
Command-Line Interface Reference

Release 0.9

OpenStack contributors

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ABSTRACT

This guide documents the OpenStack command-line clients.

CONTENTS

2.1 Conventions

The OpenStack documentation uses several typesetting conventions.

2.1.1 Notices

Notices take these forms:

Note: A comment with additional information that explains a part of the text.

Important: Something you must be aware of before proceeding.

Tip: An extra but helpful piece of practical advice.

Caution: Helpful information that prevents the user from making mistakes.

Warning: Critical information about the risk of data loss or security issues.

2.1.2 Command prompts

`$ command`

Any user, including the `root` user, can run commands that are prefixed with the `$` prompt.

`# command`

The `root` user must run commands that are prefixed with the `#` prompt. You can also prefix these commands with the **sudo** command, if available, to run them.

2.2 OpenStack command-line clients overview

2.2.1 Overview

Each OpenStack project provides a command-line client, which enables you to access the project API through easy-to-use commands. For example, the Compute service provides a `nova` command-line client.

You can run the commands from the command line, or include the commands within scripts to automate tasks. If you provide OpenStack credentials, such as your user name and password, you can run these commands on any computer.

Internally, each command uses `cURL` command-line tools, which embed API requests. OpenStack APIs are RESTful APIs, and use the HTTP protocol. They include methods, URIs, media types, and response codes.

OpenStack APIs are open-source Python clients, and can run on Linux or Mac OS X systems. On some client commands, you can specify a `debug` parameter to show the underlying API request for the command. This is a good way to become familiar with the OpenStack API calls.

As a cloud end user, you can use the OpenStack dashboard to provision your own resources within the limits set by administrators. You can modify the examples provided in this section to create other types and sizes of server instances.

The following table lists the command-line client for each OpenStack service with its package name and description.

Table 2.1: OpenStack services and clients

Service	Client	Package	Description
Commandline client	openstack	python-openstackclient	Common client for the OpenStack project.
Application Catalog service	murano	python-muranoclient	Creates and manages applications.
Bare Metal service	ironic	python-ironicclient	Manages and provisions physical machines.
Block Storage service	cinder	python-cinderclient	Creates and manages volumes.
Clustering service	senlin	python-senlinclient	Creates and manages clustering services.
Compute service	nova	python-novaclient	Creates and manages images, instances, and flavors.
Containers service	magnum	python-magnumclient	Creates and manages containers.
Data Processing service	sahara	python-saharaclient	Creates and manages Hadoop clusters on OpenStack.
Database service	trove	python-troveclient	Creates and manages databases.
Deployment service	fuel	python-fuelclient	Plans deployments.
DNS service	designate	python-designateclient	Creates and manages self service authoritative DNS.
Identity service	keystone	python-keystoneclient	Creates and manages users, tenants, roles, endpoints, and credentials.
Image service	glance	python-glanceclient	Creates and manages images.
Key Manager service	barbican	python-barbicanclient	Creates and manages keys.
Monitoring	monasca	python-monascaclient	Monitoring solution.
Networking service	neutron	python-neutronclient	Configures networks for guest servers.
Object Storage service	swift	python-swiftclient	Gathers statistics, lists items, updates metadata, and uploads, downloads, and deletes files stored by the Object Storage service. Gains access to an Object Storage installation for ad hoc processing
Orchestration service	heat	python-heatclient	Launches stacks from templates, views details of running stacks including events and resources, and updates and deletes stacks.
Rating service	cloudkitty	python-cloudkittyclient	Rating service.
Shared File Systems service	manila	python-manilaclient	Creates and manages shared file systems.
Telemetry service	ceilometer	python-ceilometerclient	Creates and collects measurements across OpenStack.
Telemetry v3	gnocchi	python-gnocchiclient	Creates and collects measurements across OpenStack.
Workflow service	mistral	python-mistralclient	Workflow service for OpenStack cloud.

2.2.2 Install the OpenStack command-line clients

Install the prerequisite software and the Python package for each OpenStack client.

Install the prerequisite software

Most Linux distributions include packaged versions of the command-line clients that you can install directly, see *Installing_from_packages*.

If you need to install the source package for the command-line package, the following table lists the software needed to run the command-line clients, and provides installation instructions as needed.

Prerequisite	Description
Python 2.7 or later	Currently, the clients do not support Python 3.
setuptools package	<p>Installed by default on Mac OS X.</p> <p>Many Linux distributions provide packages to make setuptools easy to install. Search your package manager for setuptools to find an installation package. If you cannot find one, download the setuptools package directly from https://pypi.python.org/pypi/setuptools.</p> <p>The recommended way to Install setuptools on Microsoft Windows is to follow the documentation provided on the setuptools website (https://pypi.python.org/pypi/setuptools). Another option is to use the unofficial binary installer maintained by Christop Gohlke (http://www.lfd.uci.edu/~gohlke/pythonlibs/#setuptools).</p>
pip package	<p>To install the clients on a Linux, Mac OS X, or Microsoft Windows system, use pip. It is easy to use, ensures that you get the latest version of the clients from the Python Package Index, and lets you update or remove the packages later on.</p> <p>Since the installation process compiles source files, this requires the related Python development package for your operating system and distribution.</p> <p>Install pip through the package manager for your system:</p> <p>MacOS</p> <pre># easy_install pip</pre> <p>Microsoft Windows</p> <p>Ensure that the C:\Python27\Scripts directory is defined in the PATH environment variable, and use the easy_install command from the setuptools package:</p> <pre>C:\>easy_installpip</pre> <p>Another option is to use the unofficial binary installer provided by Christoph Gohlke http://www.lfd.uci.edu/~gohlke/pythonlibs/#pip.</p> <p>Ubuntu or Debian</p> <pre># apt-getinstallpython-devpython-pip</pre> <p>Note that extra dependencies may be required, per operating system, depending on the package being installed, such as is the case with Tempest.</p> <p>Red Hat Enterprise Linux, CentOS, or Fedora.</p> <p>A packaged version enables you to use yum to install the package:</p> <pre># yum install python-devel python-pip</pre> <p>There are also packaged versions of the clients available in RDO that enable yum to install the clients as described in Installing from packages.</p> <p>SUSE Linux Enterprise Server</p> <p>A packaged version available in the Open Build Service (https://build.opensuse.org/package/show?package=python-pip&project=Cloud:OpenStack:Master) enables you to use YaST or zypper to install the package.</p> <p>First, add the Open Build Service repository:</p> <pre># zypper addrepo -f obs:// →Cloud:OpenStack: \ Liberty/SLE_12 Liberty</pre> <p>Then install pip and use it to manage client installation:</p> <pre># zypper install python-devel python-pip</pre> <p>There are also packaged versions of the clients available that enable zypper to install the clients as described in Installing from packages.</p> <p>openSUSE</p> <p>You can install pip and use it to manage client installation:</p> <pre># zypper install python-devel python-pip</pre> <p>There are also packaged versions of the clients available that enable zypper to install the clients as described in Installing from packages.</p>

Install the OpenStack client

The following example shows the command for installing the OpenStack client with `pip`, which supports multiple services.

```
# pip install python-openstackclient
```

The following individual clients are deprecated in favor of a common client. Instead of installing and learning all these clients, we recommend installing and using the OpenStack client. You may need to install an individual project's client because coverage is not yet sufficient in the OpenStack client. If you need to install an individual client's project, replace the `<project>` name in this `pip install` command using the list below.

```
# pip install python-<project>client
```

- `barbican` - Key Manager Service API
- `ceilometer` - Telemetry API
- `cinder` - Block Storage API and extensions
- `cloudkitty` - Rating service API
- `designate` - DNS service API
- `fuel` - Deployment service API
- `glance` - Image service API
- `gnocchi` - Telemetry API v3
- `heat` - Orchestration API
- `keystone` - Identity service API and extensions
- `magnum` - Containers service API
- `manila` - Shared file systems API
- `mistral` - Workflow service API
- `monasca` - Monitoring API
- `murano` - Application catalog API
- `neutron` - Networking API
- `nova` - Compute API and extensions
- `sahara` - Data Processing API
- `senlin` - Clustering service API
- `swift` - Object Storage API
- `trove` - Database service API

While you can install the `keystone` client for interacting with version 2.0 of the service's API, you should use the `openstack` client for all Identity interactions. Identity API v2 is deprecated in the Mitaka release.

Installing with pip

Use `pip` to install the OpenStack clients on a Linux, Mac OS X, or Microsoft Windows system. It is easy to use and ensures that you get the latest version of the client from the [Python Package Index](#). Also, `pip` enables you to update or remove a package.

Install each client separately by using the following command:

- For Mac OS X or Linux:

```
# pip install python-PROJECTclient
```

- For Microsoft Windows:

```
C:\>pip install python-PROJECTclient
```

Installing from packages

RDO, openSUSE, SUSE Linux Enterprise, Debian, and Ubuntu have client packages that can be installed without pip.

- On Red Hat Enterprise Linux, CentOS, or Fedora, use `yum` to install the clients from the packaged versions available in [RDO](#):

```
# yum install python-PROJECTclient
```

- For Ubuntu or Debian, use `apt-get` to install the clients from the packaged versions:

```
# apt-get install python-PROJECTclient
```

- For openSUSE, use `zypper` to install the clients from the distribution packages service:

```
# zypper install python-PROJECTclient
```

- For SUSE Linux Enterprise Server, use `zypper` to install the clients from the distribution packages in the Open Build Service. First, add the Open Build Service repository:

```
# zypper addrepo -f obs://Cloud:OpenStack:Liberty/SLE_12 Liberty
```

Then you can install the packages:

```
# zypper install python-PROJECTclient
```

Upgrade or remove clients

To upgrade a client, add the `--upgrade` option to the `pip install` command:

```
# pip install --upgrade python-PROJECTclient
```

To remove the client, run the `pip uninstall` command:

```
# pip uninstall python-PROJECTclient
```

What's next

Before you can run client commands, you must create and source the `PROJECT-openrc.sh` file to set environment variables. See [Set environment variables using the OpenStack RC file](#).

2.2.3 Discover the version number for a client

Run the following command to discover the version number for a client:

```
$ PROJECT --version
```

For example, to see the version number for the `openstack` client, run the following command:

```
$ openstack --version
2.2.0
```

2.2.4 Set environment variables using the OpenStack RC file

To set the required environment variables for the OpenStack command-line clients, you must create an environment file called an OpenStack rc file, or `openrc.sh` file. If your OpenStack installation provides it, you can download the file from the OpenStack dashboard as an administrative user or any other user. This project-specific environment file contains the credentials that all OpenStack services use.

When you source the file, environment variables are set for your current shell. The variables enable the OpenStack client commands to communicate with the OpenStack services that run in the cloud.

Note: Defining environment variables using an environment file is not a common practice on Microsoft Windows. Environment variables are usually defined in the *Advanced > System Properties* dialog box.

Download and source the OpenStack RC file

1. Log in to the dashboard and from the drop-down list select the project for which you want to download the OpenStack RC file.
2. On the *Project* tab, open the *Compute* tab and click *Access & Security*.
3. On the *API Access* tab, click *Download OpenStack RC File* and save the file. The filename will be of the form `PROJECT-openrc.sh` where `PROJECT` is the name of the project for which you downloaded the file.
4. Copy the `PROJECT-openrc.sh` file to the computer from which you want to run OpenStack commands.

For example, copy the file to the computer from which you want to upload an image with a `glance` client command.

5. On any shell from which you want to run OpenStack commands, source the `PROJECT-openrc.sh` file for the respective project.

In the following example, the `demo-openrc.sh` file is sourced for the `demo` project:

```
$ . demo-openrc.sh
```

6. When you are prompted for an OpenStack password, enter the password for the user who downloaded the `PROJECT-openrc.sh` file.

Create and source the OpenStack RC file

Alternatively, you can create the `PROJECT-openrc.sh` file from scratch, if you cannot download the file from the dashboard.

1. In a text editor, create a file named `PROJECT-openrc.sh` and add the following authentication information:

```
export OS_PROJECT_DOMAIN_NAME=default
export OS_USER_DOMAIN_NAME=default
export OS_PROJECT_NAME=projectName
export OS_USERNAME=username
export OS_PASSWORD=password
export OS_AUTH_URL=http://identityHost:portNumber/v3
export OS_IDENTITY_API_VERSION=3
export OS_IMAGE_API_VERSION=2
```

2. On any shell from which you want to run OpenStack commands, source the `PROJECT-openrc.sh` file for the respective project. In this example, you source the `admin-openrc.sh` file for the admin project:

```
$ . admin-openrc.sh
```

Note: You are not prompted for the password with this method. The password lives in clear text format in the `PROJECT-openrc.sh` file. Restrict the permissions on this file to avoid security problems. You can also remove the `OS_PASSWORD` variable from the file, and use the `-password` parameter with OpenStack client commands instead.

Note: You must set the `OS_CACERT` environment variable when using the `https` protocol in the `OS_AUTH_URL` environment setting because the verification process for the TLS (HTTPS) server certificate uses the one indicated in the environment. This certificate will be used when verifying the TLS (HTTPS) server certificate.

Override environment variable values

When you run OpenStack client commands, you can override some environment variable settings by using the options that are listed at the end of the `help` output of the various client commands. For example, you can override the `OS_PASSWORD` setting in the `PROJECT-openrc.sh` file by specifying a password on a **openstack** command, as follows:

```
$ openstack --os-password PASSWORD server list
```

Where `PASSWORD` is your password.

A user specifies their username and password credentials to interact with OpenStack, using any client command. These credentials can be specified using various mechanisms, namely, the environment variable or command-line argument. It is not safe to specify the password using either of these methods.

For example, when you specify your password using the command-line client with the `--os-password` argument, anyone with access to your computer can view it in plain text with the `ps` field.

To avoid storing the password in plain text, you can prompt for the OpenStack password interactively.

2.3 OpenStack command-line client

The `openstack` client is a common OpenStack command-line interface (CLI).

This chapter documents **openstack** version 2.3.0.

For help on a specific **openstack** command, enter:

```
$ openstack help COMMAND
```

2.3.1 openstack usage

```
usage: openstack [--version] [-v | -q] [--log-file LOG_FILE] [-h] [--debug]
               [--os-cloud <cloud-config-name>]
               [--os-region-name <auth-region-name>]
               [--os-cacert <ca-bundle-file>] [--verify | --insecure]
               [--os-default-domain <auth-domain>]
               [--os-interface <interface>] [--timing] [--profile hmac-key]
               [--os-compute-api-version <compute-api-version>]
               [--os-network-api-version <network-api-version>]
               [--os-image-api-version <image-api-version>]
               [--os-volume-api-version <volume-api-version>]
               [--os-identity-api-version <identity-api-version>]
               [--os-auth-type <auth-type>]
               [--os-project-domain-id <auth-project-domain-id>]
               [--os-protocol <auth-protocol>]
               [--os-project-name <auth-project-name>]
               [--os-trust-id <auth-trust-id>]
               [--os-service-provider-endpoint <auth-service-provider-endpoint>]
               [--os-domain-name <auth-domain-name>]
               [--os-user-domain-id <auth-user-domain-id>]
               [--os-identity-provider-url <auth-identity-provider-url>]
               [--os-access-token-endpoint <auth-access-token-endpoint>]
               [--os-domain-id <auth-domain-id>]
               [--os-user-domain-name <auth-user-domain-name>]
               [--os-scope <auth-scope>] [--os-user-id <auth-user-id>]
               [--os-identity-provider <auth-identity-provider>]
               [--os-username <auth-username>]
               [--os-auth-url <auth-auth-url>]
               [--os-client-secret <auth-client-secret>]
               [--os-client-id <auth-client-id>]
               [--os-project-domain-name <auth-project-domain-name>]
               [--os-password <auth-password>]
               [--os-endpoint <auth-endpoint>] [--os-url <auth-url>]
               [--os-token <auth-token>] [--os-project-id <auth-project-id>]
               [--os-object-api-version <object-api-version>]
               [--inspector-api-version INSPECTOR_API_VERSION]
               [--inspector-url INSPECTOR_URL]
               [--os-data-processing-api-version <data-processing-api-version>]
               [--os-data-processing-url OS_DATA_PROCESSING_URL]
               [--os-dns-api-version <dns-api-version>]
               [--os-orchestration-api-version <orchestration-api-version>]
               [--os-mb-api-version <mb-api-version>]
               [--os-queues-api-version <queues-api-version>]
               [--os-key-manager-api-version <key-manager-api-version>]
               [--os-baremetal-api-version <baremetal-api-version>]
               [--os-policy-api-version <policy-api-version>]
```

2.3.2 openstack optional arguments

- version** show program's version number and exit
- v, --verbose** Increase verbosity of output. Can be repeated.

-q, --quiet Suppress output except warnings and errors.

--log-file LOG_FILE Specify a file to log output. Disabled by default.

-h, --help Show help message and exit.

--debug Show tracebacks on errors.

--os-cloud <cloud-config-name> Cloud name in clouds.yaml (Env: OS_CLOUD)

--os-region-name <auth-region-name> Authentication region name (Env: OS_REGION_NAME)

--os-cacert <ca-bundle-file> CA certificate bundle file (Env: OS_CACERT)

--verify Verify server certificate (default)

--insecure Disable server certificate verification

--os-default-domain <auth-domain> Default domain ID, default=default (Env: OS_DEFAULT_DOMAIN)

--os-interface <interface> Select an interface type. Valid interface types: [admin, public, internal]. (Env: OS_INTERFACE)

--timing Print API call timing info

--profile hmac-key HMAC key to use for encrypting context data for performance profiling of operation. This key should be the value of one of the HMAC keys configured in osprofiler middleware in the projects user would like to profile. It needs to be specified in configuration files of the required projects.

--os-compute-api-version <compute-api-version> Compute API version, default=2 (Env: OS_COMPUTE_API_VERSION)

--os-network-api-version <network-api-version> Network API version, default=2.0 (Env: OS_NETWORK_API_VERSION)

--os-image-api-version <image-api-version> Image API version, default=1 (Env: OS_IMAGE_API_VERSION)

--os-volume-api-version <volume-api-version> Volume API version, default=2 (Env: OS_VOLUME_API_VERSION)

--os-identity-api-version <identity-api-version> Identity API version, default=3 (Env: OS_IDENTITY_API_VERSION)

--os-auth-type <auth-type> Select an authentication type. Available types: osc_password, token_endpoint, v2token, admin_token, v2password, v3password, v3scopedsaml, v3oidcpassword, v3unscopedadfs, token, v3token, password, v3unscopedsaml. Default: selected based on --os-username/--os-token (Env: OS_AUTH_TYPE)

--os-project-domain-id <auth-project-domain-id> With osc_password: Domain ID containing project With v3password: Domain ID containing project With v3scopedsaml: Domain ID containing project With v3oidcpassword: Domain ID containing project With v3unscopedadfs: Domain ID containing project With token: Domain ID containing project With v3token: Domain ID containing project With password: Domain ID containing project With v3unscopedsaml: Domain ID containing project (Env: OS_PROJECT_DOMAIN_ID)

--os-protocol <auth-protocol> With v3oidcpassword: Name of the federated protocol used for federated authentication. Must match its counterpart name configured at the keystone service provider. Typically values would be 'saml2' or 'oidc'. (Env: OS_PROTOCOL)

--os-project-name <auth-project-name> With osc_password: Project name to scope to With v3password: Project name to scope to With v3scopedsaml: Project name to scope to With v3oidcpassword: Project name to scope to With v3unscopedadfs: Project name to scope to With token: Project name to scope to

to With v3token: Project name to scope to With password: Project name to scope to With v3unscopeddsaml: Project name to scope to (Env: OS_PROJECT_NAME)

--os-trust-id <auth-trust-id> With osc_password: Trust ID With v2token: Trust ID With v2password: Trust ID With v3password: Trust ID With v3scopeddsaml: Trust ID With v3oidcpasword: Trust ID With v3unscopedadfs: Trust ID With token: Trust ID With v3token: Trust ID With password: Trust ID With v3unscopeddsaml: Trust ID (Env: OS_TRUST_ID)

--os-service-provider-endpoint <auth-service-provider-endpoint> With v3unscopedadfs: Service Provider's Endpoint (Env: OS_SERVICE_PROVIDER_ENDPOINT)

--os-domain-name <auth-domain-name> With osc_password: Domain name to scope to With v3password: Domain name to scope to With v3scopeddsaml: Domain name to scope to With v3oidcpasword: Domain name to scope to With v3unscopedadfs: Domain name to scope to With token: Domain name to scope to With v3token: Domain name to scope to With password: Domain name to scope to With v3unscopeddsaml: Domain name to scope to (Env: OS_DOMAIN_NAME)

--os-user-domain-id <auth-user-domain-id> With osc_password: User's domain id With v3password: User's domain id With password: User's domain id (Env: OS_USER_DOMAIN_ID)

--os-identity-provider-url <auth-identity-provider-url> With v3unscopedadfs: Identity Provider's URL With v3unscopeddsaml: Identity Provider's URL (Env: OS_IDENTITY_PROVIDER_URL)

--os-access-token-endpoint <auth-access-token-endpoint> With v3oidcpasword: OpenID Connect Provider Token Endpoint (Env: OS_ACCESS_TOKEN_ENDPOINT)

--os-domain-id <auth-domain-id> With osc_password: Domain ID to scope to With v3password: Domain ID to scope to With v3scopeddsaml: Domain ID to scope to With v3oidcpasword: Domain ID to scope to With v3unscopedadfs: Domain ID to scope to With token: Domain ID to scope to With v3token: Domain ID to scope to With password: Domain ID to scope to With v3unscopeddsaml: Domain ID to scope to (Env: OS_DOMAIN_ID)

--os-user-domain-name <auth-user-domain-name> With osc_password: User's domain name With v3password: User's domain name With password: User's domain name (Env: OS_USER_DOMAIN_NAME)

--os-scope <auth-scope> With v3oidcpasword: OpenID Connect scope that is requested from OP (Env: OS_SCOPE)

--os-user-id <auth-user-id> With osc_password: User id With v2password: User ID to login with With v3password: User ID With password: User id (Env: OS_USER_ID)

--os-identity-provider <auth-identity-provider> With v3oidcpasword: Identity Provider's name With v3unscopedadfs: Identity Provider's name With v3unscopeddsaml: Identity Provider's name (Env: OS_IDENTITY_PROVIDER)

--os-username <auth-username> With osc_password: Username With v2password: Username to login with With v3password: Username With v3oidcpasword: Username With v3unscopedadfs: Username With password: Username With v3unscopeddsaml: Username (Env: OS_USERNAME)

--os-auth-url <auth-auth-url> With osc_password: Authentication URL With v2token: Authentication URL With v2password: Authentication URL With v3password: Authentication URL With v3scopeddsaml: Authentication URL With v3oidcpasword: Authentication URL With v3unscopedadfs: Authentication URL With token: Authentication URL With v3token: Authentication URL With password: Authentication URL With v3unscopeddsaml: Authentication URL (Env: OS_AUTH_URL)

--os-client-secret <auth-client-secret> With v3oidcpasword: OAuth 2.0 Client Secret (Env: OS_CLIENT_SECRET)

--os-client-id <auth-client-id> With v3oidcpasword: OAuth 2.0 Client ID (Env: OS_CLIENT_ID)

--os-project-domain-name <auth-project-domain-name> With osc_password: Domain name containing project With v3password: Domain name containing project With v3scopedsaml: Domain name containing project With v3oidcpassword: Domain name containing project With v3unscopedadfs: Domain name containing project With token: Domain name containing project With v3token: Domain name containing project With password: Domain name containing project With v3unscopedsaml: Domain name containing project (Env: OS_PROJECT_DOMAIN_NAME)

--os-password <auth-password> With osc_password: User's password With v2password: Password to use With v3password: User's password With v3oidcpassword: Password With v3unscopedadfs: Password With password: User's password With v3unscopedsaml: Password (Env: OS_PASSWORD)

--os-endpoint <auth-endpoint> With token_endpoint: The endpoint that will always be used With admin_token: The endpoint that will always be used (Env: OS_ENDPOINT)

--os-url <auth-url> With token_endpoint: Specific service endpoint to use (Env: OS_URL)

--os-token <auth-token> With token_endpoint: The token that will always be used With token_endpoint: Authentication token to use With v2token: Token With admin_token: The token that will always be used With v3scopedsaml: Token to authenticate with With token: Token to authenticate with With v3token: Token to authenticate with (Env: OS_TOKEN)

--os-project-id <auth-project-id> With osc_password: Project ID to scope to With v3password: Project ID to scope to With v3scopedsaml: Project ID to scope to With v3oidcpassword: Project ID to scope to With v3unscopedadfs: Project ID to scope to With token: Project ID to scope to With v3token: Project ID to scope to With password: Project ID to scope to With v3unscopedsaml: Project ID to scope to (Env: OS_PROJECT_ID)

--os-object-api-version <object-api-version> Object API version, default=1 (Env: OS_OBJECT_API_VERSION)

--inspector-api-version INSPECTOR_API_VERSION inspector API version, only 1 is supported now (env: INSPECTOR_VERSION).

--inspector-url INSPECTOR_URL inspector URL, defaults to localhost (env: INSPECTOR_URL).

--os-data-processing-api-version <data-processing-api-version> Data processing API version, default=1.1 (Env: OS_DATA_PROCESSING_API_VERSION)

--os-data-processing-url OS_DATA_PROCESSING_URL Data processing API URL, (Env: OS_DATA_PROCESSING_API_URL)

--os-dns-api-version <dns-api-version> DNS API version, default=2 (Env: OS_DNS_API_VERSION)

--os-orchestration-api-version <orchestration-api-version> Orchestration API version, default=1 (Env: OS_ORCHESTRATION_API_VERSION)

--os-mb-api-version <mb-api-version> MB API version, default=1 (Env: OS_MB_API_VERSION)

--os-queues-api-version <queues-api-version> Queues API version, default=1.1 (Env: OS_QUEUES_API_VERSION)

--os-key-manager-api-version <key-manager-api-version> Barbican API version, default=1 (Env: OS_KEY_MANAGER_API_VERSION)

--os-baremetal-api-version <baremetal-api-version> Baremetal API version, default=1.6 (Env: OS_BAREMETAL_API_VERSION)

--os-policy-api-version <policy-api-version> Policy API version, default=1 (Env: OS_POLICY_API_VERSION)

2.3.3 OpenStack with Identity API v3 commands

Important: OpenStack Identity API v2 is deprecated in the Mitaka release.

You can select the Identity API version to use by adding the `--os-identity-api-version` parameter or by setting the corresponding environment variable:

```
export OS_IDENTITY_API_VERSION=3
```

openstack access token create

```
usage: openstack --os-identity-api-version 3 access token create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        --consumer-key <consumer-key>
                        --consumer-secret <consumer-secret>
                        --request-key <request-key>
                        --request-secret <request-secret>
                        --verifier <verifier>
```

Create an access token

Optional arguments:

-h, --help show this help message and exit

--consumer-key <consumer-key> Consumer key (required)

--consumer-secret <consumer-secret> Consumer secret (required)

--request-key <request-key> Request token to exchange for access token (required)

--request-secret <request-secret> Secret associated with <request-key> (required)

--verifier <verifier> Verifier associated with <request-key> (required)

openstack acl delete

```
usage: openstack --os-identity-api-version 3 acl delete [-h] URI
```

Delete ACLs for a secret or container as identified by its href.

Positional arguments:

URI The URI reference for the secret or container.

Optional arguments:

-h, --help show this help message and exit

openstack acl get

```
usage: openstack --os-identity-api-version 3 acl get [-h] [-f {csv,html,json,table,
↪value,yaml}]
           [-c COLUMN] [--max-width <integer>] [--noindent]
           [--quote {all,minimal,none,nonnumeric}]
           URI
```

Retrieve ACLs for a secret or container by providing its href.

Positional arguments:

URI The URI reference for the secret or container.

Optional arguments:

-h, --help show this help message and exit

openstack acl submit

```
usage: openstack --os-identity-api-version 3 acl submit [-h] [-f {csv,html,json,table,
↪value,yaml}]
           [-c COLUMN] [--max-width <integer>] [--noindent]
           [--quote {all,minimal,none,nonnumeric}]
           [--user [USERS]]
           [--project-access | --no-project-access]
           [--operation-type {read}]
           URI
```

Submit ACL on a secret or container as identified by its href.

Positional arguments:

URI The URI reference for the secret or container.

Optional arguments:

-h, --help show this help message and exit

--user [USERS], -u [USERS] Keystone userid(s) for ACL.

--project-access Flag to enable project access behavior.

--no-project-access Flag to disable project access behavior.

--operation-type {read}, -o {read} Type of Barbican operation ACL is set for

openstack acl user add

```
usage: openstack --os-identity-api-version 3 acl user add [-h] [-f {csv,html,json,
↪table,value,yaml}]
           [-c COLUMN] [--max-width <integer>] [--noindent]
           [--quote {all,minimal,none,nonnumeric}]
           [--user [USERS]]
           [--project-access | --no-project-access]
           [--operation-type {read}]
           URI
```

Add ACL users to a secret or container as identified by its href.

Positional arguments:

URI The URI reference for the secret or container.

Optional arguments:

-h, --help show this help message and exit

--user [USERS], -u [USERS] Keystone userid(s) for ACL.

--project-access Flag to enable project access behavior.

--no-project-access Flag to disable project access behavior.

--operation-type {read}, -o {read} Type of Barbican operation ACL is set for

openstack acl user remove

```
usage: openstack --os-identity-api-version 3 acl user remove [-h] [-f {csv,html,json,
    ↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--user [USERS]]
                                [--project-access | --no-project-access]
                                [--operation-type {read}]
                                URI
```

Remove ACL users from a secret or container as identified by its href.

Positional arguments:

URI The URI reference for the secret or container.

Optional arguments:

-h, --help show this help message and exit

--user [USERS], -u [USERS] Keystone userid(s) for ACL.

--project-access Flag to enable project access behavior.

--no-project-access Flag to disable project access behavior.

--operation-type {read}, -o {read} Type of Barbican operation ACL is set for

openstack aggregate add host

```
usage: openstack --os-identity-api-version 3 aggregate add host [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <aggregate> <host>
```

Add host to aggregate

Positional arguments:

<aggregate> Aggregate (name or ID)

<host> Host to add to <aggregate>

Optional arguments:

-h, --help show this help message and exit

openstack aggregate create

```
usage: openstack --os-identity-api-version 3 aggregate create [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--zone <availability-zone>]
                                [--property <key=value>]
                                <name>
```

Create a new aggregate

Positional arguments:

<name> New aggregate name

Optional arguments:

-h, --help show this help message and exit

--zone <availability-zone> Availability zone name

--property <key=value> Property to add to this aggregate (repeat option to set multiple properties)

openstack aggregate delete

```
usage: openstack --os-identity-api-version 3 aggregate delete [-h] <aggregate>
```

Delete an existing aggregate

Positional arguments:

<aggregate> Aggregate to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack aggregate list

```
usage: openstack --os-identity-api-version 3 aggregate list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--long]
```

List all aggregates

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack aggregate remove host

```
usage: openstack --os-identity-api-version 3 aggregate remove host [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <aggregate> <host>
```

Remove host from aggregate

Positional arguments:

<aggregate> Aggregate (name or ID)

<host> Host to remove from <aggregate>

Optional arguments:

-h, --help show this help message and exit

openstack aggregate set

```
usage: openstack --os-identity-api-version 3 aggregate set [-h] [--name <name>]
                                [--zone <availability-zone>]
                                [--property <key=value>]
                                <aggregate>
```

Set aggregate properties

Positional arguments:

<aggregate> Aggregate to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Set aggregate name

--zone <availability-zone> Set availability zone name

--property <key=value> Property to set on <aggregate> (repeat option to set multiple properties)

openstack aggregate show

```
usage: openstack --os-identity-api-version 3 aggregate show [-h] [-f {html,json,shell,
→table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <aggregate>
```

Display aggregate details

Positional arguments:

<aggregate> Aggregate to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack availability zone list

```
usage: openstack --os-identity-api-version 3 availability zone list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--compute] [--network] [--volume]
                                [--long]
```

List availability zones and their status

Optional arguments:

- h, --help** show this help message and exit
- compute** List compute availability zones
- network** List network availability zones
- volume** List volume availability zones
- long** List additional fields in output

openstack backup create

```
usage: openstack --os-identity-api-version 3 backup create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX] --name <name>
                                [--description <description>]
                                [--container <container>]
                                <volume>
```

Create new backup

Positional arguments:

<volume> Volume to backup (name or ID)

Optional arguments:

- h, --help** show this help message and exit
- name <name>** Name of the backup
- description <description>** Description of the backup
- container <container>** Optional backup container name

openstack backup delete

```
usage: openstack --os-identity-api-version 3 backup delete [-h] <backup> [<backup> ...
↪]
```

Delete backup(s)

Positional arguments:

<backup> Backup(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack backup list

```
usage: openstack --os-identity-api-version 3 backup list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}] [--long]
```

List backups

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack backup restore

```
usage: openstack --os-identity-api-version 3 backup restore [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <backup> <volume>
```

Restore backup

Positional arguments:

<backup> Backup to restore (ID only)

<volume> Volume to restore to (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack backup show

```
usage: openstack --os-identity-api-version 3 backup show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <backup>
```

Display backup details

Positional arguments:

<backup> Backup to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack baremetal create

```
usage: openstack --os-identity-api-version 3 baremetal create [-h] [-f {html,json,
↪shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--chassis-uuid <chassis>] --driver <driver>
                        [--driver-info <key=value>]
                        [--property <key=value>]
                        [--extra <key=value>] [--uuid <uuid>]
                        [--name <name>]
```

Register a new node with the baremetal service

Optional arguments:

-h, --help show this help message and exit

--chassis-uuid <chassis> UUID of the chassis that this node belongs to.

--driver <driver> Driver used to control the node [REQUIRED].

--driver-info <key=value> Key/value pair used by the driver, such as out-of-band management credentials. Can be specified multiple times.

--property <key=value> Key/value pair describing the physical characteristics of the node. This is exported to Nova and used by the scheduler. Can be specified multiple times.

--extra <key=value> Record arbitrary key/value metadata. Can be specified multiple times.

--uuid <uuid> Unique UUID for the node.

--name <name> Unique name for the node.

openstack baremetal delete

```
usage: openstack --os-identity-api-version 3 baremetal delete [-h] <node>
```

Unregister a baremetal node

Positional arguments:

<node> Node to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack baremetal introspection abort

```
usage: openstack --os-identity-api-version 3 baremetal introspection abort [-h] uuid
```

Abort running introspection for node.

Positional arguments:

uuid baremetal node UUID

Optional arguments:

-h, --help show this help message and exit

openstack baremetal introspection data save

```
usage: openstack --os-identity-api-version 3 baremetal introspection data save [-h] [-  
↪-file <filename>]                                uuid
```

Save or display raw introspection data.

Positional arguments:

uuid baremetal node UUID

Optional arguments:

-h, --help show this help message and exit

--file <filename> downloaded introspection data filename (default: stdout)

openstack baremetal introspection rule delete

```
usage: openstack --os-identity-api-version 3 baremetal introspection rule delete [-h]   
↪uuid
```

Delete an introspection rule.

Positional arguments:

uuid rule UUID

Optional arguments:

-h, --help show this help message and exit

openstack baremetal introspection rule import

```
usage: openstack --os-identity-api-version 3 baremetal introspection rule import [-h]   
↪file
```

Import one or several introspection rules from a json file.

Positional arguments:

file JSON file to import, may contain one or several rules

Optional arguments:

-h, --help show this help message and exit

openstack baremetal introspection rule list

```
usage: openstack --os-identity-api-version 3 baremetal introspection rule list [-h]   
                                [-f {csv,html,json,table,value,  
↪yaml}]                                [-c COLUMN]                                  
                                [--max-width <integer>]                                  
                                [--noindent]                                  
                                [--quote {all,minimal,none,  
↪nonnumeric}]
```

List all introspection rules.

Optional arguments:

-h, --help show this help message and exit

openstack baremetal introspection rule purge

```
usage: openstack --os-identity-api-version 3 baremetal introspection rule purge [-h]
```

Drop all introspection rules.

Optional arguments:

-h, --help show this help message and exit

openstack baremetal introspection rule show

```
usage: openstack --os-identity-api-version 3 baremetal introspection rule show [-h]
                                           [-f {html,json,shell,table,value,
→yaml}]
                                           [-c COLUMN]
                                           [--max-width <integer>]
                                           [--noindent]
                                           [--prefix PREFIX]
                                           uuid
```

Show an introspection rule.

Positional arguments:

uuid rule UUID

Optional arguments:

-h, --help show this help message and exit

openstack baremetal introspection start

```
usage: openstack --os-identity-api-version 3 baremetal introspection start [-h]
                                           [-f {csv,html,json,table,value,yaml}]
                                           [-c COLUMN]
                                           [--max-width <integer>]
                                           [--noindent]
                                           [--quote {all,minimal,none,nonnumeric}]
                                           [--new-ipmi-username NEW_IPMI_USERNAME]
                                           [--new-ipmi-password NEW_IPMI_PASSWORD]
                                           [--wait]
                                           uuid [uuid ...]
```

Start the introspection.

Positional arguments:

uuid baremetal node UUID(s)

Optional arguments:

-h, --help show this help message and exit

--new-ipmi-username **NEW_IPMI_USERNAME** if set, *Ironic Inspector* will update IPMI user name to this value

--new-ipmi-password **NEW_IPMI_PASSWORD** if set, *Ironic Inspector* will update IPMI password to this value

--wait wait for introspection to finish; the result will be displayed in the end

openstack baremetal introspection status

```
usage: openstack --os-identity-api-version 3 baremetal introspection status [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         uuid
```

Get introspection status.

Positional arguments:

uuid baremetal node UUID

Optional arguments:

-h, --help show this help message and exit

openstack baremetal list

```
usage: openstack --os-identity-api-version 3 baremetal list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
                                         [--limit <limit>] [--marker <node>]
                                         [--sort <key>[:<direction>]] [--maintenance]
                                         [--associated] [--long]
```

List baremetal nodes

Optional arguments:

-h, --help show this help message and exit

--limit **<limit>** Maximum number of nodes to return per request, 0 for no limit. Default is the maximum number used by the Baremetal API Service.

--marker **<node>** Node UUID (for example, of the last node in the list from a previous request). Returns the list of nodes after this UUID.

--sort **<key>[:<direction>]** Sort output by selected keys and directions(asc or desc) (default: asc), multiple keys and directions can be specified separated by comma

--maintenance List nodes in maintenance mode.

--associated List only nodes associated with an instance.

--long Show detailed information about the nodes.

openstack baremetal set

```
usage: openstack --os-identity-api-version 3 baremetal set [-h] [--property
↪<path=value>] <node>
```

Set baremetal properties

Positional arguments:

<node> Name or UUID of the node.

Optional arguments:

-h, --help show this help message and exit

--property <path=value> Property to add to this baremetal host (repeat option to set multiple properties)

openstack baremetal show

```
usage: openstack --os-identity-api-version 3 baremetal show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX] [--instance]
                        [--long]
                        <node>
```

Show baremetal node details

Positional arguments:

<node> Name or UUID of the node (or instance UUID if `--instance` is specified)

Optional arguments:

-h, --help show this help message and exit

--instance <node> is an instance UUID.

--long

openstack baremetal unset

```
usage: openstack --os-identity-api-version 3 baremetal unset [-h] [--property <path>]
↪<node>
```

Unset baremetal properties

Positional arguments:

<node> Name or UUID of the node.

Optional arguments:

-h, --help show this help message and exit

--property <path> Property to unset on this baremetal host (repeat option to unset multiple properties)

openstack ca get

```
usage: openstack --os-identity-api-version 3 ca get [-h] [-f {html,json,shell,table,
↪value,yaml}]
                [-c COLUMN] [--max-width <integer>] [--noindent]
                [--prefix PREFIX]
                URI
```

Retrieve a CA by providing its URI.

Positional arguments:

URI The URI reference for the CA.

Optional arguments:

-h, --help show this help message and exit

openstack ca list

```
usage: openstack --os-identity-api-version 3 ca list [-h] [-f {csv,html,json,table,
↪value,yaml}]
                [-c COLUMN] [--max-width <integer>] [--noindent]
                [--quote {all,minimal,none,nonnumeric}]
                [--limit LIMIT] [--offset OFFSET] [--name NAME]
```

List cas.

Optional arguments:

-h, --help show this help message and exit

--limit LIMIT, -l LIMIT specify the limit to the number of items to list per page (default: 10; maximum: 100)

--offset OFFSET, -o OFFSET specify the page offset (default: 0)

--name NAME, -n NAME specify the secret name (default: None)

openstack catalog list

```
usage: openstack --os-identity-api-version 3 catalog list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                [-c COLUMN] [--max-width <integer>] [--noindent]
                [--quote {all,minimal,none,nonnumeric}]
```

List services in the service catalog

Optional arguments:

-h, --help show this help message and exit

openstack catalog show

```
usage: openstack --os-identity-api-version 3 catalog show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                [-c COLUMN] [--max-width <integer>] [--noindent]
```

```
[--prefix PREFIX]
<service>
```

Display service catalog details

Positional arguments:

<service> Service to display (type or name)

Optional arguments:

-h, --help show this help message and exit

openstack claim create

```
usage: openstack --os-identity-api-version 3 claim create [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--ttl <ttl>] [--grace <grace>]
                                [--limit <limit>]
                                <queue_name>
```

Create claim and return a list of claimed messages

Positional arguments:

<queue_name> Name of the queue to be claim

Optional arguments:

-h, --help show this help message and exit

--ttl <ttl> Time to live in seconds for claim

--grace <grace> The message grace period in seconds

--limit <limit> Claims a set of messages, up to limit

openstack claim query

```
usage: openstack --os-identity-api-version 3 claim query [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                <queue_name> <claim_id>
```

Display claim details

Positional arguments:

<queue_name> Name of the claimed queue

<claim_id> ID of the claim

Optional arguments:

-h, --help show this help message and exit

openstack claim release

```
usage: openstack --os-identity-api-version 3 claim release [-h] <queue_name> <claim_
↪id>
```

Delete a claim

Positional arguments:

<queue_name> Name of the claimed queue

<claim_id> Claim ID to delete

Optional arguments:

-h, --help show this help message and exit

openstack claim renew

```
usage: openstack --os-identity-api-version 3 claim renew [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--ttl <ttl>] [--grace <grace>]
                                <queue_name> <claim_id>
```

Renew a claim

Positional arguments:

<queue_name> Name of the claimed queue

<claim_id> Claim ID

Optional arguments:

-h, --help show this help message and exit

--ttl <ttl> Time to live in seconds for claim

--grace <grace> The message grace period in seconds

openstack command list

```
usage: openstack --os-identity-api-version 3 command list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List recognized commands by group

Optional arguments:

-h, --help show this help message and exit

openstack compute agent create


```
usage: openstack --os-identity-api-version 3 compute agent create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        <os> <architecture> <version> <url>
                        <md5hash> <hypervisor>
```

Create compute agent command

Positional arguments:

<os> Type of OS

<architecture> Type of architecture

<version> Version

<url> URL

<md5hash> MD5 hash

<hypervisor> Type of hypervisor

Optional arguments:

-h, --help show this help message and exit

openstack compute agent delete

```
usage: openstack --os-identity-api-version 3 compute agent delete [-h] <id>
```

Delete compute agent command

Positional arguments:

<id> ID of agent to delete

Optional arguments:

-h, --help show this help message and exit

openstack compute agent list

```
usage: openstack --os-identity-api-version 3 compute agent list [-h] [-f {csv,html,
↪ json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--hypervisor <hypervisor>]
```

List compute agent command

Optional arguments:

-h, --help show this help message and exit

--hypervisor <hypervisor> Type of hypervisor

openstack compute agent set

```
usage: openstack --os-identity-api-version 3 compute agent set [-h] <id> <version>
      ↪<url> <md5hash>
```

Set compute agent command

Positional arguments:

<id> ID of the agent

<version> Version of the agent

<url> URL

<md5hash> MD5 hash

Optional arguments:

-h, --help show this help message and exit

openstack compute service delete

```
usage: openstack --os-identity-api-version 3 compute service delete [-h] <service>
```

Delete service command

Positional arguments:

<service> Compute service to delete (ID only)

Optional arguments:

-h, --help show this help message and exit

openstack compute service list

```
usage: openstack --os-identity-api-version 3 compute service list [-h]
                        [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--host <host>] [--service <service>]
```

List service command

Optional arguments:

-h, --help show this help message and exit

--host <host> Name of host

--service <service> Name of service

openstack compute service set

```
usage: openstack --os-identity-api-version 3 compute service set [-h] [--enable | --
      ↪disable]
                        <host> <service>
```

Set service command

Positional arguments:

<host> Name of host

<service> Name of service

Optional arguments:

-h, --help show this help message and exit

--enable Enable a service (default)

--disable Disable a service

openstack configuration show

```
usage: openstack --os-identity-api-version 3 configuration show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--mask | --unmask]
```

Display configuration details

Optional arguments:

-h, --help show this help message and exit

--mask Attempt to mask passwords (default)

--unmask Show password in clear text

openstack congress datasource create

```
usage: openstack --os-identity-api-version 3 congress datasource create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN]
                                [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--description <datasource-description>]
                                [--config <key=value>]
                                <datasource-driver>
                                <datasource-name>
```

Create a datasource.

Positional arguments:

<datasource-driver> Selected datasource driver

<datasource-name> Name you want to call the datasource

Optional arguments:

-h, --help show this help message and exit

--description <datasource-description> Description of the datasource

--config <key=value> config dictionary to pass in

openstack congress datasource delete

```
usage: openstack --os-identity-api-version 3 congress datasource delete [-h]
      ↪ <datasource-name>
```

Delete a datasource.

Positional arguments:

<datasource-name> Name of the datasource to delete

Optional arguments:

-h, --help show this help message and exit

openstack congress datasource list

```
usage: openstack --os-identity-api-version 3 congress datasource list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
```

List Datasources.

Optional arguments:

-h, --help show this help message and exit

openstack congress datasource row list

```
usage: openstack --os-identity-api-version 3 congress datasource row list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     <datasource-name> <table>
```

List datasource rows.

Positional arguments:

<datasource-name> Name of the datasource to show

<table> Table to get the datasource rows from

Optional arguments:

-h, --help show this help message and exit

openstack congress datasource schema show

```
usage: openstack --os-identity-api-version 3 congress datasource schema show [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
```

```

--noindent]
--quote {all,minimal,none,
↪nonnumeric}}

<datasource-name>

```

Show schema for datasource.

Positional arguments:

<datasource-name> Name of the datasource

Optional arguments:

-h, --help show this help message and exit

openstack congress datasource status show

```

usage: openstack --os-identity-api-version 3 congress datasource status show [-h]
                                         [-f {html,json,shell,table,value,
↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         <datasource-name>

```

List status for datasource.

Positional arguments:

<datasource-name> Name of the datasource

Optional arguments:

-h, --help show this help message and exit

openstack congress datasource table list

```

usage: openstack --os-identity-api-version 3 congress datasource table list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}
↪]
                                         <datasource-name>

```

List datasource tables.

Positional arguments:

<datasource-name> Name of the datasource

Optional arguments:

-h, --help show this help message and exit

openstack congress datasource table schema show

```
usage: openstack --os-identity-api-version 3 congress datasource table schema show [-h]
                                     [-f {csv,html,json,table,value,
                                     ↪yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,
                                     ↪nonnumeric}]
                                     <datasource-name>
                                     <table-name>
```

Show schema for datasource table.

Positional arguments:

<datasource-name> Name of the datasource

<table-name> Name of the table

Optional arguments:

-h, --help show this help message and exit

openstack congress datasource table show

```
usage: openstack --os-identity-api-version 3 congress datasource table show [-h]
                                     [-f {html,json,shell,table,value,yaml}
                                     ↪]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     <datasource-name> <table-id>
```

Show Datasource Table properties.

Positional arguments:

<datasource-name> Name of datasource

<table-id> Table id

Optional arguments:

-h, --help show this help message and exit

openstack congress driver config show

```
usage: openstack --os-identity-api-version 3 congress driver config show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     <datasource-driver>
```

List driver tables.

Positional arguments:

<datasource-driver> Name of the datasource driver

Optional arguments:

-h, --help show this help message and exit

openstack congress driver list

```
usage: openstack --os-identity-api-version 3 congress driver list [-h]
                        [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List drivers.

Optional arguments:

-h, --help show this help message and exit

openstack congress driver schema show

```
usage: openstack --os-identity-api-version 3 congress driver schema show [-h]
                        [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN]
                        [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        <datasource-driver>
```

List datasource tables.

Positional arguments:

<datasource-driver> Name of the datasource driver

Optional arguments:

-h, --help show this help message and exit

openstack congress policy create

```
usage: openstack --os-identity-api-version 3 congress policy create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--description <description>]
                        [--abbreviation <abbreviation>]
                        [--kind <kind>]
                        <policy_name>
```

Create a policy.

Positional arguments:

<policy_name> Name of the policy

Optional arguments:

-h, --help show this help message and exit

--description <description> Policy description

--abbreviation <abbreviation> Policy abbreviation (used in traces)

--kind <kind> Kind of policy: {nonrecursive, database, action, materialized}

openstack congress policy delete

```
usage: openstack --os-identity-api-version 3 congress policy delete [-h] <policy>
```

Delete a policy.

Positional arguments:

<policy> ID or name of the policy to delete

Optional arguments:

-h, --help show this help message and exit

openstack congress policy list

```
usage: openstack --os-identity-api-version 3 congress policy list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List Policy.

Optional arguments:

-h, --help show this help message and exit

openstack congress policy row list

```
usage: openstack --os-identity-api-version 3 congress policy row list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--trace]
                                <policy-name> <table>
```

List policy rows.

Positional arguments:

<policy-name> Name of the policy to show

<table> Table to get the policy rows from

Optional arguments:

-h, --help show this help message and exit

--trace Display explanation of result

openstack congress policy rule create

```
usage: openstack --os-identity-api-version 3 congress policy rule create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--name RULE_NAME]
                                     [--comment COMMENT]
                                     <policy-name> <rule>
```

Create a policy rule.

Positional arguments:

<policy-name> Name or identifier of the policy

<rule> Policy rule

Optional arguments:

-h, --help show this help message and exit

--name RULE_NAME Name of the policy rule

--comment COMMENT Comment about policy rule

openstack congress policy rule delete

```
usage: openstack --os-identity-api-version 3 congress policy rule delete [-h]
                                     <policy-name> <rule-id/rule-name>
```

Delete a policy rule.

Positional arguments:

<policy-name> Name of the policy to delete

<rule-id/rule-name> ID/Name of the policy rule to delete

Optional arguments:

-h, --help show this help message and exit

openstack congress policy rule list

```
usage: openstack --os-identity-api-version 3 congress policy rule list [-h] <policy-
↵name>
```

List policy rules.

Positional arguments:

<policy-name> Name of the policy

Optional arguments:

-h, --help show this help message and exit

openstack congress policy rule show

```
usage: openstack --os-identity-api-version 3 congress policy rule show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     <policy-name> <rule-id/rule-name>
```

Show a policy rule.

Positional arguments:

<policy-name> Name or identifier of the policy

<rule-id/rule-name> Policy rule id or rule name

Optional arguments:

-h, --help show this help message and exit

openstack congress policy show

```
usage: openstack --os-identity-api-version 3 congress policy show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     <policy-name>
```

Show policy properties.

Positional arguments:

<policy-name> Name of policy

Optional arguments:

-h, --help show this help message and exit

openstack congress policy simulate

```
usage: openstack --os-identity-api-version 3 congress policy simulate [-h] [--delta]
↪ [--trace]
                                     <policy> <query> <sequence>
                                     <action_policy>
```

Show the result of simulation.

Positional arguments:

<policy> Name of the policy

<query> String representing query (policy rule or literal)

<sequence> String representing sequence of updates/actions

<action_policy> Name of the policy with actions

Optional arguments:

-h, --help show this help message and exit

--delta Return difference in query caused by update sequence

--trace Include trace describing computation

openstack congress policy table list

```
usage: openstack --os-identity-api-version 3 congress policy table list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     <policy-name>
```

List policy tables.

Positional arguments:

<policy-name> Name of the policy

Optional arguments:

-h, --help show this help message and exit

openstack congress policy table show

```
usage: openstack --os-identity-api-version 3 congress policy table show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     <policy-name> <table-id>
```

Show policy table properties.

Positional arguments:

<policy-name> Name of policy

<table-id> Table id

Optional arguments:

-h, --help show this help message and exit

openstack console log show

```
usage: openstack --os-identity-api-version 3 console log show [-h] [--lines <num-
↵lines>] <server>
```

Show server's console output

Positional arguments:

<server> Server to show console log (name or ID)

Optional arguments:

-h, --help show this help message and exit

--lines <num-lines> Number of lines to display from the end of the log (default=all)

openstack console url show

```
usage: openstack --os-identity-api-version 3 console url show [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--novnc | --xvpvnc | --spice]
                                <server>
```

Show server's remote console URL

Positional arguments:

<server> Server to show URL (name or ID)

Optional arguments:

-h, --help show this help message and exit

--novnc Show noVNC console URL (default)

--xvpvnc Show xpvnc console URL

--spice Show SPICE console URL

openstack consumer create

```
usage: openstack --os-identity-api-version 3 consumer create [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--description <description>]
```

Create new consumer

Optional arguments:

-h, --help show this help message and exit

--description <description> New consumer description

openstack consumer delete

```
usage: openstack --os-identity-api-version 3 consumer delete [-h] <consumer>
```

Delete consumer

Positional arguments:

<consumer> Consumer to delete

Optional arguments:

-h, --help show this help message and exit

openstack consumer list

```
usage: openstack --os-identity-api-version 3 consumer list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List consumers

Optional arguments:

-h, --help show this help message and exit

openstack consumer set

```
usage: openstack --os-identity-api-version 3 consumer set [-h] [--description
↪<description>] <consumer>
```

Set consumer properties

Positional arguments:

<consumer> Consumer to modify

Optional arguments:

-h, --help show this help message and exit

--description <description> New consumer description

openstack consumer show

```
usage: openstack --os-identity-api-version 3 consumer show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        <consumer>
```

Display consumer details

Positional arguments:

<consumer> Consumer to display

Optional arguments:

-h, --help show this help message and exit

openstack container create

```
usage: openstack --os-identity-api-version 3 container create [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        <container-name> [<container-name> ...]
```

Create new container

Positional arguments:

<container-name> New container name(s)

Optional arguments:

-h, --help show this help message and exit

openstack container delete

```
usage: openstack --os-identity-api-version 3 container delete [-h] [--recursive]
      <container> [<container> ...]
```

Delete container

Positional arguments:

<container> Container(s) to delete

Optional arguments:

-h, --help show this help message and exit

--recursive, -r Recursively delete objects and container

openstack container list

```
usage: openstack --os-identity-api-version 3 container list [-h] [-f {csv,html,json,
↪table,value,yaml}]
      [-c COLUMN] [--max-width <integer>]
      [--noindent]
      [--quote {all,minimal,none,nonnumeric}]
      [--prefix <prefix>] [--marker <marker>]
      [--end-marker <end-marker>] [--limit <limit>]
      [--long] [--all]
```

List containers

Optional arguments:

-h, --help show this help message and exit

--prefix <prefix> Filter list using <prefix>

--marker <marker> Anchor for paging

--end-marker <end-marker> End anchor for paging

--limit <limit> Limit the number of containers returned

--long List additional fields in output

--all List all containers (default is 10000)

openstack container save

```
usage: openstack --os-identity-api-version 3 container save [-h] <container>
```

Save container contents locally

Positional arguments:

<container> Container to save

Optional arguments:

-h, --help show this help message and exit

openstack container set

```
usage: openstack --os-identity-api-version 3 container set [-h] --property <key=value>
↪ <container>
```

Set container properties

Positional arguments:

<container> Container to modify

Optional arguments:

-h, --help show this help message and exit

--property <key=value> Set a property on this container (repeat option to set multiple properties)

openstack container show

```
usage: openstack --os-identity-api-version 3 container show [-h] [-f {html,json,shell,
↪ table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        <container>
```

Display container details

Positional arguments:

<container> Container to display

Optional arguments:

-h, --help show this help message and exit

openstack container unset

```
usage: openstack --os-identity-api-version 3 container unset [-h] --property <key>
↪ <container>
```

Unset container properties

Positional arguments:

<container> Container to modify

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from container (repeat option to remove multiple properties)

openstack credential create

```
usage: openstack --os-identity-api-version 3 credential create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--type <type>] [--project <project>]
                        <user> <data>
```

Create credential command

Positional arguments:

<user> Name or ID of user that owns the credential

<data> New credential data

Optional arguments:

-h, --help show this help message and exit

--type <type> New credential type

--project <project> Project name or ID which limits the scope of the credential

openstack credential delete

```
usage: openstack --os-identity-api-version 3 credential delete [-h] <credential-id>
```

Delete credential command

Positional arguments:

<credential-id> ID of credential to delete

Optional arguments:

-h, --help show this help message and exit

openstack credential list

```
usage: openstack --os-identity-api-version 3 credential list [-h] [-f {csv,html,json,
↵table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List credential command

Optional arguments:

-h, --help show this help message and exit

openstack credential set


```
usage: openstack --os-identity-api-version 3 credential set [-h] --user <user> --type
      ↪<type> --data <data>
                                [--project <project>]
                                <credential-id>
```

Set credential command

Positional arguments:

<credential-id> ID of credential to change

Optional arguments:

-h, --help show this help message and exit

--user <user> Name or ID of user that owns the credential

--type <type> New credential type

--data <data> New credential data

--project <project> Project name or ID which limits the scope of the credential

openstack credential show

```
usage: openstack --os-identity-api-version 3 credential show [-h] [-f {html,json,
      ↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <credential-id>
```

Show credential command

Positional arguments:

<credential-id> ID of credential to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing cluster create

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN]
                                [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--name <name>]
                                [--cluster-template <cluster-template>]
                                [--image <image>]
                                [--description <description>]
                                [--user-keypair <keypair>]
                                [--neutron-network <network>]
                                [--count <count>] [--public]
                                [--protected] [--transient]
                                [--json <filename>] [--wait]
```

Creates cluster

Optional arguments:

- h, --help** show this help message and exit
- name <name>** Name of the cluster [REQUIRED if JSON is not provided]
- cluster-template <cluster-template>** Cluster template name or ID [REQUIRED if JSON is not provided]
- image <image>** Image that will be used for cluster deployment (Name or ID) [REQUIRED if JSON is not provided]
- description <description>** Description of the cluster
- user-keypair <keypair>** User keypair to get acces to VMs after cluster creation
- neutron-network <network>** Instances of the cluster will get fixed IP addresses in this network. (Name or ID should be provided)
- count <count>** Number of clusters to be created
- public** Make the cluster public (Visible from other tenants)
- protected** Make the cluster protected
- transient** Create transient cluster
- json <filename>** JSON representation of the cluster. Other arguments (except for **--wait**) will not be taken into account if this one is provided
- wait** Wait for the cluster creation to complete

openstack dataprocessing cluster delete

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster delete [-h] [--
↪wait]
                                <cluster> [<cluster> ...]
```

Deletes cluster

Positional arguments:

<cluster> Name(s) or id(s) of the cluster(s) to delete

Optional arguments:

- h, --help** show this help message and exit
- wait** Wait for the cluster(s) delete to complete

openstack dataprocessing cluster list

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN]
                                [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--long] [--plugin <plugin>]
```

```
[--version <version>]
[--name <name-substring>]
```

Lists clusters

Optional arguments:

- h, --help** show this help message and exit
- long** List additional fields in output
- plugin <plugin>** List clusters with specific plugin
- version <version>** List clusters with specific version of the plugin
- name <name-substring>** List clusters with specific substring in the name

openstack dataprocessing cluster scale

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster scale [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--instances <node-group-
→template:instances_count> [<node-group-template:instances_count> ...]]
                                         [--json <filename>] [--wait]
                                         <cluster>
```

Scales cluster

Positional arguments:

<cluster> Name or ID of the cluster

Optional arguments:

- h, --help** show this help message and exit
- instances <node-group-template:instances_count> [<node-group-template:instances_count> .**
Node group templates and number of their instances to be scale to [REQUIRED if JSON is not provided]
- json <filename>** JSON representation of the cluster scale object. Other arguments (except for --wait) will not be taken into account if this one is provided
- wait** Wait for the cluster scale to complete

openstack dataprocessing cluster show

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--verification]
                                         <cluster>
```

Display cluster details

Positional arguments:

<cluster> Name or id of the cluster to display

Optional arguments:

-h, --help show this help message and exit

--verification List additional fields for verifications

openstack dataprocessing cluster template create

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster template create [-
↪h]
                                     [-f {html,json,shell,table,
↪value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--prefix PREFIX]
                                     [--name <name>]
                                     [--node-groups <node-
↪group:instances_count> [<node-group:instances_count> ...]]
                                     [--anti-affinity <anti-
↪affinity> [<anti-affinity> ...]]
                                     [--description <description>]
                                     [--autoconfig]
                                     [--public]
                                     [--protected]
                                     [--json <filename>]
                                     [--shares <filename>]
                                     [--configs <filename>]
```

Creates cluster template

Optional arguments:

-h, --help show this help message and exit

--name <name> Name of the cluster template [REQUIRED if JSON is not provided]

--node-groups <node-group:instances_count> [<node-group:instances_count> ...]
List of the node groups(names or IDs) and numbers of instances for each one of them [REQUIRED if JSON is not provided]

--anti-affinity <anti-affinity> [<anti-affinity> ...] List of processes that should be added to an anti- affinity group

--description <description> Description of the cluster template

--autoconfig If enabled, instances of the cluster will be automatically configured

--public Make the cluster template public (Visible from other tenants)

--protected Make the cluster template protected

--json <filename> JSON representation of the cluster template. Other arguments will not be taken into account if this one is provided

--shares <filename> JSON representation of the manila shares

--configs <filename> JSON representation of the cluster template configs

openstack dataprocessing cluster template delete

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster template delete [-h]
<cluster-template>
[<cluster-template> ...]
```

Deletes cluster template

Positional arguments:

<cluster-template> Name(s) or id(s) of the cluster template(s) to delete

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing cluster template list

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster template list [-h]
[-f {csv,html,json,table,value,
↪yaml}]
[-c COLUMN]
[--max-width <integer>]
[--noindent]
[--quote {all,minimal,none,
↪nonnumeric}]
[--long]
[--plugin <plugin>]
[--version <version>]
[--name <name-substring>]
```

Lists cluster templates

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

--plugin <plugin> List cluster templates for specific plugin

--version <version> List cluster templates with specific version of the plugin

--name <name-substring> List cluster templates with specific substring in the name

openstack dataprocessing cluster template show

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster template show [-h]
[-f {html,json,shell,table,
↪value,yaml}]
[-c COLUMN]
[--max-width <integer>]
[--noindent]
[--prefix PREFIX]
<cluster-template>
```

Display cluster template details

Positional arguments:

<cluster-template> Name or id of the cluster template to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing cluster template update

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster template update [-
↪h]
                                                    [-f {html,json,shell,table,
↪value,yaml}]
                                                    [-c COLUMN]
                                                    [--max-width <integer>]
                                                    [--noindent]
                                                    [--prefix PREFIX]
                                                    [--name <name>]
                                                    [--node-groups <node-
↪group:instances_count> [<node-group:instances_count> ...]]
                                                    [--anti-affinity <anti-
↪affinity> [<anti-affinity> ...]]
                                                    [--description <description>]
                                                    [--autoconfig-enable | --
↪autoconfig-disable]
                                                    [--public | --private]
                                                    [--protected | --unprotected]
                                                    [--json <filename>]
                                                    [--shares <filename>]
                                                    [--configs <filename>]
                                                    <cluster-template>
```

Updates cluster template

Positional arguments:

<cluster-template> Name or ID of the cluster template [REQUIRED]

Optional arguments:

-h, --help show this help message and exit

--name <name> New name of the cluster template

--node-groups <node-group:instances_count> [<node-group:instances_count> ...]
List of the node groups(names or IDs) and numbers of instances for each one of them

--anti-affinity <anti-affinity> [<anti-affinity> ...] List of processes that should be added to an anti- affinity group

--description <description> Description of the cluster template

--autoconfig-enable Instances of the cluster will be automatically configured

--autoconfig-disable Instances of the cluster will not be automatically configured

--public Make the cluster template public (Visible from other tenants)

--private Make the cluster template private (Visible only from this tenant)

- protected** Make the cluster template protected
- unprotected** Make the cluster template unprotected
- json <filename>** JSON representation of the cluster template. Other arguments will not be taken into account if this one is provided
- shares <filename>** JSON representation of the manila shares
- configs <filename>** JSON representation of the cluster template configs

openstack dataprocessing cluster update

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster update [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--name <name>]
                                         [--description <description>]
                                         [--shares <filename>]
                                         [--public | --private]
                                         [--protected | --unprotected]
                                         <cluster>
```

Updates cluster

Positional arguments:

<cluster> Name or ID of the cluster

Optional arguments:

- h, --help** show this help message and exit
- name <name>** New name of the cluster
- description <description>** Description of the cluster
- shares <filename>** JSON representation of the manila shares
- public** Make the cluster public (Visible from other tenants)
- private** Make the cluster private (Visible only from this tenant)
- protected** Make the cluster protected
- unprotected** Make the cluster unprotected

openstack dataprocessing cluster verification

```
usage: openstack --os-identity-api-version 3 dataprocessing cluster verification [-h]
                                         [-f {html,json,shell,table,value,
↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         (--start | --show)
                                         <cluster>
```

Updates cluster verifications

Positional arguments:

<cluster> Name or ID of the cluster

Optional arguments:

-h, --help show this help message and exit

--start Start health verification for the cluster

--show Show health of the cluster

openstack dataprocessing data source create

```
usage: openstack --os-identity-api-version 3 dataprocessing data source create [-h]
                                         [-f {html,json,shell,table,value,
                                         ↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX] --type
                                         <type>--url <url>
                                         [--username <username>]
                                         [--password <password>]
                                         [--description <description>]
                                         [--public] [--protected]
                                         <name>
```

Creates data source

Positional arguments:

<name> Name of the data source

Optional arguments:

-h, --help show this help message and exit

--type <type> Type of the data source (swift, hdfs, maprfs, manila) [REQUIRED]

--url <url> Url for the data source [REQUIRED]

--username <username> Username for accessing the data source url

--password <password> Password for accessing the data source url

--description <description> Description of the data source

--public Make the data source public

--protected Make the data source protected

openstack dataprocessing data source delete

```
usage: openstack --os-identity-api-version 3 dataprocessing data source delete [-h]
                                         <data-source>
                                         [<data-source> ...]
```


Delete data source

Positional arguments:

<data-source> Name(s) or id(s) of the data source(s) to delete

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing data source list

```
usage: openstack --os-identity-api-version 3 dataprocessing data source list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,
↪nonnumeric}]
                                         [--long] [--type <type>]
```

Lists data sources

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

--type <type> List data sources of specific type (swift, hdfs, maprfs, manila)

openstack dataprocessing data source show

```
usage: openstack --os-identity-api-version 3 dataprocessing data source show [-h]
                                         [-f {html,json,shell,table,value,
↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         <data-source>
```

Display data source details

Positional arguments:

<data-source> Name or id of the data source to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing data source update

```
usage: openstack --os-identity-api-version 3 dataprocessing data source update [-h]
                                         [-f {html,json,shell,table,value,
↪yaml}]
                                         [-c COLUMN]
```

```

[--max-width <integer>]
[--noindent]
[--prefix PREFIX]
[--name <name>]
[--type <type>]
[--url <url>]
[--username <username>]
[--password <password>]
[--description <description>]
[--public | --private]
[--protected | --unprotected]
<data-source>

```

Update data source

Positional arguments:

<data-source> Name or id of the data source

Optional arguments:

-h, --help show this help message and exit

--name <name> New name of the data source

--type <type> Type of the data source (swift, hdfs, maprfs, manila)

--url <url> Url for the data source

--username <username> Username for accessing the data source url

--password <password> Password for accessing the data source url

--description <description> Description of the data source

--public Make the data source public (Visible from other tenants)

--private Make the data source private (Visible only from this tenant)

--protected Make the data source protected

--unprotected Make the data source unprotected

openstack dataprocessing image list

```

usage: openstack --os-identity-api-version 3 dataprocessing image list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--long] [--name <name-regex>]
                                [--tags <tag> [<tag> ...]]
                                [--username <username>]

```

Lists registered images

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

--name <name-regex> Regular expression to match image name

--tags <tag> [<tag> ...] List images with specific tag(s)

--username <username> List images with specific username

openstack dataprocessing image register

```
usage: openstack --os-identity-api-version 3 dataprocessing image register [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     --username <username>
                                     [--description <description>]
                                     <image>
```

Register an image

Positional arguments:

<image> Name or ID of the image to register

Optional arguments:

-h, --help show this help message and exit

--username <username> Username of privileged user in the image [REQUIRED]

--description <description> Description of the image. If not provided, description of the image will be reset to empty

openstack dataprocessing image show

```
usage: openstack --os-identity-api-version 3 dataprocessing image show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     <image>
```

Display image details

Positional arguments:

<image> Name or id of the image to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing image tags add

```
usage: openstack --os-identity-api-version 3 dataprocessing image tags add [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     --tags <tag> [<tag> ...]
                                     <image>
```

Add image tags

Positional arguments:

<image> Name or id of the image

Optional arguments:

-h, --help show this help message and exit

--tags <tag> [<tag> ...] Tag(s) to add [REQUIRED]

openstack dataprocessing image tags remove

```
usage: openstack --os-identity-api-version 3 dataprocessing image tags remove [-h]
                                         [-f {html,json,shell,table,value,
→yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         [--tags <tag> [<tag> ...] |
                                         --all]
                                         <image>
```

Remove image tags

Positional arguments:

<image> Name or id of the image

Optional arguments:

-h, --help show this help message and exit

--tags <tag> [<tag> ...] Tag(s) to remove

--all Remove all tags from image

openstack dataprocessing image tags set

```
usage: openstack --os-identity-api-version 3 dataprocessing image tags set [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         --tags <tag> [<tag> ...]
                                         <image>
```

Set image tags (Replace current image tags with provided ones)

Positional arguments:

<image> Name or id of the image

Optional arguments:

-h, --help show this help message and exit

--tags <tag> [<tag> ...] Tag(s) to set [REQUIRED]

openstack dataprocessing image unregister

```
usage: openstack --os-identity-api-version 3 dataprocessing image unregister [-h]
↪<image> [<image> ...]
```

Unregister image(s)

Positional arguments:

<image> Name(s) or id(s) of the image(s) to unregister

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing job binary create

```
usage: openstack --os-identity-api-version 3 dataprocessing job binary create [-h]
                                         [-f {html,json,shell,table,value,
↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         [--name <name>]
                                         [--data <file> | --url <url>]
                                         [--description <description>]
                                         [--username <username>]
                                         [--password <password> | --password-
↪prompt]
                                         [--public] [--protected]
                                         [--json <filename>]
```

Creates job binary

Optional arguments:

-h, --help show this help message and exit

--name <name> Name of the job binary [REQUIRED if JSON is not provided]

--data <file> File that will be stored in the internal DB [REQUIRED if JSON and URL are not provided]

--url <url> URL for the job binary [REQUIRED if JSON and file are not provided]

--description <description> Description of the job binary

--username <username> Username for accessing the job binary URL

--password <password> Password for accessing the job binary URL

--password-prompt Prompt interactively for password

--public Make the job binary public

--protected Make the job binary protected

--json <filename> JSON representation of the job binary. Other arguments will not be taken into account if this one is provided

openstack dataprocessing job binary delete

```
usage: openstack --os-identity-api-version 3 dataprocessing job binary delete [-h]
                                         <job-binary>
                                         [<job-binary> ...]
```

Deletes job binary

Positional arguments:

<job-binary> Name(s) or id(s) of the job binary(ies) to delete

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing job binary download

```
usage: openstack --os-identity-api-version 3 dataprocessing job binary download [-h]
↪ [--file <file>]
                                         <job-binary>
```

Downloads job binary

Positional arguments:

<job-binary> Name or ID of the job binary to download

Optional arguments:

-h, --help show this help message and exit

--file <file> Destination file (defaults to job binary name)

openstack dataprocessing job binary list

```
usage: openstack --os-identity-api-version 3 dataprocessing job binary list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}
↪ ]
                                         [--long]
                                         [--name <name-substring>]
```

Lists job binaries

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

--name <name-substring> List job binaries with specific substring in the name

openstack dataprocessing job binary show

```
usage: openstack --os-identity-api-version 3 dataprocessing job binary show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         <job-binary>
```

Display job binary details

Positional arguments:

<job-binary> Name or ID of the job binary to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing job binary update

```
usage: openstack --os-identity-api-version 3 dataprocessing job binary update [-h]
                                         [-f {html,json,shell,table,value,
                                         ↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         [--name <name>]
                                         [--url <url>]
                                         [--description <description>]
                                         [--username <username>]
                                         [--password <password> | --password-
                                         ↪prompt]
                                         [--public | --private]
                                         [--protected | --unprotected]
                                         [--json <filename>]
                                         <job-binary>
```

Updates job binary

Positional arguments:

<job-binary> Name or ID of the job binary

Optional arguments:

-h, --help show this help message and exit

--name <name> New name of the job binary

--url <url> URL for the job binary [Internal DB URL can not be updated]

--description <description> Description of the job binary

--username <username> Username for accessing the job binary URL

--password <password> Password for accessing the job binary URL

--password-prompt Prompt interactively for password

--public Make the job binary public (Visible from other tenants)
--private Make the job binary private (Visible only from this tenant)
--protected Make the job binary protected
--unprotected Make the job binary unprotected
--json <filename> JSON representation of the update object. Other arguments will not be taken into account if this one is provided

openstack dataprocessing job delete

```
usage: openstack --os-identity-api-version 3 dataprocessing job delete [-h] [--wait]
↪<job> [<job> ...]
```

Deletes job

Positional arguments:

<job> ID(s) of the job(s) to delete

Optional arguments:

-h, --help show this help message and exit

--wait Wait for the job(s) delete to complete

openstack dataprocessing job execute

```
usage: openstack --os-identity-api-version 3 dataprocessing job execute [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--job-template <job-template>]
                                     [--cluster <cluster>]
                                     [--input <input>]
                                     [--output <output>]
                                     [--params <name:value> [<name:value> ...]]
                                     [--args <argument> [<argument> ...]]
                                     [--public] [--protected]
                                     [--config-json <filename> | --configs
↪<name:value> [<name:value> ...]]
                                     [--interface <filename>]
                                     [--json <filename>]
```

Executes job

Optional arguments:

-h, --help show this help message and exit

--job-template <job-template> Name or ID of the job template [REQUIRED if JSON is not provided]

--cluster <cluster> Name or ID of the cluster [REQUIRED if JSON is not provided]

--input <input> Name or ID of the input data source

--output <output> Name or ID of the output data source

--params <name:value> [<name:value> ...] Parameters to add to the job

--args <argument> [<argument> ...] Arguments to add to the job

--public Make the job public

--protected Make the job protected

--config-json <filename> JSON representation of the job configs

--configs <name:value> [<name:value> ...] Configs to add to the job

--interface <filename> JSON representation of the interface

--json <filename> JSON representation of the job. Other arguments will not be taken into account if this one is provided

openstack dataprocessing job list

```
usage: openstack --os-identity-api-version 3 dataprocessing job list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--long] [--status <status>]
```

Lists jobs

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

--status <status> List jobs with specific status

openstack dataprocessing job show

```
usage: openstack --os-identity-api-version 3 dataprocessing job show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <job>
```

Display job details

Positional arguments:

<job> ID of the job to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing job template create

```
usage: openstack --os-identity-api-version 3 dataprocessing job template create [-h]
                                         [-f {html,json,shell,table,value,
↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         [--name <name>]
                                         [--type <type>]
                                         [--mains <main> [<main> ...]]
                                         [--libs <lib> [<lib> ...]]
                                         [--description <description>]
                                         [--public] [--protected]
                                         [--interface <filename>]
                                         [--json <filename>]
```

Creates job template

Optional arguments:

-h, --help show this help message and exit

--name <name> Name of the job template [REQUIRED if JSON is not provided]

--type <type> Type of the job (Hive, Java, MapReduce, Storm, Pig, Shell, MapReduce.Streaming, Spark) [REQUIRED if JSON is not provided]

--mains <main> [<main> ...] Name(s) or ID(s) for job's main job binary(s)

--libs <lib> [<lib> ...] Name(s) or ID(s) for job's lib job binary(s)

--description <description> Description of the job template

--public Make the job template public

--protected Make the job template protected

--interface <filename> JSON representation of the interface

--json <filename> JSON representation of the job template

openstack dataprocessing job template delete

```
usage: openstack --os-identity-api-version 3 dataprocessing job template delete [-h]
                                         <job-template>
                                         [<job-template> ...]
```

Deletes job template

Positional arguments:

<job-template> Name(s) or id(s) of the job template(s) to delete

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing job template list

```
usage: openstack --os-identity-api-version 3 dataprocessing job template list [-h]
                                         [-f {csv,html,json,table,value,yaml}
                                         ↪]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,
                                         ↪nonnumeric}]
                                         [--long] [--type <type>]
                                         [--name <name-substring>]
```

Lists job templates

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

--type <type> List job templates of specific type

--name <name-substring> List job templates with specific substring in the name

openstack dataprocessing job template show

```
usage: openstack --os-identity-api-version 3 dataprocessing job template show [-h]
                                         [-f {html,json,shell,table,value,
                                         ↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         <job-template>
```

Display job template details

Positional arguments:

<job-template> Name or ID of the job template to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing job template update

```
usage: openstack --os-identity-api-version 3 dataprocessing job template update [-h]
                                         [-f {html,json,shell,table,value,
                                         ↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         [--name <name>]
                                         [--description <description>]
                                         [--public | --private]
```

```
[--protected | --unprotected]
<job-template>
```

Updates job template

Positional arguments:

<job-template> Name or ID of the job template

Optional arguments:

-h, --help show this help message and exit

--name <name> New name of the job template

--description <description> Description of the job template

--public Make the job template public (Visible from other tenants)

--private Make the job_template private (Visible only from this tenant)

--protected Make the job template protected

--unprotected Make the job template unprotected

openstack dataprocessing job type configs get

```
usage: openstack --os-identity-api-version 3 dataprocessing job type configs get [-h]
      ↪[--file <file>]
                                     <job-type>
```

Get job type configs

Positional arguments:

<job-type> Type of the job to provide config information about

Optional arguments:

-h, --help show this help message and exit

--file <file> Destination file (defaults to job type)

openstack dataprocessing job type list

```
usage: openstack --os-identity-api-version 3 dataprocessing job type list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--type <type>]
                                     [--plugin <plugin>]
                                     [--version <version>]
```

Lists job types supported by plugins

Optional arguments:

-h, --help show this help message and exit

--type <type> Get information about specific job type

--plugin <plugin> Get only job types supported by this plugin

--version <version> Get only job types supported by specific version of the plugin. This parameter will be taken into account only if plugin is provided

openstack dataprocessing job update

```
usage: openstack --os-identity-api-version 3 dataprocessing job update [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--public | --private]
                                [--protected | --unprotected]
                                <job>
```

Updates job

Positional arguments:

<job> ID of the job to update

Optional arguments:

-h, --help show this help message and exit

--public Make the job public (Visible from other tenants)

--private Make the job private (Visible only from this tenant)

--protected Make the job protected

--unprotected Make the job unprotected

openstack dataprocessing node group template create

```
usage: openstack --os-identity-api-version 3 dataprocessing node group template_
↪create [-h]
                                [-f {html,json,shell,table,
↪value,yaml}]
                                [-c COLUMN]
                                [--max-width <integer>]
                                [--noindent]
                                [--prefix PREFIX]
                                [--name <name>]
                                [--plugin <plugin>]
                                [--version <version>]
                                [--processes <processes> [
↪<processes> ...]]
                                [--flavor <flavor>]
                                [--security-groups
↪<security-groups> [<security-groups> ...]]
                                [--auto-security-group]
                                [--availability-zone
↪<availability-zone>]
                                [--floating-ip-pool
↪<floating-ip-pool>]
                                [--volumes-per-node
↪<volumes-per-node>]
                                [--volumes-size <volumes-
↪size>]
```

```

↪type>]                                     [--volumes-type <volumes-
                                           [--volumes-availability-
↪zone <volumes-availability-zone>]         [--volumes-mount-prefix
                                           [--volumes-locality]
↪<volumes-mount-prefix>]                 [--description
                                           [--autoconfig]
                                           [--proxy-gateway]
                                           [--public]
                                           [--protected]
                                           [--json <filename>]
                                           [--shares <filename>]
↪<description>]                           [--configs <filename>]

```

Creates node group template

Optional arguments:

-h, --help show this help message and exit

--name <name> Name of the node group template [REQUIRED if JSON is not provided]

--plugin <plugin> Name of the plugin [REQUIRED if JSON is not provided]

--version <version> Version of the plugin [REQUIRED if JSON is not provided]

--processes <processes> [<processes> ...] List of the processes that will be launched on each instance [REQUIRED if JSON is not provided]

--flavor <flavor> Name or ID of the flavor [REQUIRED if JSON is not provided]

--security-groups <security-groups> [<security-groups> ...] List of the security groups for the instances in this node group

--auto-security-group Indicates if an additional security group should be created for the node group

--availability-zone <availability-zone> Name of the availability zone where instances will be created

--floating-ip-pool <floating-ip-pool> ID of the floating IP pool

--volumes-per-node <volumes-per-node> Number of volumes attached to every node

--volumes-size <volumes-size> Size of volumes attached to node (GB). This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-type <volumes-type> Type of the volumes. This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-availability-zone <volumes-availability-zone> Name of the availability zone where volumes will be created. This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-mount-prefix <volumes-mount-prefix> Prefix for mount point directory. This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-locality If enabled, instance and attached volumes will be created on the same physical host. This parameter will be taken into account only if volumes-per-node is set and non-zero

--description <description> Description of the node group template

- autoconfig** If enabled, instances of the node group will be automatically configured
- proxy-gateway** If enabled, instances of the node group will be used to access other instances in the cluster
- public** Make the node group template public (Visible from other tenants)
- protected** Make the node group template protected
- json <filename>** JSON representation of the node group template. Other arguments will not be taken into account if this one is provided
- shares <filename>** JSON representation of the manila shares
- configs <filename>** JSON representation of the node group template configs

openstack dataprocessing node group template delete

```
usage: openstack --os-identity-api-version 3 dataprocessing node group template_
↪delete [-h]
                                           <node-group-template>
                                           [<node-group-template> ...]
```

Deletes node group template

Positional arguments:

<node-group-template> Name(s) or id(s) of the node group template(s) to delete

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing node group template list

```
usage: openstack --os-identity-api-version 3 dataprocessing node group template list_
↪[-h]
                                           [-f {csv,html,json,table,
↪value,yaml}]
                                           [-c COLUMN]
                                           [--max-width <integer>]
                                           [--noindent]
                                           [--quote {all,minimal,none,
↪nonnumeric}]
                                           [--long]
                                           [--plugin <plugin>]
                                           [--version <version>]
                                           [--name <name-substring>]
```

Lists node group templates

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

--plugin <plugin> List node group templates for specific plugin

--version <version> List node group templates with specific version of the plugin

--name <name-substring> List node group templates with specific substring in the name

openstack dataprocessing node group template show

```
usage: openstack --os-identity-api-version 3 dataprocessing node group template show_
↪ [-h]
                                     [-f {html,json,shell,table,
↪ value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--prefix PREFIX]
                                     <node-group-template>
```

Display node group template details

Positional arguments:

<node-group-template> Name or id of the node group template to display

Optional arguments:

-h, --help show this help message and exit

openstack dataprocessing node group template update

```
usage: openstack --os-identity-api-version 3 dataprocessing node group template_
↪ update [-h]
                                     [-f {html,json,shell,table,
↪ value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--prefix PREFIX]
                                     [--name <name>]
                                     [--plugin <plugin>]
                                     [--version <version>]
                                     [--processes <processes> [
↪ <processes> ...]]
                                     [--security-groups
↪ <security-groups> [<security-groups> ...]]
                                     [--auto-security-group-
↪ enable | --auto-security-group-disable]
                                     [--availability-zone
↪ <availability-zone>]
                                     [--flavor <flavor>]
                                     [--floating-ip-pool
↪ <floating-ip-pool>]
                                     [--volumes-per-node
↪ <volumes-per-node>]
                                     [--volumes-size <volumes-
↪ size>]
                                     [--volumes-type <volumes-
↪ type>]
                                     [--volumes-availability-
↪ zone <volumes-availability-zone>]
                                     [--volumes-mount-prefix
↪ <volumes-mount-prefix>]
                                     [--volumes-locality-enable_
↪ | --volumes-locality-disable]
```


<code><description>]</code>	<code>[--description</code>
<code><autoconfig-disable]</code>	<code>[--autoconfig-enable --</code>
<code><proxy-gateway-disable]</code>	<code>[--proxy-gateway-enable -</code>
<code><unprotected]</code>	<code>[--public --private]</code>
	<code>[--protected --</code>
	<code>[--json <filename>]</code>
	<code>[--shares <filename>]</code>
	<code>[--configs <filename>]</code>
	<code><node-group-template></code>

Updates node group template

Positional arguments:

<node-group-template> Name or ID of the node group template

Optional arguments:

-h, --help show this help message and exit

--name <name> New name of the node group template

--plugin <plugin> Name of the plugin

--version <version> Version of the plugin

--processes <processes> [<processes> ...] List of the processes that will be launched on each instance

--security-groups <security-groups> [<security-groups> ...] List of the security groups for the instances in this node group

--auto-security-group-enable Additional security group should be created for the node group

--auto-security-group-disable Additional security group should not be created for the node group

--availability-zone <availability-zone> Name of the availability zone where instances will be created

--flavor <flavor> Name or ID of the flavor

--floating-ip-pool <floating-ip-pool> ID of the floating IP pool

--volumes-per-node <volumes-per-node> Number of volumes attached to every node

--volumes-size <volumes-size> Size of volumes attached to node (GB). This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-type <volumes-type> Type of the volumes. This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-availability-zone <volumes-availability-zone> Name of the availability zone where volumes will be created. This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-mount-prefix <volumes-mount-prefix> Prefix for mount point directory. This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-locality-enable Instance and attached volumes will be created on the same physical host. This parameter will be taken into account only if volumes-per-node is set and non-zero

--volumes-locality-disable Instance and attached volumes creation on the same physical host will not be regulated. This parameter will be taken into account only if volumes-per-node is set and non-zero

--description <description> Description of the node group template

--autoconfig-enable Instances of the node group will be automatically configured

--autoconfig-disable Instances of the node group will not be automatically configured

--proxy-gateway-enable Instances of the node group will be used to access other instances in the cluster

--proxy-gateway-disable Instances of the node group will not be used to access other instances in the cluster

--public Make the node group template public (Visible from other tenants)

--private Make the node group template private (Visible only from this tenant)

--protected Make the node group template protected

--unprotected Make the node group template unprotected

--json <filename> JSON representation of the node group template update fields. Other arguments will not be taken into account if this one is provided

--shares <filename> JSON representation of the manila shares

--configs <filename> JSON representation of the node group template configs

openstack dataprocessing plugin configs get

```
usage: openstack --os-identity-api-version 3 dataprocessing plugin configs get [-h] [-f <file>]
                                     <plugin> <version>
```

Get plugin configs

Positional arguments:

<plugin> Name of the plugin to provide config information about

<version> Version of the plugin to provide config information about

Optional arguments:

-h, --help show this help message and exit

--file <file> Destination file (defaults to plugin name)

openstack dataprocessing plugin list

```
usage: openstack --os-identity-api-version 3 dataprocessing plugin list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--long]
```

Lists plugins

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack dataprocessing plugin show

```
usage: openstack --os-identity-api-version 3 dataprocessing plugin show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--version VERSION]
                                     <plugin>
```

Display plugin details

Positional arguments:

<plugin> Name of the plugin to display

Optional arguments:

-h, --help show this help message and exit

--version VERSION Version of the plugin to display

openstack domain create

```
usage: openstack --os-identity-api-version 3 domain create [-h] [-f {html,json,shell,
→table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--description <description>]
                                     [--enable | --disable] [--or-show]
                                     <domain-name>
```

Create new domain

Positional arguments:

<domain-name> New domain name

Optional arguments:

-h, --help show this help message and exit

--description <description> New domain description

--enable Enable domain (default)

--disable Disable domain

--or-show Return existing domain

openstack domain delete

```
usage: openstack --os-identity-api-version 3 domain delete [-h] <domain>
```

Delete domain

Positional arguments:

<domain> Domain to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack domain list

```
usage: openstack --os-identity-api-version 3 domain list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List domains

Optional arguments:

-h, --help show this help message and exit

openstack domain set

```
usage: openstack --os-identity-api-version 3 domain set [-h] [--name <name>] [--
↪description <description>]
                                [--enable | --disable]
                                <domain>
```

Set domain properties

Positional arguments:

<domain> Domain to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> New domain name

--description <description> New domain description

--enable Enable domain

--disable Disable domain

openstack domain show

