VMware Aria Automation Release Notes Archive (8.12.0-8.16.2)

VMware Aria Automation

vmware®
by **Broadcom**

You can find the most up-to-date technical documentation on the VMware by Broadcom website at:

https://docs.vmware.com/

VMware by Broadcom
3401 Hillview Ave.
Palo Alto, CA 94304
www.vmware.com

Contents

Introduction 1

This is an archive of the VMware Aria Automation 8.12.0-8.16.2 Release Notes. For information on current VMware Aria Automation releases, go to VMware Aria Automation Release Notes.

Release Versions

<div style="text-align: right; font-size: xx-large; color: gray;">2</div>

VMware Aria Automation| March 2024
VMware Aria Automation 8.16.2| Mar 21 2024 ■ VMware Aria Automation build 23505094 ■ VMware Aria Automation Easy Installer build 23508932 ■ VMware Aria Automation Cloud Extensibility Proxy build 23466436 ■ VMware Aria Automation Orchestrator build 23466433

Updates made to this document

Date	Description of update	Type
March 21st 2024	nitial publishing for VMware Aria Automation 8.16.2	

For more information, see our blogs about the VMware Aria Automation releases.

Starting with the April 2023 release, the product name is now changed from vRealize Automation to VMware Aria Automation. VMware Aria Automation also now includes these services as one unified product:

■ VMware Aria Automation Config (formerly SaltStack Config)

■ VMware Aria Automation for Secure Hosts (formely SaltStack SecOps)

■ VMware Aria Automation Orchestrator (formerly vRealize Orchestrator)

Note: VMware has announced the End of Availability (EoA) of the VMware Aria SaaS services including VMware Aria Automation SaaS, as of February 2024. VMware will continue to support customers currently using VMware Aria SaaS services until the end of their subscription term. See VMware End Of Availability of Perpetual Licensing and SaaS Services.

About VMware Aria Automation

3

You can find information about these new features and more at VMware Aria Automation and in the signpost and tooltip help in the user interface. Even more information is available when you open the in-product support panel where you can read and search for related topics, and view community posts and KBs, that appear for the active user interface page.

Notice: Release Notes for previous releases are archived yearly:

- vRealize Automation Release Notes Archive (8.8.1 - 8.11.2)

Before you begin

4

Familiarize yourself with the supporting documents.

VMware Aria Automation	VMware Aria Automation 8.16
After setting up your users, you can use the *Getting Started* and *Using and Managing* guides for each of the included services. The *Getting Started* guides include an end-to-end proof of concept. The *Using and Managing* guides provide more in-depth information that supports your exploration of the available features. Additional information is also available in VMware Aria Automation product documentation. ■ *Getting Started with VMware Aria Automation* ■ *Using Automation Assembler* ■ *Using Automation Pipelines* ■ *Using Automation Service Broker*	■ *Installing VMware Aria Automation with Easy Installer* ■ *Administering VMware Aria Automation* ■ *VMware Aria Automation Transition Guide* After installing vRealize Automation and setting up your users, you can use the *Getting Started* and *Using and Managing* guides for each of the included services. The *Getting Started* guides include an end-to-end proof of concept. The *Using and Managing* guides provide more in-depth information that supports your exploration of the available features. Additional information is also available in VMware Aria Automation product documentation. ■ *Getting Started with VMware Aria Automation* ■ *Using Automation Assembler* ■ *Using Automation Pipelines* ■ *Using Automation Service Broker*
Automation Config and Secure Hosts	**Automation Config and Secure Hosts 8.16**
■ Getting Started with Automation Config ■ Using Automation Config ■ Using Automation for Secure Hosts	■ Installing and Configuring Automation Config
	Automation Orchestrator 8.16
	■ Installing and Configuring Automation Orchestrator ■ Upgrading Automation Orchestrator ■ Using Automation Orchestrator ■ Using Automation Orchestrator Plug-ins

Automation Config Upgrade Requirements

Before you can upgrade your Automation Config appliance you must upgrade the Master plugin. For information on upgrading the Master plugin, go to Upgrade the Master Plugin.

VMware Aria Automation 8.16.2 What's New

5

- **A new "Change Display Name" day 2 action is introduced to the "Disk" resource**

  Starting from this release, users can apply custom display names to disk resources in the form of day 2 actions. This can help users easily distinguish disk resources when they have too many disks attached to templates.

- **Catalog Setup Wizard for the Private AI Automation Services**

  Private AI Automation Services is a collection of features that enable cloud administrators to quickly design, curate, and offer optimized AI infrastructure catalog objects through the VMware Aria Automation self-service Service Broker portal. The Catalog Setup Wizard is a new capability in this release, which assists cloud administrators in publishing the following catalog items with ease:

  - AI Workstation - A GPU-enabled deep learning VM which can be configured with desired vCPU, vGPU, memory, and AI/ML NGC containers from NVIDIA.

  - AI Kubernetes Cluster - A GPU-enabled Tanzu Kubernetes cluster which can be automatically configured with the NVIDIA GPU Operator.

  For detailed instructions on using the Catalog Setup Wizard, AI Workstation, and AI Kubernetes Cluster catalog items, go to How do you get started with Private AI Automation Services using the Catalog Setup Wizard.

  Note: The Catalog Setup Wizard is not enabled by default. Contact VMware by Broadcom Professional Services to activate the wizard for your organization.

- **Cloud Consumption Interface (CCI) General Availability for VMware Aria Automation on-prem**

  CCI became available for VMware Aria Automation SaaS in October 2023. As part of the 8.16.2 release, the same capabilities are now available in VMware Aria Automation on-prem. CCI in VMware Aria Automation on-prem offers the same benefits as the SaaS offering without requiring any cloud connectivity, including having vCenter connected to vSphere+ cloud service. For more information, go to Configuring and working with the Cloud Consumption Interface.

- **Deprecation of HCMP Dashboards in VMware Aria Automation**

The diagnostic dashboards and alerts UI in VMware Aria Automation is now deprecated and the services will be no longer supported by VMware.

- **The Python 3.7 runtime for extensibility actions is no longer supported**

  Python 3.7 is no longer supported for extensibility actions that use AWS as their FaaS provider. The supported runtime is now Python 3.10. Existing extensibility actions that still use Python 3.7 do not automatically migrate to the new runtime version. Users must manually update any relevant extensibility actions by following this procedure:

  a   Select a extensibility action that still uses Python 3.7.

  b   Change the runtime at any other version (such as Node.js 18, for example).

  c   Save the changes.

  d   Change the runtime to Python 3.10.

  e   Save the changes.

  f   Test and run the extensibility action.

- **New memory requirements for deployments that use the Medium profile**

  Starting with this release, VMware Aria Automation deployments that use the Medium profile must have 54 GB of RAM.

Read the following topics next:

- Automation Orchestrator 8.16.2 What's New
- Resolved Issues
- Known Issues

Automation Orchestrator 8.16.2 What's New

- **Added support for new Node.js version**

  The Node,js runtime now uses version 20. Node.js 18 is now deprecated and will be removed in a future release.

- **Added support for new PowerShell and PowerCLI verions**

  The PowerCLI and PowerShell environments are now using the latest PowerShell 7.4 (LTS) version. PowerCLI now uses version 13. PowerCLI 12 is now deprecated and will be removed in a future release.

Resolved Issues

- **Incorrect action schema population for nested fields**

In previous releases, VMware Aria Automaton did not populate the schema for nested fields. Because of this issue, it returned a 403 forbidden error message on action runs. In VMwareAria Automation 8.16.2, this issue is resolved and error messages are no longer displaying when using cloud templates that have object field inputs containing nested fields with an Automation Orchestrator action as default value($dynamicDefault), enum($dynamicEnum) or value list($data).

- **Generate correct no-proxy acls for squid proxy**

    Previously, any IP net prefixes or wildcards (e.g., 192.168.) added to the proxy exclude list of VMware Aria Automation through the `vracli proxy set ... --proxy-exclude ...` command were not enforced correctly. This caused traffic to addresses in those networks (e.g., 192.168.10.123) to be routed through the Internet proxy server, if such a proxy is configured by the user, instead of being sent directly from the VMware Aria Automation deployment.

    This issue was caused by an incorrect configuration of the internal proxy server that is always active in the VMware Aria Automation deployment. This internal proxy server is now properly configured and both IP (192.168.) and domain wildcards added to the proxy exclude list are enforced correctly. Additionally, the user and system entries of the proxy exclude list are now decoupled.

    When updating the proxy exclude list, users must no longer manually maintain system entries in the list. The `vracli proxy default-no-proxy` command now returns an empty result. Users no longer need to run the `/opt/scripts/deploy.sh` script to properly configure the runtime of the deployed services after making changes to the proxy exclude list through the the `vracli proxy set ... --proxy-exclude ...` command. Existing deployments will retain the same proxy exclude settings they had before upgrading to this version. The previous proxy exclude settings will be available in the list of user proxy exclude entries after the upgrade. During this migration, the 10., 192.168., and 172.16. address entries will be removed from the list. These entries were previously added by the system itself but were not enforced before this fix. They are now removed to ensure the same user experience after an upgrade. Any system entries in the user-managed proxy exclude list that were not added explicitly by the user can safely be removed the next time proxy settings are updated through the `vracli proxy set ...` command. Any required but missing entries can be added the same way.

- **Merge conflict in environments leads to 400 error in the Automation Orchestrator Client**

    Having a merge conflict in action environments can lead to a 400 error in the Automation Orchestrator Client. As a result, pull and revert operations cannot be completed.

- **Automation Orchestrator version history format changes can lead to hundreds of line changes for Gitlab merge request**

    Workflow scripts could contain either CRLF (\r\n) or LF (\n) as line endings depending on the developer OS. When scripts are updated through the editor, the endings will switch to LF (\n) in order to improve the version history readability.

- **Python environment does not collect all dependencies**

Adding Python dependencies that install modules into the same namespace might result in missing dependencies.

- **Creating a package results in a 404 error**

  Creating a package in an external Automation Orchestrator deployment can result in a 404 error.

- **Control Center displays an error when adding a license manually**

  After opening the **Licensing** tab in Control Center, an error is shown indicating license information cannot be loaded.

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

  When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

  `"Something went wrong in a backend service."`

  This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

  Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

VMware Aria Automation 8.16.1 What's New

6

- **vCenter License Service integration for VMware Aria Automation**

  VMware Aria Automation now supports the new VMware Cloud Foundation (VCF) Solution license-based entitlement. The solution license must be applied to vCenter. VMware Aria Automation automatically retrieves the entitlement after the vCenter is registered. To support the VCF Solution license, VMware Aria Automation can now be deployed in an evaluation mode.

  Support for older licenses will continue. However, if your deployment is entitled with the VCF Solution license, older licenses become irrelevant.

- **Provisioning Avi Load Balancer natively in VMware Aria Automation**

  This release introduces out-of-the-box support for automating VMware Avi Load Balancer (formerly VMware NSX Advanced Load Balancer). Customers who create templates in Automation Assembler can now see new Avi Load Balancer resources such as virtual service, pool, and VIP available in the list of resources on the design page. Creating templates with Avi resources and publishing them as catalog items in Automation Service Broker enables a next generation VMware Load Balancing as a Service offering powered by VMware Avi Load Balancer. See the VMware Aria Automation documentation for more details on getting started and end-to-end use cases and the Avi Load Balancer plug-in documentation for supported features.

- **The onboarding policy setting is now moved to the onboarding plan creation**

  With this release, users must choose to activate (to enforce project resource limits) or deactivate resource placement while creating an onboarding plan. Upon plan creation, the **Use Placement** toggle on the onboarding plan becomes read-only. When the use placement option is activated, users can only select eligible discovered machines from the cloud zones associated with the project plan.

- **CVE-2024-22231 notice:** Automation Config users should be aware that Salt Project released versions 3005.5 and 3006.6 to resolve CVE-2024-22231, a Medium severity vulnerability. Automation Config users should upgrade their Salt master(s) to the latest supported releases. For more information on these vulnerabilities, go to https://saltproject.io/security-announcements/2024-01-31-advisory/.

- **CVE-2024-22232 notice:** Automation Config users should be aware that Salt Project released versions 3005.5 and 3006.6 to resolve CVE-2024-22232, a High severity vulnerability. Automation Config users should upgrade their Salt master(s) to the latest supported releases. For more information on these vulnerabilities, go to https://saltproject.io/security-announcements/2024-01-31-advisory/.

- **The Debian 10 CIS Benchmark is now available for VMware Aria Automation for Secure Hosts**

  Automation for Secure Hosts now supports the Debian 10 CIS Benchmark for compliance scans and remediation.

- **Public (customer) facing API for the request graph**

  Currently, the provisioning request graph API is private. This API is used to retrieve the request graph for a simulated cloud template request.

  The signature of the public API is `GET:` `https://host/iaas/api/request-graph?apiVersion=2021-07-15&deploymentId=deploymentId&flowId=flowId` .

  Using the information provided by the API, the placement is validated in terms of computing, network, and storage.

- **VMware Aria Automation Config UI enhancements**

  Starting this release, Automation Config provides several UI changes with simplified navigation:

  - The unified view of Activities now includes all return status.

  - Return status is automatically updated as a job is finished. Users must no longer perform a manual refresh for the latest updates.

  - Ability to view job results from the Activity table as the job is finished for each minion.

Read the following topics next:

- Automation Orchestrator 8.16.1 What's New

- Resolved Issues

- Known Issues

Automation Orchestrator 8.16.1 What's New

- **vCenter License Service integration for Automation Orchestrator**

  Automation Orchestrator now supports the new VMware Cloud Foundation (VCF) and VMware vSphere Foundation (VVF) Solution license-based entitlement. The solution license must be applied to vCenter. Automation Orchestrator automatically retrieves the entitlement after the vCenter is registered. To support the VCF and VVF Solution license, Automation Orchestrator can now be deployed in an evaluation mode.

Support for older licenses will continue. However, if your deployment is entitled with the VCF or VVF Solution license, older licenses become irrelevant.

- **The JDBC driver for Oracle databases is removed**

   The JDBC driver for Oracle databases is removed from the platform. To continue to use SQL plugin to manage Oracle databases, you must provide a JDBC connector. For more information, go to Adding a JDBC connector for the Automation Orchestrator SQL plug-in.

   .

Resolved Issues

- **Links to workflows in scheduled tasks do not work**

   When you schedule a workflow run in Automation Orchestrator and you click on button to open the workflow, the workflow page does not open.

- **Incorrect action schema population for nested fields**

   Error messages are no longer displaying when using cloud templates that have object field inputs containing nested fields with an Automation Orchestrator action as default value (`$dynamicDefault`), enumeration (`$dynamicEnum`), or value list (`$data`).

- **When adding more dependencies under Assets >> Environments, the "Environment Variables" element is hidden**

   Cannot scroll down to view environment variables and dependencies in the environment editor when the datagrids grow larger than the current screen size.

- **Workflows with "Resume from failed" enabled do not show the correct error in VMware Aria Automation**

   User interaction auto generated when **Resume from failed** is enabled for a workflow is canceled in VMware Aria Automation.

- **Automation Orchestrator user interactions do not appear in VMware Aria Automation**

   When the Workspace ONE Access integration used in VMware Aria Automation is synced using `sAMAccountName` to the Active Directory, user interactions for workflows started from Automation Service Broker do not appear in VMware Aria Automation and can be answered only from the Automation Orchestrator.

- **After the first Git pull, new workflows are not available in Automation Assembler**

   Some Automation Orchestrator workflows are missing in Automation Assembler even after data collection is triggered. This issue is caused when data collection is triggered during an ongoing Git update in Automation Orchestrator.

- **The Automation Orchestrator vco-app pod crashes and causes the service to restart**

The Automation Orchestrator service is restarting because of timeouts of the Kubernetes probes. This is caused by spikes in backend calls to list actions by category. Improvements are made to the performance of actions listings by category which handles excessive calls.

Known Issues

- **Password length issue when using Kerberos authentication**

  After Automation Orchestrator is upgraded, if the deployment is in FIPS mode, some plug-in endpoints configured with Kerberos authentication stop working and you receive the following error message in the logs:

  ```
  org.bouncycastle.crypto.fips.FipsUnapprovedOperationError: password must be at least 112 bits
  ```

  Workaround: Use longer and stronger passwords, with at least 14 characters, to satisfy the FIPS requirements.

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

  When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

  ```
  "Something went wrong in a backend service."
  ```

  This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

  Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **Control-Center displays an error when adding a license manually**

  After opening the **License** tab in Control Center, an error is shown indicating license information cannot be loaded.

  Workaround: Use the command line tools for gathering up to date information about the currently used license provider. Log in to the Automation Orchestrator Appliance over SSH and use the `vracli vro license` command. For more information, go to Additional command line interface configuration options.

- **Delete operation for day 2 actions fails when deleting a pool from a deployment that depends on a virtual service**

  If an Avi load balancer resource, such as a health monitor, is used by two pools in different deployments, deleting the health monitor from one of the deployments will fail with a `"false"` error.

The failure to delete the resource is valid as the health monitor is referenced by multiple pools. However, the error displayed in VMware Aria Automation is not descriptive. The error displayed in the Avi load balancer is more detailed and shows why the delete operation failed.

No workaround.

- **Intermittent behavior where servers are not added to a pool when using existing security groups**

When associating an NSX security group to an Avi load balancer pool, the reference to this security group must be the full path of the security group as seen in NSX.

No workaround.

- **Deleted actions appear for helpers**

Unsupported delete actions appear for helpers such as `CloudZoneAllocationHelper` and `CustomNamingHelper`.

No workaround.

VMware Aria Automation January 2024/8.16 What's New

- **VMware Aria Automation patch for custom form issues**

  The latest VMware Aria Automation patch resolves the custom form issues mentioned in KB 96181. In addition to the issue fixes mentioned in the KB, the patch also resolves the following:

  - Fixed an issue where project fields without a `"valueList"` property in the field schema was causing catalog items to not load and throw a 500 Internal Server Error.

  - Input binding to a datagrid component with required columns is now fixed and no longer throwing a validation error.

  This patch is available for product versions 8.11.2, 8.12.2, 8.13.1, 8.14.1, and 8.16.0.

- **CVE-2023-34063 notice**: This release resolves CVE-2023-34063. For more information on these vulnerabilities and their impact on VMware products, go to https://www.vmware.com/security/advisories/VMSA-2024-0001.html.

- **Provide the ability to scope secrets by organization or projects**

  Cloud admins can now assign secrets at an organization level, or scope them to multiple projects.