```
usage: openstack --os-identity-api-version 3 domain show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <domain>
```

Display domain details

Positional arguments:

<domain> Domain to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ec2 credentials create

```
usage: openstack --os-identity-api-version 3 ec2 credentials create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--project <project>] [--user <user>]
                                [--user-domain <user-domain>]
                                [--project-domain <project-domain>]
```

Create EC2 credentials

Optional arguments:

-h, --help show this help message and exit

--project <project> Create credentials in project (name or ID; default: current authenticated project)

--user <user> Create credentials for user (name or ID; default: current authenticated user)

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

openstack ec2 credentials delete

```
usage: openstack --os-identity-api-version 3 ec2 credentials delete [-h] [--user
↪<user>]
                                [--user-domain <user-domain>]
                                <access-key>
```

Delete EC2 credentials

Positional arguments:

<access-key> Credentials access key

Optional arguments:

-h, --help show this help message and exit

--user <user> Delete credentials for user (name or ID)

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

openstack ec2 credentials list

```
usage: openstack --os-identity-api-version 3 ec2 credentials list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

```
[--user <user>]
[--user-domain <user-domain>]
```

List EC2 credentials

Optional arguments:

-h, --help show this help message and exit

--user <user> Filter list by user (name or ID)

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

openstack ec2 credentials show

```
usage: openstack --os-identity-api-version 3 ec2 credentials show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--user <user>]
                                [--user-domain <user-domain>]
                                <access-key>
```

Display EC2 credentials details

Positional arguments:

<access-key> Credentials access key

Optional arguments:

-h, --help show this help message and exit

--user <user> Show credentials for user (name or ID)

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

openstack endpoint create

```
usage: openstack --os-identity-api-version 3 endpoint create [-h] [-f {html,json,
↵shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--region <region-id>] [--enable | --disable]
                                <service> <interface> <url>
```

Create new endpoint

Positional arguments:

<service> New endpoint service (name or ID)

<interface> New endpoint interface type (admin, public or internal)

<url> New endpoint URL

Optional arguments:

-h, --help show this help message and exit

--region <region-id> New endpoint region ID

--enable Enable endpoint (default)

--disable Disable endpoint

openstack endpoint delete

```
usage: openstack --os-identity-api-version 3 endpoint delete [-h] <endpoint-id>
```

Delete endpoint

Positional arguments:

<endpoint-id> Endpoint ID to delete

Optional arguments:

-h, --help show this help message and exit

openstack endpoint list

```
usage: openstack --os-identity-api-version 3 endpoint list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--service <service>] [--interface <interface>]
                        [--region <region-id>]
```

List endpoints

Optional arguments:

-h, --help show this help message and exit

--service <service> Filter by service

--interface <interface> Filter by interface type (admin, public or internal)

--region <region-id> Filter by region ID

openstack endpoint set

```
usage: openstack --os-identity-api-version 3 endpoint set [-h] [--region <region-id>]
                        [--interface <interface>] [--url <url>]
                        [--service <service>] [--enable | --disable]
                        <endpoint-id>
```

Set endpoint properties

Positional arguments:

<endpoint-id> Endpoint ID to modify

Optional arguments:

-h, --help show this help message and exit

--region <region-id> New endpoint region ID

--interface <interface> New endpoint interface type (admin, public or internal)
--url <url> New endpoint URL
--service <service> New endpoint service (name or ID)
--enable Enable endpoint
--disable Disable endpoint

openstack endpoint show

```
usage: openstack --os-identity-api-version 3 endpoint show [-h] [-f {html,json,shell,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <endpoint-id>
```

Display endpoint details

Positional arguments:

<endpoint-id> Endpoint ID to display

Optional arguments:

-h, --help show this help message and exit

openstack extension list

```
usage: openstack --os-identity-api-version 3 extension list [-h] [-f {csv,html,json,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--compute] [--identity] [--network]
                                [--volume] [--long]
```

List API extensions

Optional arguments:

-h, --help show this help message and exit

--compute List extensions for the Compute API

--identity List extensions for the Identity API

--network List extensions for the Network API

--volume List extensions for the Block Storage API

--long List additional fields in output

openstack federation domain list

```
usage: openstack --os-identity-api-version 3 federation domain list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
```



```
[--noindent]
[--quote {all,minimal,none,nonnumeric}]
```

List accessible domains

Optional arguments:

-h, --help show this help message and exit

openstack federation project list

```
usage: openstack --os-identity-api-version 3 federation project list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List accessible projects

Optional arguments:

-h, --help show this help message and exit

openstack federation protocol create

```
usage: openstack --os-identity-api-version 3 federation protocol create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN]
                                [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                --identity-provider
                                <identity-provider> --mapping
                                <mapping>
                                <name>
```

Create new federation protocol

Positional arguments:

<name> New federation protocol name (must be unique per identity provider)

Optional arguments:

-h, --help show this help message and exit

--identity-provider <identity-provider> Identity provider that will support the new federation protocol (name or ID) (required)

--mapping <mapping> Mapping that is to be used (name or ID) (required)

openstack federation protocol delete

```
usage: openstack --os-identity-api-version 3 federation protocol delete [-h] --
    ↪ identity-provider
                                <identity-provider>
                                <federation-protocol>
```

Delete federation protocol

Positional arguments:

<federation-protocol> Federation protocol to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

--identity-provider <identity-provider> Identity provider that supports <federation-protocol> (name or ID) (required)

openstack federation protocol list

```
usage: openstack --os-identity-api-version 3 federation protocol list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                --identity-provider
                                <identity-provider>
```

List federation protocols

Optional arguments:

-h, --help show this help message and exit

--identity-provider <identity-provider> Identity provider to list (name or ID) (required)

openstack federation protocol set

```
usage: openstack --os-identity-api-version 3 federation protocol set [-h] --identity-
    ↪provider
                                <identity-provider>
                                [--mapping <mapping>]
                                <name>
```

Set federation protocol properties

Positional arguments:

<name> Federation protocol to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--identity-provider <identity-provider> Identity provider that supports <federation-protocol> (name or ID) (required)

--mapping <mapping> Mapping that is to be used (name or ID)

openstack federation protocol show

```
usage: openstack --os-identity-api-version 3 federation protocol show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                --identity-provider
                                <identity-provider>
                                <federation-protocol>
```

Display federation protocol details

Positional arguments:

<federation-protocol> Federation protocol to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

--identity-provider <identity-provider> Identity provider that supports <federation-protocol> (name or ID) (required)

openstack flavor create

```
usage: openstack --os-identity-api-version 3 flavor create [-h] [-f {html,json,shell,
    ↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX] [--id <id>]
                                [--ram <size-mb>] [--disk <size-gb>]
                                [--ephemeral <size-gb>] [--swap <size-gb>]
                                [--vcpus <vcpus>] [--rxtx-factor <factor>]
                                [--public | --private]
                                <flavor-name>
```

Create new flavor

Positional arguments:

<flavor-name> New flavor name

Optional arguments:

-h, --help show this help message and exit

--id <id> Unique flavor ID; 'auto' creates a UUID (default: auto)

--ram <size-mb> Memory size in MB (default 256M)

--disk <size-gb> Disk size in GB (default 0G)

--ephemeral <size-gb> Ephemeral disk size in GB (default 0G)

--swap <size-gb> Swap space size in GB (default 0G)

--vcpus <vcpus> Number of vcpus (default 1)

--rxtx-factor <factor> RX/TX factor (default 1)

--public Flavor is available to other projects (default)

--private Flavor is not available to other projects

openstack flavor delete

```
usage: openstack --os-identity-api-version 3 flavor delete [-h] <flavor>
```

Delete flavor

Positional arguments:

<flavor> Flavor to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack flavor list

```
usage: openstack --os-identity-api-version 3 flavor list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--public | --private | --all] [--long]
                                [--marker <marker>] [--limit <limit>]
```

List flavors

Optional arguments:

-h, --help show this help message and exit

--public List only public flavors (default)

--private List only private flavors

--all List all flavors, whether public or private

--long List additional fields in output

--marker <marker> The last flavor ID of the previous page

--limit <limit> Maximum number of flavors to display

openstack flavor set

```
usage: openstack --os-identity-api-version 3 flavor set [-h] [--property <key=value>]
↪<flavor>
```

Set flavor properties

Positional arguments:

<flavor> Flavor to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key=value> Property to add or modify for this flavor (repeat option to set multiple properties)

openstack flavor show

```
usage: openstack --os-identity-api-version 3 flavor show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <flavor>
```

Display flavor details

Positional arguments:

<flavor> Flavor to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack flavor unset

```
usage: openstack --os-identity-api-version 3 flavor unset [-h] --property <key>
↪<flavor>
```

Unset flavor properties

Positional arguments:

<flavor> Flavor to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from flavor (repeat option to unset multiple properties)

openstack group add user

```
usage: openstack --os-identity-api-version 3 group add user [-h] [--group-domain
↪<group-domain>]
                                [--user-domain <user-domain>]
                                <group> <user>
```

Add user to group

Positional arguments:

<group> Group to contain <user> (name or ID)

<user> User to add to <group> (name or ID)

Optional arguments:

-h, --help show this help message and exit

--group-domain <group-domain> Domain the group belongs to (name or ID). This can be used in case collisions between group names exist.

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

openstack group contains user

```
usage: openstack --os-identity-api-version 3 group contains user [-h] [--group-domain
↪<group-domain>]
                                     [--user-domain <user-domain>]
                                     <group> <user>
```

Check user membership in group

Positional arguments:

<group> Group to check (name or ID)

<user> User to check (name or ID)

Optional arguments:

-h, --help show this help message and exit

--group-domain <group-domain> Domain the group belongs to (name or ID). This can be used in case collisions between group names exist.

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

openstack group create

```
usage: openstack --os-identity-api-version 3 group create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>] [--noindent]
                                     [--prefix PREFIX] [--domain <domain>]
                                     [--description <description>] [--or-show]
                                     <group-name>
```

Create new group

Positional arguments:

<group-name> New group name

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain to contain new group (name or ID)

--description <description> New group description

--or-show Return existing group

openstack group delete

```
usage: openstack --os-identity-api-version 3 group delete [-h] [--domain <domain>]
↪<group> [<group> ...]
```

Delete group(s)

Positional arguments:

<group> Group(s) to delete (name or ID)

Optional arguments:

- h, --help** show this help message and exit
- domain <domain>** Domain containing group(s) (name or ID)

openstack group list

```
usage: openstack --os-identity-api-version 3 group list [-h] [-f {csv,html,json,table,
↪value,yaml}]
                               [-c COLUMN] [--max-width <integer>] [--noindent]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--domain <domain>] [--user <user>]
                               [--user-domain <user-domain>] [--long]
```

List groups

Optional arguments:

- h, --help** show this help message and exit
- domain <domain>** Filter group list by <domain> (name or ID)
- user <user>** Filter group list by <user> (name or ID)
- user-domain <user-domain>** Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.
- long** List additional fields in output

openstack group remove user

```
usage: openstack --os-identity-api-version 3 group remove user [-h] [--group-domain
↪<group-domain>]
                               [--user-domain <user-domain>]
                               <group> <user>
```

Remove user from group

Positional arguments:

- <group>** Group containing <user> (name or ID)
- <user>** User to remove from <group> (name or ID)

Optional arguments:

- h, --help** show this help message and exit
- group-domain <group-domain>** Domain the group belongs to (name or ID). This can be used in case collisions between group names exist.
- user-domain <user-domain>** Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

openstack group set

```
usage: openstack --os-identity-api-version 3 group set [-h] [--domain <domain>] [--  
↪name <name>]                                [--description <description>]  
                                                <group>
```

Set group properties

Positional arguments:

<group> Group to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain containing <group> (name or ID)

--name <name> New group name

--description <description> New group description

openstack group show

```
usage: openstack --os-identity-api-version 3 group show [-h] [-f {html,json,shell,  
↪table,value,yaml}]                                [-c COLUMN] [--max-width <integer>] [--noindent]  
                                                [--prefix PREFIX] [--domain <domain>]  
                                                <group>
```

Display group details

Positional arguments:

<group> Group to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain containing <group> (name or ID)

openstack host list

```
usage: openstack --os-identity-api-version 3 host list [-h] [-f {csv,html,json,table,  
↪value,yaml}]                                [-c COLUMN] [--max-width <integer>] [--noindent]  
                                                [--quote {all,minimal,none,nonnumeric}]  
                                                [--zone <zone>]
```

List host command

Optional arguments:

-h, --help show this help message and exit

--zone <zone> Only return hosts in the availability zone.

openstack host show

```
usage: openstack --os-identity-api-version 3 host show [-h] [-f {csv,html,json,table,
↪value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                <host>
```

Show host command

Positional arguments:

<host> Name of host

Optional arguments:

-h, --help show this help message and exit

openstack hypervisor list

```
usage: openstack --os-identity-api-version 3 hypervisor list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--matching <hostname>]
```

List hypervisors

Optional arguments:

-h, --help show this help message and exit

--matching <hostname> Filter hypervisors using <hostname> substring

openstack hypervisor show

```
usage: openstack --os-identity-api-version 3 hypervisor show [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <hypervisor>
```

Display hypervisor details

Positional arguments:

<hypervisor> Hypervisor to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack hypervisor stats show

```
usage: openstack --os-identity-api-version 3 hypervisor stats show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
```

Display hypervisor stats details

Optional arguments:

-h, --help show this help message and exit

openstack identity provider create

```
usage: openstack --os-identity-api-version 3 identity provider create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--remote-id <remote-id> | --remote-id-file
↪<file-name>]
                                [--description <description>]
                                [--enable | --disable]
                                <name>
```

Create new identity provider

Positional arguments:

<name> New identity provider name (must be unique)

Optional arguments:

-h, --help show this help message and exit

--remote-id <remote-id> Remote IDs to associate with the Identity Provider (repeat to provide multiple values)

--remote-id-file <file-name> Name of a file that contains many remote IDs to associate with the identity provider, one per line

--description <description> New identity provider description

--enable Enable identity provider (default)

--disable Disable the identity provider

openstack identity provider delete

```
usage: openstack --os-identity-api-version 3 identity provider delete [-h] <identity-
↪provider>
```

Delete identity provider

Positional arguments:

<identity-provider> Identity provider to delete

Optional arguments:

-h, --help show this help message and exit

openstack identity provider list

```
usage: openstack --os-identity-api-version 3 identity provider list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List identity providers

Optional arguments:

-h, --help show this help message and exit

openstack identity provider set

```
usage: openstack --os-identity-api-version 3 identity provider set [-h] [--
↪description <description>]
                                [--remote-id <remote-id> | --remote-id-file
↪<file-name>]
                                [--enable | --disable]
                                <identity-provider>
```

Set identity provider properties

Positional arguments:

<identity-provider> Identity provider to modify

Optional arguments:

-h, --help show this help message and exit

--description <description> Set identity provider description

--remote-id <remote-id> Remote IDs to associate with the Identity Provider (repeat to provide multiple values)

--remote-id-file <file-name> Name of a file that contains many remote IDs to associate with the identity provider, one per line

--enable Enable the identity provider

--disable Disable the identity provider

openstack identity provider show

```
usage: openstack --os-identity-api-version 3 identity provider show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <identity-provider>
```

Display identity provider details

Positional arguments:

<identity-provider> Identity provider to display

Optional arguments:

-h, --help show this help message and exit

openstack image add project

```
usage: openstack --os-identity-api-version 3 image add project [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--project-domain <project-domain>]
                        <image> <project>
```

Associate project with image

Positional arguments:

<image> Image to share (name or ID)

<project> Project to associate with image (name or ID)

Optional arguments:

-h, --help show this help message and exit

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

openstack image create

```
usage: openstack --os-identity-api-version 3 image create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--id <id>]
                        [--container-format <container-format>]
                        [--disk-format <disk-format>]
                        [--min-disk <disk-gb>] [--min-ram <ram-mb>]
                        [--file <file>] [--volume <volume>] [--force]
                        [--protected | --unprotected]
                        [--public | --private] [--property <key=value>]
                        [--tag <tag>] [--project <project>]
                        [--project-domain <project-domain>]
                        <image-name>
```

Create/upload an image

Positional arguments:

<image-name> New image name

Optional arguments:

-h, --help show this help message and exit

--id <id> Image ID to reserve

--container-format <container-format> Image container format (default: bare)

--disk-format <disk-format> Image disk format (default: raw)

--min-disk <disk-gb> Minimum disk size needed to boot image, in gigabytes

--min-ram <ram-mb> Minimum RAM size needed to boot image, in megabytes

--file <file> Upload image from local file
--volume <volume> Create image from a volume
--force Force image creation if volume is in use (only meaningful with **--volume**)
--protected Prevent image from being deleted
--unprotected Allow image to be deleted (default)
--public Image is accessible to the public
--private Image is inaccessible to the public (default)
--property <key=value> Set a property on this image (repeat option to set multiple properties)
--tag <tag> Set a tag on this image (repeat option to set multiple tags)
--project <project> Set an alternate project on this image (name or ID)
--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

openstack image delete

```
usage: openstack --os-identity-api-version 3 image delete [-h] <image> [<image> ...]
```

Delete image(s)

Positional arguments:

<image> Image(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack image list

```
usage: openstack --os-identity-api-version 3 image list [-h] [-f {csv,html,json,table,
↪value,yaml}]
               [-c COLUMN] [--max-width <integer>] [--noindent]
               [--quote {all,minimal,none,nonnumeric}]
               [--public | --private | --shared]
               [--property <key=value>] [--long]
               [--sort <key>[:<direction>]] [--limit <limit>]
               [--marker <marker>]
```

List available images

Optional arguments:

-h, --help show this help message and exit

--public List only public images

--private List only private images

--shared List only shared images

--property <key=value> Filter output based on property

--long List additional fields in output

- sort <key>[:<direction>]** Sort output by selected keys and directions(asc or desc) (default: asc), multiple keys and directions can be specified separated by comma
- limit <limit>** Maximum number of images to display.
- marker <marker>** The last image (name or ID) of the previous page. Display list of images after marker. Display all images if not specified.

openstack image remove project

```
usage: openstack --os-identity-api-version 3 image remove project [-h] [--project-  
↪domain <project-domain>]   
                                <image> <project>
```

Disassociate project with image

Positional arguments:

- <image>** Image to unshare (name or ID)
- <project>** Project to disassociate with image (name or ID)

Optional arguments:

- h, --help** show this help message and exit
- project-domain <project-domain>** Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

openstack image save

```
usage: openstack --os-identity-api-version 3 image save [-h] [--file <filename>]   
↪<image>
```

Save an image locally

Positional arguments:

- <image>** Image to save (name or ID)

Optional arguments:

- h, --help** show this help message and exit
- file <filename>** Downloaded image save filename (default: stdout)

openstack image set

```
usage: openstack --os-identity-api-version 3 image set [-h] [--name <name>] [--min-  
↪disk <disk-gb>]   
                                [--min-ram <ram-mb>]   
                                [--container-format <container-format>]   
                                [--disk-format <disk-format>]   
                                [--protected | --unprotected]   
                                [--public | --private] [--property <key=value>]   
                                [--tag <tag>] [--architecture <architecture>]   
                                [--instance-id <instance-id>]   
                                [--kernel-id <kernel-id>] [--os-distro <os-distro>]   
                                [--os-version <os-version>]
```

```

[--ramdisk-id <ramdisk-id>]
[--deactivate | --activate] [--project <project>]
[--project-domain <project-domain>]
<image>

```

Set image properties

Positional arguments:

<image> Image to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> New image name

--min-disk <disk-gb> Minimum disk size needed to boot image, in gigabytes

--min-ram <ram-mb> Minimum RAM size needed to boot image, in megabytes

--container-format <container-format> Image container format (default: bare)

--disk-format <disk-format> Image disk format (default: raw)

--protected Prevent image from being deleted

--unprotected Allow image to be deleted (default)

--public Image is accessible to the public

--private Image is inaccessible to the public (default)

--property <key=value> Set a property on this image (repeat option to set multiple properties)

--tag <tag> Set a tag on this image (repeat option to set multiple tags)

--architecture <architecture> Operating system architecture

--instance-id <instance-id> ID of server instance used to create this image

--kernel-id <kernel-id> ID of kernel image used to boot this disk image

--os-distro <os-distro> Operating system distribution name

--os-version <os-version> Operating system distribution version

--ramdisk-id <ramdisk-id> ID of ramdisk image used to boot this disk image

--deactivate Deactivate the image

--activate Activate the image

--project <project> Set an alternate project on this image (name or ID)

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

openstack image show

```

usage: openstack --os-identity-api-version 3 image show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                    [-c COLUMN] [--max-width <integer>] [--noindent]
                    [--prefix PREFIX]
                    <image>

```

Display image details

Positional arguments:

<image> Image to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ip fixed add

```
usage: openstack --os-identity-api-version 3 ip fixed add [-h] <network> <server>
```

Add fixed IP address to server

Positional arguments:

<network> Network to fetch an IP address from (name or ID)

<server> Server to receive the IP address (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ip fixed remove

```
usage: openstack --os-identity-api-version 3 ip fixed remove [-h] <ip-address>
↪<server>
```

Remove fixed IP address from server

Positional arguments:

<ip-address> IP address to remove from server (name only)

<server> Server to remove the IP address from (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ip floating add

```
usage: openstack --os-identity-api-version 3 ip floating add [-h] <ip-address>
↪<server>
```

Add floating IP address to server

Positional arguments:

<ip-address> IP address to add to server (name only)

<server> Server to receive the IP address (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ip floating create

```
usage: openstack --os-identity-api-version 3 ip floating create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        <pool>
```

Create new floating IP address

Positional arguments:

<pool> Pool to fetch IP address from (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ip floating delete

```
usage: openstack --os-identity-api-version 3 ip floating delete [-h] <floating-ip>
```

Delete floating IP

Positional arguments:

<floating-ip> Floating IP to delete (IP address or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ip floating list

```
usage: openstack --os-identity-api-version 3 ip floating list [-h] [-f {csv,html,json,
→table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List floating IP(s)

Optional arguments:

-h, --help show this help message and exit

openstack ip floating pool list

```
usage: openstack --os-identity-api-version 3 ip floating pool list [-h]
                        [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List pools of floating IP addresses

Optional arguments:

-h, --help show this help message and exit

openstack ip floating remove

```
usage: openstack --os-identity-api-version 3 ip floating remove [-h] <ip-address>
      ↪ <server>
```

Remove floating IP address from server

Positional arguments:

<ip-address> IP address to remove from server (name only)

<server> Server to remove the IP address from (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack ip floating show

```
usage: openstack --os-identity-api-version 3 ip floating show [-h] [-f {html,json,
      ↪ shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     <floating-ip>
```

Show floating IP details

Positional arguments:

<floating-ip> Floating IP to display (IP address or ID)

Optional arguments:

-h, --help show this help message and exit

openstack keypair create

```
usage: openstack --os-identity-api-version 3 keypair create [-h] [-f {html,json,shell,
      ↪ table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--public-key <file>]
                                     <name>
```

Create new public key

Positional arguments:

<name> New public key name

Optional arguments:

-h, --help show this help message and exit

--public-key <file> Filename for public key to add

openstack keypair delete

```
usage: openstack --os-identity-api-version 3 keypair delete [-h] <key>
```

Delete public key

Positional arguments:

<key> Public key to delete

Optional arguments:

-h, --help show this help message and exit

openstack keypair list

```
usage: openstack --os-identity-api-version 3 keypair list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List public key fingerprints

Optional arguments:

-h, --help show this help message and exit

openstack keypair show

```
usage: openstack --os-identity-api-version 3 keypair show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--public-key]
                        <key>
```

Display public key details

Positional arguments:

<key> Public key to display

Optional arguments:

-h, --help show this help message and exit

--public-key Show only bare public key

openstack limits show

```
usage: openstack --os-identity-api-version 3 limits show [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        (--absolute | --rate) [--reserved]
                        [--project <project>] [--domain <domain>]
```

Show compute and block storage limits

Optional arguments:

-h, --help show this help message and exit

--absolute Show absolute limits

--rate Show rate limits

--reserved Include reservations count [only valid with **--absolute**]

--project <project> Show limits for a specific project (name or ID) [only valid with **--absolute**]

--domain <domain> Domain that owns **--project** (name or ID) [only valid with **--absolute**]

openstack mapping create

```
usage: openstack --os-identity-api-version 3 mapping create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX] --rules
                                <filename>
                                <name>
```

Create new mapping

Positional arguments:

<name> New mapping name (must be unique)

Optional arguments:

-h, --help show this help message and exit

--rules <filename> Filename that contains a set of mapping rules (required)

openstack mapping delete

```
usage: openstack --os-identity-api-version 3 mapping delete [-h] <mapping>
```

Delete mapping

Positional arguments:

<mapping> Mapping to delete

Optional arguments:

-h, --help show this help message and exit

openstack mapping list

```
usage: openstack --os-identity-api-version 3 mapping list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List mappings

Optional arguments:

-h, --help show this help message and exit

openstack mapping set

```
usage: openstack --os-identity-api-version 3 mapping set [-h] [--rules <filename>]
      ↪ <name>
```

Set mapping properties

Positional arguments:

<name> Mapping to modify

Optional arguments:

-h, --help show this help message and exit

--rules <filename> Filename that contains a new set of mapping rules

openstack mapping show

```
usage: openstack --os-identity-api-version 3 mapping show [-h] [-f {html,json,shell,
      ↪ table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX]
                        <mapping>
```

Display mapping details

Positional arguments:

<mapping> Mapping to display

Optional arguments:

-h, --help show this help message and exit

openstack messaging flavor create

```
usage: openstack --os-identity-api-version 3 messaging flavor create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--capabilities <capabilities>]
                        <flavor_name> <pool_group>
```

Create a pool flavor

Positional arguments:

<flavor_name> Name of the flavor

<pool_group> Pool group for flavor

Optional arguments:

-h, --help show this help message and exit

--capabilities <capabilities> Describes flavor-specific capabilities, This option is only available in client api version < 2 .

openstack messaging flavor delete

```
usage: openstack --os-identity-api-version 3 messaging flavor delete [-h] <flavor_
↪name>
```

Delete a flavor

Positional arguments:

<flavor_name> Name of the flavor

Optional arguments:

-h, --help show this help message and exit

openstack messaging flavor list

```
usage: openstack --os-identity-api-version 3 messaging flavor list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--marker <flavor_name>]
                                [--limit <limit>]
                                [--detailed <detailed>]
```

List available flavors

Optional arguments:

-h, --help show this help message and exit

--marker <flavor_name> Flavor's paging marker

--limit <limit> Page size limit

--detailed <detailed> If show detailed capabilities of flavor

openstack messaging flavor show

```
usage: openstack --os-identity-api-version 3 messaging flavor show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <flavor_name>
```

Display flavor details

Positional arguments:

<flavor_name> Flavor to display (name)

Optional arguments:

-h, --help show this help message and exit

openstack messaging flavor update

```
usage: openstack --os-identity-api-version 3 messaging flavor update [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--pool_group <pool_group>]
                                [--capabilities <capabilities>]
                                <flavor_name>
```

Update a flavor's attributes

Positional arguments:

<flavor_name> Name of the flavor

Optional arguments:

-h, --help show this help message and exit

--pool_group <pool_group> Pool group the flavor sits on

--capabilities <capabilities> Describes flavor-specific capabilities.

openstack module list

```
usage: openstack --os-identity-api-version 3 module list [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--all]
```

List module versions

Optional arguments:

-h, --help show this help message and exit

--all Show all modules that have version information

openstack network create

```
usage: openstack --os-identity-api-version 3 network create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--share | --no-share] [--subnet <subnet>]
                                <name>
```

Create new network

Positional arguments:

<name> New network name

Optional arguments:

-h, --help show this help message and exit

- share** Share the network between projects
- no-share** Do not share the network between projects
- subnet** <subnet> IPv4 subnet for fixed IPs (in CIDR notation)

openstack network delete

```
usage: openstack --os-identity-api-version 3 network delete [-h] <network> [<network>
↪ ...]
```

Delete network(s)

Positional arguments:

<network> Network(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack network list

```
usage: openstack --os-identity-api-version 3 network list [-h] [-f {csv,html,json,
↪ table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--external] [--long]
```

List networks

Optional arguments:

-h, --help show this help message and exit

--external List external networks

--long List additional fields in output

openstack network set

```
usage: openstack --os-identity-api-version 3 network set [-h] [--name <name>] [--
↪ enable | --disable]
                        [--share | --no-share]
                        <network>
```

Set network properties

Positional arguments:

<network> Network to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Set network name

--enable Enable network

- disable** Disable network
- share** Share the network between projects
- no-share** Do not share the network between projects

openstack network show

```
usage: openstack --os-identity-api-version 3 network show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <network>
```

Show network details

Positional arguments:

<network> Network to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack object create

```
usage: openstack --os-identity-api-version 3 object create [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                <container> <filename> [<filename> ...]
```

Upload object to container

Positional arguments:

<container> Container for new object

<filename> Local filename(s) to upload

Optional arguments:

-h, --help show this help message and exit

openstack object delete

```
usage: openstack --os-identity-api-version 3 object delete [-h] <container> <object> [
↪<object> ...]
```

Delete object from container

Positional arguments:

<container> Delete object(s) from <container>

<object> Object(s) to delete

Optional arguments:

-h, --help show this help message and exit

openstack object list

```
usage: openstack --os-identity-api-version 3 object list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--prefix <prefix>] [--delimiter <delimiter>]
                                [--marker <marker>] [--end-marker <end-marker>]
                                [--limit <limit>] [--long] [--all]
                                <container>
```

List objects

Positional arguments:

<container> Container to list

Optional arguments:

-h, --help show this help message and exit

--prefix <prefix> Filter list using <prefix>

--delimiter <delimiter> Roll up items with <delimiter>

--marker <marker> Anchor for paging

--end-marker <end-marker> End anchor for paging

--limit <limit> Limit the number of objects returned

--long List additional fields in output

--all List all objects in container (default is 10000)

openstack object save

```
usage: openstack --os-identity-api-version 3 object save [-h] [--file <filename>]
↪<container> <object>
```

Save object locally

Positional arguments:

<container> Download <object> from <container>

<object> Object to save

Optional arguments:

-h, --help show this help message and exit

--file <filename> Destination filename (defaults to object name)

openstack object set

```
usage: openstack --os-identity-api-version 3 object set [-h] --property <key=value>
↪<container> <object>
```

Set object properties

Positional arguments:

<container> Modify <object> from <container>

<object> Object to modify

Optional arguments:

-h, --help show this help message and exit

--property <key=value> Set a property on this object (repeat option to set multiple properties)

openstack object show

```
usage: openstack --os-identity-api-version 3 object show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX]
                        <container> <object>
```

Display object details

Positional arguments:

<container> Display <object> from <container>

<object> Object to display

Optional arguments:

-h, --help show this help message and exit

openstack object store account set

```
usage: openstack --os-identity-api-version 3 object store account set [-h] --property
↪<key=value>
```

Set account properties

Optional arguments:

-h, --help show this help message and exit

--property <key=value> Set a property on this account (repeat option to set multiple properties)

openstack object store account show

```
usage: openstack --os-identity-api-version 3 object store account show [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
```

Display account details

Optional arguments:

-h, --help show this help message and exit

openstack object store account unset

```
usage: openstack --os-identity-api-version 3 object store account unset [-h] --
    ↪property <key>
```

Unset account properties

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from account (repeat option to remove multiple properties)

openstack object unset

```
usage: openstack --os-identity-api-version 3 object unset [-h] --property <key>
    ↪<container> <object>
```

Unset object properties

Positional arguments:

<container> Modify <object> from <container>

<object> Object to modify

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from object (repeat option to remove multiple properties)

openstack orchestration build info

```
usage: openstack --os-identity-api-version 3 orchestration build info [-h]
    [-f {html,json,shell,table,value,yaml}]
    [-c COLUMN] [--max-width <integer>]
    [--noindent] [--prefix PREFIX]
```

Retrieve build information.

Optional arguments:

-h, --help show this help message and exit

openstack orchestration resource type list

```
usage: openstack --os-identity-api-version 3 orchestration resource type list [-h]
    [-f {csv,html,json,table,value,yaml}]
    ↪]
    [-c COLUMN]
    [--max-width <integer>]
    [--noindent]
    [--quote {all,minimal,none,
    ↪nonnumeric}]
    [--filter <key=value>]
```

List resource types.

Optional arguments:

-h, --help show this help message and exit

--filter <key=value> Filter parameters to apply on returned resource types. This can be specified multiple times. It can be any of name, version or support_status

openstack orchestration resource type show

```
usage: openstack --os-identity-api-version 3 orchestration resource type show [-h]
                                         [-f {html,json,shell,table,value,
↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--prefix PREFIX]
                                         [--template-type <template-type>]
                                         <resource-type>
```

Show details and optionally generate a template for a resource type.

Positional arguments:

<resource-type> Resource type to show details for

Optional arguments:

-h, --help show this help message and exit

--template-type <template-type> Optional template type to generate, hot or cfn

openstack orchestration service list

```
usage: openstack --os-identity-api-version 3 orchestration service list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
```

List the Heat engines.

Optional arguments:

-h, --help show this help message and exit

openstack orchestration template function list

```
usage: openstack --os-identity-api-version 3 orchestration template function list [-h]
                                         [-f {csv,html,json,table,value,
↪yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent]
```

```
↪nonnumeric}}                                [--quote {all,minimal,none,  
                                                <template-version>
```

List the available functions.

Positional arguments:

<template-version> Template version to get the functions for

Optional arguments:

-h, --help show this help message and exit

openstack orchestration template version list

```
usage: openstack --os-identity-api-version 3 orchestration template version list [-h]  
                                                [-f {csv,html,json,table,value,  
↪yaml}}]  
                                                [-c COLUMN]  
                                                [--max-width <integer>]  
                                                [--noindent]  
                                                [--quote {all,minimal,none,  
↪nonnumeric}}]
```

List the available template versions.

Optional arguments:

-h, --help show this help message and exit

openstack policy create

```
usage: openstack --os-identity-api-version 3 policy create [-h] [-f {html,json,shell,  
↪table,value,yaml}}  
                                                [-c COLUMN] [--max-width <integer>]  
                                                [--noindent] [--prefix PREFIX] [--type <type>]  
                                                <filename>
```

Create new policy

Positional arguments:

<filename> New serialized policy rules file

Optional arguments:

-h, --help show this help message and exit

--type <type> New MIME type of the policy rules file (defaults to application/json)

openstack policy delete

```
usage: openstack --os-identity-api-version 3 policy delete [-h] <policy>
```

Delete policy

Positional arguments:

<policy> Policy to delete

Optional arguments:

-h, --help show this help message and exit

openstack policy list

```
usage: openstack --os-identity-api-version 3 policy list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}] [--long]
```

List policies

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack policy set

```
usage: openstack --os-identity-api-version 3 policy set [-h] [--type <type>] [--rules
↪<filename>] <policy>
```

Set policy properties

Positional arguments:

<policy> Policy to modify

Optional arguments:

-h, --help show this help message and exit

--type <type> New MIME type of the policy rules file

--rules <filename> New serialized policy rules file

openstack policy show

```
usage: openstack --os-identity-api-version 3 policy show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <policy>
```

Display policy details

Positional arguments:

<policy> Policy to display

Optional arguments:

-h, --help show this help message and exit

openstack pool create

```
usage: openstack --os-identity-api-version 3 pool create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--pool_group <pool_group>]
                                [--pool_options <pool_options>]
                                <pool_name> <pool_uri> <pool_weight>
```

Create a pool

Positional arguments:

<pool_name> Name of the pool

<pool_uri> Storage engine URI

<pool_weight> weight of the pool

Optional arguments:

-h, --help show this help message and exit

--pool_group <pool_group> Group of the pool

--pool_options <pool_options> An optional request component related to storage- specific options

openstack pool delete

```
usage: openstack --os-identity-api-version 3 pool delete [-h] <pool_name>
```

Delete a pool

Positional arguments:

<pool_name> Name of the pool

Optional arguments:

-h, --help show this help message and exit

openstack pool list

```
usage: openstack --os-identity-api-version 3 pool list [-h] [-f {csv,html,json,table,
↪value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--marker <pool_name>] [--limit <limit>]
                                [--detailed <detailed>]
```

List available Pools

Optional arguments:

-h, --help show this help message and exit

--marker <pool_name> Pool's paging marker

--limit <limit> Page size limit

--detailed <detailed> Detailed output

openstack pool show

```
usage: openstack --os-identity-api-version 3 pool show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX]
                        <pool_name>
```

Display pool details

Positional arguments:

<pool_name> Pool to display (name)

Optional arguments:

-h, --help show this help message and exit

openstack pool update

```
usage: openstack --os-identity-api-version 3 pool update [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--pool-uri <pool_uri>]
                        [--pool-weight <pool_weight>]
                        [--pool-group <pool_group>]
                        [--pool-options <pool_options>]
                        <pool_name>
```

Update a pool attribute

Positional arguments:

<pool_name> Name of the pool

Optional arguments:

-h, --help show this help message and exit

--pool-uri <pool_uri> Storage engine URI

--pool-weight <pool_weight> Weight of the pool

--pool-group <pool_group> Group of the pool

--pool-options <pool_options> An optional request component related to storage- specific options

openstack port delete

```
usage: openstack --os-identity-api-version 3 port delete [-h] <port> [<port> ...]
```

Delete port(s)

Positional arguments:

<port> Port(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack port show

```
usage: openstack --os-identity-api-version 3 port show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX]
                        <port>
```

Display port details

Positional arguments:

<port> Port to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack project create

```
usage: openstack --os-identity-api-version 3 project create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--domain <domain>] [--parent <project>]
                        [--description <description>]
                        [--enable | --disable]
                        [--property <key=value>] [--or-show]
                        <project-name>
```

Create new project

Positional arguments:

<project-name> New project name

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain owning the project (name or ID)

--parent <project> Parent of the project (name or ID)

--description <description> Project description

--enable Enable project

--disable Disable project

--property <key=value> Add a property to <name> (repeat option to set multiple properties)

--or-show Return existing project

openstack project delete

```
usage: openstack --os-identity-api-version 3 project delete [-h] [--domain <domain>]
                        <project> [<project> ...]
```

Delete project(s)

Positional arguments:

<project> Project(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain owning <project> (name or ID)

openstack project list

```
usage: openstack --os-identity-api-version 3 project list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--domain <domain>] [--user <user>] [--long]
```

List projects

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Filter projects by <domain> (name or ID)

--user <user> Filter projects by <user> (name or ID)

--long List additional fields in output

openstack project set

```
usage: openstack --os-identity-api-version 3 project set [-h] [--name <name>] [--
↪domain <domain>]
                                [--description <description>]
                                [--enable | --disable] [--property <key=value>]
                                <project>
```

Set project properties

Positional arguments:

<project> Project to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Set project name

--domain <domain> Domain owning <project> (name or ID)

--description <description> Set project description

--enable Enable project

--disable Disable project

--property <key=value> Set a property on <project> (repeat option to set multiple properties)

openstack project show

```
usage: openstack --os-identity-api-version 3 project show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--domain <domain>]
                        [--parents] [--children]
                        <project>
```

Display project details

Positional arguments:

<project> Project to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain owning <project> (name or ID)

--parents Show the project's parents as a list

--children Show project's subtree (children) as a list

openstack ptr record list

```
usage: openstack --os-identity-api-version 3 ptr record list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List floatingip ptr records

Optional arguments:

-h, --help show this help message and exit

openstack ptr record set

```
usage: openstack --os-identity-api-version 3 ptr record set [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--description DESCRIPTION | --no-description]
                        [--ttl TTL | --no-ttl]
                        floatingip_id ptrdname
```

Set floatingip ptr record

Positional arguments:

floatingip_id Floating IP ID

ptrdname PTRD Name

Optional arguments:

-h, --help show this help message and exit

--description **DESCRIPTION** Description

--no-description

--ttl **TTL** TTL

--no-ttl

openstack ptr record show

```
usage: openstack --os-identity-api-version 3 ptr record show [-h] [-f {html,json,
→shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                floatingip_id
```

Show floatingip ptr record details

Positional arguments:

floatingip_id Floating IP ID

Optional arguments:

-h, --help show this help message and exit

openstack ptr record unset

```
usage: openstack --os-identity-api-version 3 ptr record unset [-h] floatingip_id
```

Unset floatingip ptr record

Positional arguments:

floatingip_id Floating IP ID

Optional arguments:

-h, --help show this help message and exit

openstack queue create

```
usage: openstack --os-identity-api-version 3 queue create [-h] [-f {html,json,shell,
→table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <queue_name>
```

Create a queue

Positional arguments:

<queue_name> Name of the queue

Optional arguments:

-h, --help show this help message and exit

openstack queue delete

```
usage: openstack --os-identity-api-version 3 queue delete [-h] <queue_name>
```

Delete a queue

Positional arguments:

<queue_name> Name of the queue

Optional arguments:

-h, --help show this help message and exit

openstack queue exists

```
usage: openstack --os-identity-api-version 3 queue exists [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <queue_name>
```

Check queue existence

Positional arguments:

<queue_name> Name of the queue

Optional arguments:

-h, --help show this help message and exit

openstack queue get metadata

```
usage: openstack --os-identity-api-version 3 queue get metadata [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <queue_name>
```

Get queue metadata

Positional arguments:

<queue_name> Name of the queue

Optional arguments:

-h, --help show this help message and exit

openstack queue list

```
usage: openstack --os-identity-api-version 3 queue list [-h] [-f {csv,html,json,table,
↪value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--marker <queue_id>] [--limit <limit>]
```

List available queues

Optional arguments:

- h, --help** show this help message and exit
- marker <queue_id>** Queue's paging marker
- limit <limit>** Page size limit

openstack queue set metadata

```
usage: openstack --os-identity-api-version 3 queue set metadata [-h] <queue_name>
      ↪<queue_metadata>
```

Set queue metadata

Positional arguments:

- <queue_name>** Name of the queue
- <queue_metadata>** Queue metadata

Optional arguments:

- h, --help** show this help message and exit

openstack queue stats

```
usage: openstack --os-identity-api-version 3 queue stats [-h] [-f {html,json,shell,
      ↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX]
                        <queue_name>
```

Get queue stats

Positional arguments:

- <queue_name>** Name of the queue

Optional arguments:

- h, --help** show this help message and exit

openstack quota set

```
usage: openstack --os-identity-api-version 3 quota set [-h] [--class] [--properties
      ↪<properties>]
                        [--ram <ram>] [--secgroup-rules <secgroup-rules>]
                        [--instances <instances>] [--key-pairs <key-pairs>]
                        [--fixed-ips <fixed-ips>] [--secgroups <secgroups>]
                        [--injected-file-size <injected-file-size>]
                        [--floating-ips <floating-ips>]
                        [--injected-files <injected-files>]
                        [--cores <cores>]
                        [--injected-path-size <injected-path-size>]
                        [--gigabytes <gigabytes>] [--volumes <volumes>]
                        [--snapshots <snapshots>]
```

```
[--volume-type <volume-type>]
<project/class>
```

Set quotas for project or class

Positional arguments:

<project/class> Set quotas for this project or class (name/ID)

Optional arguments:

-h, --help show this help message and exit

--class Set quotas for <class>

--properties <properties> New value for the properties quota

--ram <ram> New value for the ram quota

--secgroup-rules <secgroup-rules> New value for the secgroup-rules quota

--instances <instances> New value for the instances quota

--key-pairs <key-pairs> New value for the key-pairs quota

--fixed-ips <fixed-ips> New value for the fixed-ips quota

--secgroups <secgroups> New value for the secgroups quota

--injected-file-size <injected-file-size> New value for the injected-file-size quota

--floating-ips <floating-ips> New value for the floating-ips quota

--injected-files <injected-files> New value for the injected-files quota

--cores <cores> New value for the cores quota

--injected-path-size <injected-path-size> New value for the injected-path-size quota

--gigabytes <gigabytes> New value for the gigabytes quota

--volumes <volumes> New value for the volumes quota

--snapshots <snapshots> New value for the snapshots quota

--volume-type <volume-type> Set quotas for a specific <volume-type>

openstack quota show

```
usage: openstack --os-identity-api-version 3 quota show [-h] [-f {html,json,shell,
↵table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--class | --default]
                        <project/class>
```

Show quotas for project or class

Positional arguments:

<project/class> Show this project or class (name/ID)

Optional arguments:

-h, --help show this help message and exit

--class Show quotas for <class>

--default Show default quotas for <project>

openstack recordset create

```
usage: openstack --os-identity-api-version 3 recordset create [-h] [-f {html,json,
↵shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX] --records
                                RECORDS [RECORDS ...] --type TYPE
                                [--ttl TTL] [--description DESCRIPTION]
                                zone_id name
```

Create new recordset

Positional arguments:

zone_id Zone ID

name RecordSet Name

Optional arguments:

-h, --help show this help message and exit

--records RECORDS [RECORDS ...] RecordSet Records

--type TYPE RecordSet Type

--ttl TTL Time To Live (Seconds)

--description DESCRIPTION Description

openstack recordset delete

```
usage: openstack --os-identity-api-version 3 recordset delete [-h] zone_id id
```

Delete recordset

Positional arguments:

zone_id Zone ID

id RecordSet ID

Optional arguments:

-h, --help show this help message and exit

openstack recordset list

```
usage: openstack --os-identity-api-version 3 recordset list [-h] [-f {csv,html,json,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--name NAME] [--type TYPE] [--data DATA]
                                [--ttl TTL] [--description DESCRIPTION]
                                [--status STATUS] [--action ACTION]
                                zone_id
```

List recordsets

Positional arguments:

zone_id Zone ID

Optional arguments:

-h, --help show this help message and exit

--name NAME RecordSet Name

--type TYPE RecordSet Type

--data DATA RecordSet Record Data

--ttl TTL Time To Live (Seconds)

--description DESCRIPTION Description

--status STATUS RecordSet Status

--action ACTION RecordSet Action

openstack recordset set

```
usage: openstack --os-identity-api-version 3 recordset set [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--records RECORDS [RECORDS ...]]
                                [--description DESCRIPTION | --no-description]
                                [--ttl TTL | --no-ttl]
                                zone_id id
```

Set recordset properties

Positional arguments:

zone_id Zone ID

id RecordSet ID

Optional arguments:

-h, --help show this help message and exit

--records RECORDS [RECORDS ...] Records

--description DESCRIPTION Description

--no-description

--ttl TTL TTL

--no-ttl

openstack recordset show

```
usage: openstack --os-identity-api-version 3 recordset show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
```

```
[--noindent] [--prefix PREFIX]
zone_id id
```

Show recordset details

Positional arguments:

zone_id Zone ID

id RecordSet ID

Optional arguments:

-h, --help show this help message and exit

openstack region create

```
usage: openstack --os-identity-api-version 3 region create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--parent-region <region-id>]
                        [--description <description>]
                        <region-id>
```

Create new region

Positional arguments:

<region-id> New region ID

Optional arguments:

-h, --help show this help message and exit

--parent-region <region-id> Parent region ID

--description <description> New region description

openstack region delete

```
usage: openstack --os-identity-api-version 3 region delete [-h] <region-id>
```

Delete region

Positional arguments:

<region-id> Region ID to delete

Optional arguments:

-h, --help show this help message and exit

openstack region list

```
usage: openstack --os-identity-api-version 3 region list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
```

```
[--quote {all,minimal,none,nonnumeric}]  
[--parent-region <region-id>]
```

List regions

Optional arguments:

-h, --help show this help message and exit

--parent-region <region-id> Filter by parent region ID

openstack region set

```
usage: openstack --os-identity-api-version 3 region set [-h] [--parent-region <region-  
↪id>]  
                                [--description <description>]  
                                <region-id>
```

Set region properties

Positional arguments:

<region-id> Region to modify

Optional arguments:

-h, --help show this help message and exit

--parent-region <region-id> New parent region ID

--description <description> New region description

openstack region show

```
usage: openstack --os-identity-api-version 3 region show [-h] [-f {html,json,shell,  
↪table,value,yaml}]  
                                [-c COLUMN] [--max-width <integer>] [--noindent]  
                                [--prefix PREFIX]  
                                <region-id>
```

Display region details

Positional arguments:

<region-id> Region to display

Optional arguments:

-h, --help show this help message and exit

openstack request token authorize

```
usage: openstack --os-identity-api-version 3 request token authorize [-h]  
                                [-f {html,json,shell,table,value,yaml}]  
                                [-c COLUMN] [--max-width <integer>]  
                                [--noindent] [--prefix PREFIX]  
                                --request-key <request-key> --role  
                                <role>
```

Authorize a request token

Optional arguments:

- h, --help** show this help message and exit
- request-key <request-key>** Request token to authorize (ID only) (required)
- role <role>** Roles to authorize (name or ID) (repeat to set multiple values) (required)

openstack request token create

```
usage: openstack --os-identity-api-version 3 request token create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                --consumer-key <consumer-key>
                                --consumer-secret <consumer-secret>
                                --project <project> [--domain <domain>]
```

Create a request token

Optional arguments:

- h, --help** show this help message and exit
- consumer-key <consumer-key>** Consumer key (required)
- consumer-secret <consumer-secret>** Consumer secret (required)
- project <project>** Project that consumer wants to access (name or ID) (required)
- domain <domain>** Domain owning <project> (name or ID)

openstack role add

```
usage: openstack --os-identity-api-version 3 role add [-h] [--domain <domain> | --
↪project <project>]
                                [--user <user> | --group <group>]
                                [--group-domain <group-domain>]
                                [--project-domain <project-domain>]
                                [--user-domain <user-domain>] [--inherited]
                                <role>
```

Adds a role to a user or group on a domain or project

Positional arguments:

- <role>** Role to add to <user> (name or ID)

Optional arguments:

- h, --help** show this help message and exit
- domain <domain>** Include <domain> (name or ID)
- project <project>** Include <project> (name or ID)
- user <user>** Include <user> (name or ID)
- group <group>** Include <group> (name or ID)

- group-domain <group-domain>** Domain the group belongs to (name or ID). This can be used in case collisions between group names exist.
- project-domain <project-domain>** Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.
- user-domain <user-domain>** Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.
- inherited** Specifies if the role grant is inheritable to the sub projects

openstack role assignment list

```
usage: openstack --os-identity-api-version 3 role assignment list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--effective] [--role <role>] [--names]
                                [--user <user>]
                                [--user-domain <user-domain>]
                                [--group <group>]
                                [--group-domain <group-domain>]
                                [--domain <domain> | --project <project>]
                                [--project-domain <project-domain>]
                                [--inherited]
```

List role assignments

Optional arguments:

- h, --help** show this help message and exit
- effective** Returns only effective role assignments
- role <role>** Role to filter (name or ID)
- names** Display names instead of IDs
- user <user>** User to filter (name or ID)
- user-domain <user-domain>** Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.
- group <group>** Group to filter (name or ID)
- group-domain <group-domain>** Domain the group belongs to (name or ID). This can be used in case collisions between group names exist.
- domain <domain>** Domain to filter (name or ID)
- project <project>** Project to filter (name or ID)
- project-domain <project-domain>** Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.
- inherited** Specifies if the role grant is inheritable to the sub projects

openstack role create

```
usage: openstack --os-identity-api-version 3 role create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--or-show]
                                <role-name>
```

Create new role

Positional arguments:

<role-name> New role name

Optional arguments:

-h, --help show this help message and exit

--or-show Return existing role

openstack role delete

```
usage: openstack --os-identity-api-version 3 role delete [-h] <role> [<role> ...]
```

Delete role(s)

Positional arguments:

<role> Role(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack role list

```
usage: openstack --os-identity-api-version 3 role list [-h] [-f {csv,html,json,table,
↪value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--domain <domain> | --project <project>]
                                [--user <user> | --group <group>]
                                [--group-domain <group-domain>]
                                [--project-domain <project-domain>]
                                [--user-domain <user-domain>] [--inherited]
```

List roles

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Include <domain> (name or ID)

--project <project> Include <project> (name or ID)

--user <user> Include <user> (name or ID)

--group <group> Include <group> (name or ID)

- group-domain <group-domain>** Domain the group belongs to (name or ID). This can be used in case collisions between group names exist.
- project-domain <project-domain>** Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.
- user-domain <user-domain>** Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.
- inherited** Specifies if the role grant is inheritable to the sub projects

openstack role remove

```
usage: openstack --os-identity-api-version 3 role remove [-h] [--domain <domain> | --
↪project <project>]
                               [--user <user> | --group <group>]
                               [--group-domain <group-domain>]
                               [--project-domain <project-domain>]
                               [--user-domain <user-domain>] [--inherited]
                               <role>
```

Remove role from domain/project : user/group

Positional arguments:

<role> Role to remove (name or ID)

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Include <domain> (name or ID)

--project <project> Include <project> (name or ID)

--user <user> Include <user> (name or ID)

--group <group> Include <group> (name or ID)

--group-domain <group-domain> Domain the group belongs to (name or ID). This can be used in case collisions between group names exist.

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

--inherited Specifies if the role grant is inheritable to the sub projects

openstack role set

```
usage: openstack --os-identity-api-version 3 role set [-h] [--name <name>] <role>
```

Set role properties

Positional arguments:

<role> Role to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Set role name

openstack role show

```
usage: openstack --os-identity-api-version 3 role show [-h] [-f {html,json,shell,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <role>
```

Display role details

Positional arguments:

<role> Role to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack router create

```
usage: openstack --os-identity-api-version 3 router create [-h] [-f {html,json,shell,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--enable | --disable] [--distributed]
                                [--project <project>]
                                [--availability-zone-hint <availability-zone>]
                                [--project-domain <project-domain>]
                                <name>
```

Create a new router

Positional arguments:

<name> New router name

Optional arguments:

-h, --help show this help message and exit

--enable Enable router (default)

--disable Disable router

--distributed Create a distributed router

--project <project> Owner's project (name or ID)

--availability-zone-hint <availability-zone> Availability Zone in which to create this router (requires the Router Availability Zone extension, this option can be repeated).

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

openstack router delete

```
usage: openstack --os-identity-api-version 3 router delete [-h] <router> [<router> ...  
↪]
```

Delete router(s)

Positional arguments:

<router> Router(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack router list

```
usage: openstack --os-identity-api-version 3 router list [-h] [-f {csv,html,json,  
↪table,value,yaml}]  
[-c COLUMN] [--max-width <integer>] [--noindent]  
[--quote {all,minimal,none,nonnumeric}] [--long]
```

List routers

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack router set

```
usage: openstack --os-identity-api-version 3 router set [-h] [--name <name>] [--  
↪enable | --disable]  
[--distributed | --centralized]  
[--route destination=<subnet>,gateway=<ip-address> | --  
↪clear-routes]  
<router>
```

Set router properties

Positional arguments:

<router> Router to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Set router name

--enable Enable router

--disable Disable router

--distributed Set router to distributed mode (disabled router only)

--centralized Set router to centralized mode (disabled router only)

--route destination=<subnet>,gateway=<ip-address> Routes associated with the router. Repeat this option to set multiple routes. destination: destination subnet (in CIDR notation). gateway: nexthop IP address.

--clear-routes Clear routes associated with the router

openstack router show

```
usage: openstack --os-identity-api-version 3 router show [-h] [-f {html,json,shell,
→table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <router>
```

Display router details

Positional arguments:

<router> Router to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack secret container create

```
usage: openstack --os-identity-api-version 3 secret container create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--name NAME] [--type TYPE]
                                [--secret SECRET]
```

Store a container in Barbican.

Optional arguments:

-h, --help show this help message and exit

--name NAME, -n NAME a human-friendly name.

--type TYPE type of container to create (default: generic).

--secret SECRET, -s SECRET one secret to store in a container (can be set multiple times). Example: `--secret "private_key=https://url.test/v1/secrets/1-2-3-4"`

openstack secret container delete

```
usage: openstack --os-identity-api-version 3 secret container delete [-h] URI
```

Delete a container by providing its href.

Positional arguments:

URI The URI reference for the container

Optional arguments:

-h, --help show this help message and exit

openstack secret container get

```
usage: openstack --os-identity-api-version 3 secret container get [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                URI
```

Retrieve a container by providing its URI.

Positional arguments:

URI The URI reference for the container.

Optional arguments:

-h, --help show this help message and exit

openstack secret container list

```
usage: openstack --os-identity-api-version 3 secret container list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--limit LIMIT] [--offset OFFSET]
                                [--name NAME] [--type TYPE]
```

List containers.

Optional arguments:

-h, --help show this help message and exit

--limit LIMIT, -l LIMIT specify the limit to the number of items to list per page (default: 10; maximum: 100)

--offset OFFSET, -o OFFSET specify the page offset (default: 0)

--name NAME, -n NAME specify the container name (default: None)

--type TYPE, -t TYPE specify the type filter for the list (default: None).

openstack secret delete

```
usage: openstack --os-identity-api-version 3 secret delete [-h] URI
```

Delete a secret by providing its URI.

Positional arguments:

URI The URI reference for the secret

Optional arguments:

-h, --help show this help message and exit

openstack secret get

```
usage: openstack --os-identity-api-version 3 secret get [-h] [-f {html,json,shell,
↪table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>] [--noindent]
                               [--prefix PREFIX] [--decrypt] [--payload]
                               [--payload_content_type PAYLOAD_CONTENT_TYPE]
                               URI
```

Retrieve a secret by providing its URI.

Positional arguments:

URI The URI reference for the secret.

Optional arguments:

-h, --help show this help message and exit

--decrypt, -d if specified, retrieve the unencrypted secret data; the data type can be specified with **--payload-content-type**.

--payload, -p if specified, retrieve the unencrypted secret data; the data type can be specified with **--payload-content-type**. If the user wishes to only retrieve the value of the payload they must add “-f value” to format returning only the value of the payload

--payload_content_type PAYLOAD_CONTENT_TYPE, -t PAYLOAD_CONTENT_TYPE the content type of the decrypted secret (default: text/plain).

openstack secret list

```
usage: openstack --os-identity-api-version 3 secret list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>] [--noindent]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--limit LIMIT] [--offset OFFSET] [--name NAME]
                               [--algorithm ALGORITHM] [--bit-length BIT_LENGTH]
                               [--mode MODE]
```

List secrets.

Optional arguments:

-h, --help show this help message and exit

--limit LIMIT, -l LIMIT specify the limit to the number of items to list per page (default: 10; maximum: 100)

--offset OFFSET, -o OFFSET specify the page offset (default: 0)

--name NAME, -n NAME specify the secret name (default: None)

--algorithm ALGORITHM, -a ALGORITHM the algorithm filter for the list (default: None).

--bit-length BIT_LENGTH, -b BIT_LENGTH the bit length filter for the list (default: 0).

--mode MODE, -m MODE the algorithm mode filter for the list (default: None).

openstack secret order create

```
usage: openstack --os-identity-api-version 3 secret order create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--name NAME] [--algorithm ALGORITHM]
                        [--bit-length BIT_LENGTH] [--mode MODE]
                        [--payload-content-type PAYLOAD_CONTENT_TYPE]
                        [--expiration EXPIRATION]
                        [--request-type REQUEST_TYPE]
                        [--subject-dn SUBJECT_DN]
                        [--source-container-ref SOURCE_CONTAINER_REF]
                        [--ca-id CA_ID] [--profile PROFILE]
                        [--request-file REQUEST_FILE]
                        type
```

Create a new order.

Positional arguments:

type the type of the order to create.

Optional arguments:

-h, --help show this help message and exit

--name NAME, -n NAME a human-friendly name.

--algorithm ALGORITHM, -a ALGORITHM the algorithm to be used with the requested key (default: aes).

--bit-length BIT_LENGTH, -b BIT_LENGTH the bit length of the requested secret key (default: 256).

--mode MODE, -m MODE the algorithm mode to be used with the requested key (default: cbc).

--payload-content-type PAYLOAD_CONTENT_TYPE, -t PAYLOAD_CONTENT_TYPE the type/format of the secret to be generated (default: application/octet-stream).

--expiration EXPIRATION, -x EXPIRATION the expiration time for the secret in ISO 8601 format.

--request-type REQUEST_TYPE the type of the certificate request.

--subject-dn SUBJECT_DN the subject of the certificate.

--source-container-ref SOURCE_CONTAINER_REF the source of the certificate when using stored-key requests.

--ca-id CA_ID the identifier of the CA to use for the certificate request.

--profile PROFILE the profile of certificate to use.

--request-file REQUEST_FILE the file containing the CSR.

openstack secret order delete

```
usage: openstack --os-identity-api-version 3 secret order delete [-h] URI
```

Delete an order by providing its href.

Positional arguments:

URI The URI reference for the order

Optional arguments:

-h, --help show this help message and exit

openstack secret order get

```
usage: openstack --os-identity-api-version 3 secret order get [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                URI
```

Retrieve an order by providing its URI.

Positional arguments:

URI The URI reference order.

Optional arguments:

-h, --help show this help message and exit

openstack secret order list

```
usage: openstack --os-identity-api-version 3 secret order list [-h] [-f {csv,html,
↪json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--limit LIMIT] [--offset OFFSET]
```

List orders.

Optional arguments:

-h, --help show this help message and exit

--limit LIMIT, -l LIMIT specify the limit to the number of items to list per page (default: 10; maximum: 100)

--offset OFFSET, -o OFFSET specify the page offset (default: 0)

openstack secret store

```
usage: openstack --os-identity-api-version 3 secret store [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--name NAME]
                                [--payload PAYLOAD] [--secret-type SECRET_TYPE]
                                [--payload-content-type PAYLOAD_CONTENT_TYPE]
                                [--payload-content-encoding PAYLOAD_CONTENT_ENCODING]
                                [--algorithm ALGORITHM]
                                [--bit-length BIT_LENGTH] [--mode MODE]
                                [--expiration EXPIRATION]
```

Store a secret in Barbican.

Optional arguments:

-h, --help show this help message and exit

--name NAME, -n NAME a human-friendly name.

--payload PAYLOAD, -p PAYLOAD the unencrypted secret; if provided, you must also provide a `payload_content_type`

--secret-type SECRET_TYPE, -s SECRET_TYPE the secret type; must be one of symmetric, public, private, certificate, passphrase, opaque (default)

--payload-content-type PAYLOAD_CONTENT_TYPE, -t PAYLOAD_CONTENT_TYPE the type/format of the provided secret data; “text/plain” is assumed to be UTF-8; required when `--payload` is supplied.

--payload-content-encoding PAYLOAD_CONTENT_ENCODING, -e PAYLOAD_CONTENT_ENCODING required if `--payload-content-type` is “application/octet-stream”.

--algorithm ALGORITHM, -a ALGORITHM the algorithm (default: aes).

--bit-length BIT_LENGTH, -b BIT_LENGTH the bit length (default: 256).

--mode MODE, -m MODE the algorithm mode; used only for reference (default: cbc)

--expiration EXPIRATION, -x EXPIRATION the expiration time for the secret in ISO 8601 format.

openstack secret update

```
usage: openstack --os-identity-api-version 3 secret update [-h] URI payload
```

Update a secret with no payload in Barbican.

Positional arguments:

URI The URI reference for the secret.

payload the unencrypted secret

Optional arguments:

-h, --help show this help message and exit

openstack security group create

```
usage: openstack --os-identity-api-version 3 security group create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--description <description>]
                                <name>
```

Create a new security group

Positional arguments:

<name> New security group name

Optional arguments:

-h, --help show this help message and exit

--description <description> Security group description

openstack security group delete

```
usage: openstack --os-identity-api-version 3 security group delete [-h] <group>
```

Delete a security group

Positional arguments:

<group> Security group to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack security group list

```
usage: openstack --os-identity-api-version 3 security group list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--all-projects]
```

List security groups

Optional arguments:

-h, --help show this help message and exit

--all-projects Display information from all projects (admin only)

openstack security group rule create

```
usage: openstack --os-identity-api-version 3 security group rule create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN]
                                [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--proto <proto>]
                                [--src-ip <ip-address> | --src-group
                                ↪<group>]
                                [--dst-port <port-range>]
                                <group>
```

Create a new security group rule

Positional arguments:

<group> Create rule in this security group (name or ID)

Optional arguments:

-h, --help show this help message and exit

--proto <proto> IP protocol (icmp, tcp, udp; default: tcp)

--src-ip <ip-address> Source IP address block (may use CIDR notation; default: 0.0.0.0/0)

--src-group <group> Source security group (ID only)

--dst-port **<port-range>** Destination port, may be a range: 137:139 (default: 0; only required for proto tcp and udp)

openstack security group rule delete

```
usage: openstack --os-identity-api-version 3 security group rule delete [-h] <rule>
```

Delete a security group rule

Positional arguments:

<rule> Security group rule to delete (ID only)

Optional arguments:

-h, --help show this help message and exit

openstack security group rule list

```
usage: openstack --os-identity-api-version 3 security group rule list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [<group>]
```

List security group rules

Positional arguments:

<group> List all rules in this security group (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack security group rule show

```
usage: openstack --os-identity-api-version 3 security group rule show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <rule>
```

Display security group rule details

Positional arguments:

<rule> Security group rule to display (ID only)

Optional arguments:

-h, --help show this help message and exit

openstack security group set

```
usage: openstack --os-identity-api-version 3 security group set [-h] [--name <new-
↪name>]
                                [--description <description>]
                                <group>
```

Set security group properties

Positional arguments:

<group> Security group to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <new-name> New security group name

--description <description> New security group description

openstack security group show

```
usage: openstack --os-identity-api-version 3 security group show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <group>
```

Display security group details

Positional arguments:

<group> Security group to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server add security group

```
usage: openstack --os-identity-api-version 3 server add security group [-h] <server>
↪<group>
```

Add security group to server

Positional arguments:

<server> Server (name or ID)

<group> Security group to add (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server add volume

```
usage: openstack --os-identity-api-version 3 server add volume [-h] [--device <device>
↪] <server> <volume>
```

Add volume to server

Positional arguments:

<server> Server (name or ID)

<volume> Volume to add (name or ID)

Optional arguments:

-h, --help show this help message and exit

--device <device> Server internal device name for volume

openstack server create

```
usage: openstack --os-identity-api-version 3 server create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                (--image <image> | --volume <volume>) --flavor
                                <flavor>
                                [--security-group <security-group-name>]
                                [--key-name <key-name>]
                                [--property <key=value>]
                                [--file <dest-filename=source-filename>]
                                [--user-data <user-data>]
                                [--availability-zone <zone-name>]
                                [--block-device-mapping <dev-name=mapping>]
                                [--nic <net-id=net-uuid,v4-fixed-ip=ip-addr,v6-fixed-
↪ip=ip-addr,port-id=port-uuid>]
                                [--hint <key=value>]
                                [--config-drive <config-drive-volume>|True]
                                [--min <count>] [--max <count>] [--wait]
                                <server-name>
```

Create a new server

Positional arguments:

<server-name> New server name

Optional arguments:

-h, --help show this help message and exit

--image <image> Create server from this image (name or ID)

--volume <volume> Create server from this volume (name or ID)

--flavor <flavor> Create server with this flavor (name or ID)

--security-group <security-group-name> Security group to assign to this server (name or ID) (repeat for multiple groups)

--key-name <key-name> Keypair to inject into this server (optional extension)

--property <key=value> Set a property on this server (repeat for multiple values)

--file <dest-filename=source-filename> File to inject into image before boot (repeat for multiple files)

--user-data <user-data> User data file to serve from the metadata server

--availability-zone <zone-name> Select an availability zone for the server

--block-device-mapping <dev-name=mapping> Map block devices; map is <id>:<type>:<size(GB)>:<delete_on_terminate> (optional extension)

--nic <net-id=net-uuid,v4-fixed-ip=ip-addr,v6-fixed-ip=ip-addr,port-id=port-uuid>
Create a NIC on the server. Specify option multiple times to create multiple NICs. Either net-id or port-id must be provided, but not both. net-id: attach NIC to network with this UUID, port-id: attach NIC to port with this UUID, v4-fixed-ip: IPv4 fixed address for NIC (optional), v6-fixed-ip: IPv6 fixed address for NIC (optional).

--hint <key=value> Hints for the scheduler (optional extension)

--config-drive <config-drive-volume>|True Use specified volume as the config drive, or 'True' to use an ephemeral drive

--min <count> Minimum number of servers to launch (default=1)

--max <count> Maximum number of servers to launch (default=1)

--wait Wait for build to complete

openstack server delete

```
usage: openstack --os-identity-api-version 3 server delete [-h] [--wait] <server> [
↪<server> ...]
```

Delete server(s)

Positional arguments:

<server> Server(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

--wait Wait for delete to complete

openstack server dump create

```
usage: openstack --os-identity-api-version 3 server dump create [-h] <server> [
↪<server> ...]
```

Create a dump file in server(s) Trigger crash dump in server(s) with features like kdump in Linux. It will create a dump file in the server(s) dumping the server(s)' memory, and also crash the server(s). OSC sees the dump file (server dump) as a kind of resource.

Positional arguments:

<server> Server(s) to create dump file (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server image create

```
usage: openstack --os-identity-api-version 3 server image create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--name <image-name>] [--wait]
                                <server>
```

Create a new disk image from a running server

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <image-name> Name of new image (default is server name)

--wait Wait for image create to complete

openstack server list

```
usage: openstack --os-identity-api-version 3 server list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--reservation-id <reservation-id>]
                                [--ip <ip-address-regex>]
                                [--ip6 <ip-address-regex>] [--name <name-regex>]
                                [--instance-name <server-name>]
                                [--status <status>] [--flavor <flavor>]
                                [--image <image>] [--host <hostname>]
                                [--all-projects] [--project <project>]
                                [--project-domain <project-domain>]
                                [--user <user>] [--user-domain <user-domain>]
                                [--long] [--marker <marker>] [--limit <limit>]
```

List servers

Optional arguments:

-h, --help show this help message and exit

--reservation-id <reservation-id> Only return instances that match the reservation

--ip <ip-address-regex> Regular expression to match IP addresses

--ip6 <ip-address-regex> Regular expression to match IPv6 addresses

--name <name-regex> Regular expression to match names

--instance-name <server-name> Regular expression to match instance name (admin only)

--status <status> Search by server status

--flavor <flavor> Search by flavor (name or ID)

--image <image> Search by image (name or ID)

--host <hostname> Search by hostname

- all-projects** Include all projects (admin only)
- project <project>** Search by project (admin only) (name or ID)
- project-domain <project-domain>** Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.
- user <user>** Search by user (admin only) (name or ID)
- user-domain <user-domain>** Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.
- long** List additional fields in output
- marker <marker>** The last server (name or ID) of the previous page. Display list of servers after marker. Display all servers if not specified.
- limit <limit>** Maximum number of servers to display. If limit equals -1, all servers will be displayed. If limit is greater than 'osapi_max_limit' option of Nova API, 'osapi_max_limit' will be used instead.

openstack server lock

```
usage: openstack --os-identity-api-version 3 server lock [-h] <server> [<server> ...]
```

Lock server(s). A non-admin user will not be able to execute actions

Positional arguments:

<server> Server(s) to lock (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server migrate

```
usage: openstack --os-identity-api-version 3 server migrate [-h] [--live <hostname>]
                    [--shared-migration | --block-migration]
                    [--disk-overcommit | --no-disk-overcommit]
                    [--wait]
                    <server>
```

Migrate server to different host

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--live <hostname> Target hostname

--shared-migration Perform a shared live migration (default)

--block-migration Perform a block live migration

--disk-overcommit Allow disk over-commit on the destination host

--no-disk-overcommit Do not over-commit disk on the destination host (default)

--wait Wait for resize to complete

openstack server pause

```
usage: openstack --os-identity-api-version 3 server pause [-h] <server> [<server> ...]
```

Pause server(s)

Positional arguments:

<server> Server(s) to pause (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server reboot

```
usage: openstack --os-identity-api-version 3 server reboot [-h] [--hard | --soft] [--  
↪wait] <server>
```

Perform a hard or soft server reboot

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--hard Perform a hard reboot

--soft Perform a soft reboot

--wait Wait for reboot to complete

openstack server rebuild

```
usage: openstack --os-identity-api-version 3 server rebuild [-h] [-f {html,json,shell,  
↪table,value,yaml}]  
                        [-c COLUMN] [--max-width <integer>]  
                        [--noindent] [--prefix PREFIX]  
                        [--image <image>] [--password <password>]  
                        [--wait]  
                        <server>
```

Rebuild server

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--image <image> Recreate server from the specified image (name or ID). Defaults to the currently used one.

--password <password> Set the password on the rebuilt instance

--wait Wait for rebuild to complete

openstack server remove security group

```
usage: openstack --os-identity-api-version 3 server remove security group [-h]
      ↪<server> <group>
```

Remove security group from server

Positional arguments:

<server> Name or ID of server to use

<group> Name or ID of security group to remove from server

Optional arguments:

-h, --help show this help message and exit

openstack server remove volume

```
usage: openstack --os-identity-api-version 3 server remove volume [-h] <server>
      ↪<volume>
```

Remove volume from server

Positional arguments:

<server> Server (name or ID)

<volume> Volume to remove (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server rescue

```
usage: openstack --os-identity-api-version 3 server rescue [-h] [-f {html,json,shell,
      ↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        <server>
```

Put server in rescue mode

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server resize

```
usage: openstack --os-identity-api-version 3 server resize [-h] [--flavor <flavor> | -
      ↪-confirm | --revert]
                        [--wait]
                        <server>
```

Scale server to a new flavor

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--flavor <flavor> Resize server to specified flavor

--confirm Confirm server resize is complete

--revert Restore server state before resize

--wait Wait for resize to complete

openstack server resume

```
usage: openstack --os-identity-api-version 3 server resume [-h] <server> [<server> ...  
↪]
```

Resume server(s)

Positional arguments:

<server> Server(s) to resume (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server set

```
usage: openstack --os-identity-api-version 3 server set [-h] [--name <new-name>] [--  
↪root-password]  
                [--property <key=value>]  
                <server>
```

Set server properties

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <new-name> New server name

--root-password Set new root password (interactive only)

--property <key=value> Property to add/change for this server (repeat option to set multiple properties)

openstack server shelve

```
usage: openstack --os-identity-api-version 3 server shelve [-h] <server> [<server> ...  
↪]
```

Shelve server(s)

Positional arguments:

<server> Server(s) to shelve (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server show

```
usage: openstack --os-identity-api-version 3 server show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--diagnostics]
                                <server>
```

Show server details

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--diagnostics Display server diagnostics information

openstack server ssh

```
usage: openstack --os-identity-api-version 3 server ssh [-h] [--login <login-name>] [-
↪-port <port>]
                                [--identity <keyfile>] [--option <config-options>]
                                [-4 | -6]
                                [--public | --private | --address-type <address-type>]
                                <server>
```

Ssh to server

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--login <login-name> Login name (ssh -l option)

--port <port> Destination port (ssh -p option)

--identity <keyfile> Private key file (ssh -i option)

--option <config-options> Options in ssh_config(5) format (ssh -o option)

-4 Use only IPv4 addresses

-6 Use only IPv6 addresses

--public Use public IP address

--private Use private IP address

--address-type <address-type> Use other IP address (public, private, etc)

openstack server start

```
usage: openstack --os-identity-api-version 3 server start [-h] <server> [<server> ...]
```

Start server(s).

Positional arguments:

<server> Server(s) to start (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server stop

```
usage: openstack --os-identity-api-version 3 server stop [-h] <server> [<server> ...]
```

Stop server(s).

Positional arguments:

<server> Server(s) to stop (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server suspend

```
usage: openstack --os-identity-api-version 3 server suspend [-h] <server> [<server> ..  
↪.]
```

Suspend server(s)

Positional arguments:

<server> Server(s) to suspend (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server unlock

```
usage: openstack --os-identity-api-version 3 server unlock [-h] <server> [<server> ...  
↪]
```

Unlock server(s)

Positional arguments:

<server> Server(s) to unlock (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server unpause

```
usage: openstack --os-identity-api-version 3 server unpause [-h] <server> [<server> ..
↪.]
```

Unpause server(s)

Positional arguments:

<server> Server(s) to unpause (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server unrescue

```
usage: openstack --os-identity-api-version 3 server unrescue [-h] <server>
```

Restore server from rescue mode

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack server unset

```
usage: openstack --os-identity-api-version 3 server unset [-h] [--property <key>]
↪<server>
```

Unset server properties

Positional arguments:

<server> Server (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key> Property key to remove from server (repeat to unset multiple values)

openstack server unshelve

```
usage: openstack --os-identity-api-version 3 server unshelve [-h] <server> [<server> .
↪..]
```

Unshelve server(s)

Positional arguments:

<server> Server(s) to unshelve (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack service create

```
usage: openstack --os-identity-api-version 3 service create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX] [--name <name>]
                                [--description <description>]
                                [--enable | --disable]
                                <type>
```

Create new service

Positional arguments:

<type> New service type (compute, image, identity, volume, etc)

Optional arguments:

-h, --help show this help message and exit

--name <name> New service name

--description <description> New service description

--enable Enable service (default)

--disable Disable service

openstack service delete

```
usage: openstack --os-identity-api-version 3 service delete [-h] <service>
```

Delete service

Positional arguments:

<service> Service to delete (type or ID)

Optional arguments:

-h, --help show this help message and exit

openstack service list

```
usage: openstack --os-identity-api-version 3 service list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}] [--long]
```

List services

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack service provider create

```
usage: openstack --os-identity-api-version 3 service provider create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                --auth-url <auth-url>
                                [--description <description>]
                                --service-provider-url <sp-url>
                                [--enable | --disable]
                                <name>
```

Create new service provider

Positional arguments:

<name> New service provider name (must be unique)

Optional arguments:

-h, --help show this help message and exit

--auth-url <auth-url> Authentication URL of remote federated service provider (required)

--description <description> New service provider description

--service-provider-url <sp-url> A service URL where SAML assertions are being sent (required)

--enable Enable the service provider (default)

--disable Disable the service provider

openstack service provider delete

```
usage: openstack --os-identity-api-version 3 service provider delete [-h] <service-
↵provider>
```

Delete service provider

Positional arguments:

<service-provider> Service provider to delete

Optional arguments:

-h, --help show this help message and exit

openstack service provider list

```
usage: openstack --os-identity-api-version 3 service provider list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List service providers

Optional arguments:

-h, --help show this help message and exit

openstack service provider set

```
usage: openstack --os-identity-api-version 3 service provider set [-h] [--auth-url
↪<auth-url>]
                                [--description <description>]
                                [--service-provider-url <sp-url>]
                                [--enable | --disable]
                                <service-provider>
```

Set service provider properties

Positional arguments:

<service-provider> Service provider to modify

Optional arguments:

-h, --help show this help message and exit

--auth-url <auth-url> New Authentication URL of remote federated service provider

--description <description> New service provider description

--service-provider-url <sp-url> New service provider URL, where SAML assertions are sent

--enable Enable the service provider

--disable Disable the service provider

openstack service provider show

```
usage: openstack --os-identity-api-version 3 service provider show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <service-provider>
```

Display service provider details

Positional arguments:

<service-provider> Service provider to display

Optional arguments:

-h, --help show this help message and exit

openstack service set

```
usage: openstack --os-identity-api-version 3 service set [-h] [--type <type>] [--name
↪<service-name>]
                                [--description <description>]
                                [--enable | --disable]
                                <service>
```


Set service properties

Positional arguments:

<service> Service to update (type, name or ID)

Optional arguments:

-h, --help show this help message and exit

--type <type> New service type (compute, image, identity, volume, etc)

--name <service-name> New service name

--description <description> New service description

--enable Enable service

--disable Disable service

openstack service show

```
usage: openstack --os-identity-api-version 3 service show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>] [--noindent]
                               [--prefix PREFIX]
                               <service>
```

Display service details

Positional arguments:

<service> Service to display (type, name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack snapshot create

```
usage: openstack --os-identity-api-version 3 snapshot create [-h] [-f {html,json,
↪shell,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--noindent] [--prefix PREFIX] --name <name>
                               [--description <description>] [--force]
                               <volume>
```

Create new snapshot

Positional arguments:

<volume> Volume to snapshot (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Name of the snapshot

--description <description> Description of the snapshot

--force Create a snapshot attached to an instance. Default is False

openstack snapshot delete

```
usage: openstack --os-identity-api-version 3 snapshot delete [-h] <snapshot> [
↪<snapshot> ...]
```

Delete volume snapshot(s)

Positional arguments:

<snapshot> Snapshot(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack snapshot list

```
usage: openstack --os-identity-api-version 3 snapshot list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--all-projects] [--long]
```

List snapshots

Optional arguments:

-h, --help show this help message and exit

--all-projects Include all projects (admin only)

--long List additional fields in output

openstack snapshot set

```
usage: openstack --os-identity-api-version 3 snapshot set [-h] [--name <name>]
                        [--description <description>]
                        [--property <key=value>]
                        <snapshot>
```

Set snapshot properties

Positional arguments:

<snapshot> Snapshot to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> New snapshot name

--description <description> New snapshot description

--property <key=value> Property to add/change for this snapshot (repeat option to set multiple properties)

openstack snapshot show

```
usage: openstack --os-identity-api-version 3 snapshot show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        <snapshot>
```

Display snapshot details

Positional arguments:

<snapshot> Snapshot to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack snapshot unset

```
usage: openstack --os-identity-api-version 3 snapshot unset [-h] [--property <key>]
↪<snapshot>
```

Unset snapshot properties

Positional arguments:

<snapshot> Snapshot to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from snapshot (repeat to remove multiple values)

openstack software config create

```
usage: openstack --os-identity-api-version 3 software config create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--config-file <config-file>]
                        [--definition-file <destination-file>]
                        [--group <group>]
                        <config-name>
```

Create software config

Positional arguments:

<config-name> Name of the software config to create

Optional arguments:

-h, --help show this help message and exit

--config-file <config-file> Path to JSON/YAML containing map defining <inputs>, <outputs>, and <options>

--definition-file <destination-file> Path to software config script/data

--group <group> Group name of tool expected by the software config

openstack software config delete

```
usage: openstack --os-identity-api-version 3 software config delete [-h] <config> [
↪<config> ...]
```

Delete software configs

Positional arguments:

<config> IDs of the software configs to delete

Optional arguments:

-h, --help show this help message and exit

openstack software config list

```
usage: openstack --os-identity-api-version 3 software config list [-h]
                        [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--limit <limit>] [--marker <id>]
```

List software configs

Optional arguments:

-h, --help show this help message and exit

--limit <limit> Limit the number of configs returned

--marker <id> Return configs that appear after the given config ID

openstack software config show

```
usage: openstack --os-identity-api-version 3 software config show [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--config-only]
                        <config>
```

Show software config details

Positional arguments:

<config> ID of the config

Optional arguments:

-h, --help show this help message and exit

--config-only Only display the value of the <config> property.

openstack software deployment create

```
usage: openstack --os-identity-api-version 3 software deployment create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN]
                                [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--input-value <key=value>]
                                [--action <action>]
                                [--config <config>] --server
                                <server>
                                [--signal-transport <signal-transport>]
                                [--container <container>]
                                [--timeout <timeout>]
                                <deployment-name>
```

Create a software deployment.

Positional arguments:

<deployment-name> Name of the derived config associated with this deployment. This is used to apply a sort order to the list of configurations currently deployed to the server.

Optional arguments:

-h, --help show this help message and exit

--input-value <key=value> Input value to set on the deployment. This can be specified multiple times.

--action <action> Name of an action for this deployment. This can be a custom action, or one of CREATE, UPDATE, DELETE, SUSPEND, RESUME. Default is UPDATE

--config <config> ID of the configuration to deploy

--server <server> ID of the server being deployed to

--signal-transport <signal-transport> How the server should signal to heat with the deployment output values. TEMP_URL_SIGNAL will create a Swift TempURL to be signaled via HTTP PUT. ZAQAR_SIGNAL will create a dedicated zaqar queue to be signaled using the provided keystone credentials. NO_SIGNAL will result in the resource going to the COMPLETE state without waiting for any signal

--container <container> Optional name of container to store TEMP_URL_SIGNAL objects in. If not specified a container will be created with a name derived from the DEPLOY_NAME

--timeout <timeout> Deployment timeout in minutes

openstack software deployment delete

```
usage: openstack --os-identity-api-version 3 software deployment delete [-h]
                                <deployment> [<deployment> ...]
```

Delete software deployment(s) and correlative config(s).

Positional arguments:

<deployment> ID of the deployment(s) to delete.

Optional arguments:

-h, --help show this help message and exit

openstack software deployment list

```
usage: openstack --os-identity-api-version 3 software deployment list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--server <server>] [--long]
```

List software deployments.

Optional arguments:

- h, --help** show this help message and exit
- server <server>** ID of the server to fetch deployments for
- long** List more fields in output

openstack software deployment metadata show

```
usage: openstack --os-identity-api-version 3 software deployment metadata show [-h]
      ↪<server>
```

Get deployment configuration metadata for the specified server.

Positional arguments:

<server> ID of the server to fetch deployments for

Optional arguments:

- h, --help** show this help message and exit

openstack software deployment output show

```
usage: openstack --os-identity-api-version 3 software deployment output show [-h] [--
      ↪all] [--long]
                                     <deployment> [<output-name>]
```

Show a specific deployment output.

Positional arguments:

<deployment> ID of deployment to show the output for

<output-name> Name of an output to display

Optional arguments:

- h, --help** show this help message and exit
- all** Display all deployment outputs
- long** Show full deployment logs in output

openstack software deployment show

```
usage: openstack --os-identity-api-version 3 software deployment show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--long]
                                     <deployment>
```

Show SoftwareDeployment Details.

Positional arguments:

<deployment> ID of the deployment

Optional arguments:

-h, --help show this help message and exit

--long Show more fields in output

openstack stack abandon

```
usage: openstack --os-identity-api-version 3 stack abandon [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--output-file <output-file>]
                                     <stack>
```

Abandon stack and output results.

Positional arguments:

<stack> Name or ID of stack to abandon

Optional arguments:

-h, --help show this help message and exit

--output-file <output-file> File to output abandon results

openstack stack adopt

```
usage: openstack --os-identity-api-version 3 stack adopt [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>] [--noindent]
                                     [--prefix PREFIX] [-e <environment>]
                                     [--timeout <timeout>] --adopt-file <adopt-file>
                                     [--enable-rollback] [--parameter <key=value>]
                                     [--wait]
                                     <stack-name>
```

Adopt a stack.

Positional arguments:

<stack-name> Name of the stack to adopt

Optional arguments:

-h, --help show this help message and exit

-e <environment>, --environment <environment> Path to the environment. Can be specified multiple times

--timeout <timeout> Stack creation timeout in minutes

--adopt-file <adopt-file> Path to adopt stack data file

--enable-rollback Enable rollback on create/update failure

--parameter <key=value> Parameter values used to create the stack. Can be specified multiple times

--wait Wait until stack adopt completes

openstack stack cancel

```
usage: openstack --os-identity-api-version 3 stack cancel [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}] [--wait]
                                <stack> [<stack> ...]
```

Cancel current task for a stack. Supported tasks for cancellation: * update

Positional arguments:

<stack> Stack(s) to cancel (name or ID)

Optional arguments:

-h, --help show this help message and exit

--wait Wait for check to complete

openstack stack check

```
usage: openstack --os-identity-api-version 3 stack check [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}] [--wait]
                                <stack> [<stack> ...]
```

Check a stack.

Positional arguments:

<stack> Stack(s) to check update (name or ID)

Optional arguments:

-h, --help show this help message and exit

--wait Wait for check to complete

openstack stack create


```
usage: openstack --os-identity-api-version 3 stack create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] -t <template>
                                [-e <environment>] [--timeout <timeout>]
                                [--pre-create <resource>] [--enable-rollback]
                                [--parameter <key=value>]
                                [--parameter-file <key=file>] [--wait]
                                [--tags <tag1,tag2...>] [--dry-run]
                                <stack-name>
```

Create a stack.

Positional arguments:

<stack-name> Name of the stack to create

Optional arguments:

-h, --help show this help message and exit

-t <template>, --template <template> Path to the template

-e <environment>, --environment <environment> Path to the environment. Can be specified multiple times

--timeout <timeout> Stack creating timeout in minutes

--pre-create <resource> Name of a resource to set a pre-create hook to. Resources in nested stacks can be set using slash as a separator: nested_stack/another/my_resource. You can use wildcards to match multiple stacks or resources: nested_stack/an*/*_resource. This can be specified multiple times

--enable-rollback Enable rollback on create/update failure

--parameter <key=value> Parameter values used to create the stack. This can be specified multiple times

--parameter-file <key=file> Parameter values from file used to create the stack. This can be specified multiple times. Parameter values would be the content of the file

--wait Wait until stack goes to CREATE_COMPLETE or CREATE_FAILED

--tags <tag1,tag2...> A list of tags to associate with the stack

--dry-run Do not actually perform the stack create, but show what would be created

openstack stack delete

```
usage: openstack --os-identity-api-version 3 stack delete [-h] [--yes] [--wait]
↪<stack> [<stack> ...]
```

Delete stack(s).

Positional arguments:

<stack> Stack(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

--yes Skip yes/no prompt (assume yes)

--wait Wait for stack delete to complete

openstack stack event list

```
usage: openstack --os-identity-api-version 3 stack event list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--resource <resource>]
                                [--filter <key=value>] [--limit <limit>]
                                [--marker <id>] [--nested-depth <depth>]
                                [--sort <key>[:<direction>]] [--follow]
                                <stack>
```

List events.

Positional arguments:

<stack> Name or ID of stack to show events for

Optional arguments:

-h, --help show this help message and exit

--resource <resource> Name of resource to show events for. Note: this cannot be specified with **--nested-depth**

--filter <key=value> Filter parameters to apply on returned events

--limit <limit> Limit the number of events returned

--marker <id> Only return events that appear after the given ID

--nested-depth <depth> Depth of nested stacks from which to display events. Note: this cannot be specified with **--resource**

--sort <key>[:<direction>] Sort output by selected keys and directions (asc or desc) (default: asc). Specify multiple times to sort on multiple keys

--follow Print events until process is halted

openstack stack event show

```
usage: openstack --os-identity-api-version 3 stack event show [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <stack> <resource> <event>
```

Show event details.

Positional arguments:

<stack> Name or ID of stack to show events for

<resource> Name of the resource event belongs to

<event> ID of event to display details for

Optional arguments:

-h, --help show this help message and exit

openstack stack hook clear

```
usage: openstack --os-identity-api-version 3 stack hook clear [-h] [--pre-create] [--pre-update]
                                <stack> <resource> [<resource> ...]
```

Clear resource hooks on a given stack.

Positional arguments:

<stack> Stack to display (name or ID)

<resource> Resource names with hooks to clear. Resources in nested stacks can be set using slash as a separator: `nested_stack/another/my_resource`. You can use wildcards to match multiple stacks or resources: `nested_stack/an*/*_resource`

Optional arguments:

-h, --help show this help message and exit

--pre-create Clear the pre-create hooks

--pre-update Clear the pre-update hooks

openstack stack hook poll

```
usage: openstack --os-identity-api-version 3 stack hook poll [-h] [-f {csv,html,json,
                                ↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--nested-depth <nested-depth>]
                                <stack>
```

List resources with pending hook for a stack.

Positional arguments:

<stack> Stack to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

--nested-depth <nested-depth> Depth of nested stacks from which to display hooks

openstack stack list

```
usage: openstack --os-identity-api-version 3 stack list [-h] [-f {csv,html,json,table,
                                ↪value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--deleted] [--nested] [--hidden]
                                [--property <key=value>] [--tags <tag1,tag2...>]
                                [--tag-mode <mode>] [--limit <limit>]
                                [--marker <id>] [--sort <key>[:<direction>]]
                                [--all-projects] [--short] [--long]
```

List stacks.

Optional arguments:

- h, --help** show this help message and exit
- deleted** Include soft-deleted stacks in the stack listing
- nested** Include nested stacks in the stack listing
- hidden** Include hidden stacks in the stack listing
- property <key=value>** Filter properties to apply on returned stacks (repeat to filter on multiple properties)
- tags <tag1,tag2...>** List of tags to filter by. Can be combined with **-tag-** mode to specify how to filter tags
- tag-mode <mode>** Method of filtering tags. Must be one of “any”, “not”, or “not-any”. If not specified, multiple tags will be combined with the boolean AND expression
- limit <limit>** The number of stacks returned
- marker <id>** Only return stacks that appear after the given ID
- sort <key>[:<direction>]** Sort output by selected keys and directions (asc or desc) (default: asc). Specify multiple times to sort on multiple properties
- all-projects** Include all projects (admin only)
- short** List fewer fields in output
- long** List additional fields in output, this is implied by **-all-projects**

openstack stack output list

```
usage: openstack --os-identity-api-version 3 stack output list [-h] [-f {csv,html,
↪ json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                <stack>
```

List stack outputs.

Positional arguments:

<stack> Name or ID of stack to query

Optional arguments:

- h, --help** show this help message and exit

openstack stack output show

```
usage: openstack --os-identity-api-version 3 stack output show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX] [--all]
                                <stack> [<output>]
```

Show stack output.

Positional arguments:

<stack> Name or ID of stack to query

<output> Name of an output to display

Optional arguments:

-h, --help show this help message and exit

--all Display all stack outputs

openstack stack resource list

```
usage: openstack --os-identity-api-version 3 stack resource list [-h]
                                [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--long] [-n <nested-depth>]
                                [--filter <key=value>]
                                <stack>
```

List stack resources.

Positional arguments:

<stack> Name or ID of stack to query

Optional arguments:

-h, --help show this help message and exit

--long Enable detailed information presented for each resource in resource list

-n <nested-depth>, --nested-depth <nested-depth> Depth of nested stacks from which to display resources

--filter <key=value> Filter parameters to apply on returned resources based on their name, status, type, action, id and physical_resource_id

openstack stack resource mark unhealthy

```
usage: openstack --os-identity-api-version 3 stack resource mark unhealthy [-h] [--
↪reset]
                                <stack> <resource> [reason]
```

Set resource's health.

Positional arguments:

<stack> Name or ID of stack the resource belongs to

<resource> Name of the resource

reason Reason for state change

Optional arguments:

-h, --help show this help message and exit

--reset Set the resource as healthy

openstack stack resource metadata

```
usage: openstack --os-identity-api-version 3 stack resource metadata [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <stack> <resource>
```

Show resource metadata

Positional arguments:

<stack> Stack to display (name or ID)

<resource> Name of the resource to show the metadata for

Optional arguments:

-h, --help show this help message and exit

openstack stack resource show

```
usage: openstack --os-identity-api-version 3 stack resource show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--with-attr <attribute>]
                                <stack> <resource>
```

Display stack resource.

Positional arguments:

<stack> Name or ID of stack to query

<resource> Name or ID of resource

Optional arguments:

-h, --help show this help message and exit

--with-attr <attribute> Attribute to show, can be specified multiple times

openstack stack resource signal

```
usage: openstack --os-identity-api-version 3 stack resource signal [-h] [--data <data>
↪]
                                [--data-file <data-file>]
                                <stack> <resource>
```

Signal a resource with optional data.

Positional arguments:

<stack> Name or ID of stack the resource belongs to

<resource> Name of the resource to signal

Optional arguments:

-h, --help show this help message and exit

--data <data> JSON Data to send to the signal handler

--data-file <data-file> File containing JSON data to send to the signal handler

openstack stack resume

```
usage: openstack --os-identity-api-version 3 stack resume [-h] [-f {csv,html,json,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}] [--wait]
                                <stack> [<stack> ...]
```

Resume a stack.

Positional arguments:

<stack> Stack(s) to resume (name or ID)

Optional arguments:

-h, --help show this help message and exit

--wait Wait for resume to complete

openstack stack show

```
usage: openstack --os-identity-api-version 3 stack show [-h] [-f {html,json,shell,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <stack>
```

Show stack details.

Positional arguments:

<stack> Stack to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack stack snapshot create

```
usage: openstack --os-identity-api-version 3 stack snapshot create [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--name <name>]
                                <stack>
```

Create stack snapshot.

Positional arguments:

<stack> Name or ID of stack

Optional arguments:

-h, --help show this help message and exit

--name <name> Name of snapshot

openstack stack snapshot delete

```
usage: openstack --os-identity-api-version 3 stack snapshot delete [-h] <stack>
      ↪<snapshot>
```

Delete stack snapshot.

Positional arguments:

<stack> Name or ID of stack

<snapshot> ID of stack snapshot

Optional arguments:

-h, --help show this help message and exit

openstack stack snapshot list

```
usage: openstack --os-identity-api-version 3 stack snapshot list [-h]
                        [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        <stack>
```

List stack snapshots.

Positional arguments:

<stack> Name or ID of stack containing the snapshots

Optional arguments:

-h, --help show this help message and exit

openstack stack snapshot restore

```
usage: openstack --os-identity-api-version 3 stack snapshot restore [-h] <stack>
      ↪<snapshot>
```

Restore stack snapshot

Positional arguments:

<stack> Name or ID of stack containing the snapshot

<snapshot> ID of the snapshot to restore

Optional arguments:

-h, --help show this help message and exit

openstack stack snapshot show

```
usage: openstack --os-identity-api-version 3 stack snapshot show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <stack> <snapshot>
```

Show stack snapshot.

Positional arguments:

<stack> Name or ID of stack containing the snapshot

<snapshot> ID of the snapshot to show

Optional arguments:

-h, --help show this help message and exit

openstack stack suspend

```
usage: openstack --os-identity-api-version 3 stack suspend [-h] [-f {csv,html,json,
→table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--wait]
                                <stack> [<stack> ...]
```

Suspend a stack.

Positional arguments:

<stack> Stack(s) to suspend (name or ID)

Optional arguments:

-h, --help show this help message and exit

--wait Wait for suspend to complete

openstack stack template show

```
usage: openstack --os-identity-api-version 3 stack template show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <stack>
```

Display stack template.

Positional arguments:

<stack> Name or ID of stack to query

Optional arguments:

-h, --help show this help message and exit

openstack stack update

```
usage: openstack --os-identity-api-version 3 stack update [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [-t <template>]
                        [-e <environment>] [--pre-update <resource>]
                        [--timeout <timeout>] [--rollback <value>]
                        [--dry-run] [--parameter <key=value>]
                        [--parameter-file <key=file>] [--existing]
                        [--clear-parameter <parameter>]
                        [--tags <tag1,tag2...>] [--wait]
                        <stack>
```

Update a stack.

Positional arguments:

<stack> Name or ID of stack to update

Optional arguments:

-h, --help show this help message and exit

-t <template>, --template <template> Path to the template

-e <environment>, --environment <environment> Path to the environment. Can be specified multiple times

--pre-update <resource> Name of a resource to set a pre-update hook to. Resources in nested stacks can be set using slash as a separator: nested_stack/another/my_resource. You can use wildcards to match multiple stacks or resources: nested_stack/an*/*_resource. This can be specified multiple times

--timeout <timeout> Stack update timeout in minutes

--rollback <value> Set rollback on update failure. Value “enabled” sets rollback to enabled. Value “disabled” sets rollback to disabled. Value “keep” uses the value of existing stack to be updated (default)

--dry-run Do not actually perform the stack update, but show what would be changed

--parameter <key=value> Parameter values used to create the stack. This can be specified multiple times

--parameter-file <key=file> Parameter values from file used to create the stack. This can be specified multiple times. Parameter value would be the content of the file

--existing Re-use the template, parameters and environment of the current stack. If the template argument is omitted then the existing template is used. If no **--environment** is specified then the existing environment is used. Parameters specified in **--parameter** will patch over the existing values in the current stack. Parameters omitted will keep the existing values

--clear-parameter <parameter> Remove the parameters from the set of parameters of current stack for the stack-update. The default value in the template will be used. This can be specified multiple times

--tags <tag1,tag2...> An updated list of tags to associate with the stack

--wait Wait until stack goes to UPDATE_COMPLETE or UPDATE_FAILED

openstack subnet delete

```
usage: openstack --os-identity-api-version 3 subnet delete [-h] <subnet>
```

Delete subnet

Positional arguments:

<subnet> Subnet to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack subnet list

```
usage: openstack --os-identity-api-version 3 subnet list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}] [--long]
```

List subnets

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack subnet pool delete

```
usage: openstack --os-identity-api-version 3 subnet pool delete [-h] <subnet-pool>
```

Delete subnet pool

Positional arguments:

<subnet-pool> Subnet pool to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack subnet pool list

```
usage: openstack --os-identity-api-version 3 subnet pool list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--long]
```

List subnet pools

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack subnet pool show

```
usage: openstack --os-identity-api-version 3 subnet pool show [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <subnet-pool>
```

Display subnet pool details

Positional arguments:

<subnet-pool> Subnet pool to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack subnet show

```
usage: openstack --os-identity-api-version 3 subnet show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <subnet>
```

Show subnet details

Positional arguments:

<subnet> Subnet to show (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack tld create

```
usage: openstack --os-identity-api-version 3 tld create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] --name NAME
                                [--description DESCRIPTION]
```

Create new tld

Optional arguments:

-h, --help show this help message and exit

--name NAME TLD Name

--description DESCRIPTION Description

openstack tld delete

```
usage: openstack --os-identity-api-version 3 tld delete [-h] id
```

Delete tld

Positional arguments:

id TLD ID

Optional arguments:

-h, --help show this help message and exit

openstack tld list

```
usage: openstack --os-identity-api-version 3 tld list [-h] [-f {csv,html,json,table,
↵value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--name NAME] [--description DESCRIPTION]
```

List tlds

Optional arguments:

-h, --help show this help message and exit

--name NAME TLD NAME

--description DESCRIPTION TLD Description

openstack tld set

```
usage: openstack --os-identity-api-version 3 tld set [-h] [-f {html,json,shell,table,
↵value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--name NAME]
                                [--description DESCRIPTION | --no-description]
                                id
```

Set tld properties

Positional arguments:

id TLD ID

Optional arguments:

-h, --help show this help message and exit

--name NAME TLD Name

--description DESCRIPTION Description

--no-description

openstack tld show

```
usage: openstack --os-identity-api-version 3 tld show [-h] [-f {html,json,shell,table,
↵value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                id
```

Show tld details

Positional arguments:

id TLD ID

Optional arguments:

-h, --help show this help message and exit

openstack token issue

```
usage: openstack --os-identity-api-version 3 token issue [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
```

Issue new token

Optional arguments:

-h, --help show this help message and exit

openstack token revoke

```
usage: openstack --os-identity-api-version 3 token revoke [-h] <token>
```

Revoke existing token

Positional arguments:

<token> Token to be deleted

Optional arguments:

-h, --help show this help message and exit

openstack trust create

```
usage: openstack --os-identity-api-version 3 trust create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] --project <project> --role
                                <role> [--impersonate]
                                [--expiration <expiration>]
                                [--project-domain <project-domain>]
                                [--trustor-domain <trustor-domain>]
                                [--trustee-domain <trustee-domain>]
                                <trustor-user> <trustee-user>
```

Create new trust

Positional arguments:

<trustor-user> User that is delegating authorization (name or ID)

<trustee-user> User that is assuming authorization (name or ID)

Optional arguments:

-h, --help show this help message and exit

--project <project> Project being delegated (name or ID) (required)

--role <role> Roles to authorize (name or ID) (repeat to set multiple values) (required)

--impersonate Tokens generated from the trust will represent <trustor> (defaults to False)

--expiration <expiration> Sets an expiration date for the trust (format of YYYY-mm-ddTHH:MM:SS)

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

--trustor-domain <trustor-domain> Domain that contains <trustor> (name or ID)

--trustee-domain <trustee-domain> Domain that contains <trustee> (name or ID)

openstack trust delete

```
usage: openstack --os-identity-api-version 3 trust delete [-h] <trust> [<trust> ...]
```

Delete trust(s)

Positional arguments:

<trust> Trust(s) to delete

Optional arguments:

-h, --help show this help message and exit

openstack trust list

```
usage: openstack --os-identity-api-version 3 trust list [-h] [-f {csv,html,json,table,
↪value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List trusts

Optional arguments:

-h, --help show this help message and exit

openstack trust show

```
usage: openstack --os-identity-api-version 3 trust show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX]
                                <trust>
```

Display trust details

Positional arguments:

<trust> Trust to display

Optional arguments:

-h, --help show this help message and exit

openstack usage list

```
usage: openstack --os-identity-api-version 3 usage list [-h] [-f {csv,html,json,table,
↵value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--start <start>] [--end <end>]
```

List resource usage per project

Optional arguments:

-h, --help show this help message and exit

--start <start> Usage range start date, ex 2012-01-20 (default: 4 weeks ago)

--end <end> Usage range end date, ex 2012-01-20 (default: tomorrow)

openstack usage show

```
usage: openstack --os-identity-api-version 3 usage show [-h] [-f {html,json,shell,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--project <project>]
                                [--start <start>] [--end <end>]
```

Show resource usage for a single project

Optional arguments:

-h, --help show this help message and exit

--project <project> Name or ID of project to show usage for

--start <start> Usage range start date, ex 2012-01-20 (default: 4 weeks ago)

--end <end> Usage range end date, ex 2012-01-20 (default: tomorrow)

openstack user create

```
usage: openstack --os-identity-api-version 3 user create [-h] [-f {html,json,shell,
↵table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--domain <domain>]
                                [--project <project>]
                                [--project-domain <project-domain>]
                                [--password <password>] [--password-prompt]
                                [--email <email-address>]
                                [--description <description>]
                                [--enable | --disable] [--or-show]
                                <name>
```

Create new user

Positional arguments:

<name> New user name

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Default domain (name or ID)

--project <project> Default project (name or ID)

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

--password <password> Set user password

--password-prompt Prompt interactively for password

--email <email-address> Set user email address

--description <description> User description

--enable Enable user (default)

--disable Disable user

--or-show Return existing user

openstack user delete

```
usage: openstack --os-identity-api-version 3 user delete [-h] [--domain <domain>]
      ↪<user> [<user> ...]
```

Delete user(s)

Positional arguments:

<user> User(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain owning <user> (name or ID)

openstack user list

```
usage: openstack --os-identity-api-version 3 user list [-h] [-f {csv,html,json,table,
      ↪value,yaml}]
      [-c COLUMN] [--max-width <integer>] [--noindent]
      [--quote {all,minimal,none,nonnumeric}]
      [--domain <domain>]
      [--group <group> | --project <project>] [--long]
```

List users

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Filter users by <domain> (name or ID)

--group <group> Filter users by <group> membership (name or ID)

--project <project> Filter users by <project> (name or ID)

--long List additional fields in output

openstack user password set

```
usage: openstack --os-identity-api-version 3 user password set [-h] [--password <new-  
↪password>]                                     [--original-password <original-password>]
```

Change current user password

Optional arguments:

-h, --help show this help message and exit

--password <new-password> New user password

--original-password <original-password> Original user password

openstack user set

```
usage: openstack --os-identity-api-version 3 user set [-h] [--name <name>] [--project  
↪<project>]                                     [--project-domain <project-domain>]  
                                                [--password <password>] [--password-prompt]  
                                                [--email <email-address>]  
                                                [--description <description>] [--enable | --disable]  
                                                <user>
```

Set user properties

Positional arguments:

<user> User to change (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Set user name

--project <project> Set default project (name or ID)

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

--password <password> Set user password

--password-prompt Prompt interactively for password

--email <email-address> Set user email address

--description <description> Set user description

--enable Enable user (default)

--disable Disable user

openstack user show

```
usage: openstack --os-identity-api-version 3 user show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--domain <domain>]
                        <user>
```

Display user details

Positional arguments:

<user> User to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

--domain <domain> Domain owning <user> (name or ID)

openstack volume create

```
usage: openstack --os-identity-api-version 3 volume create [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX] --size <size>
                        [--snapshot <snapshot>]
                        [--description <description>]
                        [--type <volume-type>] [--user <user>]
                        [--project <project>]
                        [--availability-zone <availability-zone>]
                        [--image <image>] [--source <volume>]
                        [--property <key=value>]
                        <name>
```

Create new volume

Positional arguments:

<name> New volume name

Optional arguments:

-h, --help show this help message and exit

--size <size> New volume size in GB

--snapshot <snapshot> Use <snapshot> as source of new volume (name or ID)

--description <description> New volume description

--type <volume-type> Use <volume-type> as the new volume type

--user <user> Specify an alternate user (name or ID)

--project <project> Specify an alternate project (name or ID)

--availability-zone <availability-zone> Create new volume in <availability_zone>

--image <image> Use <image> as source of new volume (name or ID)

--source <volume> Volume to clone (name or ID)

--property <key=value> Set a property to this volume (repeat option to set multiple properties)

openstack volume delete

```
usage: openstack --os-identity-api-version 3 volume delete [-h] [--force] <volume> [
↪<volume> ...]
```

Delete volume(s)

Positional arguments:

<volume> Volume(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

--force Attempt forced removal of volume(s), regardless of state (defaults to False)

openstack volume list

```
usage: openstack --os-identity-api-version 3 volume list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--project <project-id>]
                                [--project-domain <project-domain>]
                                [--user <user-id>] [--user-domain <user-domain>]
                                [--name <name>] [--status <status>]
                                [--all-projects] [--long]
```

List volumes

Optional arguments:

-h, --help show this help message and exit

--project <project-id> Filter results by project (name or ID) (admin only)

--project-domain <project-domain> Domain the project belongs to (name or ID). This can be used in case collisions between project names exist.

--user <user-id> Filter results by user (name or ID) (admin only)

--user-domain <user-domain> Domain the user belongs to (name or ID). This can be used in case collisions between user names exist.

--name <name> Filter results by volume name

--status <status> Filter results by status

--all-projects Include all projects (admin only)

--long List additional fields in output

openstack volume qos associate

```
usage: openstack --os-identity-api-version 3 volume qos associate [-h] <qos-spec>
↪<volume-type>
```

Associate a QoS specification to a volume type

Positional arguments:

<qos-spec> QoS specification to modify (name or ID)

<volume-type> Volume type to associate the QoS (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack volume qos create

```
usage: openstack --os-identity-api-version 3 volume qos create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--consumer <consumer>]
                        [--property <key=value>]
                        <name>
```

Create new QoS specification

Positional arguments:

<name> New QoS specification name

Optional arguments:

-h, --help show this help message and exit

--consumer <consumer> Consumer of the QoS. Valid consumers: back-end, both, front-end (defaults to 'both')

--property <key=value> Set a QoS specification property (repeat option to set multiple properties)

openstack volume qos delete

```
usage: openstack --os-identity-api-version 3 volume qos delete [-h] <qos-spec> [<qos-
  ↪spec> ...]
```

Delete QoS specification

Positional arguments:

<qos-spec> QoS specification(s) to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack volume qos disassociate

```
usage: openstack --os-identity-api-version 3 volume qos disassociate [-h]
                        [--volume-type <volume-type> | --all]
                        <qos-spec>
```

Disassociate a QoS specification from a volume type

Positional arguments:

<qos-spec> QoS specification to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--volume-type <volume-type> Volume type to disassociate the QoS from (name or ID)

--all Disassociate the QoS from every volume type

openstack volume qos list

```
usage: openstack --os-identity-api-version 3 volume qos list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
```

List QoS specifications

Optional arguments:

-h, --help show this help message and exit

openstack volume qos set

```
usage: openstack --os-identity-api-version 3 volume qos set [-h] [--property
↪<key=value>] <qos-spec>
```

Set QoS specification properties

Positional arguments:

<qos-spec> QoS specification to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key=value> Property to add or modify for this QoS specification (repeat option to set multiple properties)

openstack volume qos show

```
usage: openstack --os-identity-api-version 3 volume qos show [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <qos-spec>
```

Display QoS specification details

Positional arguments:

<qos-spec> QoS specification to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack volume qos unset

```
usage: openstack --os-identity-api-version 3 volume qos unset [-h] [--property <key>]
      ↪<qos-spec>
```

Unset QoS specification properties

Positional arguments:

<qos-spec> QoS specification to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from the QoS specification. (repeat option to unset multiple properties)

openstack volume set

```
usage: openstack --os-identity-api-version 3 volume set [-h] [--name <name>] [--
      ↪description <description>]
      [--size <size>] [--property <key=value>]
      <volume>
```

Set volume properties

Positional arguments:

<volume> Volume to change (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> New volume name

--description <description> New volume description

--size <size> Extend volume size in GB

--property <key=value> Property to add or modify for this volume (repeat option to set multiple properties)

openstack volume show

```
usage: openstack --os-identity-api-version 3 volume show [-h] [-f {html,json,shell,
      ↪table,value,yaml}]
      [-c COLUMN] [--max-width <integer>] [--noindent]
      [--prefix PREFIX]
      <volume-id>
```

Display volume details

Positional arguments:

<volume-id> Volume to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack volume type create

```
usage: openstack --os-identity-api-version 3 volume type create [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--description <description>]
                        [--public | --private]
                        [--property <key=value>]
                        <name>
```

Create new volume type

Positional arguments:

<name> New volume type name

Optional arguments:

-h, --help show this help message and exit

--description <description> New volume type description

--public Volume type is accessible to the public

--private Volume type is not accessible to the public

--property <key=value> Property to add for this volume type(repeat option to set multiple properties)

openstack volume type delete

```
usage: openstack --os-identity-api-version 3 volume type delete [-h] <volume-type>
```

Delete volume type

Positional arguments:

<volume-type> Volume type to delete (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack volume type list

```
usage: openstack --os-identity-api-version 3 volume type list [-h] [-f {csv,html,json,
→table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--long]
```

List volume types

Optional arguments:

-h, --help show this help message and exit

--long List additional fields in output

openstack volume type set

```
usage: openstack --os-identity-api-version 3 volume type set [-h] [--name <name>] [--
↪description <name>]
                                [--property <key=value>]
                                <volume-type>
```

Set volume type properties

Positional arguments:

<volume-type> Volume type to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--name <name> Set volume type name

--description <name> Set volume type description

--property <key=value> Property to add or modify for this volume type (repeat option to set multiple properties)

openstack volume type show

```
usage: openstack --os-identity-api-version 3 volume type show [-h] [-f {html,json,
↪shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                <volume-type>
```

Display volume type details

Positional arguments:

<volume-type> Volume type to display (name or ID)

Optional arguments:

-h, --help show this help message and exit

openstack volume type unset

```
usage: openstack --os-identity-api-version 3 volume type unset [-h] --property <key>
↪<volume-type>
```

Unset volume type properties

Positional arguments:

<volume-type> Volume type to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from volume type (repeat option to remove multiple properties)

openstack volume unset

```
usage: openstack --os-identity-api-version 3 volume unset [-h] --property <key>
      ↪<volume>
```

Unset volume properties

Positional arguments:

<volume> Volume to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key> Property to remove from volume (repeat option to remove multiple properties)

openstack zone abandon

```
usage: openstack --os-identity-api-version 3 zone abandon [-h] id
```

Abandon a zone

Positional arguments:

id Zone ID

Optional arguments:

-h, --help show this help message and exit

openstack zone axfr

```
usage: openstack --os-identity-api-version 3 zone axfr [-h] id
```

AXFR a zone

Positional arguments:

id Zone ID

Optional arguments:

-h, --help show this help message and exit

openstack zone blacklist create

```
usage: openstack --os-identity-api-version 3 zone blacklist create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     --pattern PATTERN
                                     [--description DESCRIPTION]
```

Create new blacklist

Optional arguments:

-h, --help show this help message and exit

--pattern **PATTERN** Blacklist pattern
--description **DESCRIPTION** Description

openstack zone blacklist delete

```
usage: openstack --os-identity-api-version 3 zone blacklist delete [-h] id
```

Delete blacklist

Positional arguments:

id Blacklist ID

Optional arguments:

-h, --help show this help message and exit

openstack zone blacklist list

```
usage: openstack --os-identity-api-version 3 zone blacklist list [-h]
                        [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
```

List blacklists

Optional arguments:

-h, --help show this help message and exit

openstack zone blacklist set

```
usage: openstack --os-identity-api-version 3 zone blacklist set [-h]
                        [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>]
                        [--noindent] [--prefix PREFIX]
                        [--pattern PATTERN]
                        [--description DESCRIPTION | --no-description]
                        id
```

Set blacklist properties

Positional arguments:

id Blacklist ID

Optional arguments:

-h, --help show this help message and exit

--pattern **PATTERN** Blacklist pattern

--description **DESCRIPTION** Description

--no-description

openstack zone blacklist show

```
usage: openstack --os-identity-api-version 3 zone blacklist show [-h]
                                [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                id
```

Show blacklist details

Positional arguments:

id Blacklist ID

Optional arguments:

-h, --help show this help message and exit

openstack zone create

```
usage: openstack --os-identity-api-version 3 zone create [-h] [-f {html,json,shell,
→table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>] [--noindent]
                                [--prefix PREFIX] [--email EMAIL] [--type TYPE]
                                [--ttl TTL] [--description DESCRIPTION]
                                [--masters MASTERS [MASTERS ...]]
                                name
```

Create new zone

Positional arguments:

name Zone Name

Optional arguments:

-h, --help show this help message and exit

--email EMAIL Zone Email

--type TYPE Zone Type

--ttl TTL Time To Live (Seconds)

--description DESCRIPTION Description

--masters MASTERS [MASTERS ...] Zone Masters

openstack zone delete

```
usage: openstack --os-identity-api-version 3 zone delete [-h] id
```

Delete zone

Positional arguments:

id Zone ID

Optional arguments:

-h, --help show this help message and exit

openstack zone list

```
usage: openstack --os-identity-api-version 3 zone list [-h] [-f {csv,html,json,table,
↪value,yaml}]
                               [-c COLUMN] [--max-width <integer>] [--noindent]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--name NAME] [--email EMAIL] [--type TYPE]
                               [--ttl TTL] [--description DESCRIPTION]
                               [--status STATUS]
```

List zones

Optional arguments:

-h, --help show this help message and exit

--name NAME Zone Name

--email EMAIL Zone Email

--type TYPE Zone Type

--ttl TTL Time To Live (Seconds)

--description DESCRIPTION Description

--status STATUS Zone Status

openstack zone set

```
usage: openstack --os-identity-api-version 3 zone set [-h] [-f {html,json,shell,table,
↪value,yaml}]
                               [-c COLUMN] [--max-width <integer>] [--noindent]
                               [--prefix PREFIX] [--email EMAIL] [--ttl TTL]
                               [--description DESCRIPTION | --no-description]
                               [--masters MASTERS [MASTERS ...]]
                               id
```

Set zone properties

Positional arguments:

id Zone ID

Optional arguments:

-h, --help show this help message and exit

--email EMAIL Zone Email

--ttl TTL Time To Live (Seconds)

--description DESCRIPTION Description

--no-description

--masters MASTERS [MASTERS ...] Zone Masters

openstack zone show

```
usage: openstack --os-identity-api-version 3 zone show [-h] [-f {html,json,shell,
↪table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX]
                        id
```

Show zone details

Positional arguments:

id Zone ID

Optional arguments:

-h, --help show this help message and exit

openstack zone transfer accept request

```
usage: openstack --os-identity-api-version 3 zone transfer accept request [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         --transfer-id TRANSFER_ID --key
                                         KEY
```

Accept a Zone Transfer Request

Optional arguments:

-h, --help show this help message and exit

--transfer-id TRANSFER_ID Transfer ID

--key KEY Transfer Key

openstack zone transfer accept show

```
usage: openstack --os-identity-api-version 3 zone transfer accept show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         id
```

Show Zone Transfer Accept

Positional arguments:

id Zone Transfer Accept ID

Optional arguments:

-h, --help show this help message and exit

openstack zone transfer request create

```
usage: openstack --os-identity-api-version 3 zone transfer request create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--target-project-id TARGET_PROJECT_ID]
                                     [--description DESCRIPTION]
                                     zone_id
```

Create new zone transfer request

Positional arguments:

zone_id Zone ID to transfer.

Optional arguments:

-h, --help show this help message and exit

--target-project-id TARGET_PROJECT_ID Target Project ID to transfer to.

--description DESCRIPTION Description

openstack zone transfer request delete

```
usage: openstack --os-identity-api-version 3 zone transfer request delete [-h] id
```

Delete a Zone Transfer Request

Positional arguments:

id Zone Transfer Request ID

Optional arguments:

-h, --help show this help message and exit

openstack zone transfer request list

```
usage: openstack --os-identity-api-version 3 zone transfer request list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
```

List Zone Transfer Requests

Optional arguments:

-h, --help show this help message and exit

openstack zone transfer request set

```
usage: openstack --os-identity-api-version 3 zone transfer request set [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--description DESCRIPTION | --no-
↪description]
                                     id
```

Set a Zone Transfer Request

Positional arguments:

id Zone Transfer Request ID

Optional arguments:

-h, --help show this help message and exit

--description DESCRIPTION Description

--no-description

openstack zone transfer request show

```
usage: openstack --os-identity-api-version 3 zone transfer request show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN]
                                     [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     id
```

Show Zone Transfer Request Details

Positional arguments:

id Zone Transfer Request ID

Optional arguments:

-h, --help show this help message and exit

2.3.4 OpenStack with Identity API v2 commands (diff)

This section documents only the difference in subcommands available for the openstack client when the Identity API version is changed from v3 to v2.

openstack project unset (Identity API v2)

```
usage: openstack --os-identity-api-version 2 project unset [-h] --property <key>
↪<project>
```

Unset project properties

Positional arguments:

<project> Project to modify (name or ID)

Optional arguments:

-h, --help show this help message and exit

--property <key> Unset a project property (repeat option to unset multiple properties)

openstack user role list (Identity API v2)

```
usage: openstack --os-identity-api-version 2 user role list [-h] [-f {csv,html,json,
↪table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--project <project>]
                                [<user>]
```

List user-role assignments

Positional arguments:

<user> User to list (name or ID)

Optional arguments:

-h, --help show this help message and exit

--project <project> Filter users by <project> (name or ID)

2.4 Block Storage service command-line client

The cinder client is the command-line interface (CLI) for the Block Storage service API and its extensions.

This chapter documents **cinder** version 1.6.0.

For help on a specific **cinder** command, enter:

```
$ cinder help COMMAND
```

2.4.1 cinder usage

```
usage: cinder [--version] [-d] [--os-auth-system <auth-system>]
              [--service-type <service-type>] [--service-name <service-name>]
              [--volume-service-name <volume-service-name>]
              [--os-endpoint-type <os-endpoint-type>]
              [--endpoint-type <endpoint-type>]
              [--os-volume-api-version <volume-api-ver>]
              [--bypass-url <bypass-url>] [--retries <retries>]
              [--os-auth-strategy <auth-strategy>]
              [--os-username <auth-user-name>] [--os-password <auth-password>]
              [--os-tenant-name <auth-tenant-name>]
              [--os-tenant-id <auth-tenant-id>] [--os-auth-url <auth-url>]
              [--os-user-id <auth-user-id>]
              [--os-user-domain-id <auth-user-domain-id>]
              [--os-user-domain-name <auth-user-domain-name>]
              [--os-project-id <auth-project-id>]
              [--os-project-name <auth-project-name>]
              [--os-project-domain-id <auth-project-domain-id>]
              [--os-project-domain-name <auth-project-domain-name>]
```

```
[--os-region-name <region-name>] [--os-token <token>]
[--os-url <url>] [--insecure] [--os-cacert <ca-certificate>]
[--os-cert <certificate>] [--os-key <key>] [--timeout <seconds>]
<subcommand> ...
```

Subcommands:

absolute-limits Lists absolute limits for a user.

availability-zone-list Lists all availability zones.

backup-create Creates a volume backup.

backup-delete Removes one or more backups.

backup-export Export backup metadata record.

backup-import Import backup metadata record.

backup-list Lists all backups.

backup-reset-state Explicitly updates the backup state.

backup-restore Restores a backup.

backup-show Shows backup details.

cgsnapshot-create Creates a cgsnapshot.

cgsnapshot-delete Removes one or more cgsnapshots.

cgsnapshot-list Lists all cgsnapshots.

cgsnapshot-show Shows cgsnapshot details.

consisgroup-create Creates a consistency group.

consisgroup-create-from-src Creates a consistency group from a cgsnapshot or a source CG.

consisgroup-delete Removes one or more consistency groups.

consisgroup-list Lists all consistencygroups.

consisgroup-show Shows details of a consistency group.

consisgroup-update Updates a consistencygroup.

create Creates a volume.

credentials Shows user credentials returned from auth.

delete Removes one or more volumes.

encryption-type-create Creates encryption type for a volume type. Admin only.

encryption-type-delete Deletes encryption type for a volume type. Admin only.

encryption-type-list Shows encryption type details for volume types. Admin only.

encryption-type-show Shows encryption type details for a volume type. Admin only.

encryption-type-update Update encryption type information for a volume type (Admin Only).

endpoints Discovers endpoints registered by authentication service.

extend Attempts to extend size of an existing volume.

extra-specs-list Lists current volume types and extra specs.

failover-host

force-delete Attempts force-delete of volume, regardless of state.

freeze-host

get-capabilities Show backend volume stats and properties. Admin only.

get-pools Show pool information for backends. Admin only.

image-metadata Sets or deletes volume image metadata.

image-metadata-show Shows volume image metadata.

list Lists all volumes.

manage Manage an existing volume.

metadata Sets or deletes volume metadata.

metadata-show Shows volume metadata.

metadata-update-all Updates volume metadata.

migrate Migrates volume to a new host.

qos-associate Associates qos specs with specified volume type.

qos-create Creates a qos specs.

qos-delete Deletes a specified qos specs.

qos-disassociate Disassociates qos specs from specified volume type.

qos-disassociate-all Disassociates qos specs from all its associations.

qos-get-association Lists all associations for specified qos specs.

qos-key Sets or unsets specifications for a qos spec.

qos-list Lists qos specs.

qos-show Shows qos specs details.

quota-class-show Lists quotas for a quota class.

quota-class-update Updates quotas for a quota class.

quota-defaults Lists default quotas for a tenant.

quota-delete Delete the quotas for a tenant.

quota-show Lists quotas for a tenant.

quota-update Updates quotas for a tenant.

quota-usage Lists quota usage for a tenant.

rate-limits Lists rate limits for a user.

readonly-mode-update Updates volume read-only access-mode flag.

rename Renames a volume.

replication-promote Promote a secondary volume to primary for a relationship.

replication-reenable Sync the secondary volume with primary for a relationship.

reset-state Explicitly updates the volume state in the Cinder database.

retype Changes the volume type for a volume.

service-disable Disables the service.

service-enable Enables the service.

service-list Lists all services. Filter by host and service binary.

set-bootable Update bootable status of a volume.

show Shows volume details.

snapshot-create Creates a snapshot.

snapshot-delete Removes one or more snapshots.

snapshot-list Lists all snapshots.

snapshot-manage Manage an existing snapshot.

snapshot-metadata Sets or deletes snapshot metadata.

snapshot-metadata-show Shows snapshot metadata.

snapshot-metadata-update-all Updates snapshot metadata.

snapshot-rename Renames a snapshot.

snapshot-reset-state Explicitly updates the snapshot state.

snapshot-show Shows snapshot details.

snapshot-unmanage Stop managing a snapshot.

thaw-host

transfer-accept Accepts a volume transfer.

transfer-create Creates a volume transfer.

transfer-delete Undoes a transfer.

transfer-list Lists all transfers.

transfer-show Shows transfer details.

type-access-add Adds volume type access for the given project.

type-access-list Print access information about the given volume type.

type-access-remove Removes volume type access for the given project.

type-create Creates a volume type.

type-default List the default volume type.

type-delete Deletes a volume type.

type-key Sets or unsets extra_spec for a volume type.

type-list Lists available 'volume types'. (Admin only will see private types)

type-show Show volume type details.

type-update Updates volume type name, description, and/or is_public.

unmanage Stop managing a volume.

upload-to-image Uploads volume to Image Service as an image.

bash-completion Prints arguments for bash_completion.

help Shows help about this program or one of its subcommands.

list-extensions Lists all available os-api extensions.

2.4.2 cinder optional arguments

--version show program's version number and exit

-d, --debug Shows debugging output.

--os-auth-system <auth-system> Defaults to `env[OS_AUTH_SYSTEM]`.

--service-type <service-type> Service type. For most actions, default is volume.

--service-name <service-name> Service name. Default= `env[CINDER_SERVICE_NAME]`.

--volume-service-name <volume-service-name> Volume service name. Default= `env[CINDER_VOLUME_SERVICE_NAME]`.

--os-endpoint-type <os-endpoint-type> Endpoint type, which is publicURL or internalURL. Default= `env[OS_ENDPOINT_TYPE]` or nova `env[CINDER_ENDPOINT_TYPE]` or publicURL.

--endpoint-type <endpoint-type> **DEPRECATED!** Use `--os-endpoint-type`.

--os-volume-api-version <volume-api-ver> Block Storage API version. Valid values are 1 or 2. Default= `env[OS_VOLUME_API_VERSION]`.

--bypass-url <bypass-url> Use this API endpoint instead of the Service Catalog. Defaults to `env[CINDERCLIENT_BYPASS_URL]`.

--retries <retries> Number of retries.

--os-auth-strategy <auth-strategy> Authentication strategy (Env: `OS_AUTH_STRATEGY`, default keystone). For now, any other value will disable the authentication.

--os-username <auth-user-name> OpenStack user name. Default= `env[OS_USERNAME]`.

--os-password <auth-password> Password for OpenStack user. Default= `env[OS_PASSWORD]`.

--os-tenant-name <auth-tenant-name> Tenant name. Default= `env[OS_TENANT_NAME]`.

--os-tenant-id <auth-tenant-id> ID for the tenant. Default= `env[OS_TENANT_ID]`.

--os-auth-url <auth-url> URL for the authentication service. Default= `env[OS_AUTH_URL]`.

--os-user-id <auth-user-id> Authentication user ID (Env: `OS_USER_ID`).

--os-user-domain-id <auth-user-domain-id> OpenStack user domain ID. Defaults to `env[OS_USER_DOMAIN_ID]`.

--os-user-domain-name <auth-user-domain-name> OpenStack user domain name. Defaults to `env[OS_USER_DOMAIN_NAME]`.

--os-project-id <auth-project-id> Another way to specify tenant ID. This option is mutually exclusive with `--os-tenant-id`. Defaults to `env[OS_PROJECT_ID]`.

--os-project-name <auth-project-name> Another way to specify tenant name. This option is mutually exclusive with `--os-tenant-name`. Defaults to `env[OS_PROJECT_NAME]`.

--os-project-domain-id <auth-project-domain-id> Defaults to `env[OS_PROJECT_DOMAIN_ID]`.

--os-project-domain-name <auth-project-domain-name> Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.

--os-region-name <region-name> Region name. Default= `env[OS_REGION_NAME]`.

--os-token <token> Defaults to `env[OS_TOKEN]`.

--os-url <url> Defaults to `env[OS_URL]`.

--insecure Explicitly allow client to perform “insecure” TLS (https) requests. The server’s certificate will not be verified against any certificate authorities. This option should be used with caution.

--os-cacert <ca-certificate> Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.

--os-cert <certificate> Defaults to `env[OS_CERT]`.

--os-key <key> Defaults to `env[OS_KEY]`.

--timeout <seconds> Set request timeout (in seconds).

2.4.3 Block Storage API v2 commands

You can select an API version to use by adding the `--os-volume-api-version` parameter or by setting the corresponding environment variable:

```
export OS_VOLUME_API_VERSION=2
```

cinder absolute-limits

```
usage: cinder --os-volume-api-version 2 absolute-limits
```

Lists absolute limits for a user.

cinder availability-zone-list

```
usage: cinder --os-volume-api-version 2 availability-zone-list
```

Lists all availability zones.

cinder backup-create

```
usage: cinder --os-volume-api-version 2 backup-create [--container <container>] [--  
↪name <name>]                                     [--description <description>] [--incremental]  
                                                    [--force] [--snapshot-id <snapshot-id>]  
                                                    <volume>
```

Creates a volume backup.

Positional arguments:

<volume> Name or ID of volume to backup.

Optional arguments:

--container <container> Backup container name. Default=None.

--name <name> Backup name. Default=None.

--description <description> Backup description. Default=None.

--incremental Incremental backup. Default=False.

--force Allows or disallows backup of a volume when the volume is attached to an instance. If set to True, backs up the volume whether its status is “available” or “in-use”. The backup of an “in-use” volume means your data is crash consistent. Default=False.

--snapshot-id <snapshot-id> ID of snapshot to backup. Default=None.

cinder backup-delete

```
usage: cinder --os-volume-api-version 2 backup-delete <backup> [<backup> ...]
```

Removes one or more backups.

Positional arguments:

<backup> Name or ID of backup(s) to delete.

cinder backup-export

```
usage: cinder --os-volume-api-version 2 backup-export <backup>
```

Export backup metadata record.

Positional arguments:

<backup> ID of the backup to export.

cinder backup-import

```
usage: cinder --os-volume-api-version 2 backup-import <backup_service> <backup_url>
```

Import backup metadata record.

Positional arguments:

<backup_service> Backup service to use for importing the backup.

<backup_url> Backup URL for importing the backup metadata.

cinder backup-list

```
usage: cinder --os-volume-api-version 2 backup-list [--all-tenants [<all_tenants>]] [-
↪-name <name>]
                                [--status <status>] [--volume-id <volume-id>]
                                [--marker <marker>] [--limit <limit>]
                                [--sort <key>[:<direction>]]
```

Lists all backups.

Optional arguments:

--all-tenants [<all_tenants>] Shows details for all tenants. Admin only.

--name <name> Filters results by a name. Default=None.

--status <status> Filters results by a status. Default=None.

--volume-id <volume-id> Filters results by a volume ID. Default=None.

--marker <marker> Begin returning backups that appear later in the backup list than that represented by this id. Default=None.

--limit <limit> Maximum number of backups to return. Default=None.

--sort <key>[:<direction>] Comma-separated list of sort keys and directions in the form of <key>[:<ascldesc>]. Valid keys: id, status, size, availability_zone, name, bootable, created_at. Default=None.

cinder backup-reset-state

```
usage: cinder --os-volume-api-version 2 backup-reset-state [--state <state>] <backup>
      ↪ [<backup> ...]
```

Explicitly updates the backup state.

Positional arguments:

<backup> Name or ID of the backup to modify.

Optional arguments:

--state <state> The state to assign to the backup. Valid values are “available”, “error”. Default=available.

cinder backup-restore

```
usage: cinder --os-volume-api-version 2 backup-restore [--volume <volume>] <backup>
```

Restores a backup.

Positional arguments:

<backup> ID of backup to restore.

Optional arguments:

--volume <volume> Name or ID of volume to which to restore. Default=None.

cinder backup-show

```
usage: cinder --os-volume-api-version 2 backup-show <backup>
```

Shows backup details.

Positional arguments:

<backup> Name or ID of backup.

cinder cgsnapshot-create

```
usage: cinder --os-volume-api-version 2 cgsnapshot-create [--name <name>] [--
      ↪ description <description>]
      <consistencygroup>
```

Creates a cgsnapshot.

Positional arguments:

<consistencygroup> Name or ID of a consistency group.

Optional arguments:**--name <name>** Cgsnapshot name. Default=None.**--description <description>** Cgsnapshot description. Default=None.**cinder cgsnapshot-delete**

```
usage: cinder --os-volume-api-version 2 cgsnapshot-delete <cgsnapshot> [<cgsnapshot> .
↪ ..]
```

Removes one or more cgsnapshots.

Positional arguments:**<cgsnapshot>** Name or ID of one or more cgsnapshots to be deleted.**cinder cgsnapshot-list**

```
usage: cinder --os-volume-api-version 2 cgsnapshot-list [--all-tenants [<0|1>]] [--
↪ status <status>]
                                [--consistencygroup-id <consistencygroup_id>]
```

Lists all cgsnapshots.

Optional arguments:**--all-tenants [<0|1>]** Shows details for all tenants. Admin only.**--status <status>** Filters results by a status. Default=None.**--consistencygroup-id <consistencygroup_id>** Filters results by a consistency group ID. Default=None.**cinder cgsnapshot-show**

```
usage: cinder --os-volume-api-version 2 cgsnapshot-show <cgsnapshot>
```

Shows cgsnapshot details.

Positional arguments:**<cgsnapshot>** Name or ID of cgsnapshot.**cinder consisgroup-create**

```
usage: cinder --os-volume-api-version 2 consisgroup-create [--name <name>] [--
↪ description <description>]
                                [--availability-zone <availability-zone>]
                                <volume-types>
```

Creates a consistency group.

Positional arguments:**<volume-types>** Volume types.

Optional arguments:

- name <name>** Name of a consistency group.
- description <description>** Description of a consistency group. Default=None.
- availability-zone <availability-zone>** Availability zone for volume. Default=None.

cinder consisgroup-create-from-src

```
usage: cinder --os-volume-api-version 2 consisgroup-create-from-src [--cgsnapshot
↪<cgsnapshot>]
                                [--source-cg <source-cg>]
                                [--name <name>]
                                [--description <description>]
```

Creates a consistency group from a cgsnapshot or a source CG.

Optional arguments:

- cgsnapshot <cgsnapshot>** Name or ID of a cgsnapshot. Default=None.
- source-cg <source-cg>** Name or ID of a source CG. Default=None.
- name <name>** Name of a consistency group. Default=None.
- description <description>** Description of a consistency group. Default=None.

cinder consisgroup-delete

```
usage: cinder --os-volume-api-version 2 consisgroup-delete [--force]
                                <consistencygroup> [<consistencygroup> ...]
```

Removes one or more consistency groups.

Positional arguments:

<consistencygroup> Name or ID of one or more consistency groups to be deleted.

Optional arguments:

- force** Allows or disallows consistency groups to be deleted. If the consistency group is empty, it can be deleted without the force flag. If the consistency group is not empty, the force flag is required for it to be deleted.

cinder consisgroup-list

```
usage: cinder --os-volume-api-version 2 consisgroup-list [--all-tenants [<0|1>]]
```

Lists all consistencygroups.

Optional arguments:

- all-tenants [<0|1>]** Shows details for all tenants. Admin only.

cinder consisgroup-show

```
usage: cinder --os-volume-api-version 2 consisgroup-show <consistencygroup>
```

Shows details of a consistency group.

Positional arguments:

<consistencygroup> Name or ID of a consistency group.

cinder consisgroup-update

```
usage: cinder --os-volume-api-version 2 consisgroup-update [--name <name>] [--
↪description <description>]
                                [--add-volumes <uuid1,uuid2,.....>]
                                [--remove-volumes <uuid3,uuid4,.....>]
                                <consistencygroup>
```

Updates a consistencygroup.

Positional arguments:

<consistencygroup> Name or ID of a consistency group.

Optional arguments:

--name <name> New name for consistency group. Default=None.

--description <description> New description for consistency group. Default=None.

--add-volumes <uuid1,uuid2,.....> UUID of one or more volumes to be added to the consistency group, separated by commas. Default=None.

--remove-volumes <uuid3,uuid4,.....> UUID of one or more volumes to be removed from the consistency group, separated by commas. Default=None.

cinder create

```
usage: cinder --os-volume-api-version 2 create [--consisgroup-id <consistencygroup-id>
↪]
                                [--snapshot-id <snapshot-id>]
                                [--source-volid <source-volid>]
                                [--source-replica <source-replica>]
                                [--image-id <image-id>] [--image <image>] [--name <name>]
                                [--description <description>]
                                [--volume-type <volume-type>]
                                [--availability-zone <availability-zone>]
                                [--metadata [<key=value> [<key=value> ...]]]
                                [--hint <key=value>] [--allow-multiattach]
                                [<size>]
```

Creates a volume.

Positional arguments:

<size> Size of volume, in GiBs. (Required unless snapshot-id /source-volid is specified).

Optional arguments:

--consisgroup-id <consistencygroup-id> ID of a consistency group where the new volume belongs to. Default=None.

--snapshot-id <snapshot-id> Creates volume from snapshot ID. Default=None.

--source-volid <source-volid> Creates volume from volume ID. Default=None.

--source-replica <source-replica> Creates volume from replicated volume ID. Default=None.

--image-id <image-id> Creates volume from image ID. Default=None.

--image <image> Creates a volume from image (ID or name). Default=None.

--name <name> Volume name. Default=None.

--description <description> Volume description. Default=None.

--volume-type <volume-type> Volume type. Default=None.

--availability-zone <availability-zone> Availability zone for volume. Default=None.

--metadata [<key=value> [<key=value> ...]] Metadata key and value pairs. Default=None.

--hint <key=value> Scheduler hint, like in nova.

--allow-multiattach Allow volume to be attached more than once. Default=False

cinder credentials

```
usage: cinder --os-volume-api-version 2 credentials
```

Shows user credentials returned from auth.

cinder delete

```
usage: cinder --os-volume-api-version 2 delete <volume> [<volume> ...]
```

Removes one or more volumes.

Positional arguments:

<volume> Name or ID of volume or volumes to delete.

cinder encryption-type-create

```
usage: cinder --os-volume-api-version 2 encryption-type-create [--cipher <cipher>]
                                [--key_size <key_size>]
                                [--control_location <control_location>]
                                <volume_type> <provider>
```

Creates encryption type for a volume type. Admin only.

Positional arguments:

<volume_type> Name or ID of volume type.

<provider> The class that provides encryption support. For example, LuksEncryptor.

Optional arguments:

--cipher <cipher> The encryption algorithm or mode. For example, aes-xts-plain64. Default=None.

--key_size <key_size> Size of encryption key, in bits. For example, 128 or 256. Default=None.

--control_location <control_location> Notional service where encryption is performed. Valid values are “front-end” or “back-end.” For example, front-end=Nova. Default is “front-end.”

cinder encryption-type-delete

```
usage: cinder --os-volume-api-version 2 encryption-type-delete <volume_type>
```

Deletes encryption type for a volume type. Admin only.

Positional arguments:

<volume_type> Name or ID of volume type.

cinder encryption-type-list

```
usage: cinder --os-volume-api-version 2 encryption-type-list
```

Shows encryption type details for volume types. Admin only.

cinder encryption-type-show

```
usage: cinder --os-volume-api-version 2 encryption-type-show <volume_type>
```

Shows encryption type details for a volume type. Admin only.

Positional arguments:

<volume_type> Name or ID of volume type.

cinder encryption-type-update

```
usage: cinder --os-volume-api-version 2 encryption-type-update [--provider <provider>]
                                [--cipher [<cipher>]]
                                [--key-size [<key-size>]]
                                [--control-location <control-location>]
                                <volume-type>
```

Update encryption type information for a volume type (Admin Only).

Positional arguments:

<volume-type> Name or ID of the volume type

Optional arguments:

--provider <provider> Class providing encryption support (e.g. LuksEncryptor) (Optional)

--cipher [<cipher>] Encryption algorithm/mode to use (e.g., aes-xts-plain64). Provide parameter without value to set to provider default. (Optional)

--key-size [<key-size>] Size of the encryption key, in bits (e.g., 128, 256). Provide parameter without value to set to provider default. (Optional)

--control-location <control-location> Notional service where encryption is performed (e.g., front-end=Nova). Values: ‘front-end’, ‘back-end’ (Optional)

cinder endpoints

```
usage: cinder --os-volume-api-version 2 endpoints
```

Discovers endpoints registered by authentication service.

cinder extend

```
usage: cinder --os-volume-api-version 2 extend <volume> <new_size>
```

Attempts to extend size of an existing volume.

Positional arguments:

<volume> Name or ID of volume to extend.

<new_size> New size of volume, in GiBs.

cinder extra-specs-list

```
usage: cinder --os-volume-api-version 2 extra-specs-list
```

Lists current volume types and extra specs.

cinder failover-host

```
usage: cinder --os-volume-api-version 2 failover-host [--backend_id <backend-id>]
↔<hostname>
```

Positional arguments:

<hostname> Host name.

Optional arguments:

--backend_id <backend-id> ID of backend to failover to (Default=None)

cinder force-delete

```
usage: cinder --os-volume-api-version 2 force-delete <volume> [<volume> ...]
```

Attempts force-delete of volume, regardless of state.

Positional arguments:

<volume> Name or ID of volume or volumes to delete.

cinder freeze-host

```
usage: cinder --os-volume-api-version 2 freeze-host <hostname>
```

Positional arguments:

<hostname> Host name.

cinder get-capabilities

```
usage: cinder --os-volume-api-version 2 get-capabilities <host>
```

Show backend volume stats and properties. Admin only.

Positional arguments:

<host> Cinder host to show backend volume stats and properties; takes the form: `host@backend-name`

cinder get-pools

```
usage: cinder --os-volume-api-version 2 get-pools [--detail]
```

Show pool information for backends. Admin only.

Optional arguments:

--detail Show detailed information about pools.

cinder image-metadata

```
usage: cinder --os-volume-api-version 2 image-metadata <volume> <action> <key=value> [
  ↪<key=value> ...]
```

Sets or deletes volume image metadata.

Positional arguments:

<volume> Name or ID of volume for which to update metadata.

<action> The action. Valid values are 'set' or 'unset.'

<key=value> Metadata key and value pair to set or unset. For unset, specify only the key.

cinder image-metadata-show

```
usage: cinder --os-volume-api-version 2 image-metadata-show <volume>
```

Shows volume image metadata.

Positional arguments:

<volume> ID of volume.

cinder list

```
usage: cinder --os-volume-api-version 2 list [--all-tenants [<0|1>]] [--name <name>]
  ↪[--status <status>]
      [--bootable [<True|true|False|false>]]
      [--migration_status <migration_status>]
      [--metadata [<key=value> [<key=value> ...]]]
      [--marker <marker>] [--limit <limit>] [--fields <fields>]
      [--sort <key>[:<direction>]] [--tenant [<tenant>]]
```

Lists all volumes.

Optional arguments:

- all-tenants** [**<0|1>**] Shows details for all tenants. Admin only.
- name** **<name>** Filters results by a name. Default=None.
- status** **<status>** Filters results by a status. Default=None.
- bootable** [**<True|true|False|false>**] Filters results by bootable status. Default=None.
- migration_status** **<migration_status>** Filters results by a migration status. Default=None. Admin only.
- metadata** [**<key=value>** [**<key=value>** ...]] Filters results by a metadata key and value pair. Default=None.
- marker** **<marker>** Begin returning volumes that appear later in the volume list than that represented by this volume id. Default=None.
- limit** **<limit>** Maximum number of volumes to return. Default=None.
- fields** **<fields>** Comma-separated list of fields to display. Use the show command to see which fields are available. Unavailable/non-existent fields will be ignored. Default=None.
- sort** **<key>[:<direction>]** Comma-separated list of sort keys and directions in the form of **<key>[:<asc|desc>]**. Valid keys: id, status, size, availability_zone, name, bootable, created_at. Default=None.
- tenant** [**<tenant>**] Display information from single tenant (Admin only).

cinder list-extensions

```
usage: cinder --os-volume-api-version 2 list-extensions
```

Lists all available os-api extensions.

cinder manage

```
usage: cinder --os-volume-api-version 2 manage [--id-type <id-type>] [--name <name>]
        [--description <description>]
        [--volume-type <volume-type>]
        [--availability-zone <availability-zone>]
        [--metadata [<key=value> [<key=value> ...]]] [--bootable]
        <host> <identifier>
```

Manage an existing volume.

Positional arguments:

- <host>** Cinder host on which the existing volume resides; takes the form: `host@backend-name#pool`
- <identifier>** Name or other Identifier for existing volume

Optional arguments:

- id-type** **<id-type>** Type of backend device identifier provided, typically source-name or source-id (Default=source-name)
- name** **<name>** Volume name (Default=None)
- description** **<description>** Volume description (Default=None)

--volume-type <volume-type> Volume type (Default=None)

--availability-zone <availability-zone> Availability zone for volume (Default=None)

--metadata [<key=value> [<key=value> ...]] Metadata key=value pairs (Default=None)

--bootable Specifies that the newly created volume should be marked as bootable

cinder metadata

```
usage: cinder --os-volume-api-version 2 metadata <volume> <action> <key=value> [
  ↪<key=value> ...]
```

Sets or deletes volume metadata.

Positional arguments:

<volume> Name or ID of volume for which to update metadata.

<action> The action. Valid values are “set” or “unset.”

<key=value> Metadata key and value pair to set or unset. For unset, specify only the key.

cinder metadata-show

```
usage: cinder --os-volume-api-version 2 metadata-show <volume>
```

Shows volume metadata.

Positional arguments:

<volume> ID of volume.

cinder metadata-update-all

```
usage: cinder --os-volume-api-version 2 metadata-update-all <volume> <key=value> [
  ↪<key=value> ...]
```

Updates volume metadata.

Positional arguments:

<volume> ID of volume for which to update metadata.

<key=value> Metadata key and value pair or pairs to update.

cinder migrate

```
usage: cinder --os-volume-api-version 2 migrate [--force-host-copy [<True|False>]]
      [--lock-volume [<True|False>]]
      <volume> <host>
```

Migrates volume to a new host.

Positional arguments:

<volume> ID of volume to migrate.

<host> Destination host. Takes the form: `host@backend- name#pool`

Optional arguments:

--force-host-copy [**<True|False>**] Enables or disables generic host-based force- migration, which bypasses driver optimizations. Default=False.

--lock-volume [**<True|False>**] Enables or disables the termination of volume migration caused by other commands. This option applies to the available volume. True means it locks the volume state and does not allow the migration to be aborted. The volume status will be in maintenance during the migration. False means it allows the volume migration to be aborted. The volume status is still in the original status. Default=False.

cinder qos-associate

```
usage: cinder --os-volume-api-version 2 qos-associate <qos_specs> <volume_type_id>
```

Associates qos specs with specified volume type.

Positional arguments:

<qos_specs> ID of QoS specifications.

<volume_type_id> ID of volume type with which to associate QoS specifications.

cinder qos-create

```
usage: cinder --os-volume-api-version 2 qos-create <name> <key=value> [<key=value> ...  
↪]
```

Creates a qos specs.

Positional arguments:

<name> Name of new QoS specifications.

<key=value> QoS specifications.

cinder qos-delete

```
usage: cinder --os-volume-api-version 2 qos-delete [--force [<True|False>]] <qos_  
↪specs>
```

Deletes a specified qos specs.

Positional arguments:

<qos_specs> ID of QoS specifications to delete.

Optional arguments:

--force [**<True|False>**] Enables or disables deletion of in-use QoS specifications. Default=False.

cinder qos-disassociate

```
usage: cinder --os-volume-api-version 2 qos-disassociate <qos_specs> <volume_type_id>
```

Disassociates qos specs from specified volume type.

Positional arguments:

<qos_specs> ID of QoS specifications.

<volume_type_id> ID of volume type with which to associate QoS specifications.

cinder qos-disassociate-all

```
usage: cinder --os-volume-api-version 2 qos-disassociate-all <qos_specs>
```

Disassociates qos specs from all its associations.

Positional arguments:

<qos_specs> ID of QoS specifications on which to operate.

cinder qos-get-association

```
usage: cinder --os-volume-api-version 2 qos-get-association <qos_specs>
```

Lists all associations for specified qos specs.

Positional arguments:

<qos_specs> ID of QoS specifications.

cinder qos-key

```
usage: cinder --os-volume-api-version 2 qos-key <qos_specs> <action> key=value_
↪[key=value ...]
```

Sets or unsets specifications for a qos spec.

Positional arguments:

<qos_specs> ID of QoS specifications.

<action> The action. Valid values are “set” or “unset.”

key=value Metadata key and value pair to set or unset. For unset, specify only the key.

cinder qos-list

```
usage: cinder --os-volume-api-version 2 qos-list
```

Lists qos specs.

cinder qos-show

```
usage: cinder --os-volume-api-version 2 qos-show <qos_specs>
```

Shows qos specs details.

Positional arguments:

<qos_specs> ID of QoS specifications to show.

cinder quota-class-show

```
usage: cinder --os-volume-api-version 2 quota-class-show <class>
```

Lists quotas for a quota class.

Positional arguments:

<class> Name of quota class for which to list quotas.

cinder quota-class-update

```
usage: cinder --os-volume-api-version 2 quota-class-update [--volumes <volumes>]
                                     [--snapshots <snapshots>]
                                     [--gigabytes <gigabytes>]
                                     [--volume-type <volume_type_name>]
                                     <class_name>
```

Updates quotas for a quota class.

Positional arguments:

<class_name> Name of quota class for which to set quotas.

Optional arguments:

--volumes <volumes> The new “volumes” quota value. Default=None.

--snapshots <snapshots> The new “snapshots” quota value. Default=None.

--gigabytes <gigabytes> The new “gigabytes” quota value. Default=None.

--volume-type <volume_type_name> Volume type. Default=None.

cinder quota-defaults

```
usage: cinder --os-volume-api-version 2 quota-defaults <tenant_id>
```

Lists default quotas for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to list quota defaults.

cinder quota-delete

```
usage: cinder --os-volume-api-version 2 quota-delete <tenant_id>
```

Delete the quotas for a tenant.

Positional arguments:

<tenant_id> UUID of tenant to delete the quotas for.

cinder quota-show

```
usage: cinder --os-volume-api-version 2 quota-show <tenant_id>
```

Lists quotas for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to list quotas.

cinder quota-update

```
usage: cinder --os-volume-api-version 2 quota-update [--volumes <volumes>] [--
↪ snapshots <snapshots>]
                                [--gigabytes <gigabytes>] [--backups <backups>]
                                [--backup-gigabytes <backup_gigabytes>]
                                [--consistencygroups <consistencygroups>]
                                [--volume-type <volume_type_name>]
                                [--per-volume-gigabytes <per_volume_gigabytes>]
                                <tenant_id>
```

Updates quotas for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to set quotas.

Optional arguments:

--volumes <volumes> The new “volumes” quota value. Default=None.

--snapshots <snapshots> The new “snapshots” quota value. Default=None.

--gigabytes <gigabytes> The new “gigabytes” quota value. Default=None.

--backups <backups> The new “backups” quota value. Default=None.

--backup-gigabytes <backup_gigabytes> The new “backup_gigabytes” quota value. Default=None.

--consistencygroups <consistencygroups> The new “consistencygroups” quota value. Default=None.

--volume-type <volume_type_name> Volume type. Default=None.

--per-volume-gigabytes <per_volume_gigabytes> Set max volume size limit. Default=None.

cinder quota-usage

```
usage: cinder --os-volume-api-version 2 quota-usage <tenant_id>
```

Lists quota usage for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to list quota usage.

cinder rate-limits

```
usage: cinder --os-volume-api-version 2 rate-limits
```

Lists rate limits for a user.

cinder readonly-mode-update

```
usage: cinder --os-volume-api-version 2 readonly-mode-update <volume>
↪<True|true|False|false>
```

Updates volume read-only access-mode flag.

Positional arguments:

<volume> ID of volume to update.

<True|true|False|false> Enables or disables update of volume to read-only access mode.

cinder rename

```
usage: cinder --os-volume-api-version 2 rename [--description <description>] <volume>_
↪ [<name>]
```

Renames a volume.

Positional arguments:

<volume> Name or ID of volume to rename.

<name> New name for volume.

Optional arguments:

--description <description> Volume description. Default=None.

cinder replication-promote

```
usage: cinder --os-volume-api-version 2 replication-promote <volume>
```

Promote a secondary volume to primary for a relationship.

Positional arguments:

<volume> Name or ID of the volume to promote. The volume should have the replica volume created with source-replica argument.

cinder replication-reenable

```
usage: cinder --os-volume-api-version 2 replication-reenable <volume>
```

Sync the secondary volume with primary for a relationship.

Positional arguments:

<volume> Name or ID of the volume to reenableView replication. The replication- status of the volume should be inactive.

cinder reset-state

```
usage: cinder --os-volume-api-version 2 reset-state [--state <state>] [--attach-
↪ status <attach-status>]
                                [--reset-migration-status]
                                <volume> [<volume> ...]
```

Explicitly updates the volume state in the Cinder database. Note that this does not affect whether the volume is actually attached to the Nova compute host or instance and can result in an unusable volume. Being a database change only, this has no impact on the true state of the volume and may not match the actual state. This can render a volume unusable in the case of change to the ‘available’ state.

Positional arguments:

<volume> Name or ID of volume to modify.

Optional arguments:

--state <state> The state to assign to the volume. Valid values are “available”, “error”, “creating”, “deleting”, “in- use”, “attaching”, “detaching”, “error_deleting” and “maintenance”. NOTE: This command simply changes the state of the Volume in the DataBase with no regard to actual status, exercise caution when using. Default=available.

--attach-status <attach-status> The attach status to assign to the volume in the DataBase, with no regard to the actual status. Valid values are “attached” and “detached”. Default=None, that means the status is unchanged.

--reset-migration-status Clears the migration status of the volume in the DataBase that indicates the volume is source or destination of volume migration, with no regard to the actual status.

cinder retype

```
usage: cinder --os-volume-api-version 2 retype [--migration-policy <never|on-demand>]
                                <volume> <volume-type>
```

Changes the volume type for a volume.

Positional arguments:

<volume> Name or ID of volume for which to modify type.

<volume-type> New volume type.

Optional arguments:

--migration-policy <never|on-demand> Migration policy during retype of volume.

cinder service-disable

```
usage: cinder --os-volume-api-version 2 service-disable [--reason <reason>] <hostname>
↪ <binary>
```

Disables the service.

Positional arguments:

<hostname> Host name.

<binary> Service binary.

Optional arguments:

--reason <reason> Reason for disabling service.

cinder service-enable

```
usage: cinder --os-volume-api-version 2 service-enable <hostname> <binary>
```

Enables the service.

Positional arguments:

<hostname> Host name.

<binary> Service binary.

cinder service-list

```
usage: cinder --os-volume-api-version 2 service-list [--host <hostname>] [--binary
↪<binary>]
                                     [--withreplication [<True|False>]]
```

Lists all services. Filter by host and service binary.

Optional arguments:

--host <hostname> Host name. Default=None.

--binary <binary> Service binary. Default=None.

--withreplication [<True|False>] Enables or disables display of Replication info for c-vol services.
Default=False.

cinder set-bootable

```
usage: cinder --os-volume-api-version 2 set-bootable <volume> <True|true|False|false>
```

Update bootable status of a volume.

Positional arguments:

<volume> ID of the volume to update.

<True|true|False|false> Flag to indicate whether volume is bootable.

cinder show

```
usage: cinder --os-volume-api-version 2 show <volume>
```

Shows volume details.

Positional arguments:

<volume> Name or ID of volume.

cinder snapshot-create

```
usage: cinder --os-volume-api-version 2 snapshot-create [--force [<True|False>]] [--
↪name <name>]
                                [--description <description>]
                                [--metadata [<key=value> [<key=value> ...]]]
                                <volume>
```

Creates a snapshot.

Positional arguments:

<volume> Name or ID of volume to snapshot.

Optional arguments:

--force [<True|False>] Allows or disallows snapshot of a volume when the volume is attached to an instance. If set to True, ignores the current status of the volume when attempting to snapshot it rather than forcing it to be available. Default=False.

--name <name> Snapshot name. Default=None.

--description <description> Snapshot description. Default=None.

--metadata [<key=value> [<key=value> ...]] Snapshot metadata key and value pairs. Default=None.

cinder snapshot-delete

```
usage: cinder --os-volume-api-version 2 snapshot-delete <snapshot> [<snapshot> ...]
```

Removes one or more snapshots.

Positional arguments:

<snapshot> Name or ID of the snapshot(s) to delete.

cinder snapshot-list

```
usage: cinder --os-volume-api-version 2 snapshot-list [--all-tenants [<0|1>]] [--name
↪<name>]
                                [--status <status>] [--volume-id <volume-id>]
                                [--marker <marker>] [--limit <limit>]
                                [--sort <key>[:<direction>]] [--tenant [<tenant>]]
```

Lists all snapshots.

Optional arguments:

--all-tenants [<0|1>] Shows details for all tenants. Admin only.

--name <name> Filters results by a name. Default=None.

--status <status> Filters results by a status. Default=None.

--volume-id <volume-id> Filters results by a volume ID. Default=None.

--marker <marker> Begin returning snapshots that appear later in the snapshot list than that represented by this id. Default=None.

--limit <limit> Maximum number of snapshots to return. Default=None.

--sort <key>[:<direction>] Comma-separated list of sort keys and directions in the form of <key>[:<asc|desc>]. Valid keys: id, status, size, availability_zone, name, bootable, created_at. Default=None.

--tenant [<tenant>] Display information from single tenant (Admin only).

cinder snapshot-manage

```
usage: cinder --os-volume-api-version 2 snapshot-manage [--id-type <id-type>] [--name
↪<name>]
                                [--description <description>]
                                [--metadata [<key=value> [<key=value> ...]]]
                                <volume> <identifier>
```

Manage an existing snapshot.

Positional arguments:

<volume> Cinder volume already exists in volume backend

<identifier> Name or other Identifier for existing snapshot

Optional arguments:

--id-type <id-type> Type of backend device identifier provided, typically source-name or source-id (Default=source-name)

--name <name> Snapshot name (Default=None)

--description <description> Snapshot description (Default=None)

--metadata [<key=value> [<key=value> ...]] Metadata key=value pairs (Default=None)

cinder snapshot-metadata

```
usage: cinder --os-volume-api-version 2 snapshot-metadata <snapshot> <action>
↪<key=value>
                                [<key=value> ...]
```

Sets or deletes snapshot metadata.

Positional arguments:

<snapshot> ID of snapshot for which to update metadata.

<action> The action. Valid values are “set” or “unset.”

<key=value> Metadata key and value pair to set or unset. For unset, specify only the key.

cinder snapshot-metadata-show

```
usage: cinder --os-volume-api-version 2 snapshot-metadata-show <snapshot>
```

Shows snapshot metadata.

Positional arguments:

<snapshot> ID of snapshot.

cinder snapshot-metadata-update-all

```
usage: cinder --os-volume-api-version 2 snapshot-metadata-update-all <snapshot>
      ↪<key=value>
                                     [<key=value> ...]
```

Updates snapshot metadata.

Positional arguments:

<snapshot> ID of snapshot for which to update metadata.

<key=value> Metadata key and value pair to update.

cinder snapshot-rename

```
usage: cinder --os-volume-api-version 2 snapshot-rename [--description <description>]
      <snapshot> [<name>]
```

Renames a snapshot.

Positional arguments:

<snapshot> Name or ID of snapshot.

<name> New name for snapshot.

Optional arguments:

--description <description> Snapshot description. Default=None.

cinder snapshot-reset-state

```
usage: cinder --os-volume-api-version 2 snapshot-reset-state [--state <state>]
      <snapshot> [<snapshot> ...]
```

Explicitly updates the snapshot state.

Positional arguments:

<snapshot> Name or ID of snapshot to modify.

Optional arguments:

--state <state> The state to assign to the snapshot. Valid values are “available”, “error”, “creating”, “deleting”, and “error_deleting”. NOTE: This command simply changes the state of the Snapshot in the DataBase with no regard to actual status, exercise caution when using. Default=available.

cinder snapshot-show

```
usage: cinder --os-volume-api-version 2 snapshot-show <snapshot>
```

Shows snapshot details.

Positional arguments:

<snapshot> Name or ID of snapshot.

cinder snapshot-unmanage

```
usage: cinder --os-volume-api-version 2 snapshot-unmanage <snapshot>
```

Stop managing a snapshot.

Positional arguments:

<snapshot> Name or ID of the snapshot to unmanage.

cinder thaw-host

```
usage: cinder --os-volume-api-version 2 thaw-host <hostname>
```

Positional arguments:

<hostname> Host name.

cinder transfer-accept

```
usage: cinder --os-volume-api-version 2 transfer-accept <transfer> <auth_key>
```

Accepts a volume transfer.

Positional arguments:

<transfer> ID of transfer to accept.

<auth_key> Authentication key of transfer to accept.

cinder transfer-create

```
usage: cinder --os-volume-api-version 2 transfer-create [--name <name>] <volume>
```

Creates a volume transfer.

Positional arguments:

<volume> Name or ID of volume to transfer.

Optional arguments:

--name <name> Transfer name. Default=None.

cinder transfer-delete

```
usage: cinder --os-volume-api-version 2 transfer-delete <transfer>
```

Undoes a transfer.

Positional arguments:

<transfer> Name or ID of transfer to delete.

cinder transfer-list

```
usage: cinder --os-volume-api-version 2 transfer-list [--all-tenants [<0|1>]]
```

Lists all transfers.

Optional arguments:

--all-tenants [<0|1>] Shows details for all tenants. Admin only.

cinder transfer-show

```
usage: cinder --os-volume-api-version 2 transfer-show <transfer>
```

Shows transfer details.

Positional arguments:

<transfer> Name or ID of transfer to accept.

cinder type-access-add

```
usage: cinder --os-volume-api-version 2 type-access-add --volume-type <volume_type> --
      ↪project-id
                                     <project_id>
```

Adds volume type access for the given project.

Optional arguments:

--volume-type <volume_type> Volume type name or ID to add access for the given project.

--project-id <project_id> Project ID to add volume type access for.

cinder type-access-list

```
usage: cinder --os-volume-api-version 2 type-access-list --volume-type <volume_type>
```

Print access information about the given volume type.

Optional arguments:

--volume-type <volume_type> Filter results by volume type name or ID.

cinder type-access-remove

```
usage: cinder --os-volume-api-version 2 type-access-remove --volume-type <volume_type>
      ↪ --project-id
                                     <project_id>
```

Removes volume type access for the given project.

Optional arguments:

--volume-type <volume_type> Volume type name or ID to remove access for the given project.

--project-id <project_id> Project ID to remove volume type access for.

cinder type-create

```
usage: cinder --os-volume-api-version 2 type-create [--description <description>]
        [--is-public <is-public>]
        <name>
```

Creates a volume type.

Positional arguments:

<name> Name of new volume type.

Optional arguments:

--description <description> Description of new volume type.

--is-public <is-public> Make type accessible to the public (default true).

cinder type-default

```
usage: cinder --os-volume-api-version 2 type-default
```

List the default volume type.

cinder type-delete

```
usage: cinder --os-volume-api-version 2 type-delete <id>
```

Deletes a volume type.

Positional arguments:

<id> ID of volume type to delete.

cinder type-key

```
usage: cinder --os-volume-api-version 2 type-key <vtype> <action> <key=value> [
  ↪<key=value> ...]
```

Sets or unsets extra_spec for a volume type.

Positional arguments:

<vtype> Name or ID of volume type.

<action> The action. Valid values are “set” or “unset.”

<key=value> The extra specs key and value pair to set or unset. For unset, specify only the key.

cinder type-list

```
usage: cinder --os-volume-api-version 2 type-list
```

Lists available ‘volume types’. (Admin only will see private types)

cinder type-show

```
usage: cinder --os-volume-api-version 2 type-show <volume_type>
```

Show volume type details.

Positional arguments:

<volume_type> Name or ID of the volume type.

cinder type-update

```
usage: cinder --os-volume-api-version 2 type-update [--name <name>] [--description
↪<description>]
                                     [--is-public <is-public>]
                                     <id>
```

Updates volume type name, description, and/or `is_public`.

Positional arguments:

<id> ID of the volume type.

Optional arguments:

--name <name> Name of the volume type.

--description <description> Description of the volume type.

--is-public <is-public> Make type accessible to the public or not.

cinder unmanage

```
usage: cinder --os-volume-api-version 2 unmanage <volume>
```

Stop managing a volume.

Positional arguments:

<volume> Name or ID of the volume to unmanage.

cinder upload-to-image

```
usage: cinder --os-volume-api-version 2 upload-to-image [--force [<True|False>]]
                                     [--container-format <container-format>]
                                     [--disk-format <disk-format>]
                                     <volume> <image-name>
```

Uploads volume to Image Service as an image.

Positional arguments:

<volume> Name or ID of volume to snapshot.

<image-name> The new image name.

Optional arguments:

--force [**<True|False>**] Enables or disables upload of a volume that is attached to an instance. Default=False.

--container-format **<container-format>** Container format type. Default is bare.

--disk-format **<disk-format>** Disk format type. Default is raw.

2.4.4 Block Storage API v1 commands (DEPRECATED)

cinder absolute-limits (v1)

```
usage: cinder absolute-limits
```

Lists absolute limits for a user.

cinder availability-zone-list (v1)

```
usage: cinder availability-zone-list
```

Lists all availability zones.

cinder backup-create (v1)

```
usage: cinder backup-create [--container <container>] [--name <name>]
                             [--description <description>] [--incremental]
                             [--force] [--snapshot-id <snapshot-id>]
                             <volume>
```

Creates a volume backup.

Positional arguments:

<volume> Name or ID of volume to backup.

Optional arguments:

--container **<container>** Backup container name. Default=None.

--name **<name>** Backup name. Default=None.

--description **<description>** Backup description. Default=None.

--incremental Incremental backup. Default=False.

--force Allows or disallows backup of a volume when the volume is attached to an instance. If set to True, backs up the volume whether its status is “available” or “in- use”. The backup of an “in-use” volume means your data is crash consistent. Default=False.

--snapshot-id **<snapshot-id>** ID of snapshot to backup. Default=None.

cinder backup-delete (v1)

```
usage: cinder backup-delete <backup> [<backup> ...]
```


Removes one or more backups.

Positional arguments:

<backup> Name or ID of backup(s) to delete.

cinder backup-export (v1)

```
usage: cinder backup-export <backup>
```

Export backup metadata record.

Positional arguments:

<backup> ID of the backup to export.

cinder backup-import (v1)

```
usage: cinder backup-import <backup_service> <backup_url>
```

Import backup metadata record.

Positional arguments:

<backup_service> Backup service to use for importing the backup.

<backup_url> Backup URL for importing the backup metadata.

cinder backup-list (v1)

```
usage: cinder backup-list [--all-tenants [<all_tenants>]] [--name <name>]
                        [--status <status>] [--volume-id <volume-id>]
                        [--marker <marker>] [--limit <limit>]
                        [--sort <key>[:<direction>]]
```

Lists all backups.

Optional arguments:

--all-tenants [<all_tenants>] Shows details for all tenants. Admin only.

--name <name> Filters results by a name. Default=None.

--status <status> Filters results by a status. Default=None.

--volume-id <volume-id> Filters results by a volume ID. Default=None.

--marker <marker> Begin returning backups that appear later in the backup list than that represented by this id. Default=None.

--limit <limit> Maximum number of backups to return. Default=None.

--sort <key>[:<direction>] Comma-separated list of sort keys and directions in the form of <key>[:<ascldesc>]. Valid keys: id, status, size, availability_zone, name, bootable, created_at. Default=None.

cinder backup-reset-state (v1)

```
usage: cinder backup-reset-state [--state <state>] <backup> [<backup> ...]
```

Explicitly updates the backup state.

Positional arguments:

<backup> Name or ID of the backup to modify.

Optional arguments:

--state <state> The state to assign to the backup. Valid values are “available”, “error”. Default=available.

cinder backup-restore (v1)

```
usage: cinder backup-restore [--volume <volume>] <backup>
```

Restores a backup.

Positional arguments:

<backup> ID of backup to restore.

Optional arguments:

--volume <volume> Name or ID of volume to which to restore. Default=None.

cinder backup-show (v1)

```
usage: cinder backup-show <backup>
```

Shows backup details.

Positional arguments:

<backup> Name or ID of backup.

cinder cgsnapshot-create (v1)

```
usage: cinder cgsnapshot-create [--name <name>] [--description <description>]
                                <consistencygroup>
```

Creates a cgsnapshot.

Positional arguments:

<consistencygroup> Name or ID of a consistency group.

Optional arguments:

--name <name> Cgsnapshot name. Default=None.

--description <description> Cgsnapshot description. Default=None.

cinder cgsnapshot-delete (v1)

```
usage: cinder cgsnapshot-delete <cgsnapshot> [<cgsnapshot> ...]
```

Removes one or more cgsnapshots.

Positional arguments:

<cgsnapshot> Name or ID of one or more cgsnapshots to be deleted.

cinder cgsnapshot-list (v1)

```
usage: cinder cgsnapshot-list [--all-tenants [<0|1>]] [--status <status>]
                               [--consistencygroup-id <consistencygroup_id>]
```

Lists all cgsnapshots.

Optional arguments:

--all-tenants [<0|1>] Shows details for all tenants. Admin only.

--status <status> Filters results by a status. Default=None.

--consistencygroup-id <consistencygroup_id> Filters results by a consistency group ID. Default=None.

cinder cgsnapshot-show (v1)

```
usage: cinder cgsnapshot-show <cgsnapshot>
```

Shows cgsnapshot details.

Positional arguments:

<cgsnapshot> Name or ID of cgsnapshot.

cinder consisgroup-create (v1)

```
usage: cinder consisgroup-create [--name <name>] [--description <description>]
                                  [--availability-zone <availability-zone>]
                                  <volume-types>
```

Creates a consistency group.

Positional arguments:

<volume-types> Volume types.

Optional arguments:

--name <name> Name of a consistency group.

--description <description> Description of a consistency group. Default=None.

--availability-zone <availability-zone> Availability zone for volume. Default=None.

cinder consisgroup-create-from-src (v1)

```
usage: cinder consisgroup-create-from-src [--cgsnapshot <cgsnapshot>]
                                           [--source-cg <source-cg>]
                                           [--name <name>]
                                           [--description <description>]
```

Creates a consistency group from a cgsnapshot or a source CG.

Optional arguments:

--cgsnapshot <cgsnapshot> Name or ID of a cgsnapshot. Default=None.

--source-cg <source-cg> Name or ID of a source CG. Default=None.

--name <name> Name of a consistency group. Default=None.

--description <description> Description of a consistency group. Default=None.

cinder consisgroup-delete (v1)

```
usage: cinder consisgroup-delete [--force]
                                   <consistencygroup> [<consistencygroup> ...]
```

Removes one or more consistency groups.

Positional arguments:

<consistencygroup> Name or ID of one or more consistency groups to be deleted.

Optional arguments:

--force Allows or disallows consistency groups to be deleted. If the consistency group is empty, it can be deleted without the force flag. If the consistency group is not empty, the force flag is required for it to be deleted.

cinder consisgroup-list (v1)

```
usage: cinder consisgroup-list [--all-tenants [<0|1>]]
```

Lists all consistencygroups.

Optional arguments:

--all-tenants [<0|1>] Shows details for all tenants. Admin only.

cinder consisgroup-show (v1)

```
usage: cinder consisgroup-show <consistencygroup>
```

Shows details of a consistency group.

Positional arguments:

<consistencygroup> Name or ID of a consistency group.

cinder consisgroup-update (v1)

```
usage: cinder consisgroup-update [--name <name>] [--description <description>]
                                [--add-volumes <uuid1,uuid2,.....>]
                                [--remove-volumes <uuid3,uuid4,.....>]
                                <consistencygroup>
```

Updates a consistencygroup.

Positional arguments:

<consistencygroup> Name or ID of a consistency group.

Optional arguments:

--name <name> New name for consistency group. Default=None.

--description <description> New description for consistency group. Default=None.

--add-volumes <uuid1,uuid2,.....> UUID of one or more volumes to be added to the consistency group, separated by commas. Default=None.

--remove-volumes <uuid3,uuid4,.....> UUID of one or more volumes to be removed from the consistency group, separated by commas. Default=None.

cinder create (v1)

```
usage: cinder create [--consisgroup-id <consistencygroup-id>]
                    [--snapshot-id <snapshot-id>]
                    [--source-uuid <source-uuid>]
                    [--source-replica <source-replica>]
                    [--image-id <image-id>] [--image <image>] [--name <name>]
                    [--description <description>]
                    [--volume-type <volume-type>]
                    [--availability-zone <availability-zone>]
                    [--metadata [<key=value> [<key=value> ...]]]
                    [--hint <key=value>] [--allow-multiattach]
                    <size>
```

Creates a volume.

Positional arguments:

<size> Size of volume, in GiBs. (Required unless snapshot-id /source-uuid is specified).

Optional arguments:

--consisgroup-id <consistencygroup-id> ID of a consistency group where the new volume belongs to. Default=None.

--snapshot-id <snapshot-id> Creates volume from snapshot ID. Default=None.

--source-uuid <source-uuid> Creates volume from volume ID. Default=None.

--source-replica <source-replica> Creates volume from replicated volume ID. Default=None.

--image-id <image-id> Creates volume from image ID. Default=None.

--image <image> Creates a volume from image (ID or name). Default=None.

--name <name> Volume name. Default=None.

--description <description> Volume description. Default=None.

--volume-type <volume-type> Volume type. Default=None.

--availability-zone <availability-zone> Availability zone for volume. Default=None.

--metadata [**<key=value>** [**<key=value>** ...]] Metadata key and value pairs. Default=None.

--hint <key=value> Scheduler hint, like in nova.

--allow-multiattach Allow volume to be attached more than once. Default=False

cinder credentials (v1)

```
usage: cinder credentials
```

Shows user credentials returned from auth.

cinder delete (v1)

```
usage: cinder delete <volume> [<volume> ...]
```

Removes one or more volumes.

Positional arguments:

<volume> Name or ID of volume or volumes to delete.

cinder encryption-type-create (v1)

```
usage: cinder encryption-type-create [--cipher <cipher>]
                                     [--key_size <key_size>]
                                     [--control_location <control_location>]
                                     <volume_type> <provider>
```

Creates encryption type for a volume type. Admin only.

Positional arguments:

<volume_type> Name or ID of volume type.

<provider> The class that provides encryption support. For example, LuksEncryptor.

Optional arguments:

--cipher <cipher> The encryption algorithm or mode. For example, aes-xts-plain64. Default=None.

--key_size <key_size> Size of encryption key, in bits. For example, 128 or 256. Default=None.

--control_location <control_location> Notional service where encryption is performed. Valid values are “front-end” or “back-end.” For example, front-end=Nova. Default is “front-end.”

cinder encryption-type-delete (v1)

```
usage: cinder encryption-type-delete <volume_type>
```

Deletes encryption type for a volume type. Admin only.

Positional arguments:

<volume_type> Name or ID of volume type.

cinder encryption-type-list (v1)

```
usage: cinder encryption-type-list
```

Shows encryption type details for volume types. Admin only.

cinder encryption-type-show (v1)

```
usage: cinder encryption-type-show <volume_type>
```

Shows encryption type details for a volume type. Admin only.

Positional arguments:

<volume_type> Name or ID of volume type.

cinder encryption-type-update (v1)