- **Rebuild day 2 actions at the deployment level**

  Following the release of rebuilding machines, VMware Aria Automation now also supports rebuilding at the deployment level. Users can initiate a day 2 action to rebuild an existing deployment and choose which machines to rebuild. For machines with a missing image, users must select a valid image to rebuild.

- **Update to Automation Orchestrator access management in VMware Aria Automation**

  In previous VMware Aria Automation releases, access to Automation Orchestrator was managed by assigning Automation Assembler service roles to the relevant users. Role access is now managed by the Automation Orchestrator service which allows organization owners to assign Automation Orchestrator service roles to users who need access to Automation Orchestrator. VMware Aria Automation SaaS now also includes an Automation Orchestrator service.

  Note: The previous implementation where users had access to Automation Orchestrator through Automation Assembler service roles is no longer valid.

For more information, go to Orchestrator Service Roles.

- **Access to the Public API for listing IaaS Events**

  Access to the IaaS Events list is now available for customers through the Swagger API.

- **VMware Aria Automation Config now supports scheduling jobs using a list of minion IDs**

  Starting with this release, jobs can also be scheduled by providing a list of minion IDs that users have access to in addition to scheduling jobs by using targets.

Read the following topics next:

- Known Issues

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

  When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

  `"Something went wrong in a backend service."`

  This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

  Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **Issues with importing Automation Orchestrator workflows**

  You can experience issues importing an Automation Orchestrator workflow into the VMware Aria Automation catalog content sources if the workflow inputs or fields include the `"project"` ID element as it is a system property. Having the ID added to the workflow inputs or fields can cause you to receive an error message similar to the following:
  `"Error downloading catalog item '/workflow/<workflowId>' (Error: Content provider error).".`

  Note: This issue is only valid for `"project"` ID elements manually added to workflows. It does not relate to automatically generated project fields created when a workflow or cloud template is imported into Service Broker.

  Workaround: Remove the `"project"` ID element from the workflow inputs or fields.

- **You might receive a error if your custom form field includes regex constrains**

  If your custom form includes one or more fields with a regex constraint, you can receive a error message similar to the following: "`Some data cannot be retrieved. If the problem persists, contact your system administrator. Failed request: <action name>".`

Workaround: Ensure that the regex adheres to both Java and JavaScript compliance standards. When this adjustment is made, the issue is resolved.

- **You receive a validation error when an action input is bound to the Project field**

  When a catalog item with custom forms has an external action that has the **Project** field as an input, this can cause an error. Opening the catalog item, the action run fails with the one of the following error messages: "`Cannot execute external actions due to validation errors [Request info field with name: 'project' does not exist.];`" or `Some data cannot be retrieved. If the problem persists, contact your system administrator. Failed request: <action name>.`

  Workaround: Do not explicitly pass the project field as an action input. When an Automation Orchestrator action run is started, the project ID is implicitly passed as a context parameter. Instead of having an input for the project in the action, use the "`_projectId`" context parameter.

  For example, if the Automation Orchestrator action receives one input called `"project"`:

  a Remove that input, and in the action script, create a variable called `"project"` and assign it with the following context parameter value: `var project = System.getContext().getParameter("_projectId")`.

  b Save the action.

  c In the catalog item custom form designer, re-select the updated action.

  d Save the modified custom form.

- **Deploying an NSX Load Balancer with persistence configuration fails if values for required fields are not specified**

  When deploying an NSX load balancer with a route that includes persistence configuration, the VMware Aria Automation Template displays all possible fields under `properties > routes > persistenceConfig`. You must specify values for all required fields as follows:

  - For `PersistenceConfig.type = COOKIE`, specify values for the following fields:

    - `cookieMode`

    - `cookieGarble`

  - For `PersistenceConfig.type = SOURCE_IP`, specify a value for `ipPurge`.

  - Do not use `PersistenceConfig.type = NONE`.

  If a value is missing for any required field, the deployment will fail.

  For more information about resource schema for the `Cloud.NSX.LoadBalancer > routes > persistenceConfig`, go to Aria Automation SaaS Resource Type Schema.

  No workaround.

- **vCenter machines are showing with an Automatic Private IP Addressing (APIPA) IP as the primary IP**

The APIPA IP is an IPv4 address that is assigned to a machine when the DHCP server in the system is not reachable. The address is within the following range: from 169.254.0.1 through 169.254.255.254. When this occurs, the VMware Aria Automation algorithm is incorrectly selecting the APIPA IP address as the primary IP address for the machine that appears in the VMware Aria Automation UI. This is true for both discovered and deployed machines.

VMware Aria Automation shows the APIPA IP as the primary IP address of the vCenter machine because the algorithm for determining the primary IP address failed to filter out these IPs.

No workaround.

VMware Aria Automation December 2023 What's New

8

- **VMware Aria Automation patch for custom form issues**

  The latest VMware Aria Automation patch resolves the custom form issues mentioned in KB 96181. In addition to the issue fixes mentioned in the KB, the patch also resolves the following:

  - Fixed an issue where project fields without a "valueList" property in the field schema was causing catalog items to not load and throw a 500 Internal Server Error.

  - Input binding to a datagrid component with required columns is now fixed and no longer throwing a validation error.

  This patch is available for product versions 8.11.2, 8.12.2, 8.13.1, 8.14.1, and 8.16.0.

- **Provide the ability to scope secrets by organization or projects**

  Cloud admins can now assign secrets at an organization level, or scope them to multiple projects.

- **Rebuild day 2 actions at the deployment level**

  Following the release of rebuilding machines, VMware Aria Automation now also supports rebuilding at the deployment level. Users can initiate a day 2 action to rebuild an existing deployment and choose which machines to rebuild. For machines with a missing image, users must select a valid image to rebuild.

- **Access to the Public API for listing IaaS Events**

  Access to the IaaS Events list is now available for customers through the Swagger API.

- **VMware Aria Automation Config now supports scheduling jobs using a list of minion IDs**

  Starting with this release, jobs can also be scheduled by providing a list of minion IDs that users have access to in addition to scheduling jobs by using targets.

Read the following topics next:

- Resolved Issues

- Known Issues

Resolved Issues

- **VMware Aria Automation Orchestrator Git failure for uninitialized configuration elements**

  Automation Orchestrator fails remote Git push or Git pull operations for uninitialized configuration elements such as Array and Composite Type with the `Error: begin 1, end -1, length 2` error.

- **Using the VMware Aria Automation Config Cloud "sseapi-config auth" command throws errors**

  The "sseapi-config auth" command can be used to view the fingerprints of keys used to authenticate the Salt master in Automation Config. Prior to this release, the command was broken for SaaS deployments of Automation Config. Starting this release, the command now works as expected and returns the fingerprints of keys used to authenticate the Salt master in Automation Config.

- **Restrict content updates triggered from Polyglot scripts to push version history commits**

  Using Polyglot environments (Node.js, PowerShell, and Python) to create, update, and delete Automation Orchestrator objects by using the REST API results in commits being pushed to the version history repository. Doing this in a frequent, automated, fashion results in the version history repository quickly expanding in size, causing shutdowns. For scenarios where a restart is required, this can cause Automation Orchestrator not to start up in a timely manner. To resolve this issue, incoming Polyglot content modification through REST requests is now restricted.

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

  When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

  `"Something went wrong in a backend service."`

  This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

  Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **Issues with importing Automation Orchestrator workflows**

You can experience issues importing an Automation Orchestrator workflow into the VMware Aria Automation catalog content sources if the workflow inputs or fields include the `"project"` ID element as it is a system property. Having the ID added to the workflow inputs or fields can cause you to receive an error message similar to the following: `"Error downloading catalog item '/workflow/<workflowId>' (Error: Content provider error)."`.

Note: This issue is only valid for `"project"` ID elements manually added to workflows. It does not relate to automatically generated project fields created when a workflow or cloud template is imported into Service Broker.

Workaround: Remove the `"project"` ID element from the workflow inputs or fields.

- **You might receive a error if your custom form field includes regex constrains**

    If your custom form includes one or more fields with a regex constraint, you can receive a error message similar to the following: "`Some data cannot be retrieved. If the problem persists, contact your system administrator. Failed request: <action name>"`.

    Workaround: Ensure that the regex adheres to both Java and JavaScript compliance standards. When this adjustment is made, the issue is resolved.

- **Deploying an NSX Load Balancer with persistence configuration fails if values for required fields are not specified**

    When deploying an NSX load balancer with a route that includes persistence configuration, the VMware Aria Automation Template displays all possible fields under `properties > routes > persistenceConfig`. You must specify values for all required fields as follows:

    - For `PersistenceConfig.type = COOKIE`, specify values for the following fields:

        - `cookieMode`

        - `cookieGarble`

    - For `PersistenceConfig.type = SOURCE_IP`, specify a value for `ipPurge`.

    - Do not use `PersistenceConfig.type = NONE`.

    If a value is missing for any required field, the deployment will fail.

    For more information about resource schema for the `Cloud.NSX.LoadBalancer > routes > persistenceConfig`, go to Aria Automation SaaS Resource Type Schema.

    No workaround.

- **vCenter machines are showing with an Automatic Private IP Addressing (APIPA) IP as the primary IP**

    The APIPA IP is an IPv4 address that is assigned to a machine when the DHCP server in the system is not reachable. The address is within the following range: from 169.254.0.1 through 169.254.255.254. When this occurs, the VMware Aria Automation algorithm is incorrectly selecting the APIPA IP address as the primary IP address for the machine that appears in the VMware Aria Automation UI. This is true for both discovered and deployed machines.

VMware Aria Automation shows the APIPA IP as the primary IP address of the vCenter machine because the algorithm for determining the primary IP address failed to filter out these IPs.

No workaround.

VMware Aria Automation November 2023/8.14.1 What's New

9

- **VMware Aria Automation patch for custom form issues**

  The latest VMware Aria Automation patch resolves the custom form issues mentioned in KB 96181. In addition to the issue fixes mentioned in the KB, the patch also resolves the following:

  - Fixed an issue where project fields without a `"valueList"` property in the field schema was causing catalog items to not load and throw a 500 Internal Server Error.

  - Input binding to a datagrid component with required columns is now fixed and no longer throwing a validation error.

  This patch is available for product versions 8.11.2, 8.12.2, 8.13.1, 8.14.1, and 8.16.0.

- **CVE-2023-34063 notice:** Additional patches are released to address CVE-2023-34063 and for further details, go to https://www.vmware.com/security/advisories/VMSA-2024-0001.html. Any customers using VMware Aria Automation versions older than 8.16.0 must refer to KB 96098.

- **Enable Cloud Consumption Interface (CCI) for existing VMware Aria Automation SaaS customers in the US region**

  Following the General Availability of CCI a in prior release, this feature is now available for all VMware Aria Automation SaaS customers in the US region without requiring them to activate the vSphere+ developer experience. Having at least one vCenter connnected to vSphere+ is a requirement for CCI and as of the August 2023 release, admins can add a vSphere+ connected vCenter cloud account directly from the VMware Aria Automation Assembler UI. For more information, go to Using the Cloud Consumption Interface.

- **Support for Azure machine networks and data disks**

  The most commonly used Azure resources such as compute, network, and data disk are supported in the plug-in based approach. Flavor mapping and image mapping are supported for compute resources. Image helper and flavor helpers can also be used with compute resources. Power on and power off day 2 actions can also be performed on compute resources. The plug-in based framework also supports creating networks and data disks.

- **Support for Azure storage accounts**

It is possible to create storage accounts in VMware Aria Automation by using the plug-in approach. The storage accounts can be modified and deleted. All properties for storage accounts are available in VMware Aria Automation.

- **Support for the Azure SQL database**

  The Azure SQL database is supported by using the plug-in based approach. All properties for the Azure SQL database are supported. The service should be available so users can deploy the Azure SQL database. For this release, only create, update, and delete operations are supported. The database operations are performed by the user specified in the database properties.

- **Create Service Broker catalog item based on VM templates from vSphere+**

  With the release of Cloud editions we have a new integration that allows for the quick and easy creation of Service Broker catalog items based on a VM template from vSphere+. Previously, as a VI Admin, when you get requests to create new VMs you can do this through manual creation of the VM on each request or giving users access to the vCenter where their template resides. With this new integration you can quickly create a robust Service Broker catalog item that can be shared with end users and reused as needed. VMware Aria Automation dynamically places this VM based on the best availability in your cluster.

- **Support OVF properties for OVFs in the vCenter content library**

  OVF properties for OVF/OVA images in the vCenter content library are supported in VCT by using the property "ovfProperties" available on the vSphere machine resource. OVF properties for OVF/OVA images in the vCenter content library are also shown in image mappings.

- **Vulnerability pre- and post-remediation actions UI**

  Users can now employ Salt state files in the file manager to specify a pre-state before initiating vulnerability fixes. Additionally, an optional post-state can be set for actions following the completion of the remediation. This feature facilitates the automation of tasks commonly performed during system patching that might require reboots or additional steps for successful remediation.

- **Support for on-prem SCM (GitLab Enterprise) for VCT from VMware Aria Automation SaaS**

  Previously, GitLab Enterprise endpoints were not support in VMware Aria Automation SaaS. This feature allows users to configure GitLab Enterprise as an endpoint for repositories. Cloud templates, Terraform scripts, and extensibility action services can be imported from GitLab Enterprise.

- **Additional warning for resize day 2 actions**

  Resize day 2 actions now include a warning to highlight that, if hot-add is deactivated on vCenter, the machine is rebooted and out of service during the time of reboot. When hot-add is activated, users have the option to choose to reboot or not reboot with the resize action, with "not reboot" as the default option. If the hot-add setting in vCenter is updated, it takes approximately 10 minutes for the change to be reflected in VMware Aria Automation.

- **Pause triggering external request if the input parameter is invalid**

  External actions used in a custom form field will only be run when all dependency fields with constraints are properly populated with valid values. When a field is initially breaking some of its constraints, such as required, min/max value or length, and pattern constraints, the directly dependent input fields with a external action will be evaluated only after the field is updated with the valid requirements. Any transitively dependent fields with external action are not evaluated unless the field is valid. If a valid field is updated to be invalid, then all dependent actions are not run.

  This can lead to confusion when filling in a custom form. Customers can observe some external actions not being run, for example fields that are not auto populated with default values, or drop-down menus without options. If this happens, customers must ensure that all dependency fields with constraints are properly populated with valid values. For example, all required dependencies are filled in and all constraints on the dependencies are satisfied.

- **Updates to VMware Aria Automation Infoblox plug-in**

  Version 1.5.1 of the VMware Infoblox plugin for VMware Aria Automation comes with the following improvements on top of the update to version 1.5:

  - The validation of the credentials fails when the HTTP request to Infoblox server returns a status code different than HTTP 200. The improvement removes the possibility of false positive outcomes and gives better user experience. This avoids misconceptions where the user believes that the cloud account is validated successfully while the networks and IP addresses are not enumerated after the cloud account is added.

  - The plugin does not perform queries for IP addresses in case no specific IP is requested during IP allocation.

  - The extensibility action runtime is changed from Photon 3.x to Photon 4.x in order to run the plug-in with Python 3.10.11 taking into account Python 3.7.5 has reached it end-of-life.

  - This version of the plug-in uses the newer OpenSSL 3.0.x to handle HTTPS traffic instead of OpenSSL 1.0.2 used in the previous version. This brings additional security, but requires the Infoblox server having properly created certificates. The certificates must have the domain of the server listed under SAN, unlike the previous version where the domain could be listed under CN. For more more information, go to How do Common Names (CN) and Subject Alternative Names (SAN) work together?. For information on how to manage the certificates on the Infoblox server, go to Managing Certificates.

  Since the plug-in requires Photon 4.x as a extensibility action runtime in order to run on Python 3.10.11, the plug-in works only with versions of VMware Aria Automation 8.14.0 or later. Since the support for Python 3.7.5 will not be available in VMware Aria Automation 8.14.1, the previous versions of the VMware Infoblox plug-in (1.5 or earlier) are not supported in VMware Aria Automation 8.14.1 or later.

Read the following topics next:

- Automation Orchestrator November 2023/8.14.1 What's New

- Resolved Issues

- Known Issues

Automation Orchestrator November 2023/8.14.1 What's New

- **Cipher engine changes when operating VMware Aria Automation Orchestrator in FIPS mode**

  Starting this release, Automation Orchestrator will use an updated FIPS provider when running in FIPS mode (bc-fips-1.0.2.4). This switch requires the default cipher (Tripple-DES/3DES) and message digest (MD5) to be changed to AES-256 and SHA-256 respectively. These changes are consistent with the NIST special Publication 800-131A Revision 2 . For more information, go to Transitioning the Use of Cryptographic Algorithms and Key Lengths. When Automation Orchestrator runs in FIPS mode, users of the SSH plug-in who already have a password protected key pair(s) might be impacted by exception error. To troubleshoot, refer to KB 95579.

Resolved Issues

- **VMware Aria Automation Orchestrator debug logs level returns to INFO after reboot**

  After rebooting your Automation Orchestrator deployment, debug logs return to the `INFO` level.

- **VMware Aria Automation Orchestrator Java runtime errors**

  Failures of workflows and actions when using the Automation Orchestrator vCenter API through the vCenter plug-in sometimes resulted in Java runtime errors similar to the following:

  ```
  Unable to make field int sun.util.calendar.BaseCalendar$Date.cachedYear accessible:
  module java.base does not "opens sun.util.calendar" to unnamed module @7729d72
  ```

- **VMware Aria Automation Orchestrator workflows and actions stuck in the "Waiting" state**

  Automation Orchestrator workflows that have user inputs, remain stuck in the "Waiting" state when the user input is received after a duration of 8 hours. In this case, the workflow does not show in the **Waiting for Input** section of the Automation Orchestrator Client. This issue was caused by a token validity limitation.

- **Update to the VMware Aria Automation Orchestrator workflow Git repository performance**

  The Automation Orchestrator Git service can slow down when large amounts of workflows are pulled from the repository. This leads to many instances of Git pull operations exceeding the default timeout value and failing. Starting with this release, performance improvements are made which reduce the possibility of large Git pull operations timing out.

- **Upgrading the VMware Aria Automation Orchestrator vSphere Replication Plug-In fails to upgrade the workflows and actions**

  When users upgraded the Automation Orchestrator vSphere Replication Plugin from version 8.7 to 8.8, the workflow and action versions fail to upgrade. The workaround was to uninstall and perform a fresh install of version 8.8 of the Replication Plug-in. This issue is now fixed and users can upgrade both the Replication Plug-in and its content to the latest version.