```
usage: cinder encryption-type-update [--provider <provider>]
                                     [--cipher [<cipher>]]
                                     [--key-size [<key-size>]]
                                     [--control-location <control-location>]
                                     <volume-type>
```

Update encryption type information for a volume type (Admin Only).

Positional arguments:

<volume-type> Name or ID of the volume type

Optional arguments:

--provider <provider> Class providing encryption support (e.g. LuksEncryptor) (Optional)

--cipher [<cipher>] Encryption algorithm/mode to use (e.g., aes-xts-plain64). Provide parameter without value to set to provider default. (Optional)

--key-size [<key-size>] Size of the encryption key, in bits (e.g., 128, 256). Provide parameter without value to set to provider default. (Optional)

--control-location <control-location> Notional service where encryption is performed (e.g., front-end=Nova). Values: 'front-end', 'back-end' (Optional)

cinder endpoints (v1)

```
usage: cinder endpoints
```

Discovers endpoints registered by authentication service.

cinder extend (v1)

```
usage: cinder extend <volume> <new_size>
```

Attempts to extend size of an existing volume.

Positional arguments:

<volume> Name or ID of volume to extend.

<new_size> New size of volume, in GiBs.

cinder extra-specs-list (v1)

```
usage: cinder extra-specs-list
```

Lists current volume types and extra specs.

cinder failover-host (v1)

```
usage: cinder failover-host [--backend_id <backend-id>] <hostname>
```

Positional arguments:

<hostname> Host name.

Optional arguments:

--backend_id <backend-id> ID of backend to failover to (Default=None)

cinder force-delete (v1)

```
usage: cinder force-delete <volume> [<volume> ...]
```

Attempts force-delete of volume, regardless of state.

Positional arguments:

<volume> Name or ID of volume or volumes to delete.

cinder freeze-host (v1)

```
usage: cinder freeze-host <hostname>
```

Positional arguments:

<hostname> Host name.

cinder get-capabilities (v1)

```
usage: cinder get-capabilities <host>
```


Show backend volume stats and properties. Admin only.

Positional arguments:

<host> Cinder host to show backend volume stats and properties; takes the form: `host@backend-name`

cinder get-pools (v1)

```
usage: cinder get-pools [--detail]
```

Show pool information for backends. Admin only.

Optional arguments:

--detail Show detailed information about pools.

cinder image-metadata (v1)

```
usage: cinder image-metadata <volume> <action> <key=value> [<key=value> ...]
```

Sets or deletes volume image metadata.

Positional arguments:

<volume> Name or ID of volume for which to update metadata.

<action> The action. Valid values are 'set' or 'unset.'

<key=value> Metadata key and value pair to set or unset. For unset, specify only the key.

cinder image-metadata-show (v1)

```
usage: cinder image-metadata-show <volume>
```

Shows volume image metadata.

Positional arguments:

<volume> ID of volume.

cinder list (v1)

```
usage: cinder list [--all-tenants [<0|1>]] [--name <name>] [--status <status>]
               [--bootable [<True|true|False|false>]]
               [--migration_status <migration_status>]
               [--metadata [<key=value> [<key=value> ...]]]
               [--marker <marker>] [--limit <limit>] [--fields <fields>]
               [--sort <key>[:<direction>]] [--tenant [<tenant>]]
```

Lists all volumes.

Optional arguments:

--all-tenants [<0|1>] Shows details for all tenants. Admin only.

--name <name> Filters results by a name. Default=None.

--status <status> Filters results by a status. Default=None.

--bootable [**<True|true|False|false>**] Filters results by bootable status. Default=None.

--migration_status **<migration_status>** Filters results by a migration status. Default=None. Admin only.

--metadata [**<key=value>** [**<key=value>** ...]] Filters results by a metadata key and value pair. Default=None.

--marker **<marker>** Begin returning volumes that appear later in the volume list than that represented by this volume id. Default=None.

--limit **<limit>** Maximum number of volumes to return. Default=None.

--fields **<fields>** Comma-separated list of fields to display. Use the show command to see which fields are available. Unavailable/non-existent fields will be ignored. Default=None.

--sort **<key>[:<direction>]** Comma-separated list of sort keys and directions in the form of **<key>[:<asc|desc>]**. Valid keys: id, status, size, availability_zone, name, bootable, created_at. Default=None.

--tenant [**<tenant>**] Display information from single tenant (Admin only).

cinder list-extensions (v1)

```
usage: cinder list-extensions
```

Lists all available os-api extensions.

cinder manage (v1)

```
usage: cinder manage [--id-type <id-type>] [--name <name>]
                    [--description <description>]
                    [--volume-type <volume-type>]
                    [--availability-zone <availability-zone>]
                    [--metadata [<key=value> [<key=value> ...]]] [--bootable]
                    <host> <identifier>
```

Manage an existing volume.

Positional arguments:

<host> Cinder host on which the existing volume resides; takes the form: **host@backend-name#pool**

<identifier> Name or other Identifier for existing volume

Optional arguments:

--id-type **<id-type>** Type of backend device identifier provided, typically source-name or source-id (Default=source-name)

--name **<name>** Volume name (Default=None)

--description **<description>** Volume description (Default=None)

--volume-type **<volume-type>** Volume type (Default=None)

--availability-zone **<availability-zone>** Availability zone for volume (Default=None)

--metadata [**<key=value>** [**<key=value>** ...]] Metadata key=value pairs (Default=None)

--bootable Specifies that the newly created volume should be marked as bootable

cinder metadata (v1)

```
usage: cinder metadata <volume> <action> <key=value> [<key=value> ...]
```

Sets or deletes volume metadata.

Positional arguments:

<volume> Name or ID of volume for which to update metadata.

<action> The action. Valid values are “set” or “unset.”

<key=value> Metadata key and value pair to set or unset. For unset, specify only the key.

cinder metadata-show (v1)

```
usage: cinder metadata-show <volume>
```

Shows volume metadata.

Positional arguments:

<volume> ID of volume.

cinder metadata-update-all (v1)

```
usage: cinder metadata-update-all <volume> <key=value> [<key=value> ...]
```

Updates volume metadata.

Positional arguments:

<volume> ID of volume for which to update metadata.

<key=value> Metadata key and value pair or pairs to update.

cinder migrate (v1)

```
usage: cinder migrate [--force-host-copy [<True|False>]]
                    [--lock-volume [<True|False>]]
                    <volume> <host>
```

Migrates volume to a new host.

Positional arguments:

<volume> ID of volume to migrate.

<host> Destination host. Takes the form: `host@backend- name#pool`

Optional arguments:

--force-host-copy [<True|False>] Enables or disables generic host-based force- migration, which bypasses driver optimizations. Default=False.

--lock-volume [<True|False>] Enables or disables the termination of volume migration caused by other commands. This option applies to the available volume. True means it locks the volume state and does not allow the migration to be aborted. The volume status will be in maintenance during the migration. False means it allows the volume migration to be aborted. The volume status is still in the original status. Default=False.

cinder qos-associate (v1)

```
usage: cinder qos-associate <qos_specs> <volume_type_id>
```

Associates qos specs with specified volume type.

Positional arguments:

<qos_specs> ID of QoS specifications.

<volume_type_id> ID of volume type with which to associate QoS specifications.

cinder qos-create (v1)

```
usage: cinder qos-create <name> <key=value> [<key=value> ...]
```

Creates a qos specs.

Positional arguments:

<name> Name of new QoS specifications.

<key=value> QoS specifications.

cinder qos-delete (v1)

```
usage: cinder qos-delete [--force [<True|False>]] <qos_specs>
```

Deletes a specified qos specs.

Positional arguments:

<qos_specs> ID of QoS specifications to delete.

Optional arguments:

--force [**<True|False>**] Enables or disables deletion of in-use QoS specifications. Default=False.

cinder qos-disassociate (v1)

```
usage: cinder qos-disassociate <qos_specs> <volume_type_id>
```

Disassociates qos specs from specified volume type.

Positional arguments:

<qos_specs> ID of QoS specifications.

<volume_type_id> ID of volume type with which to associate QoS specifications.

cinder qos-disassociate-all (v1)

```
usage: cinder qos-disassociate-all <qos_specs>
```

Disassociates qos specs from all its associations.

Positional arguments:

<qos_specs> ID of QoS specifications on which to operate.

cinder qos-get-association (v1)

```
usage: cinder qos-get-association <qos_specs>
```

Lists all associations for specified qos specs.

Positional arguments:

<qos_specs> ID of QoS specifications.

cinder qos-key (v1)

```
usage: cinder qos-key <qos_specs> <action> key=value [key=value ...]
```

Sets or unsets specifications for a qos spec.

Positional arguments:

<qos_specs> ID of QoS specifications.

<action> The action. Valid values are “set” or “unset.”

key=value Metadata key and value pair to set or unset. For unset, specify only the key.

cinder qos-list (v1)

```
usage: cinder qos-list
```

Lists qos specs.

cinder qos-show (v1)

```
usage: cinder qos-show <qos_specs>
```

Shows qos specs details.

Positional arguments:

<qos_specs> ID of QoS specifications to show.

cinder quota-class-show (v1)

```
usage: cinder quota-class-show <class>
```

Lists quotas for a quota class.

Positional arguments:

<class> Name of quota class for which to list quotas.

cinder quota-class-update (v1)

```
usage: cinder quota-class-update [--volumes <volumes>]
                                [--snapshots <snapshots>]
                                [--gigabytes <gigabytes>]
                                [--volume-type <volume_type_name>]
                                <class_name>
```

Updates quotas for a quota class.

Positional arguments:

<class_name> Name of quota class for which to set quotas.

Optional arguments:

--volumes <volumes> The new “volumes” quota value. Default=None.

--snapshots <snapshots> The new “snapshots” quota value. Default=None.

--gigabytes <gigabytes> The new “gigabytes” quota value. Default=None.

--volume-type <volume_type_name> Volume type. Default=None.

cinder quota-defaults (v1)

```
usage: cinder quota-defaults <tenant_id>
```

Lists default quotas for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to list quota defaults.

cinder quota-delete (v1)

```
usage: cinder quota-delete <tenant_id>
```

Delete the quotas for a tenant.

Positional arguments:

<tenant_id> UUID of tenant to delete the quotas for.

cinder quota-show (v1)

```
usage: cinder quota-show <tenant_id>
```

Lists quotas for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to list quotas.

cinder quota-update (v1)

```
usage: cinder quota-update [--volumes <volumes>] [--snapshots <snapshots>]
                           [--gigabytes <gigabytes>] [--backups <backups>]
                           [--backup-gigabytes <backup_gigabytes>]
                           [--consistencygroups <consistencygroups>]
                           [--volume-type <volume_type_name>]
                           [--per-volume-gigabytes <per_volume_gigabytes>]
                           <tenant_id>
```

Updates quotas for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to set quotas.

Optional arguments:

--volumes <volumes> The new “volumes” quota value. Default=None.

--snapshots <snapshots> The new “snapshots” quota value. Default=None.

--gigabytes <gigabytes> The new “gigabytes” quota value. Default=None.

--backups <backups> The new “backups” quota value. Default=None.

--backup-gigabytes <backup_gigabytes> The new “backup_gigabytes” quota value. Default=None.

--consistencygroups <consistencygroups> The new “consistencygroups” quota value. Default=None.

--volume-type <volume_type_name> Volume type. Default=None.

--per-volume-gigabytes <per_volume_gigabytes> Set max volume size limit. Default=None.

cinder quota-usage (v1)

```
usage: cinder quota-usage <tenant_id>
```

Lists quota usage for a tenant.

Positional arguments:

<tenant_id> ID of tenant for which to list quota usage.

cinder rate-limits (v1)

```
usage: cinder rate-limits
```

Lists rate limits for a user.

cinder readonly-mode-update (v1)

```
usage: cinder readonly-mode-update <volume> <True|true|False|false>
```

Updates volume read-only access-mode flag.

Positional arguments:

<volume> ID of volume to update.

<True|true|False|false> Enables or disables update of volume to read-only access mode.

cinder rename (v1)

```
usage: cinder rename [--description <description>] <volume> [<name>]
```

Renames a volume.

Positional arguments:

<volume> Name or ID of volume to rename.

<name> New name for volume.

Optional arguments:

--description <description> Volume description. Default=None.

cinder replication-promote (v1)

```
usage: cinder replication-promote <volume>
```

Promote a secondary volume to primary for a relationship.

Positional arguments:

<volume> Name or ID of the volume to promote. The volume should have the replica volume created with source-replica argument.

cinder replication-reenable (v1)

```
usage: cinder replication-reenable <volume>
```

Sync the secondary volume with primary for a relationship.

Positional arguments:

<volume> Name or ID of the volume to reenableView replication. The replication- status of the volume should be inactive.

cinder reset-state (v1)

```
usage: cinder reset-state [--state <state>] [--attach-status <attach-status>]
                        [--reset-migration-status]
                        <volume> [<volume> ...]
```

Explicitly updates the volume state in the Cinder database. Note that this does not affect whether the volume is actually attached to the Nova compute host or instance and can result in an unusable volume. Being a database change only, this has no impact on the true state of the volume and may not match the actual state. This can render a volume unusable in the case of change to the 'available' state.

Positional arguments:

<volume> Name or ID of volume to modify.

Optional arguments:

- state <state>** The state to assign to the volume. Valid values are “available”, “error”, “creating”, “deleting”, “in- use”, “attaching”, “detaching”, “error_deleting” and “maintenance”. NOTE: This command simply changes the state of the Volume in the DataBase with no regard to actual status, exercise caution when using. Default=available.
- attach-status <attach-status>** The attach status to assign to the volume in the DataBase, with no regard to the actual status. Valid values are “attached” and “detached”. Default=None, that means the status is unchanged.
- reset-migration-status** Clears the migration status of the volume in the DataBase that indicates the volume is source or destination of volume migration, with no regard to the actual status.

cinder retype (v1)

```
usage: cinder retype [--migration-policy <never|on-demand>]
                   <volume> <volume-type>
```

Changes the volume type for a volume.

Positional arguments:

- <volume>** Name or ID of volume for which to modify type.
- <volume-type>** New volume type.

Optional arguments:

- migration-policy <never|on-demand>** Migration policy during retype of volume.

cinder service-disable (v1)

```
usage: cinder service-disable [--reason <reason>] <hostname> <binary>
```

Disables the service.

Positional arguments:

- <hostname>** Host name.
- <binary>** Service binary.

Optional arguments:

- reason <reason>** Reason for disabling service.

cinder service-enable (v1)

```
usage: cinder service-enable <hostname> <binary>
```

Enables the service.

Positional arguments:

- <hostname>** Host name.
- <binary>** Service binary.

cinder service-list (v1)

```
usage: cinder service-list [--host <hostname>] [--binary <binary>]
                             [--withreplication [<True|False>]]
```

Lists all services. Filter by host and service binary.

Optional arguments:

--host <hostname> Host name. Default=None.

--binary <binary> Service binary. Default=None.

--withreplication [<True|False>] Enables or disables display of Replication info for c-vol services. Default=False.

cinder set-bootable (v1)

```
usage: cinder set-bootable <volume> <True|true|False|false>
```

Update bootable status of a volume.

Positional arguments:

<volume> ID of the volume to update.

<True|true|False|false> Flag to indicate whether volume is bootable.

cinder show (v1)

```
usage: cinder show <volume>
```

Shows volume details.

Positional arguments:

<volume> Name or ID of volume.

cinder snapshot-create (v1)

```
usage: cinder snapshot-create [--force [<True|False>]] [--name <name>]
                               [--description <description>]
                               [--metadata [<key=value> [<key=value> ...]]]
                               <volume>
```

Creates a snapshot.

Positional arguments:

<volume> Name or ID of volume to snapshot.

Optional arguments:

--force [<True|False>] Allows or disallows snapshot of a volume when the volume is attached to an instance. If set to True, ignores the current status of the volume when attempting to snapshot it rather than forcing it to be available. Default=False.

--name <name> Snapshot name. Default=None.

--description <description> Snapshot description. Default=None.

--metadata [<key=value> [<key=value> ...]] Snapshot metadata key and value pairs. Default=None.

cinder snapshot-delete (v1)

```
usage: cinder snapshot-delete <snapshot> [<snapshot> ...]
```

Removes one or more snapshots.

Positional arguments:

<snapshot> Name or ID of the snapshot(s) to delete.

cinder snapshot-list (v1)

```
usage: cinder snapshot-list [--all-tenants [<0|1>]] [--name <name>]
                             [--status <status>] [--volume-id <volume-id>]
                             [--marker <marker>] [--limit <limit>]
                             [--sort <key>[:<direction>]] [--tenant [<tenant>]]
```

Lists all snapshots.

Optional arguments:

--all-tenants [<0|1>] Shows details for all tenants. Admin only.

--name <name> Filters results by a name. Default=None.

--status <status> Filters results by a status. Default=None.

--volume-id <volume-id> Filters results by a volume ID. Default=None.

--marker <marker> Begin returning snapshots that appear later in the snapshot list than that represented by this id. Default=None.

--limit <limit> Maximum number of snapshots to return. Default=None.

--sort <key>[:<direction>] Comma-separated list of sort keys and directions in the form of <key>[:<asc|desc>]. Valid keys: id, status, size, availability_zone, name, bootable, created_at. Default=None.

--tenant [<tenant>] Display information from single tenant (Admin only).

cinder snapshot-manage (v1)

```
usage: cinder snapshot-manage [--id-type <id-type>] [--name <name>]
                             [--description <description>]
                             [--metadata [<key=value> [<key=value> ...]]]
                             <volume> <identifier>
```

Manage an existing snapshot.

Positional arguments:

<volume> Cinder volume already exists in volume backend

<identifier> Name or other Identifier for existing snapshot

Optional arguments:

--id-type <id-type> Type of backend device identifier provided, typically source-name or source-id (Default=source-name)

--name <name> Snapshot name (Default=None)

--description <description> Snapshot description (Default=None)

--metadata [<key=value> [<key=value> ...]] Metadata key=value pairs (Default=None)

cinder snapshot-metadata (v1)

```
usage: cinder snapshot-metadata <snapshot> <action> <key=value>
      [<key=value> ...]
```

Sets or deletes snapshot metadata.

Positional arguments:

<snapshot> ID of snapshot for which to update metadata.

<action> The action. Valid values are “set” or “unset.”

<key=value> Metadata key and value pair to set or unset. For unset, specify only the key.

cinder snapshot-metadata-show (v1)

```
usage: cinder snapshot-metadata-show <snapshot>
```

Shows snapshot metadata.

Positional arguments:

<snapshot> ID of snapshot.

cinder snapshot-metadata-update-all (v1)

```
usage: cinder snapshot-metadata-update-all <snapshot> <key=value>
      [<key=value> ...]
```

Updates snapshot metadata.

Positional arguments:

<snapshot> ID of snapshot for which to update metadata.

<key=value> Metadata key and value pair to update.

cinder snapshot-rename (v1)

```
usage: cinder snapshot-rename [--description <description>]
      <snapshot> [<name>]
```

Renames a snapshot.

Positional arguments:

<snapshot> Name or ID of snapshot.

<name> New name for snapshot.

Optional arguments:

--description <description> Snapshot description. Default=None.

cinder snapshot-reset-state (v1)

```
usage: cinder snapshot-reset-state [--state <state>]
                                   <snapshot> [<snapshot> ...]
```

Explicitly updates the snapshot state.

Positional arguments:

<snapshot> Name or ID of snapshot to modify.

Optional arguments:

--state <state> The state to assign to the snapshot. Valid values are “available”, “error”, “creating”, “deleting”, and “error_deleting”. NOTE: This command simply changes the state of the Snapshot in the DataBase with no regard to actual status, exercise caution when using. Default=available.

cinder snapshot-show (v1)

```
usage: cinder snapshot-show <snapshot>
```

Shows snapshot details.

Positional arguments:

<snapshot> Name or ID of snapshot.

cinder snapshot-unmanage (v1)

```
usage: cinder snapshot-unmanage <snapshot>
```

Stop managing a snapshot.

Positional arguments:

<snapshot> Name or ID of the snapshot to unmanage.

cinder thaw-host (v1)

```
usage: cinder thaw-host <hostname>
```

Positional arguments:

<hostname> Host name.

cinder transfer-accept (v1)

```
usage: cinder transfer-accept <transfer> <auth_key>
```

Accepts a volume transfer.

Positional arguments:

<transfer> ID of transfer to accept.

<auth_key> Authentication key of transfer to accept.

cinder transfer-create (v1)

```
usage: cinder transfer-create [--name <name>] <volume>
```

Creates a volume transfer.

Positional arguments:

<volume> Name or ID of volume to transfer.

Optional arguments:

--name <name> Transfer name. Default=None.

cinder transfer-delete (v1)

```
usage: cinder transfer-delete <transfer>
```

Undoes a transfer.

Positional arguments:

<transfer> Name or ID of transfer to delete.

cinder transfer-list (v1)

```
usage: cinder transfer-list [--all-tenants [<0|1>]]
```

Lists all transfers.

Optional arguments:

--all-tenants [<0|1>] Shows details for all tenants. Admin only.

cinder transfer-show (v1)

```
usage: cinder transfer-show <transfer>
```

Shows transfer details.

Positional arguments:

<transfer> Name or ID of transfer to accept.

cinder type-access-add (v1)

```
usage: cinder type-access-add --volume-type <volume_type> --project-id
      <project_id>
```

Adds volume type access for the given project.

Optional arguments:

--volume-type <volume_type> Volume type name or ID to add access for the given project.

--project-id <project_id> Project ID to add volume type access for.

cinder type-access-list (v1)

```
usage: cinder type-access-list --volume-type <volume_type>
```

Print access information about the given volume type.

Optional arguments:

--volume-type <volume_type> Filter results by volume type name or ID.

cinder type-access-remove (v1)

```
usage: cinder type-access-remove --volume-type <volume_type> --project-id
      <project_id>
```

Removes volume type access for the given project.

Optional arguments:

--volume-type <volume_type> Volume type name or ID to remove access for the given project.

--project-id <project_id> Project ID to remove volume type access for.

cinder type-create (v1)

```
usage: cinder type-create [--description <description>]
      [--is-public <is-public>]
      <name>
```

Creates a volume type.

Positional arguments:

<name> Name of new volume type.

Optional arguments:

--description <description> Description of new volume type.

--is-public <is-public> Make type accessible to the public (default true).

cinder type-default (v1)

```
usage: cinder type-default
```

List the default volume type.

cinder type-delete (v1)

```
usage: cinder type-delete <id>
```

Deletes a volume type.

Positional arguments:

<id> ID of volume type to delete.

cinder type-key (v1)

```
usage: cinder type-key <vtype> <action> <key=value> [<key=value> ...]
```

Sets or unsets extra_spec for a volume type.

Positional arguments:

<vtype> Name or ID of volume type.

<action> The action. Valid values are “set” or “unset.”

<key=value> The extra specs key and value pair to set or unset. For unset, specify only the key.

cinder type-list (v1)

```
usage: cinder type-list
```

Lists available ‘volume types’. (Admin only will see private types)

cinder type-show (v1)

```
usage: cinder type-show <volume_type>
```

Show volume type details.

Positional arguments:

<volume_type> Name or ID of the volume type.

cinder type-update (v1)

```
usage: cinder type-update [--name <name>] [--description <description>]
                        [--is-public <is-public>]
                        <id>
```


Updates volume type name, description, and/or `is_public`.

Positional arguments:

<id> ID of the volume type.

Optional arguments:

--name <name> Name of the volume type.

--description <description> Description of the volume type.

--is-public <is-public> Make type accessible to the public or not.

cinder unmanage (v1)

```
usage: cinder unmanage <volume>
```

Stop managing a volume.

Positional arguments:

<volume> Name or ID of the volume to unmanage.

cinder upload-to-image (v1)

```
usage: cinder upload-to-image [--force [<True|False>]]
                               [--container-format <container-format>]
                               [--disk-format <disk-format>]
                               <volume> <image-name>
```

Uploads volume to Image Service as an image.

Positional arguments:

<volume> Name or ID of volume to snapshot.

<image-name> The new image name.

Optional arguments:

--force [<True|False>] Enables or disables upload of a volume that is attached to an instance. Default=False.

--container-format <container-format> Container format type. Default is bare.

--disk-format <disk-format> Disk format type. Default is raw.

2.5 Compute command-line client

The nova client is the command-line interface (CLI) for the OpenStack Compute API and its extensions.

This chapter documents **nova** version 3.4.0.

For help on a specific **nova** command, enter:

```
$ nova help COMMAND
```

2.5.1 nova usage

```
usage: nova [--version] [--debug] [--os-cache] [--timings]
           [--os-region-name <region-name>] [--service-type <service-type>]
           [--service-name <service-name>]
           [--volume-service-name <volume-service-name>]
           [--os-endpoint-type <endpoint-type>]
           [--os-compute-api-version <compute-api-ver>]
           [--bypass-url <bypass-url>] [--insecure]
           [--os-cacert <ca-certificate>] [--os-cert <certificate>]
           [--os-key <key>] [--timeout <seconds>] [--os-auth-type <name>]
           [--os-auth-url OS_AUTH_URL] [--os-domain-id OS_DOMAIN_ID]
           [--os-domain-name OS_DOMAIN_NAME] [--os-project-id OS_PROJECT_ID]
           [--os-project-name OS_PROJECT_NAME]
           [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
           [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
           [--os-trust-id OS_TRUST_ID]
           [--os-default-domain-id OS_DEFAULT_DOMAIN_ID]
           [--os-default-domain-name OS_DEFAULT_DOMAIN_NAME]
           [--os-user-id OS_USER_ID] [--os-user-name OS_USERNAME]
           [--os-user-domain-id OS_USER_DOMAIN_ID]
           [--os-user-domain-name OS_USER_DOMAIN_NAME]
           [--os-password OS_PASSWORD]
           <subcommand> ...
```

Subcommands:

absolute-limits **DEPRECATED**, use limits instead.

add-fixed-ip Add new IP address on a network to server.

add-floating-ip **DEPRECATED**, use floating-ip-associate instead.

add-secgroup Add a Security Group to a server.

agent-create Create new agent build.

agent-delete Delete existing agent build.

agent-list List all builds.

agent-modify Modify existing agent build.

aggregate-add-host Add the host to the specified aggregate.

aggregate-create Create a new aggregate with the specified details.

aggregate-delete Delete the aggregate.

aggregate-details **DEPRECATED**, use aggregate-show instead.

aggregate-list Print a list of all aggregates.

aggregate-remove-host Remove the specified host from the specified aggregate.

aggregate-set-metadata Update the metadata associated with the aggregate.

aggregate-show Show details of the specified aggregate.

aggregate-update Update the aggregate's name and optionally availability zone.

availability-zone-list List all the availability zones.

backup Backup a server by creating a 'backup' type snapshot.

boot Boot a new server.

clear-password Clear the admin password for a server.

cloudpipe-configure Update the VPN IP/port of a cloudpipe instance.

cloudpipe-create Create a cloudpipe instance for the given project.

cloudpipe-list Print a list of all cloudpipe instances.

console-log Get console log output of a server.

credentials Show user credentials returned from auth.

delete Immediately shut down and delete specified server(s).

diagnostics Retrieve server diagnostics.

dns-create Create a DNS entry for domain, name, and IP.

dns-create-private-domain Create the specified DNS domain.

dns-create-public-domain Create the specified DNS domain.

dns-delete Delete the specified DNS entry.

dns-delete-domain Delete the specified DNS domain.

dns-domains Print a list of available dns domains.

dns-list List current DNS entries for domain and IP or domain and name.

endpoints Discover endpoints that get returned from the authenticate services.

evacuate Evacuate server from failed host.

fixed-ip-get Retrieve info on a fixed IP.

fixed-ip-reserve Reserve a fixed IP.

fixed-ip-unreserve Unreserve a fixed IP.

flavor-access-add Add flavor access for the given tenant.

flavor-access-list Print access information about the given flavor.

flavor-access-remove Remove flavor access for the given tenant.

flavor-create Create a new flavor.

flavor-delete Delete a specific flavor

flavor-key Set or unset extra_spec for a flavor.

flavor-list Print a list of available 'flavors' (sizes of servers).

flavor-show Show details about the given flavor.

floating-ip-associate Associate a floating IP address to a server.

floating-ip-bulk-create Bulk create floating IPs by range (nova- network only).

floating-ip-bulk-delete Bulk delete floating IPs by range (nova- network only).

floating-ip-bulk-list List all floating IPs (nova-network only).

floating-ip-create Allocate a floating IP for the current tenant.

floating-ip-delete De-allocate a floating IP.

floating-ip-disassociate Disassociate a floating IP address from a server.

floating-ip-list List floating IPs.

floating-ip-pool-list List all floating IP pools.

get-mks-console Get a serial console to a server. (Supported by API versions '2.8' - '2.latest') [hint: use '–os-compute-api-version' flag to show help message for proper version]

get-password Get the admin password for a server.

get-rdp-console Get a rdp console to a server.

get-serial-console Get a serial console to a server.

get-spice-console Get a spice console to a server.

get-vnc-console Get a vnc console to a server.

host-action Perform a power action on a host.

host-describe Describe a specific host.

host-list List all hosts by service.

host-update Update host settings.

hypervisor-list List hypervisors.

hypervisor-servers List servers belonging to specific hypervisors.

hypervisor-show Display the details of the specified hypervisor.

hypervisor-stats Get hypervisor statistics over all compute nodes.

hypervisor-uptime Display the uptime of the specified hypervisor.

image-create Create a new image by taking a snapshot of a running server.

image-delete Delete specified image(s).

image-list Print a list of available images to boot from.

image-meta Set or delete metadata on an image.

image-show Show details about the given image.

interface-attach Attach a network interface to a server.

interface-detach Detach a network interface from a server.

interface-list List interfaces attached to a server.

keypair-add Create a new key pair for use with servers.

keypair-delete Delete keypair given by its name. (Supported by API versions '2.0' - '2.latest') [hint: use '–os-compute-api-version' flag to show help message for proper version]

keypair-list Print a list of keypairs for a user (Supported by API versions '2.0' - '2.latest') [hint: use '–os-compute-api-version' flag to show help message for proper version]

keypair-show Show details about the given keypair. (Supported by API versions '2.0' - '2.latest') [hint: use '–os-compute-api-version' flag to show help message for proper version]

limits Print rate and absolute limits.

list List active servers.

list-secgroup List Security Group(s) of a server.

live-migration Migrate running server to a new machine.

live-migration-abort Abort an on-going live migration. (Supported by API versions '2.24' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

live-migration-force-complete Force on-going live migration to complete. (Supported by API versions '2.22' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

lock Lock a server. A normal (non-admin) user will not be able to execute actions on a locked server.

meta Set or delete metadata on a server.

migrate Migrate a server. The new host will be selected by the scheduler.

network-associate-host Associate host with network.

network-associate-project Associate project with network.

network-create Create a network.

network-delete Delete network by label or id.

network-disassociate Disassociate host and/or project from the given network.

network-list Print a list of available networks.

network-show Show details about the given network.

pause Pause a server.

quota-class-show List the quotas for a quota class.

quota-class-update Update the quotas for a quota class.

quota-defaults List the default quotas for a tenant.

quota-delete Delete quota for a tenant/user so their quota will Revert back to default.

quota-show List the quotas for a tenant/user.

quota-update Update the quotas for a tenant/user.

rate-limits **DEPRECATED**, use limits instead.

reboot Reboot a server.

rebuild Shutdown, re-image, and re-boot a server.

refresh-network Refresh server network information.

remove-fixed-ip Remove an IP address from a server.

remove-floating-ip **DEPRECATED**, use floating-ip-disassociate instead.

remove-secgroup Remove a Security Group from a server.

rename **DEPRECATED**, use update instead.

rescue Reboots a server into rescue mode, which starts the machine from either the initial image or a specified image, attaching the current boot disk as secondary.

reset-network Reset network of a server.

reset-state Reset the state of a server.

resize Resize a server.

resize-confirm Confirm a previous resize.

resize-revert Revert a previous resize (and return to the previous VM).

resume Resume a server.

root-password **DEPRECATED**, use set-password instead.

scrub Delete networks and security groups associated with a project.

secgroup-add-default-rule Add a rule to the set of rules that will be added to the 'default' security group for new tenants (nova-network only).

secgroup-add-group-rule Add a source group rule to a security group.

secgroup-add-rule Add a rule to a security group.

secgroup-create Create a security group.

secgroup-delete Delete a security group.

secgroup-delete-default-rule Delete a rule from the set of rules that will be added to the 'default' security group for new tenants (nova-network only).

secgroup-delete-group-rule Delete a source group rule from a security group.

secgroup-delete-rule Delete a rule from a security group.

secgroup-list List security groups for the current tenant.

secgroup-list-default-rules List rules that will be added to the 'default' security group for new tenants.

secgroup-list-rules List rules for a security group.

secgroup-update Update a security group.

server-group-create Create a new server group with the specified details.

server-group-delete Delete specific server group(s).

server-group-get Get a specific server group.

server-group-list Print a list of all server groups.

server-migration-list Get the migrations list of specified server. (Supported by API versions '2.23' - '2.latest') [hint: use '-os-compute-api- version' flag to show help message for proper version]

server-migration-show Get the migration of specified server. (Supported by API versions '2.23' - '2.latest') [hint: use '-os-compute-api- version' flag to show help message for proper version]

service-delete Delete the service.

service-disable Disable the service.

service-enable Enable the service.

service-force-down Force service to down. (Supported by API versions '2.11' - '2.latest') [hint: use '-os-compute-api-version' flag to show help message for proper version]

service-list Show a list of all running services. Filter by host & binary.

set-password Change the admin password for a server.

shelve Shelve a server.

shelve-offload Remove a shelved server from the compute node.

show Show details about the given server.

ssh SSH into a server.

start Start the server(s).

stop Stop the server(s).

suspend Suspend a server.

trigger-crash-dump Trigger crash dump in an instance. (Supported by API versions '2.17' - '2.latest') [hint: use '-os-compute-api-version' flag to show help message for proper version]

unlock Unlock a server.

unpause Unpause a server.

unrescue Restart the server from normal boot disk again.

unshelve Unshelve a server.

update Update the name or the description for a server.

usage Show usage data for a single tenant.

usage-list List usage data for all tenants.

version-list List all API versions.

virtual-interface-list Show virtual interface info about the given server.

volume-attach Attach a volume to a server.

volume-attachments List all the volumes attached to a server.

volume-create **DEPRECATED:** Add a new volume.

volume-delete **DEPRECATED:** Remove volume(s).

volume-detach Detach a volume from a server.

volume-list **DEPRECATED:** List all the volumes.

volume-show **DEPRECATED:** Show details about a volume.

volume-snapshot-create **DEPRECATED:** Add a new snapshot.

volume-snapshot-delete **DEPRECATED:** Remove a snapshot.

volume-snapshot-list **DEPRECATED:** List all the snapshots.

volume-snapshot-show **DEPRECATED:** Show details about a snapshot.

volume-type-create **DEPRECATED:** Create a new volume type.

volume-type-delete **DEPRECATED:** Delete a specific volume type.

volume-type-list **DEPRECATED:** Print a list of available 'volume types'.

volume-update Update volume attachment.

x509-create-cert Create x509 cert for a user in tenant.

x509-get-root-cert Fetch the x509 root cert.

bash-completion Prints all of the commands and options to stdout so that the nova.bash_completion script doesn't have to hard code them.

help Display help about this program or one of its subcommands.

host-evacuate-live Live migrate all instances of the specified host to other available hosts.

cell-capacities Get cell capacities for all cells or a given cell.

cell-show Show details of a given cell.

migration-list Print a list of migrations.

instance-action Show an action.

instance-action-list List actions on a server.

net **DEPRECATED**, use `tenant-network-show` instead.

net-create **DEPRECATED**, use `tenant-network-create` instead.

net-delete **DEPRECATED**, use `tenant-network-delete` instead.

net-list **DEPRECATED**, use `tenant-network-list` instead.

tenant-network-create Create a tenant network.

tenant-network-delete Delete a tenant network.

tenant-network-list List tenant networks.

tenant-network-show Show a tenant network.

host-servers-migrate Cold migrate all instances off the specified host to other available hosts.

host-evacuate Evacuate all instances from failed host.

host-meta Set or Delete metadata on all instances of a host.

list-extensions List all the os-api extensions that are available.

force-delete Force delete a server.

restore Restore a soft-deleted server.

baremetal-interface-add Add a network interface to a baremetal node.

baremetal-interface-list List network interfaces associated with a baremetal node.

baremetal-interface-remove Remove a network interface from a baremetal node.

baremetal-node-create Create a baremetal node.

baremetal-node-delete Remove a baremetal node and any associated interfaces.

baremetal-node-list Print list of available baremetal nodes.

baremetal-node-show Show information about a baremetal node.

2.5.2 nova optional arguments

--version show program's version number and exit

--debug Print debugging output.

--os-cache Use the auth token cache. Defaults to False if `env[OS_CACHE]` is not set.

--timings Print call timing info.

--os-region-name <region-name> Defaults to `env[OS_REGION_NAME]`.

--service-type <service-type> Defaults to compute for most actions.

--service-name <service-name> Defaults to `env[NOVA_SERVICE_NAME]`.

--volume-service-name <volume-service-name> Defaults to `env[NOVA_VOLUME_SERVICE_NAME]`.

--os-endpoint-type <endpoint-type> Defaults to `env[NOVA_ENDPOINT_TYPE]`, `env[OS_ENDPOINT_TYPE]` or publicURL.

--os-compute-api-version <compute-api-ver> Accepts X, X.Y (where X is major and Y is minor part) or "X.latest", defaults to `env[OS_COMPUTE_API_VERSION]`.

--bypass-url <bypass-url> Use this API endpoint instead of the Service Catalog. Defaults to `env[NOVACLIENT_BYPASS_URL]`.

--os-auth-type <name>, **--os-auth-plugin <name>** Authentication type to use

2.5.3 nova add-fixed-ip

```
usage: nova add-fixed-ip <server> <network-id>
```

Add new IP address on a network to server.

Positional arguments:

<server> Name or ID of server.

<network-id> Network ID.

2.5.4 nova add-secgroup

```
usage: nova add-secgroup <server> <secgroup>
```

Add a Security Group to a server.

Positional arguments:

<server> Name or ID of server.

<secgroup> Name or ID of Security Group.

2.5.5 nova agent-create

```
usage: nova agent-create <os> <architecture> <version> <url> <md5hash>
                        <hypervisor>
```

Create new agent build.

Positional arguments:

<os> Type of OS.

<architecture> Type of architecture.

<version> Version.

<url> URL.

<md5hash> MD5 hash.

<hypervisor> Type of hypervisor.

2.5.6 nova agent-delete

```
usage: nova agent-delete <id>
```

Delete existing agent build.

Positional arguments:

<id> ID of the agent-build.

2.5.7 nova agent-list

```
usage: nova agent-list [--hypervisor <hypervisor>]
```

List all builds.

Optional arguments:

--hypervisor <hypervisor> Type of hypervisor.

2.5.8 nova agent-modify

```
usage: nova agent-modify <id> <version> <url> <md5hash>
```

Modify existing agent build.

Positional arguments:

<id> ID of the agent-build.

<version> Version.

<url> URL

<md5hash> MD5 hash.

2.5.9 nova aggregate-add-host

```
usage: nova aggregate-add-host <aggregate> <host>
```

Add the host to the specified aggregate.

Positional arguments:

<aggregate> Name or ID of aggregate.

<host> The host to add to the aggregate.

2.5.10 nova aggregate-create

```
usage: nova aggregate-create <name> [<availability-zone>]
```

Create a new aggregate with the specified details.

Positional arguments:

<name> Name of aggregate.

<availability-zone> The availability zone of the aggregate (optional).

2.5.11 nova aggregate-delete

```
usage: nova aggregate-delete <aggregate>
```

Delete the aggregate.

Positional arguments:

<aggregate> Name or ID of aggregate to delete.

2.5.12 nova aggregate-list

```
usage: nova aggregate-list
```

Print a list of all aggregates.

2.5.13 nova aggregate-remove-host

```
usage: nova aggregate-remove-host <aggregate> <host>
```

Remove the specified host from the specified aggregate.

Positional arguments:

<aggregate> Name or ID of aggregate.

<host> The host to remove from the aggregate.

2.5.14 nova aggregate-set-metadata

```
usage: nova aggregate-set-metadata <aggregate> <key=value> [<key=value> ...]
```

Update the metadata associated with the aggregate.

Positional arguments:

<aggregate> Name or ID of aggregate to update.

<key=value> Metadata to add/update to aggregate. Specify only the key to delete a metadata item.

2.5.15 nova aggregate-show

```
usage: nova aggregate-show <aggregate>
```

Show details of the specified aggregate.

Positional arguments:

<aggregate> Name or ID of aggregate.

2.5.16 nova aggregate-update

```
usage: nova aggregate-update <aggregate> <name> [<availability-zone>]
```

Update the aggregate's name and optionally availability zone.

Positional arguments:

<aggregate> Name or ID of aggregate to update.

<name> Name of aggregate.

<availability-zone> The availability zone of the aggregate.

2.5.17 nova availability-zone-list

```
usage: nova availability-zone-list
```

List all the availability zones.

2.5.18 nova backup

```
usage: nova backup <server> <name> <backup-type> <rotation>
```

Backup a server by creating a ‘backup’ type snapshot.

Positional arguments:

<server> Name or ID of server.

<name> Name of the backup image.

<backup-type> The backup type, like “daily” or “weekly”.

<rotation> Int parameter representing how many backups to keep around.

2.5.19 nova baremetal-interface-add

```
usage: nova baremetal-interface-add [--datapath_id <datapath_id>]
                                     [--port_no <port_no>]
                                     <node> <address>
```

Add a network interface to a baremetal node.

Positional arguments:

<node> ID of node

<address> MAC address of interface

Optional arguments:

--datapath_id <datapath_id> OpenFlow Datapath ID of interface

--port_no <port_no> OpenFlow port number of interface

2.5.20 nova baremetal-interface-list

```
usage: nova baremetal-interface-list <node>
```

List network interfaces associated with a baremetal node.

Positional arguments:

<node> ID of node

2.5.21 nova baremetal-interface-remove

```
usage: nova baremetal-interface-remove <node> <address>
```

Remove a network interface from a baremetal node.

Positional arguments:

<node> ID of node

<address> MAC address of interface

2.5.22 nova baremetal-node-create

```
usage: nova baremetal-node-create [--pm_address <pm_address>]
                                   [--pm_user <pm_user>]
                                   [--pm_password <pm_password>]
                                   [--terminal_port <terminal_port>]
                                   <service_host> <cpus> <memory_mb> <local_gb>
                                   <prov_mac_address>
```

Create a baremetal node.

Positional arguments:

<service_host> Name of nova compute host which will control this baremetal node

<cpus> Number of CPUs in the node

<memory_mb> Megabytes of RAM in the node

<local_gb> Gigabytes of local storage in the node

<prov_mac_address> MAC address to provision the node

Optional arguments:

--pm_address <pm_address> Power management IP for the node

--pm_user <pm_user> Username for the node's power management

--pm_password <pm_password> Password for the node's power management

--terminal_port <terminal_port> ShellInABox port?

2.5.23 nova baremetal-node-delete

```
usage: nova baremetal-node-delete <node>
```

Remove a baremetal node and any associated interfaces.

Positional arguments:

<node> ID of the node to delete.

2.5.24 nova baremetal-node-list

```
usage: nova baremetal-node-list
```

Print list of available baremetal nodes.

2.5.25 nova baremetal-node-show

```
usage: nova baremetal-node-show <node>
```

Show information about a baremetal node.

Positional arguments:

<node> ID of node

2.5.26 nova boot

```
usage: nova boot [--flavor <flavor>] [--image <image>]
                [--image-with <key=value>] [--boot-volume <volume_id>]
                [--snapshot <snapshot_id>] [--min-count <number>]
                [--max-count <number>] [--meta <key=value>]
                [--file <dst-path=src-path>] [--key-name <key-name>]
                [--user-data <user-data>]
                [--availability-zone <availability-zone>]
                [--security-groups <security-groups>]
                [--block-device-mapping <dev-name=mapping>]
                [--block-device key1=value1[,key2=value2...]]
                [--swap <swap_size>]
                [--ephemeral size=<size>[,format=<format>]]
                [--hint <key=value>]
                [--nic <net-id=net-uuid,net-name=network-name,v4-fixed-ip=ip-addr,v6-
→fixed-ip=ip-addr,port-id=port-uuid>]
                [--config-drive <value>] [--poll] [--admin-pass <value>]
                [--access-ip-v4 <value>] [--access-ip-v6 <value>]
                [--description <description>]
                <name>
```

Boot a new server.

Positional arguments:

<name> Name for the new server.

Optional arguments:

--flavor <flavor> Name or ID of flavor (see ‘nova flavor-list’).

--image <image> Name or ID of image (see ‘nova image-list’).

--image-with <key=value> Image metadata property (see ‘nova image-show’).

--boot-volume <volume_id> Volume ID to boot from.

--snapshot <snapshot_id> Snapshot ID to boot from (will create a volume).

--min-count <number> Boot at least <number> servers (limited by quota).

--max-count <number> Boot up to <number> servers (limited by quota).

- meta <key=value>** Record arbitrary key/value metadata to /meta_data.json on the metadata server. Can be specified multiple times.
- file <dst-path=src-path>** Store arbitrary files from <src-path> locally to <dst-path> on the new server. Limited by the injected_files quota value.
- key-name <key-name>** Key name of keypair that should be created earlier with the command keypair-add.
- user-data <user-data>** user data file to pass to be exposed by the metadata server.
- availability-zone <availability-zone>** The availability zone for server placement.
- security-groups <security-groups>** Comma separated list of security group names.
- block-device-mapping <dev-name=mapping>** Block device mapping in the format <dev-name>=<id>:<type>:<size(GB)>:<delete-on-terminate>.
- block-device key1=value1[,key2=value2...]** Block device mapping with the keys: id=UUID (image_id, snapshot_id or volume_id only if using source image, snapshot or volume) source=source type (image, snapshot, volume or blank), dest=destination type of the block device (volume or local), bus=device's bus (e.g. uml, lxc, virtio, ...; if omitted, hypervisor driver chooses a suitable default, honoured only if device type is supplied) type=device type (e.g. disk, cdrom, ...; defaults to 'disk') device=name of the device (e.g. vda, xda, ...; if omitted, hypervisor driver chooses suitable device depending on selected bus; note the libvirt driver always uses default device names), size=size of the block device in MB(for swap) and in GB(for other formats) (if omitted, hypervisor driver calculates size), format=device will be formatted (e.g. swap, ntfs, ...; optional), bootindex=integer used for ordering the boot disks (for image backed instances it is equal to 0, for others need to be specified) and shutdown=shutdown behaviour (either preserve or remove, for local destination set to remove).
- swap <swap_size>** Create and attach a local swap block device of <swap_size> MB.
- ephemeral size=<size>[,format=<format>]** Create and attach a local ephemeral block device of <size> GB and format it to <format>.
- hint <key=value>** Send arbitrary key/value pairs to the scheduler for custom use.
- nic <net-id=net-uuid,net-name=network-name,v4-fixed-ip=ip-addr,v6-fixed-ip=ip-addr,port-id=port-id>** Create a NIC on the server. Specify option multiple times to create multiple NICs. net-id: attach NIC to network with this UUID net-name: attach NIC to network with this name (either port-id or net-id or net-name must be provided), v4-fixed-ip: IPv4 fixed address for NIC (optional), v6-fixed-ip: IPv6 fixed address for NIC (optional), port-id: attach NIC to port with this UUID (either port-id or net-id must be provided).
- config-drive <value>** Enable config drive.
- poll** Report the new server boot progress until it completes.
- admin-pass <value>** Admin password for the instance.
- access-ip-v4 <value>** Alternative access IPv4 of the instance.
- access-ip-v6 <value>** Alternative access IPv6 of the instance.
- description <description>** Description for the server. (Supported by API versions '2.19' - '2.latest')

2.5.27 nova cell-capacities

```
usage: nova cell-capacities [--cell <cell-name>]
```

Get cell capacities for all cells or a given cell.

Optional arguments:

- cell <cell-name>** Name of the cell to get the capacities.

2.5.28 nova cell-show

```
usage: nova cell-show <cell-name>
```

Show details of a given cell.

Positional arguments:

<cell-name> Name of the cell.

2.5.29 nova clear-password

```
usage: nova clear-password <server>
```

Clear the admin password for a server.

Positional arguments:

<server> Name or ID of server.

2.5.30 nova cloudpipe-configure

```
usage: nova cloudpipe-configure <ip address> <port>
```

Update the VPN IP/port of a cloudpipe instance.

Positional arguments:

<ip address> New IP Address.

<port> New Port.

2.5.31 nova cloudpipe-create

```
usage: nova cloudpipe-create <project_id>
```

Create a cloudpipe instance for the given project.

Positional arguments:

<project_id> UUID of the project to create the cloudpipe for.

2.5.32 nova cloudpipe-list

```
usage: nova cloudpipe-list
```

Print a list of all cloudpipe instances.

2.5.33 nova console-log

```
usage: nova console-log [--length <length>] <server>
```


Get console log output of a server.

Positional arguments:

<server> Name or ID of server.

Optional arguments:

--length <length> Length in lines to tail.

2.5.34 nova credentials

```
usage: nova credentials [--wrap <integer>]
```

Show user credentials returned from auth.

Optional arguments:

--wrap <integer> Wrap PKI tokens to a specified length, or 0 to disable.

2.5.35 nova delete

```
usage: nova delete [--all-tenants] <server> [<server> ...]
```

Immediately shut down and delete specified server(s).

Positional arguments:

<server> Name or ID of server(s).

Optional arguments:

--all-tenants Delete server(s) in another tenant by name (Admin only).

2.5.36 nova diagnostics

```
usage: nova diagnostics <server>
```

Retrieve server diagnostics.

Positional arguments:

<server> Name or ID of server.

2.5.37 nova dns-create

```
usage: nova dns-create [--type <type>] <ip> <name> <domain>
```

Create a DNS entry for domain, name, and IP.

Positional arguments:

<ip> IP address.

<name> DNS name.

<domain> DNS domain.

Optional arguments:

--type <type> DNS type (e.g. “A”)

2.5.38 nova dns-create-private-domain

```
usage: nova dns-create-private-domain
                                [--availability-zone <availability-zone>]
                                <domain>
```

Create the specified DNS domain.

Positional arguments:

<domain> DNS domain.

Optional arguments:

--availability-zone <availability-zone> Limit access to this domain to servers in the specified availability zone.

2.5.39 nova dns-create-public-domain

```
usage: nova dns-create-public-domain [--project <project>] <domain>
```

Create the specified DNS domain.

Positional arguments:

<domain> DNS domain.

Optional arguments:

--project <project> Limit access to this domain to users of the specified project.

2.5.40 nova dns-delete

```
usage: nova dns-delete <domain> <name>
```

Delete the specified DNS entry.

Positional arguments:

<domain> DNS domain.

<name> DNS name.

2.5.41 nova dns-delete-domain

```
usage: nova dns-delete-domain <domain>
```

Delete the specified DNS domain.

Positional arguments:

<domain> DNS domain.

2.5.42 nova dns-domains

```
usage: nova dns-domains
```

Print a list of available dns domains.

2.5.43 nova dns-list

```
usage: nova dns-list [--ip <ip>] [--name <name>] <domain>
```

List current DNS entries for domain and IP or domain and name.

Positional arguments:

<domain> DNS domain.

Optional arguments:

--ip <ip> IP address.

--name <name> DNS name.

2.5.44 nova endpoints

```
usage: nova endpoints
```

Discover endpoints that get returned from the authenticate services.

2.5.45 nova evacuate

```
usage: nova evacuate [--password <password>] <server> [<host>]
```

Evacuate server from failed host.

Positional arguments:

<server> Name or ID of server.

<host> Name or ID of the target host. If no host is specified, the scheduler will choose one.

Optional arguments:

--password <password> Set the provided admin password on the evacuated server. Not applicable if the server is on shared storage.

2.5.46 nova fixed-ip-get

```
usage: nova fixed-ip-get <fixed_ip>
```

Retrieve info on a fixed IP.

Positional arguments:

<fixed_ip> Fixed IP Address.

2.5.47 nova fixed-ip-reserve

```
usage: nova fixed-ip-reserve <fixed_ip>
```

Reserve a fixed IP.

Positional arguments:

<fixed_ip> Fixed IP Address.

2.5.48 nova fixed-ip-unreserve

```
usage: nova fixed-ip-unreserve <fixed_ip>
```

Unreserve a fixed IP.

Positional arguments:

<fixed_ip> Fixed IP Address.

2.5.49 nova flavor-access-add

```
usage: nova flavor-access-add <flavor> <tenant_id>
```

Add flavor access for the given tenant.

Positional arguments:

<flavor> Flavor name or ID to add access for the given tenant.

<tenant_id> Tenant ID to add flavor access for.

2.5.50 nova flavor-access-list

```
usage: nova flavor-access-list [--flavor <flavor>] [--tenant <tenant_id>]
```

Print access information about the given flavor.

Optional arguments:

--flavor <flavor> Filter results by flavor name or ID.

--tenant <tenant_id> Filter results by tenant ID.

2.5.51 nova flavor-access-remove

```
usage: nova flavor-access-remove <flavor> <tenant_id>
```

Remove flavor access for the given tenant.

Positional arguments:

<flavor> Flavor name or ID to remove access for the given tenant.

<tenant_id> Tenant ID to remove flavor access for.

2.5.52 nova flavor-create

```
usage: nova flavor-create [--ephemeral <ephemeral>] [--swap <swap>]
                        [--rxtx-factor <factor>] [--is-public <is-public>]
                        <name> <id> <ram> <disk> <vcpus>
```

Create a new flavor.

Positional arguments:

<name> Unique name of the new flavor.

<id> Unique ID of the new flavor. Specifying 'auto' will generate a UUID for the ID.

<ram> Memory size in MB.

<disk> Disk size in GB.

<vcpus> Number of vcpus

Optional arguments:

--ephemeral <ephemeral> Ephemeral space size in GB (default 0).

--swap <swap> Swap space size in MB (default 0).

--rxtx-factor <factor> RX/TX factor (default 1).

--is-public <is-public> Make flavor accessible to the public (default true).

2.5.53 nova flavor-delete

```
usage: nova flavor-delete <flavor>
```

Delete a specific flavor

Positional arguments:

<flavor> Name or ID of the flavor to delete.

2.5.54 nova flavor-key

```
usage: nova flavor-key <flavor> <action> <key=value> [<key=value> ...]
```

Set or unset extra_spec for a flavor.

Positional arguments:

<flavor> Name or ID of flavor.

<action> Actions: 'set' or 'unset'.

<key=value> Extra_specs to set/unset (only key is necessary on unset).

2.5.55 nova flavor-list

```
usage: nova flavor-list [--extra-specs] [--all] [--marker <marker>]
                        [--limit <limit>]
```

Print a list of available ‘flavors’ (sizes of servers).

Optional arguments:

--extra-specs Get extra-specs of each flavor.

--all Display all flavors (Admin only).

--marker <marker> The last flavor ID of the previous page; displays list of flavors after “marker”.

--limit <limit> Maximum number of flavors to display. If limit == -1, all flavors will be displayed. If limit is bigger than ‘osapi_max_limit’ option of Nova API, limit ‘osapi_max_limit’ will be used instead.

2.5.56 nova flavor-show

```
usage: nova flavor-show <flavor>
```

Show details about the given flavor.

Positional arguments:

<flavor> Name or ID of flavor.

2.5.57 nova floating-ip-associate

```
usage: nova floating-ip-associate [--fixed-address <fixed_address>]
                                   <server> <address>
```

Associate a floating IP address to a server.

Positional arguments:

<server> Name or ID of server.

<address> IP Address.

Optional arguments:

--fixed-address <fixed_address> Fixed IP Address to associate with.

2.5.58 nova floating-ip-bulk-create

```
usage: nova floating-ip-bulk-create [--pool <pool>] [--interface <interface>]
                                   <range>
```

Bulk create floating IPs by range (nova-network only).

Positional arguments:

<range> Address range to create.

Optional arguments:

--pool <pool> Pool for new Floating IPs.

--interface <interface> Interface for new Floating IPs.

2.5.59 nova floating-ip-bulk-delete

```
usage: nova floating-ip-bulk-delete <range>
```

Bulk delete floating IPs by range (nova-network only).

Positional arguments:

<range> Address range to delete.

2.5.60 nova floating-ip-bulk-list

```
usage: nova floating-ip-bulk-list [--host <host>]
```

List all floating IPs (nova-network only).

Optional arguments:

--host <host> Filter by host.

2.5.61 nova floating-ip-create

```
usage: nova floating-ip-create [<floating-ip-pool>]
```

Allocate a floating IP for the current tenant.

Positional arguments:

<floating-ip-pool> Name of Floating IP Pool. (Optional)

2.5.62 nova floating-ip-delete

```
usage: nova floating-ip-delete <address>
```

De-allocate a floating IP.

Positional arguments:

<address> IP of Floating IP.

2.5.63 nova floating-ip-disassociate

```
usage: nova floating-ip-disassociate <server> <address>
```

Disassociate a floating IP address from a server.

Positional arguments:

<server> Name or ID of server.

<address> IP Address.

2.5.64 nova floating-ip-list

```
usage: nova floating-ip-list
```

List floating IPs.

2.5.65 nova floating-ip-pool-list

```
usage: nova floating-ip-pool-list
```

List all floating IP pools.

2.5.66 nova force-delete

```
usage: nova force-delete <server>
```

Force delete a server.

Positional arguments:

<server> Name or ID of server.

2.5.67 nova get-mks-console

```
usage: nova get-mks-console <server>
```

Get a serial console to a server. (Supported by API versions ‘2.8’ - ‘2.latest’) [hint: use ‘--os-compute-api-version’ flag to show help message for proper version]

Positional arguments:

<server> Name or ID of server.

2.5.68 nova get-password

```
usage: nova get-password <server> [<private-key>]
```

Get the admin password for a server.

Positional arguments:

<server> Name or ID of server.

<private-key> Private key (used locally to decrypt password) (Optional). When specified, the command displays the clear (decrypted) VM password. When not specified, the ciphered VM password is displayed.

2.5.69 nova get-rdp-console

```
usage: nova get-rdp-console <server> <console-type>
```


Get a rdp console to a server.

Positional arguments:

<server> Name or ID of server.

<console-type> Type of rdp console (“rdp-html5”).

2.5.70 nova get-serial-console

```
usage: nova get-serial-console [--console-type CONSOLE_TYPE] <server>
```

Get a serial console to a server.

Positional arguments:

<server> Name or ID of server.

Optional arguments:

--console-type CONSOLE_TYPE Type of serial console, default=”serial”.

2.5.71 nova get-spice-console

```
usage: nova get-spice-console <server> <console-type>
```

Get a spice console to a server.

Positional arguments:

<server> Name or ID of server.

<console-type> Type of spice console (“spice-html5”).

2.5.72 nova get-vnc-console

```
usage: nova get-vnc-console <server> <console-type>
```

Get a vnc console to a server.

Positional arguments:

<server> Name or ID of server.

<console-type> Type of vnc console (“novnc” or “xvpvnc”).

2.5.73 nova host-action

```
usage: nova host-action [--action <action>] <hostname>
```

Perform a power action on a host.

Positional arguments:

<hostname> Name of host.

Optional arguments:

--action <action> A power action: startup, reboot, or shutdown.

2.5.74 nova host-describe

```
usage: nova host-describe <hostname>
```

Describe a specific host.

Positional arguments:

<hostname> Name of host.

2.5.75 nova host-evacuate

```
usage: nova host-evacuate [--target_host <target_host>] [--on-shared-storage]
                        <host>
```

Evacuate all instances from failed host.

Positional arguments:

<host> Name of host.

Optional arguments:

--target_host <target_host> Name of target host. If no host is specified the scheduler will select a target.

--on-shared-storage Specifies whether all instances files are on shared storage

2.5.76 nova host-evacuate-live

```
usage: nova host-evacuate-live [--target-host <target_host>] [--block-migrate]
                               [--max-servers <max_servers>]
                               <host>
```

Live migrate all instances of the specified host to other available hosts.

Positional arguments:

<host> Name of host.

Optional arguments:

--target-host <target_host> Name of target host.

--block-migrate Enable block migration. (Default=auto) (Supported by API versions ‘2.25’ - ‘2.latest’)

--max-servers <max_servers> Maximum number of servers to live migrate simultaneously

2.5.77 nova host-list

```
usage: nova host-list [--zone <zone>]
```

List all hosts by service.

Optional arguments:

--zone <zone> Filters the list, returning only those hosts in the availability zone <zone>.

2.5.78 nova host-meta

```
usage: nova host-meta <host> <action> <key=value> [<key=value> ...]
```

Set or Delete metadata on all instances of a host.

Positional arguments:

<host> Name of host.

<action> Actions: 'set' or 'delete'

<key=value> Metadata to set or delete (only key is necessary on delete)

2.5.79 nova host-servers-migrate

```
usage: nova host-servers-migrate <host>
```

Cold migrate all instances off the specified host to other available hosts.

Positional arguments:

<host> Name of host.

2.5.80 nova host-update

```
usage: nova host-update [--status <enable|disable>]
                        [--maintenance <enable|disable>]
                        <hostname>
```

Update host settings.

Positional arguments:

<hostname> Name of host.

Optional arguments:

--status <enable|disable> Either enable or disable a host.

--maintenance <enable|disable> Either put or resume host to/from maintenance.

2.5.81 nova hypervisor-list

```
usage: nova hypervisor-list [--matching <hostname>]
```

List hypervisors.

Optional arguments:

--matching <hostname> List hypervisors matching the given <hostname>.

2.5.82 nova hypervisor-servers

```
usage: nova hypervisor-servers <hostname>
```

List servers belonging to specific hypervisors.

Positional arguments:

<hostname> The hypervisor hostname (or pattern) to search for.

2.5.83 nova hypervisor-show

```
usage: nova hypervisor-show [--wrap <integer>] <hypervisor>
```

Display the details of the specified hypervisor.

Positional arguments:

<hypervisor> Name or ID of the hypervisor to show the details of.

Optional arguments:

--wrap <integer> Wrap the output to a specified length. Default is 40 or 0 to disable

2.5.84 nova hypervisor-stats

```
usage: nova hypervisor-stats
```

Get hypervisor statistics over all compute nodes.

2.5.85 nova hypervisor-uptime

```
usage: nova hypervisor-uptime <hypervisor>
```

Display the uptime of the specified hypervisor.

Positional arguments:

<hypervisor> Name or ID of the hypervisor to show the uptime of.

2.5.86 nova image-create

```
usage: nova image-create [--metadata <key=value>] [--show] [--poll]
                        <server> <name>
```

Create a new image by taking a snapshot of a running server.

Positional arguments:

<server> Name or ID of server.

<name> Name of snapshot.

Optional arguments:

- metadata <key=value>** Record arbitrary key/value metadata to /meta_data.json on the metadata server. Can be specified multiple times.
- show** Print image info.
- poll** Report the snapshot progress and poll until image creation is complete.

2.5.87 nova image-delete

```
usage: nova image-delete <image> [<image> ...]
```

Delete specified image(s).

Positional arguments:

<image> Name or ID of image(s).

2.5.88 nova image-list

```
usage: nova image-list [--limit <limit>]
```

Print a list of available images to boot from.

Optional arguments:

--limit <limit> Number of images to return per request.

2.5.89 nova image-meta

```
usage: nova image-meta <image> <action> <key=value> [<key=value> ...]
```

Set or delete metadata on an image.

Positional arguments:

<image> Name or ID of image.

<action> Actions: 'set' or 'delete'.

<key=value> Metadata to add/update or delete (only key is necessary on delete).

2.5.90 nova image-show

```
usage: nova image-show <image>
```

Show details about the given image.

Positional arguments:

<image> Name or ID of image.

2.5.91 nova instance-action

```
usage: nova instance-action <server> <request_id>
```

Show an action.

Positional arguments:

<server> Name or UUID of the server to show actions for. Only UUID can be used to show actions for a deleted server. (Supported by API versions '2.21' - '2.latest')

<request_id> Request ID of the action to get.

2.5.92 nova instance-action-list

```
usage: nova instance-action-list <server>
```

List actions on a server.

Positional arguments:

<server> Name or UUID of the server to list actions for. Only UUID can be used to list actions on a deleted server. (Supported by API versions '2.21' - '2.latest')

2.5.93 nova interface-attach

```
usage: nova interface-attach [--port-id <port_id>] [--net-id <net_id>]
                             [--fixed-ip <fixed_ip>]
                             <server>
```

Attach a network interface to a server.

Positional arguments:

<server> Name or ID of server.

Optional arguments:

--port-id <port_id> Port ID.

--net-id <net_id> Network ID

--fixed-ip <fixed_ip> Requested fixed IP.

2.5.94 nova interface-detach

```
usage: nova interface-detach <server> <port_id>
```

Detach a network interface from a server.

Positional arguments:

<server> Name or ID of server.

<port_id> Port ID.

2.5.95 nova interface-list

```
usage: nova interface-list <server>
```

List interfaces attached to a server.

Positional arguments:

<server> Name or ID of server.

2.5.96 nova keypair-add

```
usage: nova keypair-add [--pub-key <pub-key>] [--key-type <key-type>]
                        [--user <user-id>]
                        <name>
```

Create a new key pair for use with servers.

Positional arguments:

<name> Name of key.

Optional arguments:

--pub-key <pub-key> Path to a public ssh key.

--key-type <key-type> Keypair type. Can be ssh or x509. (Supported by API versions '2.2' - '2.latest')

--user <user-id> ID of user to whom to add key-pair (Admin only). (Supported by API versions '2.10' - '2.latest')

2.5.97 nova keypair-delete

```
usage: nova keypair-delete [--user <user-id>] <name>
```

Delete keypair given by its name. (Supported by API versions '2.0' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

Positional arguments:

<name> Keypair name to delete.

Optional arguments:

--user <user-id> ID of key-pair owner (Admin only).

2.5.98 nova keypair-list

```
usage: nova keypair-list [--user <user-id>]
```

Print a list of keypairs for a user (Supported by API versions '2.0' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

Optional arguments:

--user <user-id> List key-pairs of specified user ID (Admin only).

2.5.99 nova keypair-show

```
usage: nova keypair-show [--user <user-id>] <keypair>
```

Show details about the given keypair. (Supported by API versions ‘2.0’ - ‘2.latest’) [hint: use ‘--os-compute-api-version’ flag to show help message for proper version]

Positional arguments:

<keypair> Name of keypair.

Optional arguments:

--user <user-id> ID of key-pair owner (Admin only).

2.5.100 nova limits

```
usage: nova limits [--tenant [<tenant>]] [--reserved]
```

Print rate and absolute limits.

Optional arguments:

--tenant [<tenant>] Display information from single tenant (Admin only).

--reserved Include reservations count.

2.5.101 nova list

```
usage: nova list [--reservation-id <reservation-id>] [--ip <ip-regexp>]
               [--ip6 <ip6-regexp>] [--name <name-regexp>]
               [--instance-name <name-regexp>] [--status <status>]
               [--flavor <flavor>] [--image <image>] [--host <hostname>]
               [--all-tenants [<0|1>]] [--tenant [<tenant>]]
               [--user [<user>]] [--deleted] [--fields <fields>] [--minimal]
               [--sort <key>[:<direction>]] [--marker <marker>]
               [--limit <limit>] [--changes-since <changes_since>]
```

List active servers.

Optional arguments:

--reservation-id <reservation-id> Only return servers that match reservation-id.

--ip <ip-regexp> Search with regular expression match by IP address.

--ip6 <ip6-regexp> Search with regular expression match by IPv6 address.

--name <name-regexp> Search with regular expression match by name.

--instance-name <name-regexp> Search with regular expression match by server name.

--status <status> Search by server status.

--flavor <flavor> Search by flavor name or ID.

--image <image> Search by image name or ID.

--host <hostname> Search servers by hostname to which they are assigned (Admin only).

--all-tenants [<0|1>] Display information from all tenants (Admin only).

--tenant [**<tenant>**] Display information from single tenant (Admin only).

--user [**<user>**] Display information from single user (Admin only).

--deleted Only display deleted servers (Admin only).

--fields **<fields>** Comma-separated list of fields to display. Use the show command to see which fields are available.

--minimal Get only UUID and name.

--sort **<key>[:<direction>]** Comma-separated list of sort keys and directions in the form of **<key>[:<asc|desc>]**. The direction defaults to descending if not specified.

--marker **<marker>** The last server UUID of the previous page; displays list of servers after “marker”.

--limit **<limit>** Maximum number of servers to display. If limit == -1, all servers will be displayed. If limit is bigger than ‘osapi_max_limit’ option of Nova API, limit ‘osapi_max_limit’ will be used instead.

--changes-since **<changes_since>** List only servers changed after a certain point of time. The provided time should be an ISO 8061 formatted time. ex 2016-03-04T06:27:59Z .

2.5.102 nova list-extensions

```
usage: nova list-extensions
```

List all the os-api extensions that are available.

2.5.103 nova list-secgroup

```
usage: nova list-secgroup <server>
```

List Security Group(s) of a server.

Positional arguments:

<server> Name or ID of server.

2.5.104 nova live-migration

```
usage: nova live-migration [--block-migrate] <server> [<host>]
```

Migrate running server to a new machine.

Positional arguments:

<server> Name or ID of server.

<host> Destination host name.

Optional arguments:

--block-migrate True in case of block_migration. (Default=auto:live_migration) (Supported by API versions ‘2.25’ - ‘2.latest’)

2.5.105 nova live-migration-abort

```
usage: nova live-migration-abort <server> <migration>
```

Abort an on-going live migration. (Supported by API versions ‘2.24’ - ‘2.latest’) [hint: use ‘--os-compute-api-version’ flag to show help message for proper version]

Positional arguments:

<server> Name or ID of server.

<migration> ID of migration.

2.5.106 nova live-migration-force-complete

```
usage: nova live-migration-force-complete <server> <migration>
```

Force on-going live migration to complete. (Supported by API versions ‘2.22’ - ‘2.latest’) [hint: use ‘--os-compute-api-version’ flag to show help message for proper version]

Positional arguments:

<server> Name or ID of server.

<migration> ID of migration.

2.5.107 nova lock

```
usage: nova lock <server>
```

Lock a server. A normal (non-admin) user will not be able to execute actions on a locked server.

Positional arguments:

<server> Name or ID of server.

2.5.108 nova meta

```
usage: nova meta <server> <action> <key=value> [<key=value> ...]
```

Set or delete metadata on a server.

Positional arguments:

<server> Name or ID of server.

<action> Actions: ‘set’ or ‘delete’.

<key=value> Metadata to set or delete (only key is necessary on delete).

2.5.109 nova migrate

```
usage: nova migrate [--poll] <server>
```

Migrate a server. The new host will be selected by the scheduler.

Positional arguments:

<server> Name or ID of server.

Optional arguments:

--poll Report the server migration progress until it completes.

2.5.110 nova migration-list

```
usage: nova migration-list [--host <host>] [--status <status>]
                           [--cell_name <cell_name>]
```

Print a list of migrations.

Optional arguments:

--host <host> Fetch migrations for the given host.

--status <status> Fetch migrations for the given status.

--cell_name <cell_name> Fetch migrations for the given cell_name.

2.5.111 nova network-associate-host

```
usage: nova network-associate-host <network> <host>
```

Associate host with network.

Positional arguments:

<network> UUID of network.

<host> Name of host

2.5.112 nova network-associate-project

```
usage: nova network-associate-project <network>
```

Associate project with network.

Positional arguments:

<network> UUID of network.

2.5.113 nova network-create

```
usage: nova network-create [--fixed-range-v4 <x.x.x.x/yy>]
                           [--fixed-range-v6 CIDR_V6] [--vlan <vlan id>]
                           [--vlan-start <vlan start>] [--vpn <vpn start>]
                           [--gateway GATEWAY] [--gateway-v6 GATEWAY_V6]
                           [--bridge <bridge>]
                           [--bridge-interface <bridge interface>]
                           [--multi-host <'T'/'F'>] [--dns1 <DNS Address>]
```

```
[--dns2 <DNS Address>] [--uuid <network uuid>]
[--fixed-cidr <x.x.x.x/yy>]
[--project-id <project id>] [--priority <number>]
[--mtu MTU] [--enable-dhcp <'T'|'F'>]
[--dhcp-server DHCP_SERVER]
[--share-address <'T'|'F'>]
[--allowed-start ALLOWED_START]
[--allowed-end ALLOWED_END]
<network_label>
```

Create a network.

Positional arguments:

<network_label> Label for network

Optional arguments:

--fixed-range-v4 <x.x.x.x/yy> IPv4 subnet (ex: 10.0.0.0/8)

--fixed-range-v6 CIDR_V6 IPv6 subnet (ex: fe80::/64)

--vlan <vlan id> The vlan ID to be assigned to the project.

--vlan-start <vlan start> First vlan ID to be assigned to the project. Subsequent vlan IDs will be assigned incrementally.

--vpn <vpn start> vpn start

--gateway GATEWAY gateway

--gateway-v6 GATEWAY_V6 IPv6 gateway

--bridge <bridge> VIFs on this network are connected to this bridge.

--bridge-interface <bridge interface> The bridge is connected to this interface.

--multi-host <'T'|'F'> Multi host

--dns1 <DNS Address> First DNS.

--dns2 <DNS Address> Second DNS.

--uuid <network uuid> Network UUID.

--fixed-cidr <x.x.x.x/yy> IPv4 subnet for fixed IPs (ex: 10.20.0.0/16).

--project-id <project id> Project ID.

--priority <number> Network interface priority.

--mtu MTU MTU for network.

--enable-dhcp <'T'|'F'> Enable DHCP.

--dhcp-server DHCP_SERVER DHCP-server address (defaults to gateway address)

--share-address <'T'|'F'> Share address

--allowed-start ALLOWED_START Start of allowed addresses for instances.

--allowed-end ALLOWED_END End of allowed addresses for instances.

2.5.114 nova network-delete

```
usage: nova network-delete <network>
```

Delete network by label or id.

Positional arguments:

<network> UUID or label of network.

2.5.115 nova network-disassociate

```
usage: nova network-disassociate [--host-only [<0|1>]]
                                [--project-only [<0|1>]]
                                <network>
```

Disassociate host and/or project from the given network.

Positional arguments:

<network> UUID of network.

Optional arguments:

--host-only [<0|1>]

--project-only [<0|1>]

2.5.116 nova network-list

```
usage: nova network-list [--fields <fields>]
```

Print a list of available networks.

Optional arguments:

--fields <fields> Comma-separated list of fields to display. Use the show command to see which fields are available.

2.5.117 nova network-show

```
usage: nova network-show <network>
```

Show details about the given network.

Positional arguments:

<network> UUID or label of network.

2.5.118 nova pause

```
usage: nova pause <server>
```

Pause a server.

Positional arguments:

<server> Name or ID of server.

2.5.119 nova quota-class-show

```
usage: nova quota-class-show <class>
```

List the quotas for a quota class.

Positional arguments:

<class> Name of quota class to list the quotas for.

2.5.120 nova quota-class-update

```
usage: nova quota-class-update [--instances <instances>] [--cores <cores>]
                                [--ram <ram>] [--floating-ips <floating-ips>]
                                [--fixed-ips <fixed-ips>]
                                [--metadata-items <metadata-items>]
                                [--injected-files <injected-files>]
                                [--injected-file-content-bytes <injected-file-content-
↵bytes>]
                                [--injected-file-path-bytes <injected-file-path-bytes>]
                                [--key-pairs <key-pairs>]
                                [--security-groups <security-groups>]
                                [--security-group-rules <security-group-rules>]
                                [--server-groups <server-groups>]
                                [--server-group-members <server-group-members>]
                                <class>
```

Update the quotas for a quota class.

Positional arguments:

<class> Name of quota class to set the quotas for.

Optional arguments:

--instances <instances> New value for the “instances” quota.

--cores <cores> New value for the “cores” quota.

--ram <ram> New value for the “ram” quota.

--floating-ips <floating-ips> New value for the “floating-ips” quota.

--fixed-ips <fixed-ips> New value for the “fixed-ips” quota.

--metadata-items <metadata-items> New value for the “metadata-items” quota.

--injected-files <injected-files> New value for the “injected-files” quota.

--injected-file-content-bytes <injected-file-content-bytes> New value for the “injected-file-content-bytes” quota.

--injected-file-path-bytes <injected-file-path-bytes> New value for the “injected-file-path-bytes” quota.

--key-pairs <key-pairs> New value for the “key-pairs” quota.

--security-groups <security-groups> New value for the “security-groups” quota.

--security-group-rules <security-group-rules> New value for the “security-group-rules” quota.

--server-groups <server-groups> New value for the “server-groups” quota.

--server-group-members <server-group-members> New value for the “server-group-members” quota.

2.5.121 nova quota-defaults

```
usage: nova quota-defaults [--tenant <tenant-id>]
```

List the default quotas for a tenant.

Optional arguments:

--tenant <tenant-id> ID of tenant to list the default quotas for.

2.5.122 nova quota-delete

```
usage: nova quota-delete --tenant <tenant-id> [--user <user-id>]
```

Delete quota for a tenant/user so their quota will Revert back to default.

Optional arguments:

--tenant <tenant-id> ID of tenant to delete quota for.

--user <user-id> ID of user to delete quota for.

2.5.123 nova quota-show

```
usage: nova quota-show [--tenant <tenant-id>] [--user <user-id>]
```

List the quotas for a tenant/user.

Optional arguments:

--tenant <tenant-id> ID of tenant to list the quotas for.

--user <user-id> ID of user to list the quotas for.

2.5.124 nova quota-update

```
usage: nova quota-update [--user <user-id>] [--instances <instances>]
                        [--cores <cores>] [--ram <ram>]
                        [--floating-ips <floating-ips>]
                        [--fixed-ips <fixed-ips>]
                        [--metadata-items <metadata-items>]
                        [--injected-files <injected-files>]
                        [--injected-file-content-bytes <injected-file-content-bytes>]
                        [--injected-file-path-bytes <injected-file-path-bytes>]
                        [--key-pairs <key-pairs>]
                        [--security-groups <security-groups>]
                        [--security-group-rules <security-group-rules>]
                        [--server-groups <server-groups>]
```

```

[--server-group-members <server-group-members>]
[--force]
<tenant-id>

```

Update the quotas for a tenant/user.

Positional arguments:

<tenant-id> ID of tenant to set the quotas for.

Optional arguments:

--user <user-id> ID of user to set the quotas for.

--instances <instances> New value for the “instances” quota.

--cores <cores> New value for the “cores” quota.

--ram <ram> New value for the “ram” quota.

--floating-ips <floating-ips> New value for the “floating-ips” quota.

--fixed-ips <fixed-ips> New value for the “fixed-ips” quota.

--metadata-items <metadata-items> New value for the “metadata-items” quota.

--injected-files <injected-files> New value for the “injected-files” quota.

--injected-file-content-bytes <injected-file-content-bytes> New value for the “injected-file-content- bytes” quota.

--injected-file-path-bytes <injected-file-path-bytes> New value for the “injected-file-path-bytes” quota.

--key-pairs <key-pairs> New value for the “key-pairs” quota.

--security-groups <security-groups> New value for the “security-groups” quota.

--security-group-rules <security-group-rules> New value for the “security-group-rules” quota.

--server-groups <server-groups> New value for the “server-groups” quota.

--server-group-members <server-group-members> New value for the “server-group-members” quota.

--force Whether force update the quota even if the already used and reserved exceeds the new quota.

2.5.125 nova reboot

```
usage: nova reboot [--hard] [--poll] <server> [<server> ...]
```

Reboot a server.

Positional arguments:

<server> Name or ID of server(s).

Optional arguments:

--hard Perform a hard reboot (instead of a soft one).

--poll Poll until reboot is complete.

2.5.126 nova rebuild

```
usage: nova rebuild [--rebuild-password <rebuild-password>] [--poll]
                  [--minimal] [--preserve-ephemeral] [--name <name>]
                  [--description <description>] [--meta <key=value>]
                  [--file <dst-path=src-path>]
                  <server> <image>
```

Shutdown, re-image, and re-boot a server.

Positional arguments:

<server> Name or ID of server.

<image> Name or ID of new image.

Optional arguments:

--rebuild-password <rebuild-password> Set the provided admin password on the rebuilt server.

--poll Report the server rebuild progress until it completes.

--minimal Skips flavor/image lookups when showing servers.

--preserve-ephemeral Preserve the default ephemeral storage partition on rebuild.

--name <name> Name for the new server.

--description <description> New description for the server. (Supported by API versions '2.19' - '2.latest')

--meta <key=value> Record arbitrary key/value metadata to /meta_data.json on the metadata server. Can be specified multiple times.

--file <dst-path=src-path> Store arbitrary files from <src-path> locally to <dst-path> on the new server. You may store up to 5 files.

2.5.127 nova refresh-network

```
usage: nova refresh-network <server>
```

Refresh server network information.

Positional arguments:

<server> Name or ID of a server for which the network cache should be refreshed from neutron (Admin only).

2.5.128 nova remove-fixed-ip

```
usage: nova remove-fixed-ip <server> <address>
```

Remove an IP address from a server.

Positional arguments:

<server> Name or ID of server.

<address> IP Address.

2.5.129 nova remove-secgroup

```
usage: nova remove-secgroup <server> <secgroup>
```

Remove a Security Group from a server.

Positional arguments:

<server> Name or ID of server.

<secgroup> Name of Security Group.

2.5.130 nova rescue

```
usage: nova rescue [--password <password>] [--image <image>] <server>
```

Reboots a server into rescue mode, which starts the machine from either the initial image or a specified image, attaching the current boot disk as secondary.

Positional arguments:

<server> Name or ID of server.

Optional arguments:

--password <password> The admin password to be set in the rescue environment.

--image <image> The image to rescue with.

2.5.131 nova reset-network

```
usage: nova reset-network <server>
```

Reset network of a server.

Positional arguments:

<server> Name or ID of server.

2.5.132 nova reset-state

```
usage: nova reset-state [--all-tenants] [--active] <server> [<server> ...]
```

Reset the state of a server.

Positional arguments:

<server> Name or ID of server(s).

Optional arguments:

--all-tenants Reset state server(s) in another tenant by name (Admin only).

--active Request the server be reset to “active” state instead of “error” state (the default).

2.5.133 nova resize

```
usage: nova resize [--poll] <server> <flavor>
```

Resize a server.

Positional arguments:

<server> Name or ID of server.

<flavor> Name or ID of new flavor.

Optional arguments:

--poll Report the server resize progress until it completes.

2.5.134 nova resize-confirm

```
usage: nova resize-confirm <server>
```

Confirm a previous resize.

Positional arguments:

<server> Name or ID of server.

2.5.135 nova resize-revert

```
usage: nova resize-revert <server>
```

Revert a previous resize (and return to the previous VM).

Positional arguments:

<server> Name or ID of server.

2.5.136 nova restore

```
usage: nova restore <server>
```

Restore a soft-deleted server.

Positional arguments:

<server> Name or ID of server.

2.5.137 nova resume

```
usage: nova resume <server>
```

Resume a server.

Positional arguments:

<server> Name or ID of server.

2.5.138 nova scrub

```
usage: nova scrub <project_id>
```

Delete networks and security groups associated with a project.

Positional arguments:

<project_id> The ID of the project.

2.5.139 nova secgroup-add-default-rule

```
usage: nova secgroup-add-default-rule <ip-proto> <from-port> <to-port> <cidr>
```

Add a rule to the set of rules that will be added to the 'default' security group for new tenants (nova-network only).

Positional arguments:

<ip-proto> IP protocol (icmp, tcp, udp).

<from-port> Port at start of range.

<to-port> Port at end of range.

<cidr> CIDR for address range.

2.5.140 nova secgroup-add-group-rule

```
usage: nova secgroup-add-group-rule <secgroup> <source-group> <ip-proto>
                                     <from-port> <to-port>
```

Add a source group rule to a security group.

Positional arguments:

<secgroup> ID or name of security group.

<source-group> ID or name of source group.

<ip-proto> IP protocol (icmp, tcp, udp).

<from-port> Port at start of range.

<to-port> Port at end of range.

2.5.141 nova secgroup-add-rule

```
usage: nova secgroup-add-rule <secgroup> <ip-proto> <from-port> <to-port>
                               <cidr>
```

Add a rule to a security group.

Positional arguments:

<secgroup> ID or name of security group.

<ip-proto> IP protocol (icmp, tcp, udp).

<from-port> Port at start of range.

<to-port> Port at end of range.

<cidr> CIDR for address range.

2.5.142 nova secgroup-create

```
usage: nova secgroup-create <name> <description>
```

Create a security group.

Positional arguments:

<name> Name of security group.

<description> Description of security group.

2.5.143 nova secgroup-delete

```
usage: nova secgroup-delete <secgroup>
```

Delete a security group.

Positional arguments:

<secgroup> ID or name of security group.

2.5.144 nova secgroup-delete-default-rule

```
usage: nova secgroup-delete-default-rule <ip-proto> <from-port> <to-port>
                                         <cidr>
```

Delete a rule from the set of rules that will be added to the ‘default’ security group for new tenants (nova-network only).

Positional arguments:

<ip-proto> IP protocol (icmp, tcp, udp).

<from-port> Port at start of range.

<to-port> Port at end of range.

<cidr> CIDR for address range.

2.5.145 nova secgroup-delete-group-rule

```
usage: nova secgroup-delete-group-rule <secgroup> <source-group> <ip-proto>
                                         <from-port> <to-port>
```

Delete a source group rule from a security group.

Positional arguments:

<secgroup> ID or name of security group.

<source-group> ID or name of source group.

<ip-proto> IP protocol (icmp, tcp, udp).

<from-port> Port at start of range.

<to-port> Port at end of range.

2.5.146 nova secgroup-delete-rule

```
usage: nova secgroup-delete-rule <secgroup> <ip-proto> <from-port> <to-port>
                                   <cidr>
```

Delete a rule from a security group.

Positional arguments:

<secgroup> ID or name of security group.

<ip-proto> IP protocol (icmp, tcp, udp).

<from-port> Port at start of range.

<to-port> Port at end of range.

<cidr> CIDR for address range.

2.5.147 nova secgroup-list

```
usage: nova secgroup-list [--all-tenants [<0|1>]]
```

List security groups for the current tenant.

Optional arguments:

--all-tenants [<0|1>] Display information from all tenants (Admin only).

2.5.148 nova secgroup-list-default-rules

```
usage: nova secgroup-list-default-rules
```

List rules that will be added to the ‘default’ security group for new tenants.

2.5.149 nova secgroup-list-rules

```
usage: nova secgroup-list-rules <secgroup>
```

List rules for a security group.

Positional arguments:

<secgroup> ID or name of security group.

2.5.150 nova secgroup-update

```
usage: nova secgroup-update <secgroup> <name> <description>
```

Update a security group.

Positional arguments:

<secgroup> ID or name of security group.

<name> Name of security group.

<description> Description of security group.

2.5.151 nova server-group-create

```
usage: nova server-group-create <name> [<policy> [<policy> ...]]
```

Create a new server group with the specified details.

Positional arguments:

<name> Server group name.

<policy> Policies for the server groups.

2.5.152 nova server-group-delete

```
usage: nova server-group-delete <id> [<id> ...]
```

Delete specific server group(s).

Positional arguments:

<id> Unique ID(s) of the server group to delete.

2.5.153 nova server-group-get

```
usage: nova server-group-get <id>
```

Get a specific server group.

Positional arguments:

<id> Unique ID of the server group to get.

2.5.154 nova server-group-list

```
usage: nova server-group-list [--all-projects]
```

Print a list of all server groups.

Optional arguments:

--all-projects Display server groups from all projects (Admin only).

2.5.155 nova server-migration-list

```
usage: nova server-migration-list <server>
```

Get the migrations list of specified server. (Supported by API versions '2.23' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

Positional arguments:

<server> Name or ID of server.

2.5.156 nova server-migration-show

```
usage: nova server-migration-show <server> <migration>
```

Get the migration of specified server. (Supported by API versions '2.23' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

Positional arguments:

<server> Name or ID of server.

<migration> ID of migration.

2.5.157 nova service-delete

```
usage: nova service-delete <id>
```

Delete the service.

Positional arguments:

<id> ID of service.

2.5.158 nova service-disable

```
usage: nova service-disable [--reason <reason>] <hostname> <binary>
```

Disable the service.

Positional arguments:

<hostname> Name of host.

<binary> Service binary.

Optional arguments:

--reason <reason> Reason for disabling service.

2.5.159 nova service-enable

```
usage: nova service-enable <hostname> <binary>
```


Enable the service.

Positional arguments:

<hostname> Name of host.

<binary> Service binary.

2.5.160 nova service-force-down

```
usage: nova service-force-down [--unset] <hostname> <binary>
```

Force service to down. (Supported by API versions '2.11' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

Positional arguments:

<hostname> Name of host.

<binary> Service binary.

Optional arguments:

--unset Unset the force state down of service.

2.5.161 nova service-list

```
usage: nova service-list [--host <hostname>] [--binary <binary>]
```

Show a list of all running services. Filter by host & binary.

Optional arguments:

--host <hostname> Name of host.

--binary <binary> Service binary.

2.5.162 nova set-password