- **Complex custom forms do not load take more than 10 minutes to load**

  In 8.14.0 there is an issue that causes an increase in the custom form rendering time, depending on the complexity of the custom form. When the form consists of hundreds of fields and complicated default value rules, the slow down can be more significant. For current product releases, this issue is now fixed. There is also a patch for 8.14.0 which addresses the issue in earlier versions.

- **Error when using the VMware Remote Control Application (VMRC) day 2 actions for on-prem users on vSphere 8+**

  vSphere 8+ only supports WebMKS and the deprecated MKS communication. On-prem VMware Aria Automation deployments cannot communicate with vSphere 8+ instances since the console proxy does not support WebMKS. The fix in the current release allows VMware Aria Automation to directly connect to vCenter 8+ instances by using WebMKS. This bypasses the VMware Aria Automation console proxy which does not support WebMKS. Users can also enable native access to vCenter Remote Proxy to avoid exposure of ESXi hosts.

  The port and certificate requirements associated with proxy connections are not addressed as part of this update. For information on the relevant workaround, see KB 93070.

- **Resources are updated to the "missing" state after a network is deleted**

  When a network is deleted from VMware Aria Automation or vCenter, all associated resource elements in the deployment, including the network resource, are now updated to the "missing" state.

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

  When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

  `"Something went wrong in a backend service."`

  This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

  Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **Issues with importing Automation Orchestrator workflows**

  You can experience issues importing an Automation Orchestrator workflow into the VMware Aria Automation catalog content sources if the workflow inputs or fields include the `"project"` ID element as it is a system property. Having the ID added to the workflow inputs or fields can cause you to receive an error message similar to the following:
  `"Error downloading catalog item '/workflow/<workflowId>' (Error: Content provider error)."`.

  Note: This issue is only valid for `"project"` ID elements manually added to workflows. It does not relate to automatically generated project fields created when a workflow or cloud template is imported into Service Broker.

  Workaround: Remove the `"project"` ID element from the workflow inputs or fields.

- **You might receive a error if your custom form field includes regex constrains**

  If your custom form includes one or more fields with a regex constraint, you can receive a error message similar to the following: `"Some data cannot be retrieved. If the problem persists, contact your system administrator. Failed request: <action name>"`.

  Workaround: Ensure that the regex adheres to both Java and JavaScript compliance standards. When this adjustment is made, the issue is resolved.

- **The CMX agent needs to support all Spring Boot supported metrics so that alerts can be created**

  Now that the CMX service has moved to Spring Boot, it needs to support all metrics, particularly "system_cpu_usage", and needs to push them to Wavefront. Without this, alerts cannot be created in Wavefront when the CPU usage crosses the threshold.

  No workaround.

- **The "sseapi-config auth" command throws errors in VMware Aria Automation Config SaaS**

  The "sseapi-config auth" command can be used to view the fingerprint IDs of the Master Key. Currently, this command does not work for VMware Aria Automation Config SaaS.

  No workaround.

VMware Aria Automation October 2023/8.14 What's New

10

- **New unified tile for VMware Aria Automation with rebranded service names**

    VMware Aria Automation on-premises 8.14 and onward have a unified family of services: "Aria Automation". Depending on the user license and role, you will see "Aria Automation Assembler" (Cloud Assembly), "Aria Automation Service Broker", "Aria Automation Pipelines" (Code Stream) as a family of services under "Aria Automation". A new service switcher enables quick and easy navigation between services under VMware Aria Automation.

- **Usability enhancements to VMware Aria Automation Config**

    The following usability enhancements are added to VMware Aria Automation Config:

    - Ability to view notifications on user actions with buttons on every page.

    - Ability to use refresh icons to get the latest status for the jobs on all applicable pages.

    - Ability to copy the job identification number (JID) by using the copy icon.

    - Consistent boolean toggles.

    - Provide additional clarity on job status after job execution. The job status can be:

        - Failed

        - Succeeded

- **Custom forms variable to distinguish fields between Create and Update Forms**

    A context variable is added in the Form Designer called "IsUpdateAction" that can be used in the custom form to indicate if the field is used for deployment creation or update requests.

- **General Availability of Cloud Consumption Interface (CCI)**

    Powered by VMware Aria Automation Service Broker, vSphere with Tanzu and vSphere+, Cloud Consumption Interface presents a set of features that cloud admins can use to offer a modern UI or K8S CLI-driven self-service experience for VMware clouds. This release brings CCI to General Availability. The CCI feature set is available only for VMware Aria Automation SaaS customers in the US region only. See the documentation and main web page for more information.

- **Using free IP address space across the set of all IP ranges for VMs and LB VIP**

When allocating a network from within a profile containing multiple networks, we will now consider the free IP address space across the set of IP ranges across all networks in a network profile. This avoids provisioning failures when allocating the network. However, when a network is allocated for a machine cluster with a certain number of machines, we will always choose a network that has at least the same number of available IP addresses. Allocation of machine clusters is not spread across networks.

- **Quick bulk onboarding for VMs from the Virtual Machines page**

  Cloud administrators can now select discovered virtual machines and quickly onboard them in bulk into VMware Aria Automation management without an onboarding plan.

  Note: VMs onboarded through this flow are not counted towards project limits by default. There's a limit of 50 machines when you run this action through both the UI and API. Learn more.

- **IPv6 support for VMware Aria Automation provisioned workloads with an external IPAM**

  This feature introduces support for assigning IPv6 to single and dual stacked workloads provisioned by VMware Aria Automation where IPv6 address is requested through a VMware Aria Automation integration with an external IPAM system.

  Note: This requires for the IPAM plug-in to support IPv6 too.

- **Support for deployment related property conditions for custom day2 actions**

  Custom day 2 actions now support deployment related conditional properties. Custom day 2 actions coming through the migration assistant with the deployment children name as conditions are required to be reconfigured with this new feature.

- **Support for vCenter hosts and clusters in maintenance mode**

  When a vCenter ESXi host is placed in maintenance mode, VMware Aria Automation can detect the host state change, and does not select this host for provisioning a VM. This state change is not reflected immediately inside VMware Aria Automation. It requires a resource enumeration (runs every 10 minutes) to complete. After a host is put in maintenance mode and updated in VMware Aria Automation, the host will continue to show on **Infrastructure >Resources > Compute** page and can be selected from the list of **Cloud Zones > Compute** page. But new VM provisioning requests will skip this host and only select active hosts for provisioning.

  For clusters, if one of hosts of the cluster is put in maintenance, the cluster can still be selected for VM provisioning if the cluster has at least one active host. If all hosts within a cluster are put in maintenance mode in vCenter so that there are no active hosts in this cluster, VMware Aria Automation will skip this cluster for provisioning VMs.

  Hosts in maintenance mode will be skipped for provisioning until the host is removed from maintenance mode and the VMware Aria Automation resource enumeration has been successfully completed.

- **Support for Active Directory on Windows 2022 for vIDM 3.3.7 with the latest VMSA patch**

  The latest VMSA patch now includes support for Active Directory on Windows for use in vIDM 3.3.7. You can download the patch from the VMware Customer Connect portal. Without the patch, users will get removed when the vIDM sync completes.

  For more information on vIDM 3.3.7, go to the vIDM 3.3.7 Release Notes.

- **Extensibility events are available for approval workflows**

  New event topics are now available for various events during the approval workflow in accordance with an approval policy. Events are generated when:

  - An approval request is created.

  - An approval request is approved.

  - A request is approved by the authorized user

  - An approval request is rejected.

  - A request is approved at a level in a multi-level approval policy.

  These events can be used to trigger an Automation Orchestrator workflow or extensibility action.

- **Update image mappings in bulk across cloud accounts**

  Image mappings are now easier to manage at scale across cloud accounts. Customers can now update image mappings in bulk by managing all image mappings for a specific cloud account/region simultaneously. Previously, this had to be done individually for each image in a cloud account.

- **Availability of Unregister day 2 action function for missing VMs**

  The Unregister day 2 action function is now available for virtual machines which are in the "missing" state.

  Note: If the VM is in the "missing" state for more than 30 days, the unregister action is not supported.

- **Improved tag management through the API and user interface**

  Several enhancements are made to allow easier tag management through the API. Users are now able to delete tags if they are not in use and retrieve tag usage information. In the VMware Aria Automation console, users can now see all origins of a tag while previously the console would only show one, if two tags existed with the same name but different origin. Users can also sort and filter based on the key and value of a tag and the origin of a tag.

- **Deprecation notice for VMware Aria Automation extensibility action runtimes**

Extensibility actions are introducing new runtimes starting with the current release. Old runtimes are considered deprecated immediately and will be supported for a grace period. The last grace period is expected to end around the January release, after which old runtimes will be removed and extensibility actions will default to the new runtimes.

We are adding a new property to the action object called 'runtimeVersion' to help customers navigate through the transition period. Extensibility actions will default to the deprecated version of the runtime when the property 'runtimeVersion' is not set. When new actions are created, they will default to the updated versions of the runtime. The 'runtimeVersion' property will be removed after the grace period. We are also adding ribbons in the extensibility action user interfaces to alert users about the deprecation.

The following is a list of the deprecated runtimes:

AWS:

- Python 3.7
- Node.js 14

Azure:

- Python 3.8
- Node.js 12

On-premises:

- Python 3.7
- Node.js 14
- Powershell 7.1.7

These deprecated runtime versions are replaced with the following:

AWS:

- Python 3.10
- Node.js 18

Azure:

- Python 3.10
- Node.js 18

On-premises:

- Python 3.10
- Node.js 18
- Powershell 7.2.7

Read the following topics next:

- Automation Orchestrator October 2023/8.14 What's New

- [Resolved Issues](#)

- [Known Issues](#)

Automation Orchestrator October 2023/8.14 What's New

- **The runtime version for Python is updated to 3.10**

    Automation Orchestrator now uses version 3.10 of the Python runtime. Python 3.7 is now removed and the grace period expired as specified in the deprecation notice in VMware Aria Automation July 2023/8.13 release notes. Customers are advised to start using Python 3.10 immediately.