```
usage: nova set-password <server>
```

Change the admin password for a server.

Positional arguments:

<server> Name or ID of server.

2.5.163 nova shelve

```
usage: nova shelve <server>
```

Shelve a server.

Positional arguments:

<server> Name or ID of server.

2.5.164 nova shelve-offload

```
usage: nova shelve-offload <server>
```

Remove a shelved server from the compute node.

Positional arguments:

<server> Name or ID of server.

2.5.165 nova show

```
usage: nova show [--minimal] <server>
```

Show details about the given server.

Positional arguments:

<server> Name or ID of server.

Optional arguments:

--minimal Skips flavor/image lookups when showing servers.

2.5.166 nova ssh

```
usage: nova ssh [--port PORT] [--address-type ADDRESS_TYPE]
               [--network <network>] [--ipv6] [--login <login>] [-i IDENTITY]
               [--extra-opts EXTRA]
               <server>
```

SSH into a server.

Positional arguments:

<server> Name or ID of server.

Optional arguments:

--port PORT Optional flag to indicate which port to use for ssh. (Default=22)

--address-type ADDRESS_TYPE Optional flag to indicate which IP type to use. Possible values includes fixed and floating (the Default).

--network <network> Network to use for the ssh.

--ipv6 Optional flag to indicate whether to use an IPv6 address attached to a server. (Defaults to IPv4 address)

--login <login> Login to use.

-i IDENTITY, --identity IDENTITY Private key file, same as the -i option to the ssh command.

--extra-opts EXTRA Extra options to pass to ssh. see: man ssh.

2.5.167 nova start

```
usage: nova start [--all-tenants] <server> [<server> ...]
```

Start the server(s).

Positional arguments:

<server> Name or ID of server(s).

Optional arguments:

--all-tenants Start server(s) in another tenant by name (Admin only).

2.5.168 nova stop

```
usage: nova stop [--all-tenants] <server> [<server> ...]
```

Stop the server(s).

Positional arguments:

<server> Name or ID of server(s).

Optional arguments:

--all-tenants Stop server(s) in another tenant by name (Admin only).

2.5.169 nova suspend

```
usage: nova suspend <server>
```

Suspend a server.

Positional arguments:

<server> Name or ID of server.

2.5.170 nova tenant-network-create

```
usage: nova tenant-network-create <network_label> <cidr>
```

Create a tenant network.

Positional arguments:

<network_label> Network label (ex. my_new_network)

<cidr> IP block to allocate from (ex. 172.16.0.0/24 or 2001:DB8::/64)

2.5.171 nova tenant-network-delete

```
usage: nova tenant-network-delete <network_id>
```

Delete a tenant network.

Positional arguments:

<network_id> ID of network

2.5.172 nova tenant-network-list

```
usage: nova tenant-network-list
```

List tenant networks.

2.5.173 nova tenant-network-show

```
usage: nova tenant-network-show <network_id>
```

Show a tenant network.

Positional arguments:

<network_id> ID of network

2.5.174 nova trigger-crash-dump

```
usage: nova trigger-crash-dump <server>
```

Trigger crash dump in an instance. (Supported by API versions '2.17' - '2.latest') [hint: use '--os-compute-api-version' flag to show help message for proper version]

Positional arguments:

<server> Name or ID of server.

2.5.175 nova unlock

```
usage: nova unlock <server>
```

Unlock a server.

Positional arguments:

<server> Name or ID of server.

2.5.176 nova unpause

```
usage: nova unpause <server>
```

Unpause a server.

Positional arguments:

<server> Name or ID of server.

2.5.177 nova unrescue

```
usage: nova unrescue <server>
```

Restart the server from normal boot disk again.

Positional arguments:

<server> Name or ID of server.

2.5.178 nova unshelve

```
usage: nova unshelve <server>
```

Unshelve a server.

Positional arguments:

<server> Name or ID of server.

2.5.179 nova update

```
usage: nova update [--name <name>] [--description <description>] <server>
```

Update the name or the description for a server.

Positional arguments:

<server> Name (old name) or ID of server.

Optional arguments:

--name <name> New name for the server.

--description <description> New description for the server. If it equals to empty string (i.g. ""), the server description will be removed. (Supported by API versions '2.19' - '2.latest')

2.5.180 nova usage

```
usage: nova usage [--start <start>] [--end <end>] [--tenant <tenant-id>]
```

Show usage data for a single tenant.

Optional arguments:

--start <start> Usage range start date ex 2012-01-20. (default: 4 weeks ago)

--end <end> Usage range end date, ex 2012-01-20. (default: tomorrow)

--tenant <tenant-id> UUID of tenant to get usage for.

2.5.181 nova usage-list

```
usage: nova usage-list [--start <start>] [--end <end>]
```

List usage data for all tenants.

Optional arguments:

--start <start> Usage range start date ex 2012-01-20. (default: 4 weeks ago)

--end <end> Usage range end date, ex 2012-01-20. (default: tomorrow)

2.5.182 nova version-list

```
usage: nova version-list
```

List all API versions.

2.5.183 nova virtual-interface-list

```
usage: nova virtual-interface-list <server>
```

Show virtual interface info about the given server.

Positional arguments:

<server> ID of server.

2.5.184 nova volume-attach

```
usage: nova volume-attach <server> <volume> [<device>]
```

Attach a volume to a server.

Positional arguments:

<server> Name or ID of server.

<volume> ID of the volume to attach.

<device> Name of the device e.g. /dev/vdb. Use “auto” for autoassign (if supported). Libvirt driver will use default device name.

2.5.185 nova volume-attachments

```
usage: nova volume-attachments <server>
```

List all the volumes attached to a server.

Positional arguments:

<server> Name or ID of server.

2.5.186 nova volume-detach

```
usage: nova volume-detach <server> <volume>
```

Detach a volume from a server.

Positional arguments:

<server> Name or ID of server.

<volume> ID of the volume to detach.

2.5.187 nova volume-update

```
usage: nova volume-update <server> <attachment> <volume>
```

Update volume attachment.

Positional arguments:

<server> Name or ID of server.

<attachment> Attachment ID of the volume.

<volume> ID of the volume to attach.

2.5.188 nova x509-create-cert

```
usage: nova x509-create-cert [<private-key-filename>] [<x509-cert-filename>]
```

Create x509 cert for a user in tenant.

Positional arguments:

<private-key-filename> Filename for the private key. [Default: pk.pem]

<x509-cert-filename> Filename for the X.509 certificate. [Default: cert.pem]

2.5.189 nova x509-get-root-cert

```
usage: nova x509-get-root-cert [<filename>]
```

Fetch the x509 root cert.

Positional arguments:

<filename> Filename to write the x509 root cert.

2.6 Identity service command-line client

Warning: The keystone CLI is deprecated in favor of python-openstackclient. For more information, see [OpenStack command-line client](#). For a Python library, continue using python-keystoneclient.

The keystone client is the command-line interface (CLI) for the Identity service API and its extensions.

This chapter documents **keystone** version 2.3.1.

For help on a specific **keystone** command, enter:

```
$ keystone help COMMAND
```

2.6.1 keystone usage

```
usage: keystone [--version] [--debug] [--os-username <auth-user-name>]
               [--os-password <auth-password>]
               [--os-tenant-name <auth-tenant-name>]
               [--os-tenant-id <tenant-id>] [--os-auth-url <auth-url>]
               [--os-region-name <region-name>]
               [--os-identity-api-version <identity-api-version>]
               [--os-token <service-token>]
               [--os-endpoint <service-endpoint>] [--os-cache]
               [--force-new-token] [--stale-duration <seconds>] [--insecure]
               [--os-cacert <ca-certificate>] [--os-cert <certificate>]
               [--os-key <key>] [--timeout <seconds>]
               <subcommand> ...
```

Subcommands:

catalog List service catalog, possibly filtered by service.

ec2-credentials-create Create EC2-compatible credentials for user per tenant.

ec2-credentials-delete Delete EC2-compatible credentials.

ec2-credentials-get Display EC2-compatible credentials.

ec2-credentials-list List EC2-compatible credentials for a user.

endpoint-create Create a new endpoint associated with a service.

endpoint-delete Delete a service endpoint.

endpoint-get Find endpoint filtered by a specific attribute or service type.

endpoint-list List configured service endpoints.

password-update Update own password.

role-create Create new role.

role-delete Delete role.

role-get Display role details.

role-list List all roles.

service-create Add service to Service Catalog.

service-delete Delete service from Service Catalog.

service-get Display service from Service Catalog.

service-list List all services in Service Catalog.

tenant-create Create new tenant.

tenant-delete Delete tenant.

tenant-get Display tenant details.

tenant-list List all tenants.

tenant-update Update tenant name, description, enabled status.

token-get Display the current user token.

user-create Create new user.

user-delete Delete user.

user-get Display user details.

user-list List users.

user-password-update Update user password.

user-role-add Add role to user.

user-role-list List roles granted to a user.

user-role-remove Remove role from user.

user-update Update user's name, email, and enabled status.

discover Discover Keystone servers, supported API versions and extensions.

bootstrap Grants a new role to a new user on a new tenant, after creating each.

bash-completion Prints all of the commands and options to stdout.

help Display help about this program or one of its subcommands.

2.6.2 keystone optional arguments

--version Shows the client version and exits.

--debug Prints debugging output onto the console, this includes the curl request and response calls. Helpful for debugging and understanding the API calls.

--os-username <auth-user-name> Name used for authentication with the OpenStack Identity service. Defaults to `env[OS_USERNAME]`.

--os-password <auth-password> Password used for authentication with the OpenStack Identity service. Defaults to `env[OS_PASSWORD]`.

--os-tenant-name <auth-tenant-name> Tenant to request authorization on. Defaults to `env[OS_TENANT_NAME]`.

--os-tenant-id <tenant-id> Tenant to request authorization on. Defaults to `env[OS_TENANT_ID]`.

--os-auth-url <auth-url> Specify the Identity endpoint to use for authentication. Defaults to `env[OS_AUTH_URL]`.

--os-region-name <region-name> Specify the region to use. Defaults to `env[OS_REGION_NAME]`.

--os-identity-api-version <identity-api-version> Specify Identity API version to use. Defaults to `env[OS_IDENTITY_API_VERSION]` or 2.0.

--os-token <service-token> Specify an existing token to use instead of retrieving one via authentication (e.g. with username & password). Defaults to `env[OS_SERVICE_TOKEN]`.

--os-endpoint <service-endpoint> Specify an endpoint to use instead of retrieving one from the service catalog (via authentication). Defaults to `env[OS_SERVICE_ENDPOINT]`.

--os-cache Use the auth token cache. Defaults to `env[OS_CACHE]`.

--force-new-token If the keyring is available and in use, token will always be stored and fetched from the keyring until the token has expired. Use this option to request a new token and replace the existing one in the keyring.

--stale-duration <seconds> Stale duration (in seconds) used to determine whether a token has expired when retrieving it from keyring. This is useful in mitigating process or network delays. Default is 30 seconds.

--insecure Explicitly allow client to perform “insecure” TLS (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.

--os-cacert <ca-certificate> Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.

--os-cert <certificate> Defaults to `env[OS_CERT]`.

--os-key <key> Defaults to `env[OS_KEY]`.

--timeout <seconds> Set request timeout (in seconds).

2.6.3 keystone bootstrap

```
usage: keystone bootstrap [--user-name <user-name>] --pass <password>
                             [--role-name <role-name>]
                             [--tenant-name <tenant-name>]
```

Grants a new role to a new user on a new tenant, after creating each.

Arguments:

--user-name <user-name> The name of the user to be created (default="admin").

--pass <password> The password for the new user.

--role-name <role-name> The name of the role to be created and granted to the user (default="admin").

--tenant-name <tenant-name> The name of the tenant to be created (default="admin").

2.6.4 keystone catalog

```
usage: keystone catalog [--service <service-type>]
```

List service catalog, possibly filtered by service.

Arguments:

--service <service-type> Service type to return.

2.6.5 keystone discover

```
usage: keystone discover
```

Discover Keystone servers, supported API versions and extensions.

2.6.6 keystone ec2-credentials-create

```
usage: keystone ec2-credentials-create [--user-id <user-id>]
                                         [--tenant-id <tenant-id>]
```

Create EC2-compatible credentials for user per tenant.

Arguments:

--user-id <user-id> User ID for which to create credentials. If not specified, the authenticated user will be used.

--tenant-id <tenant-id> Tenant ID for which to create credentials. If not specified, the authenticated tenant ID will be used.

2.6.7 keystone ec2-credentials-delete

```
usage: keystone ec2-credentials-delete [--user-id <user-id>] --access
      <access-key>
```

Delete EC2-compatible credentials.

Arguments:

--user-id <user-id> User ID.

--access <access-key> Access Key.

2.6.8 keystone ec2-credentials-get

```
usage: keystone ec2-credentials-get [--user-id <user-id>] --access
      <access-key>
```

Display EC2-compatible credentials.

Arguments:

--user-id <user-id> User ID.

--access <access-key> Access Key.

2.6.9 keystone ec2-credentials-list

```
usage: keystone ec2-credentials-list [--user-id <user-id>]
```

List EC2-compatible credentials for a user.

Arguments:

--user-id <user-id> User ID.

2.6.10 keystone endpoint-create

```
usage: keystone endpoint-create [--region <endpoint-region>] --service
      <service> --publicurl <public-url>
      [--adminurl <admin-url>]
      [--internalurl <internal-url>]
```

Create a new endpoint associated with a service.

Arguments:

--region <endpoint-region> Endpoint region.

--service <service>, **--service-id <service>**, **--service_id <service>** Name or ID of service associated with endpoint.

--publicurl <public-url> Public URL endpoint.

--adminurl <admin-url> Admin URL endpoint.

--internalurl <internal-url> Internal URL endpoint.

2.6.11 keystone endpoint-delete

```
usage: keystone endpoint-delete <endpoint-id>
```

Delete a service endpoint.

Arguments:

<endpoint-id> ID of endpoint to delete.

2.6.12 keystone endpoint-get

```
usage: keystone endpoint-get --service <service-type>
                                [--endpoint-type <endpoint-type>]
                                [--attr <service-attribute>] [--value <value>]
```

Find endpoint filtered by a specific attribute or service type.

Arguments:

--service <service-type> Service type to select.

--endpoint-type <endpoint-type> Endpoint type to select.

--attr <service-attribute> Service attribute to match for selection.

--value <value> Value of attribute to match.

2.6.13 keystone endpoint-list

```
usage: keystone endpoint-list
```

List configured service endpoints.

2.6.14 keystone password-update

```
usage: keystone password-update [--current-password <current-password>]
                                [--new-password <new-password>]
```

Update own password.

Arguments:

--current-password <current-password> Current password, Defaults to the password as set by `--os-password` or `env[OS_PASSWORD]`.

--new-password <new-password> Desired new password.

2.6.15 keystone role-create

```
usage: keystone role-create --name <role-name>
```

Create new role.

Arguments:

--name <role-name> Name of new role.

2.6.16 keystone role-delete

```
usage: keystone role-delete <role>
```

Delete role.

Arguments:

<role> Name or ID of role to delete.

2.6.17 keystone role-get

```
usage: keystone role-get <role>
```

Display role details.

Arguments:

<role> Name or ID of role to display.

2.6.18 keystone role-list

```
usage: keystone role-list
```

List all roles.

2.6.19 keystone service-create

```
usage: keystone service-create --type <type> [--name <name>]
                                [--description <service-description>]
```

Add service to Service Catalog.

Arguments:

--type <type> Service type (one of: identity, compute, network, image, object-store, or other service identifier string).

--name <name> Name of new service (must be unique).

--description <service-description> Description of service.

2.6.20 keystone service-delete

```
usage: keystone service-delete <service>
```

Delete service from Service Catalog.

Arguments:

<service> Name or ID of service to delete.

2.6.21 keystone service-get

```
usage: keystone service-get <service>
```

Display service from Service Catalog.

Arguments:

<service> Name or ID of service to display.

2.6.22 keystone service-list

```
usage: keystone service-list
```

List all services in Service Catalog.

2.6.23 keystone tenant-create

```
usage: keystone tenant-create --name <tenant-name>
                                [--description <tenant-description>]
                                [--enabled <true|false>]
```

Create new tenant.

Arguments:

--name <tenant-name> New tenant name (must be unique).

--description <tenant-description> Description of new tenant. Default is none.

--enabled <true|false> Initial tenant enabled status. Default is true.

2.6.24 keystone tenant-delete

```
usage: keystone tenant-delete <tenant>
```

Delete tenant.

Arguments:

<tenant> Name or ID of tenant to delete.

2.6.25 keystone tenant-get

```
usage: keystone tenant-get <tenant>
```

Display tenant details.

Arguments:

<tenant> Name or ID of tenant to display.

2.6.26 keystone tenant-list

```
usage: keystone tenant-list
```

List all tenants.

2.6.27 keystone tenant-update

```
usage: keystone tenant-update [--name <tenant_name>]
                               [--description <tenant-description>]
                               [--enabled <true|false>]
                               <tenant>
```

Update tenant name, description, enabled status.

Arguments:

--name <tenant_name> Desired new name of tenant.
--description <tenant-description> Desired new description of tenant.
--enabled <true|false> Enable or disable tenant.
<tenant> Name or ID of tenant to update.

2.6.28 keystone token-get

```
usage: keystone token-get [--wrap <integer>]
```

Display the current user token.

Arguments:

--wrap <integer> Wrap PKI tokens to a specified length, or 0 to disable.

2.6.29 keystone user-create

```
usage: keystone user-create --name <user-name> [--tenant <tenant>]
                               [--pass [<pass>]] [--email <email>]
                               [--enabled <true|false>]
```

Create new user.

Arguments:

--name <user-name> New user name (must be unique).
--tenant <tenant>, **--tenant-id <tenant>** New user default tenant.
--pass [<pass>] New user password; required for some auth backends.
--email <email> New user email address.
--enabled <true|false> Initial user enabled status. Default is true.

2.6.30 keystone user-delete

```
usage: keystone user-delete <user>
```

Delete user.

Arguments:

<user> Name or ID of user to delete.

2.6.31 keystone user-get

```
usage: keystone user-get <user>
```

Display user details.

Arguments:

<user> Name or ID of user to display.

2.6.32 keystone user-list

```
usage: keystone user-list [--tenant <tenant>]
```

List users.

Arguments:

--tenant <tenant>, **--tenant-id <tenant>** Tenant; lists all users if not specified.

2.6.33 keystone user-password-update

```
usage: keystone user-password-update [--pass <password>] <user>
```

Update user password.

Arguments:

--pass <password> Desired new password.

<user> Name or ID of user to update password.

2.6.34 keystone user-role-add

```
usage: keystone user-role-add --user <user> --role <role> [--tenant <tenant>]
```

Add role to user.

Arguments:

--user <user>, **--user-id <user>**, **--user_id <user>** Name or ID of user.

--role <role>, **--role-id <role>**, **--role_id <role>** Name or ID of role.

--tenant <tenant>, **--tenant-id <tenant>** Name or ID of tenant.

2.6.35 keystone user-role-list

```
usage: keystone user-role-list [--user <user>] [--tenant <tenant>]
```

List roles granted to a user.

Arguments:

--user <user>, --user-id <user> List roles granted to specified user.

--tenant <tenant>, --tenant-id <tenant> List only roles granted on specified tenant.

2.6.36 keystone user-role-remove

```
usage: keystone user-role-remove --user <user> --role <role>
                                   [--tenant <tenant>]
```

Remove role from user.

Arguments:

--user <user>, --user-id <user>, --user_id <user> Name or ID of user.

--role <role>, --role-id <role>, --role_id <role> Name or ID of role.

--tenant <tenant>, --tenant-id <tenant> Name or ID of tenant.

2.6.37 keystone user-update

```
usage: keystone user-update [--name <user-name>] [--email <email>]
                             [--enabled <true|false>]
                             <user>
```

Update user's name, email, and enabled status.

Arguments:

--name <user-name> Desired new user name.

--email <email> Desired new email address.

--enabled <true|false> Enable or disable user.

<user> Name or ID of user to update.

2.7 Image service command-line client

The glance client is the command-line interface (CLI) for the Image service API and its extensions.

This chapter documents **glance** version 2.0.0.

For help on a specific **glance** command, enter:

```
$ glance help COMMAND
```

2.7.1 glance usage

```
usage: glance [--version] [-d] [-v] [--get-schema] [--no-ssl-compression] [-f]
      [--os-image-url OS_IMAGE_URL]
      [--os-image-api-version OS_IMAGE_API_VERSION]
      [--profile HMAC_KEY] [--insecure] [--os-cacert <ca-certificate>]
      [--os-cert <certificate>] [--os-key <key>] [--timeout <seconds>]
      [--os-auth-url OS_AUTH_URL] [--os-domain-id OS_DOMAIN_ID]
      [--os-domain-name OS_DOMAIN_NAME]
      [--os-project-id OS_PROJECT_ID]
      [--os-project-name OS_PROJECT_NAME]
      [--os-project-domain-id OS_PROJECT_DOMAIN_ID]
      [--os-project-domain-name OS_PROJECT_DOMAIN_NAME]
      [--os-trust-id OS_TRUST_ID] [--os-user-id OS_USER_ID]
      [--os-username OS_USERNAME]
      [--os-user-domain-id OS_USER_DOMAIN_ID]
      [--os-user-domain-name OS_USER_DOMAIN_NAME]
      [--os-password OS_PASSWORD] [--key-file OS_KEY]
      [--ca-file OS_CACERT] [--cert-file OS_CERT]
      [--os-tenant-id OS_TENANT_ID] [--os-tenant-name OS_TENANT_NAME]
      [--os-region-name OS_REGION_NAME]
      [--os-auth-token OS_AUTH_TOKEN]
      [--os-service-type OS_SERVICE_TYPE]
      [--os-endpoint-type OS_ENDPOINT_TYPE]
      <subcommand> ...
```

2.7.2 glance optional arguments

--version show program's version number and exit

-d, --debug Defaults to `env[GLANCECLIENT_DEBUG]`.

-v, --verbose Print more verbose output.

--get-schema Ignores cached copy and forces retrieval of schema that generates portions of the help text. Ignored with API version 1.

--no-ssl-compression **DEPRECATED!** This option is deprecated and not used anymore. SSL compression should be disabled by default by the system SSL library.

-f, --force Prevent select actions from requesting user confirmation.

--os-image-url OS_IMAGE_URL Defaults to `env[OS_IMAGE_URL]`. If the provided image url contains a version number and `'--os-image-api-version'` is omitted the version of the URL will be picked as the image api version to use.

--os-image-api-version OS_IMAGE_API_VERSION Defaults to `env[OS_IMAGE_API_VERSION]` or 2.

--profile HMAC_KEY HMAC key to use for encrypting context data for performance profiling of operation. This key should be the value of HMAC key configured in `osprofiler` middleware in glance, it is specified in paste configuration file at `/etc/glance/api-paste.ini` and `/etc/glance/registry-paste.ini`. Without key the profiling will not be triggered even if `osprofiler` is enabled on server side.

--insecure Explicitly allow client to perform “insecure” TLS (https) requests. The server's certificate will not be verified against any certificate authorities. This option should be used with caution.

--os-cacert <ca-certificate> Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.

```

--os-cert <certificate> Defaults to env[OS_CERT].
--os-key <key> Defaults to env[OS_KEY].
--timeout <seconds> Set request timeout (in seconds).
--os-auth-url OS_AUTH_URL Authentication URL
--os-domain-id OS_DOMAIN_ID Domain ID to scope to
--os-domain-name OS_DOMAIN_NAME Domain name to scope to
--os-project-id OS_PROJECT_ID Project ID to scope to
--os-project-name OS_PROJECT_NAME Project name to scope to
--os-project-domain-id OS_PROJECT_DOMAIN_ID Domain ID containing project
--os-project-domain-name OS_PROJECT_DOMAIN_NAME Domain name containing project
--os-trust-id OS_TRUST_ID Trust ID
--os-user-id OS_USER_ID User ID
--os-username OS_USERNAME, --os-user_name OS_USERNAME Username
--os-user-domain-id OS_USER_DOMAIN_ID User's domain id
--os-user-domain-name OS_USER_DOMAIN_NAME User's domain name
--os-password OS_PASSWORD User's password
--key-file OS_KEY DEPRECATED! Use -os-key.
--ca-file OS_CACERT DEPRECATED! Use -os-cacert.
--cert-file OS_CERT DEPRECATED! Use -os-cert.
--os-tenant-id OS_TENANT_ID Defaults to env[OS_TENANT_ID].
--os-tenant-name OS_TENANT_NAME Defaults to env[OS_TENANT_NAME].
--os-region-name OS_REGION_NAME Defaults to env[OS_REGION_NAME].
--os-auth-token OS_AUTH_TOKEN Defaults to env[OS_AUTH_TOKEN].
--os-service-type OS_SERVICE_TYPE Defaults to env[OS_SERVICE_TYPE].
--os-endpoint-type OS_ENDPOINT_TYPE Defaults to env[OS_ENDPOINT_TYPE].

```

2.7.3 Image service API v1 commands

2.7.4 glance image-create (v1)

```

usage: glance --os-image-api-version 1 image-create [--id <IMAGE_ID>] [--name <NAME>]
↪ [--store <STORE>]
    [--disk-format <DISK_FORMAT>]
    [--container-format <CONTAINER_FORMAT>]
    [--owner <TENANT_ID>] [--size <SIZE>]
    [--min-disk <DISK_GB>] [--min-ram <DISK_RAM>]
    [--location <IMAGE_URL>] [--file <FILE>]
    [--checksum <CHECKSUM>] [--copy-from <IMAGE_URL>]
    [--is-public {True,False}]
    [--is-protected {True,False}]

```

```
[--property <key=value>] [--human-readable]
[--progress]
```

Create a new image.

Optional arguments:

- id <IMAGE_ID>** ID of image to reserve.
- name <NAME>** Name of image.
- store <STORE>** Store to upload image to.
- disk-format <DISK_FORMAT>** Disk format of image. Acceptable formats: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, and iso.
- container-format <CONTAINER_FORMAT>** Container format of image. Acceptable formats: ami, ari, aki, bare, and ovf.
- owner <TENANT_ID>** Tenant who should own image.
- size <SIZE>** Size of image data (in bytes). Only used with ‘--location’ and ‘--copy_from’.
- min-disk <DISK_GB>** Minimum size of disk needed to boot image (in gigabytes).
- min-ram <DISK_RAM>** Minimum amount of ram needed to boot image (in megabytes).
- location <IMAGE_URL>** URL where the data for this image already resides. For example, if the image data is stored in swift, you could specify ‘swift+http://tenant%3Aaccount:key@auth_url/v2.0/container/obj’. (Note: ‘%3A’ is ‘:’ URL encoded.)
- file <FILE>** Local file that contains disk image to be uploaded during creation. Alternatively, images can be passed to the client via stdin.
- checksum <CHECKSUM>** Hash of image data used Glance can use for verification. Provide a md5 checksum here.
- copy-from <IMAGE_URL>** Similar to ‘--location’ in usage, but this indicates that the Glance server should immediately copy the data and store it in its configured image store.
- is-public {True,False}** Make image accessible to the public.
- is-protected {True,False}** Prevent image from being deleted.
- property <key=value>** Arbitrary property to associate with image. May be used multiple times.
- human-readable** Print image size in a human-friendly format.
- progress** Show upload progress bar.

2.7.5 glance image-delete (v1)

```
usage: glance --os-image-api-version 1 image-delete <IMAGE> [<IMAGE> ...]
```

Delete specified image(s).

Positional arguments:

- <IMAGE>** Name or ID of image(s) to delete.

2.7.6 glance image-download (v1)

```
usage: glance --os-image-api-version 1 image-download [--file <FILE>] [--progress]
      <IMAGE>
```

Download a specific image.

Positional arguments:

<IMAGE> Name or ID of image to download.

Optional arguments:

--file <FILE> Local file to save downloaded image data to. If this is not specified and there is no redirection the image data will be not be saved.

--progress Show download progress bar.

2.7.7 glance image-list (v1)

```
usage: glance --os-image-api-version 1 image-list [--name <NAME>] [--status <STATUS>]
      [--changes-since <CHANGES_SINCE>]
      [--container-format <CONTAINER_FORMAT>]
      [--disk-format <DISK_FORMAT>] [--size-min <SIZE>]
      [--size-max <SIZE>] [--property-filter <KEY=VALUE>]
      [--page-size <SIZE>] [--human-readable]
      [--sort-key {name,status,container_format,disk_format,size,
      <id,created_at,updated_at>}]
      [--sort-dir {asc,desc}] [--is-public {True,False}]
      [--owner <TENANT_ID>] [--all-tenants]
```

List images you can access.

Optional arguments:

--name <NAME> Filter images to those that have this name.

--status <STATUS> Filter images to those that have this status.

--changes-since <CHANGES_SINCE> Filter images to those that changed since the given time, which will include the deleted images.

--container-format <CONTAINER_FORMAT> Filter images to those that have this container format. Acceptable formats: ami, ari, aki, bare, and ovf.

--disk-format <DISK_FORMAT> Filter images to those that have this disk format. Acceptable formats: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, and iso.

--size-min <SIZE> Filter images to those with a size greater than this.

--size-max <SIZE> Filter images to those with a size less than this.

--property-filter <KEY=VALUE> Filter images by a user-defined image property.

--page-size <SIZE> Number of images to request in each paginated request.

--human-readable Print image size in a human-friendly format.

--sort-key {name,status,container_format,disk_format,size,id,created_at,updated_at}
Sort image list by specified field.

--sort-dir {asc,desc} Sort image list in specified direction.

- is-public {True,False}** Allows the user to select a listing of public or non public images.
- owner <TENANT_ID>** Display only images owned by this tenant id. Filtering occurs on the client side so may be inefficient. This option is mainly intended for admin use. Use an empty string (‘’) to list images with no owner. Note: This option overrides the **--is-public** argument if present. Note: the v2 API supports more efficient server-side owner based filtering.
- all-tenants** Allows the admin user to list all images irrespective of the image’s owner or **is_public** value.

2.7.8 glance image-show (v1)

```
usage: glance --os-image-api-version 1 image-show [--human-readable] [--max-column-
↪width <integer>]
           <IMAGE>
```

Describe a specific image.

Positional arguments:

<IMAGE> Name or ID of image to describe.

Optional arguments:

- human-readable** Print image size in a human-friendly format.
- max-column-width <integer>** The max column width of the printed table.

2.7.9 glance image-update (v1)

```
usage: glance --os-image-api-version 1 image-update [--name <NAME>] [--disk-format
↪<DISK_FORMAT>]
           [--container-format <CONTAINER_FORMAT>]
           [--owner <TENANT_ID>] [--size <SIZE>]
           [--min-disk <DISK_GB>] [--min-ram <DISK_RAM>]
           [--location <IMAGE_URL>] [--file <FILE>]
           [--checksum <CHECKSUM>] [--copy-from <IMAGE_URL>]
           [--is-public {True,False}]
           [--is-protected {True,False}]
           [--property <key=value>] [--purge-props]
           [--human-readable] [--progress]
           <IMAGE>
```

Update a specific image.

Positional arguments:

<IMAGE> Name or ID of image to modify.

Optional arguments:

- name <NAME>** Name of image.
- disk-format <DISK_FORMAT>** Disk format of image. Acceptable formats: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, and iso.
- container-format <CONTAINER_FORMAT>** Container format of image. Acceptable formats: ami, ari, aki, bare, and ovf.
- owner <TENANT_ID>** Tenant who should own image.

--size <SIZE> Size of image data (in bytes).

--min-disk <DISK_GB> Minimum size of disk needed to boot image (in gigabytes).

--min-ram <DISK_RAM> Minimum amount of ram needed to boot image (in megabytes).

--location <IMAGE_URL> URL where the data for this image already resides. For example, if the image data is stored in swift, you could specify 'swift+http://tenant%3Aaccount:key@auth_url/v2.0/container/obj'. (Note: '%3A' is ':' URL encoded.) This option only works for images in 'queued' status.

--file <FILE> Local file that contains disk image to be uploaded during update. Alternatively, images can be passed to the client via stdin.

--checksum <CHECKSUM> Hash of image data used Glance can use for verification.

--copy-from <IMAGE_URL> Similar to 'location' in usage, but this indicates that the Glance server should immediately copy the data and store it in its configured image store. This option only works for images in 'queued' status.

--is-public {True,False} Make image accessible to the public.

--is-protected {True,False} Prevent image from being deleted.

--property <key=value> Arbitrary property to associate with image. May be used multiple times.

--purge-props If this flag is present, delete all image properties not explicitly set in the update request. Otherwise, those properties not referenced are preserved.

--human-readable Print image size in a human-friendly format.

--progress Show upload progress bar.

2.7.10 glance member-create (v1)

```
usage: glance --os-image-api-version 1 member-create [--can-share] <IMAGE> <TENANT_ID>
```

Share a specific image with a tenant.

Positional arguments:

<IMAGE> Image to add member to.

<TENANT_ID> Tenant to add as member.

Optional arguments:

--can-share Allow the specified tenant to share this image.

2.7.11 glance member-delete (v1)

```
usage: glance --os-image-api-version 1 member-delete <IMAGE> <TENANT_ID>
```

Remove a shared image from a tenant.

Positional arguments:

<IMAGE> Image from which to remove member.

<TENANT_ID> Tenant to remove as member.

2.7.12 glance member-list (v1)

```
usage: glance --os-image-api-version 1 member-list [--image-id <IMAGE_ID>] [--tenant-id <TENANT_ID>]
```

Describe sharing permissions by image or tenant.

Optional arguments:

--image-id <IMAGE_ID> Filter results by an image ID.

--tenant-id <TENANT_ID> Filter results by a tenant ID.

2.7.13 Image service API v2 commands

You can select an API version to use by adding the `--os-image-api-version` parameter or by setting the corresponding environment variable:

```
export OS_IMAGE_API_VERSION=2
```

2.7.14 glance explain (v2)

```
usage: glance --os-image-api-version 2 explain <MODEL>
```

Describe a specific model.

Positional arguments:

<MODEL> Name of model to describe.

2.7.15 glance image-create (v2)

```
usage: glance --os-image-api-version 2 image-create [--architecture <ARCHITECTURE>]
           [--protected [True|False]] [--name <NAME>]
           [--instance-uuid <INSTANCE_UUID>]
           [--min-disk <MIN_DISK>] [--visibility <VISIBILITY>]
           [--kernel-id <KERNEL_ID>]
           [--tags <TAGS> [<TAGS> ...]]
           [--os-version <OS_VERSION>]
           [--disk-format <DISK_FORMAT>]
           [--os-distro <OS_DISTRO>] [--id <ID>]
           [--owner <OWNER>] [--ramdisk-id <RAMDISK_ID>]
           [--min-ram <MIN_RAM>]
           [--container-format <CONTAINER_FORMAT>]
           [--property <key=value>] [--file <FILE>]
           [--progress]
```

Create a new image.

Optional arguments:

--architecture <ARCHITECTURE> Operating system architecture as specified in <http://docs.openstack.org/trunk/openstack-compute/admin/content/adding-images.html>

--protected [True|False] If true, image will not be deletable.

--name <NAME> Descriptive name for the image

--instance-uuid <INSTANCE_UUID> Metadata which can be used to record which instance this image is associated with. (Informational only, does not create an instance snapshot.)

--min-disk <MIN_DISK> Amount of disk space (in GB) required to boot image.

--visibility <VISIBILITY> Scope of image accessibility Valid values: public, private

--kernel-id <KERNEL_ID> ID of image stored in Glance that should be used as the kernel when booting an AMI-style image.

--tags <TAGS> [<TAGS> ...] List of strings related to the image

--os-version <OS_VERSION> Operating system version as specified by the distributor

--disk-format <DISK_FORMAT> Format of the disk Valid values: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, iso

--os-distro <OS_DISTRO> Common name of operating system distribution as specified in <http://docs.openstack.org/trunk/openstack-compute/admin/content/adding-images.html>

--id <ID> An identifier for the image

--owner <OWNER> Owner of the image

--ramdisk-id <RAMDISK_ID> ID of image stored in Glance that should be used as the ramdisk when booting an AMI-style image.

--min-ram <MIN_RAM> Amount of ram (in MB) required to boot image.

--container-format <CONTAINER_FORMAT> Format of the container Valid values: ami, ari, aki, bare, ovf, ova, docker

--property <key=value> Arbitrary property to associate with image. May be used multiple times.

--file <FILE> Local file that contains disk image to be uploaded during creation. Alternatively, the image data can be passed to the client via stdin.

--progress Show upload progress bar.

2.7.16 glance image-deactivate (v2)

```
usage: glance --os-image-api-version 2 image-deactivate <IMAGE_ID>
```

Deactivate specified image.

Positional arguments:

<IMAGE_ID> ID of image to deactivate.

2.7.17 glance image-delete (v2)

```
usage: glance --os-image-api-version 2 image-delete <IMAGE_ID> [<IMAGE_ID> ...]
```

Delete specified image.

Positional arguments:

<IMAGE_ID> ID of image(s) to delete.

2.7.18 glance image-download (v2)

```
usage: glance --os-image-api-version 2 image-download [--file <FILE>] [--progress]
      ↪<IMAGE_ID>
```

Download a specific image.

Positional arguments:

<IMAGE_ID> ID of image to download.

Optional arguments:

--file <FILE> Local file to save downloaded image data to. If this is not specified and there is no redirection the image data will be not be saved.

--progress Show download progress bar.

2.7.19 glance image-list (v2)

```
usage: glance --os-image-api-version 2 image-list [--limit <LIMIT>] [--page-size
      ↪<SIZE>]
      [--visibility <VISIBILITY>]
      [--member-status <MEMBER_STATUS>] [--owner <OWNER>]
      [--property-filter <KEY=VALUE>]
      [--checksum <CHECKSUM>] [--tag <TAG>]
      [--sort-key {name,status,container_format,disk_format,size,
      ↪id,created_at,updated_at}]
      [--sort-dir {asc,desc}] [--sort <key>[:<direction>]]
```

List images you can access.

Optional arguments:

--limit <LIMIT> Maximum number of images to get.

--page-size <SIZE> Number of images to request in each paginated request.

--visibility <VISIBILITY> The visibility of the images to display.

--member-status <MEMBER_STATUS> The status of images to display.

--owner <OWNER> Display images owned by <OWNER>.

--property-filter <KEY=VALUE> Filter images by a user-defined image property.

--checksum <CHECKSUM> Displays images that match the checksum.

--tag <TAG> Filter images by a user-defined tag.

--sort-key {name,status,container_format,disk_format,size,id,created_at,updated_at}
Sort image list by specified fields. May be used multiple times.

--sort-dir {asc,desc} Sort image list in specified directions.

--sort <key>[:<direction>] Comma-separated list of sort keys and directions in the form of <key>[:<asc|desc>]. Valid keys: name, status, container_format, disk_format, size, id, created_at, updated_at. OPTIONAL.

2.7.20 glance image-reactivate (v2)

```
usage: glance --os-image-api-version 2 image-reactivate <IMAGE_ID>
```

Reactivate specified image.

Positional arguments:

<IMAGE_ID> ID of image to reactivate.

2.7.21 glance image-show (v2)

```
usage: glance --os-image-api-version 2 image-show [--human-readable] [--max-column-
↪width <integer>]
                                <IMAGE_ID>
```

Describe a specific image.

Positional arguments:

<IMAGE_ID> ID of image to describe.

Optional arguments:

--human-readable Print image size in a human-friendly format.

--max-column-width <integer> The max column width of the printed table.

2.7.22 glance image-tag-delete (v2)

```
usage: glance --os-image-api-version 2 image-tag-delete <IMAGE_ID> <TAG_VALUE>
```

Delete the tag associated with the given image.

Positional arguments:

<IMAGE_ID> ID of the image from which to delete tag.

<TAG_VALUE> Value of the tag.

2.7.23 glance image-tag-update (v2)

```
usage: glance --os-image-api-version 2 image-tag-update <IMAGE_ID> <TAG_VALUE>
```

Update an image with the given tag.

Positional arguments:

<IMAGE_ID> Image to be updated with the given tag.

<TAG_VALUE> Value of the tag.

2.7.24 glance image-update (v2)

```
usage: glance --os-image-api-version 2 image-update [--architecture <ARCHITECTURE>]
        [--protected [True|False]] [--name <NAME>]
        [--instance-uuid <INSTANCE_UUID>]
        [--min-disk <MIN_DISK>] [--visibility <VISIBILITY>]
        [--kernel-id <KERNEL_ID>]
        [--os-version <OS_VERSION>]
        [--disk-format <DISK_FORMAT>]
        [--os-distro <OS_DISTRO>] [--owner <OWNER>]
        [--ramdisk-id <RAMDISK_ID>] [--min-ram <MIN_RAM>]
        [--container-format <CONTAINER_FORMAT>]
        [--property <key=value>] [--remove-property key]
        <IMAGE_ID>
```

Update an existing image.

Positional arguments:

<IMAGE_ID> ID of image to update.

Optional arguments:

--architecture <ARCHITECTURE> Operating system architecture as specified in <http://docs.openstack.org/trunk/openstack-compute/admin/content/adding-images.html>

--protected [True|False] If true, image will not be deletable.

--name <NAME> Descriptive name for the image

--instance-uuid <INSTANCE_UUID> Metadata which can be used to record which instance this image is associated with. (Informational only, does not create an instance snapshot.)

--min-disk <MIN_DISK> Amount of disk space (in GB) required to boot image.

--visibility <VISIBILITY> Scope of image accessibility Valid values: public, private

--kernel-id <KERNEL_ID> ID of image stored in Glance that should be used as the kernel when booting an AMI-style image.

--os-version <OS_VERSION> Operating system version as specified by the distributor

--disk-format <DISK_FORMAT> Format of the disk Valid values: ami, ari, aki, vhd, vmdk, raw, qcow2, vdi, iso

--os-distro <OS_DISTRO> Common name of operating system distribution as specified in <http://docs.openstack.org/trunk/openstack-compute/admin/content/adding-images.html>

--owner <OWNER> Owner of the image

--ramdisk-id <RAMDISK_ID> ID of image stored in Glance that should be used as the ramdisk when booting an AMI-style image.

--min-ram <MIN_RAM> Amount of ram (in MB) required to boot image.

--container-format <CONTAINER_FORMAT> Format of the container Valid values: ami, ari, aki, bare, ovf, ova, docker

--property <key=value> Arbitrary property to associate with image. May be used multiple times.

--remove-property key Name of arbitrary property to remove from the image.

2.7.25 glance image-upload (v2)

```
usage: glance --os-image-api-version 2 image-upload [--file <FILE>] [--size <IMAGE_
↪SIZE>] [--progress]
                               <IMAGE_ID>
```

Upload data for a specific image.

Positional arguments:

<IMAGE_ID> ID of image to upload data to.

Optional arguments:

--file <FILE> Local file that contains disk image to be uploaded. Alternatively, images can be passed to the client via stdin.

--size <IMAGE_SIZE> Size in bytes of image to be uploaded. Default is to get size from provided data object but this is supported in case where size cannot be inferred.

--progress Show upload progress bar.

2.7.26 glance location-add (v2)

```
usage: glance --os-image-api-version 2 location-add --url <URL> [--metadata <STRING>]
↪<IMAGE_ID>
```

Add a location (and related metadata) to an image.

Positional arguments:

<IMAGE_ID> ID of image to which the location is to be added.

Optional arguments:

--url <URL> URL of location to add.

--metadata <STRING> Metadata associated with the location. Must be a valid JSON object (default: {})

2.7.27 glance location-delete (v2)

```
usage: glance --os-image-api-version 2 location-delete --url <URL> <IMAGE_ID>
```

Remove locations (and related metadata) from an image.

Positional arguments:

<IMAGE_ID> ID of image whose locations are to be removed.

Optional arguments:

--url <URL> URL of location to remove. May be used multiple times.

2.7.28 glance location-update (v2)

```
usage: glance --os-image-api-version 2 location-update --url <URL> [--metadata
↪<STRING>] <IMAGE_ID>
```

Update metadata of an image's location.

Positional arguments:

<IMAGE_ID> ID of image whose location is to be updated.

Optional arguments:

--url <URL> URL of location to update.

--metadata <STRING> Metadata associated with the location. Must be a valid JSON object (default: {})

2.7.29 glance md-namespace-create (v2)

```
usage: glance --os-image-api-version 2 md-namespace-create <NAMESPACE> <unavailable>
```

Create a new metadata definitions namespace.

Positional arguments:

<NAMESPACE> Name of the namespace.

<unavailable> Please run with connection parameters set to retrieve the schema for generating help for this command

2.7.30 glance md-namespace-delete (v2)

```
usage: glance --os-image-api-version 2 md-namespace-delete <NAMESPACE>
```

Delete specified metadata definitions namespace with its contents.

Positional arguments:

<NAMESPACE> Name of namespace to delete.

2.7.31 glance md-namespace-import (v2)

```
usage: glance --os-image-api-version 2 md-namespace-import [--file <FILEPATH>]
```

Import a metadata definitions namespace from file or standard input.

Optional arguments:

--file <FILEPATH> Path to file with namespace schema to import. Alternatively, namespaces schema can be passed to the client via stdin.

2.7.32 glance md-namespace-list (v2)

```
usage: glance --os-image-api-version 2 md-namespace-list [--resource-types <RESOURCE_
↪TYPES>]
                                [--visibility <VISIBILITY>]
                                [--page-size <SIZE>]
```

List metadata definitions namespaces.

Optional arguments:

--resource-types <RESOURCE_TYPES> Resource type to filter namespaces.

--visibility <VISIBILITY> Visibility parameter to filter namespaces.

--page-size <SIZE> Number of namespaces to request in each paginated request.

2.7.33 glance md-namespace-objects-delete (v2)

```
usage: glance --os-image-api-version 2 md-namespace-objects-delete <NAMESPACE>
```

Delete all metadata definitions objects inside a specific namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

2.7.34 glance md-namespace-properties-delete (v2)

```
usage: glance --os-image-api-version 2 md-namespace-properties-delete <NAMESPACE>
```

Delete all metadata definitions property inside a specific namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

2.7.35 glance md-namespace-resource-type-list (v2)

```
usage: glance --os-image-api-version 2 md-namespace-resource-type-list <NAMESPACE>
```

List resource types associated to specific namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

2.7.36 glance md-namespace-show (v2)

```
usage: glance --os-image-api-version 2 md-namespace-show [--resource-type <RESOURCE_
↪TYPE>]
                                [--max-column-width <integer>]
                                <NAMESPACE>
```

Describe a specific metadata definitions namespace. Lists also the namespace properties, objects and resource type associations.

Positional arguments:

<NAMESPACE> Name of namespace to describe.

Optional arguments:

--resource-type <RESOURCE_TYPE> Applies prefix of given resource type associated to a namespace to all properties of a namespace.

--max-column-width <integer> The max column width of the printed table.

2.7.37 glance md-namespace-tags-delete (v2)

```
usage: glance --os-image-api-version 2 md-namespace-tags-delete <NAMESPACE>
```

Delete all metadata definitions tags inside a specific namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

2.7.38 glance md-namespace-update (v2)

```
usage: glance --os-image-api-version 2 md-namespace-update <NAMESPACE> <unavailable>
```

Update an existing metadata definitions namespace.

Positional arguments:

<NAMESPACE> Name of namespace to update.

<unavailable> Please run with connection parameters set to retrieve the schema for generating help for this command

2.7.39 glance md-object-create (v2)

```
usage: glance --os-image-api-version 2 md-object-create --name <NAME> --schema  
-><SCHEMA> <NAMESPACE>
```

Create a new metadata definitions object inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the object will belong.

Optional arguments:

--name <NAME> Internal name of an object.

--schema <SCHEMA> Valid JSON schema of an object.

2.7.40 glance md-object-delete (v2)

```
usage: glance --os-image-api-version 2 md-object-delete <NAMESPACE> <OBJECT>
```

Delete a specific metadata definitions object inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the object belongs.

<OBJECT> Name of an object.

2.7.41 glance md-object-list (v2)

```
usage: glance --os-image-api-version 2 md-object-list <NAMESPACE>
```

List metadata definitions objects inside a specific namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

2.7.42 glance md-object-property-show (v2)

```
usage: glance --os-image-api-version 2 md-object-property-show [--max-column-width
↪<integer>]
                                <NAMESPACE> <OBJECT> <PROPERTY>
```

Describe a specific metadata definitions property inside an object.

Positional arguments:

<NAMESPACE> Name of namespace the object belongs.

<OBJECT> Name of an object.

<PROPERTY> Name of a property.

Optional arguments:

--max-column-width <integer> The max column width of the printed table.

2.7.43 glance md-object-show (v2)

```
usage: glance --os-image-api-version 2 md-object-show [--max-column-width <integer>]
                                <NAMESPACE> <OBJECT>
```

Describe a specific metadata definitions object inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the object belongs.

<OBJECT> Name of an object.

Optional arguments:

--max-column-width <integer> The max column width of the printed table.

2.7.44 glance md-object-update (v2)

```
usage: glance --os-image-api-version 2 md-object-update [--name <NAME>] [--schema
↪<SCHEMA>]
                                <NAMESPACE> <OBJECT>
```

Update metadata definitions object inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the object belongs.

<OBJECT> Name of an object.

Optional arguments:

--name <NAME> New name of an object.

--schema <SCHEMA> Valid JSON schema of an object.

2.7.45 glance md-property-create (v2)

```
usage: glance --os-image-api-version 2 md-property-create --name <NAME> --title
      ↪<TITLE> --schema
                                <SCHEMA>
                                <NAMESPACE>
```

Create a new metadata definitions property inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the property will belong.

Optional arguments:

--name <NAME> Internal name of a property.

--title <TITLE> Property name displayed to the user.

--schema <SCHEMA> Valid JSON schema of a property.

2.7.46 glance md-property-delete (v2)

```
usage: glance --os-image-api-version 2 md-property-delete <NAMESPACE> <PROPERTY>
```

Delete a specific metadata definitions property inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the property belongs.

<PROPERTY> Name of a property.

2.7.47 glance md-property-list (v2)

```
usage: glance --os-image-api-version 2 md-property-list <NAMESPACE>
```

List metadata definitions properties inside a specific namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

2.7.48 glance md-property-show (v2)

```
usage: glance --os-image-api-version 2 md-property-show [--max-column-width <integer>]
      <NAMESPACE> <PROPERTY>
```

Describe a specific metadata definitions property inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the property belongs.

<PROPERTY> Name of a property.

Optional arguments:

--max-column-width <integer> The max column width of the printed table.

2.7.49 glance md-property-update (v2)

```
usage: glance --os-image-api-version 2 md-property-update [--name <NAME>] [--title
↪<TITLE>]
                                [--schema <SCHEMA>]
                                <NAMESPACE> <PROPERTY>
```

Update metadata definitions property inside a namespace.

Positional arguments:

<NAMESPACE> Name of namespace the property belongs.

<PROPERTY> Name of a property.

Optional arguments:

--name <NAME> New name of a property.

--title <TITLE> Property name displayed to the user.

--schema <SCHEMA> Valid JSON schema of a property.

2.7.50 glance md-resource-type-associate (v2)

```
usage: glance --os-image-api-version 2 md-resource-type-associate <NAMESPACE>
↪<unavailable>
```

Associate resource type with a metadata definitions namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

<unavailable> Please run with connection parameters set to retrieve the schema for generating help for this command

2.7.51 glance md-resource-type-deassociate (v2)

```
usage: glance --os-image-api-version 2 md-resource-type-deassociate <NAMESPACE>
↪<RESOURCE_TYPE>
```

Deassociate resource type with a metadata definitions namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

<RESOURCE_TYPE> Name of resource type.

2.7.52 glance md-resource-type-list (v2)

```
usage: glance --os-image-api-version 2 md-resource-type-list
```

List available resource type names.

2.7.53 glance md-tag-create (v2)

```
usage: glance --os-image-api-version 2 md-tag-create --name <NAME> <NAMESPACE>
```

Add a new metadata definitions tag inside a namespace.

Positional arguments:

<NAMESPACE> Name of the namespace the tag will belong to.

Optional arguments:

--name <NAME> The name of the new tag to add.

2.7.54 glance md-tag-create-multiple (v2)

```
usage: glance --os-image-api-version 2 md-tag-create-multiple --names <NAMES> [--  
↪delim <DELIM>]  
                                <NAMESPACE>
```

Create new metadata definitions tags inside a namespace.

Positional arguments:

<NAMESPACE> Name of the namespace the tags will belong to.

Optional arguments:

--names <NAMES> A comma separated list of tag names.

--delim <DELIM> The delimiter used to separate the names (if none is provided then the default is a comma).

2.7.55 glance md-tag-delete (v2)

```
usage: glance --os-image-api-version 2 md-tag-delete <NAMESPACE> <TAG>
```

Delete a specific metadata definitions tag inside a namespace.

Positional arguments:

<NAMESPACE> Name of the namespace to which the tag belongs.

<TAG> Name of the tag.

2.7.56 glance md-tag-list (v2)

```
usage: glance --os-image-api-version 2 md-tag-list <NAMESPACE>
```

List metadata definitions tags inside a specific namespace.

Positional arguments:

<NAMESPACE> Name of namespace.

2.7.57 glance md-tag-show (v2)

```
usage: glance --os-image-api-version 2 md-tag-show <NAMESPACE> <TAG>
```

Describe a specific metadata definitions tag inside a namespace.

Positional arguments:

<NAMESPACE> Name of the namespace to which the tag belongs.

<TAG> Name of the tag.

2.7.58 glance md-tag-update (v2)

```
usage: glance --os-image-api-version 2 md-tag-update --name <NAME> <NAMESPACE> <TAG>
```

Rename a metadata definitions tag inside a namespace.

Positional arguments:

<NAMESPACE> Name of the namespace to which the tag belongs.

<TAG> Name of the old tag.

Optional arguments:

--name <NAME> New name of the new tag.

2.7.59 glance member-create (v2)

```
usage: glance --os-image-api-version 2 member-create <IMAGE_ID> <MEMBER_ID>
```

Create member for a given image.

Positional arguments:

<IMAGE_ID> Image with which to create member.

<MEMBER_ID> Tenant to add as member.

2.7.60 glance member-delete (v2)

```
usage: glance --os-image-api-version 2 member-delete <IMAGE_ID> <MEMBER_ID>
```

Delete image member.

Positional arguments:

<IMAGE_ID> Image from which to remove member.

<MEMBER_ID> Tenant to remove as member.

2.7.61 glance member-list (v2)

```
usage: glance --os-image-api-version 2 member-list --image-id <IMAGE_ID>
```

Describe sharing permissions by image.

Optional arguments:

--image-id <IMAGE_ID> Image to display members of.

2.7.62 glance member-update (v2)

```
usage: glance --os-image-api-version 2 member-update <IMAGE_ID> <MEMBER_ID> <MEMBER_
↪STATUS>
```

Update the status of a member for a given image.

Positional arguments:

<IMAGE_ID> Image from which to update member.

<MEMBER_ID> Tenant to update.

<MEMBER_STATUS> Updated status of member. Valid Values: accepted, rejected, pending

2.7.63 glance task-create (v2)

```
usage: glance --os-image-api-version 2 task-create [--type <TYPE>] [--input <STRING>]
```

Create a new task.

Optional arguments:

--type <TYPE> Type of Task. Please refer to Glance schema or documentation to see which tasks are supported.

--input <STRING> Parameters of the task to be launched

2.7.64 glance task-list (v2)

```
usage: glance --os-image-api-version 2 task-list [--sort-key {id,type,status}] [--
↪sort-dir {asc,desc}]
                                [--page-size <SIZE>] [--type <TYPE>]
                                [--status <STATUS>]
```

List tasks you can access.

Optional arguments:

--sort-key {id,type,status} Sort task list by specified field.

--sort-dir {asc,desc} Sort task list in specified direction.

--page-size <SIZE> Number of tasks to request in each paginated request.

--type <TYPE> Filter tasks to those that have this type.

--status <STATUS> Filter tasks to those that have this status.

2.7.65 glance task-show (v2)

```
usage: glance --os-image-api-version 2 task-show <TASK_ID>
```

Describe a specific task.

Positional arguments:

<TASK_ID> ID of task to describe.

orphan

2.7.66 Image service property keys

The following keys, together with the components to which they are specific, can be used with the property option for both the **glance image-update** and **glance image-create** commands. For example:

```
$ glance image-update IMG-UUID --property architecture=x86_64
```

Note: Behavior set using image properties overrides behavior set using flavors. For more information, refer to the *OpenStack Administrator Guide* <<http://docs.openstack.org/admin-guide/>>.

Continued on next page

Table 2.2: Image service property keys

Specific to	Key	Description	Supported values
All	architecture	The CPU architecture that must be supported by the hypervisor. For example, <code>x86_64</code> , <code>arm</code> , or <code>ppc64</code> . Run <code>uname-m</code> to get the architecture of a machine. We strongly recommend using the architecture data vocabulary defined by the libosinfo project for this purpose.	<ul style="list-style-type: none"> <code>alpha</code> - DEC 64-bit RISC <code>armv7l</code> - ARM Cortex-A7 MPCore <code>cris</code> - Ethernet, Token Ring, AXIs—Code Reduced Instruction Set <code>i686</code> - Intel sixthgeneration x86 (P6 micro architecture) <code>ia64</code> - Itanium <code>lm32</code> - Lattice Micro32 <code>m68k</code> - Motorola 68000 <code>microblaze</code> - Xilinx 32-bit FPGA (Big Endian) <code>microblazeel</code> - Xilinx 32-bit FPGA (Little Endian) <code>mips</code> - MIPS 32-bit RISC (Big Endian) <code>mipsel</code> - MIPS 32-bit RISC (Little Endian) <code>mips64</code> - MIPS 64-bit RISC (Big Endian) <code>mips64el</code> - MIPS 64-bit RISC (Little Endian) <code>openrisc</code> - OpenCores RISC <code>parisc</code> - HP Precision Architecture RISC <code>parisc64</code> - HP Precision Architecture 64-bit RISC <code>ppc</code> - PowerPC 32-bit <code>ppc64</code> - PowerPC 64-bit <code>ppcemb</code> - PowerPC (Embedded 32-bit) <code>s390</code> - IBM Enterprise Systems Architecture/390 <code>s390x</code> - S/390 64-bit <code>sh4</code> - SuperH SH-4 (Little Endian) <code>sh4eb</code> - SuperH SH-4 (Big Endian) <code>sparc</code> - Scalable Processor Architecture, 32 bit <code>sparc64</code> - Scalable Processor Architecture, 64 bit <code>unicore32</code> - Microprocessor Research and Development Center RISC Unicores32 <code>x86_64</code> - 64-bit extension of IA-32 <code>xtensa</code> - Tensilica Xtensa configurable microprocessor core <code>xtensaeb</code> - Tensilica Xtensa configurable microprocessor core (BigEndian)
Continued on next page			

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
All	<code>hypervisor-type</code>	The hypervisor type. Note that <code>qemu</code> is used for both QEMU and KVM hypervisor types.	<code>hyperv</code> , <code>ironic</code> , <code>lxc</code> , <code>qemu</code> , <code>uml</code> , <code>vmware</code> , or <code>xen</code> .
All	<code>instance_type_rxtx_factor</code>	Optional property allows created servers to have a different bandwidth cap than that defined in the network they are attached to. This factor is multiplied by the <code>rxtx_base</code> property of the network. The <code>rxtx_base</code> property defaults to <code>1.0</code> , which is the same as the attached network. This parameter is only available for Xen or NSX based systems.	Float (default value is <code>1.0</code>)
All	<code>instance_uuid</code>	For snapshot images, this is the UUID of the server used to create this image.	Valid server UUID
All	<code>img_config_drive</code>	Specifies whether the image needs a config drive.	<code>mandatory</code> or <code>optional</code> (default if property is not used).
All	<code>kernel_id</code>	The ID of an image stored in the Image service that should be used as the kernel when booting an AMI-style image.	Valid image ID
Continued on next page			

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
All	os_distro	The common name of the operating system distribution in lowercase (uses the same data vocabulary as the libosinfo project). Specify only a recognized value for this field. Deprecated values are listed to assist you in searching for the recognized value.	<ul style="list-style-type: none"> • <code>arch</code> - Arch Linux. Do not use <code>archlinux</code> or <code>org.archlinux</code>. • <code>centos</code> - Community Enterprise Operating System. Do not use <code>org.centos</code> or <code>CentOS</code>. • <code>debian</code> - Debian. Do not use <code>Debian</code> or <code>org.Debian</code>. • <code>fedora</code> - Fedora. Do not use <code>Fedora</code>, <code>org.fedora</code>, or <code>org.fedoraproject</code>. • <code>freebsd</code> - FreeBSD. Do not use <code>org.freebsd</code>, <code>freeBSD</code>, or <code>FreeBSD</code>. • <code>gentoo</code> - Gentoo Linux. Do not use <code>Gentoo</code> or <code>org.gentoo</code>. • <code>mandrake</code> - Mandrakelinux. (MandrakeSoft) distribution. Do not use <code>mandrakelinux</code> or <code>MandrakeLinux</code>. • <code>mandriva</code> - Mandriva Linux. Do not use <code>mandrivalinux</code>. • <code>mes</code> - Mandriva Enterprise Server. Do not use <code>mandrivaent</code> or <code>mandrivaES</code>. • <code>msdos</code> - Microsoft Disc Operating System. Do not use <code>ms-dos</code>. • <code>netbsd</code> - NetBSD. Do not use <code>NetBSD</code> or <code>org.netbsd</code>. • <code>netware</code> - Novell NetWare. Do not use <code>usenovell</code> or <code>Netware</code>. • <code>openbsd</code> - OpenBSD. Do not use <code>OpenBSD</code> or <code>org.openbsd</code>. • <code>opensolaris</code> - OpenSolaris. Do not use <code>OpenSolaris</code> or <code>org.opensolaris</code>. • <code>opensuse</code> - openSUSE. Do not use <code>suse</code>, <code>SuSE</code> or <code>org.opensuse</code>. • <code>rhel</code> - Red Hat Enterprise Linux. Do not use <code>redhat</code>, <code>RedHat</code>, or <code>com.redhat</code>. • <code>sled</code> - SUSE Linux Enterprise Desktop. Do not use <code>com.suse</code>. • <code>ubuntu</code> - Ubuntu. Do not use <code>Ubuntu</code>, <code>com.ubuntu</code>, <code>org.ubuntu</code> or <code>canonical</code>. • <code>windows</code> - Microsoft Windows. Do not use <code>com.microsoft.server</code> or <code>windoze</code>.

Continued on next page

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
All	<code>os_version</code>	The operating system version as specified by the distributor.	Valid version number (for example, 11.10).
All	<code>ramdisk_id</code>	The ID of image stored in the Image service that should be used as the ramdisk when booting an AMI-style image.	Valid image ID.
All	<code>vm_mode</code>	The virtual machine mode. This represents the host/guest ABI (application binary interface) used for the virtual machine.	<ul style="list-style-type: none"> • <code>hvm</code> - Fully virtualized. This is the mode used by QEMU and KVM. • <code>xen</code> - Xen 3.0 paravirtualized. • <code>uml</code> - User Mode Linux paravirtualized. • <code>exe</code> - Executables in containers. This is the mode used by LXC.
libvirt API driver	<code>hw_cpu_sockets</code>	The preferred number of sockets to expose to the guest.	Integer.
libvirt API driver	<code>hw_cpu_cores</code>	The preferred number of cores to expose to the guest.	Integer.
libvirt API driver	<code>hw_cpu_threads</code>	The preferred number of threads to expose to the guest.	Integer.
libvirt API driver	<code>hw_disk_bus</code>	Specifies the type of disk controller to attach disk devices to.	One of <code>scsi</code> , <code>virtio</code> , <code>uml</code> , <code>xen</code> , <code>ide</code> , or <code>usb</code> .
Continued on next page			

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
libvirt API driver	<code>hw_rng_model</code>	<p>Adds a random-number generator device to the image's instances. The cloud administrator can enable and control device behavior by configuring the instance's flavor. By default:</p> <ul style="list-style-type: none"> • The generator device is disabled. • <code>/dev/random</code> is used as the default entropy source. To specify a physical HW RNG device, use the following option in the nova.conf file: <pre>rng_dev_path = /dev/ → hwrng</pre>	<code>virtio</code> , or other supported device.
libvirt API driver, Hyper-V driver	<code>hw_machine_type</code>	<p>For libvirt: Enables booting an ARM system using the specified machine type. By default, if an ARM image is used and its type is not specified, Compute uses <code>vexpress-a15</code> (for ARMv7) or <code>virt</code> (for AArch64) machine types. For Hyper-V: Specifies whether the Hyper-V instance will be a generation 1 or generation 2 VM. By default, if the property is not provided, the instances will be generation 1 VMs. If the image is specific for generation 2 VMs but the property is not provided accordingly, the instance will fail to boot.</p>	<p>For libvirt: Valid types can be viewed by using the virsh capabilities command (machine types are displayed in the machine tag).</p> <p>For hyper-V: Acceptable values are either <code>hyperv-gen1</code> or <code>hyperv-gen2</code>.</p>
Continued on next page			

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
libvirt API driver	<code>hw_scsi_model</code>	Enables the use of VirtIO SCSI (<code>virtio-scsi</code>) to provide block device access for compute instances; by default, instances use VirtIO Block (<code>virtio-blk</code>). VirtIO SCSI is a para-virtualized SCSI controller device that provides improved scalability and performance, and supports advanced SCSI hardware.	<code>virtio-scsi</code>
libvirt API driver	<code>hw_serial_port_count</code>	Specifies the count of serial ports that should be provided. If <code>hw:serial_port_count</code> is not set in the flavor's <code>extra_specs</code> , then any count is permitted. If <code>hw:serial_port_count</code> is set, then this provides the default serial port count. It is permitted to override the default serial port count, but only with a lower value.	Integer
libvirt API driver	<code>hw_video_model</code>	The video image driver used.	<code>vga</code> , <code>cirrus</code> , <code>vmvga</code> , <code>xen</code> , or <code>qxl</code> .
libvirt API driver	<code>hw_video_ram</code>	Maximum RAM for the video image. Used only if a <code>hw_video:ram_max_mb</code> value has been set in the flavor's <code>extra_specs</code> and that value is higher than the value set in <code>hw_video_ram</code> .	Integer in MB (for example, 64).
Continued on next page			

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
libvirt API driver	<code>hw_watchdog_action</code>	Enables a virtual hardware watchdog device that carries out the specified action if the server hangs. The watchdog uses the <code>i6300esb</code> device (emulating a PCI Intel 6300ESB). If <code>hw_watchdog_action</code> is not specified, the watchdog is disabled.	<ul style="list-style-type: none"> • <code>disabled</code> - (default) The device is not attached. Allows the user to disable the watchdog for the image, even if it has been enabled using the image's flavor. • <code>reset</code> - Forcefully reset the guest. • <code>poweroff</code> - Forcefully power off the guest. • <code>pause</code> - Pause the guest. • <code>none</code> - Only enable the watchdog; do nothing if the server hangs.
libvirt API driver	<code>os_command_line</code>	The kernel command line to be used by the libvirt driver, instead of the default. For Linux Containers (LXC), the value is used as arguments for initialization. This key is valid only for Amazon kernel, ramdisk, or machine images (<code>aki</code> , <code>ari</code> , or <code>ami</code>).	

Continued on next page

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
libvirt API driver and VMware API driver	hw_vif_model	Specifies the model of virtual network interface device to use.	<p>The valid options depend on the configured hypervisor.</p> <ul style="list-style-type: none"> •KVM and QEMU: e1000, ne2k_pci, pcnet, rtl8139, and virtio. •VMware: e1000, e1000e, VirtualE1000, VirtualE1000e, VirtualPCNet32, VirtualSriovEthernetCard and VirtualVmxnet. •Xen: e1000, netfront, ne2_pci, pcnet, and rtl8139.
libvirt API driver	hw_vif_multiqueue_enabled	If true, this enables the virtio-net multiqueue feature. In this case, the driver sets the number of queues equal to the number of guest vCPUs. This makes the network performance scale across a number of vCPUs.	true false
libvirt API driver	hw_boot_menu	If true, this enables the BIOS bootmenu. In cases where both the image metadata and Extra Spec are set, the Extra Spec setting is used. This allows for flexibility in setting/overriding the default behavior as needed.	true or false
VMware API driver	vmware_adaptype	The virtual SCSI or IDE controller used by the hypervisor.	lsiLogic, lsiLogicsas, busLogic, ide, or paraVirtual.
Continued on next page			

Table 2.2 – continued from previous page

Specific to	Key	Description	Supported values
VMware API driver	<code>vmware_ostype</code>	A VMware GuestID which describes the operating system installed in the image. This value is passed to the hypervisor when creating a virtual machine. If not specified, the key defaults to <code>otherGuest</code>	See thinkvirt.com .
VMwareAPI driver	<code>vmware_image_version</code>	Currently unused.	1
XenAPI driver	<code>auto_disk_config</code>	If <code>true</code> , the root partition on the disk is automatically resized before the instance boots. This value is only taken into account by the Compute service when using a Xen-based hypervisor with the XenAPI driver. The Compute service will only attempt to resize if there is a single partition on the image, and only if the partition is in <code>ext3</code> or <code>ext4</code> format.	<code>true</code> or <code>false</code>
XenAPI driver	<code>os_type</code>	The operating system installed on the image. The XenAPI driver contains logic that takes different actions depending on the value of the <code>os_type</code> parameter of the image. For example, for <code>os_type=windows</code> images, it creates a FAT32-based swap partition instead of a Linux swap partition, and it limits the injected host name to less than 16 characters.	<code>linux</code> or <code>windows</code>

2.8 Networking service command-line client

The neutron client is the command-line interface (CLI) for the Networking service API and its extensions.

This chapter documents **neutron** version 4.2.0.

For help on a specific **neutron** command, enter:

```
$ neutron help COMMAND
```

2.8.1 neutron usage

```
usage: neutron [--version] [-v] [-q] [-h] [-r NUM]
              [--os-service-type <os-service-type>]
              [--os-endpoint-type <os-endpoint-type>]
              [--service-type <service-type>]
              [--endpoint-type <endpoint-type>]
              [--os-auth-strategy <auth-strategy>] [--os-cloud <cloud>]
              [--os-auth-url <auth-url>]
              [--os-tenant-name <auth-tenant-name> | --os-project-name <auth-project-
↪name>]
              [--os-tenant-id <auth-tenant-id> | --os-project-id <auth-project-id>]
              [--os-username <auth-username>] [--os-user-id <auth-user-id>]
              [--os-user-domain-id <auth-user-domain-id>]
              [--os-user-domain-name <auth-user-domain-name>]
              [--os-project-domain-id <auth-project-domain-id>]
              [--os-project-domain-name <auth-project-domain-name>]
              [--os-cert <certificate>] [--os-cacert <ca-certificate>]
              [--os-key <key>] [--os-password <auth-password>]
              [--os-region-name <auth-region-name>] [--os-token <token>]
              [--http-timeout <seconds>] [--os-url <url>] [--insecure]
```

2.8.2 neutron optional arguments

--version show program's version number and exit

-v, --verbose, --debug Increase verbosity of output and show tracebacks on errors. You can repeat this option.

-q, --quiet Suppress output except warnings and errors.

-h, --help Show this help message and exit.

-r NUM, --retries NUM How many times the request to the Neutron server should be retried if it fails.

--os-service-type <os-service-type> Defaults to `env[OS_NETWORK_SERVICE_TYPE]` or `network`.

--os-endpoint-type <os-endpoint-type> Defaults to `env[OS_ENDPOINT_TYPE]` or `public`.

--service-type <service-type> **DEPRECATED!** Use `--os-service-type`.

--endpoint-type <endpoint-type> **DEPRECATED!** Use `--os-endpoint-type`.

--os-auth-strategy <auth-strategy> **DEPRECATED!** Only keystone is supported.

--os-cloud <cloud> Defaults to `env[OS_CLOUD]`.

--os-auth-url <auth-url> Authentication URL, defaults to `env[OS_AUTH_URL]`.

--os-tenant-name <auth-tenant-name> Authentication tenant name, defaults to `env[OS_TENANT_NAME]`.

--os-project-name <auth-project-name> Another way to specify tenant name. This option is mutually exclusive with `--os-tenant-name`. Defaults to `env[OS_PROJECT_NAME]`.

--os-tenant-id <auth-tenant-id> Authentication tenant ID, defaults to `env[OS_TENANT_ID]`.

--os-project-id <auth-project-id> Another way to specify tenant ID. This option is mutually exclusive with `--os-tenant-id`. Defaults to `env[OS_PROJECT_ID]`.

--os-username <auth-username> Authentication username, defaults to `env[OS_USERNAME]`.

--os-user-id <auth-user-id> Authentication user ID (Env: OS_USER_ID)

--os-user-domain-id <auth-user-domain-id> OpenStack user domain ID. Defaults to `env[OS_USER_DOMAIN_ID]`.

--os-user-domain-name <auth-user-domain-name> OpenStack user domain name. Defaults to `env[OS_USER_DOMAIN_NAME]`.

--os-project-domain-id <auth-project-domain-id> Defaults to `env[OS_PROJECT_DOMAIN_ID]`.

--os-project-domain-name <auth-project-domain-name> Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.

--os-cert <certificate> Path of certificate file to use in SSL connection. This file can optionally be prepended with the private key. Defaults to `env[OS_CERT]`.

--os-cacert <ca-certificate> Specify a CA bundle file to use in verifying a TLS (https) server certificate. Defaults to `env[OS_CACERT]`.

--os-key <key> Path of client key to use in SSL connection. This option is not necessary if your key is prepended to your certificate file. Defaults to `env[OS_KEY]`.

--os-password <auth-password> Authentication password, defaults to `env[OS_PASSWORD]`.

--os-region-name <auth-region-name> Authentication region name, defaults to `env[OS_REGION_NAME]`.

--os-token <token> Authentication token, defaults to `env[OS_TOKEN]`.

--http-timeout <seconds> Timeout in seconds to wait for an HTTP response. Defaults to `env[OS_NETWORK_TIMEOUT]` or None if not specified.

--os-url <url> Defaults to `env[OS_URL]`.

--insecure Explicitly allow neutronclient to perform “insecure” SSL (https) requests. The server’s certificate will not be verified against any certificate authorities. This option should be used with caution.

2.8.3 neutron API v2.0 commands

address-scope-create Create an address scope for a given tenant.

address-scope-delete Delete an address scope.

address-scope-list List address scopes that belong to a given tenant.

address-scope-show Show information about an address scope.

address-scope-update Update an address scope.

agent-delete Delete a given agent.

agent-list List agents.

agent-show Show information of a given agent.

agent-update Updates the admin status and description for a specified agent.

auto-allocated-topology-show Show the auto-allocated topology of a given tenant.

availability-zone-list List availability zones.

bash-completion Prints all of the commands and options for bash-completion.

bgp-dragent-list-hosting-speaker List Dynamic Routing agents hosting a BGP speaker.

bgp-dragent-speaker-add Add a BGP speaker to a Dynamic Routing agent.

bgp-dragent-speaker-remove Removes a BGP speaker from a Dynamic Routing agent.

bgp-peer-create Create a BGP Peer.

bgp-peer-delete Delete a BGP peer.

bgp-peer-list List BGP peers.

bgp-peer-show Show information of a given BGP peer.

bgp-peer-update Update BGP Peer's information.

bgp-speaker-advertiseroute-list List routes advertised by a given BGP speaker.

bgp-speaker-create Create a BGP Speaker.

bgp-speaker-delete Delete a BGP speaker.

bgp-speaker-list List BGP speakers.

bgp-speaker-list-on-dragent List BGP speakers hosted by a Dynamic Routing agent.

bgp-speaker-network-add Add a network to the BGP speaker.

bgp-speaker-network-remove Remove a network from the BGP speaker.

bgp-speaker-peer-add Add a peer to the BGP speaker.

bgp-speaker-peer-remove Remove a peer from the BGP speaker.

bgp-speaker-show Show information of a given BGP speaker.

bgp-speaker-update Update BGP Speaker's information.

dhcp-agent-list-hosting-net List DHCP agents hosting a network.

dhcp-agent-network-add Add a network to a DHCP agent.

dhcp-agent-network-remove Remove a network from a DHCP agent.

ext-list List all extensions.

ext-show Show information of a given resource.

firewall-create Create a firewall.

firewall-delete Delete a given firewall.

firewall-list List firewalls that belong to a given tenant.

firewall-policy-create Create a firewall policy.

firewall-policy-delete Delete a given firewall policy.

firewall-policy-insert-rule Insert a rule into a given firewall policy.

firewall-policy-list List firewall policies that belong to a given tenant.

firewall-policy-remove-rule Remove a rule from a given firewall policy.

firewall-policy-show Show information of a given firewall policy.

firewall-policy-update Update a given firewall policy.

firewall-rule-create Create a firewall rule.

firewall-rule-delete Delete a given firewall rule.

firewall-rule-list List firewall rules that belong to a given tenant.

firewall-rule-show Show information of a given firewall rule.

firewall-rule-update Update a given firewall rule.

firewall-show Show information of a given firewall.

firewall-update Update a given firewall.

flavor-associate Associate a Neutron service flavor with a flavor profile.

flavor-create Create a Neutron service flavor.

flavor-delete Delete a given Neutron service flavor.

flavor-disassociate Disassociate a Neutron service flavor from a flavor profile.

flavor-list List Neutron service flavors.

flavor-profile-create Create a Neutron service flavor profile.

flavor-profile-delete Delete a given Neutron service flavor profile.

flavor-profile-list List Neutron service flavor profiles.

flavor-profile-show Show information about a given Neutron service flavor profile.

flavor-profile-update Update a given Neutron service flavor profile.

flavor-show Show information about a given Neutron service flavor.

flavor-update Update a Neutron service flavor.

floatingip-associate Create a mapping between a floating IP and a fixed IP.

floatingip-create Create a floating IP for a given tenant.

floatingip-delete Delete a given floating IP.

floatingip-disassociate Remove a mapping from a floating IP to a fixed IP.

floatingip-list List floating IPs that belong to a given tenant.

floatingip-show Show information of a given floating IP.

gateway-device-create Create a network gateway device.

gateway-device-delete Delete a given network gateway device.

gateway-device-list List network gateway devices for a given tenant.

gateway-device-show Show information for a given network gateway device.

gateway-device-update Update a network gateway device.

help print detailed help for another command

ipsec-site-connection-create Create an IPsec site connection.

ipsec-site-connection-delete Delete a given IPsec site connection.

ipsec-site-connection-list List IPsec site connections that belong to a given tenant.

ipsec-site-connection-show Show information of a given IPsec site connection.

ipsec-site-connection-update Update a given IPsec site connection.

l3-agent-list-hosting-router List L3 agents hosting a router.

l3-agent-router-add Add a router to a L3 agent.

l3-agent-router-remove Remove a router from a L3 agent.

lb-agent-hosting-pool Get loadbalancer agent hosting a pool.

lb-healthmonitor-associate Create a mapping between a health monitor and a pool.

lb-healthmonitor-create Create a health monitor.

lb-healthmonitor-delete Delete a given health monitor.

lb-healthmonitor-disassociate Remove a mapping from a health monitor to a pool.

lb-healthmonitor-list List health monitors that belong to a given tenant.

lb-healthmonitor-show Show information of a given health monitor.

lb-healthmonitor-update Update a given health monitor.

lb-member-create Create a member.

lb-member-delete Delete a given member.

lb-member-list List members that belong to a given tenant.

lb-member-show Show information of a given member.

lb-member-update Update a given member.

lb-pool-create Create a pool.

lb-pool-delete Delete a given pool.

lb-pool-list List pools that belong to a given tenant.

lb-pool-list-on-agent List the pools on a loadbalancer agent.

lb-pool-show Show information of a given pool.

lb-pool-stats Retrieve stats for a given pool.

lb-pool-update Update a given pool.

lb-vip-create Create a vip.

lb-vip-delete Delete a given vip.

lb-vip-list List vips that belong to a given tenant.

lb-vip-show Show information of a given vip.

lb-vip-update Update a given vip.

lbaas-agent-hosting-loadbalancer Get lbaas v2 agent hosting a loadbalancer.

lbaas-healthmonitor-create LBaaS v2 Create a healthmonitor.

lbaas-healthmonitor-delete LBaaS v2 Delete a given healthmonitor.

lbaas-healthmonitor-list LBaaS v2 List healthmonitors that belong to a given tenant.

lbaas-healthmonitor-show LBaaS v2 Show information of a given healthmonitor.

lbaas-healthmonitor-update LBaaS v2 Update a given healthmonitor.

lbaas-l7policy-create LBaaS v2 Create L7 policy.

lbaas-l7policy-delete LBaaS v2 Delete a given L7 policy.

lbaas-l7policy-list LBaaS v2 List L7 policies that belong to a given listener.

lbaas-l7policy-show LBaaS v2 Show information of a given L7 policy.

lbaas-l7policy-update LBaaS v2 Update a given L7 policy.

lbaas-l7rule-create LBaaS v2 Create L7 rule.

lbaas-l7rule-delete LBaaS v2 Delete a given L7 rule.

lbaas-l7rule-list LBaaS v2 List L7 rules that belong to a given L7 policy.

lbaas-l7rule-show LBaaS v2 Show information of a given rule.

lbaas-l7rule-update LBaaS v2 Update a given L7 rule.

lbaas-listener-create LBaaS v2 Create a listener.

lbaas-listener-delete LBaaS v2 Delete a given listener.

lbaas-listener-list LBaaS v2 List listeners that belong to a given tenant.

lbaas-listener-show LBaaS v2 Show information of a given listener.

lbaas-listener-update LBaaS v2 Update a given listener.

lbaas-loadbalancer-create LBaaS v2 Create a loadbalancer.

lbaas-loadbalancer-delete LBaaS v2 Delete a given loadbalancer.

lbaas-loadbalancer-list LBaaS v2 List loadbalancers that belong to a given tenant.

lbaas-loadbalancer-list-on-agent List the loadbalancers on a loadbalancer v2 agent.

lbaas-loadbalancer-show LBaaS v2 Show information of a given loadbalancer.

lbaas-loadbalancer-stats Retrieve stats for a given loadbalancer.

lbaas-loadbalancer-status Retrieve status for a given loadbalancer.

lbaas-loadbalancer-update LBaaS v2 Update a given loadbalancer.

lbaas-member-create LBaaS v2 Create a member.

lbaas-member-delete LBaaS v2 Delete a given member.

lbaas-member-list LBaaS v2 List members that belong to a given pool.

lbaas-member-show LBaaS v2 Show information of a given member.

lbaas-member-update LBaaS v2 Update a given member.

lbaas-pool-create LBaaS v2 Create a pool.

lbaas-pool-delete LBaaS v2 Delete a given pool.

lbaas-pool-list LBaaS v2 List pools that belong to a given tenant.

lbaas-pool-show LBaaS v2 Show information of a given pool.

lbaas-pool-update LBaaS v2 Update a given pool.

meter-label-create Create a metering label for a given tenant.

meter-label-delete Delete a given metering label.

meter-label-list List metering labels that belong to a given tenant.

meter-label-rule-create Create a metering label rule for a given label.

meter-label-rule-delete Delete a given metering label.

meter-label-rule-list List metering labels that belong to a given label.

meter-label-rule-show Show information of a given metering label rule.

meter-label-show Show information of a given metering label.

net-create Create a network for a given tenant.

net-delete Delete a given network.

net-external-list List external networks that belong to a given tenant.

net-gateway-connect Add an internal network interface to a router.

net-gateway-create Create a network gateway.

net-gateway-delete Delete a given network gateway.

net-gateway-disconnect Remove a network from a network gateway.

net-gateway-list List network gateways for a given tenant.

net-gateway-show Show information of a given network gateway.

net-gateway-update Update the name for a network gateway.

net-ip-availability-list List IP usage of networks

net-ip-availability-show Show IP usage of specific network

net-list List networks that belong to a given tenant.

net-list-on-dhcp-agent List the networks on a DHCP agent.

net-show Show information of a given network.

net-update Update network's information.

port-create Create a port for a given tenant.

port-delete Delete a given port.

port-list List ports that belong to a given tenant.

port-show Show information of a given port.

port-update Update port's information.

purge

qos-available-rule-types List available qos rule types.

qos-bandwidth-limit-rule-create Create a qos bandwidth limit rule.

qos-bandwidth-limit-rule-delete Delete a given qos bandwidth limit rule.

qos-bandwidth-limit-rule-list List all qos bandwidth limit rules belonging to the specified policy.

qos-bandwidth-limit-rule-show Show information about the given qos bandwidth limit rule.

qos-bandwidth-limit-rule-update Update the given qos bandwidth limit rule.

qos-dscp-marking-rule-create Create a QoS DSCP marking rule.

qos-dscp-marking-rule-delete Delete a given qos dscp marking rule.

qos-dscp-marking-rule-list List all QoS DSCP marking rules belonging to the specified policy.

qos-dscp-marking-rule-show Show information about the given qos dscp marking rule.

qos-dscp-marking-rule-update Update the given QoS DSCP marking rule.

qos-policy-create Create a qos policy.

qos-policy-delete Delete a given qos policy.

qos-policy-list List QoS policies that belong to a given tenant connection.

qos-policy-show Show information of a given qos policy.

qos-policy-update Update a given qos policy.

queue-create Create a queue.

queue-delete Delete a given queue.

queue-list List queues that belong to a given tenant.

queue-show Show information of a given queue.

quota-delete Delete defined quotas of a given tenant.

quota-list List quotas of all tenants who have non-default quota values.

quota-show Show quotas of a given tenant.

quota-update Define tenant's quotas not to use defaults.

rbac-create Create a RBAC policy for a given tenant.

rbac-delete Delete a RBAC policy.

rbac-list List RBAC policies that belong to a given tenant.

rbac-show Show information of a given RBAC policy.

rbac-update Update RBAC policy for given tenant.

router-create Create a router for a given tenant.

router-delete Delete a given router.

router-gateway-clear Remove an external network gateway from a router.

router-gateway-set Set the external network gateway for a router.

router-interface-add Add an internal network interface to a router.

router-interface-delete Remove an internal network interface from a router.

router-list List routers that belong to a given tenant.

router-list-on-l3-agent List the routers on a L3 agent.

router-port-list List ports that belong to a given tenant, with specified router.

router-show Show information of a given router.

router-update Update router's information.

security-group-create Create a security group.

security-group-delete Delete a given security group.

security-group-list List security groups that belong to a given tenant.

security-group-rule-create Create a security group rule.

security-group-rule-delete Delete a given security group rule.

security-group-rule-list List security group rules that belong to a given tenant.

security-group-rule-show Show information of a given security group rule.

security-group-show Show information of a given security group.

security-group-update Update a given security group.

service-provider-list List service providers.

subnet-create Create a subnet for a given tenant.

subnet-delete Delete a given subnet.

subnet-list List subnets that belong to a given tenant.

subnet-show Show information of a given subnet.

subnet-update Update subnet's information.

subnetpool-create Create a subnetpool for a given tenant.

subnetpool-delete Delete a given subnetpool.

subnetpool-list List subnetpools that belong to a given tenant.

subnetpool-show Show information of a given subnetpool.

subnetpool-update Update subnetpool's information.

tag-add Add a tag into the resource.

tag-remove Remove a tag on the resource.

tag-replace Replace all tags on the resource.

vpn-endpoint-group-create Create a VPN endpoint group.

vpn-endpoint-group-delete Delete a given VPN endpoint group.

vpn-endpoint-group-list List VPN endpoint groups that belong to a given tenant.

vpn-endpoint-group-show Show a specific VPN endpoint group.

vpn-endpoint-group-update Update a given VPN endpoint group.

vpn-ikepolicy-create Create an IKE policy.

vpn-ikepolicy-delete Delete a given IKE policy.

vpn-ikepolicy-list List IKE policies that belong to a tenant.

vpn-ikepolicy-show Show information of a given IKE policy.

vpn-ikepolicy-update Update a given IKE policy.

vpn-ipsecpolicy-create Create an IPsec policy.

vpn-ipsecpolicy-delete Delete a given IPsec policy.

vpn-ipsecpolicy-list List IPsec policies that belong to a given tenant connection.

vpn-ipsecpolicy-show Show information of a given IPsec policy.

vpn-ipsecpolicy-update Update a given IPsec policy.

vpn-service-create Create a VPN service.

vpn-service-delete Delete a given VPN service.

vpn-service-list List VPN service configurations that belong to a given tenant.

vpn-service-show Show information of a given VPN service.

vpn-service-update Update a given VPN service.

neutron address-scope-create

```
usage: neutron address-scope-create [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}]
                                   [--tenant-id TENANT_ID] [--shared]
                                   NAME IP_VERSION
```

Create an address scope for a given tenant.

Positional arguments:

NAME Specify the name of the address scope.

IP_VERSION Specify the address family of the address scope.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--shared Set the address scope as shared.

neutron address-scope-delete

```
usage: neutron address-scope-delete [-h] [--request-format {json}]
                                   ADDRESS_SCOPE
```

Delete an address scope.

Positional arguments:

ADDRESS_SCOPE ID or name of address_scope to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron address-scope-list

```
usage: neutron address-scope-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

List address scopes that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.
- P SIZE, --page-size SIZE** Specify retrieve unit of each request, then split one request to several requests.
- sort-key FIELD** Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
- sort-dir {asc, desc}** Sorts the list in the specified direction. You can repeat this option.

neutron address-scope-show

```
usage: neutron address-scope-show [-h] [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   ADDRESS_SCOPE
```

Show information about an address scope.