- **The runtime version for PowerCLI is updated to 12**

    Automation Orchestrator now uses version 12 of the PowerCLI runtime. PowerCLI 11 is now removed and the grace period expired as specified in the deprecation notice in the VMware Aria Automation July 2023/8.13 release notes. Customers are advised to start using PowerCLI 12 immediately.

Resolved Issues

- **The Automation Orchestrator variable default value takes priority over the user interaction form default value**

    When an Automation Orchestrator variable has a defined default value in both the variables definition and user interaction form, the default value from the variables definition takes priority when the form is accessed from VMware Aria Automation. If the variable has a external value defined from the user interaction form and default value from the variables definition, then the external value takes priority over the default value from the variables definition.

    If the variable has a conditional value defined from the user interaction form and default value from the variables definition, then the variable first has the default value shown. However, if the user changes the value of the text box which the variable is dependent on, then the conditional value for the variable take priority dependent on the new value user has set.

    If the external value of a text box is dependent on a variable with a different default value defined in both the variables definition and user interaction form, then the external action is called once for both values and the variables default value takes priority.

- **Long running Automation Orchestrator actions (over 60 seconds) cause a timeout in the Form Service of the VMware Aria Automation environment**

Starting with the 8.10.2 release, the timeout for retrieving custom form values through extensibility actions or Automation Orchestrator external actions was changed from 10 minutes to one minute. This caused custom forms which have values from a external source to timeout if the action runs for longer than 1 minute.

With the current release, the timeout is increased back to 10 minutes.

- **Incorrect numbering on the Automation Orchestrator workflow page**

  The numbering on the Automation Orchestrator workflow page could previously display incorrectly.

- **Unable to copy the Kerberos authentication when running the "Clone a REST host" workflow**

  Previously, users could not copy the Kerberos authentication when running the **Clone a REST host** workflow because this option was not available under the **Host's authentication type** drop-down. Now this option is added and is working as expected.

- **The Pull operation takes a long time to complete when using a remote Git repository**

  When attempting to pull a large number of workflows from the Git repository integrated in Automation Orchestrator, the Pull operations takes a long time to complete.

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

  When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

  `"Something went wrong in a backend service."`

  This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

  Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **Unsupported Kerberos authentication for the PowerShell plug-in**

  The PowerShell Plug-in for VMware Aria Automation Orchestrator does not support Kerberos authentication when used in FIPS mode because of security restrictions on the required security provider.

  When used with older versions of Automation Orchestrator in FIPS mode, using Kerberos authentication in the PowerShell plug-in is not recommended as it can break the FIPS compliance.

Workaround: Use the **Run Script In Guest** workflow to run a PowerShell script inside the virtual machine.

- **Complex custom forms do not load take more than 10 minutes to load**

    For complex custom forms with hundreds of fields and complicated default value rules, there might be a slow down to render the form. In most cases the longer rendering time is not noticeable, while the more complex the form is, the slow down can be significant.

    No workaround.

VMware Aria Automation August 2023/ 8.13.1 What's New

<div style="text-align: right">11</div>

- **VMware Aria Automation patch for custom form issues**

  The latest VMware Aria Automation patch resolves the custom form issues mentioned in KB 96181. In addition to the issue fixes mentioned in the KB, the patch also resolves the following:

  - Fixed an issue where project fields without a `"valueList"` property in the field schema was causing catalog items to not load and throw a 500 Internal Server Error.

  - Input binding to a datagrid component with required columns is now fixed and no longer throwing a validation error.

  This patch is available for product versions 8.11.2, 8.12.2, 8.13.1, 8.14.1, and 8.16.0.

- **CVE-2023-34063 notice:** Additional patches are released to address CVE-2023-34063 and for further details, go to https://www.vmware.com/security/advisories/ VMSA-2024-0001.html. Any customers using VMware Aria Automation versions older than 8.16.0 must refer to KB 96098.

- **Custom naming for plug-in resources**

  The plug-in based resources now support a custom naming feature. You can now define custom naming templates at the project level or organization level and use it the same way as classic resources. Custom naming helpers are also available in the Automation Assembler canvas. These helpers can be used like other allocation helpers on cloud objects.

- **FIPS compliance for plug-in based resources**

  Newly added services to VMware Aria Automation are Federal Information Processing Standards (FIPS) compliant. This satisfies requirements from the US federal government divisions, research institutions, universities, defense contractors, and anyone else using government networks or protecting government data. Financial and healthcare organizations also require FIPS compliance for protection of their confidential data.

- **Storage filter should pass all the eligible selections to downstream filters**

The SPREAD placement policy, both at the project level and cloud zone level, can now be used with multiple storage profiles that are selected through storage constraint tags . There are several behavior changes for soft constraints at storage profile level:

- If soft constraints are used for storage in cloud templates, the corresponding storage profile item with a matching tag is selected.

- If there is no matching storage profile item for that tag, then the default profile for that region is selected.

- If there is a SPREAD policy at the cloud zone or project level, then the compute cluster is selected based on the policy. Afterwards, tag matching is used to select the corresponding storage profile item.

- In case of soft constraints, if there is no matching storage item connected to the selected compute cluster, then default storage item is selected.

- In case of hard constraints, if there is no matching storage item connected to the selected compute cluster, then provisioning fails based on the definition of the specific hard constraint.

Workaround:

a Tag the required storage profile by adding a tag in the capability tags field (such as `mytag`) of the profile.

b Add the same tag in the cloud template YAML as shown:

```
Cloud_Azure_Machine_1:
   type: Cloud.Azure.Machine
   properties:
    storage:
     constraints:
       - tag: mytag
```

- **Updates to the Service Broker Catalog**

  The Catalog items UI is updated to be user focused and share more details. These updates include:

  - You can now select a list view when browsing catalog items.

  - New design and font for the catalog card to allow a longer description and name.

  - Smaller **My Resource Usage** summary.

  - Sort and search are moved to top right side.

- **Plug-in based resources now support new OOTB Day 2 actions**

  These Day 2 actions are now supported for plug-in based resources:

   AWS * EC2: power on, power off

  - S3 bucket: Delete

- LB: Delete - delete works, but the LB resource type is currently hidden

- RDS: Delete - delete works, but the RDS resource type is currently hidden

- EKS: Delete - delete works, but the EKS resource type is currently hidden

GCP * VM - power on, power off, resume, suspend

- Storage Bucket: Delete

- Service Account: Delete

- Shielded Machine: power on, power off, resume, suspend

- **Updates related to Terraform license changes made by HashiCorp**

   On August 10 2023, HashiCorp announced that its source code license from Mozilla Public License (MPL) is changing to the Business Source License (BSL/BUSL) for future releases of its products, including Terraform, Vault, Consul, Boundary, Nomad, Waypoint, Packer, and Vagrant. This licensing change effects only Terraform versions newer than 1.5.5.

   As a result, we are immediately restricting customers from choosing any Terraform versions newer than 1.5.5 in VMware Aria Automation when running their Terraform configurations.

- **Add a cloud account for vCenter that is connected to vSphere+**

   VMware Aria Automation now supports adding vCenter cloud accounts that are used as vSphere IaaS layers for workload automation. This feature introduces support for adding a cloud account for vCenter that is connected to the vSphere+ cloud service.

   As part of this, the UI and API are updated to reflect the unique nature of vSphere+ connected to vCenter. Particularly for the UI, the experience is simplified. You are no longer required to specify the IP, FQDN, or cloud proxy information as all vCenter instances that are connected to vSphere+ are provisioned in the same SaaS org. Therefore, they are automatically discovered by VMware Aria Automation automatically and can be selected one at a time.

   Note: This feature is currently only usable by customers with VMware Aria Automation SaaS deployed in the US region.

- **VMware Aria Automation Config support for Salt Onedir packages**

   VMware Aria Automation Config now supports Salt installed with Onedir packages as the new preferred installation method of Open Salt 3006 and later. Through Onedir, all Salt executables are included under one directory. Onedir also includes the Python version needed by Salt and its required dependencies. For more information on Onedir and the upgrade process, see Upgrade to onedir.

   When upgrading Open Salt to Onedir, it is highly recommended to review the user guide. Remember to follow step 4 in the Upgrade to onedir documentation and reinstall any third-party Python packages.

For Salt Masters connected to and managed by VMware Aria Automation Config, the RaaS master plugin needs to be reinstalled. Follow the Aria Config documentation for installing/upgrading/configuring RaaS master plugin.

For more information, see KB 89728.

 Note: Support of Salt Onedir with Photon OS 4.0 will be available in an upcoming release.

- **VMware Aria Automation for Secure Hosts: Qualys Vulnerability scan imports now has UI support**

The Qualys Vulnerability scan import now has UI support with VMware Aria Automation for Secure Hosts. For more information, go to How to run a third party scan.

- **Salt Open (Open Source Project) release Information**

The Salt Project is an open source automation and configuration management engine. Salt is the technology that underlies the core functionality of VMware Aria Automation Config. For more information on the Salt Project, go to The Salt Project.

The following extensions are released for Salt Open:

Note: VMware Aria Automation Config updates are called out separately in these release notes.

- **Salt Analytics** enables customers to forward the analytics information to any external systems to monitor Salt infrastructure.

- **Salt Heist** improves Salt management by installing or upgrading Salt at scale. It also provides an agentless solution by removing the agent when it is no longer needed.

- **Salt Describe** improves the user experience by automatically generating Salt state files to manage desired states for greenfield or brownfield environments. These files can be used as is or with changes based on the business needs.

For more details on Salt Open releases, visit the following links:

- Salt Project Blogs

- Salt Project Release Notes

Read the following topics next:

- Automation Orchestrator What's New

- Resolved Issues

- Known Issues

Automation Orchestrator What's New

- **Limiting the number of vAPI metamodels supoprted by VMware Aria Automation Orchestrator vAPI plug-in**

Starting with the 8.13.1 release, the number of vAPI metamodels that can be added from the Automation Orchestrator vAPI plug-in is limited to a default value of 20. This value can be changed by adding the vapi.metamodels.count to your Automation Orchestrator deployment and setting the property value to the desired number of metamodels. Adding more than 20 models can consume excessive memory and lead to instability of the Automation Orchestrator deployment.

Resolved Issues

- **User cannot change the status of the Enable Features option under the Help panel**

  When the Enable Features option (Support Requests and Feedback) is deactivated for secondary tenants, the change is not applied and the settings stay active.

- **The Debugger does not step into sub-actions in the script of an action**

  Previously, when debugging an action, the debugger did not step into sub-actions when the **Step Into** button is pressed. Now, the debugger steps into sub-actions when the **Step Into** button is pressed while debugging inside the action editor.

- **You receive a data collection error in vra-vcd-adapter when an imported cross-vdc network is present**

  The VCD public cloud adapted fails when collection data about a VCD infrastructure object. This error occurs when there is an imported VDC network configured in the remote VCD tenant. This causes other VCD constructs to not be collected, including storage policies, datastores, VMs, volumes, and others.

  This issue is now resolved and you can collect data when using imported VDC networks, including VDC networks scoped to VCD data center groups. This allows the provisioning of compute workfloads connected to such networks while also leveraging integration capabilities such as IPAM, static and dynamic IP assignments, external IPAM integrations, and others.

- **The dynamic enumerations input for cloud templates cannot be validated if the actions return type is Array/Properties**

  The validation fails when a cloud template includes a string enumeration input with a dynamic value with the Array/Properties return type containing only the properties `value` and `label`. With the latest release such issues are resolved by treating the Array/Properties value as an enumerated list of keys and values. For each properties element in the array, its corresponding list element has a key - the value of the `label` property, and value - the value of the `value` property.

- **The inputs for Constant values for the Form Designer action parameters of the array/ number or array/date type behave as a single value**

  This issue is resolved through changes made to the way in which the Form Designer handles these parameters.

When the action parameters are of the array/string or array/number type, the input for Constant values is a `Textarea`, where you can enter the array elements values separated by commas.

When constant action parameters are of the array/date type, an array input is used. This allows you to add or remove elements, while not adding any empty or incorrect values to the array. The parameter value is saved in the form schema as a string of ISO date-time strings separated by commas.

- **The PowerShell version of the PowerCLI container is now updated**

  The PowerShell version of the PowerCLI 12 container is now updated from version 7.1 to the latest version of LTS 7.2.

- **Scheduled task inputs with a drop-down menu cannot be seen**

  When scheduling a workflow with an input that requires a drop-down menu to be shown for value options, the menu with the value options gets cut off by the page footer.

  This layout issue is now fixed. As part of this fix, the pages for creating, editing, and viewing details of scheduled workflows are now unified. As a result, you can now update the input values of an existing scheduled task, instead of needing to create a new scheduled task. New values are applied from the first future run.

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

  When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

  `"Something went wrong in a backend service."`

  This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

  Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **Issues with importing Automation Orchestrator workflows**

  You can experience issues importing an Automation Orchestrator workflow into the VMware Aria Automation catalog content sources if the workflow inputs or fields include the `"project"` ID element as it is a system property. Having the ID added to the workflow inputs or fields can cause you to receive an error message similar to the following:

  `"Error downloading catalog item '/workflow/<workflowId>' (Error: Content provider error)."`.

Note: This issue is only valid for "`project`" ID elements manually added to workflows. It does not relate to automatically generated project fields created when a workflow or cloud template is imported into Service Broker.

Workaround: Remove the "`project`" ID element from the workflow inputs or fields.

- **You might receive a error if your custom form field includes regex constrains**

  If your custom form includes one or more fields with a regex constraint, you can receive a error message similar to the following: "`Some data cannot be retrieved. If the problem persists, contact your system administrator. Failed request: <action name>`".

  Workaround: Ensure that the regex adheres to both Java and JavaScript compliance standards. When this adjustment is made, the issue is resolved.

- **The Change Project process fails for multi-tenant environments in deployments with remote access**

  This issue can occur if your deployment includes remote access with an authentication type other than **publicPrivateKey**. Other authentication types store their authentication credentials link and during the change project action, the remote access credentials are set with the tenant organization. The compute description is patched but with the owner context (because of `reenterWithOwnerAuthContext` logic) and have a provider organization. The authentication credentials are set in the tenant organization, but it is changed to the provider organization and the patch request fails with `IllegalAccess` exception.

  Workaround:

  A potential workaround is to update the cloud templates from which the deployments are created to use **publicPrivateKey** authentication type for remote access.

  ```
  remoteAccess:
    authentication: publicPrivateKey
    sshKey: ${input.sshKey}
    username: root
  ```

- **Drop-down menu values do not get reset to the last selected value if the action is re-triggered**

  In cases where the `valueOptions` (`dropdown`, `multiSelect`, `dualList`, `combobox`, and others) are controlled by an external source, you might encounter this situation:

  a   You select a value from the drop-down menu.

  b   An action triggers, causing the menu to have zero options.

  c   The originally selected value is cleared from the UI control but is available on request.

  Workaround: Explicitly select the empty value if available.

VMware Aria Automation July 2023/8.13 What's New

<div style="text-align:right">12</div>

- **Secure Host supports CIS Benchmark for RHEL9**

  VMware Aria Automation for Secure Hosts now supports the CIS benchmark for RHEL9.

- **Command line support for configuring VMware Aria Automation Orchestrator**

  VMware Aria Automation Orchestrator can now be configured through the command line interface (CLI) by using 'vracli vro' commands in addition to using the existing Control Center options. For information on configuring VMware Aria Automation Orchestrator with CLI commands, go to Configuring the Automation Orchestrator Appliance authentication provider with the command line interface and Additional command line interface configuration options.

- **Support for load balancer in GCP plugin**

  It is now possible to create external global TCP Load balancers from the plugin based load balance resource.

  As part of load balance it is possible to:

  - Insert, delete, and update an instanceGroup resource

  - Add, remove, and list instances associated with an instanceGroup resource

  - Get and list healthChecks

  - Patch and update a healthCheck resource

  - Insert and delete backendService resources

  - Insert and delete forwardingRules

  - Get and list forwardingRules

  - Get and list backendService resource

  - Patch and update a firewall resource

  - Update and patch a backendServices resource

  - Get and list firewalls

  - Insert and delete firewalls

  - Insert and delete healthChecks

  - Support for get/list target pools

- ◾ Patch set labels and set target on a forwardingRules resource

- ◾ **Onboarded deployments are compliant with Service Broker policy limits**

  Deployments that include VM and disks are now compliant towards Service Broker policy limits. Onboarded deployments are counted towards the limits below:

  - ◾ org limit: CPU, VM count, memory, and storage

  - ◾ org user limit: CPU, VM count, memory, and storage

  - ◾ project limit: CPU, VM count, memory, and storage

  - ◾ project user limit: CPU, VM count, memory, and storage

  You can choose to allow onboarding resources to count towards limits by switching the option to do so to "on". By default, the option is "off", which is consistent with the previous behavior.

- ◾ **VMware Aria Automation billable object visibility**

  VMware Aria Automation is introducing an ability for administrators to view a summary of billable objects under management via API and UI. In addition, the resource center inside Aria Automation Assembler and Aria Automation Service Broker is being enhanced to provide the ability to filter out billable resources by themselves or in combination with any other filters that are already supported. Learn more about billable objects.

- ◾ **Day 2 action to change performance tier of Azure storage disks**

  VMware Aria Automation now supports the modification of an Azure storage disk's performance tier as a day 2 action. You can now see a day 2 action available on these disks that allows you to modify the perforance tier of the disk as needed.

- ◾ **Rebuild virtual machine for Onboarded and Migrated vSphere workloads**

  Following the last release of Rebuild Day2 action, we now support Rebuild actions for onboarded vSphere workloads and vSphere workloads from the migration assistant tool. When an onboarded VM is selected to be rebuilt for the first time, the user can view and confirm the image selection.

- ◾ **Resource visualization Improvement**

  In this release, Aria Automation includes these UI improvements for plugin based resource:

  - ◾ Allocation helper properties can be collapsed

  - ◾ New category to display generic idem resource properties.

  - ◾ Descriptions are added to parameters.

  - ◾ Added Breadcrumbs component to properties tooltip for backwards navigation.

  - ◾ When an Allocation Helper component is linked to an Idem resource directly in the canvas it populates the respective property binding automatically, whenever possible.