Positional arguments:

ADDRESS_SCOPE ID or name of address_scope to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron address-scope-update

```
usage: neutron address-scope-update [-h] [--request-format {json}]
                                     [--name NAME]
                                     ADDRESS_SCOPE
```

Update an address scope.

Positional arguments:

ADDRESS_SCOPE ID or name of address_scope to update.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- name NAME** Name of the address scope to update.

neutron agent-delete

```
usage: neutron agent-delete [-h] [--request-format {json}] AGENT
```

Delete a given agent.

Positional arguments:

AGENT ID of agent to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron agent-list

```
usage: neutron agent-list [-h] [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json}] [-D] [-F FIELD]
                        [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List agents.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron agent-show

```
usage: neutron agent-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--request-format {json}] [-D]
                        [-F FIELD]
                        AGENT
```

Show information of a given agent.

Positional arguments:

AGENT ID of agent to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron agent-update

```
usage: neutron agent-update [-h] [--request-format {json}]
                             [--admin-state-down] [--description DESCRIPTION]
                             AGENT
```

Updates the admin status and description for a specified agent.

Positional arguments:

AGENT ID of agent to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--admin-state-down Set admin state up of the agent to false.

--description DESCRIPTION Description for the agent.

neutron auto-allocated-topology-show

```
usage: neutron auto-allocated-topology-show [-h]
                                              [-f {html,json,shell,table,value,yaml}]
                                              [-c COLUMN]
                                              [--max-width <integer>]
                                              [--noindent] [--prefix PREFIX]
                                              [--request-format {json}]
                                              [--dry-run]
                                              [--tenant-id tenant-id]
```

Show the auto-allocated topology of a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--dry-run Validate the requirements for auto-allocated-topology. (Does not return a topology.)

--tenant-id tenant-id The owner tenant ID.

neutron availability-zone-list

```
usage: neutron availability-zone-list [-h]
                                       [-f {csv,html,json,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--noindent]
                                       [--quote {all,minimal,none,nonnumeric}]
                                       [--request-format {json}] [-D]
                                       [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                       [--sort-dir {asc,desc}]
```

List availability zones.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron bgp-dragent-list-hosting-speaker

```
usage: neutron bgp-dragent-list-hosting-speaker [-h]
                                                [-f {csv,html,json,table,value,yaml}]
                                                [-c COLUMN]
                                                [--max-width <integer>]
                                                [--noindent]
                                                [--quote {all,minimal,none,nonnumeric}]
                                                [--request-format {json}] [-D]
                                                [-F FIELD]
                                                BGP_SPEAKER
```

List Dynamic Routing agents hosting a BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of the BGP speaker.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron bgp-dragent-speaker-add

```
usage: neutron bgp-dragent-speaker-add [-h] [--request-format {json}]
                                         BGP_DRAGENT_ID BGP_SPEAKER
```

Add a BGP speaker to a Dynamic Routing agent.

Positional arguments:

BGP_DRAGENT_ID ID of the Dynamic Routing agent.

BGP_SPEAKER ID or name of the BGP speaker.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-dragent-speaker-remove

```
usage: neutron bgp-dragent-speaker-remove [-h] [--request-format {json}]
                                           BGP_DRAGENT_ID BGP_SPEAKER
```

Removes a BGP speaker from a Dynamic Routing agent.

Positional arguments:

BGP_DRAGENT_ID ID of the Dynamic Routing agent.

BGP_SPEAKER ID or name of the BGP speaker.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-peer-create

```
usage: neutron bgp-peer-create [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}]
                                [--tenant-id TENANT_ID] --peer-ip
                                PEER_IP_ADDRESS --remote-as PEER_REMOTE_AS
                                [--auth-type PEER_AUTH_TYPE]
                                [--password AUTH_PASSWORD]
                                NAME
```

Create a BGP Peer.

Positional arguments:

NAME Name of the BGP peer to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--peer-ip PEER_IP_ADDRESS Peer IP address.

--remote-as PEER_REMOTE_AS Peer AS number. (Integer in [1, 65535] is allowed.)

--auth-type PEER_AUTH_TYPE Authentication algorithm. Supported algorithms: none(default), md5

--password AUTH_PASSWORD Authentication password.

neutron bgp-peer-delete

```
usage: neutron bgp-peer-delete [-h] [--request-format {json}] BGP_PEER
```


Delete a BGP peer.

Positional arguments:

BGP_PEER ID or name of bgp_peer to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-peer-list

```
usage: neutron bgp-peer-list [-h] [-f {csv,html,json,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--quote {all,minimal,none,nonnumeric}]
                             [--request-format {json}] [-D] [-F FIELD]
                             [-P SIZE] [--sort-key FIELD]
                             [--sort-dir {asc,desc}]
```

List BGP peers.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron bgp-peer-show

```
usage: neutron bgp-peer-show [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}] [-D]
                             [-F FIELD]
                             BGP_PEER
```

Show information of a given BGP peer.

Positional arguments:

BGP_PEER ID or name of bgp_peer to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron bgp-peer-update

```
usage: neutron bgp-peer-update [-h] [--request-format {json}] [--name NAME]
                               [--password AUTH_PASSWORD]
                               BGP_PEER
```

Update BGP Peer's information.

Positional arguments:

BGP_PEER ID or name of bgp_peer to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Updated name of the BGP peer.

--password AUTH_PASSWORD Updated authentication password.

neutron bgp-speaker-advertiseroute-list

```
usage: neutron bgp-speaker-advertiseroute-list [-h]
                                                [-f {csv,html,json,table,value,yaml}]
                                                [-c COLUMN]
                                                [--max-width <integer>]
                                                [--noindent]
                                                [--quote {all,minimal,none,nonnumeric}]
                                                [--request-format {json}] [-D]
                                                [-F FIELD] [-P SIZE]
                                                [--sort-key FIELD]
                                                [--sort-dir {asc,desc}]
                                                BGP_SPEAKER
```

List routes advertised by a given BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of the BGP speaker.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron bgp-speaker-create

```
usage: neutron bgp-speaker-create [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--noindent] [--prefix PREFIX]
                                  [--request-format {json}]
                                  [--tenant-id TENANT_ID] --local-as LOCAL_AS
                                  [--ip-version {4,6}]
                                  [--advertise-floating-ip-host-routes {True,False}]
                                  [--advertise-tenant-networks {True,False}]
                                  NAME
```

Create a BGP Speaker.

Positional arguments:

NAME Name of the BGP speaker to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--local-as LOCAL_AS Local AS number. (Integer in [1, 65535] is allowed.)

--ip-version {4,6} **IP** version for the BGP speaker (default is 4).

--advertise-floating-ip-host-routes {True,False} Whether to enable or disable the advertisement of floating-ip host routes by the BGP speaker. By default floating ip host routes will be advertised by the BGP speaker.

--advertise-tenant-networks {True,False} Whether to enable or disable the advertisement of tenant network routes by the BGP speaker. By default tenant network routes will be advertised by the BGP speaker.

neutron bgp-speaker-delete

```
usage: neutron bgp-speaker-delete [-h] [--request-format {json}] BGP_SPEAKER
```

Delete a BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of bgp_speaker to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-speaker-list

```
usage: neutron bgp-speaker-list [-h] [-f {csv,html,json,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--noindent]
                                  [--quote {all,minimal,none,nonnumeric}]
                                  [--request-format {json}] [-D] [-F FIELD]
```

```
[-P SIZE] [--sort-key FIELD]
[--sort-dir {asc,desc}]
```

List BGP speakers.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.
- P SIZE, --page-size SIZE** Specify retrieve unit of each request, then split one request to several requests.
- sort-key FIELD** Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
- sort-dir {asc,desc}** Sorts the list in the specified direction. You can repeat this option.

neutron bgp-speaker-list-on-dragent

```
usage: neutron bgp-speaker-list-on-dragent [-h]
                                           [-f {csv,html,json,table,value,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--noindent]
                                           [--quote {all,minimal,none,nonnumeric}]
                                           [--request-format {json}] [-D]
                                           [-F FIELD]
                                           BGP_DRAGENT_ID
```

List BGP speakers hosted by a Dynamic Routing agent.

Positional arguments:

BGP_DRAGENT_ID ID of the Dynamic Routing agent.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron bgp-speaker-network-add

```
usage: neutron bgp-speaker-network-add [-h] [--request-format {json}]
                                         BGP_SPEAKER NETWORK
```

Add a network to the BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of the BGP speaker.

NETWORK ID or name of the network to add.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-speaker-network-remove

```
usage: neutron bgp-speaker-network-remove [-h] [--request-format {json}]
                                           BGP_SPEAKER NETWORK
```

Remove a network from the BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of the BGP speaker.

NETWORK ID or name of the network to remove.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-speaker-peer-add

```
usage: neutron bgp-speaker-peer-add [-h] [--request-format {json}]
                                      BGP_SPEAKER BGP_PEER
```

Add a peer to the BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of the BGP speaker.

BGP_PEER ID or name of the BGP peer to add.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-speaker-peer-remove

```
usage: neutron bgp-speaker-peer-remove [-h] [--request-format {json}]
                                         BGP_SPEAKER BGP_PEER
```

Remove a peer from the BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of the BGP speaker.

BGP_PEER ID or name of the BGP peer to remove.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron bgp-speaker-show

```
usage: neutron bgp-speaker-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                BGP_SPEAKER
```

Show information of a given BGP speaker.

Positional arguments:

BGP_SPEAKER ID or name of bgp_speaker to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron bgp-speaker-update

```
usage: neutron bgp-speaker-update [-h] [--request-format {json}] [--name NAME]
                                   [--advertise-floating-ip-host-routes {True,False}]
                                   [--advertise-tenant-networks {True,False}]
                                   BGP_SPEAKER
```

Update BGP Speaker's information.

Positional arguments:

BGP_SPEAKER ID or name of bgp_speaker to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Name of the BGP speaker to update.

--advertise-floating-ip-host-routes {True,False} Whether to enable or disable the advertisement of floating-ip host routes by the BGP speaker. By default floating ip host routes will be advertised by the BGP speaker.

--advertise-tenant-networks {True,False} Whether to enable or disable the advertisement of tenant network routes by the BGP speaker. By default tenant network routes will be advertised by the BGP speaker.

neutron dhcp-agent-list-hosting-net

```
usage: neutron dhcp-agent-list-hosting-net [-h]
                                           [-f {csv,html,json,table,value,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--noindent]
                                           [--quote {all,minimal,none,nonnumeric}]
                                           [--request-format {json}] [-D]
                                           [-F FIELD]
                                           NETWORK
```

List DHCP agents hosting a network.

Positional arguments:

NETWORK Network to query.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron dhcp-agent-network-add

```
usage: neutron dhcp-agent-network-add [-h] [--request-format {json}]
                                      DHCP_AGENT NETWORK
```

Add a network to a DHCP agent.

Positional arguments:

DHCP_AGENT ID of the DHCP agent.

NETWORK Network to add.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron dhcp-agent-network-remove

```
usage: neutron dhcp-agent-network-remove [-h] [--request-format {json}]
                                          DHCP_AGENT NETWORK
```

Remove a network from a DHCP agent.

Positional arguments:

DHCP_AGENT ID of the DHCP agent.

NETWORK Network to remove.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron ext-list

```
usage: neutron ext-list [-h] [-f {csv,html,json,table,value,yaml}] [-c COLUMN]
                        [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json}] [-D] [-F FIELD]
```

List all extensions.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron ext-show

```
usage: neutron ext-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--request-format {json}] [-D]
                        [-F FIELD]
                        EXTENSION
```

Show information of a given resource.

Positional arguments:

EXTENSION ID of extension to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron firewall-create

```
usage: neutron firewall-create [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}]
                                [--tenant-id TENANT_ID] [--name NAME]
                                [--description DESCRIPTION]
                                [--router ROUTER | --no-routers]
                                [--admin-state-down]
                                POLICY
```

Create a firewall.

Positional arguments:

POLICY Firewall policy name or ID.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- tenant-id TENANT_ID** The owner tenant ID.
- name NAME** Name for the firewall.
- description DESCRIPTION** Description for the firewall.
- router ROUTER** Firewall associated router name or ID (requires FWaaS router insertion extension, this option can be repeated)
- no-routers** Associate no routers with the firewall (requires FWaaS router insertion extension)
- admin-state-down** Set admin state up to false.

neutron firewall-delete

```
usage: neutron firewall-delete [-h] [--request-format {json}] FIREWALL
```

Delete a given firewall.

Positional arguments:

FIREWALL ID or name of firewall to delete.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.

neutron firewall-list

```
usage: neutron firewall-list [-h] [-f {csv,html,json,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--quote {all,minimal,none,nonnumeric}]
                             [--request-format {json}] [-D] [-F FIELD]
                             [-P SIZE] [--sort-key FIELD]
                             [--sort-dir {asc,desc}]
```

List firewalls that belong to a given tenant.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.
- P SIZE, --page-size SIZE** Specify retrieve unit of each request, then split one request to several requests.
- sort-key FIELD** Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
- sort-dir {asc,desc}** Sorts the list in the specified direction. You can repeat this option.

neutron firewall-policy-create

```
usage: neutron firewall-policy-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}]
                                     [--tenant-id TENANT_ID] [--shared]
                                     [--audited] [--description DESCRIPTION]
                                     [--firewall-rules FIREWALL_RULES]
                                     NAME
```

Create a firewall policy.

Positional arguments:

NAME Name for the firewall policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--shared Create a shared policy.

--audited Sets audited to True.

--description DESCRIPTION Description for the firewall policy.

--firewall-rules FIREWALL_RULES Ordered list of whitespace-delimited firewall rule names or IDs; e.g.,
-firewall-rules "rule1 rule2"

neutron firewall-policy-delete

```
usage: neutron firewall-policy-delete [-h] [--request-format {json}]
                                     FIREWALL_POLICY
```

Delete a given firewall policy.

Positional arguments:

FIREWALL_POLICY ID or name of firewall_policy to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron firewall-policy-insert-rule

```
usage: neutron firewall-policy-insert-rule [-h] [--request-format {json}]
                                           [--insert-before FIREWALL_RULE]
                                           [--insert-after FIREWALL_RULE]
                                           FIREWALL_POLICY FIREWALL_RULE
```

Insert a rule into a given firewall policy.

Positional arguments:

FIREWALL_POLICY ID or name of firewall_policy to update.

FIREWALL_RULE New rule to insert.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--insert-before FIREWALL_RULE Insert before this rule.

--insert-after FIREWALL_RULE Insert after this rule.

neutron firewall-policy-list

```
usage: neutron firewall-policy-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

List firewall policies that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron firewall-policy-remove-rule

```
usage: neutron firewall-policy-remove-rule [-h] [--request-format {json}]
                                           FIREWALL_POLICY FIREWALL_RULE
```

Remove a rule from a given firewall policy.

Positional arguments:

FIREWALL_POLICY ID or name of firewall_policy to update.

FIREWALL_RULE Firewall rule to remove from policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron firewall-policy-show

```
usage: neutron firewall-policy-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   FIREWALL_POLICY
```

Show information of a given firewall policy.

Positional arguments:

FIREWALL_POLICY ID or name of firewall_policy to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron firewall-policy-update

```
usage: neutron firewall-policy-update [-h] [--request-format {json}]
                                       [--description DESCRIPTION]
                                       [--firewall-rules FIREWALL_RULES]
                                       [--name NAME] [--shared {True,False}]
                                       [--audited {True,False}]
                                       FIREWALL_POLICY
```

Update a given firewall policy.

Positional arguments:

FIREWALL_POLICY ID or name of firewall_policy to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--description DESCRIPTION Description for the firewall policy.

--firewall-rules FIREWALL_RULES Ordered list of whitespace-delimited firewall rule names or IDs; e.g.,
-firewall-rules "rule1 rule2"

--name NAME Name for the firewall policy.

--shared {True,False} Update the sharing status of the policy. (True means shared)

--audited {True,False} Update the audit status of the policy. (True means auditing is enabled)

neutron firewall-rule-create

```
usage: neutron firewall-rule-create [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}]
                                   [--tenant-id TENANT_ID] [--shared]
                                   [--name NAME] [--description DESCRIPTION]
                                   [--source-ip-address SOURCE_IP_ADDRESS]
                                   [--destination-ip-address DESTINATION_IP_ADDRESS]
                                   [--source-port SOURCE_PORT]
                                   [--destination-port DESTINATION_PORT]
                                   [--enabled {True,False}] --protocol
                                   {tcp,udp,icmp,any} --action
                                   {allow,deny,reject} [--ip-version {4,6}]
```

Create a firewall rule.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--shared Set shared flag for the firewall rule.

--name NAME Name for the firewall rule.

--description DESCRIPTION Description for the firewall rule.

--source-ip-address SOURCE_IP_ADDRESS Source IP address or subnet.

--destination-ip-address DESTINATION_IP_ADDRESS Destination IP address or subnet.

--source-port SOURCE_PORT Source port (integer in [1, 65535] or range in a:b).

--destination-port DESTINATION_PORT Destination port (integer in [1, 65535] or range in a:b).

--enabled {True,False} Whether to enable or disable this rule.

--protocol {tcp,udp,icmp,any} Protocol for the firewall rule.

--action {allow,deny,reject} Action for the firewall rule.

--ip-version {4,6} IP version for the firewall rule (default is 4).

neutron firewall-rule-delete

```
usage: neutron firewall-rule-delete [-h] [--request-format {json}]
                                   FIREWALL_RULE
```

Delete a given firewall rule.

Positional arguments:

FIREWALL_RULE ID or name of firewall_rule to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron firewall-rule-list

```
usage: neutron firewall-rule-list [-h] [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
```

List firewall rules that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron firewall-rule-show

```
usage: neutron firewall-rule-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                FIREWALL_RULE
```

Show information of a given firewall rule.

Positional arguments:

FIREWALL_RULE ID or name of firewall_rule to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron firewall-rule-update

```
usage: neutron firewall-rule-update [-h] [--request-format {json}]
                                   [--shared {True,False}]
                                   [--ip-version {4,6}] [--name NAME]
                                   [--description DESCRIPTION]
                                   [--source-ip-address SOURCE_IP_ADDRESS]
                                   [--destination-ip-address DESTINATION_IP_ADDRESS]
                                   [--source-port SOURCE_PORT]
                                   [--destination-port DESTINATION_PORT]
                                   [--enabled {True,False}]
                                   [--protocol {tcp,udp,icmp,any}]
                                   [--action {allow,deny,reject}]
                                   FIREWALL_RULE
```

Update a given firewall rule.

Positional arguments:

FIREWALL_RULE ID or name of firewall_rule to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--shared {True,False} Update the shared flag for the firewall rule.

--ip-version {4,6} Update IP version for the firewall rule.

--name NAME Name for the firewall rule.

--description DESCRIPTION Description for the firewall rule.

--source-ip-address SOURCE_IP_ADDRESS Source IP address or subnet.

--destination-ip-address DESTINATION_IP_ADDRESS Destination IP address or subnet.

--source-port SOURCE_PORT Source port (integer in [1, 65535] or range in a:b).

--destination-port DESTINATION_PORT Destination port (integer in [1, 65535] or range in a:b).

--enabled {True,False} Whether to enable or disable this rule.

--protocol {tcp,udp,icmp,any} Protocol for the firewall rule.

--action {allow,deny,reject} Action for the firewall rule.

neutron firewall-show

```
usage: neutron firewall-show [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}] [-D]
                             [-F FIELD]
                             FIREWALL
```

Show information of a given firewall.

Positional arguments:

FIREWALL ID or name of firewall to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron firewall-update

```
usage: neutron firewall-update [-h] [--request-format {json}] [--name NAME]
                               [--description DESCRIPTION]
                               [--router ROUTER | --no-routers]
                               [--policy POLICY]
                               [--admin-state-up {True,False}]
                               FIREWALL
```

Update a given firewall.

Positional arguments:

FIREWALL ID or name of firewall to update.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- name NAME** Name for the firewall.
- description DESCRIPTION** Description for the firewall.
- router ROUTER** Firewall associated router name or ID (requires FWaaS router insertion extension, this option can be repeated)
- no-routers** Associate no routers with the firewall (requires FWaaS router insertion extension)
- policy POLICY** Firewall policy name or ID.
- admin-state-up {True,False}** Update the admin state for the firewall(True means UP)

neutron flavor-associate

```
usage: neutron flavor-associate [-h] [--request-format {json}]
                                FLAVOR FLAVOR_PROFILE
```

Associate a Neutron service flavor with a flavor profile.

Positional arguments:

FLAVOR Name or ID of the flavor to associate.

FLAVOR_PROFILE ID of the flavor profile to be associated with the flavor.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.

neutron flavor-create

```
usage: neutron flavor-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id TENANT_ID]
                             [--description DESCRIPTION]
                             [--enabled {True,False}]
                             NAME SERVICE_TYPE
```

Create a Neutron service flavor.

Positional arguments:

NAME Name for the flavor.

SERVICE_TYPE Service type to which the flavor applies to: e.g. VPN. (See service-provider-list for loaded examples.)

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description for the flavor.

--enabled {True,False} Sets enabled flag.

neutron flavor-delete

```
usage: neutron flavor-delete [-h] [--request-format {json}] FLAVOR
```

Delete a given Neutron service flavor.

Positional arguments:

FLAVOR ID or name of flavor to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron flavor-disassociate

```
usage: neutron flavor-disassociate [-h] [--request-format {json}]
                                   FLAVOR FLAVOR_PROFILE
```

Disassociate a Neutron service flavor from a flavor profile.

Positional arguments:

FLAVOR Name or ID of the flavor.

FLAVOR_PROFILE ID of the flavor profile to be disassociated from the flavor.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron flavor-list

```
usage: neutron flavor-list [-h] [-f {csv,html,json,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--quote {all,minimal,none,nonnumeric}]
                           [--request-format {json}] [-D] [-F FIELD] [-P SIZE]
                           [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List Neutron service flavors.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron flavor-profile-create

```
usage: neutron flavor-profile-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}]
                                     [--tenant-id TENANT_ID]
                                     [--description DESCRIPTION]
                                     [--driver DRIVER] [--metainfo METAINFO]
                                     [--enabled {True,False}]
```

Create a Neutron service flavor profile.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description for the flavor profile.

--driver DRIVER Python module path to driver.

--metainfo METAINFO Metainfo for the flavor profile.

--enabled {True,False} Sets enabled flag.

neutron flavor-profile-delete

```
usage: neutron flavor-profile-delete [-h] [--request-format {json}]
                                     SERVICE_PROFILE
```

Delete a given Neutron service flavor profile.

Positional arguments:

SERVICE_PROFILE ID or name of service_profile to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron flavor-profile-list

```
usage: neutron flavor-profile-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

List Neutron service flavor profiles.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron flavor-profile-show

```
usage: neutron flavor-profile-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   SERVICE_PROFILE
```

Show information about a given Neutron service flavor profile.

Positional arguments:

SERVICE_PROFILE ID or name of service_profile to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron flavor-profile-update

```
usage: neutron flavor-profile-update [-h] [--request-format {json}]
                                     [--description DESCRIPTION]
                                     [--driver DRIVER] [--metainfo METAINFO]
                                     [--enabled {True,False}]
                                     SERVICE_PROFILE
```

Update a given Neutron service flavor profile.

Positional arguments:

SERVICE_PROFILE ID or name of service_profile to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--description DESCRIPTION Description for the flavor profile.

--driver DRIVER Python module path to driver.

--metainfo METAINFO Metainfo for the flavor profile.

--enabled {True,False} Sets enabled flag.

neutron flavor-show

```
usage: neutron flavor-show [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--prefix PREFIX] [--request-format {json}] [-D]
                           [-F FIELD]
                           FLAVOR
```

Show information about a given Neutron service flavor.

Positional arguments:

FLAVOR ID or name of flavor to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron flavor-update

```
usage: neutron flavor-update [-h] [--request-format {json}] [--name NAME]
                             [--description DESCRIPTION]
                             [--enabled {True,False}]
                             FLAVOR
```

Update a Neutron service flavor.

Positional arguments:

FLAVOR ID or name of flavor to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Name for the flavor.

--description DESCRIPTION Description for the flavor.

--enabled {True,False} Sets enabled flag.

neutron floatingip-associate

```
usage: neutron floatingip-associate [-h] [--request-format {json}]
                                     [--fixed-ip-address FIXED_IP_ADDRESS]
                                     FLOATINGIP_ID PORT
```

Create a mapping between a floating IP and a fixed IP.

Positional arguments:

FLOATINGIP_ID ID of the floating IP to associate.

PORT ID or name of the port to be associated with the floating IP.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--fixed-ip-address FIXED_IP_ADDRESS IP address on the port (only required if port has multiple IPs).

neutron floatingip-create

```
usage: neutron floatingip-create [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--noindent] [--prefix PREFIX]
                                  [--request-format {json}]
                                  [--tenant-id TENANT_ID]
                                  [--description DESCRIPTION]
                                  [--port-id PORT_ID]
                                  [--fixed-ip-address FIXED_IP_ADDRESS]
                                  [--floating-ip-address FLOATING_IP_ADDRESS]
                                  [--subnet SUBNET_ID]
                                  [--dns-domain DNS_DOMAIN]
```

```
[--dns-name DNS_NAME]
FLOATING_NETWORK
```

Create a floating IP for a given tenant.

Positional arguments:

FLOATING_NETWORK Network name or ID to allocate floating IP from.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of the floating IP.

--port-id PORT_ID ID of the port to be associated with the floating IP.

--fixed-ip-address FIXED_IP_ADDRESS IP address on the port (only required if port has multiple IPs).

--floating-ip-address FLOATING_IP_ADDRESS IP address of the floating IP

--subnet SUBNET_ID Subnet ID on which you want to create the floating IP.

--dns-domain DNS_DOMAIN Assign DNS domain to the floatingip (requires DNS integration extension)

--dns-name DNS_NAME Assign DNS name to the floatingip (requires DNS integration extension)

neutron floatingip-delete

```
usage: neutron floatingip-delete [-h] [--request-format {json}] FLOATINGIP
```

Delete a given floating IP.

Positional arguments:

FLOATINGIP ID of floatingip to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron floatingip-disassociate

```
usage: neutron floatingip-disassociate [-h] [--request-format {json}]
FLOATINGIP_ID
```

Remove a mapping from a floating IP to a fixed IP.

Positional arguments:

FLOATINGIP_ID ID of the floating IP to disassociate.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron floatingip-list

```
usage: neutron floatingip-list [-h] [-f {csv,html,json,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--noindent]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--request-format {json}] [-D] [-F FIELD]
                               [-P SIZE] [--sort-key FIELD]
                               [--sort-dir {asc,desc}]
```

List floating IPs that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron floatingip-show

```
usage: neutron floatingip-show [-h] [-f {html,json,shell,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--noindent] [--prefix PREFIX]
                               [--request-format {json}] [-D] [-F FIELD]
                               FLOATINGIP
```

Show information of a given floating IP.

Positional arguments:

FLOATINGIP ID of floatingip to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron gateway-device-create

```
usage: neutron gateway-device-create [-h]
                                      [-f {html,json,shell,table,value,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--noindent] [--prefix PREFIX]
```

```

[--request-format {json}]
[--tenant-id TENANT_ID]
[--connector-type {stt,gre,ipsecre,ipsecrestt,
↪bridge,ipsec_gre,ipsec_stt}]
--connector-ip CONNECTOR_IP
(--client-certificate CERT_DATA | --client-
↪certificate-file CERT_FILE)
NAME

```

Create a network gateway device.

Positional arguments:

NAME Name of network gateway device to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--connector-type {stt,gre,ipsecre,ipsecrestt,bridge,ipsec_gre,ipsec_stt} Type of the transport zone connector to use for this device. Valid values are gre, stt, ipsec_gre, ipsec_stt, and bridge. Defaults to stt. ipsecgre and ipsecstt are also accepted as alternative names

--connector-ip CONNECTOR_IP IP address for this device's transport connector. It must correspond to the IP address of the interface used for tenant traffic on the NSX gateway node.

--client-certificate CERT_DATA PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.

--client-certificate-file CERT_FILE File containing the PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.

neutron gateway-device-delete

```

usage: neutron gateway-device-delete [-h] [--request-format {json}]
GATEWAY_DEVICE

```

Delete a given network gateway device.

Positional arguments:

GATEWAY_DEVICE ID or name of gateway_device to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron gateway-device-list

```

usage: neutron gateway-device-list [-h] [-f {csv,html,json,table,value,yaml}]
[-c COLUMN] [--max-width <integer>]
[--noindent]
[--quote {all,minimal,none,nonnumeric}]
[--request-format {json}] [-D] [-F FIELD]

```


List network gateway devices for a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron gateway-device-show

```
usage: neutron gateway-device-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   GATEWAY_DEVICE
```

Show information for a given network gateway device.

Positional arguments:

GATEWAY_DEVICE ID or name of gateway_device to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron gateway-device-update

```
usage: neutron gateway-device-update [-h] [--request-format {json}]
                                     [--name NAME]
                                     [--connector-type {stt,gre,ipsecre,ipsecrestt,
↪bridge,ipsec_gre,ipsec_stt}]
                                     [--connector-ip CONNECTOR_IP]
                                     [--client-certificate CERT_DATA | --client-
↪certificate-file CERT_FILE]
                                     GATEWAY_DEVICE
```

Update a network gateway device.

Positional arguments:

GATEWAY_DEVICE ID or name of gateway_device to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME New name for network gateway device.

- connector-type** {stt,gre,ipsecgre,ipsecstt,bridge,ipsec_gre,ipsec_stt} Type of the transport zone connector to use for this device. Valid values are gre, stt, ipsec_gre, ipsec_stt, and bridge. Defaults to stt. ipsecgre and ipsecstt are also accepted as alternative names
- connector-ip** CONNECTOR_IP IP address for this device's transport connector. It must correspond to the IP address of the interface used for tenant traffic on the NSX gateway node.
- client-certificate** CERT_DATA PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.
- client-certificate-file** CERT_FILE File containing the PEM certificate used by the NSX gateway transport node to authenticate with the NSX controller.

neutron ipsec-site-connection-create

```
usage: neutron ipsec-site-connection-create [-h]
                                           [-f {html,json,shell,table,value,yaml}]
                                           [-c COLUMN]
                                           [--max-width <integer>]
                                           [--noindent] [--prefix PREFIX]
                                           [--request-format {json}]
                                           [--tenant-id TENANT_ID]
                                           [--admin-state-down] [--name NAME]
                                           [--description DESCRIPTION]
                                           [--mtu MTU]
                                           [--initiator {bi-directional,response-
↪only}]
                                           --vpnservice-id VPNSERVICE
                                           --ikepolicy-id IKEPOLICY
                                           --ipsecpolicy-id IPSECPOLICY
                                           --peer-address PEER_ADDRESS
                                           --peer-id PEER_ID
                                           [--peer-cidr PEER_CIDRS] --psk PSK
                                           [--dpd action=ACTION,interval=INTERVAL,
↪timeout=TIMEOUT]
                                           [--local-ep-group LOCAL_EP_GROUP]
                                           [--peer-ep-group PEER_EP_GROUP]
```

Create an IPsec site connection.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- tenant-id** TENANT_ID The owner tenant ID.
- admin-state-down** Set admin state up to false.
- name** NAME Set friendly name for the connection.
- description** DESCRIPTION Set a description for the connection.
- mtu** MTU MTU size for the connection, default:1500
- initiator {bi-directional,response-only}** Initiator state in lowercase, default:bi-directional
- vpnservice-id** VPNSERVICE VPN service instance ID associated with this connection.
- ikepolicy-id** IKEPOLICY IKE policy ID associated with this connection.

--ipsecpolicy-id **IPSECPOLICY** IPsec policy ID associated with this connection.

--peer-address **PEER_ADDRESS** Peer gateway public IPv4/IPv6 address or FQDN.

--peer-id **PEER_ID** Peer router identity for authentication. Can be IPv4/IPv6 address, e-mail address, key id, or FQDN.

--peer-cidr **PEER_CIDRS** [DEPRECATED in Mitaka] Remote subnet(s) in CIDR format. Cannot be specified when using endpoint groups. Only applicable, if subnet provided for VPN service.

--psk **PSK** Pre-shared key string.

--dpd **action=ACTION,interval=INTERVAL,timeout=TIMEOUT** IPsec connection. Dead Peer Detection attributes. 'action'-hold,clear,disabled,restart,restart-by-peer. 'interval' and 'timeout' are non negative integers. 'interval' should be less than 'timeout' value. 'action', default:hold 'interval', default:30, 'timeout', default:120.

--local-ep-group **LOCAL_EP_GROUP** Local endpoint group ID/name with subnet(s) for IPsec connection.

--peer-ep-group **PEER_EP_GROUP** Peer endpoint group ID/name with CIDR(s) for IPsec connection.

neutron ipsec-site-connection-delete

```
usage: neutron ipsec-site-connection-delete [-h] [--request-format {json}]
                                           IPSEC_SITE_CONNECTION
```

Delete a given IPsec site connection.

Positional arguments:

IPSEC_SITE_CONNECTION ID or name of IPsec site connection to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} DEPRECATED! Only JSON request format is supported.

neutron ipsec-site-connection-list

```
usage: neutron ipsec-site-connection-list [-h]
                                           [-f {csv,html,json,table,value,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--noindent]
                                           [--quote {all,minimal,none,nonnumeric}]
                                           [--request-format {json}] [-D]
                                           [-F FIELD] [-P SIZE]
                                           [--sort-key FIELD]
                                           [--sort-dir {asc,desc}]
```

List IPsec site connections that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} DEPRECATED! Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron ipsec-site-connection-show

```
usage: neutron ipsec-site-connection-show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}] [-D]
                                         [-F FIELD]
                                         IPSEC_SITE_CONNECTION
```

Show information of a given IPsec site connection.

Positional arguments:

IPSEC_SITE_CONNECTION ID or name of IPsec site connection to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron ipsec-site-connection-update

```
usage: neutron ipsec-site-connection-update [-h] [--request-format {json}]
                                             [--dpd action=ACTION,interval=INTERVAL,
↳ timeout=TIMEOUT]
                                             [--local-ep-group LOCAL_EP_GROUP]
                                             [--peer-ep-group PEER_EP_GROUP]
                                             IPSEC_SITE_CONNECTION
```

Update a given IPsec site connection.

Positional arguments:

IPSEC_SITE_CONNECTION ID or name of IPsec site connection to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--dpd action=ACTION,interval=INTERVAL,timeout=TIMEOUT Ipsec connection. Dead Peer Detection attributes. 'action'-hold,clear,disabled,restart,restart-by-peer. 'interval' and 'timeout' are non negative integers. 'interval' should be less than 'timeout' value. 'action', default:hold 'interval', default:30, 'timeout', default:120.

--local-ep-group LOCAL_EP_GROUP Local endpoint group ID/name with subnet(s) for IPsec connection.

--peer-ep-group PEER_EP_GROUP Peer endpoint group ID/name with CIDR(s) for IPsec connection.

neutron l3-agent-list-hosting-router

```
usage: neutron l3-agent-list-hosting-router [-h]
                                           [-f {csv,html,json,table,value,yaml}]
                                           [-c COLUMN]
                                           [--max-width <integer>]
                                           [--noindent]
                                           [--quote {all,minimal,none,nonnumeric}]
                                           [--request-format {json}] [-D]
                                           [-F FIELD]
                                           ROUTER
```

List L3 agents hosting a router.

Positional arguments:

ROUTER Router to query.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron l3-agent-router-add

```
usage: neutron l3-agent-router-add [-h] [--request-format {json}]
                                   L3_AGENT ROUTER
```

Add a router to a L3 agent.

Positional arguments:

L3_AGENT ID of the L3 agent.

ROUTER Router to add.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron l3-agent-router-remove

```
usage: neutron l3-agent-router-remove [-h] [--request-format {json}]
                                       L3_AGENT ROUTER
```

Remove a router from a L3 agent.

Positional arguments:

L3_AGENT ID of the L3 agent.

ROUTER Router to remove.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-agent-hosting-pool

```
usage: neutron lb-agent-hosting-pool [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json}] [-D] [-F FIELD]
                                     POOL
```

Get loadbalancer agent hosting a pool. Deriving from ListCommand though server will return only one agent to keep common output format for all agent schedulers

Positional arguments:

POOL Pool to query.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lb-healthmonitor-associate

```
usage: neutron lb-healthmonitor-associate [-h] [--request-format {json}]
                                           HEALTH_MONITOR_ID POOL
```

Create a mapping between a health monitor and a pool.

Positional arguments:

HEALTH_MONITOR_ID Health monitor to associate.

POOL ID of the pool to be associated with the health monitor.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-healthmonitor-create

```
usage: neutron lb-healthmonitor-create [-h]
                                        [-f {html,json,shell,table,value,yaml}]
                                        [-c COLUMN] [--max-width <integer>]
                                        [--noindent] [--prefix PREFIX]
                                        [--request-format {json}]
                                        [--tenant-id TENANT_ID]
                                        [--admin-state-down]
```

```

[--expected-codes EXPECTED_CODES]
[--http-method HTTP_METHOD]
[--url-path URL_PATH] --delay DELAY
--max-retries MAX_RETRIES --timeout
TIMEOUT --type {PING,TCP,HTTP,HTTPS}

```

Create a health monitor.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--expected-codes EXPECTED_CODES The list of HTTP status codes expected in response from the member to declare it healthy. This attribute can contain one value, or a list of values separated by comma, or a range of values (e.g. "200-299"). If this attribute is not specified, it defaults to "200".

--http-method HTTP_METHOD The HTTP method used for requests by the monitor of type HTTP.

--url-path URL_PATH The HTTP path used in the HTTP request used by the monitor to test a member health. This must be a string beginning with a / (forward slash).

--delay DELAY The time in seconds between sending probes to members.

--max-retries MAX_RETRIES Number of permissible connection failures before changing the member status to INACTIVE. [1..10]

--timeout TIMEOUT Maximum number of seconds for a monitor to wait for a connection to be established before it times out. The value must be less than the delay value.

--type {PING,TCP,HTTP,HTTPS} One of the predefined health monitor types.

neutron lb-healthmonitor-delete

```

usage: neutron lb-healthmonitor-delete [-h] [--request-format {json}]
                                         HEALTH_MONITOR

```

Delete a given health monitor.

Positional arguments:

HEALTH_MONITOR ID of health_monitor to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-healthmonitor-disassociate

```

usage: neutron lb-healthmonitor-disassociate [-h] [--request-format {json}]
                                              HEALTH_MONITOR_ID POOL

```

Remove a mapping from a health monitor to a pool.

Positional arguments:

HEALTH_MONITOR_ID Health monitor to associate.

POOL ID of the pool to be associated with the health monitor.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-healthmonitor-list

```
usage: neutron lb-healthmonitor-list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json}] [-D] [-F FIELD]
                                     [-P SIZE] [--sort-key FIELD]
                                     [--sort-dir {asc,desc}]
```

List health monitors that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lb-healthmonitor-show

```
usage: neutron lb-healthmonitor-show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}] [-D] [-F FIELD]
                                     HEALTH_MONITOR
```

Show information of a given health monitor.

Positional arguments:

HEALTH_MONITOR ID of health_monitor to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lb-healthmonitor-update

```
usage: neutron lb-healthmonitor-update [-h] [--request-format {json}]
                                         HEALTH_MONITOR
```

Update a given health monitor.

Positional arguments:

HEALTH_MONITOR ID of health_monitor to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-member-create

```
usage: neutron lb-member-create [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}]
                                [--tenant-id TENANT_ID] [--admin-state-down]
                                [--weight WEIGHT] --address ADDRESS
                                --protocol-port PROTOCOL_PORT
                                POOL
```

Create a member.

Positional arguments:

POOL Pool ID or name this vip belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--weight WEIGHT Weight of pool member in the pool (default:1, [0..256]).

--address ADDRESS IP address of the pool member on the pool network.

--protocol-port PROTOCOL_PORT Port on which the pool member listens for requests or connections.

neutron lb-member-delete

```
usage: neutron lb-member-delete [-h] [--request-format {json}] MEMBER
```

Delete a given member.

Positional arguments:

MEMBER ID or name of member to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-member-list

```
usage: neutron lb-member-list [-h] [-f {csv,html,json,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--quote {all,minimal,none,nonnumeric}]
                             [--request-format {json}] [-D] [-F FIELD]
                             [-P SIZE] [--sort-key FIELD]
                             [--sort-dir {asc,desc}]
```

List members that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lb-member-show

```
usage: neutron lb-member-show [-h] [-f {html,json,shell,table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>] [--noindent]
                              [--prefix PREFIX] [--request-format {json}] [-D]
                              [-F FIELD]
                              MEMBER
```

Show information of a given member.

Positional arguments:

MEMBER ID of member to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lb-member-update

```
usage: neutron lb-member-update [-h] [--request-format {json}] MEMBER
```

Update a given member.

Positional arguments:

MEMBER ID or name of member to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-pool-create

```
usage: neutron lb-pool-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id TENANT_ID] [--admin-state-down]
                             [--description DESCRIPTION] --lb-method
                             {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP} --name
                             NAME --protocol {HTTP,HTTPS,TCP} --subnet-id
                             SUBNET [--provider PROVIDER]
```

Create a pool.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--description DESCRIPTION Description of the pool.

--lb-method {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP} The algorithm used to distribute load between the members of the pool.

--name NAME The name of the pool.

--protocol {HTTP,HTTPS,TCP} Protocol for balancing.

--subnet-id SUBNET The subnet on which the members of the pool will be located.

--provider PROVIDER Provider name of loadbalancer service.

neutron lb-pool-delete

```
usage: neutron lb-pool-delete [-h] [--request-format {json}] POOL
```

Delete a given pool.

Positional arguments:

POOL ID or name of pool to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-pool-list

```
usage: neutron lb-pool-list [-h] [-f {csv,html,json,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--quote {all,minimal,none,nonnumeric}]
                             [--request-format {json}] [-D] [-F FIELD]
                             [-P SIZE] [--sort-key FIELD]
                             [--sort-dir {asc,desc}]
```

List pools that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lb-pool-list-on-agent

```
usage: neutron lb-pool-list-on-agent [-h]
                                       [-f {csv,html,json,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--noindent]
                                       [--quote {all,minimal,none,nonnumeric}]
                                       [--request-format {json}] [-D] [-F FIELD]
                                       LBAAS_AGENT
```

List the pools on a loadbalancer agent.

Positional arguments:

LBAAS_AGENT ID of the loadbalancer agent to query.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron lb-pool-show

```
usage: neutron lb-pool-show [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}] [-D]
                             [-F FIELD]
                             POOL
```

Show information of a given pool.

Positional arguments:

POOL ID or name of pool to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron lb-pool-stats

```
usage: neutron lb-pool-stats [-h] [-f {html,json,shell,table,value,yaml}]
                              [-c COLUMN] [--max-width <integer>] [--noindent]
                              [--prefix PREFIX] [--request-format {json}] [-D]
                              [-F FIELD]
                              POOL
```

Retrieve stats for a given pool.

Positional arguments:

POOL ID or name of pool to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron lb-pool-update

```
usage: neutron lb-pool-update [-h] [--request-format {json}] POOL
```

Update a given pool.

Positional arguments:

POOL ID or name of pool to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-vip-create

```
usage: neutron lb-vip-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id TENANT_ID] [--address ADDRESS]
                             [--admin-state-down]
                             [--connection-limit CONNECTION_LIMIT]
                             [--description DESCRIPTION] --name NAME
                             --protocol-port PROTOCOL_PORT --protocol
                             {TCP,HTTP,HTTPS} --subnet-id SUBNET
                             POOL
```

Create a vip.

Positional arguments:

POOL Pool ID or name this vip belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--address ADDRESS IP address of the vip.

--admin-state-down Set admin state up to false.

--connection-limit CONNECTION_LIMIT The maximum number of connections per second allowed for the vip. Positive integer or -1 for unlimited (default).

--description DESCRIPTION Description of the vip.

--name NAME Name of the vip.

--protocol-port PROTOCOL_PORT TCP port on which to listen for client traffic that is associated with the vip address.

--protocol {TCP,HTTP,HTTPS} Protocol for balancing.

--subnet-id SUBNET The subnet on which to allocate the vip address.

neutron lb-vip-delete

```
usage: neutron lb-vip-delete [-h] [--request-format {json}] VIP
```

Delete a given vip.

Positional arguments:

VIP ID or name of vip to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lb-vip-list

```
usage: neutron lb-vip-list [-h] [-f {csv,html,json,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--quote {all,minimal,none,nonnumeric}]
                           [--request-format {json}] [-D] [-F FIELD] [-P SIZE]
                           [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List vips that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lb-vip-show

```
usage: neutron lb-vip-show [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--prefix PREFIX] [--request-format {json}] [-D]
                           [-F FIELD]
                           VIP
```

Show information of a given vip.

Positional arguments:

VIP ID or name of vip to look up.

Optional arguments:

-h, --help show this help message and exit

- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron lb-vip-update

```
usage: neutron lb-vip-update [-h] [--request-format {json}] VIP
```

Update a given vip.

Positional arguments:

VIP ID or name of vip to update.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-agent-hosting-loadbalancer

```
usage: neutron lbaas-agent-hosting-loadbalancer [-h]
                                                [-f {csv,html,json,table,value,yaml}]
                                                [-c COLUMN]
                                                [--max-width <integer>]
                                                [--noindent]
                                                [--quote {all,minimal,none,nonnumeric}
↪ ]
                                                [--request-format {json}] [-D]
                                                [-F FIELD]
                                                LOADBALANCER
```

Get lbaas v2 agent hosting a loadbalancer. Deriving from ListCommand though server will return only one agent to keep common output format for all agent schedulers

Positional arguments:

LOADBALANCER LoadBalancer to query.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-healthmonitor-create

```
usage: neutron lbaas-healthmonitor-create [-h]
                                           [-f {html,json,shell,table,value,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--noindent] [--prefix PREFIX]
                                           [--request-format {json}]
```



```

[--tenant-id TENANT_ID]
[--name NAME] [--admin-state-down]
[--expected-codes EXPECTED_CODES]
[--http-method HTTP_METHOD]
[--url-path URL_PATH] --delay DELAY
--max-retries MAX_RETRIES --timeout
TIMEOUT --type {PING,TCP,HTTP,HTTPS}
--pool POOL

```

LBaaS v2 Create a healthmonitor.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--name NAME Name of the health monitor to be created.

--admin-state-down Set admin state up to false.

--expected-codes EXPECTED_CODES The list of HTTP status codes expected in response from the member to declare it healthy. This attribute can contain one value, or a list of values separated by comma, or a range of values (e.g. “200-299”). If this attribute is not specified, it defaults to “200”.

--http-method HTTP_METHOD The HTTP method used for requests by the monitor of type HTTP.

--url-path URL_PATH The HTTP path used in the HTTP request used by the monitor to test a member health. This must be a string beginning with a / (forward slash).

--delay DELAY The time in seconds between sending probes to members.

--max-retries MAX_RETRIES Number of permissible connection failures before changing the member status to INACTIVE. [1..10].

--timeout TIMEOUT Maximum number of seconds for a monitor to wait for a connection to be established before it times out. The value must be less than the delay value.

--type {PING,TCP,HTTP,HTTPS} One of the predefined health monitor types.

--pool POOL ID or name of the pool that this healthmonitor will monitor.

neutron lbaas-healthmonitor-delete

```

usage: neutron lbaas-healthmonitor-delete [-h] [--request-format {json}]
HEALTHMONITOR

```

LBaaS v2 Delete a given healthmonitor.

Positional arguments:

HEALTHMONITOR ID or name of healthmonitor to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-healthmonitor-list

```
usage: neutron lbaas-healthmonitor-list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
                                         [--request-format {json}] [-D]
                                         [-F FIELD] [-P SIZE]
                                         [--sort-key FIELD]
                                         [--sort-dir {asc,desc}]
```

LBaaS v2 List healthmonitors that belong to a given tenant.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.
- P SIZE, --page-size SIZE** Specify retrieve unit of each request, then split one request to several requests.
- sort-key FIELD** Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
- sort-dir {asc,desc}** Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-healthmonitor-show

```
usage: neutron lbaas-healthmonitor-show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}] [-D]
                                         [-F FIELD]
                                         HEALTHMONITOR
```

LBaaS v2 Show information of a given healthmonitor.

Positional arguments:

HEALTHMONITOR ID or name of healthmonitor to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-healthmonitor-update

```
usage: neutron lbaas-healthmonitor-update [-h] [--request-format {json}]
                                           [--name NAME]
                                           HEALTHMONITOR
```

LBaaS v2 Update a given healthmonitor.

Positional arguments:

HEALTHMONITOR ID or name of healthmonitor to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Updated name of the health monitor.

neutron lbaas-l7policy-create

```
usage: neutron lbaas-l7policy-create [-h]
                                       [-f {html,json,shell,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--noindent] [--prefix PREFIX]
                                       [--request-format {json}]
                                       [--tenant-id TENANT_ID] [--name NAME]
                                       [--description DESCRIPTION] --action
                                       ACTION [--redirect-pool REDIRECT_POOL]
                                       [--redirect-url REDIRECT_URL]
                                       [--position POSITION]
                                       [--admin-state-down] --listener LISTENER
```

LBaaS v2 Create L7 policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--name NAME Name of the policy.

--description DESCRIPTION Description of the policy.

--action ACTION Action type of the policy.

--redirect-pool REDIRECT_POOL ID or name of the pool for REDIRECT_TO_POOL action type.

--redirect-url REDIRECT_URL URL for REDIRECT_TO_URL action type. This should be a valid URL string.

--position POSITION L7 policy position in ordered policies list. This must be an integer starting from 1. Not specifying the position will place the policy at the tail of existing policies list.

--admin-state-down Set admin state up to false.

--listener LISTENER ID or name of the listener this policy belongs to.

neutron lbaas-l7policy-delete

```
usage: neutron lbaas-l7policy-delete [-h] [--request-format {json}] L7POLICY
```

LBaaS v2 Delete a given L7 policy.

Positional arguments:

L7POLICY ID or name of l7policy to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-l7policy-list

```
usage: neutron lbaas-l7policy-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

LBaaS v2 List L7 policies that belong to a given listener.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-l7policy-show

```
usage: neutron lbaas-l7policy-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   L7POLICY
```

LBaaS v2 Show information of a given L7 policy.

Positional arguments:

L7POLICY ID or name of l7policy to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-l7policy-update

```
usage: neutron lbaas-l7policy-update [-h] [--request-format {json}]
                                     [--name NAME] [--description DESCRIPTION]
                                     [--action ACTION]
                                     [--redirect-pool REDIRECT_POOL]
                                     [--redirect-url REDIRECT_URL]
                                     [--position POSITION]
                                     [--admin-state-up {True,False}]
                                     L7POLICY
```

LBaaS v2 Update a given L7 policy.

Positional arguments:

L7POLICY ID or name of l7policy to update.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- name NAME** Name of the policy.
- description DESCRIPTION** Description of the policy.
- action ACTION** Action type of the policy.
- redirect-pool REDIRECT_POOL** ID or name of the pool for REDIRECT_TO_POOL action type.
- redirect-url REDIRECT_URL** URL for REDIRECT_TO_URL action type. This should be a valid URL string.
- position POSITION** L7 policy position in ordered policies list. This must be an integer starting from 1. Not specifying the position will place the policy at the tail of existing policies list.
- admin-state-up {True,False}** Specify the administrative state of the policy (True meaning “Up”).

neutron lbaas-l7rule-create

```
usage: neutron lbaas-l7rule-create [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}]
                                   [--tenant-id TENANT_ID] --type
                                   {HOST_NAME,PATH,FILE_TYPE,HEADER,COOKIE}
                                   --compare-type
                                   {REGEX,STARTS_WITH,ENDS_WITH,CONTAINS,EQUAL_TO}
                                   [--invert-compare] [--key KEY] --value
```

```
VALUE [--admin-state-down]
L7POLICY
```

LBaaS v2 Create L7 rule.

Positional arguments:

L7POLICY ID or name of L7 policy this rule belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--type {HOST_NAME,PATH,FILE_TYPE,HEADER,COOKIE} Rule type.

--compare-type {REGEX,STARTS_WITH,ENDS_WITH,CONTAINS,EQUAL_TO} Rule compare type.

--invert-compare Invert the compare type.

--key KEY Key to compare. Relevant for HEADER and COOKIE types only.

--value VALUE Value to compare.

--admin-state-down Set admin state up to false

neutron lbaas-l7rule-delete

```
usage: neutron lbaas-l7rule-delete [-h] [--request-format {json}]
                                   RULE L7POLICY
```

LBaaS v2 Delete a given L7 rule.

Positional arguments:

RULE ID or name of rule to delete.

L7POLICY ID or name of L7 policy this rule belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-l7rule-list

```
usage: neutron lbaas-l7rule-list [-h] [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
                                L7POLICY
```

LBaaS v2 List L7 rules that belong to a given L7 policy.

Positional arguments:

L7POLICY ID or name of L7 policy this rule belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc, desc} Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-l7rule-show

```
usage: neutron lbaas-l7rule-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                RULE L7POLICY
```

LBaaS v2 Show information of a given rule.

Positional arguments:

RULE ID or name of rule to look up.

L7POLICY ID or name of L7 policy this rule belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-l7rule-update

```
usage: neutron lbaas-l7rule-update [-h] [--request-format {json}]
                                   [--type {HOST_NAME,PATH,FILE_TYPE,HEADER,COOKIE}]
                                   [--compare-type {REGEX,STARTS_WITH,ENDS_WITH,
↳CONTAINS,EQUAL_TO}]
                                   [--invert-compare] [--key KEY]
                                   [--value VALUE]
                                   [--admin-state-up {True,False}]
                                   RULE L7POLICY
```

LBaaS v2 Update a given L7 rule.

Positional arguments:

RULE ID or name of rule to update.

L7POLICY ID or name of L7 policy this rule belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--type {HOST_NAME,PATH,FILE_TYPE,HEADER,COOKIE} Rule type.

--compare-type {REGEX,STARTS_WITH,ENDS_WITH,CONTAINS,EQUAL_TO} Rule compare type.

--invert-compare Invert the compare type.

--key KEY Key to compare. Relevant for HEADER and COOKIE types only.

--value VALUE Value to compare.

--admin-state-up {True,False} Specify the administrative state of the rule (True meaning “Up”).

neutron lbaas-listener-create

```
usage: neutron lbaas-listener-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}]
                                     [--tenant-id TENANT_ID]
                                     [--admin-state-down]
                                     [--connection-limit CONNECTION_LIMIT]
                                     [--description DESCRIPTION] [--name NAME]
                                     [--default-tls-container-ref DEFAULT_TLS_
↳CONTAINER_REF]
                                     [--sni-container-refs SNI_CONTAINER_REFS [SNI_
↳CONTAINER_REFS ...]]
                                     [--default-pool DEFAULT_POOL]
                                     [--loadbalancer LOADBALANCER] --protocol
{TCP,HTTP,HTTPS,TERMINATED_HTTPS}
                                     --protocol-port PORT
```

LBaaS v2 Create a listener.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--connection-limit CONNECTION_LIMIT The maximum number of connections per second allowed for the vip. Positive integer or -1 for unlimited (default).

--description DESCRIPTION Description of the listener.

--name NAME The name of the listener. At least one of --default- pool or --loadbalancer must be specified.

--default-tls-container-ref DEFAULT_TLS_CONTAINER_REF Default TLS container reference to retrieve TLS information.

--sni-container-refs SNI_CONTAINER_REFS [SNI_CONTAINER_REFS ...] List of TLS container references for SNI.

--default-pool **DEFAULT_POOL** Default pool for the listener.

--loadbalancer **LOADBALANCER** ID or name of the load balancer.

--protocol **{TCP,HTTP,HTTPS,TERMINATED_HTTPS}** Protocol for the listener.

--protocol-port **PORT** Protocol port for the listener.

neutron lbaas-listener-delete

```
usage: neutron lbaas-listener-delete [-h] [--request-format {json}] LISTENER
```

LBaaS v2 Delete a given listener.

Positional arguments:

LISTENER ID or name of listener to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-listener-list

```
usage: neutron lbaas-listener-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

LBaaS v2 List listeners that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-listener-show

```
usage: neutron lbaas-listener-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
```

```
 [--request-format {json}] [-D] [-F FIELD]
LISTENER
```

LBaaS v2 Show information of a given listener.

Positional arguments:

LISTENER ID or name of listener to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-listener-update

```
usage: neutron lbaas-listener-update [-h] [--request-format {json}] LISTENER
```

LBaaS v2 Update a given listener.

Positional arguments:

LISTENER ID of listener to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-loadbalancer-create

```
usage: neutron lbaas-loadbalancer-create [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}]
                                         [--tenant-id TENANT_ID]
                                         [--description DESCRIPTION]
                                         [--admin-state-down] [--name NAME]
                                         [--provider PROVIDER]
                                         [--flavor FLAVOR]
                                         [--vip-address VIP_ADDRESS]
                                         VIP_SUBNET
```

LBaaS v2 Create a loadbalancer.

Positional arguments:

VIP_SUBNET Load balancer VIP subnet.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id **TENANT_ID** The owner tenant ID.
--description **DESCRIPTION** Description of the load balancer.
--admin-state-down Set admin state up to false.
--name **NAME** Name of the load balancer.
--provider **PROVIDER** Provider name of load balancer service.
--flavor **FLAVOR** ID or name of flavor.
--vip-address **VIP_ADDRESS** VIP address for the load balancer.

neutron lbaas-loadbalancer-delete

```
usage: neutron lbaas-loadbalancer-delete [-h] [--request-format {json}]
                                         LOADBALANCER
```

LBaaS v2 Delete a given loadbalancer.

Positional arguments:

LOADBALANCER ID or name of loadbalancer to delete.

Optional arguments:

-h, --help show this help message and exit
--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-loadbalancer-list

```
usage: neutron lbaas-loadbalancer-list [-h]
                                       [-f {csv,html,json,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--noindent]
                                       [--quote {all,minimal,none,nonnumeric}]
                                       [--request-format {json}] [-D]
                                       [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                       [--sort-dir {asc,desc}]
```

LBaaS v2 List loadbalancers that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit
--request-format {json} **DEPRECATED!** Only JSON request format is supported.
-D, --show-details Show detailed information.
-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.
-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.
--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-loadbalancer-list-on-agent

```
usage: neutron lbaas-loadbalancer-list-on-agent [-h]
                                                [-f {csv,html,json,table,value,yaml}]
                                                [-c COLUMN]
                                                [--max-width <integer>]
                                                [--noindent]
                                                [--quote {all,minimal,none,nonnumeric}
↪ ]
                                                [--request-format {json}] [-D]
                                                [-F FIELD]
                                                LBAAS_AGENT
```

List the loadbalancers on a loadbalancer v2 agent.

Positional arguments:

LBAAS_AGENT ID of the loadbalancer agent to query.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-loadbalancer-show

```
usage: neutron lbaas-loadbalancer-show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}] [-D]
                                         [-F FIELD]
                                         LOADBALANCER
```

LBaaS v2 Show information of a given loadbalancer.

Positional arguments:

LOADBALANCER ID or name of loadbalancer to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-loadbalancer-stats

```
usage: neutron lbaas-loadbalancer-stats [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
```

```

[--noindent] [--prefix PREFIX]
[--request-format {json}] [-D]
[-F FIELD]
LOADBALANCER

```

Retrieve stats for a given loadbalancer.

Positional arguments:

LOADBALANCER ID or name of loadbalancer to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-loadbalancer-status

```

usage: neutron lbaas-loadbalancer-status [-h] [--request-format {json}]
LOADBALANCER

```

Retrieve status for a given loadbalancer. The only output is a formatted JSON tree, and the table format does not support this type of data.

Positional arguments:

LOADBALANCER ID or name of loadbalancer to show.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-loadbalancer-update

```

usage: neutron lbaas-loadbalancer-update [-h] [--request-format {json}]
LOADBALANCER

```

LBaaS v2 Update a given loadbalancer.

Positional arguments:

LOADBALANCER ID or name of loadbalancer to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-member-create

```
usage: neutron lbaas-member-create [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}]
                                   [--tenant-id TENANT_ID]
                                   [--admin-state-down] [--weight WEIGHT]
                                   [--name NAME] --subnet SUBNET --address
                                   ADDRESS --protocol-port PROTOCOL_PORT
                                   POOL
```

LBaaS v2 Create a member.

Positional arguments:

POOL ID or name of the pool that this member belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false

--weight WEIGHT Weight of member in the pool (default:1, [0..256]).

--name NAME Name of the member to be created.

--subnet SUBNET Subnet ID or name for the member.

--address ADDRESS IP address of the pool member in the pool.

--protocol-port PROTOCOL_PORT Port on which the pool member listens for requests or connections.

neutron lbaas-member-delete

```
usage: neutron lbaas-member-delete [-h] [--request-format {json}] MEMBER POOL
```

LBaaS v2 Delete a given member.

Positional arguments:

MEMBER ID or name of member to delete.

POOL ID or name of the pool that this member belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-member-list

```
usage: neutron lbaas-member-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
```

```

[--request-format {json}] [-D] [-F FIELD]
[-P SIZE] [--sort-key FIELD]
[--sort-dir {asc,desc}]
POOL

```

LBaaS v2 List members that belong to a given pool.

Positional arguments:

POOL ID or name of the pool that this member belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-member-show

```

usage: neutron lbaas-member-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                MEMBER POOL

```

LBaaS v2 Show information of a given member.

Positional arguments:

MEMBER ID or name of member to look up.

POOL ID or name of the pool that this member belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-member-update

```

usage: neutron lbaas-member-update [-h] [--request-format {json}]
                                   [--admin-state-down] [--weight WEIGHT]
                                   [--name NAME]
                                   MEMBER POOL

```

LBaaS v2 Update a given member.

Positional arguments:

MEMBER ID or name of member to update.

POOL ID or name of the pool that this member belongs to

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--admin-state-down Set admin state up to false

--weight WEIGHT Weight of member in the pool (default:1, [0..256])

--name NAME Updated name of the member.

neutron lbaas-pool-create

```
usage: neutron lbaas-pool-create [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}]
                                [--tenant-id TENANT_ID] [--admin-state-down]
                                [--description DESCRIPTION]
                                [--session-persistence type=TYPE[,cookie_name=COOKIE_
↪NAME]]
                                [--name NAME] [--listener LISTENER]
                                [--loadbalancer LOADBALANCER] --lb-algorithm
                                {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP}
                                --protocol {HTTP,HTTPS,TCP}
```

LBaaS v2 Create a pool.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--description DESCRIPTION Description of the pool.

--session-persistence type=TYPE[,cookie_name=COOKIE_NAME] The type of session persistence to use and associated cookie name

--name NAME The name of the pool.

--listener LISTENER Listener whose default-pool should be set to this pool. At least one of **--listener** or **--loadbalancer** must be specified.

--loadbalancer LOADBALANCER Loadbalancer with which this pool should be associated. At least one of **--listener** or **--loadbalancer** must be specified.

--lb-algorithm {ROUND_ROBIN,LEAST_CONNECTIONS,SOURCE_IP} The algorithm used to distribute load between the members of the pool.

--protocol {HTTP,HTTPS,TCP} Protocol for balancing.

neutron lbaas-pool-delete

```
usage: neutron lbaas-pool-delete [-h] [--request-format {json}] POOL
```

LBaaS v2 Delete a given pool.

Positional arguments:

POOL ID or name of pool to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron lbaas-pool-list

```
usage: neutron lbaas-pool-list [-h] [-f {csv,html,json,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--noindent]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--request-format {json}] [-D] [-F FIELD]
                               [-P SIZE] [--sort-key FIELD]
                               [--sort-dir {asc,desc}]
```

LBaaS v2 List pools that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron lbaas-pool-show

```
usage: neutron lbaas-pool-show [-h] [-f {html,json,shell,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--noindent] [--prefix PREFIX]
                               [--request-format {json}] [-D] [-F FIELD]
                               POOL
```

LBaaS v2 Show information of a given pool.

Positional arguments:

POOL ID or name of pool to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron lbaas-pool-update

```
usage: neutron lbaas-pool-update [-h] [--request-format {json}] POOL
```

LBaaS v2 Update a given pool.

Positional arguments:

POOL ID or name of pool to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron meter-label-create

```
usage: neutron meter-label-create [-h] [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}]
                                   [--tenant-id TENANT_ID]
                                   [--description DESCRIPTION] [--shared]
                                   NAME
```

Create a metering label for a given tenant.

Positional arguments:

NAME Name of metering label to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of metering label to create.

--shared Set the label as shared.

neutron meter-label-delete

```
usage: neutron meter-label-delete [-h] [--request-format {json}]
                                   METERING_LABEL
```

Delete a given metering label.

Positional arguments:

METERING_LABEL ID or name of metering_label to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron meter-label-list

```
usage: neutron meter-label-list [-h] [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
```

List metering labels that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron meter-label-rule-create

```
usage: neutron meter-label-rule-create [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}]
                                         [--tenant-id TENANT_ID]
                                         [--direction {ingress,egress}]
                                         [--excluded]
                                         LABEL REMOTE_IP_PREFIX
```

Create a metering label rule for a given label.

Positional arguments:

LABEL Id or Name of the label.

REMOTE_IP_PREFIX CIDR to match on.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--direction {ingress,egress} Direction of traffic, default: ingress.

--excluded Exclude this CIDR from the label, default: not excluded.

neutron meter-label-rule-delete

```
usage: neutron meter-label-rule-delete [-h] [--request-format {json}]
                                         METERING_LABEL_RULE
```

Delete a given metering label.

Positional arguments:

METERING_LABEL_RULE ID or name of metering_label_rule to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron meter-label-rule-list

```
usage: neutron meter-label-rule-list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json}] [-D] [-F FIELD]
                                     [-P SIZE] [--sort-key FIELD]
                                     [--sort-dir {asc,desc}]
```

List metering labels that belong to a given label.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron meter-label-rule-show

```
usage: neutron meter-label-rule-show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}] [-D] [-F FIELD]
                                     METERING_LABEL_RULE
```

Show information of a given metering label rule.

Positional arguments:

METERING_LABEL_RULE ID or name of metering_label_rule to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron meter-label-show

```
usage: neutron meter-label-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                METERING_LABEL
```

Show information of a given metering label.

Positional arguments:

METERING_LABEL ID or name of metering_label to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron net-create

```
usage: neutron net-create [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--prefix PREFIX] [--request-format {json}]
                           [--tenant-id TENANT_ID] [--admin-state-down]
                           [--shared] [--provider:network_type <network_type>]
                           [--provider:physical_network <physical_network_name>]
                           [--provider:segmentation_id <segmentation_id>]
                           [--vlan-transparent {True,False}]
                           [--description DESCRIPTION]
                           [--qos-policy QOS_POLICY]
                           [--availability-zone-hint AVAILABILITY_ZONE]
```

```
[--dns-domain DNS_DOMAIN]
NAME
```

Create a network for a given tenant.

Positional arguments:

NAME Name of network to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--shared Set the network as shared.

--provider:network_type <network_type> The physical mechanism by which the virtual network is implemented.

--provider:physical_network <physical_network_name> Name of the physical network over which the virtual network is implemented.

--provider:segmentation_id <segmentation_id> VLAN ID for VLAN networks or tunnel-id for GRE/VXLAN networks.

--vlan-transparent {True,False} Create a vlan transparent network.

--description DESCRIPTION Description of network.

--qos-policy QOS_POLICY Attach QoS policy ID or name to the resource.

--availability-zone-hint AVAILABILITY_ZONE Availability Zone for the network (requires availability zone extension, this option can be repeated).

--dns-domain DNS_DOMAIN Assign DNS domain to the network (requires DNS integration extension)

neutron net-delete

```
usage: neutron net-delete [-h] [--request-format {json}] NETWORK
```

Delete a given network.

Positional arguments:

NETWORK ID or name of network to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron net-external-list

```
usage: neutron net-external-list [-h] [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
                                [--tenant-id TENANT_ID] [--name NAME]
                                [--admin-state-up {True,False}]
                                [--status STATUS] [--shared {True,False}]
                                [--router:external {True,False}] [--tags TAG]
                                [--tags-any TAG] [--not-tags TAG]
                                [--not-tags-any TAG]
```

List external networks that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron net-gateway-connect

```
usage: neutron net-gateway-connect [-h] [--request-format {json}]
                                   [--segmentation-type SEGMENTATION_TYPE]
                                   [--segmentation-id SEGMENTATION_ID]
                                   NET-GATEWAY-ID NETWORK-ID
```

Add an internal network interface to a router.

Positional arguments:

NET-GATEWAY-ID ID of the network gateway.

NETWORK-ID ID of the internal network to connect on the gateway.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--segmentation-type SEGMENTATION_TYPE L2 segmentation strategy on the external side of the gateway (e.g.: VLAN, FLAT).

--segmentation-id SEGMENTATION_ID Identifier for the L2 segment on the external side of the gateway.

neutron net-gateway-create

```
usage: neutron net-gateway-create [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--noindent] [--prefix PREFIX]
                                  [--request-format {json}]
                                  [--tenant-id TENANT_ID]
                                  [--device id=ID,interface_name=NAME_OR_ID]
                                  NAME
```

Create a network gateway.

Positional arguments:

NAME Name of network gateway to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--device id=ID,interface_name=NAME_OR_ID Device info for this gateway. You can repeat this option for multiple devices for HA gateways.

neutron net-gateway-delete

```
usage: neutron net-gateway-delete [-h] [--request-format {json}]
                                  NETWORK_GATEWAY
```

Delete a given network gateway.

Positional arguments:

NETWORK_GATEWAY ID or name of network_gateway to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron net-gateway-disconnect

```
usage: neutron net-gateway-disconnect [-h] [--request-format {json}]
                                       [--segmentation-type SEGMENTATION_TYPE]
                                       [--segmentation-id SEGMENTATION_ID]
                                       NET-GATEWAY-ID NETWORK-ID
```

Remove a network from a network gateway.

Positional arguments:

NET-GATEWAY-ID ID of the network gateway.

NETWORK-ID ID of the internal network to connect on the gateway.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- segmentation-type SEGMENTATION_TYPE** L2 segmentation strategy on the external side of the gateway (e.g.: VLAN, FLAT).
- segmentation-id SEGMENTATION_ID** Identifier for the L2 segment on the external side of the gateway.

neutron net-gateway-list

```
usage: neutron net-gateway-list [-h] [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json}] [-D] [-F FIELD]
```

List network gateways for a given tenant.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron net-gateway-show

```
usage: neutron net-gateway-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                NETWORK_GATEWAY
```

Show information of a given network gateway.

Positional arguments:

NETWORK_GATEWAY ID or name of network_gateway to look up.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.

neutron net-gateway-update

```
usage: neutron net-gateway-update [-h] [--request-format {json}]
                                NETWORK_GATEWAY
```

Update the name for a network gateway.

Positional arguments:

NETWORK_GATEWAY ID or name of network_gateway to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron net-ip-availability-list

```
usage: neutron net-ip-availability-list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
                                         [--request-format {json}] [-D]
                                         [-F FIELD] [--sort-key FIELD]
                                         [--sort-dir {asc,desc}]
                                         [--ip-version {4,6}]
                                         [--network-id NETWORK_ID]
                                         [--network-name NETWORK_NAME]
                                         [--tenant-id TENANT_ID]
```

List IP usage of networks

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron net-ip-availability-show

```
usage: neutron net-ip-availability-show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}]
                                         NETWORK
```

Show IP usage of specific network

Positional arguments:

NETWORK ID or name of network to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron net-list

```
usage: neutron net-list [-h] [-f {csv,html,json,table,value,yaml}] [-c COLUMN]
                        [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json}] [-D] [-F FIELD] [-P SIZE]
                        [--sort-key FIELD] [--sort-dir {asc,desc}]
                        [--tenant-id TENANT_ID] [--name NAME]
                        [--admin-state-up {True,False}] [--status STATUS]
                        [--shared {True,False}]
                        [--router:external {True,False}] [--tags TAG]
                        [--tags-any TAG] [--not-tags TAG] [--not-tags-any TAG]
```

List networks that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron net-list-on-dhcp-agent

```
usage: neutron net-list-on-dhcp-agent [-h]
                                       [-f {csv,html,json,table,value,yaml}]
                                       [-c COLUMN] [--max-width <integer>]
                                       [--noindent]
                                       [--quote {all,minimal,none,nonnumeric}]
                                       [--request-format {json}] [-D]
                                       [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                       [--sort-dir {asc,desc}]
                                       [--tenant-id TENANT_ID] [--name NAME]
                                       [--admin-state-up {True,False}]
                                       [--status STATUS]
                                       [--shared {True,False}]
                                       [--router:external {True,False}]
                                       [--tags TAG] [--tags-any TAG]
                                       [--not-tags TAG] [--not-tags-any TAG]
                                       DHCP_AGENT
```

List the networks on a DHCP agent.

Positional arguments:

DHCP_AGENT ID of the DHCP agent.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron net-show

```
usage: neutron net-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--request-format {json}] [-D]
                        [-F FIELD]
                        NETWORK
```

Show information of a given network.

Positional arguments:

NETWORK ID or name of network to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron net-update

```
usage: neutron net-update [-h] [--request-format {json}]
                          [--qos-policy QOS_POLICY | --no-qos-policy]
                          [--dns-domain DNS_DOMAIN | --no-dns-domain]
                          NETWORK
```

Update network's information.

Positional arguments:

NETWORK ID or name of network to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--qos-policy QOS_POLICY Attach QoS policy ID or name to the resource.

--no-qos-policy Detach QoS policy from the resource.

--dns-domain DNS_DOMAIN Assign DNS domain to the network (requires DNS integration extension.)

--no-dns-domain Unassign DNS domain from the network (requires DNS integration extension.)

neutron port-create

```
usage: neutron port-create [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--prefix PREFIX] [--request-format {json}]
                           [--tenant-id TENANT_ID] [--name NAME]
                           [--description DESCRIPTION]
                           [--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR]
                           [--device-id DEVICE_ID]
                           [--device-owner DEVICE_OWNER] [--admin-state-down]
                           [--mac-address MAC_ADDRESS]
                           [--vnic-type <direct | direct-physical | macvtap | normal_
↳ | baremetal>]
                           [--binding-profile BINDING_PROFILE]
                           [--security-group SECURITY_GROUP | --no-security-groups]
                           [--extra-dhcp-opt EXTRA_DHCP_OPTS]
                           [--qos-policy QOS_POLICY]
                           [--allowed-address-pair ip_address=IP_ADDR[,mac_
↳ address=MAC_ADDR]
                           | --no-allowed-address-pairs] [--dns-name DNS_NAME]
                           NETWORK
```

Create a port for a given tenant.

Positional arguments:

NETWORK Network ID or name this port belongs to.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--name NAME Name of this port.

--description DESCRIPTION Description of this port.

--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR Desired IP and/or subnet for this port: subnet_id=<name_or_id>,ip_address=<ip>. You can repeat this option.

--device-id DEVICE_ID Device ID of this port.

--device-owner DEVICE_OWNER Device owner of this port.

--admin-state-down Set admin state up to false.

--mac-address MAC_ADDRESS MAC address of this port.

--vnic-type <direct | direct-physical | macvtap | normal | baremetal> VNIC type for this port.

--binding-profile BINDING_PROFILE Custom data to be passed as binding:profile.

--security-group SECURITY_GROUP Security group associated with the port. You can repeat this option.

--no-security-groups Associate no security groups with the port.

--extra-dhcp-opt EXTRA_DHCP_OPTS Extra dhcp options to be assigned to this port: opt_name=<dhcp_option_name>,opt_value=<value>,ip_version={4, 6}. You can repeat this option.

--qos-policy QOS_POLICY Attach QoS policy ID or name to the resource.

--allowed-address-pair ip_address=IP_ADDR[,mac_address=MAC_ADDR] Allowed address pair associated with the port. You can repeat this option.

--no-allowed-address-pairs Associate no allowed address pairs with the port.

--dns-name DNS_NAME Assign DNS name to the port (requires DNS integration extension)

neutron port-delete

```
usage: neutron port-delete [-h] [--request-format {json}] PORT
```

Delete a given port.

Positional arguments:

PORT ID or name of port to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron port-list

```
usage: neutron port-list [-h] [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json}] [-D] [-F FIELD] [-P SIZE]
                        [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List ports that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron port-show

```
usage: neutron port-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--request-format {json}] [-D]
                        [-F FIELD]
                        PORT
```

Show information of a given port.

Positional arguments:

PORT ID or name of port to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron port-update

```
usage: neutron port-update [-h] [--request-format {json}] [--name NAME]
                          [--description DESCRIPTION]
                          [--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR]
                          [--device-id DEVICE_ID]
                          [--device-owner DEVICE_OWNER]
                          [--admin-state-up {True,False}]
                          [--security-group SECURITY_GROUP | --no-security-groups]
                          [--extra-dhcp-opt EXTRA_DHCP_OPTS]
                          [--qos-policy QOS_POLICY | --no-qos-policy]
                          [--allowed-address-pair ip_address=IP_ADDR[,mac_
↪address=MAC_ADDR]
                          | --no-allowed-address-pairs]
                          [--dns-name DNS_NAME | --no-dns-name]
                          PORT
```

Update port's information.

Positional arguments:

PORT ID or name of port to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Name of this port.

--description DESCRIPTION Description of this port.

--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR Desired IP and/or subnet for this port: subnet_id=<name_or_id>,ip_address=<ip>. You can repeat this option.

--device-id DEVICE_ID Device ID of this port.

--device-owner DEVICE_OWNER Device owner of this port.

--admin-state-up {True,False} Set admin state up for the port.

--security-group SECURITY_GROUP Security group associated with the port. You can repeat this option.

--no-security-groups Associate no security groups with the port.

--extra-dhcp-opt EXTRA_DHCP_OPTS Extra dhcp options to be assigned to this port: opt_name=<dhcp_option_name>,opt_value=<value>,ip_version={4, 6}. You can repeat this option.

--qos-policy QOS_POLICY Attach QoS policy ID or name to the resource.

--no-qos-policy Detach QoS policy from the resource.

--allowed-address-pair ip_address=IP_ADDR[,mac_address=MAC_ADDR] Allowed address pair associated with the port. You can repeat this option.

--no-allowed-address-pairs Associate no allowed address pairs with the port.

--dns-name DNS_NAME Assign DNS name to the port (requires DNS integration extension.)

--no-dns-name Unassign DNS name from the port (requires DNS integration extension.)

neutron purge

```
usage: neutron purge [-h] [--request-format {json}] TENANT
```

Positional arguments:

TENANT ID of Tenant owning the resources to be deleted.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron qos-available-rule-types

```
usage: neutron qos-available-rule-types [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
                                         [--request-format {json}] [-D]
                                         [-F FIELD] [-P SIZE]
                                         [--sort-key FIELD]
                                         [--sort-dir {asc,desc}]
```

List available qos rule types.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc, desc} Sorts the list in the specified direction. You can repeat this option.

neutron qos-bandwidth-limit-rule-create

```
usage: neutron qos-bandwidth-limit-rule-create [-h]
                                                [-f {html,json,shell,table,value,yaml}]
                                                [-c COLUMN]
                                                [--max-width <integer>]
                                                [--noindent] [--prefix PREFIX]
                                                [--request-format {json}]
                                                [--tenant-id TENANT_ID]
                                                [--max-kbps MAX_KBPS]
                                                [--max-burst-kbps MAX_BURST_KBPS]
                                                QOS_POLICY
```

Create a qos bandwidth limit rule.

Positional arguments:

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--max-kbps MAX_KBPS max bandwidth in kbps.

--max-burst-kbps MAX_BURST_KBPS max burst bandwidth in kbps.

neutron qos-bandwidth-limit-rule-delete

```
usage: neutron qos-bandwidth-limit-rule-delete [-h] [--request-format {json}]
                                                BANDWIDTH_LIMIT_RULE QOS_POLICY
```

Delete a given qos bandwidth limit rule.

Positional arguments:

BANDWIDTH_LIMIT_RULE ID of bandwidth_limit_rule to delete.

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron qos-bandwidth-limit-rule-list

```
usage: neutron qos-bandwidth-limit-rule-list [-h]
                                             [-f {csv,html,json,table,value,yaml}]
                                             [-c COLUMN]
                                             [--max-width <integer>]
                                             [--noindent]
                                             [--quote {all,minimal,none,nonnumeric}]
                                             [--request-format {json}] [-D]
                                             [-F FIELD] [-P SIZE]
                                             [--sort-key FIELD]
                                             [--sort-dir {asc,desc}]
                                             QOS_POLICY
```

List all qos bandwidth limit rules belonging to the specified policy.

Positional arguments:

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron qos-bandwidth-limit-rule-show

```
usage: neutron qos-bandwidth-limit-rule-show [-h]
                                             [-f {html,json,shell,table,value,yaml}]
                                             [-c COLUMN]
                                             [--max-width <integer>]
                                             [--noindent] [--prefix PREFIX]
                                             [--request-format {json}] [-D]
                                             [-F FIELD]
                                             BANDWIDTH_LIMIT_RULE QOS_POLICY
```

Show information about the given qos bandwidth limit rule.

Positional arguments:

BANDWIDTH_LIMIT_RULE ID of bandwidth_limit_rule to look up.

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron qos-bandwidth-limit-rule-update

```
usage: neutron qos-bandwidth-limit-rule-update [-h] [--request-format {json}]
                                                [--max-kbps MAX_KBPS]
                                                [--max-burst-kbps MAX_BURST_KBPS]
                                                BANDWIDTH_LIMIT_RULE QOS_POLICY
```

Update the given qos bandwidth limit rule.

Positional arguments:

BANDWIDTH_LIMIT_RULE ID of bandwidth_limit_rule to update.

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--max-kbps MAX_KBPS max bandwidth in kbps.

--max-burst-kbps MAX_BURST_KBPS max burst bandwidth in kbps.

neutron qos-dscp-marking-rule-create

```
usage: neutron qos-dscp-marking-rule-create [-h]
                                             [-f {html,json,shell,table,value,yaml}]
                                             [-c COLUMN]
                                             [--max-width <integer>]
                                             [--noindent] [--prefix PREFIX]
                                             [--request-format {json}]
                                             [--tenant-id TENANT_ID]
                                             --dscp-mark DSCP_MARK
                                             QOS_POLICY
```

Create a QoS DSCP marking rule.

Positional arguments:

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--dscp-mark DSCP_MARK DSCP mark: value can be 0, even numbers from 8-56, excluding 42, 44, 50, 52, and 54.

neutron qos-dscp-marking-rule-delete

```
usage: neutron qos-dscp-marking-rule-delete [-h] [--request-format {json}]
                                             DSCP_MARKING_RULE QOS_POLICY
```

Delete a given qos dscp marking rule.

Positional arguments:

DSCP_MARKING_RULE ID of dscp_marking_rule to delete.

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron qos-dscp-marking-rule-list

```
usage: neutron qos-dscp-marking-rule-list [-h]
                                           [-f {csv,html,json,table,value,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--noindent]
                                           [--quote {all,minimal,none,nonnumeric}]
                                           [--request-format {json}] [-D]
                                           [-F FIELD] [-P SIZE]
                                           [--sort-key FIELD]
                                           [--sort-dir {asc,desc}]
                                           QOS_POLICY
```

List all QoS DSCP marking rules belonging to the specified policy.

Positional arguments:

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron qos-dscp-marking-rule-show

```
usage: neutron qos-dscp-marking-rule-show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}] [-D]
                                         [-F FIELD]
                                         DSCP_MARKING_RULE QOS_POLICY
```

Show information about the given qos dscp marking rule.

Positional arguments:

DSCP_MARKING_RULE ID of dscp_marking_rule to look up.

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron qos-dscp-marking-rule-update

```
usage: neutron qos-dscp-marking-rule-update [-h] [--request-format {json}]
                                           --dscp-mark DSCP_MARK
                                           DSCP_MARKING_RULE QOS_POLICY
```

Update the given QoS DSCP marking rule.

Positional arguments:

DSCP_MARKING_RULE ID of dscp_marking_rule to update.

QOS_POLICY ID or name of the QoS policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--dscp-mark DSCP_MARK DSCP mark: value can be 0, even numbers from 8-56, excluding 42, 44, 50, 52, and 54.

neutron qos-policy-create

```
usage: neutron qos-policy-create [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}]
                                [--tenant-id TENANT_ID]
                                [--description DESCRIPTION] [--shared]
                                NAME
```

Create a qos policy.

Positional arguments:

NAME Name of QoS policy to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of the QoS policy.

--shared Accessible by other tenants. Set shared to True (default is False).

neutron qos-policy-delete

```
usage: neutron qos-policy-delete [-h] [--request-format {json}] POLICY
```

Delete a given qos policy.

Positional arguments:

POLICY ID or name of policy to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron qos-policy-list

```
usage: neutron qos-policy-list [-h] [-f {csv,html,json,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>]
                             [--noindent]
                             [--quote {all,minimal,none,nonnumeric}]
                             [--request-format {json}] [-D] [-F FIELD]
                             [-P SIZE] [--sort-key FIELD]
                             [--sort-dir {asc,desc}]
```

List QoS policies that belong to a given tenant connection.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron qos-policy-show

```
usage: neutron qos-policy-show [-h] [-f {html,json,shell,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--noindent] [--prefix PREFIX]
                               [--request-format {json}] [-D] [-F FIELD]
                               POLICY
```

Show information of a given qos policy.

Positional arguments:

POLICY ID or name of policy to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron qos-policy-update

```
usage: neutron qos-policy-update [-h] [--request-format {json}] [--name NAME]
                                [--description DESCRIPTION] [--shared]
                                POLICY
```

Update a given qos policy.

Positional arguments:

POLICY ID or name of policy to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Name of QoS policy.

--description DESCRIPTION Description of the QoS policy.

--shared Accessible by other tenants. Set shared to True (default is False).

neutron queue-create

```
usage: neutron queue-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id TENANT_ID] [--min MIN] [--max MAX]
                             [--qos-marking QOS_MARKING] [--default DEFAULT]
                             [--dscp DSCP]
                             NAME
```

Create a queue.

Positional arguments:

NAME Name of queue.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--min MIN Minimum rate.

--max MAX Maximum rate.

--qos-marking QOS_MARKING QOS marking as untrusted or trusted.

--default DEFAULT If true all created ports will be the size of this queue, if queue is not specified

--dscp DSCP Differentiated Services Code Point.

neutron queue-delete

```
usage: neutron queue-delete [-h] [--request-format {json}] QOS_QUEUE
```

Delete a given queue.

Positional arguments:

QOS_QUEUE ID or name of qos_queue to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron queue-list

```
usage: neutron queue-list [-h] [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json}] [-D] [-F FIELD]
```

List queues that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron queue-show


```
usage: neutron queue-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--request-format {json}] [-D]
                        [-F FIELD]
                        QOS_QUEUE
```

Show information of a given queue.

Positional arguments:

QOS_QUEUE ID or name of qos_queue to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron quota-delete

```
usage: neutron quota-delete [-h] [--request-format {json}]
                          [--tenant-id tenant-id]
```

Delete defined quotas of a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id tenant-id The owner tenant ID.

neutron quota-list

```
usage: neutron quota-list [-h] [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json}]
```

List quotas of all tenants who have non-default quota values.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron quota-show

```
usage: neutron quota-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--request-format {json}]
                        [--tenant-id tenant-id]
```

Show quotas of a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id tenant-id The owner tenant ID.

neutron quota-update

```
usage: neutron quota-update [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id tenant-id] [--network networks]
                             [--subnet subnets] [--port ports]
                             [--router routers] [--floatingip floatingips]
                             [--security-group security_groups]
                             [--security-group-rule security_group_rules]
                             [--vip vips] [--pool pools] [--member members]
                             [--health-monitor health_monitors]
```

Define tenant's quotas not to use defaults.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id tenant-id The owner tenant ID.

--network networks The limit of networks.

--subnet subnets The limit of subnets.

--port ports The limit of ports.

--router routers The limit of routers.

--floatingip floatingips The limit of floating IPs.

--security-group security_groups The limit of security groups.

--security-group-rule security_group_rules The limit of security groups rules.

--vip vips The limit of vips.

--pool pools The limit of pools.

--member members The limit of pool members.

--health-monitor health_monitors The limit of health monitors.

neutron rbac-create

```
usage: neutron rbac-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id TENANT_ID] --type {qos-policy,network}
                             [--target-tenant TARGET_TENANT] --action
```

```
{access_as_external, access_as_shared}
RBAC_OBJECT
```

Create a RBAC policy for a given tenant.

Positional arguments:

RBAC_OBJECT ID or name of the RBAC object.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--type {qos-policy, network} Type of the object that RBAC policy affects.

--target-tenant TARGET_TENANT ID of the tenant to which the RBAC policy will be enforced.

--action {access_as_external, access_as_shared} Action for the RBAC policy.

neutron rbac-delete

```
usage: neutron rbac-delete [-h] [--request-format {json}] RBAC_POLICY
```

Delete a RBAC policy.

Positional arguments:

RBAC_POLICY ID of rbac_policy to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron rbac-list

```
usage: neutron rbac-list [-h] [-f {csv,html,json,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--quote {all,minimal,none,nonnumeric}]
                        [--request-format {json}] [-D] [-F FIELD] [-P SIZE]
                        [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List RBAC policies that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron rbac-show

```
usage: neutron rbac-show [-h] [-f {html,json,shell,table,value,yaml}]
                        [-c COLUMN] [--max-width <integer>] [--noindent]
                        [--prefix PREFIX] [--request-format {json}] [-D]
                        [-F FIELD]
                        RBAC_POLICY
```

Show information of a given RBAC policy.

Positional arguments:

RBAC_POLICY ID of rbac_policy to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron rbac-update

```
usage: neutron rbac-update [-h] [--request-format {json}]
                          [--target-tenant TARGET_TENANT]
                          RBAC_POLICY
```

Update RBAC policy for given tenant.

Positional arguments:

RBAC_POLICY ID of rbac_policy to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--target-tenant TARGET_TENANT ID of the tenant to which the RBAC policy will be enforced.

neutron router-create

```
usage: neutron router-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id TENANT_ID] [--admin-state-down]
                             [--description DESCRIPTION]
                             [--distributed {True,False}] [--ha {True,False}]
```

```
[--availability-zone-hint AVAILABILITY_ZONE]
NAME
```

Create a router for a given tenant.

Positional arguments:

NAME Name of router to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--description DESCRIPTION Description of router.

--distributed {True,False} Create a distributed router.

--ha {True,False} Create a highly available router.

--availability-zone-hint AVAILABILITY_ZONE Availability Zone for the router (requires availability zone extension, this option can be repeated).

neutron router-delete

```
usage: neutron router-delete [-h] [--request-format {json}] ROUTER
```

Delete a given router.

Positional arguments:

ROUTER ID or name of router to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron router-gateway-clear

```
usage: neutron router-gateway-clear [-h] [--request-format {json}] ROUTER
```

Remove an external network gateway from a router.

Positional arguments:

ROUTER ID or name of the router.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron router-gateway-set

```
usage: neutron router-gateway-set [-h] [--request-format {json}]
                                   [--disable-snat]
                                   [--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR]
                                   ROUTER EXTERNAL-NETWORK
```

Set the external network gateway for a router.

Positional arguments:

ROUTER ID or name of the router.

EXTERNAL-NETWORK ID or name of the external network for the gateway.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--disable-snat Disable source NAT on the router gateway.

--fixed-ip subnet_id=SUBNET,ip_address=IP_ADDR Desired IP and/or subnet on external network: subnet_id=<name_or_id>,ip_address=<ip>. You can specify both of subnet_id and ip_address or specify one of them as well. You can repeat this option.

neutron router-interface-add

```
usage: neutron router-interface-add [-h] [--request-format {json}]
                                     ROUTER INTERFACE
```

Add an internal network interface to a router.

Positional arguments:

ROUTER ID or name of the router.

INTERFACE The format is “SUBNET|subnet=SUBNET|port=PORT”. Either a subnet or port must be specified. Both ID and name are accepted as SUBNET or PORT. Note that “subnet=” can be omitted when specifying a subnet.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron router-interface-delete

```
usage: neutron router-interface-delete [-h] [--request-format {json}]
                                        ROUTER INTERFACE
```

Remove an internal network interface from a router.

Positional arguments:

ROUTER ID or name of the router.

INTERFACE The format is “SUBNET|subnet=SUBNET|port=PORT”. Either a subnet or port must be specified. Both ID and name are accepted as SUBNET or PORT. Note that “subnet=” can be omitted when specifying a subnet.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron router-list

```
usage: neutron router-list [-h] [-f {csv,html,json,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--quote {all,minimal,none,nonnumeric}]
                           [--request-format {json}] [-D] [-F FIELD] [-P SIZE]
                           [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List routers that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron router-list-on-l3-agent

```
usage: neutron router-list-on-l3-agent [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
                                         [--request-format {json}] [-D]
                                         [-F FIELD]
                                         L3_AGENT
```

List the routers on a L3 agent.

Positional arguments:

L3_AGENT ID of the L3 agent to query.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron router-port-list

```
usage: neutron router-port-list [-h] [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
                                ROUTER
```

List ports that belong to a given tenant, with specified router.

Positional arguments:

ROUTER ID or name of router to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron router-show

```
usage: neutron router-show [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}] [-D]
                             [-F FIELD]
                             ROUTER
```

Show information of a given router.

Positional arguments:

ROUTER ID or name of router to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron router-update

```
usage: neutron router-update [-h] [--request-format {json}] [--name NAME]
                             [--description DESCRIPTION]
                             [--admin-state-up {True,False}]
                             [--distributed {True,False}]
                             [--route destination=CIDR,nextthop=IP_ADDR | --no-routes]
                             ROUTER
```

Update router's information.

Positional arguments:

ROUTER ID or name of router to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Name of this router.

--description DESCRIPTION Description of router.

--admin-state-up {True,False} Specify the administrative state of the router (True meaning "Up")

--distributed {True,False} True means this router should operate in distributed mode.

--route destination=CIDR,nextthop=IP_ADDR Route to associate with the router. You can repeat this option.

--no-routes Remove routes associated with the router.

neutron security-group-create

```
usage: neutron security-group-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}]
                                     [--tenant-id TENANT_ID]
                                     [--description DESCRIPTION]
                                     NAME
```

Create a security group.

Positional arguments:

NAME Name of security group.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of security group.

neutron security-group-delete

```
usage: neutron security-group-delete [-h] [--request-format {json}]
                                     SECURITY_GROUP
```

Delete a given security group.

Positional arguments:

SECURITY_GROUP ID or name of security_group to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron security-group-list

```
usage: neutron security-group-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

List security groups that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron security-group-rule-create

```
usage: neutron security-group-rule-create [-h]
                                           [-f {html,json,shell,table,value,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--noindent] [--prefix PREFIX]
                                           [--request-format {json}]
                                           [--tenant-id TENANT_ID]
                                           [--description DESCRIPTION]
                                           [--direction {ingress,egress}]
                                           [--ethertype ETHERTYPE]
                                           [--protocol PROTOCOL]
```

```

[--port-range-min PORT_RANGE_MIN]
[--port-range-max PORT_RANGE_MAX]
[--remote-ip-prefix REMOTE_IP_PREFIX]
[--remote-group-id REMOTE_GROUP]
SECURITY_GROUP

```

Create a security group rule.

Positional arguments:

SECURITY_GROUP Security group name or ID to add rule.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of security group rule.

--direction {ingress, egress} Direction of traffic: ingress/egress.

--ethertype ETHERTYPE IPv4/IPv6

--protocol PROTOCOL Protocol of packet. Allowed values are [icmp, icmpv6, tcp, udp] and integer representations [0-255]

--port-range-min PORT_RANGE_MIN Starting port range. For ICMP it is type.

--port-range-max PORT_RANGE_MAX Ending port range. For ICMP it is code.

--remote-ip-prefix REMOTE_IP_PREFIX CIDR to match on.

--remote-group-id REMOTE_GROUP Remote security group name or ID to apply rule.

neutron security-group-rule-delete

```

usage: neutron security-group-rule-delete [-h] [--request-format {json}]
                                           SECURITY_GROUP_RULE

```

Delete a given security group rule.

Positional arguments:

SECURITY_GROUP_RULE ID of security_group_rule to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron security-group-rule-list

```

usage: neutron security-group-rule-list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
                                         [--request-format {json}] [-D]

```

```
[-F FIELD] [-P SIZE]
[--sort-key FIELD]
[--sort-dir {asc,desc}]
[--no-nameconv]
```

List security group rules that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

--no-nameconv Do not convert security group ID to its name.

neutron security-group-rule-show

```
usage: neutron security-group-rule-show [-h]
                                         [-f {html,json,shell,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent] [--prefix PREFIX]
                                         [--request-format {json}] [-D]
                                         [-F FIELD]
                                         SECURITY_GROUP_RULE
```

Show information of a given security group rule.

Positional arguments:

SECURITY_GROUP_RULE ID of security_group_rule to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron security-group-show

```
usage: neutron security-group-show [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}] [-D] [-F FIELD]
                                     SECURITY_GROUP
```

Show information of a given security group.

Positional arguments:

SECURITY_GROUP ID or name of security_group to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron security-group-update

```
usage: neutron security-group-update [-h] [--request-format {json}]
                                     [--name NAME] [--description DESCRIPTION]
                                     SECURITY_GROUP
```

Update a given security group.

Positional arguments:

SECURITY_GROUP ID or name of security_group to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Name of security group.

--description DESCRIPTION Description of security group.

neutron service-provider-list

```
usage: neutron service-provider-list [-h]
                                     [-f {csv,html,json,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent]
                                     [--quote {all,minimal,none,nonnumeric}]
                                     [--request-format {json}] [-D] [-F FIELD]
                                     [-P SIZE] [--sort-key FIELD]
                                     [--sort-dir {asc,desc}]
```

List service providers.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

- P SIZE, --page-size SIZE** Specify retrieve unit of each request, then split one request to several requests.
- sort-key FIELD** Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
- sort-dir {asc, desc}** Sorts the list in the specified direction. You can repeat this option.

neutron subnet-create

```
usage: neutron subnet-create [-h] [-f {html,json,shell,table,value,yaml}]
                             [-c COLUMN] [--max-width <integer>] [--noindent]
                             [--prefix PREFIX] [--request-format {json}]
                             [--tenant-id TENANT_ID] [--name NAME]
                             [--description DESCRIPTION]
                             [--gateway GATEWAY_IP | --no-gateway]
                             [--allocation-pool start=IP_ADDR,end=IP_ADDR]
                             [--host-route destination=CIDR,nexthop=IP_ADDR]
                             [--dns-nameserver DNS_NAMESERVER]
                             [--disable-dhcp] [--enable-dhcp]
                             [--ip-version {4,6}]
                             [--ipv6-ra-mode {dhcpv6-stateful,dhcpv6-stateless,slaac}]
                             [--ipv6-address-mode {dhcpv6-stateful,dhcpv6-stateless,
↪slaac}]
                             [--subnetpool SUBNETPOOL]
                             [--use-default-subnetpool]
                             [--prefixlen PREFIX_LENGTH]
                             NETWORK [CIDR]
```

Create a subnet for a given tenant.

Positional arguments:

NETWORK Network ID or name this subnet belongs to.

CIDR CIDR of subnet to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--name NAME Name of this subnet.

--description DESCRIPTION Description of this subnet.

--gateway GATEWAY_IP Gateway IP of this subnet.

--no-gateway Do not configure a gateway for this subnet.

--allocation-pool start=IP_ADDR,end=IP_ADDR Allocation pool IP addresses for this subnet (This option can be repeated).

--host-route destination=CIDR,nexthop=IP_ADDR Additional route (This option can be repeated).

--dns-nameserver DNS_NAMESERVER DNS name server for this subnet (This option can be repeated).

--disable-dhcp Disable DHCP for this subnet.

--enable-dhcp Enable DHCP for this subnet.

--ip-version {4,6} IP version to use, default is 4. Note that when subnetpool is specified, IP version is determined from the subnetpool and this option is ignored.

--ipv6-ra-mode {dhcpv6-stateful,dhcpv6-stateless,slaac} IPv6 RA (Router Advertisement) mode.

--ipv6-address-mode {dhcpv6-stateful,dhcpv6-stateless,slaac} IPv6 address mode.

--subnetpool SUBNETPOOL ID or name of subnetpool from which this subnet will obtain a CIDR.

--use-default-subnetpool Use default subnetpool for ip_version, if it exists.

--prefixlen PREFIX_LENGTH Prefix length for subnet allocation from subnetpool.

neutron subnet-delete

```
usage: neutron subnet-delete [-h] [--request-format {json}] SUBNET
```

Delete a given subnet.

Positional arguments:

SUBNET ID or name of subnet to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron subnet-list

```
usage: neutron subnet-list [-h] [-f {csv,html,json,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--quote {all,minimal,none,nonnumeric}]
                           [--request-format {json}] [-D] [-F FIELD] [-P SIZE]
                           [--sort-key FIELD] [--sort-dir {asc,desc}]
```

List subnets that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron subnet-show

```
usage: neutron subnet-show [-h] [-f {html,json,shell,table,value,yaml}]
                           [-c COLUMN] [--max-width <integer>] [--noindent]
                           [--prefix PREFIX] [--request-format {json}] [-D]
                           [-F FIELD]
                           SUBNET
```

Show information of a given subnet.

Positional arguments:

SUBNET ID or name of subnet to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron subnet-update

```
usage: neutron subnet-update [-h] [--request-format {json}] [--name NAME]
                             [--description DESCRIPTION]
                             [--gateway GATEWAY_IP | --no-gateway]
                             [--allocation-pool start=IP_ADDR,end=IP_ADDR]
                             [--host-route destination=CIDR,nexthop=IP_ADDR]
                             [--dns-nameserver DNS_NAMESERVER]
                             [--disable-dhcp] [--enable-dhcp]
                             SUBNET
```

Update subnet's information.

Positional arguments:

SUBNET ID or name of subnet to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Name of this subnet.

--description DESCRIPTION Description of this subnet.

--gateway GATEWAY_IP Gateway IP of this subnet.

--no-gateway Do not configure a gateway for this subnet.

--allocation-pool start=IP_ADDR,end=IP_ADDR Allocation pool IP addresses for this subnet (This option can be repeated).

--host-route destination=CIDR,nexthop=IP_ADDR Additional route (This option can be repeated).

--dns-nameserver DNS_NAMESERVER DNS name server for this subnet (This option can be repeated).

--disable-dhcp Disable DHCP for this subnet.

--enable-dhcp Enable DHCP for this subnet.

neutron subnetpool-create

```
usage: neutron subnetpool-create [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}]
                                [--tenant-id TENANT_ID]
                                [--description DESCRIPTION]
                                [--min-prefixlen MIN_PREFIXLEN]
                                [--max-prefixlen MAX_PREFIXLEN]
                                [--default-prefixlen DEFAULT_PREFIXLEN]
                                [--pool-prefix PREFIXES]
                                [--is-default {True,False}] [--shared]
                                [--address-scope ADDRSCOPE]
                                NAME
```

Create a subnetpool for a given tenant.

Positional arguments:

NAME Name of subnetpool to create.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of subnetpool.

--min-prefixlen MIN_PREFIXLEN Subnetpool minimum prefix length.

--max-prefixlen MAX_PREFIXLEN Subnetpool maximum prefix length.

--default-prefixlen DEFAULT_PREFIXLEN Subnetpool default prefix length.

--pool-prefix PREFIXES Subnetpool prefixes (This option can be repeated).

--is-default {True,False} Specify whether this should be the default subnetpool (True meaning default).

--shared Set the subnetpool as shared.

--address-scope ADDRSCOPE ID or name of the address scope with which the subnetpool is associated. Prefixes must be unique across address scopes

neutron subnetpool-delete

```
usage: neutron subnetpool-delete [-h] [--request-format {json}] SUBNETPOOL
```

Delete a given subnetpool.

Positional arguments:

SUBNETPOOL ID or name of subnetpool to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron subnetpool-list

```
usage: neutron subnetpool-list [-h] [-f {csv,html,json,table,value,yaml}]
                               [-c COLUMN] [--max-width <integer>]
                               [--noindent]
                               [--quote {all,minimal,none,nonnumeric}]
                               [--request-format {json}] [-D] [-F FIELD]
                               [-P SIZE] [--sort-key FIELD]
                               [--sort-dir {asc,desc}]
```

List subnetpools that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron subnetpool-show

```
usage: neutron subnetpool-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                SUBNETPOOL
```

Show information of a given subnetpool.

Positional arguments:

SUBNETPOOL ID or name of subnetpool to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron subnetpool-update

```
usage: neutron subnetpool-update [-h] [--request-format {json}]
                                [--description DESCRIPTION]
                                [--min-prefixlen MIN_PREFIXLEN]
                                [--max-prefixlen MAX_PREFIXLEN]
                                [--default-prefixlen DEFAULT_PREFIXLEN]
                                [--pool-prefix PREFIXES]
                                [--is-default {True,False}] [--name NAME]
                                [--address-scope ADDRSCOPE | --no-address-scope]
                                SUBNETPOOL
```

Update subnetpool's information.

Positional arguments:

SUBNETPOOL ID or name of subnetpool to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--description DESCRIPTION Description of subnetpool.

--min-prefixlen MIN_PREFIXLEN Subnetpool minimum prefix length.

--max-prefixlen MAX_PREFIXLEN Subnetpool maximum prefix length.

--default-prefixlen DEFAULT_PREFIXLEN Subnetpool default prefix length.

--pool-prefix PREFIXES Subnetpool prefixes (This option can be repeated).

--is-default {True,False} Specify whether this should be the default subnetpool (True meaning default).

--name NAME Name of subnetpool to update.

--address-scope ADDRSCOPE ID or name of the address scope with which the subnetpool is associated. Prefixes must be unique across address scopes

--no-address-scope Detach subnetpool from the address scope

neutron tag-add

```
usage: neutron tag-add [-h] [--request-format {json}] --resource-type
                       {network} --resource RESOURCE --tag TAG
```

Add a tag into the resource.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--resource-type {network} Resource Type.

--resource RESOURCE Resource name or ID.

--tag TAG Tag to be added.

neutron tag-remove

```
usage: neutron tag-remove [-h] [--request-format {json}] --resource-type
                           {network} --resource RESOURCE [--all | --tag TAG]
```

Remove a tag on the resource.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--resource-type {network} Resource Type.

--resource RESOURCE Resource name or ID.

--all Remove all tags on the resource.

--tag TAG Tag to be removed.

neutron tag-replace

```
usage: neutron tag-replace [-h] [--request-format {json}] --resource-type
                           {network} --resource RESOURCE --tag TAG
```

Replace all tags on the resource.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--resource-type {network} Resource Type.

--resource RESOURCE Resource name or ID.

--tag TAG Tag (This option can be repeated).

neutron vpn-endpoint-group-create

```
usage: neutron vpn-endpoint-group-create [-h]
                                           [-f {html,json,shell,table,value,yaml}]
                                           [-c COLUMN] [--max-width <integer>]
                                           [--noindent] [--prefix PREFIX]
                                           [--request-format {json}]
                                           [--tenant-id TENANT_ID] [--name NAME]
                                           [--description DESCRIPTION] --type
                                           TYPE --value ENDPOINTS
```

Create a VPN endpoint group.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--name NAME Set a name for the endpoint group.

- description DESCRIPTION** Set a description for the endpoint group.
- type TYPE** Type of endpoints in group (e.g. subnet, cidr, vlan).
- value ENDPOINTS** Endpoint(s) for the group. Must all be of the same type.

neutron vpn-endpoint-group-delete

```
usage: neutron vpn-endpoint-group-delete [-h] [--request-format {json}]
                                         ENDPOINT_GROUP
```

Delete a given VPN endpoint group.

Positional arguments:

ENDPOINT_GROUP ID or name of endpoint_group to delete.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.

neutron vpn-endpoint-group-list

```
usage: neutron vpn-endpoint-group-list [-h]
                                         [-f {csv,html,json,table,value,yaml}]
                                         [-c COLUMN] [--max-width <integer>]
                                         [--noindent]
                                         [--quote {all,minimal,none,nonnumeric}]
                                         [--request-format {json}] [-D]
                                         [-F FIELD] [-P SIZE] [--sort-key FIELD]
                                         [--sort-dir {asc,desc}]
```

List VPN endpoint groups that belong to a given tenant.

Optional arguments:

- h, --help** show this help message and exit
- request-format {json}** **DEPRECATED!** Only JSON request format is supported.
- D, --show-details** Show detailed information.
- F FIELD, --field FIELD** Specify the field(s) to be returned by server. You can repeat this option.
- P SIZE, --page-size SIZE** Specify retrieve unit of each request, then split one request to several requests.
- sort-key FIELD** Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.
- sort-dir {asc,desc}** Sorts the list in the specified direction. You can repeat this option.

neutron vpn-endpoint-group-show

```
usage: neutron vpn-endpoint-group-show [-h]
                                      [-f {html,json,shell,table,value,yaml}]
                                      [-c COLUMN] [--max-width <integer>]
                                      [--noindent] [--prefix PREFIX]
                                      [--request-format {json}] [-D]
                                      [-F FIELD]
                                      ENDPOINT_GROUP
```

Show a specific VPN endpoint group.

Positional arguments:

ENDPOINT_GROUP ID or name of endpoint_group to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron vpn-endpoint-group-update

```
usage: neutron vpn-endpoint-group-update [-h] [--request-format {json}]
                                          [--name NAME]
                                          [--description DESCRIPTION]
                                          ENDPOINT_GROUP
```

Update a given VPN endpoint group.

Positional arguments:

ENDPOINT_GROUP ID or name of endpoint_group to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--name NAME Set a name for the endpoint group.

--description DESCRIPTION Set a description for the endpoint group.

neutron vpn-ikepolicy-create

```
usage: neutron vpn-ikepolicy-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}]
                                     [--tenant-id TENANT_ID]
                                     [--description DESCRIPTION]
                                     [--auth-algorithm {sha1}]
                                     [--encryption-algorithm ENCRYPTION_ALGORITHM]
                                     [--phase1-negotiation-mode {main}]
                                     [--ike-version {v1,v2}]
```

```
[--pfs {group2,group5,group14}]
[--lifetime units=UNITS,value=VALUE]
NAME
```

Create an IKE policy.

Positional arguments:

NAME Name of the IKE policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of the IKE policy

--auth-algorithm {sha1} Authentication algorithm in lowercase. Default:sha1

--encryption-algorithm ENCRYPTION_ALGORITHM Encryption algorithm in lowercase, default:aes-128

--phase1-negotiation-mode {main} IKE Phase1 negotiation mode in lowercase, default:main

--ike-version {v1,v2} IKE version in lowercase, default:v1

--pfs {group2,group5,group14} Perfect Forward Secrecy in lowercase, default:group5

--lifetime units=UNITS,value=VALUE IKE lifetime attributes. ‘units’-seconds, default:seconds. ‘value’-non negative integer, default:3600.

neutron vpn-ikepolicy-delete

```
usage: neutron vpn-ikepolicy-delete [-h] [--request-format {json}] IKEPOLICY
```

Delete a given IKE policy.

Positional arguments:

IKEPOLICY ID or name of IKE policy to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron vpn-ikepolicy-list

```
usage: neutron vpn-ikepolicy-list [-h] [-f {csv,html,json,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--noindent]
                                  [--quote {all,minimal,none,nonnumeric}]
                                  [--request-format {json}] [-D] [-F FIELD]
                                  [-P SIZE] [--sort-key FIELD]
                                  [--sort-dir {asc,desc}]
```

List IKE policies that belong to a tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron vpn-ikepolicy-show

```
usage: neutron vpn-ikepolicy-show [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--noindent] [--prefix PREFIX]
                                  [--request-format {json}] [-D] [-F FIELD]
                                  IKEPOLICY
```

Show information of a given IKE policy.

Positional arguments:

IKEPOLICY ID or name of IKE policy to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron vpn-ikepolicy-update

```
usage: neutron vpn-ikepolicy-update [-h] [--request-format {json}]
                                     [--lifetime units=UNITS,value=VALUE]
                                     IKEPOLICY
```

Update a given IKE policy.

Positional arguments:

IKEPOLICY ID or name of IKE policy to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--lifetime units=UNITS,value=VALUE IKE lifetime attributes. ‘units’-seconds, default:seconds. ‘value’-non negative integer, default:3600.

neutron vpn-ipsecpolicy-create

```
usage: neutron vpn-ipsecpolicy-create [-h]
                                     [-f {html,json,shell,table,value,yaml}]
                                     [-c COLUMN] [--max-width <integer>]
                                     [--noindent] [--prefix PREFIX]
                                     [--request-format {json}]
                                     [--tenant-id TENANT_ID]
                                     [--description DESCRIPTION]
                                     [--transform-protocol {esp,ah,ah-esp}]
                                     [--auth-algorithm {sha1}]
                                     [--encryption-algorithm ENCRYPTION_ALGORITHM]
                                     [--encapsulation-mode {tunnel,transport}]
                                     [--pfs {group2,group5,group14}]
                                     [--lifetime units=UNITS,value=VALUE]
                                     NAME
```

Create an IPsec policy.

Positional arguments:

NAME Name of the IPsec policy.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--description DESCRIPTION Description of the IPsec policy.

--transform-protocol {esp,ah,ah-esp} Transform protocol in lowercase, default:esp

--auth-algorithm {sha1} Authentication algorithm in lowercase, default:sha1

--encryption-algorithm ENCRYPTION_ALGORITHM Encryption algorithm in lowercase, default:aes-128

--encapsulation-mode {tunnel,transport} Encapsulation mode in lowercase, default:tunnel

--pfs {group2,group5,group14} Perfect Forward Secrecy in lowercase, default:group5

--lifetime units=UNITS,value=VALUE IPsec lifetime attributes. ‘units’-seconds, default:seconds. ‘value’-non negative integer, default:3600.

neutron vpn-ipsecpolicy-delete

```
usage: neutron vpn-ipsecpolicy-delete [-h] [--request-format {json}]
                                     IPSECPOLICY
```

Delete a given IPsec policy.

Positional arguments:

IPSECPOLICY ID or name of IPsec policy to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron vpn-ipsecpolicy-list

```
usage: neutron vpn-ipsecpolicy-list [-h] [-f {csv,html,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   [-P SIZE] [--sort-key FIELD]
                                   [--sort-dir {asc,desc}]
```

List IPsec policies that belong to a given tenant connection.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron vpn-ipsecpolicy-show

```
usage: neutron vpn-ipsecpolicy-show [-h]
                                   [-f {html,json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--noindent] [--prefix PREFIX]
                                   [--request-format {json}] [-D] [-F FIELD]
                                   IPSECPOLICY
```

Show information of a given IPsec policy.

Positional arguments:

IPSECPOLICY ID or name of IPsec policy to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron vpn-ipsecpolicy-update

```
usage: neutron vpn-ipsecpolicy-update [-h] [--request-format {json}]
                                       [--lifetime units=UNITS,value=VALUE]
                                       IPSECPOLICY
```

Update a given IPsec policy.

Positional arguments:

IPSECPOLICY ID or name of IPsec policy to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--lifetime units=UNITS,value=VALUE IPsec lifetime attributes. 'units'-seconds, default:seconds. 'value'-non negative integer, default:3600.

neutron vpn-service-create

```
usage: neutron vpn-service-create [-h] [-f {html,json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--noindent] [--prefix PREFIX]
                                  [--request-format {json}]
                                  [--tenant-id TENANT_ID] [--admin-state-down]
                                  [--name NAME] [--description DESCRIPTION]
                                  ROUTER [SUBNET]
```

Create a VPN service.

Positional arguments:

ROUTER Router unique identifier for the VPN service.

SUBNET [**DEPRECATED** in Mitaka] Unique identifier for the local private subnet.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

--tenant-id TENANT_ID The owner tenant ID.

--admin-state-down Set admin state up to false.

--name NAME Set a name for the VPN service.

--description DESCRIPTION Set a description for the VPN service.

neutron vpn-service-delete

```
usage: neutron vpn-service-delete [-h] [--request-format {json}] VPNSERVICE
```

Delete a given VPN service.

Positional arguments:

VPNSERVICE ID or name of VPN service to delete.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

neutron vpn-service-list

```
usage: neutron vpn-service-list [-h] [-f {csv,html,json,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent]
                                [--quote {all,minimal,none,nonnumeric}]
                                [--request-format {json}] [-D] [-F FIELD]
                                [-P SIZE] [--sort-key FIELD]
                                [--sort-dir {asc,desc}]
```

List VPN service configurations that belong to a given tenant.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

-P SIZE, --page-size SIZE Specify retrieve unit of each request, then split one request to several requests.

--sort-key FIELD Sorts the list by the specified fields in the specified directions. You can repeat this option, but you must specify an equal number of sort_dir and sort_key values. Extra sort_dir options are ignored. Missing sort_dir options use the default asc value.

--sort-dir {asc,desc} Sorts the list in the specified direction. You can repeat this option.

neutron vpn-service-show

```
usage: neutron vpn-service-show [-h] [-f {html,json,shell,table,value,yaml}]
                                [-c COLUMN] [--max-width <integer>]
                                [--noindent] [--prefix PREFIX]
                                [--request-format {json}] [-D] [-F FIELD]
                                VPNSERVICE
```

Show information of a given VPN service.

Positional arguments:

VPNSERVICE ID or name of VPN service to look up.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

-D, --show-details Show detailed information.

-F FIELD, --field FIELD Specify the field(s) to be returned by server. You can repeat this option.

neutron vpn-service-update

```
usage: neutron vpn-service-update [-h] [--request-format {json}] VPNSERVICE
```

Update a given VPN service.

Positional arguments:

VPNSERVICE ID or name of VPN service to update.

Optional arguments:

-h, --help show this help message and exit

--request-format {json} **DEPRECATED!** Only JSON request format is supported.

2.9 Networking miscellaneous command-line client

2.9.1 neutron-debug command-line client

The **neutron-debug** client is an extension to the **neutron** command-line interface (CLI) for the OpenStack neutron-debug tool.

This chapter documents **neutron-debug** version 2.3.0.

For help on a specific **neutron-debug** command, enter:

```
$ neutron-debug help COMMAND
```

neutron-debug usage

```
usage: neutron-debug [--version] [-v] [-q] [-h] [-r NUM]
                  [--os-password <auth-password>]
                  [--os-tenant-name <auth-tenant-name>]
                  [--os-tenant-id <auth-tenant-id>] [--os-auth-url <auth-url>]
                  [--os-region-name <region-name>] [--service-type <service-type>]
                  [--service-name <service-name>]
                  [--volume-service-name <volume-service-name>]
                  [--endpoint-type <endpoint-type>]
                  [--os-volume-api-version <volume-api-ver>]
                  [--os-cacert <ca-certificate>] [--retries <retries>]
                  <subcommand> ...
```

Subcommands

probe-create Create probe port - create port and interface within a network namespace.

probe-list List all probes.

probe-clear Clear all probes.

probe-delete Delete probe - delete port then delete the namespace.

probe-exec Execute commands in the namespace of the probe.

ping-all ping-all is an all-in-one command to ping all fixed IPs in a specified network.

neutron-debug optional arguments

--version Show version number and exit.

-v, --verbose, --debug Increase verbosity of output and show tracebacks on errors. Can be repeated.

-q, --quiet Suppress output except warnings and errors

-h, --help Show this help message and exit

--os-auth-strategy <auth-strategy> Authentication strategy (Env: OS_AUTH_STRATEGY, default keystone). For now, any other value will disable the authentication

--os-auth-url <auth-url> Authentication URL (Env: OS_AUTH_URL)

--os-tenant-name <auth-tenant-name> Authentication tenant name (Env: OS_TENANT_NAME)

--os-tenant-id <auth-tenant-id> Authentication tenant name (Env: OS_TENANT_ID)

--os-username <auth-username> Authentication username (Env: OS_USERNAME)

--os-password <auth-password> Authentication password (Env: OS_PASSWORD)

--os-region-name <auth-region-name> Authentication region name (Env: OS_REGION_NAME)

--os-token <token> Defaults to `env[OS_TOKEN]`

--endpoint-type <endpoint-type> Defaults to `env[OS_ENDPOINT_TYPE]` or public URL.

--os-url <url> Defaults to `env[OS_URL]`

--os-cacert <ca-certificate> Specify a CA bundle file to use in verifying a TLS (HTTPS) server certificate. Defaults to `env[OS_CACERT]`

--insecure Explicitly allow neutron-debug to perform “insecure” SSL (HTTPS) requests. The server’s certificate will not be verified against any certificate authorities. This option should be used with caution.

--config-file CONFIG_FILE Config file for interface driver (You may also use `l3_agent.ini`)

neutron-debug probe-create command

```
usage: neutron-debug probe-create NET
```

Create probe port - create port and interface, then place it into the created network namespace.

Positional arguments

NET ID ID of the network in which the probe will be created.

neutron-debug probe-list command

```
usage: neutron-debug probe-list
```

List probes.

neutron-debug probe-clear command

```
usage: neutron-debug probe-clear
```

Clear all probes.

neutron-debug probe-delete command

```
usage: neutron-debug probe-delete <port-id>
```

Remove a probe.

Positional arguments

<port-id> ID of the probe to delete.

neutron-debug probe-exec command

```
usage: neutron-debug probe-exec <port-id> <command>
```

Execute commands in the namespace of the probe

neutron-debug ping-all command

```
usage: neutron-debug ping-all <port-id> --timeout <number>
```

All-in-one command to ping all fixed IPs in a specified network. A probe creation is not needed for this command. A new probe is created automatically. It will, however, need to be deleted manually when it is no longer needed. When there are multiple networks, the newly created probe will be attached to a random network and thus the ping will take place from within that random network.

Positional arguments

<port-id> ID of the port to use.

Optional arguments

--timeout <timeout in seconds> Optional ping timeout.

neutron-debug example

```
usage: neutron-debug create-probe <NET_ID>
```

Create a probe namespace within the network identified by `NET_ID`. The namespace will have the name of `qprobe-<UUID of the probe port>`

Note: For the following examples to function, the security group rules may need to be modified to allow the SSH (TCP port 22) or ping (ICMP) traffic into network.

```
usage: neutron-debug probe-exec <probe ID> "ssh <IP of instance>"
```

SSH to an instance within the network.

```
usage: neutron-debug ping-all <network ID>
```

Ping all instances on this network to verify they are responding.

```
usage: neutron-debug probe-exec <probe_ID> dhcping <VM_MAC address> -s <IP of DHCP_
↪server>
```

Ping the DHCP server for this network using dhcping to verify it is working.

2.9.2 neutron-sanity-check command-line client

The **neutron-sanity-check** client is a tool that checks various sanity about the Networking service.

This chapter documents **neutron-sanity-check** version 7.0.2.

neutron-sanity-check usage

```
usage: neutron-sanity-check [-h] [--arp_header_match] [--arp_responder]
                             [--config-dir DIR] [--config-file PATH] [--debug]
                             [--dibbler_version] [--dnsmasq_version]
                             [--ebtables_installed] [--icmpv6_header_match]
                             [--iproute2_vxlan] [--keepalived_ipv6_support]
                             [--log-config-append PATH]
                             [--log-date-format DATE_FORMAT]
                             [--log-dir LOG_DIR] [--log-file PATH]
                             [--log-format FORMAT] [--noarp_header_match]
                             [--noarp_responder] [--nodebug]
                             [--nodibbler_version] [--nodnsmasq_version]
                             [--noebtables_installed] [--noicmpv6_header_match]
                             [--noiproute2_vxlan] [--nokeepalived_ipv6_support]
                             [--nonova_notify] [--noovs_geneve] [--noovs_patch]
                             [--noovs_vxlan] [--noovsdb_native]
                             [--nored_netns] [--nouse_syslog]
                             [--nouse_syslog_rfc_format] [--nova_notify]
                             [--noverbose] [--novf_management] [--ovs_geneve]
                             [--ovs_patch] [--ovs_vxlan] [--ovsdb_native]
                             [--read_netns] [--state_path STATE_PATH]
                             [--syslog-log-facility SYSLOG_LOG_FACILITY]
                             [--use-syslog] [--use-syslog-rfc-format]
                             [--verbose] [--version] [--vf_management]
```

neutron-sanity-check optional arguments

-h, --help show this help message and exit

--arp_header_match Check for ARP header match support

--arp_responder Check for ARP responder support

--config-dir DIR Path to a config directory to pull *.conf files from. This file set is sorted, so as to provide a predictable parse order if individual options are over-ridden. The set is parsed after the file(s) specified via previous --config-file, arguments hence over-ridden options in the directory take precedence.

--config-file PATH Path to a config file to use. Multiple config files can be specified, with values in later files taking precedence. The default files used are: None.

--debug, -d Print debugging output (set logging level to `DEBUG` instead of default `INFO` level).

--dibbler_version Check minimal dibbler version

--dnsmasq_version Check minimal dnsmasq version

--ebtables_installed Check ebtables installation

--icmpv6_header_match Check for ICMPv6 header match support

--iproute2_vxlan Check for iproute2 vxlan support

--keepalived_ipv6_support Check keepalived IPv6 support

--log-config-append PATH, --log_config PATH The name of a logging configuration file. This file is appended to any existing logging configuration files. For details about logging configuration files, see the Python logging module documentation.

--log-date-format DATE_FORMAT Format string for `%(asctime)s` in log records. Default: None.

--log-dir LOG_DIR, --logdir LOG_DIR (Optional) The base directory used for relative `--log-file` paths.

--log-file PATH, --logfile PATH (Optional) Name of log file to output to. If no default is set, logging will go to stdout.

--log-format FORMAT DEPRECATED. A `logging.Formatter` log message format string which may use any of the available `logging.LogRecord` attributes. This option is deprecated. Please use `logging_context_format_string` and `logging_default_format_string` instead.

--noarp_header_match The inverse of `--arp_header_match`

--noarp_responder The inverse of `--arp_responder`

--nodebug The inverse of `--debug`

--nodibbler_version The inverse of `--dibbler_version`

--nodnsmasq_version The inverse of `--dnsmasq_version`

--noebtables_installed The inverse of `--ebtables_installed`

--noicmpv6_header_match The inverse of `--icmpv6_header_match`

--noiproute2_vxlan The inverse of `--iproute2_vxlan`

--nokeepalived_ipv6_support The inverse of `--keepalived_ipv6_support`

--nonova_notify The inverse of `--nova_notify`

--noovs_geneve The inverse of `--ovs_geneve`

--noovs_patch The inverse of `--ovs_patch`

--noovs_vxlan The inverse of `--ovs_vxlan`

--noovsdb_native The inverse of `--ovsdb_native`

--noread_netns The inverse of `--read_netns`

--nouse-syslog The inverse of `--use-syslog`

--nouse-syslog-rfc-format The inverse of `--use-syslog-rfc-format`

--nova_notify Check for nova notification support

--noverbose The inverse of `--verbose`

--novf_management The inverse of `--vf_management`

--ovs_geneve Check for OVS Geneve support

--ovs_patch Check for patch port support

--ovs_vxlan Check for OVS vxlan support

--ovsdb_native Check ovsdb native interface support

--read_netns Check netns permission settings

--state_path STATE_PATH Where to store Neutron state files. This directory must be writable by the agent.

--syslog-log-facility SYSLOG_LOG_FACILITY Syslog facility to receive log lines.

--use-syslog Use syslog for logging. Existing syslog format is DEPRECATED and will be changed later to honor RFC5424.

--use-syslog-rfc-format (Optional) Enables or disables syslog rfc5424 format for logging. If enabled, prefixes the MSG part of the syslog message with APP-NAME (RFC5424). The format without the APP-NAME is deprecated in Kilo, and will be removed in Mitaka, along with this option.

--verbose, -v If set to false, will disable INFO logging level, making WARNING the default.

--version show program's version number and exit

--vf_management Check for VF management support

2.10 Object Storage service command-line client

The swift client is the command-line interface (CLI) for the Object Storage service API and its extensions.

This chapter documents **swift** version 3.0.0.

For help on a specific **swift** command, enter:

```
$ swift COMMAND --help
```

2.10.1 swift usage

```
Usage: swift [--version] [--help] [--os-help] [--snet] [--verbose]
        [--debug] [--info] [--quiet] [--auth <auth_url>]
        [--auth-version <auth_version> |
        --os-identity-api-version <auth_version> ]
        [--user <username>]
        [--key <api_key>] [--retries <num_retries>]
        [--os-username <auth-user-name>] [--os-password <auth-password>]
        [--os-user-id <auth-user-id>]
        [--os-user-domain-id <auth-user-domain-id>]
        [--os-user-domain-name <auth-user-domain-name>]
        [--os-tenant-id <auth-tenant-id>]
        [--os-tenant-name <auth-tenant-name>]
        [--os-project-id <auth-project-id>]
        [--os-project-name <auth-project-name>]
        [--os-project-domain-id <auth-project-domain-id>]
        [--os-project-domain-name <auth-project-domain-name>]
        [--os-auth-url <auth-url>] [--os-auth-token <auth-token>]
        [--os-storage-url <storage-url>] [--os-region-name <region-name>]
        [--os-service-type <service-type>]
        [--os-endpoint-type <endpoint-type>]
        [--os-cacert <ca-certificate>] [--insecure]
```

```
[--no-ssl-compression]
<subcommand> [--help] [<subcommand options>]
```

Subcommands:**delete** Delete a container or objects within a container.**download** Download objects from containers.**list** Lists the containers for the account or the objects for a container.**post** Updates meta information for the account, container, or object; creates containers if not present.**stat** Displays information for the account, container, or object.**upload** Uploads files or directories to the given container.**capabilities** List cluster capabilities.**tempurl** Create a temporary URL.**auth** Display auth related environment variables.

2.10.2 swift examples

```
swift download --help

swift -A https://auth.api.rackspacecloud.com/v1.0 -U user -K api_key stat -v

swift --os-auth-url https://api.example.com/v2.0 --os-tenant-name tenant \
    --os-username user --os-password password list

swift --os-auth-url https://api.example.com/v3 --auth-version 3 \
    --os-project-name project1 --os-project-domain-name domain1 \
    --os-username user --os-user-domain-name domain1 \
    --os-password password list

swift --os-auth-url https://api.example.com/v3 --auth-version 3 \
    --os-project-id 0123456789abcdef0123456789abcdef \
    --os-user-id abcdef0123456789abcdef0123456789 \
    --os-password password list

swift --os-auth-token 6ee5eb33efad4e45ab46806eac010566 \
    --os-storage-url https://10.1.5.2:8080/v1/AUTH_ced809b6a4baea7aeab61a \
    list

swift list --lh
```

2.10.3 swift optional arguments

--version show program's version number and exit**-h, --help** show this help message and exit**--os-help** Show OpenStack authentication options.**-s, --snet** Use SERVICENET internal network.**-v, --verbose** Print more info.

--debug Show the curl commands and results of all http queries regardless of result status.

--info Show the curl commands and results of all http queries which return an error.

-q, --quiet Suppress status output.

-A AUTH, --auth=AUTH URL for obtaining an auth token.

-V AUTH_VERSION,

--auth-version=AUTH_VERSION,

--os-identity-api-version=AUTH_VERSION Specify a version for authentication. Defaults to `env[ST_AUTH_VERSION]`, `env[OS_AUTH_VERSION]`, `env[OS_IDENTITY_API_VERSION]` or 1.0.

-U USER, --user=USER User name for obtaining an auth token.

-K KEY, --key=KEY Key for obtaining an auth token.

-R RETRIES, --retries=RETRIES The number of times to retry a failed connection.

--insecure Allow swiftclient to access servers without having to verify the SSL certificate. Defaults to `env[SWIFTCLIENT_INSECURE]` (set to 'true' to enable).

--no-ssl-compression This option is deprecated and not used anymore. SSL compression should be disabled by default by the system SSL library.

swift capabilities

`Usage: swift capabilities`

Retrieve capability of the proxy.

Optional positional arguments:

<proxy_url> Proxy URL of the cluster to retrieve capabilities.

swift delete

`Usage: swift delete`

Delete a container or objects within a container.

Positional arguments:

[<container>] Name of container to delete from.

[<object>] Name of object to delete. Specify multiple times for multiple objects.

Optional arguments:

-a, --all Delete all containers and objects.

--leave-segments Do not delete segments of manifest objects.

--object-threads <threads> Number of threads to use for deleting objects. Default is 10.

--container-threads <threads> Number of threads to use for deleting containers. Default is 10.

swift download

```
Usage: swift download
```

Download objects from containers.

Positional arguments:

<container> Name of container to download from. To download a whole account, omit this and specify **-all**.

<object> Name of object to download. Specify multiple times for multiple objects. Omit this to download all objects from the container.

Optional arguments:

-a, --all Indicates that you really want to download everything in the account.

-m, --marker Marker to use when starting a container or account download.

-p, --prefix <prefix> Only download items beginning with **<prefix>**

-r, --remove-prefix An optional flag for **-prefix <prefix>**, use this option to download items without **<prefix>**

-o, --output <out_file> For a single file download, stream the output to **<out_file>**. Specifying **"-"** as **<out_file>** will redirect to stdout.

-D, --output-dir <out_directory> An optional directory to which to store objects. By default, all objects are recreated in the current directory.

--object-threads <threads> Number of threads to use for downloading objects. Default is 10.

--container-threads <threads> Number of threads to use for downloading containers. Default is 10.

--no-download Perform download(s), but don't actually write anything to disk.

-H, --header <header:value> Adds a customized request header to the query, like **"Range"** or **"If-Match"**. This option may be repeated. Example **-header "content-type:text/plain"**

--skip-identical Skip downloading files that are identical on both sides.

--no-shuffle By default, when downloading a complete account or container, download order is randomised in order to reduce the load on individual drives when multiple clients are executed simultaneously to download the same set of objects (e.g. a nightly automated download script to multiple servers). Enable this option to submit download jobs to the thread pool in the order they are listed in the object store.

swift list

```
Usage: swift list
```

Lists the containers for the account or the objects for a container.

Positional arguments:

[container] Name of container to list object in.

Optional arguments:

-l, --long Long listing format, similar to **ls -l**.

--lh Report sizes in human readable format similar to **ls -lh**.

-t, --totals Used with **-l** or **-lh**, only report totals.

-p <prefix>, --prefix <prefix> Only list items beginning with the prefix.

-d <delim>, --delimiter <delim> Roll up items with the given delimiter. For containers only. See Open-Stack Swift API documentation for what this means.

swift post

Usage: swift post

Updates meta information for the account, container, or object. If the container is not found, it will be created automatically.

Positional arguments:

[container] Name of container to post to.

[object] Name of object to post.

Optional arguments:

-r, --read-acl <acl> Read ACL for containers. Quick summary of ACL syntax: `.r:*,.r:-.example.com,.r:www.example.com,account1,account2:user2`

-w, --write-acl <acl> Write ACL for containers. Quick summary of ACL syntax: `account1 account2:user2`

-t, --sync-to <sync-to> Sync To for containers, for multi-cluster replication.

-k, --sync-key <sync-key> Sync Key for containers, for multi-cluster replication.

-m, --meta <name:value> Sets a meta data item. This option may be repeated. Example: `-m Color:Blue -m Size:Large`

-H, --header <header:value> Adds a customized request header. This option may be repeated. Example `-H "content-type:text/plain" -H "Content-Length: 4000"`

swift stat

Usage: swift stat

Displays information for the account, container, or object.

Positional arguments:

[container] Name of container to stat from.

[object] Name of object to stat.

Optional arguments:

--lh Report sizes in human readable format similar to `ls -lh`.

swift tempurl

Usage: swift tempurl

Generates a temporary URL for a Swift object.

Positional arguments:

<method> An HTTP method to allow for this temporary URL. Usually 'GET' or 'PUT'.

<seconds> The amount of time in seconds the temporary URL will be valid for; or, if `--absolute` is passed, the Unix timestamp when the temporary URL will expire.

<path> The full path to the Swift object. Example: `/v1/AUTH_account/c/o`.

<key> The secret temporary URL key set on the Swift cluster. To set a key, run `'swift post -m "Temp-URL-Key:b3968d0207b54ece87cccc06515a89d4"'`

Optional arguments:

--absolute Interpret the `<seconds>` positional argument as a Unix timestamp rather than a number of seconds in the future.

swift upload

```
Usage: swift upload
```

Uploads specified files and directories to the given container.

Positional arguments:

<container> Name of container to upload to.

<file_or_directory> Name of file or directory to upload. Specify multiple times for multiple uploads.

Optional arguments:

-c, --changed Only upload files that have changed since the last upload.

--skip-identical Skip uploading files that are identical on both sides.

-S, --segment-size <size> Upload files in segments no larger than `<size>` (in Bytes) and then create a "manifest" file that will download all the segments as if it were the original file.

--segment-container <container> Upload the segments into the specified container. If not specified, the segments will be uploaded to a `<container>_segments` container to not pollute the main `<container>` listings.

--leave-segments Indicates that you want the older segments of manifest objects left alone (in the case of overwrites).

--object-threads <threads> Number of threads to use for uploading full objects. Default is 10.

--segment-threads <threads> Number of threads to use for uploading object segments. Default is 10.

-H, --header <header:value> Adds a customized request header. This option may be repeated. Example `-H "content-type:text/plain" -H "Content-Length: 4000"`.

--use-slo When used in conjunction with `--segment-size` it will create a Static Large Object instead of the default Dynamic Large Object.

--object-name <object-name> Upload file and name object to `<object-name>` or upload dir and use `<object-name>` as object prefix instead of folder name.

--ignore-checksum Turn off checksum validation for uploads.

swift auth

```
Usage: swift auth
```

Display auth related authentication variables in shell friendly format.

Commands to run to export storage url and auth token into `OS_STORAGE_URL` and `OS_AUTH_TOKEN`:

```
$ swift auth
```

Commands to append to a runcom file (e.g. `~/ .bashrc`, `/etc/profile`) for automatic authentication:

```
$ swift auth -v -U test:tester -K testing -A http://localhost:8080/auth/v1.0
```

2.11 Telemetry service command-line client

The ceilometer client is the command-line interface (CLI) for the Telemetry service API and its extensions.

This chapter documents **ceilometer** version 2.4.0.

For help on a specific **ceilometer** command, enter:

```
$ ceilometer help COMMAND
```

2.11.1 ceilometer usage

```
usage: ceilometer [--version] [-d] [-v] [--timeout TIMEOUT]
                [--ceilometer-url <CEILOMETER_URL>]
                [--ceilometer-api-version CEILOMETER_API_VERSION]
                [--os-tenant-id <tenant-id>]
                [--os-region-name <region-name>]
                [--os-auth-token <auth-token>]
                [--os-service-type <service-type>]
                [--os-endpoint-type <endpoint-type>] [--os-cacert <cacert>]
                [--os-insecure <insecure>] [--os-cert-file <cert-file>]
                [--os-key-file <key-file>] [--os-cert <cert>]
                [--os-key <key>] [--os-project-name <project-name>]
                [--os-project-id <project-id>]
                [--os-project-domain-id <project-domain-id>]
                [--os-project-domain-name <project-domain-name>]
                [--os-user-id <user-id>]
                [--os-user-domain-id <user-domain-id>]
                [--os-user-domain-name <user-domain-name>]
                [--os-endpoint <endpoint>] [--os-auth-system <auth-system>]
                [--os-username <username>] [--os-password <password>]
                [--os-tenant-name <tenant-name>] [--os-token <token>]
                [--os-auth-url <auth-url>]
                <subcommand> ...
```

Subcommands:

alarm-combination-create Create a new alarm based on state of other alarms.

alarm-combination-update Update an existing alarm based on state of other alarms.

alarm-create Create a new alarm (Deprecated). Use `alarm-threshold-create` instead.

alarm-delete Delete an alarm.

alarm-event-create Create a new alarm based on events.

alarm-event-update Update an existing alarm based on events.

alarm-gnocchi-aggregation-by-metrics-threshold-create Create a new alarm based on computed statistics.

alarm-gnocchi-aggregation-by-metrics-threshold-update Update an existing alarm based on computed statistics.

alarm-gnocchi-aggregation-by-resources-threshold-create Create a new alarm based on computed statistics.

alarm-gnocchi-aggregation-by-resources-threshold-update Update an existing alarm based on computed statistics.

alarm-gnocchi-resources-threshold-create Create a new alarm based on computed statistics.

alarm-gnocchi-resources-threshold-update Update an existing alarm based on computed statistics.

alarm-history Display the change history of an alarm.

alarm-list List the user's alarms.

alarm-show Show an alarm.

alarm-state-get Get the state of an alarm.

alarm-state-set Set the state of an alarm.

alarm-threshold-create Create a new alarm based on computed statistics.

alarm-threshold-update Update an existing alarm based on computed statistics.

alarm-update Update an existing alarm (Deprecated).

capabilities Print Ceilometer capabilities.

event-list List events.

event-show Show a particular event.

event-type-list List event types.

meter-list List the user's meters.

query-alarm-history Query Alarm History.

query-alarms Query Alarms.

query-samples Query samples.

resource-list List the resources.

resource-show Show the resource.

sample-create Create a sample.

sample-create-list Create a sample list.

sample-list List the samples (return OldSample objects if -m/-meter is set).

sample-show Show a sample.

statistics List the statistics for a meter.

trait-description-list List trait info for an event type.

trait-list List all traits with name <trait_name> for Event Type <event_type>.

bash-completion Prints all of the commands and options to stdout.

help Display help about this program or one of its subcommands.

2.11.2 ceilometer optional arguments

--version show program's version number and exit

-d, --debug Defaults to `env[CEILOMETERCLIENT_DEBUG]`.

-v, --verbose Print more verbose output.

--timeout TIMEOUT Number of seconds to wait for a response.

--ceilometer-url <CEILOMETER_URL> DEPRECATED, use **--os-endpoint** instead. Defaults to `env[CEILOMETER_URL]`.

--ceilometer-api-version CEILOMETER_API_VERSION Defaults to `env[CEILOMETER_API_VERSION]` or 2.

--os-tenant-id <tenant-id> Defaults to `env[OS_TENANT_ID]`.

--os-region-name <region-name> Defaults to `env[OS_REGION_NAME]`.

--os-auth-token <auth-token> Defaults to `env[OS_AUTH_TOKEN]`.

--os-service-type <service-type> Defaults to `env[OS_SERVICE_TYPE]`.

--os-endpoint-type <endpoint-type> Defaults to `env[OS_ENDPOINT_TYPE]`.

--os-cacert <cacert> Defaults to `env[OS_CACERT]`.

--os-insecure <insecure> Defaults to `env[OS_INSECURE]`.

--os-cert-file <cert-file> Defaults to `env[OS_CERT_FILE]`.

--os-key-file <key-file> Defaults to `env[OS_KEY_FILE]`.

--os-cert <cert> Defaults to `env[OS_CERT]`.

--os-key <key> Defaults to `env[OS_KEY]`.

--os-project-name <project-name> Defaults to `env[OS_PROJECT_NAME]`.

--os-project-id <project-id> Defaults to `env[OS_PROJECT_ID]`.

--os-project-domain-id <project-domain-id> Defaults to `env[OS_PROJECT_DOMAIN_ID]`.

--os-project-domain-name <project-domain-name> Defaults to `env[OS_PROJECT_DOMAIN_NAME]`.

--os-user-id <user-id> Defaults to `env[OS_USER_ID]`.

--os-user-domain-id <user-domain-id> Defaults to `env[OS_USER_DOMAIN_ID]`.

--os-user-domain-name <user-domain-name> Defaults to `env[OS_USER_DOMAIN_NAME]`.

--os-endpoint <endpoint> Defaults to `env[OS_ENDPOINT]`.

--os-auth-system <auth-system> Defaults to `env[OS_AUTH_SYSTEM]`.

--os-username <username> Defaults to `env[OS_USERNAME]`.

--os-password <password> Defaults to `env[OS_PASSWORD]`.

--os-tenant-name <tenant-name> Defaults to `env[OS_TENANT_NAME]`.

--os-token <token> Defaults to `env[OS_TOKEN]`.

--os-auth-url <auth-url> Defaults to `env[OS_AUTH_URL]`.

2.11.3 ceilometer alarm-combination-create

```
usage: ceilometer alarm-combination-create --name <NAME>
                                           [--project-id <ALARM_PROJECT_ID>]
                                           [--user-id <ALARM_USER_ID>]
                                           [--description <DESCRIPTION>]
                                           [--state <STATE>]
                                           [--severity <SEVERITY>]
                                           [--enabled {True|False}]
                                           [--alarm-action <Webhook URL>]
                                           [--ok-action <Webhook URL>]
                                           [--insufficient-data-action <Webhook URL>]
                                           [--time-constraint <Time Constraint>]
                                           [--repeat-actions {True|False}]
                                           --alarm_ids <ALARM_IDS>
                                           [--operator <OPERATOR>]
```

Create a new alarm based on state of other alarms.

Optional arguments:

- name <NAME>** Name of the alarm (must be unique per tenant). Required.
- project-id <ALARM_PROJECT_ID>** Tenant to associate with alarm (configurable by admin users only).
- user-id <ALARM_USER_ID>** User to associate with alarm (configurable by admin users only).
- description <DESCRIPTION>** Free text description of the alarm.
- state <STATE>** State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
- severity <SEVERITY>** Severity of the alarm, one of: ['low', 'moderate', 'critical']
- enabled {True|False}** True if alarm evaluation/actioning is enabled.
- alarm-action <Webhook URL>** URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
- ok-action <Webhook URL>** URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.
- insufficient-data-action <Webhook URL>** URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
- time-constraint <Time Constraint>** Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezon one=<IANA Timezone>]] Defaults to None.
- repeat-actions {True|False}** True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
- alarm_ids <ALARM_IDS>** List of alarm IDs. Required.
- operator <OPERATOR>** Operator to compare with, one of: ['and', 'or'].

2.11.4 ceilometer alarm-combination-update

```
usage: ceilometer alarm-combination-update [--name <NAME>]
                                           [--project-id <ALARM_PROJECT_ID>]
                                           [--user-id <ALARM_USER_ID>]
                                           [--description <DESCRIPTION>]
                                           [--state <STATE>]
                                           [--severity <SEVERITY>]
                                           [--enabled {True|False}]
                                           [--alarm-action <Webhook URL>]
                                           [--ok-action <Webhook URL>]
                                           [--insufficient-data-action <Webhook URL>]
                                           [--time-constraint <Time Constraint>]
                                           [--repeat-actions {True|False}]
                                           [--remove-time-constraint <Constraint_
↵names>]
                                           [--alarm_ids <ALARM_IDS>]
                                           [--operator <OPERATOR>]
                                           [<ALARM_ID>]
```

Update an existing alarm based on state of other alarms.

Positional arguments:

<ALARM_ID> ID of the alarm to update.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant).

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

--time-constraint <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezones=<IANA Timezone>]] Defaults to None.

--repeat-actions {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

--remove-time-constraint <Constraint names> Name or list of names of the time constraints to remove.

--alarm_ids <ALARM_IDS> List of alarm IDs.

--operator <OPERATOR> Operator to compare with, one of: ['and', 'or'].

2.11.5 ceilometer alarm-delete

```
usage: ceilometer alarm-delete [<ALARM_ID>]
```

Delete an alarm.

Positional arguments:

<ALARM_ID> ID of the alarm to delete.

2.11.6 ceilometer alarm-event-create

```
usage: ceilometer alarm-event-create --name <NAME>
                                     [--project-id <ALARM_PROJECT_ID>]
                                     [--user-id <ALARM_USER_ID>]
                                     [--description <DESCRIPTION>]
                                     [--state <STATE>] [--severity <SEVERITY>]
                                     [--enabled {True|False}]
                                     [--alarm-action <Webhook URL>]
                                     [--ok-action <Webhook URL>]
                                     [--insufficient-data-action <Webhook URL>]
                                     [--time-constraint <Time Constraint>]
                                     [--repeat-actions {True|False}]
                                     [--event-type <EVENT_TYPE>] [-q <QUERY>]
```

Create a new alarm based on events.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant). Required.

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

--time-constraint <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timez one=<IANA Timezone>]] Defaults to None.

--repeat-actions {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

--event-type <EVENT_TYPE> Event type for event alarm.

-q <QUERY>, **--query <QUERY>** key[op]data_type::value; list for filtering events. data_type is optional, but if supplied must be string, integer, float or datetime.

2.11.7 ceilometer alarm-event-update

```
usage: ceilometer alarm-event-update [--name <NAME>]
                                     [--project-id <ALARM_PROJECT_ID>]
                                     [--user-id <ALARM_USER_ID>]
                                     [--description <DESCRIPTION>]
                                     [--state <STATE>] [--severity <SEVERITY>]
                                     [--enabled {True|False}]
                                     [--alarm-action <Webhook URL>]
                                     [--ok-action <Webhook URL>]
                                     [--insufficient-data-action <Webhook URL>]
                                     [--time-constraint <Time Constraint>]
                                     [--repeat-actions {True|False}]
                                     [--event-type <EVENT_TYPE>] [-q <QUERY>]
                                     [<ALARM_ID>]
```

Update an existing alarm based on events.

Positional arguments:

<ALARM_ID> ID of the alarm to update.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant).

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

--time-constraint <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezon one=<IANA Timezone>]] Defaults to None.

--repeat-actions {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

--event-type <EVENT_TYPE> Event type for event alarm.

-q <QUERY>, **--query <QUERY>** key[op]data_type::value; list for filtering events. data_type is optional, but if supplied must be string, integer, float or datetime.

2.11.8 ceilometer alarm-gnocchi-aggregation-by-metrics-threshold-create

```
usage: ceilometer alarm-gnocchi-aggregation-by-metrics-threshold-create
       --name <NAME> [--project-id <ALARM_PROJECT_ID>]
       [--user-id <ALARM_USER_ID>] [--description <DESCRIPTION>]
       [--state <STATE>] [--severity <SEVERITY>] [--enabled {True|False}]
       [--alarm-action <Webhook URL>] [--ok-action <Webhook URL>]
       [--insufficient-data-action <Webhook URL>]
       [--time-constraint <Time Constraint>] [--repeat-actions {True|False}]
       [--granularity <GRANULARITY>] [--evaluation-periods <COUNT>]
       --aggregation-method <AGGREATION> [--comparison-operator <OPERATOR>]
       --threshold <THRESHOLD> -m <METRICS>
```

Create a new alarm based on computed statistics.

Optional arguments:

- name <NAME>** Name of the alarm (must be unique per tenant). Required.
- project-id <ALARM_PROJECT_ID>** Tenant to associate with alarm (configurable by admin users only).
- user-id <ALARM_USER_ID>** User to associate with alarm (configurable by admin users only).
- description <DESCRIPTION>** Free text description of the alarm.
- state <STATE>** State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
- severity <SEVERITY>** Severity of the alarm, one of: ['low', 'moderate', 'critical']
- enabled {True|False}** True if alarm evaluation/actioning is enabled.
- alarm-action <Webhook URL>** URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
- ok-action <Webhook URL>** URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.
- insufficient-data-action <Webhook URL>** URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
- time-constraint <Time Constraint>** Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>[description=<DESCRIPTION>[timez one=<IANA Timezone>]] Defaults to None.
- repeat-actions {True|False}** True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
- granularity <GRANULARITY>** Length of each period (seconds) to evaluate over.
- evaluation-periods <COUNT>** Number of periods to evaluate over.
- aggregation-method <AGGREATION>** Aggregation method to use, one of: ['last', 'min', 'median', 'sum', 'std', 'first', 'mean', 'count', 'moving-average', 'max', '1pct', '2pct', '3pct', '4pct', '5pct', '6pct', '7pct', '8pct', '9pct', '10pct', '11pct', '12pct', '13pct', '14pct', '15pct', '16pct', '17pct', '18pct', '19pct', '20pct', '21pct', '22pct', '23pct', '24pct', '25pct', '26pct', '27pct', '28pct', '29pct', '30pct', '31pct', '32pct', '33pct', '34pct', '35pct', '36pct', '37pct', '38pct', '39pct', '40pct', '41pct', '42pct', '43pct', '44pct', '45pct', '46pct', '47pct', '48pct', '49pct', '50pct', '51pct', '52pct', '53pct', '54pct', '55pct', '56pct', '57pct', '58pct', '59pct',

'60pct', '61pct', '62pct', '63pct', '64pct', '65pct', '66pct', '67pct', '68pct', '69pct', '70pct', '71pct', '72pct', '73pct', '74pct', '75pct', '76pct', '77pct', '78pct', '79pct', '80pct', '81pct', '82pct', '83pct', '84pct', '85pct', '86pct', '87pct', '88pct', '89pct', '90pct', '91pct', '92pct', '93pct', '94pct', '95pct', '96pct', '97pct', '98pct', '99pct']. Required.

--comparison-operator <OPERATOR> Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].

--threshold <THRESHOLD> Threshold to evaluate against. Required.

-m <METRICS>, **--metrics** <METRICS> Metric to evaluate against. Required.

2.11.9 ceilometer alarm-gnocchi-aggregation-by-metrics-threshold-update

```
usage: ceilometer alarm-gnocchi-aggregation-by-metrics-threshold-update
  [--name <NAME>] [--project-id <ALARM_PROJECT_ID>]
  [--user-id <ALARM_USER_ID>] [--description <DESCRIPTION>]
  [--state <STATE>] [--severity <SEVERITY>] [--enabled {True|False}]
  [--alarm-action <Webhook URL>] [--ok-action <Webhook URL>]
  [--insufficient-data-action <Webhook URL>]
  [--time-constraint <Time Constraint>] [--repeat-actions {True|False}]
  [--granularity <GRANULARITY>] [--evaluation-periods <COUNT>]
  [--aggregation-method <AGGREGATION>] [--comparison-operator <OPERATOR>]
  [--threshold <THRESHOLD>] [-m <METRICS>]
  [--remove-time-constraint <Constraint names>]
  [<ALARM_ID>]
```

Update an existing alarm based on computed statistics.

Positional arguments:

<ALARM_ID> ID of the alarm to update.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant).

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

--time-constraint <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezon one=<IANA Timezone>]] Defaults to None.

- repeat-actions {True|False}** True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
- granularity <GRANULARITY>** Length of each period (seconds) to evaluate over.
- evaluation-periods <COUNT>** Number of periods to evaluate over.
- aggregation-method <AGGREATION>** Aggregation method to use, one of: ['last', 'min', 'median', 'sum', 'std', 'first', 'mean', 'count', 'moving-average', 'max', '1pct', '2pct', '3pct', '4pct', '5pct', '6pct', '7pct', '8pct', '9pct', '10pct', '11pct', '12pct', '13pct', '14pct', '15pct', '16pct', '17pct', '18pct', '19pct', '20pct', '21pct', '22pct', '23pct', '24pct', '25pct', '26pct', '27pct', '28pct', '29pct', '30pct', '31pct', '32pct', '33pct', '34pct', '35pct', '36pct', '37pct', '38pct', '39pct', '40pct', '41pct', '42pct', '43pct', '44pct', '45pct', '46pct', '47pct', '48pct', '49pct', '50pct', '51pct', '52pct', '53pct', '54pct', '55pct', '56pct', '57pct', '58pct', '59pct', '60pct', '61pct', '62pct', '63pct', '64pct', '65pct', '66pct', '67pct', '68pct', '69pct', '70pct', '71pct', '72pct', '73pct', '74pct', '75pct', '76pct', '77pct', '78pct', '79pct', '80pct', '81pct', '82pct', '83pct', '84pct', '85pct', '86pct', '87pct', '88pct', '89pct', '90pct', '91pct', '92pct', '93pct', '94pct', '95pct', '96pct', '97pct', '98pct', '99pct'].
- comparison-operator <OPERATOR>** Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
- threshold <THRESHOLD>** Threshold to evaluate against.
- m <METRICS>, --metrics <METRICS>** Metric to evaluate against.
- remove-time-constraint <Constraint names>** Name or list of names of the time constraints to remove.

2.11.10 ceilometer alarm-gnocchi-aggregation-by-resources-threshold-create

```
usage: ceilometer alarm-gnocchi-aggregation-by-resources-threshold-create
--name <NAME> [--project-id <ALARM_PROJECT_ID>]
[--user-id <ALARM_USER_ID>] [--description <DESCRIPTION>]
[--state <STATE>] [--severity <SEVERITY>] [--enabled {True|False}]
[--alarm-action <Webhook URL>] [--ok-action <Webhook URL>]
[--insufficient-data-action <Webhook URL>]
[--time-constraint <Time Constraint>] [--repeat-actions {True|False}]
[--granularity <GRANULARITY>] [--evaluation-periods <COUNT>]
--aggregation-method <AGGREATION> [--comparison-operator <OPERATOR>]
--threshold <THRESHOLD> -m <METRIC> --resource-type <RESOURCE_TYPE>
--query <QUERY>
```

Create a new alarm based on computed statistics.

Optional arguments:

- name <NAME>** Name of the alarm (must be unique per tenant). Required.
- project-id <ALARM_PROJECT_ID>** Tenant to associate with alarm (configurable by admin users only).
- user-id <ALARM_USER_ID>** User to associate with alarm (configurable by admin users only).
- description <DESCRIPTION>** Free text description of the alarm.
- state <STATE>** State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
- severity <SEVERITY>** Severity of the alarm, one of: ['low', 'moderate', 'critical']
- enabled {True|False}** True if alarm evaluation/actioning is enabled.
- alarm-action <Webhook URL>** URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

- ok-action <Webhook URL>** URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.
- insufficient-data-action <Webhook URL>** URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
- time-constraint <Time Constraint>** Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timez one=<IANA Timezone>]] Defaults to None.
- repeat-actions {True|False}** True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
- granularity <GRANULARITY>** Length of each period (seconds) to evaluate over.
- evaluation-periods <COUNT>** Number of periods to evaluate over.
- aggregation-method <AGGREATION>** Aggregation method to use, one of: ['last', 'min', 'median', 'sum', 'std', 'first', 'mean', 'count', 'moving-average', 'max', '1pct', '2pct', '3pct', '4pct', '5pct', '6pct', '7pct', '8pct', '9pct', '10pct', '11pct', '12pct', '13pct', '14pct', '15pct', '16pct', '17pct', '18pct', '19pct', '20pct', '21pct', '22pct', '23pct', '24pct', '25pct', '26pct', '27pct', '28pct', '29pct', '30pct', '31pct', '32pct', '33pct', '34pct', '35pct', '36pct', '37pct', '38pct', '39pct', '40pct', '41pct', '42pct', '43pct', '44pct', '45pct', '46pct', '47pct', '48pct', '49pct', '50pct', '51pct', '52pct', '53pct', '54pct', '55pct', '56pct', '57pct', '58pct', '59pct', '60pct', '61pct', '62pct', '63pct', '64pct', '65pct', '66pct', '67pct', '68pct', '69pct', '70pct', '71pct', '72pct', '73pct', '74pct', '75pct', '76pct', '77pct', '78pct', '79pct', '80pct', '81pct', '82pct', '83pct', '84pct', '85pct', '86pct', '87pct', '88pct', '89pct', '90pct', '91pct', '92pct', '93pct', '94pct', '95pct', '96pct', '97pct', '98pct', '99pct']. Required.
- comparison-operator <OPERATOR>** Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
- threshold <THRESHOLD>** Threshold to evaluate against. Required.
- m <METRIC>, --metric <METRIC>** Metric to evaluate against. Required.
- resource-type <RESOURCE_TYPE>** Resource_type to evaluate against. Required.
- query <QUERY>** Gnocchi resources search query filter Required.

2.11.11 ceilometer alarm-gnocchi-aggregation-by-resources-threshold-update

```
usage: ceilometer alarm-gnocchi-aggregation-by-resources-threshold-update
[--name <NAME>] [--project-id <ALARM_PROJECT_ID>]
[--user-id <ALARM_USER_ID>] [--description <DESCRIPTION>]
[--state <STATE>] [--severity <SEVERITY>] [--enabled {True|False}]
[--alarm-action <Webhook URL>] [--ok-action <Webhook URL>]
[--insufficient-data-action <Webhook URL>]
[--time-constraint <Time Constraint>] [--repeat-actions {True|False}]
[--granularity <GRANULARITY>] [--evaluation-periods <COUNT>]
[--aggregation-method <AGGREATION>] [--comparison-operator <OPERATOR>]
[--threshold <THRESHOLD>] [-m <METRIC>]
[--resource-type <RESOURCE_TYPE>] [--query <QUERY>]
[--remove-time-constraint <Constraint names>]
[<ALARM_ID>]
```

Update an existing alarm based on computed statistics.

Positional arguments:

<ALARM_ID> ID of the alarm to update.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant).

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

--time-constraint <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezone=<IANA Timezone>]] Defaults to None.

--repeat-actions {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

--granularity <GRANULARITY> Length of each period (seconds) to evaluate over.

--evaluation-periods <COUNT> Number of periods to evaluate over.

--aggregation-method <AGGREGATION> Aggregation method to use, one of: ['last', 'min', 'median', 'sum', 'std', 'first', 'mean', 'count', 'moving-average', 'max', '1pct', '2pct', '3pct', '4pct', '5pct', '6pct', '7pct', '8pct', '9pct', '10pct', '11pct', '12pct', '13pct', '14pct', '15pct', '16pct', '17pct', '18pct', '19pct', '20pct', '21pct', '22pct', '23pct', '24pct', '25pct', '26pct', '27pct', '28pct', '29pct', '30pct', '31pct', '32pct', '33pct', '34pct', '35pct', '36pct', '37pct', '38pct', '39pct', '40pct', '41pct', '42pct', '43pct', '44pct', '45pct', '46pct', '47pct', '48pct', '49pct', '50pct', '51pct', '52pct', '53pct', '54pct', '55pct', '56pct', '57pct', '58pct', '59pct', '60pct', '61pct', '62pct', '63pct', '64pct', '65pct', '66pct', '67pct', '68pct', '69pct', '70pct', '71pct', '72pct', '73pct', '74pct', '75pct', '76pct', '77pct', '78pct', '79pct', '80pct', '81pct', '82pct', '83pct', '84pct', '85pct', '86pct', '87pct', '88pct', '89pct', '90pct', '91pct', '92pct', '93pct', '94pct', '95pct', '96pct', '97pct', '98pct', '99pct'].

--comparison-operator <OPERATOR> Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].

--threshold <THRESHOLD> Threshold to evaluate against.

-m <METRIC>, --metric <METRIC> Metric to evaluate against.

--resource-type <RESOURCE_TYPE> Resource_type to evaluate against.

--query <QUERY> Gnocchi resources search query filter

--remove-time-constraint <Constraint names> Name or list of names of the time constraints to remove.

2.11.12 ceilometer alarm-gnocchi-resources-threshold-create

```
usage: ceilometer alarm-gnocchi-resources-threshold-create --name <NAME>
                                [--project-id <ALARM_
↪PROJECT_ID>]
                                [--user-id <ALARM_USER_ID>]
                                [--description
↪<DESCRIPTION>]
                                [--state <STATE>]
                                [--severity <SEVERITY>]
                                [--enabled {True|False}]
                                [--alarm-action <Webhook_
↪URL>]
                                [--ok-action <Webhook URL>]
↪action <Webhook URL>]
                                [--insufficient-data-
↪Constraint>]
                                [--time-constraint <Time_
↪{True|False}>]
                                [--repeat-actions
↪<GRANULARITY>]
                                [--granularity
↪<COUNT>]
                                [--evaluation-periods
↪<OPERATOR>]
                                --aggregation-method
                                <AGGREGATION>
                                [--comparison-operator
                                --threshold
                                <THRESHOLD> -m
                                <METRIC>
                                --resource-type
                                <RESOURCE_TYPE>
                                --resource-id
                                <RESOURCE_ID>
```

Create a new alarm based on computed statistics.

Optional arguments:

- name <NAME>** Name of the alarm (must be unique per tenant). Required.
- project-id <ALARM_PROJECT_ID>** Tenant to associate with alarm (configurable by admin users only).
- user-id <ALARM_USER_ID>** User to associate with alarm (configurable by admin users only).
- description <DESCRIPTION>** Free text description of the alarm.
- state <STATE>** State of the alarm, one of: ['ok', 'alarm', 'insufficient data']
- severity <SEVERITY>** Severity of the alarm, one of: ['low', 'moderate', 'critical']
- enabled {True|False}** True if alarm evaluation/actioning is enabled.
- alarm-action <Webhook URL>** URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
- ok-action <Webhook URL>** URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.
- insufficient-data-action <Webhook URL>** URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

- time-constraint** <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timez one=<IANA Timezone>]] Defaults to None.
- repeat-actions** {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
- granularity** <GRANULARITY> Length of each period (seconds) to evaluate over.
- evaluation-periods** <COUNT> Number of periods to evaluate over.
- aggregation-method** <AGGREATION> Aggregation method to use, one of: ['last', 'min', 'median', 'sum', 'std', 'first', 'mean', 'count', 'moving-average', 'max', '1pct', '2pct', '3pct', '4pct', '5pct', '6pct', '7pct', '8pct', '9pct', '10pct', '11pct', '12pct', '13pct', '14pct', '15pct', '16pct', '17pct', '18pct', '19pct', '20pct', '21pct', '22pct', '23pct', '24pct', '25pct', '26pct', '27pct', '28pct', '29pct', '30pct', '31pct', '32pct', '33pct', '34pct', '35pct', '36pct', '37pct', '38pct', '39pct', '40pct', '41pct', '42pct', '43pct', '44pct', '45pct', '46pct', '47pct', '48pct', '49pct', '50pct', '51pct', '52pct', '53pct', '54pct', '55pct', '56pct', '57pct', '58pct', '59pct', '60pct', '61pct', '62pct', '63pct', '64pct', '65pct', '66pct', '67pct', '68pct', '69pct', '70pct', '71pct', '72pct', '73pct', '74pct', '75pct', '76pct', '77pct', '78pct', '79pct', '80pct', '81pct', '82pct', '83pct', '84pct', '85pct', '86pct', '87pct', '88pct', '89pct', '90pct', '91pct', '92pct', '93pct', '94pct', '95pct', '96pct', '97pct', '98pct', '99pct']. Required.
- comparison-operator** <OPERATOR> Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
- threshold** <THRESHOLD> Threshold to evaluate against. Required.
- m** <METRIC>, **--metric** <METRIC> Metric to evaluate against. Required.
- resource-type** <RESOURCE_TYPE> Resource_type to evaluate against. Required.
- resource-id** <RESOURCE_ID> Resource id to evaluate against Required.

2.11.13 ceilometer alarm-gnocchi-resources-threshold-update

```
usage: ceilometer alarm-gnocchi-resources-threshold-update [--name <NAME>]
                  [--project-id <ALARM_
↪PROJECT_ID>]
                  [--user-id <ALARM_USER_ID>]
                  [--description
↪<DESCRIPTION>]
                  [--state <STATE>]
                  [--severity <SEVERITY>]
                  [--enabled {True|False}]
                  [--alarm-action <Webhook_
↪URL>]
                  [--ok-action <Webhook URL>]
                  [--insufficient-data-
↪action <Webhook URL>]
                  [--time-constraint <Time_
↪Constraint>]
                  [--repeat-actions
↪{True|False}]
                  [--granularity
↪<GRANULARITY>]
                  [--evaluation-periods
↪<COUNT>]
                  [--aggregation-method
↪<AGGREATION>]
```

<code><OPERATOR>]</code>	<code>--comparison-operator</code>
	<code>--threshold <THRESHOLD>]</code>
	<code>[-m <METRIC>]</code>
<code><TYPE>]</code>	<code>--resource-type <RESOURCE_</code>
	<code>--resource-id <RESOURCE_</code>
<code><ID>]</code>	<code>--remove-time-constraint</code>
<code><Constraint names>]</code>	<code>[<ALARM_ID>]</code>

Update an existing alarm based on computed statistics.

Positional arguments:

<ALARM_ID> ID of the alarm to update.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant).

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

--time-constraint <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timezones=<IANA Timezone>]] Defaults to None.

--repeat-actions {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

--granularity <GRANULARITY> Length of each period (seconds) to evaluate over.

--evaluation-periods <COUNT> Number of periods to evaluate over.

--aggregation-method <AGGREGATION> Aggregation method to use, one of: ['last', 'min', 'median', 'sum', 'std', 'first', 'mean', 'count', 'moving-average', 'max', '1pct', '2pct', '3pct', '4pct', '5pct', '6pct', '7pct', '8pct', '9pct', '10pct', '11pct', '12pct', '13pct', '14pct', '15pct', '16pct', '17pct', '18pct', '19pct', '20pct', '21pct', '22pct', '23pct', '24pct', '25pct', '26pct', '27pct', '28pct', '29pct', '30pct', '31pct', '32pct', '33pct', '34pct', '35pct', '36pct', '37pct', '38pct', '39pct', '40pct', '41pct', '42pct', '43pct', '44pct', '45pct', '46pct', '47pct', '48pct', '49pct', '50pct', '51pct', '52pct', '53pct', '54pct', '55pct', '56pct', '57pct', '58pct', '59pct', '60pct', '61pct', '62pct', '63pct', '64pct', '65pct', '66pct', '67pct', '68pct', '69pct', '70pct', '71pct', '72pct',

'73pct', '74pct', '75pct', '76pct', '77pct', '78pct', '79pct', '80pct', '81pct', '82pct', '83pct', '84pct', '85pct', '86pct', '87pct', '88pct', '89pct', '90pct', '91pct', '92pct', '93pct', '94pct', '95pct', '96pct', '97pct', '98pct', '99pct'].

--comparison-operator <OPERATOR> Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].

--threshold <THRESHOLD> Threshold to evaluate against.

-m <METRIC>, **--metric** <METRIC> Metric to evaluate against.

--resource-type <RESOURCE_TYPE> Resource_type to evaluate against.

--resource-id <RESOURCE_ID> Resource id to evaluate against

--remove-time-constraint <Constraint names> Name or list of names of the time constraints to remove.

2.11.14 ceilometer alarm-history

```
usage: ceilometer alarm-history [-q <QUERY>] [<ALARM_ID>]
```

Display the change history of an alarm.

Positional arguments:

<ALARM_ID> ID of the alarm for which history is shown.

Optional arguments:

-q <QUERY>, **--query** <QUERY> key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.

2.11.15 ceilometer alarm-list

```
usage: ceilometer alarm-list [-q <QUERY>]
```

List the user's alarms.

Optional arguments:

-q <QUERY>, **--query** <QUERY> key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.

2.11.16 ceilometer alarm-show

```
usage: ceilometer alarm-show [<ALARM_ID>]
```

Show an alarm.

Positional arguments:

<ALARM_ID> ID of the alarm to show.

2.11.17 ceilometer alarm-state-get

```
usage: ceilometer alarm-state-get [<ALARM_ID>]
```

Get the state of an alarm.

Positional arguments:

<ALARM_ID> ID of the alarm state to show.

2.11.18 ceilometer alarm-state-set

```
usage: ceilometer alarm-state-set --state <STATE> [<ALARM_ID>]
```

Set the state of an alarm.

Positional arguments:

<ALARM_ID> ID of the alarm state to set.

Optional arguments:

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']. Required.

2.11.19 ceilometer alarm-threshold-create

```
usage: ceilometer alarm-threshold-create --name <NAME>
                                     [--project-id <ALARM_PROJECT_ID>]
                                     [--user-id <ALARM_USER_ID>]
                                     [--description <DESCRIPTION>]
                                     [--state <STATE>]
                                     [--severity <SEVERITY>]
                                     [--enabled {True|False}]
                                     [--alarm-action <Webhook URL>]
                                     [--ok-action <Webhook URL>]
                                     [--insufficient-data-action <Webhook URL>]
                                     [--time-constraint <Time Constraint>]
                                     [--repeat-actions {True|False}] -m
                                     <METRIC> [--period <PERIOD>]
                                     [--evaluation-periods <COUNT>]
                                     [--statistic <STATISTIC>]
                                     [--comparison-operator <OPERATOR>]
                                     --threshold <THRESHOLD> [-q <QUERY>]
```

Create a new alarm based on computed statistics.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant). Required.

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

- alarm-action** <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.
- ok-action** <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.
- insufficient-data-action** <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.
- time-constraint** <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[timez one=<IANA Timezone>]] Defaults to None.
- repeat-actions** {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.
- m** <METRIC>, **--meter-name** <METRIC> Metric to evaluate against. Required.
- period** <PERIOD> Length of each period (seconds) to evaluate over.
- evaluation-periods** <COUNT> Number of periods to evaluate over.
- statistic** <STATISTIC> Statistic to evaluate, one of: ['max', 'min', 'avg', 'sum', 'count'].
- comparison-operator** <OPERATOR> Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].
- threshold** <THRESHOLD> Threshold to evaluate against. Required.
- q** <QUERY>, **--query** <QUERY> key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.

2.11.20 ceilometer alarm-threshold-update

```
usage: ceilometer alarm-threshold-update [--name <NAME>]
                                         [--project-id <ALARM_PROJECT_ID>]
                                         [--user-id <ALARM_USER_ID>]
                                         [--description <DESCRIPTION>]
                                         [--state <STATE>]
                                         [--severity <SEVERITY>]
                                         [--enabled {True|False}]
                                         [--alarm-action <Webhook URL>]
                                         [--ok-action <Webhook URL>]
                                         [--insufficient-data-action <Webhook URL>]
                                         [--time-constraint <Time Constraint>]
                                         [--repeat-actions {True|False}]
                                         [--remove-time-constraint <Constraint names>]
                                         [-m <METRIC>] [--period <PERIOD>]
                                         [--evaluation-periods <COUNT>]
                                         [--statistic <STATISTIC>]
                                         [--comparison-operator <OPERATOR>]
                                         [--threshold <THRESHOLD>]
                                         [-q <QUERY>]
                                         [<ALARM_ID>]
```

Update an existing alarm based on computed statistics.

Positional arguments:

<ALARM_ID> ID of the alarm to update.

Optional arguments:

--name <NAME> Name of the alarm (must be unique per tenant).

--project-id <ALARM_PROJECT_ID> Tenant to associate with alarm (configurable by admin users only).

--user-id <ALARM_USER_ID> User to associate with alarm (configurable by admin users only).

--description <DESCRIPTION> Free text description of the alarm.

--state <STATE> State of the alarm, one of: ['ok', 'alarm', 'insufficient data']

--severity <SEVERITY> Severity of the alarm, one of: ['low', 'moderate', 'critical']

--enabled {True|False} True if alarm evaluation/actioning is enabled.

--alarm-action <Webhook URL> URL to invoke when state transitions to alarm. May be used multiple times. Defaults to None.

--ok-action <Webhook URL> URL to invoke when state transitions to OK. May be used multiple times. Defaults to None.

--insufficient-data-action <Webhook URL> URL to invoke when state transitions to insufficient data. May be used multiple times. Defaults to None.

--time-constraint <Time Constraint> Only evaluate the alarm if the time at evaluation is within this time constraint. Start point(s) of the constraint are specified with a cron expression, whereas its duration is given in seconds. Can be specified multiple times for multiple time constraints, format is: name=<CONSTRAINT_NAME>;start=<CRON>;duration=<SECONDS>;[description=<DESCRIPTION>;[time zone=<IANA Timezone>]] Defaults to None.

--repeat-actions {True|False} True if actions should be repeatedly notified while alarm remains in target state. Defaults to False.

--remove-time-constraint <Constraint names> Name or list of names of the time constraints to remove.

-m <METRIC>, **--meter-name** <METRIC> Metric to evaluate against.

--period <PERIOD> Length of each period (seconds) to evaluate over.

--evaluation-periods <COUNT> Number of periods to evaluate over.

--statistic <STATISTIC> Statistic to evaluate, one of: ['max', 'min', 'avg', 'sum', 'count'].

--comparison-operator <OPERATOR> Operator to compare with, one of: ['lt', 'le', 'eq', 'ne', 'ge', 'gt'].

--threshold <THRESHOLD> Threshold to evaluate against.

-q <QUERY>, **--query** <QUERY> key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.

2.11.21 ceilometer capabilities

```
usage: ceilometer capabilities
```

Print Ceilometer capabilities.

2.11.22 ceilometer event-list

```
usage: ceilometer event-list [-q <QUERY>] [--no-traits] [-l <NUMBER>]
```

List events.

Optional arguments:

-q <QUERY>, **--query <QUERY>** key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float or datetime.

--no-traits If specified, traits will not be printed.

-l <NUMBER>, **--limit <NUMBER>** Maximum number of events to return. API server limits result to <default_api_return_limit> rows if no limit provided. Option is configured in ceilometer.conf [api] group

2.11.23 ceilometer event-show

```
usage: ceilometer event-show <message_id>
```

Show a particular event.

Positional arguments:

<message_id> The ID of the event. Should be a UUID.

2.11.24 ceilometer event-type-list

```
usage: ceilometer event-type-list
```

List event types.

2.11.25 ceilometer meter-list

```
usage: ceilometer meter-list [-q <QUERY>] [-l <NUMBER>]
                             [--unique {True|False}]
```

List the user's meters.

Optional arguments:

-q <QUERY>, **--query <QUERY>** key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.

-l <NUMBER>, **--limit <NUMBER>** Maximum number of meters to return. API server limits result to <default_api_return_limit> rows if no limit provided. Option is configured in ceilometer.conf [api] group

--unique {True|False} Retrieves unique list of meters.

2.11.26 ceilometer query-alarm-history

```
usage: ceilometer query-alarm-history [-f <FILTER>] [-o <ORDERBY>]
                                       [-l <LIMIT>]
```

Query Alarm History.

Optional arguments:

-f <FILTER>, **--filter <FILTER>** {complex_op: [{simple_op: {field_name: value}}]} The complex_op is one of: ['and', 'or'], simple_op is one of: ['=', '!=', '<', '<=', '>', '>='].

- o <ORDERBY>, --orderby <ORDERBY>** [{field_name: direction}, {field_name: direction}] The direction is one of: ['asc', 'desc'].
- l <LIMIT>, --limit <LIMIT>** Maximum number of alarm history items to return. API server limits result to <default_api_return_limit> rows if no limit provided. Option is configured in ceilometer.conf [api] group

2.11.27 ceilometer query-alarms

```
usage: ceilometer query-alarms [-f <FILTER>] [-o <ORDERBY>] [-l <LIMIT>]
```

Query Alarms.

Optional arguments:

- f <FILTER>, --filter <FILTER>** {complex_op: [{simple_op: {field_name: value}}]} The complex_op is one of: ['and', 'or'], simple_op is one of: ['=', '!=', '<', '<=', '>', '>='].
- o <ORDERBY>, --orderby <ORDERBY>** [{field_name: direction}, {field_name: direction}] The direction is one of: ['asc', 'desc'].
- l <LIMIT>, --limit <LIMIT>** Maximum number of alarms to return. API server limits result to <default_api_return_limit> rows if no limit provided. Option is configured in ceilometer.conf [api] group

2.11.28 ceilometer query-samples

```
usage: ceilometer query-samples [-f <FILTER>] [-o <ORDERBY>] [-l <LIMIT>]
```

Query samples.

Optional arguments:

- f <FILTER>, --filter <FILTER>** {complex_op: [{simple_op: {field_name: value}}]} The complex_op is one of: ['and', 'or'], simple_op is one of: ['=', '!=', '<', '<=', '>', '>='].
- o <ORDERBY>, --orderby <ORDERBY>** [{field_name: direction}, {field_name: direction}] The direction is one of: ['asc', 'desc'].
- l <LIMIT>, --limit <LIMIT>** Maximum number of samples to return. API server limits result to <default_api_return_limit> rows if no limit provided. Option is configured in ceilometer.conf [api] group

2.11.29 ceilometer resource-list

```
usage: ceilometer resource-list [-q <QUERY>] [-l <NUMBER>]
```

List the resources.

Optional arguments:

- q <QUERY>, --query <QUERY>** key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.
- l <NUMBER>, --limit <NUMBER>** Maximum number of resources to return. API server limits result to <default_api_return_limit> rows if no limit provided. Option is configured in ceilometer.conf [api] group

2.11.30 ceilometer resource-show

```
usage: ceilometer resource-show <RESOURCE_ID>
```

Show the resource.

Positional arguments:

<RESOURCE_ID> ID of the resource to show.

2.11.31 ceilometer sample-create

```
usage: ceilometer sample-create [--project-id <SAMPLE_PROJECT_ID>]
                                [--user-id <SAMPLE_USER_ID>] -r <RESOURCE_ID>
                                -m <METER_NAME> --meter-type <METER_TYPE>
                                --meter-unit <METER_UNIT> --sample-volume
                                <SAMPLE_VOLUME>
                                [--resource-metadata <RESOURCE_METADATA>]
                                [--timestamp <TIMESTAMP>] [--direct <DIRECT>]
```

Create a sample.

Optional arguments:

--project-id <SAMPLE_PROJECT_ID> Tenant to associate with sample (configurable by admin users only).

--user-id <SAMPLE_USER_ID> User to associate with sample (configurable by admin users only).

-r <RESOURCE_ID>, **--resource-id <RESOURCE_ID>** ID of the resource. Required.

-m <METER_NAME>, **--meter-name <METER_NAME>** The meter name. Required.

--meter-type <METER_TYPE> The meter type. Required.

--meter-unit <METER_UNIT> The meter unit. Required.

--sample-volume <SAMPLE_VOLUME> The sample volume. Required.

--resource-metadata <RESOURCE_METADATA> Resource metadata. Provided value should be a set of key-value pairs e.g. {"key":"value"}.

--timestamp <TIMESTAMP> The sample timestamp.

--direct <DIRECT> Post sample to storage directly. Defaults to False.

2.11.32 ceilometer sample-create-list

```
usage: ceilometer sample-create-list [--direct <DIRECT>] <SAMPLES_LIST>
```

Create a sample list.

Positional arguments:

<SAMPLES_LIST> Json array with samples to create.

Optional arguments:

--direct <DIRECT> Post samples to storage directly. Defaults to False.

2.11.33 ceilometer sample-list

```
usage: ceilometer sample-list [-q <QUERY>] [-m <NAME>] [-l <NUMBER>]
```

List the samples (return OldSample objects if -m/--meter is set).

Optional arguments:

- q <QUERY>, --query <QUERY>** key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.
- m <NAME>, --meter <NAME>** Name of meter to show samples for.
- l <NUMBER>, --limit <NUMBER>** Maximum number of samples to return. API server limits result to <default_api_return_limit> rows if no limit provided. Option is configured in ceilometer.conf [api] group

2.11.34 ceilometer sample-show

```
usage: ceilometer sample-show <SAMPLE_ID>
```

Show a sample.

Positional arguments:

<SAMPLE_ID> ID (aka message ID) of the sample to show.

2.11.35 ceilometer statistics

```
usage: ceilometer statistics [-q <QUERY>] -m <NAME> [-p <PERIOD>] [-g <FIELD>]
                               [-a <FUNC> [<--<PARAM>]]
```

List the statistics for a meter.

Optional arguments:

- q <QUERY>, --query <QUERY>** key[op]data_type::value; list. data_type is optional, but if supplied must be string, integer, float, or boolean.
- m <NAME>, --meter <NAME>** Name of meter to list statistics for. Required.
- p <PERIOD>, --period <PERIOD>** Period in seconds over which to group samples.
- g <FIELD>, --groupby <FIELD>** Field for group by.
- a <FUNC> [<--<PARAM>], --aggregate <FUNC> [<--<PARAM>]** Function for data aggregation. Available aggregates are: count, cardinality, min, max, sum, stddev, avg. Defaults to [].

2.11.36 ceilometer trait-description-list

```
usage: ceilometer trait-description-list -e <EVENT_TYPE>
```

List trait info for an event type.

Optional arguments:

- e <EVENT_TYPE>, --event_type <EVENT_TYPE>** Type of the event for which traits will be shown. Required.

2.11.37 ceilometer trait-list

```
usage: ceilometer trait-list -e <EVENT_TYPE> -t <TRAIT_NAME>
```

List all traits with name <trait_name> for Event Type <event_type>.

Optional arguments:

- e <EVENT_TYPE>**, **--event_type <EVENT_TYPE>** Type of the event for which traits will listed. Required.
- t <TRAIT_NAME>**, **--trait_name <TRAIT_NAME>** The name of the trait to list. Required.

2.12 Community support

The following resources are available to help you run and use OpenStack. The OpenStack community constantly improves and adds to the main features of OpenStack, but if you have any questions, do not hesitate to ask. Use the following resources to get OpenStack support, and troubleshoot your installations.

2.12.1 Documentation

For the available OpenStack documentation, see docs.openstack.org.

To provide feedback on documentation, join and use the openstack-docs@lists.openstack.org mailing list at [OpenStack Documentation Mailing List](#), or report a bug.

The following books explain how to install an OpenStack cloud and its associated components:

- [Installation Guide for openSUSE Leap 42.1 and SUSE Linux Enterprise Server 12 SP1](#)
- [Installation Guide for Red Hat Enterprise Linux 7 and CentOS 7](#)
- [Installation Guide for Ubuntu 14.04 \(LTS\)](#)

The following books explain how to configure and run an OpenStack cloud:

- [Architecture Design Guide](#)
- [Administrator Guide](#)
- [Configuration Reference](#)
- [Operations Guide](#)
- [Networking Guide](#)
- [High Availability Guide](#)
- [Security Guide](#)
- [Virtual Machine Image Guide](#)

The following books explain how to use the OpenStack dashboard and command-line clients:

- [API Guide](#)
- [End User Guide](#)
- [Command-Line Interface Reference](#)

The following documentation provides reference and guidance information for the OpenStack APIs:

- [API Complete Reference \(HTML\)](#)

- [API Complete Reference \(PDF\)](#)

The following guide provides how to contribute to OpenStack documentation:

- [Documentation Contributor Guide](#)

2.12.2 ask.openstack.org

During the set up or testing of OpenStack, you might have questions about how a specific task is completed or be in a situation where a feature does not work correctly. Use the ask.openstack.org site to ask questions and get answers. When you visit the <https://ask.openstack.org> site, scan the recently asked questions to see whether your question has already been answered. If not, ask a new question. Be sure to give a clear, concise summary in the title and provide as much detail as possible in the description. Paste in your command output or stack traces, links to screen shots, and any other information which might be useful.

2.12.3 OpenStack mailing lists

A great way to get answers and insights is to post your question or problematic scenario to the OpenStack mailing list. You can learn from and help others who might have similar issues. To subscribe or view the archives, go to <http://lists.openstack.org/cgi-bin/mailman/listinfo/openstack>. If you are interested in the other mailing lists for specific projects or development, refer to [Mailing Lists](#).

2.12.4 The OpenStack wiki

The [OpenStack wiki](#) contains a broad range of topics but some of the information can be difficult to find or is a few pages deep. Fortunately, the wiki search feature enables you to search by title or content. If you search for specific information, such as about networking or OpenStack Compute, you can find a large amount of relevant material. More is being added all the time, so be sure to check back often. You can find the search box in the upper-right corner of any OpenStack wiki page.

2.12.5 The Launchpad Bugs area

The OpenStack community values your set up and testing efforts and wants your feedback. To log a bug, you must sign up for a Launchpad account at <https://launchpad.net/+login>. You can view existing bugs and report bugs in the Launchpad Bugs area. Use the search feature to determine whether the bug has already been reported or already been fixed. If it still seems like your bug is unreported, fill out a bug report.

Some tips:

- Give a clear, concise summary.
- Provide as much detail as possible in the description. Paste in your command output or stack traces, links to screen shots, and any other information which might be useful.
- Be sure to include the software and package versions that you are using, especially if you are using a development branch, such as, "Kilo release" vs git commit `bc79c3ecc55929bac585d04a03475b72e06a3208`.
- Any deployment-specific information is helpful, such as whether you are using Ubuntu 14.04 or are performing a multi-node installation.

The following Launchpad Bugs areas are available:

- [Bugs: OpenStack Block Storage \(cinder\)](#)

- Bugs: OpenStack Compute (nova)
- Bugs: OpenStack Dashboard (horizon)
- Bugs: OpenStack Identity (keystone)
- Bugs: OpenStack Image service (glance)
- Bugs: OpenStack Networking (neutron)
- Bugs: OpenStack Object Storage (swift)
- Bugs: Application catalog (murano)
- Bugs: Bare metal service (ironic)
- Bugs: Clustering service (senlin)
- Bugs: Containers service (magnum)
- Bugs: Data processing service (sahara)
- Bugs: Database service (trove)
- Bugs: Deployment service (fuel)
- Bugs: DNS service (designate)
- Bugs: Key Manager Service (barbican)
- Bugs: Monitoring (monasca)
- Bugs: Orchestration (heat)
- Bugs: Rating (cloudkitty)
- Bugs: Shared file systems (manila)
- Bugs: Telemetry (ceilometer)
- Bugs: Telemetry v3 (gnocchi)
- Bugs: Workflow service (mistral)
- Bugs: Messaging service (zaqar)
- Bugs: OpenStack API Documentation (developer.openstack.org)
- Bugs: OpenStack Documentation (docs.openstack.org)

2.12.6 The OpenStack IRC channel

The OpenStack community lives in the #openstack IRC channel on the Freenode network. You can hang out, ask questions, or get immediate feedback for urgent and pressing issues. To install an IRC client or use a browser-based client, go to <https://webchat.freenode.net/>. You can also use Colloquy (Mac OS X, <http://colloquy.info/>), mIRC (Windows, <http://www.mirc.com/>), or XChat (Linux). When you are in the IRC channel and want to share code or command output, the generally accepted method is to use a Paste Bin. The OpenStack project has one at <http://paste.openstack.org>. Just paste your longer amounts of text or logs in the web form and you get a URL that you can paste into the channel. The OpenStack IRC channel is #openstack on `irc.freenode.net`. You can find a list of all OpenStack IRC channels at <https://wiki.openstack.org/wiki/IRC>.

2.12.7 Documentation feedback

To provide feedback on documentation, join and use the openstack-docs@lists.openstack.org mailing list at [OpenStack Documentation Mailing List](#), or report a bug.

2.12.8 OpenStack distribution packages

The following Linux distributions provide community-supported packages for OpenStack:

- **Debian:** <https://wiki.debian.org/OpenStack>
- **CentOS, Fedora, and Red Hat Enterprise Linux:** <https://www.rdoproject.org/>
- **openSUSE and SUSE Linux Enterprise Server:** <https://en.opensuse.org/Portal:OpenStack>
- **Ubuntu:** <https://wiki.ubuntu.com/ServerTeam/CloudArchive>

2.13 Glossary

This glossary offers a list of terms and definitions to define a vocabulary for OpenStack-related concepts.

To add to OpenStack glossary, clone the [openstack/openstack-manuals](#) repository and update the source file `doc/common/glossary.rst` through the OpenStack contribution process.

2.13.1 0-9

6to4 A mechanism that allows IPv6 packets to be transmitted over an IPv4 network, providing a strategy for migrating to IPv6.

2.13.2 A

absolute limit Impassable limits for guest VMs. Settings include total RAM size, maximum number of vCPUs, and maximum disk size.

access control list A list of permissions attached to an object. An ACL specifies which users or system processes have access to objects. It also defines which operations can be performed on specified objects. Each entry in a typical ACL specifies a subject and an operation. For instance, the ACL entry (`Alice`, `delete`) for a file gives Alice permission to delete the file.

access key Alternative term for an Amazon EC2 access key. See EC2 access key.

account The Object Storage context of an account. Do not confuse with a user account from an authentication service, such as Active Directory, `/etc/passwd`, OpenLDAP, OpenStack Identity, and so on.

account auditor Checks for missing replicas and incorrect or corrupted objects in a specified Object Storage account by running queries against the back-end SQLite database.

account database A SQLite database that contains Object Storage accounts and related metadata and that the accounts server accesses.

account reaper An Object Storage worker that scans for and deletes account databases and that the account server has marked for deletion.

account server Lists containers in Object Storage and stores container information in the account database.

- account service** An Object Storage component that provides account services such as list, create, modify, and audit. Do not confuse with OpenStack Identity service, OpenLDAP, or similar user-account services.
- accounting** The Compute service provides accounting information through the event notification and system usage data facilities.
- ACL** See access control list.
- active/active configuration** In a high-availability setup with an active/active configuration, several systems share the load together and if one fails, the load is distributed to the remaining systems.
- Active Directory** Authentication and identity service by Microsoft, based on LDAP. Supported in OpenStack.
- active/passive configuration** In a high-availability setup with an active/passive configuration, systems are set up to bring additional resources online to replace those that have failed.
- address pool** A group of fixed and/or floating IP addresses that are assigned to a project and can be used by or assigned to the VM instances in a project.
- admin API** A subset of API calls that are accessible to authorized administrators and are generally not accessible to end users or the public Internet. They can exist as a separate service (keystone) or can be a subset of another API (nova).
- administrator** The person responsible for installing, configuring, and managing an OpenStack cloud.
- admin server** In the context of the Identity service, the worker process that provides access to the admin API.
- Advanced Message Queuing Protocol (AMQP)** The open standard messaging protocol used by OpenStack components for intra-service communications, provided by RabbitMQ, Qpid, or ZeroMQ.
- Advanced RISC Machine (ARM)** Lower power consumption CPU often found in mobile and embedded devices. Supported by OpenStack.
- alert** The Compute service can send alerts through its notification system, which includes a facility to create custom notification drivers. Alerts can be sent to and displayed on the horizon dashboard.
- allocate** The process of taking a floating IP address from the address pool so it can be associated with a fixed IP on a guest VM instance.
- Amazon Kernel Image (AKI)** Both a VM container format and disk format. Supported by Image service.
- Amazon Machine Image (AMI)** Both a VM container format and disk format. Supported by Image service.
- Amazon Ramdisk Image (ARI)** Both a VM container format and disk format. Supported by Image service.
- Anvil** A project that ports the shell script-based project named DevStack to Python.
- Apache** The Apache Software Foundation supports the Apache community of open-source software projects. These projects provide software products for the public good.
- Apache License 2.0** All OpenStack core projects are provided under the terms of the Apache License 2.0 license.
- Apache Web Server** The most common web server software currently used on the Internet.
- API endpoint** The daemon, worker, or service that a client communicates with to access an API. API endpoints can provide any number of services, such as authentication, sales data, performance meters, Compute VM commands, census data, and so on.
- API extension** Custom modules that extend some OpenStack core APIs.
- API extension plug-in** Alternative term for a Networking plug-in or Networking API extension.
- API key** Alternative term for an API token.
- API server** Any node running a daemon or worker that provides an API endpoint.

API token Passed to API requests and used by OpenStack to verify that the client is authorized to run the requested operation.

API version In OpenStack, the API version for a project is part of the URL. For example, `example.com/nova/v1/foobar`.

applet A Java program that can be embedded into a web page.

Application Programming Interface (API) A collection of specifications used to access a service, application, or program. Includes service calls, required parameters for each call, and the expected return values.

Application Catalog service OpenStack project that provides an application catalog service so that users can compose and deploy composite environments on an application abstraction level while managing the application lifecycle. The code name of the project is murano.

application server A piece of software that makes available another piece of software over a network.

Application Service Provider (ASP) Companies that rent specialized applications that help businesses and organizations provide additional services with lower cost.

Address Resolution Protocol (ARP) The protocol by which layer-3 IP addresses are resolved into layer-2 link local addresses.

arptables Tool used for maintaining Address Resolution Protocol packet filter rules in the Linux kernel firewall modules. Used along with iptables, ebtables, and ip6tables in Compute to provide firewall services for VMs.

associate The process associating a Compute floating IP address with a fixed IP address.

Asynchronous JavaScript and XML (AJAX) A group of interrelated web development techniques used on the client-side to create asynchronous web applications. Used extensively in horizon.

ATA over Ethernet (AoE) A disk storage protocol tunneled within Ethernet.

attach The process of connecting a VIF or vNIC to a L2 network in Networking. In the context of Compute, this process connects a storage volume to an instance.

attachment (network) Association of an interface ID to a logical port. Plugs an interface into a port.

auditing Provided in Compute through the system usage data facility.

auditor A worker process that verifies the integrity of Object Storage objects, containers, and accounts. Auditors is the collective term for the Object Storage account auditor, container auditor, and object auditor.

Austin The code name for the initial release of OpenStack. The first design summit took place in Austin, Texas, US.

auth node Alternative term for an Object Storage authorization node.

authentication The process that confirms that the user, process, or client is really who they say they are through private key, secret token, password, fingerprint, or similar method.

authentication token A string of text provided to the client after authentication. Must be provided by the user or process in subsequent requests to the API endpoint.

AuthN The Identity service component that provides authentication services.

authorization The act of verifying that a user, process, or client is authorized to perform an action.

authorization node An Object Storage node that provides authorization services.

AuthZ The Identity component that provides high-level authorization services.

Auto ACK Configuration setting within RabbitMQ that enables or disables message acknowledgment. Enabled by default.

auto declare A Compute RabbitMQ setting that determines whether a message exchange is automatically created when the program starts.

availability zone An Amazon EC2 concept of an isolated area that is used for fault tolerance. Do not confuse with an OpenStack Compute zone or cell.

AWS Amazon Web Services.

AWS CloudFormation template AWS CloudFormation allows AWS users to create and manage a collection of related resources. The Orchestration service supports a CloudFormation-compatible format (CFN).

2.13.3 B

back end Interactions and processes that are obfuscated from the user, such as Compute volume mount, data transmission to an iSCSI target by a daemon, or Object Storage object integrity checks.

back-end catalog The storage method used by the Identity service catalog service to store and retrieve information about API endpoints that are available to the client. Examples include an SQL database, LDAP database, or KVS back end.

back-end store The persistent data store used to save and retrieve information for a service, such as lists of Object Storage objects, current state of guest VMs, lists of user names, and so on. Also, the method that the Image service uses to get and store VM images. Options include Object Storage, local file system, S3, and HTTP.

backup restore and disaster recovery as a service The OpenStack project that provides integrated tooling for backing up, restoring, and recovering file systems, instances, or database backups. The project name is freezer.

bandwidth The amount of available data used by communication resources, such as the Internet. Represents the amount of data that is used to download things or the amount of data available to download.

barbican Code name of the key management service for OpenStack.

bare An Image service container format that indicates that no container exists for the VM image.

Bare Metal service OpenStack project that provisions bare metal, as opposed to virtual, machines. The code name for the project is ironic.

base image An OpenStack-provided image.

Bell-LaPadula model A security model that focuses on data confidentiality and controlled access to classified information. This model divide the entities into subjects and objects. The clearance of a subject is compared to the classification of the object to determine if the subject is authorized for the specific access mode. The clearance or classification scheme is expressed in terms of a lattice.

Benchmark service OpenStack project that provides a framework for performance analysis and benchmarking of individual OpenStack components as well as full production OpenStack cloud deployments. The code name of the project is rally.

Bexar A grouped release of projects related to OpenStack that came out in February of 2011. It included only Compute (nova) and Object Storage (swift). Bexar is the code name for the second release of OpenStack. The design summit took place in San Antonio, Texas, US, which is the county seat for Bexar county.

binary Information that consists solely of ones and zeroes, which is the language of computers.

bit A bit is a single digit number that is in base of 2 (either a zero or one). Bandwidth usage is measured in bits per second.

bits per second (BPS) The universal measurement of how quickly data is transferred from place to place.

block device A device that moves data in the form of blocks. These device nodes interface the devices, such as hard disks, CD-ROM drives, flash drives, and other addressable regions of memory.

block migration A method of VM live migration used by KVM to evacuate instances from one host to another with very little downtime during a user-initiated switchover. Does not require shared storage. Supported by Compute.

Block Storage service The OpenStack core project that enables management of volumes, volume snapshots, and volume types. The project name of Block Storage is cinder.

Block Storage API An API on a separate endpoint for attaching, detaching, and creating block storage for compute VMs.

BMC Baseboard Management Controller. The intelligence in the IPMI architecture, which is a specialized micro-controller that is embedded on the motherboard of a computer and acts as a server. Manages the interface between system management software and platform hardware.

bootable disk image A type of VM image that exists as a single, bootable file.

Bootstrap Protocol (BOOTP) A network protocol used by a network client to obtain an IP address from a configuration server. Provided in Compute through the dnsmasq daemon when using either the FlatDHCP manager or VLAN manager network manager.

Border Gateway Protocol (BGP) The Border Gateway Protocol is a dynamic routing protocol that connects autonomous systems. Considered the backbone of the Internet, this protocol connects disparate networks to form a larger network.

browser Any client software that enables a computer or device to access the Internet.

builder file Contains configuration information that Object Storage uses to reconfigure a ring or to re-create it from scratch after a serious failure.

bursting The practice of utilizing a secondary environment to elastically build instances on-demand when the primary environment is resource constrained.

button class A group of related button types within horizon. Buttons to start, stop, and suspend VMs are in one class. Buttons to associate and disassociate floating IP addresses are in another class, and so on.

byte Set of bits that make up a single character; there are usually 8 bits to a byte.

2.13.4 C

CA Certificate Authority or Certification Authority. In cryptography, an entity that issues digital certificates. The digital certificate certifies the ownership of a public key by the named subject of the certificate. This enables others (relying parties) to rely upon signatures or assertions made by the private key that corresponds to the certified public key. In this model of trust relationships, a CA is a trusted third party for both the subject (owner) of the certificate and the party relying upon the certificate. CAs are characteristic of many public key infrastructure (PKI) schemes.

cache pruner A program that keeps the Image service VM image cache at or below its configured maximum size.

Cactus An OpenStack grouped release of projects that came out in the spring of 2011. It included Compute (nova), Object Storage (swift), and the Image service (glance). Cactus is a city in Texas, US and is the code name for the third release of OpenStack. When OpenStack releases went from three to six months long, the code name of the release changed to match a geography nearest the previous summit.

CADF Cloud Auditing Data Federation (CADF) is a specification for audit event data. CADF is supported by OpenStack Identity.

CALL One of the RPC primitives used by the OpenStack message queue software. Sends a message and waits for a response.

capability Defines resources for a cell, including CPU, storage, and networking. Can apply to the specific services within a cell or a whole cell.

capacity cache A Compute back-end database table that contains the current workload, amount of free RAM, and number of VMs running on each host. Used to determine on which host a VM starts.

capacity updater A notification driver that monitors VM instances and updates the capacity cache as needed.

- CAST** One of the RPC primitives used by the OpenStack message queue software. Sends a message and does not wait for a response.
- catalog** A list of API endpoints that are available to a user after authentication with the Identity service.
- catalog service** An Identity service that lists API endpoints that are available to a user after authentication with the Identity service.
- ceilometer** The project name for the Telemetry service, which is an integrated project that provides metering and measuring facilities for OpenStack.
- cell** Provides logical partitioning of Compute resources in a child and parent relationship. Requests are passed from parent cells to child cells if the parent cannot provide the requested resource.
- cell forwarding** A Compute option that enables parent cells to pass resource requests to child cells if the parent cannot provide the requested resource.
- cell manager** The Compute component that contains a list of the current capabilities of each host within the cell and routes requests as appropriate.
- CentOS** A Linux distribution that is compatible with OpenStack.
- Ceph** Massively scalable distributed storage system that consists of an object store, block store, and POSIX-compatible distributed file system. Compatible with OpenStack.
- CephFS** The POSIX-compliant file system provided by Ceph.
- certificate authority** A simple certificate authority provided by Compute for cloudpipe VPNs and VM image decryption.
- Challenge-Handshake Authentication Protocol (CHAP)** An iSCSI authentication method supported by Compute.
- chance scheduler** A scheduling method used by Compute that randomly chooses an available host from the pool.
- changes since** A Compute API parameter that downloads changes to the requested item since your last request, instead of downloading a new, fresh set of data and comparing it against the old data.
- Chef** An operating system configuration management tool supporting OpenStack deployments.
- child cell** If a requested resource such as CPU time, disk storage, or memory is not available in the parent cell, the request is forwarded to its associated child cells. If the child cell can fulfill the request, it does. Otherwise, it attempts to pass the request to any of its children.
- cinder** A core OpenStack project that provides block storage services for VMs.
- CirrOS** A minimal Linux distribution designed for use as a test image on clouds such as OpenStack.
- Cisco neutron plug-in** A Networking plug-in for Cisco devices and technologies, including UCS and Nexus.
- cloud architect** A person who plans, designs, and oversees the creation of clouds.
- cloud computing** A model that enables access to a shared pool of configurable computing resources, such as networks, servers, storage, applications, and services, that can be rapidly provisioned and released with minimal management effort or service provider interaction.
- cloud controller** Collection of Compute components that represent the global state of the cloud; talks to services, such as Identity authentication, Object Storage, and node/storage workers through a queue.
- cloud controller node** A node that runs network, volume, API, scheduler, and image services. Each service may be broken out into separate nodes for scalability or availability.
- Cloud Data Management Interface (CDMI)** SINA standard that defines a RESTful API for managing objects in the cloud, currently unsupported in OpenStack.
- Cloud Infrastructure Management Interface (CIMI)** An in-progress specification for cloud management. Currently unsupported in OpenStack.

- cloud-init** A package commonly installed in VM images that performs initialization of an instance after boot using information that it retrieves from the metadata service, such as the SSH public key and user data.
- cloudadmin** One of the default roles in the Compute RBAC system. Grants complete system access.
- Cloudbase-Init** A Windows project providing guest initialization features, similar to cloud-init.
- cloudpipe** A compute service that creates VPNs on a per-project basis.
- cloudpipe image** A pre-made VM image that serves as a cloudpipe server. Essentially, OpenVPN running on Linux.
- Clustering service** The OpenStack project that implements clustering services and libraries for the management of groups of homogeneous objects exposed by other OpenStack services. The project name of Clustering service is senlin.
- CMDB** Configuration Management Database.
- congress** OpenStack project that provides the Governance service.
- command filter** Lists allowed commands within the Compute rootwrap facility.
- Common Internet File System (CIFS)** A file sharing protocol. It is a public or open variation of the original Server Message Block (SMB) protocol developed and used by Microsoft. Like the SMB protocol, CIFS runs at a higher level and uses the TCP/IP protocol.
- community project** A project that is not officially endorsed by the OpenStack Foundation. If the project is successful enough, it might be elevated to an incubated project and then to a core project, or it might be merged with the main code trunk.
- compression** Reducing the size of files by special encoding, the file can be decompressed again to its original content. OpenStack supports compression at the Linux file system level but does not support compression for things such as Object Storage objects or Image service VM images.
- Compute service** The OpenStack core project that provides compute services. The project name of Compute service is nova.
- Compute API** The nova-api daemon provides access to nova services. Can communicate with other APIs, such as the Amazon EC2 API.
- compute controller** The Compute component that chooses suitable hosts on which to start VM instances.
- compute host** Physical host dedicated to running compute nodes.
- compute node** A node that runs the nova-compute daemon that manages VM instances that provide a wide range of services, such as web applications and analytics.
- Compute service** Name for the Compute component that manages VMs.
- compute worker** The Compute component that runs on each compute node and manages the VM instance lifecycle, including run, reboot, terminate, attach/detach volumes, and so on. Provided by the nova-compute daemon.
- concatenated object** A set of segment objects that Object Storage combines and sends to the client.
- conductor** In Compute, conductor is the process that proxies database requests from the compute process. Using conductor improves security because compute nodes do not need direct access to the database.
- consistency window** The amount of time it takes for a new Object Storage object to become accessible to all clients.
- console log** Contains the output from a Linux VM console in Compute.
- container** Organizes and stores objects in Object Storage. Similar to the concept of a Linux directory but cannot be nested. Alternative term for an Image service container format.
- container auditor** Checks for missing replicas or incorrect objects in specified Object Storage containers through queries to the SQLite back-end database.

container database A SQLite database that stores Object Storage containers and container metadata. The container server accesses this database.

container format A wrapper used by the Image service that contains a VM image and its associated metadata, such as machine state, OS disk size, and so on.

container server An Object Storage server that manages containers.

Containers service OpenStack project that provides a set of services for management of application containers in a multi-tenant cloud environment. The code name of the project name is magnum.

container service The Object Storage component that provides container services, such as create, delete, list, and so on.

content delivery network (CDN) A content delivery network is a specialized network that is used to distribute content to clients, typically located close to the client for increased performance.

controller node Alternative term for a cloud controller node.

core API Depending on context, the core API is either the OpenStack API or the main API of a specific core project, such as Compute, Networking, Image service, and so on.

core service An official OpenStack service defined as core by DefCore Committee. Currently, consists of Block Storage service (cinder), Compute service (nova), Identity service (keystone), Image service (glance), Networking service (neutron), and Object Storage service (swift).

cost Under the Compute distributed scheduler, this is calculated by looking at the capabilities of each host relative to the flavor of the VM instance being requested.

credentials Data that is only known to or accessible by a user and used to verify that the user is who he says he is. Credentials are presented to the server during authentication. Examples include a password, secret key, digital certificate, and fingerprint.

Cross-Origin Resource Sharing (CORS) A mechanism that allows many resources (for example, fonts, JavaScript) on a web page to be requested from another domain outside the domain from which the resource originated. In particular, JavaScript's AJAX calls can use the XMLHttpRequest mechanism.

Crowbar An open source community project by Dell that aims to provide all necessary services to quickly deploy clouds.

current workload An element of the Compute capacity cache that is calculated based on the number of build, snapshot, migrate, and resize operations currently in progress on a given host.

customer Alternative term for tenant.

customization module A user-created Python module that is loaded by horizon to change the look and feel of the dashboard.

2.13.5 D

daemon A process that runs in the background and waits for requests. May or may not listen on a TCP or UDP port. Do not confuse with a worker.

DAC Discretionary access control. Governs the ability of subjects to access objects, while enabling users to make policy decisions and assign security attributes. The traditional UNIX system of users, groups, and read-write-execute permissions is an example of DAC.

Dashboard The web-based management interface for OpenStack. An alternative name for horizon.

data encryption Both Image service and Compute support encrypted virtual machine (VM) images (but not instances). In-transit data encryption is supported in OpenStack using technologies such as HTTPS, SSL, TLS,

and SSH. Object Storage does not support object encryption at the application level but may support storage that uses disk encryption.

database ID A unique ID given to each replica of an Object Storage database.

database replicator An Object Storage component that copies changes in the account, container, and object databases to other nodes.

Database service An integrated project that provide scalable and reliable Cloud Database-as-a-Service functionality for both relational and non-relational database engines. The project name of Database service is trove.

Data Processing service OpenStack project that provides a scalable data-processing stack and associated management interfaces. The code name for the project is sahara.

data store A database engine supported by the Database service.

deallocate The process of removing the association between a floating IP address and a fixed IP address. Once this association is removed, the floating IP returns to the address pool.

Debian A Linux distribution that is compatible with OpenStack.

deduplication The process of finding duplicate data at the disk block, file, and/or object level to minimize storage use—currently unsupported within OpenStack.

default panel The default panel that is displayed when a user accesses the horizon dashboard.

default tenant New users are assigned to this tenant if no tenant is specified when a user is created.

default token An Identity service token that is not associated with a specific tenant and is exchanged for a scoped token.

delayed delete An option within Image service so that an image is deleted after a predefined number of seconds instead of immediately.

delivery mode Setting for the Compute RabbitMQ message delivery mode; can be set to either transient or persistent.

denial of service (DoS) Denial of service (DoS) is a short form for denial-of-service attack. This is a malicious attempt to prevent legitimate users from using a service.

deprecated auth An option within Compute that enables administrators to create and manage users through the `nova-manage` command as opposed to using the Identity service.

designate Code name for the DNS service project for OpenStack.

Desktop-as-a-Service A platform that provides a suite of desktop environments that users access to receive a desktop experience from any location. This may provide general use, development, or even homogeneous testing environments.

developer One of the default roles in the Compute RBAC system and the default role assigned to a new user.

device ID Maps Object Storage partitions to physical storage devices.

device weight Distributes partitions proportionately across Object Storage devices based on the storage capacity of each device.

DevStack Community project that uses shell scripts to quickly build complete OpenStack development environments.

DHCP Dynamic Host Configuration Protocol. A network protocol that configures devices that are connected to a network so that they can communicate on that network by using the Internet Protocol (IP). The protocol is implemented in a client-server model where DHCP clients request configuration data, such as an IP address, a default route, and one or more DNS server addresses from a DHCP server.

DHCP agent OpenStack Networking agent that provides DHCP services for virtual networks.

Diablo A grouped release of projects related to OpenStack that came out in the fall of 2011, the fourth release of OpenStack. It included Compute (nova 2011.3), Object Storage (swift 1.4.3), and the Image service (glance). Diablo is the code name for the fourth release of OpenStack. The design summit took place in the Bay Area near Santa Clara, California, US and Diablo is a nearby city.

direct consumer An element of the Compute RabbitMQ that comes to life when a RPC call is executed. It connects to a direct exchange through a unique exclusive queue, sends the message, and terminates.

direct exchange A routing table that is created within the Compute RabbitMQ during RPC calls; one is created for each RPC call that is invoked.

direct publisher Element of RabbitMQ that provides a response to an incoming MQ message.

disassociate The process of removing the association between a floating IP address and fixed IP and thus returning the floating IP address to the address pool.

disk encryption The ability to encrypt data at the file system, disk partition, or whole-disk level. Supported within Compute VMs.

disk format The underlying format that a disk image for a VM is stored as within the Image service back-end store. For example, AMI, ISO, QCOW2, VMDK, and so on.

dispersion In Object Storage, tools to test and ensure dispersion of objects and containers to ensure fault tolerance.

distributed virtual router (DVR) Mechanism for highly-available multi-host routing when using OpenStack Networking (neutron).

Django A web framework used extensively in horizon.

DNS Domain Name System. A hierarchical and distributed naming system for computers, services, and resources connected to the Internet or a private network. Associates a human-friendly names to IP addresses.

DNS record A record that specifies information about a particular domain and belongs to the domain.

DNS service OpenStack project that provides scalable, on demand, self service access to authoritative DNS services, in a technology-agnostic manner. The code name for the project is designate.

dnsmasq Daemon that provides DNS, DHCP, BOOTP, and TFTP services for virtual networks.

domain An Identity API v3 entity. Represents a collection of projects, groups and users that defines administrative boundaries for managing OpenStack Identity entities. On the Internet, separates a website from other sites. Often, the domain name has two or more parts that are separated by dots. For example, yahoo.com, usa.gov, harvard.edu, or mail.yahoo.com. Also, a domain is an entity or container of all DNS-related information containing one or more records.

Domain Name System (DNS) A system by which Internet domain name-to-address and address-to-name resolutions are determined. DNS helps navigate the Internet by translating the IP address into an address that is easier to remember. For example, translating 111.111.111.1 into www.yahoo.com. All domains and their components, such as mail servers, utilize DNS to resolve to the appropriate locations. DNS servers are usually set up in a master-slave relationship such that failure of the master invokes the slave. DNS servers might also be clustered or replicated such that changes made to one DNS server are automatically propagated to other active servers. In Compute, the support that enables associating DNS entries with floating IP addresses, nodes, or cells so that hostnames are consistent across reboots.

download The transfer of data, usually in the form of files, from one computer to another.

DRTM Dynamic root of trust measurement.

durable exchange The Compute RabbitMQ message exchange that remains active when the server restarts.

durable queue A Compute RabbitMQ message queue that remains active when the server restarts.

Dynamic Host Configuration Protocol (DHCP) A method to automatically configure networking for a host at boot time. Provided by both Networking and Compute.

Dynamic HyperText Markup Language (DHTML) Pages that use HTML, JavaScript, and Cascading Style Sheets to enable users to interact with a web page or show simple animation.

2.13.6 E

east-west traffic Network traffic between servers in the same cloud or data center. See also north-south traffic.

EBS boot volume An Amazon EBS storage volume that contains a bootable VM image, currently unsupported in OpenStack.

ebtables Filtering tool for a Linux bridging firewall, enabling filtering of network traffic passing through a Linux bridge. Used in Compute along with arptables, iptables, and ip6tables to ensure isolation of network communications.

EC2 The Amazon commercial compute product, similar to Compute.

EC2 access key Used along with an EC2 secret key to access the Compute EC2 API.

EC2 API OpenStack supports accessing the Amazon EC2 API through Compute.

EC2 Compatibility API A Compute component that enables OpenStack to communicate with Amazon EC2.

EC2 secret key Used along with an EC2 access key when communicating with the Compute EC2 API; used to digitally sign each request.

Elastic Block Storage (EBS) The Amazon commercial block storage product.

encryption OpenStack supports encryption technologies such as HTTPS, SSH, SSL, TLS, digital certificates, and data encryption.

endpoint See API endpoint.

endpoint registry Alternative term for an Identity service catalog.

encapsulation The practice of placing one packet type within another for the purposes of abstracting or securing data. Examples include GRE, MPLS, or IPsec.

endpoint template A list of URL and port number endpoints that indicate where a service, such as Object Storage, Compute, Identity, and so on, can be accessed.

entity Any piece of hardware or software that wants to connect to the network services provided by Networking, the network connectivity service. An entity can make use of Networking by implementing a VIF.

ephemeral image A VM image that does not save changes made to its volumes and reverts them to their original state after the instance is terminated.

ephemeral volume Volume that does not save the changes made to it and reverts to its original state when the current user relinquishes control.

Essex A grouped release of projects related to OpenStack that came out in April 2012, the fifth release of OpenStack. It included Compute (nova 2012.1), Object Storage (swift 1.4.8), Image (glance), Identity (keystone), and Dashboard (horizon). Essex is the code name for the fifth release of OpenStack. The design summit took place in Boston, Massachusetts, US and Essex is a nearby city.

ESXi An OpenStack-supported hypervisor.

ETag MD5 hash of an object within Object Storage, used to ensure data integrity.

euca2ools A collection of command-line tools for administering VMs; most are compatible with OpenStack.

Eucalyptus Kernel Image (EKI) Used along with an ERI to create an EMI.

Eucalyptus Machine Image (EMI) VM image container format supported by Image service.

Eucalyptus Ramdisk Image (ERI) Used along with an EKI to create an EMI.

- evacuate** The process of migrating one or all virtual machine (VM) instances from one host to another, compatible with both shared storage live migration and block migration.
- exchange** Alternative term for a RabbitMQ message exchange.
- exchange type** A routing algorithm in the Compute RabbitMQ.
- exclusive queue** Connected to by a direct consumer in RabbitMQ—Compute, the message can be consumed only by the current connection.
- extended attributes (xattr)** File system option that enables storage of additional information beyond owner, group, permissions, modification time, and so on. The underlying Object Storage file system must support extended attributes.
- extension** Alternative term for an API extension or plug-in. In the context of Identity service, this is a call that is specific to the implementation, such as adding support for OpenID.
- external network** A network segment typically used for instance Internet access.
- extra specs** Specifies additional requirements when Compute determines where to start a new instance. Examples include a minimum amount of network bandwidth or a GPU.

2.13.7 F

- FakeLDAP** An easy method to create a local LDAP directory for testing Identity and Compute. Requires Redis.
- fan-out exchange** Within RabbitMQ and Compute, it is the messaging interface that is used by the scheduler service to receive capability messages from the compute, volume, and network nodes.
- federated identity** A method to establish trusts between identity providers and the OpenStack cloud.
- Fedora** A Linux distribution compatible with OpenStack.
- Fibre Channel** Storage protocol similar in concept to TCP/IP; encapsulates SCSI commands and data.
- Fibre Channel over Ethernet (FCoE)** The fibre channel protocol tunneled within Ethernet.
- fill-first scheduler** The Compute scheduling method that attempts to fill a host with VMs rather than starting new VMs on a variety of hosts.
- filter** The step in the Compute scheduling process when hosts that cannot run VMs are eliminated and not chosen.
- firewall** Used to restrict communications between hosts and/or nodes, implemented in Compute using iptables, arptables, ip6tables, and ebtables.
- FWaaS** A Networking extension that provides perimeter firewall functionality.
- fixed IP address** An IP address that is associated with the same instance each time that instance boots, is generally not accessible to end users or the public Internet, and is used for management of the instance.
- Flat Manager** The Compute component that gives IP addresses to authorized nodes and assumes DHCP, DNS, and routing configuration and services are provided by something else.
- flat mode injection** A Compute networking method where the OS network configuration information is injected into the VM image before the instance starts.
- flat network** Virtual network type that uses neither VLANs nor tunnels to segregate tenant traffic. Each flat network typically requires a separate underlying physical interface defined by bridge mappings. However, a flat network can contain multiple subnets.
- FlatDHCP Manager** The Compute component that provides dnsmasq (DHCP, DNS, BOOTP, TFTP) and radvd (routing) services.
- flavor** Alternative term for a VM instance type.

flavor ID UUID for each Compute or Image service VM flavor or instance type.

floating IP address An IP address that a project can associate with a VM so that the instance has the same public IP address each time that it boots. You create a pool of floating IP addresses and assign them to instances as they are launched to maintain a consistent IP address for maintaining DNS assignment.

Folsom A grouped release of projects related to OpenStack that came out in the fall of 2012, the sixth release of OpenStack. It includes Compute (nova), Object Storage (swift), Identity (keystone), Networking (neutron), Image service (glance), and Volumes or Block Storage (cinder). Folsom is the code name for the sixth release of OpenStack. The design summit took place in San Francisco, California, US and Folsom is a nearby city.

FormPost Object Storage middleware that uploads (posts) an image through a form on a web page.

freezer OpenStack project that provides backup restore and disaster recovery as a service.

front end The point where a user interacts with a service; can be an API endpoint, the horizon dashboard, or a command-line tool.

2.13.8 G

gateway An IP address, typically assigned to a router, that passes network traffic between different networks.

generic receive offload (GRO) Feature of certain network interface drivers that combines many smaller received packets into a large packet before delivery to the kernel IP stack.

generic routing encapsulation (GRE) Protocol that encapsulates a wide variety of network layer protocols inside virtual point-to-point links.

glance A core project that provides the OpenStack Image service.

glance API server Processes client requests for VMs, updates Image service metadata on the registry server, and communicates with the store adapter to upload VM images from the back-end store.

glance registry Alternative term for the Image service image registry.

global endpoint template The Identity service endpoint template that contains services available to all tenants.

GlusterFS A file system designed to aggregate NAS hosts, compatible with OpenStack.

golden image A method of operating system installation where a finalized disk image is created and then used by all nodes without modification.

Governance service OpenStack project to provide Governance-as-a-Service across any collection of cloud services in order to monitor, enforce, and audit policy over dynamic infrastructure. The code name for the project is congress.

Graphic Interchange Format (GIF) A type of image file that is commonly used for animated images on web pages.

Graphics Processing Unit (GPU) Choosing a host based on the existence of a GPU is currently unsupported in OpenStack.

Green Threads The cooperative threading model used by Python; reduces race conditions and only context switches when specific library calls are made. Each OpenStack service is its own thread.

Grizzly The code name for the seventh release of OpenStack. The design summit took place in San Diego, California, US and Grizzly is an element of the state flag of California.

Group An Identity v3 API entity. Represents a collection of users that is owned by a specific domain.

guest OS An operating system instance running under the control of a hypervisor.

2.13.9 H

Hadoop Apache Hadoop is an open source software framework that supports data-intensive distributed applications.

Hadoop Distributed File System (HDFS) A distributed, highly fault-tolerant file system designed to run on low-cost commodity hardware.

handover An object state in Object Storage where a new replica of the object is automatically created due to a drive failure.

hard reboot A type of reboot where a physical or virtual power button is pressed as opposed to a graceful, proper shutdown of the operating system.

Havana The code name for the eighth release of OpenStack. The design summit took place in Portland, Oregon, US and Havana is an unincorporated community in Oregon.

heat An integrated project that aims to orchestrate multiple cloud applications for OpenStack.

Heat Orchestration Template (HOT) Heat input in the format native to OpenStack.

health monitor Determines whether back-end members of a VIP pool can process a request. A pool can have several health monitors associated with it. When a pool has several monitors associated with it, all monitors check each member of the pool. All monitors must declare a member to be healthy for it to stay active.

high availability (HA) A high availability system design approach and associated service implementation ensures that a prearranged level of operational performance will be met during a contractual measurement period. High availability systems seeks to minimize system downtime and data loss.

horizon OpenStack project that provides a dashboard, which is a web interface.

horizon plug-in A plug-in for the OpenStack dashboard (horizon).

host A physical computer, not a VM instance (node).

host aggregate A method to further subdivide availability zones into hypervisor pools, a collection of common hosts.

Host Bus Adapter (HBA) Device plugged into a PCI slot, such as a fibre channel or network card.

hybrid cloud A hybrid cloud is a composition of two or more clouds (private, community or public) that remain distinct entities but are bound together, offering the benefits of multiple deployment models. Hybrid cloud can also mean the ability to connect colocation, managed and/or dedicated services with cloud resources.

Hyper-V One of the hypervisors supported by OpenStack.

hyperlink Any kind of text that contains a link to some other site, commonly found in documents where clicking on a word or words opens up a different website.

Hypertext Transfer Protocol (HTTP) An application protocol for distributed, collaborative, hypermedia information systems. It is the foundation of data communication for the World Wide Web. Hypertext is structured text that uses logical links (hyperlinks) between nodes containing text. HTTP is the protocol to exchange or transfer hypertext.

Hypertext Transfer Protocol Secure (HTTPS) An encrypted communications protocol for secure communication over a computer network, with especially wide deployment on the Internet. Technically, it is not a protocol in and of itself; rather, it is the result of simply layering the Hypertext Transfer Protocol (HTTP) on top of the TLS or SSL protocol, thus adding the security capabilities of TLS or SSL to standard HTTP communications. most OpenStack API endpoints and many inter-component communications support HTTPS communication.

hypervisor Software that arbitrates and controls VM access to the actual underlying hardware.

hypervisor pool A collection of hypervisors grouped together through host aggregates.

2.13.10 I

IaaS Infrastructure-as-a-Service. IaaS is a provisioning model in which an organization outsources physical components of a data center, such as storage, hardware, servers, and networking components. A service provider owns the equipment and is responsible for housing, operating and maintaining it. The client typically pays on a per-use basis. IaaS is a model for providing cloud services.

Icehouse The code name for the ninth release of OpenStack. The design summit took place in Hong Kong and Ice House is a street in that city.

ICMP Internet Control Message Protocol, used by network devices for control messages. For example, **ping** uses ICMP to test connectivity.

ID number Unique numeric ID associated with each user in Identity, conceptually similar to a Linux or LDAP UID.

Identity API Alternative term for the Identity service API.

Identity back end The source used by Identity service to retrieve user information; an OpenLDAP server, for example.

identity provider A directory service, which allows users to login with a user name and password. It is a typical source of authentication tokens.

Identity service The OpenStack core project that provides a central directory of users mapped to the OpenStack services they can access. It also registers endpoints for OpenStack services. It acts as a common authentication system. The project name of Identity is keystone.

Identity service API The API used to access the OpenStack Identity service provided through keystone.

IDS Intrusion Detection System.

image A collection of files for a specific operating system (OS) that you use to create or rebuild a server. OpenStack provides pre-built images. You can also create custom images, or snapshots, from servers that you have launched. Custom images can be used for data backups or as “gold” images for additional servers.

Image API The Image service API endpoint for management of VM images.

image cache Used by Image service to obtain images on the local host rather than re-downloading them from the image server each time one is requested.

image ID Combination of a URI and UUID used to access Image service VM images through the image API.

image membership A list of tenants that can access a given VM image within Image service.

image owner The tenant who owns an Image service virtual machine image.

image registry A list of VM images that are available through Image service.

Image service An OpenStack core project that provides discovery, registration, and delivery services for disk and server images. The project name of the Image service is glance.

Image service API Alternative name for the glance image API.

image status The current status of a VM image in Image service, not to be confused with the status of a running instance.

image store The back-end store used by Image service to store VM images, options include Object Storage, local file system, S3, or HTTP.

image UUID UUID used by Image service to uniquely identify each VM image.

incubated project A community project may be elevated to this status and is then promoted to a core project.

ingress filtering The process of filtering incoming network traffic. Supported by Compute.

- INI** The OpenStack configuration files use an INI format to describe options and their values. It consists of sections and key value pairs.
- injection** The process of putting a file into a virtual machine image before the instance is started.
- instance** A running VM, or a VM in a known state such as suspended, that can be used like a hardware server.
- instance ID** Alternative term for instance UUID.
- instance state** The current state of a guest VM image.
- instance tunnels network** A network segment used for instance traffic tunnels between compute nodes and the network node.
- instance type** Describes the parameters of the various virtual machine images that are available to users; includes parameters such as CPU, storage, and memory. Alternative term for flavor.
- instance type ID** Alternative term for a flavor ID.
- instance UUID** Unique ID assigned to each guest VM instance.
- interface** A physical or virtual device that provides connectivity to another device or medium.
- interface ID** Unique ID for a Networking VIF or vNIC in the form of a UUID.
- Internet protocol (IP)** Principal communications protocol in the internet protocol suite for relaying datagrams across network boundaries.
- Internet Service Provider (ISP)** Any business that provides Internet access to individuals or businesses.
- Internet Small Computer System Interface (iSCSI)** Storage protocol that encapsulates SCSI frames for transport over IP networks.
- ironic** OpenStack project that provisions bare metal, as opposed to virtual, machines.
- IOPS** IOPS (Input/Output Operations Per Second) are a common performance measurement used to benchmark computer storage devices like hard disk drives, solid state drives, and storage area networks.
- IP address** Number that is unique to every computer system on the Internet. Two versions of the Internet Protocol (IP) are in use for addresses: IPv4 and IPv6.
- IP Address Management (IPAM)** The process of automating IP address allocation, deallocation, and management. Currently provided by Compute, melange, and Networking.
- IPL** Initial Program Loader.
- IPMI** Intelligent Platform Management Interface. IPMI is a standardized computer system interface used by system administrators for out-of-band management of computer systems and monitoring of their operation. In layman's terms, it is a way to manage a computer using a direct network connection, whether it is turned on or not; connecting to the hardware rather than an operating system or login shell.
- ip6tables** Tool used to set up, maintain, and inspect the tables of IPv6 packet filter rules in the Linux kernel. In OpenStack Compute, ip6tables is used along with arptables, ebtables, and iptables to create firewalls for both nodes and VMs.
- ipset** Extension to iptables that allows creation of firewall rules that match entire "sets" of IP addresses simultaneously. These sets reside in indexed data structures to increase efficiency, particularly on systems with a large quantity of rules.
- iptables** Used along with arptables and ebtables, iptables create firewalls in Compute. iptables are the tables provided by the Linux kernel firewall (implemented as different Netfilter modules) and the chains and rules it stores. Different kernel modules and programs are currently used for different protocols: iptables applies to IPv4, ip6tables to IPv6, arptables to ARP, and ebtables to Ethernet frames. Requires root privilege to manipulate.

IQN iSCSI Qualified Name (IQN) is the format most commonly used for iSCSI names, which uniquely identify nodes in an iSCSI network. All IQNs follow the pattern `iqn.yyyy-mm.domain:identifier`, where ‘yyyy-mm’ is the year and month in which the domain was registered, ‘domain’ is the reversed domain name of the issuing organization, and ‘identifier’ is an optional string which makes each IQN under the same domain unique. For example, ‘iqn.2015-10.org.openstack.408ae959bce1’.

iSCSI The SCSI disk protocol tunneled within Ethernet, supported by Compute, Object Storage, and Image service.

ISO9660 One of the VM image disk formats supported by Image service.

itsec A default role in the Compute RBAC system that can quarantine an instance in any project.

2.13.11 J

Java A programming language that is used to create systems that involve more than one computer by way of a network.

JavaScript A scripting language that is used to build web pages.

JavaScript Object Notation (JSON) One of the supported response formats in OpenStack.

Jenkins Tool used to run jobs automatically for OpenStack development.

jumbo frame Feature in modern Ethernet networks that supports frames up to approximately 9000 bytes.

Juno The code name for the tenth release of OpenStack. The design summit took place in Atlanta, Georgia, US and Juno is an unincorporated community in Georgia.

2.13.12 K

Kerberos A network authentication protocol which works on the basis of tickets. Kerberos allows nodes communication over a non-secure network, and allows nodes to prove their identity to one another in a secure manner.

kernel-based VM (KVM) An OpenStack-supported hypervisor. KVM is a full virtualization solution for Linux on x86 hardware containing virtualization extensions (Intel VT or AMD-V), ARM, IBM Power, and IBM zSeries. It consists of a loadable kernel module, that provides the core virtualization infrastructure and a processor specific module.

Key Manager service OpenStack project that produces a secret storage and generation system capable of providing key management for services wishing to enable encryption features. The code name of the project is barbican.

keystone The project that provides OpenStack Identity services.

Kickstart A tool to automate system configuration and installation on Red Hat, Fedora, and CentOS-based Linux distributions.

Kilo The code name for the eleventh release of OpenStack. The design summit took place in Paris, France. Due to delays in the name selection, the release was known only as K. Because `k` is the unit symbol for kilo and the reference artifact is stored near Paris in the Pavillon de Breteuil in Sèvres, the community chose Kilo as the release name.

2.13.13 L

large object An object within Object Storage that is larger than 5 GB.

Launchpad The collaboration site for OpenStack.

Layer-2 network Term used in the OSI network architecture for the data link layer. The data link layer is responsible for media access control, flow control and detecting and possibly correcting errors that may occur in the physical layer.

Layer-3 network Term used in the OSI network architecture for the network layer. The network layer is responsible for packet forwarding including routing from one node to another.

Layer-2 (L2) agent OpenStack Networking agent that provides layer-2 connectivity for virtual networks.

Layer-3 (L3) agent OpenStack Networking agent that provides layer-3 (routing) services for virtual networks.

Liberty The code name for the twelfth release of OpenStack. The design summit took place in Vancouver, Canada and Liberty is the name of a village in the Canadian province of Saskatchewan.

libvirt Virtualization API library used by OpenStack to interact with many of its supported hypervisors.

Lightweight Directory Access Protocol (LDAP) An application protocol for accessing and maintaining distributed directory information services over an IP network.

Linux bridge Software that enables multiple VMs to share a single physical NIC within Compute.

Linux Bridge neutron plug-in Enables a Linux bridge to understand a Networking port, interface attachment, and other abstractions.

Linux containers (LXC) An OpenStack-supported hypervisor.

live migration The ability within Compute to move running virtual machine instances from one host to another with only a small service interruption during switchover.

load balancer A load balancer is a logical device that belongs to a cloud account. It is used to distribute workloads between multiple back-end systems or services, based on the criteria defined as part of its configuration.

load balancing The process of spreading client requests between two or more nodes to improve performance and availability.

LBaaS Enables Networking to distribute incoming requests evenly between designated instances.

Logical Volume Manager (LVM) Provides a method of allocating space on mass-storage devices that is more flexible than conventional partitioning schemes.

2.13.14 M

magnum Code name for the OpenStack project that provides the Containers Service.

management API Alternative term for an admin API.

management network A network segment used for administration, not accessible to the public Internet.

manager Logical groupings of related code, such as the Block Storage volume manager or network manager.

manifest Used to track segments of a large object within Object Storage.

manifest object A special Object Storage object that contains the manifest for a large object.

manila OpenStack project that provides shared file systems as service to applications.

maximum transmission unit (MTU) Maximum frame or packet size for a particular network medium. Typically 1500 bytes for Ethernet networks.

mechanism driver A driver for the Modular Layer 2 (ML2) neutron plug-in that provides layer-2 connectivity for virtual instances. A single OpenStack installation can use multiple mechanism drivers.

melange Project name for OpenStack Network Information Service. To be merged with Networking.

membership The association between an Image service VM image and a tenant. Enables images to be shared with specified tenants.

membership list A list of tenants that can access a given VM image within Image service.

memcached A distributed memory object caching system that is used by Object Storage for caching.

memory overcommit The ability to start new VM instances based on the actual memory usage of a host, as opposed to basing the decision on the amount of RAM each running instance thinks it has available. Also known as RAM overcommit.

message broker The software package used to provide AMQP messaging capabilities within Compute. Default package is RabbitMQ.

message bus The main virtual communication line used by all AMQP messages for inter-cloud communications within Compute.

message queue Passes requests from clients to the appropriate workers and returns the output to the client after the job completes.

Message service OpenStack project that aims to produce an OpenStack messaging service that affords a variety of distributed application patterns in an efficient, scalable and highly-available manner, and to create and maintain associated Python libraries and documentation. The code name for the project is zaqar.

Metadata agent OpenStack Networking agent that provides metadata services for instances.

Meta-Data Server (MDS) Stores CephFS metadata.

migration The process of moving a VM instance from one host to another.

mistral OpenStack project that provides the Workflow service.

Mitaka The code name for the thirteenth release of OpenStack. The design summit took place in Tokyo, Japan. Mitaka is a city in Tokyo.

monasca OpenStack project that provides a Monitoring service.

multi-host High-availability mode for legacy (nova) networking. Each compute node handles NAT and DHCP and acts as a gateway for all of the VMs on it. A networking failure on one compute node doesn't affect VMs on other compute nodes.

multinic Facility in Compute that allows each virtual machine instance to have more than one VIF connected to it.

murano OpenStack project that provides an Application catalog.

Modular Layer 2 (ML2) neutron plug-in Can concurrently use multiple layer-2 networking technologies, such as 802.1Q and VXLAN, in Networking.

Monitor (LBaaS) LBaaS feature that provides availability monitoring using the `ping` command, TCP, and HTTP/HTTPS GET.

Monitor (Mon) A Ceph component that communicates with external clients, checks data state and consistency, and performs quorum functions.

Monitoring The OpenStack project that provides a multi-tenant, highly scalable, performant, fault-tolerant Monitoring-as-a-Service solution for metrics, complex event processing, and logging. It builds an extensible platform for advanced monitoring services that can be used by both operators and tenants to gain operational insight and visibility, ensuring availability and stability. The project name is monasca.

multi-factor authentication Authentication method that uses two or more credentials, such as a password and a private key. Currently not supported in Identity.

MultiNic Facility in Compute that enables a virtual machine instance to have more than one VIF connected to it.

2.13.15 N

Nebula Released as open source by NASA in 2010 and is the basis for Compute.

netadmin One of the default roles in the Compute RBAC system. Enables the user to allocate publicly accessible IP addresses to instances and change firewall rules.

NetApp volume driver Enables Compute to communicate with NetApp storage devices through the NetApp On-Command Provisioning Manager.

network A virtual network that provides connectivity between entities. For example, a collection of virtual ports that share network connectivity. In Networking terminology, a network is always a layer-2 network.

NAT Network Address Translation; Process of modifying IP address information while in transit. Supported by Compute and Networking.

network controller A Compute daemon that orchestrates the network configuration of nodes, including IP addresses, VLANs, and bridging. Also manages routing for both public and private networks.

Network File System (NFS) A method for making file systems available over the network. Supported by OpenStack.

network ID Unique ID assigned to each network segment within Networking. Same as network UUID.

network manager The Compute component that manages various network components, such as firewall rules, IP address allocation, and so on.

network namespace Linux kernel feature that provides independent virtual networking instances on a single host with separate routing tables and interfaces. Similar to virtual routing and forwarding (VRF) services on physical network equipment.

network node Any compute node that runs the network worker daemon.

network segment Represents a virtual, isolated OSI layer-2 subnet in Networking.

Newton The code name for the fourteenth release of OpenStack. The design summit took place in Austin, Texas, US. The release is named after “Newton House” which is located at 1013 E. Ninth St., Austin, TX. which is listed on the National Register of Historic Places.

NTP Network Time Protocol; Method of keeping a clock for a host or node correct via communication with a trusted, accurate time source.

network UUID Unique ID for a Networking network segment.

network worker The `nova-network` worker daemon; provides services such as giving an IP address to a booting nova instance.

Networking service A core OpenStack project that provides a network connectivity abstraction layer to OpenStack Compute. The project name of Networking is neutron.

Networking API API used to access OpenStack Networking. Provides an extensible architecture to enable custom plug-in creation.

neutron A core OpenStack project that provides a network connectivity abstraction layer to OpenStack Compute.

neutron API An alternative name for Networking API.

neutron manager Enables Compute and Networking integration, which enables Networking to perform network management for guest VMs.

neutron plug-in Interface within Networking that enables organizations to create custom plug-ins for advanced features, such as QoS, ACLs, or IDS.

Nexenta volume driver Provides support for NexentaStor devices in Compute.

No ACK Disables server-side message acknowledgment in the Compute RabbitMQ. Increases performance but decreases reliability.

node A VM instance that runs on a host.

non-durable exchange Message exchange that is cleared when the service restarts. Its data is not written to persistent storage.

non-durable queue Message queue that is cleared when the service restarts. Its data is not written to persistent storage.

non-persistent volume Alternative term for an ephemeral volume.

north-south traffic Network traffic between a user or client (north) and a server (south), or traffic into the cloud (south) and out of the cloud (north). See also east-west traffic.

nova OpenStack project that provides compute services.

Nova API Alternative term for the Compute API.

nova-network A Compute component that manages IP address allocation, firewalls, and other network-related tasks. This is the legacy networking option and an alternative to Networking.

2.13.16 O

object A BLOB of data held by Object Storage; can be in any format.

object auditor Opens all objects for an object server and verifies the MD5 hash, size, and metadata for each object.

object expiration A configurable option within Object Storage to automatically delete objects after a specified amount of time has passed or a certain date is reached.

object hash Uniquely ID for an Object Storage object.

object path hash Used by Object Storage to determine the location of an object in the ring. Maps objects to partitions.

object replicator An Object Storage component that copies an object to remote partitions for fault tolerance.

object server An Object Storage component that is responsible for managing objects.

Object Storage service The OpenStack core project that provides eventually consistent and redundant storage and retrieval of fixed digital content. The project name of OpenStack Object Storage is swift.

Object Storage API API used to access OpenStack Object Storage.

Object Storage Device (OSD) The Ceph storage daemon.

object versioning Allows a user to set a flag on an Object Storage container so that all objects within the container are versioned.

Ocata The code name for the fifteenth release of OpenStack. The design summit will take place in Barcelona, Spain. Ocata is a beach north of Barcelona.

Oldie Term for an Object Storage process that runs for a long time. Can indicate a hung process.

Open Cloud Computing Interface (OCCI) A standardized interface for managing compute, data, and network resources, currently unsupported in OpenStack.

Open Virtualization Format (OVF) Standard for packaging VM images. Supported in OpenStack.

Open vSwitch Open vSwitch is a production quality, multilayer virtual switch licensed under the open source Apache 2.0 license. It is designed to enable massive network automation through programmatic extension, while still supporting standard management interfaces and protocols (for example NetFlow, sFlow, SPAN, RSPAN, CLI, LACP, 802.1ag).

Open vSwitch (OVS) agent Provides an interface to the underlying Open vSwitch service for the Networking plugin.

Open vSwitch neutron plug-in Provides support for Open vSwitch in Networking.

OpenLDAP An open source LDAP server. Supported by both Compute and Identity.

OpenStack OpenStack is a cloud operating system that controls large pools of compute, storage, and networking resources throughout a data center, all managed through a dashboard that gives administrators control while empowering their users to provision resources through a web interface. OpenStack is an open source project licensed under the Apache License 2.0.

OpenStack code name Each OpenStack release has a code name. Code names ascend in alphabetical order: Austin, Bexar, Cactus, Diablo, Essex, Folsom, Grizzly, Havana, Icehouse, Juno, Kilo, Liberty, and Mitaka. Code names are cities or counties near where the corresponding OpenStack design summit took place. An exception, called the Waldon exception, is granted to elements of the state flag that sound especially cool. Code names are chosen by popular vote.

openSUSE A Linux distribution that is compatible with OpenStack.

operator The person responsible for planning and maintaining an OpenStack installation.

optional service An official OpenStack service defined as optional by DefCore Committee. Currently, consists of Dashboard (horizon), Telemetry service (Telemetry), Orchestration service (heat), Database service (trove), Bare Metal service (ironic), and so on.

Orchestration service An integrated project that orchestrates multiple cloud applications for OpenStack. The project name of Orchestration is heat.

orphan In the context of Object Storage, this is a process that is not terminated after an upgrade, restart, or reload of the service.

Oslo OpenStack project that produces a set of Python libraries containing code shared by OpenStack projects.

2.13.17 P

parent cell If a requested resource, such as CPU time, disk storage, or memory, is not available in the parent cell, the request is forwarded to associated child cells.

partition A unit of storage within Object Storage used to store objects. It exists on top of devices and is replicated for fault tolerance.

partition index Contains the locations of all Object Storage partitions within the ring.

partition shift value Used by Object Storage to determine which partition data should reside on.

path MTU discovery (PMTUD) Mechanism in IP networks to detect end-to-end MTU and adjust packet size accordingly.

pause A VM state where no changes occur (no changes in memory, network communications stop, etc); the VM is frozen but not shut down.

PCI passthrough Gives guest VMs exclusive access to a PCI device. Currently supported in OpenStack Havana and later releases.

persistent message A message that is stored both in memory and on disk. The message is not lost after a failure or restart.

persistent volume Changes to these types of disk volumes are saved.

personality file A file used to customize a Compute instance. It can be used to inject SSH keys or a specific network configuration.

Platform-as-a-Service (PaaS) Provides to the consumer the ability to deploy applications through a programming language or tools supported by the cloud platform provider. An example of Platform-as-a-Service is an Eclipse/Java programming platform provided with no downloads required.

plug-in Software component providing the actual implementation for Networking APIs, or for Compute APIs, depending on the context.

policy service Component of Identity that provides a rule-management interface and a rule-based authorization engine.

pool A logical set of devices, such as web servers, that you group together to receive and process traffic. The load balancing function chooses which member of the pool handles the new requests or connections received on the VIP address. Each VIP has one pool.

pool member An application that runs on the back-end server in a load-balancing system.

port A virtual network port within Networking; VIFs / vNICs are connected to a port.

port UUID Unique ID for a Networking port.

preseed A tool to automate system configuration and installation on Debian-based Linux distributions.

private image An Image service VM image that is only available to specified tenants.

private IP address An IP address used for management and administration, not available to the public Internet.

private network The Network Controller provides virtual networks to enable compute servers to interact with each other and with the public network. All machines must have a public and private network interface. A private network interface can be a flat or VLAN network interface. A flat network interface is controlled by the `flat_interface` with flat managers. A VLAN network interface is controlled by the `vlan_interface` option with VLAN managers.

project Projects represent the base unit of “ownership” in OpenStack, in that all resources in OpenStack should be owned by a specific project. In OpenStack Identity, a project must be owned by a specific domain.

project ID User-defined alphanumeric string in Compute; the name of a project.

project VPN Alternative term for a cloudpipe.

promiscuous mode Causes the network interface to pass all traffic it receives to the host rather than passing only the frames addressed to it.

protected property Generally, extra properties on an Image service image to which only cloud administrators have access. Limits which user roles can perform CRUD operations on that property. The cloud administrator can configure any image property as protected.

provider An administrator who has access to all hosts and instances.

proxy node A node that provides the Object Storage proxy service.

proxy server Users of Object Storage interact with the service through the proxy server, which in turn looks up the location of the requested data within the ring and returns the results to the user.

public API An API endpoint used for both service-to-service communication and end-user interactions.

public image An Image service VM image that is available to all tenants.

public IP address An IP address that is accessible to end-users.

public key authentication Authentication method that uses keys rather than passwords.

public network The Network Controller provides virtual networks to enable compute servers to interact with each other and with the public network. All machines must have a public and private network interface. The public network interface is controlled by the `public_interface` option.

Puppet An operating system configuration-management tool supported by OpenStack.

Python Programming language used extensively in OpenStack.

2.13.18 Q

QEMU Copy On Write 2 (QCOW2) One of the VM image disk formats supported by Image service.

Qpid Message queue software supported by OpenStack; an alternative to RabbitMQ.

quarantine If Object Storage finds objects, containers, or accounts that are corrupt, they are placed in this state, are not replicated, cannot be read by clients, and a correct copy is re-replicated.

Quick EMUlator (QEMU) QEMU is a generic and open source machine emulator and virtualizer. One of the hypervisors supported by OpenStack, generally used for development purposes.

quota In Compute and Block Storage, the ability to set resource limits on a per-project basis.

2.13.19 R

RabbitMQ The default message queue software used by OpenStack.

Rackspace Cloud Files Released as open source by Rackspace in 2010; the basis for Object Storage.

RADOS Block Device (RBD) Ceph component that enables a Linux block device to be striped over multiple distributed data stores.

radvd The router advertisement daemon, used by the Compute VLAN manager and FlatDHCP manager to provide routing services for VM instances.

rally OpenStack project that provides the Benchmark service.

RAM filter The Compute setting that enables or disables RAM overcommitment.

RAM overcommit The ability to start new VM instances based on the actual memory usage of a host, as opposed to basing the decision on the amount of RAM each running instance thinks it has available. Also known as memory overcommit.

rate limit Configurable option within Object Storage to limit database writes on a per-account and/or per-container basis.

raw One of the VM image disk formats supported by Image service; an unstructured disk image.

rebalance The process of distributing Object Storage partitions across all drives in the ring; used during initial ring creation and after ring reconfiguration.

reboot Either a soft or hard reboot of a server. With a soft reboot, the operating system is signaled to restart, which enables a graceful shutdown of all processes. A hard reboot is the equivalent of power cycling the server. The virtualization platform should ensure that the reboot action has completed successfully, even in cases in which the underlying domain/VM is paused or halted/stopped.

rebuild Removes all data on the server and replaces it with the specified image. Server ID and IP addresses remain the same.

Recon An Object Storage component that collects meters.

record Belongs to a particular domain and is used to specify information about the domain. There are several types of DNS records. Each record type contains particular information used to describe the purpose of that record. Examples include mail exchange (MX) records, which specify the mail server for a particular domain; and name server (NS) records, which specify the authoritative name servers for a domain.

record ID A number within a database that is incremented each time a change is made. Used by Object Storage when replicating.

Red Hat Enterprise Linux (RHEL) A Linux distribution that is compatible with OpenStack.

reference architecture A recommended architecture for an OpenStack cloud.

region A discrete OpenStack environment with dedicated API endpoints that typically shares only the Identity (key-stone) with other regions.

registry Alternative term for the Image service registry.

registry server An Image service that provides VM image metadata information to clients.

Reliable, Autonomic Distributed Object Store (RADOS)

A collection of components that provides object storage within Ceph. Similar to OpenStack Object Storage.

Remote Procedure Call (RPC) The method used by the Compute RabbitMQ for intra-service communications.

replica Provides data redundancy and fault tolerance by creating copies of Object Storage objects, accounts, and containers so that they are not lost when the underlying storage fails.

replica count The number of replicas of the data in an Object Storage ring.

replication The process of copying data to a separate physical device for fault tolerance and performance.

replicator The Object Storage back-end process that creates and manages object replicas.

request ID Unique ID assigned to each request sent to Compute.

rescue image A special type of VM image that is booted when an instance is placed into rescue mode. Allows an administrator to mount the file systems for an instance to correct the problem.

resize Converts an existing server to a different flavor, which scales the server up or down. The original server is saved to enable rollback if a problem occurs. All resizes must be tested and explicitly confirmed, at which time the original server is removed.

RESTful A kind of web service API that uses REST, or Representational State Transfer. REST is the style of architecture for hypermedia systems that is used for the World Wide Web.

ring An entity that maps Object Storage data to partitions. A separate ring exists for each service, such as account, object, and container.

ring builder Builds and manages rings within Object Storage, assigns partitions to devices, and pushes the configuration to other storage nodes.

Role Based Access Control (RBAC) Provides a predefined list of actions that the user can perform, such as start or stop VMs, reset passwords, and so on. Supported in both Identity and Compute and can be configured using the horizon dashboard.

role A personality that a user assumes to perform a specific set of operations. A role includes a set of rights and privileges. A user assuming that role inherits those rights and privileges.

role ID Alphanumeric ID assigned to each Identity service role.

rootwrap A feature of Compute that allows the unprivileged “nova” user to run a specified list of commands as the Linux root user.

round-robin scheduler Type of Compute scheduler that evenly distributes instances among available hosts.

router A physical or virtual network device that passes network traffic between different networks.

routing key The Compute direct exchanges, fanout exchanges, and topic exchanges use this key to determine how to process a message; processing varies depending on exchange type.

RPC driver Modular system that allows the underlying message queue software of Compute to be changed. For example, from RabbitMQ to ZeroMQ or Qpid.

rsync Used by Object Storage to push object replicas.

RXTX cap Absolute limit on the amount of network traffic a Compute VM instance can send and receive.

RXTX quota Soft limit on the amount of network traffic a Compute VM instance can send and receive.

2.13.20 S

S3 Object storage service by Amazon; similar in function to Object Storage, it can act as a back-end store for Image service VM images.

sahara OpenStack project that provides a scalable data-processing stack and associated management interfaces.

SAML assertion Contains information about a user as provided by the identity provider. It is an indication that a user has been authenticated.

scheduler manager A Compute component that determines where VM instances should start. Uses modular design to support a variety of scheduler types.

scoped token An Identity service API access token that is associated with a specific tenant.

scrubber Checks for and deletes unused VMs; the component of Image service that implements delayed delete.

secret key String of text known only by the user; used along with an access key to make requests to the Compute API.

secure shell (SSH) Open source tool used to access remote hosts through an encrypted communications channel, SSH key injection is supported by Compute.

security group A set of network traffic filtering rules that are applied to a Compute instance.

segmented object An Object Storage large object that has been broken up into pieces. The re-assembled object is called a concatenated object.

self-service For IaaS, ability for a regular (non-privileged) account to manage a virtual infrastructure component such as networks without involving an administrator.

SELinux Linux kernel security module that provides the mechanism for supporting access control policies.

senlin OpenStack project that provides a Clustering service.

server Computer that provides explicit services to the client software running on that system, often managing a variety of computer operations. A server is a VM instance in the Compute system. Flavor and image are requisite elements when creating a server.

server image Alternative term for a VM image.

server UUID Unique ID assigned to each guest VM instance.

service An OpenStack service, such as Compute, Object Storage, or Image service. Provides one or more endpoints through which users can access resources and perform operations.

service catalog Alternative term for the Identity service catalog.

service ID Unique ID assigned to each service that is available in the Identity service catalog.

service provider A system that provides services to other system entities. In case of federated identity, OpenStack Identity is the service provider.

service registration An Identity service feature that enables services, such as Compute, to automatically register with the catalog.

service tenant Special tenant that contains all services that are listed in the catalog.

service token An administrator-defined token used by Compute to communicate securely with the Identity service.

session back end The method of storage used by horizon to track client sessions, such as local memory, cookies, a database, or memcached.

session persistence A feature of the load-balancing service. It attempts to force subsequent connections to a service to be redirected to the same node as long as it is online.

session storage A horizon component that stores and tracks client session information. Implemented through the Django sessions framework.

share A remote, mountable file system in the context of the Shared File Systems. You can mount a share to, and access a share from, several hosts by several users at a time.

share network An entity in the context of the Shared File Systems that encapsulates interaction with the Networking service. If the driver you selected runs in the mode requiring such kind of interaction, you need to specify the share network to create a share.

Shared File Systems API A Shared File Systems service that provides a stable RESTful API. The service authenticates and routes requests throughout the Shared File Systems service. There is python-manilaclient to interact with the API.

Shared File Systems service An OpenStack service that provides a set of services for management of shared file systems in a multi-tenant cloud environment. The service is similar to how OpenStack provides block-based storage management through the OpenStack Block Storage service project. With the Shared File Systems service, you can create a remote file system and mount the file system on your instances. You can also read and write data from your instances to and from your file system. The project name of the Shared File Systems service is manila.

shared IP address An IP address that can be assigned to a VM instance within the shared IP group. Public IP addresses can be shared across multiple servers for use in various high-availability scenarios. When an IP address is shared to another server, the cloud network restrictions are modified to enable each server to listen to and respond on that IP address. You can optionally specify that the target server network configuration be modified. Shared IP addresses can be used with many standard heartbeat facilities, such as keepalive, that monitor for failure and manage IP failover.

shared IP group A collection of servers that can share IPs with other members of the group. Any server in a group can share one or more public IPs with any other server in the group. With the exception of the first server in a shared IP group, servers must be launched into shared IP groups. A server may be a member of only one shared IP group.

shared storage Block storage that is simultaneously accessible by multiple clients, for example, NFS.

Sheepdog Distributed block storage system for QEMU, supported by OpenStack.

Simple Cloud Identity Management (SCIM) Specification for managing identity in the cloud, currently unsupported by OpenStack.

Single-root I/O Virtualization (SR-IOV) A specification that, when implemented by a physical PCIe device, enables it to appear as multiple separate PCIe devices. This enables multiple virtualized guests to share direct access to the physical device, offering improved performance over an equivalent virtual device. Currently supported in OpenStack Havana and later releases.

Service Level Agreement (SLA) Contractual obligations that ensure the availability of a service.

SmokeStack Runs automated tests against the core OpenStack API; written in Rails.

snapshot A point-in-time copy of an OpenStack storage volume or image. Use storage volume snapshots to back up volumes. Use image snapshots to back up data, or as “gold” images for additional servers.

soft reboot A controlled reboot where a VM instance is properly restarted through operating system commands.

Software Development Lifecycle Automation service OpenStack project that aims to make cloud services easier to consume and integrate with application development process by automating the source-to-image process, and simplifying app-centric deployment. The project name is solum.

SolidFire Volume Driver The Block Storage driver for the SolidFire iSCSI storage appliance.

solum OpenStack project that provides a Software Development Lifecycle Automation service.

SPICE The Simple Protocol for Independent Computing Environments (SPICE) provides remote desktop access to guest virtual machines. It is an alternative to VNC. SPICE is supported by OpenStack.

spread-first scheduler The Compute VM scheduling algorithm that attempts to start a new VM on the host with the least amount of load.

SQL-Alchemy An open source SQL toolkit for Python, used in OpenStack.

SQLite A lightweight SQL database, used as the default persistent storage method in many OpenStack services.

stack A set of OpenStack resources created and managed by the Orchestration service according to a given template (either an AWS CloudFormation template or a Heat Orchestration Template (HOT)).

StackTach Community project that captures Compute AMQP communications; useful for debugging.

static IP address Alternative term for a fixed IP address.

StaticWeb WSGI middleware component of Object Storage that serves container data as a static web page.

storage back end The method that a service uses for persistent storage, such as iSCSI, NFS, or local disk.

storage node An Object Storage node that provides container services, account services, and object services; controls the account databases, container databases, and object storage.

storage manager A XenAPI component that provides a pluggable interface to support a wide variety of persistent storage back ends.

storage manager back end A persistent storage method supported by XenAPI, such as iSCSI or NFS.

storage services Collective name for the Object Storage object services, container services, and account services.

strategy Specifies the authentication source used by Image service or Identity. In the Database service, it refers to the extensions implemented for a data store.

subdomain A domain within a parent domain. Subdomains cannot be registered. Subdomains enable you to delegate domains. Subdomains can themselves have subdomains, so third-level, fourth-level, fifth-level, and deeper levels of nesting are possible.

subnet Logical subdivision of an IP network.

SUSE Linux Enterprise Server (SLES) A Linux distribution that is compatible with OpenStack.

suspend Alternative term for a paused VM instance.

swap Disk-based virtual memory used by operating systems to provide more memory than is actually available on the system.

swauth An authentication and authorization service for Object Storage, implemented through WSGI middleware; uses Object Storage itself as the persistent backing store.

swift An OpenStack core project that provides object storage services.

swift All in One (SAIO) Creates a full Object Storage development environment within a single VM.

swift middleware Collective term for Object Storage components that provide additional functionality.

swift proxy server Acts as the gatekeeper to Object Storage and is responsible for authenticating the user.

swift storage node A node that runs Object Storage account, container, and object services.

sync point Point in time since the last container and accounts database sync among nodes within Object Storage.

sysadmin One of the default roles in the Compute RBAC system. Enables a user to add other users to a project, interact with VM images that are associated with the project, and start and stop VM instances.

system usage A Compute component that, along with the notification system, collects meters and usage information. This information can be used for billing.

2.13.21 T

Telemetry service An integrated project that provides metering and measuring facilities for OpenStack. The project name of Telemetry is ceilometer.

TempAuth An authentication facility within Object Storage that enables Object Storage itself to perform authentication and authorization. Frequently used in testing and development.

Testpest Automated software test suite designed to run against the trunk of the OpenStack core project.

TempURL An Object Storage middleware component that enables creation of URLs for temporary object access.

tenant A group of users; used to isolate access to Compute resources. An alternative term for a project.

Tenant API An API that is accessible to tenants.

tenant endpoint An Identity service API endpoint that is associated with one or more tenants.

tenant ID Unique ID assigned to each tenant within the Identity service. The project IDs map to the tenant IDs.

token An alpha-numeric string of text used to access OpenStack APIs and resources.

token services An Identity service component that manages and validates tokens after a user or tenant has been authenticated.

tombstone Used to mark Object Storage objects that have been deleted; ensures that the object is not updated on another node after it has been deleted.

topic publisher A process that is created when a RPC call is executed; used to push the message to the topic exchange.

Torpedo Community project used to run automated tests against the OpenStack API.

transaction ID Unique ID assigned to each Object Storage request; used for debugging and tracing.

transient Alternative term for non-durable.

transient exchange Alternative term for a non-durable exchange.

transient message A message that is stored in memory and is lost after the server is restarted.

transient queue Alternative term for a non-durable queue.

TripleO OpenStack-on-OpenStack program. The code name for the OpenStack Deployment program.

trove OpenStack project that provides database services to applications.

2.13.22 U

Ubuntu A Debian-based Linux distribution.

unscoped token Alternative term for an Identity service default token.

updater Collective term for a group of Object Storage components that processes queued and failed updates for containers and objects.

user In OpenStack Identity, entities represent individual API consumers and are owned by a specific domain. In OpenStack Compute, a user can be associated with roles, projects, or both.

user data A blob of data that the user can specify when they launch an instance. The instance can access this data through the metadata service or config drive. Commonly used to pass a shell script that the instance runs on boot.

User Mode Linux (UML) An OpenStack-supported hypervisor.

2.13.23 V

VIF UUID Unique ID assigned to each Networking VIF.

VIP The primary load balancing configuration object. Specifies the virtual IP address and port where client traffic is received. Also defines other details such as the load balancing method to be used, protocol, and so on. This entity is sometimes known in load-balancing products as a virtual server, vservice, or listener.

Virtual Central Processing Unit (vCPU) Subdivides physical CPUs. Instances can then use those divisions.

Virtual Disk Image (VDI) One of the VM image disk formats supported by Image service.

VXLAN A network virtualization technology that attempts to reduce the scalability problems associated with large cloud computing deployments. It uses a VLAN-like encapsulation technique to encapsulate Ethernet frames within UDP packets.

Virtual Hard Disk (VHD) One of the VM image disk formats supported by Image service.

virtual IP An Internet Protocol (IP) address configured on the load balancer for use by clients connecting to a service that is load balanced. Incoming connections are distributed to back-end nodes based on the configuration of the load balancer.

virtual machine (VM) An operating system instance that runs on top of a hypervisor. Multiple VMs can run at the same time on the same physical host.

virtual network An L2 network segment within Networking.

virtual networking A generic term for virtualization of network functions such as switching, routing, load balancing, and security using a combination of VMs and overlays on physical network infrastructure.

Virtual Network Computing (VNC) Open source GUI and CLI tools used for remote console access to VMs. Supported by Compute.

Virtual Network InterFace (VIF) An interface that is plugged into a port in a Networking network. Typically a virtual network interface belonging to a VM.

virtual port Attachment point where a virtual interface connects to a virtual network.

virtual private network (VPN) Provided by Compute in the form of cloudpipes, specialized instances that are used to create VPNs on a per-project basis.

virtual server Alternative term for a VM or guest.

virtual switch (vSwitch) Software that runs on a host or node and provides the features and functions of a hardware-based network switch.

virtual VLAN Alternative term for a virtual network.

VirtualBox An OpenStack-supported hypervisor.

VLAN manager A Compute component that provides dnsmasq and radvd and sets up forwarding to and from cloudpipe instances.

VLAN network The Network Controller provides virtual networks to enable compute servers to interact with each other and with the public network. All machines must have a public and private network interface. A VLAN network is a private network interface, which is controlled by the `vlan_interface` option with VLAN managers.

VM disk (VMDK) One of the VM image disk formats supported by Image service.

VM image Alternative term for an image.

VM Remote Control (VMRC) Method to access VM instance consoles using a web browser. Supported by Compute.

VMware API Supports interaction with VMware products in Compute.

VMware NSX Neutron plug-in Provides support for VMware NSX in Neutron.

VNC proxy A Compute component that provides users access to the consoles of their VM instances through VNC or VMRC.

volume Disk-based data storage generally represented as an iSCSI target with a file system that supports extended attributes; can be persistent or ephemeral.

Volume API Alternative name for the Block Storage API.

volume controller A Block Storage component that oversees and coordinates storage volume actions.

volume driver Alternative term for a volume plug-in.

volume ID Unique ID applied to each storage volume under the Block Storage control.

volume manager A Block Storage component that creates, attaches, and detaches persistent storage volumes.

volume node A Block Storage node that runs the cinder-volume daemon.

volume plug-in Provides support for new and specialized types of back-end storage for the Block Storage volume manager.

volume worker A cinder component that interacts with back-end storage to manage the creation and deletion of volumes and the creation of compute volumes, provided by the cinder-volume daemon.

vSphere An OpenStack-supported hypervisor.

2.13.24 W

weighting A Compute process that determines the suitability of the VM instances for a job for a particular host. For example, not enough RAM on the host, too many CPUs on the host, and so on.

weight Used by Object Storage devices to determine which storage devices are suitable for the job. Devices are weighted by size.

weighted cost The sum of each cost used when deciding where to start a new VM instance in Compute.

worker A daemon that listens to a queue and carries out tasks in response to messages. For example, the cinder-volume worker manages volume creation and deletion on storage arrays.

Workflow service OpenStack project that provides a simple YAML-based language to write workflows, tasks and transition rules, and a service that allows to upload them, modify, run them at scale and in a highly available manner, manage and monitor workflow execution state and state of individual tasks. The code name of the project is mistral.

2.13.25 X

Xen Xen is a hypervisor using a microkernel design, providing services that allow multiple computer operating systems to execute on the same computer hardware concurrently.

Xen API The Xen administrative API, which is supported by Compute.

Xen Cloud Platform (XCP) An OpenStack-supported hypervisor.

Xen Storage Manager Volume Driver A Block Storage volume plug-in that enables communication with the Xen Storage Manager API.

XenServer An OpenStack-supported hypervisor.

XFS High-performance 64-bit file system created by Silicon Graphics. Excels in parallel I/O operations and data consistency.

2.13.26 Z

zaqar OpenStack project that provides a message service to applications.

ZeroMQ Message queue software supported by OpenStack. An alternative to RabbitMQ. Also spelled 0MQ.

Zuul Tool used in OpenStack development to ensure correctly ordered testing of changes in parallel.

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