- ◾ **Support for service accounts in GCP plugin**

VMware Aria Automation users can now deploy GCP service accounts and service account keys using blueprints, catalogs and Idem service.

Use case:

a   Create a service account

b   Create a storage bucket

c   Storage bucket should be accessible only through service account

- **Increasing inventory limits**

  Plugin based framework now supports 250,000 idem resources in inventory.

- **Custom Forms Versions Integrated with Content Items**

  Service Broker custom forms versions now includes these improvements:

  - You can customize root-level blueprint-based content items.

  - You can create a custom form for specific blueprint versions, by clicking on the details panel and then on the name of the version (now shown as link) to open the Form Designer for this specific version.

  - The addition of a "Disable custom form" button in the action menu in the details panel, which disables the custom form for that specific blueprint version

  - New column in the blueprint version table that indicates whether this version has a version-specific custom form.

  - The button "Delete custom form" is re-labeled as "Delete version-specific custom form" in the datagrid action menu located in details panel.

- **Remove node.js 14 from runtimes and polyglot**

  Scripting elements created for Node.js 14 will be automatically switched to run on Node.js 18.

- **Python 3.7 is deprecated and will be removed in next releases**

  Deprecation notice

  Python 3.7 is will reach End-Of-Life on 27 of July 2023. Python 3.7 runtime is now deprecated and will be removed from Aria Orchestrator starting with the October 2023 release. Customers are advised to start using Python 3.10 runtime. This applies to both Aria Orchestrator and ABX services.

- **Optionally neglect CPU/Memory of powered off VMs in resource quota policy**

  You can now choose to neglect CPU and memory consumed by powered-off virtual machines (VMs) in a resource quota policy. This allows users who are restricted by a resource quota policy to provision VMs even though they have surpassed CPU or memory quotas if some VMs that are being accounted for in the quota are powered-off.

- **Unregister provisioned machines Day2 action**

You can now unregister Aria Automation provisioned vSphere virtual machines from Aria Automation as a resource day2 action. When you unregister a provisioned VM, it is removed from the Aria Automation inventory but remains the same in vCenter as it was before performing the action. This virtual machine is then moved and listed as a "discovered" VM in Aria Automation and can be onboarded, if needed.

Note: When a provisioned VM is unregistered, its deployment remains in place.

- **The package signing certificate can now be changed using the "Generate Package Signing Certificate" workflow**

  The package signing certificate can now be changed using the "Generate Package Signing Certificate" workflow instead of using the Control Center.

- **PowerCLI 11 runtime is deprecated**

  Deprecation notice

  PowerCLI 11 (PowerShell 6.2) runtime is deprecated and will be removed from Aria Orchestrator starting with the October 2023 release. Customers are advised to start using PowerCLI 12 runtime.

- **Qualys Vulnerability scan imports via API with Aria Automation Secure Host**

  Aria Automation Secure Host now supports direct import of Qualys vulnerability scan results via API.

Read the following topics next:

-
-

Resolved Issues

- **Approval Policy Notifications with AD Group as the Approver**

  Previously, email notifications were not sent for an approval request when the approver group was an Active Directory group. Now, a notification email is sent to the AD group configured as the approver.

- **Pushing subscription from vRA 8.8.2 on prod and pre-prod the event "Custom resource post provision" is activated thrice**

  When a Custom Resource is provisioned in HA environment, sometimes the "Custom resource post provision" event was posted many times because of synchronicity issues between nodes. This usually happened when the workflow that provisions the Custom Resource ran for more than 2-3 minutes and there was a blocking subscription on the "Custom resource post provision".

- **Aria Automation Secure Host includes CVE information for all architecture types for a RHEL based system**

Aria Automation for Secure Hosts now lists the CVE/Patch information based on the architecture type of the RHEL based system. For example: Power PC, X86_64.

- **Downloading Automation for Secure Hosts assessment results sometimes does not work**

    Previously, downloading the compliance report using the download button in the JSON format sometimes did not work. This is now resolved and works as expected

- **Performance issues could occur for growing target groups in Aria Automation Config**

    In some cases, performance issues could occur in Aria Automation Config and due to growing target groups.

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

    When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

    ```
    "Something went wrong in a backend service."
    ```

    This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

    Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **You receive a error status code 500 when a extensibility action content source has its "shared" field value as NULL**

    When your project includes extensibility actions, the number of items shown on the **Content Source** page includes fewer actions than the total number of actions included in the project. For example, you might see five out of ten actions shown in the **Number of items** field and red exclamation mark next to it. This means that not all actions are synchronized in the content source and that the problematic actions are not available for use in the Catalog.

    Workaround: See KB 93437.

VMware Aria Automation June 2023/8.12.2 What's New

<div style="text-align: right; font-size: 2em; color: #888;">13</div>

- **VMware Aria Automation patch for custom form issues**

    The latest VMware Aria Automation patch resolves the custom form issues mentioned in KB 96181. In addition to the issue fixes mentioned in the KB, the patch also resolves the following:

    - Fixed an issue where project fields without a `"valueList"` property in the field schema was causing catalog items to not load and throw a 500 Internal Server Error.

    - Input binding to a datagrid component with required columns is now fixed and no longer throwing a validation error.

    This patch is available for product versions 8.11.2, 8.12.2, 8.13.1, 8.14.1, and 8.16.0.

- **CVE-2023-34063 notice:** Additional patches are released to address CVE-2023-34063 and for further details, go to https://www.vmware.com/security/advisories/ VMSA-2024-0001.html. Any customers using VMware Aria Automation versions older than 8.16.0 must refer to KB 96098.

- **Continued management of workloads failed over by SRM**

    When workloads managed by Aria Automation are protected by and failed over by VMware Site Recovery Manager (SRM) to a secondary site, Aria Automation users can now continue managing that workload and it's associated networks and disks. The workload is visible in Aria Automation with updated properties to reflect any changes as a result of the workload movement, and the day 2 actions are still available.

    Note: This initial feature release supports vSphere machines, with vSphere attached disks and vSphere networks

- **Support for VM snapshots in GCP**

    Plugin based framework in Aria Automation supports the following use cases on snapshot:

    Use case 1

    Creation of a new snapshot from a disk resource while creating a new deployment using a blueprint

    For example, the VCT YAML block can have a create a disk, and in the same VCT another YAML block to create a snapshot right after the disk (above) gets created.

    When you create a deployment with this VCT, a disk is created and a snapshot is taken.

Use case 2

Deletion of an existing snapshot

Deleting a snapshot from Delete action

Use case 3

Update an existing snapshot (eg. set labels)

Snapshot can be updated while updating an existing deployment using a VCT

Use case 4

Restoring a disk from a snapshot (using a blueprint)

In the VCT, a disk can be created and have a snapshot taken of it. Then, you can create another disk out of that snapshot (specified via 'source_snapshot' property).

- **Support for managing disks resources in GCP**

  VMware Aria Automation supports storage profiles, attach, detach a disks , encryption for GCP resources in plugin based architecture

  It has the capability to manage simple as possible disk resource in GCP plugin to attach to a request to create a VM instance.

  This includes:

  - Disk creation (present)

  - Disk deletion (absent)

  - Disk display (describe)

  Added support for DiskTypes resource as in https://cloud.google.com/compute/docs/reference/rest/v1/diskTypes

  It is possible to attach or detach a disk to an instance resource. Aria Automation also supports adding or removing one or more ResourcePolicies from a disk resource. It also supports Customer Managed Encryption Key (CMEK). If auto delete flag is set, then the disk is also deleted when the instance is deleted. It is possible to attach labels to disk.

  Aria Automation supports both both boot and non-boot (data) persistent disks. All the properties that are available in GCP will be available through Aria Automation.

- **Support for AWS subnet and Test feature in VCT**

  VMware Aria Automation June 2023 includes these improvements:

  - AWS subnet resource is available in assembler. This can be used in VCT and create catalog

  - Provides the Public IP and list of NICs connect to AWS's EC2 instances

  - Provides the list of volumes with their properties for AWS EC2 instances. The Test functionality is now fully enabled to test VCT containing plugin based resources

- Basic approval support is added allowing the approver to approve or reject deployments

- Support VCT dry run for allocation resources

- **Support for managing network resource in GCP**

  VMware Aria Automation supports provisioning of network resources on Google Cloud Platform (GCP) . This is now possible through the plugin based architecture. Network object was not available in classic GCP VM object. With plugin based architecture it is possible to create, update, and delete network objects.

  Google Cloud VPC Network Peering connects two Virtual Private Cloud (VPC) networks so that the resources in each network can communicate with each other. Plugin based architecture supports addPeering, removePeering, updatePeering, switchToCustomMode, patch, and getEffectiveFirewalls.

- **Support for storage buckets in GCP plugin**

  The Buckets resource represents a bucket in Cloud Storage.

  VMware Aria automation supports creating and deleting a Bucket resource in GCP. It also provides the ability to patch and update a storage bucket/

  The StorageBucket Resource is managed with default access control and they can be patched and updated.

  Aria Automation also provides an option to lock the retention policy of a Bucket resource.

- **Support for GPU for VMs in GCP plugin**

  VMware Aria Automation supports the creation of GCP VMs with a specific number of GPU resources.

  The plugin based architecture provides all properties that are available in GCP instead of a predefined set by Aria Automation. This includes a GPU property that was not available in classic GCP VM object in Aria Automation. However, with plugin based architecture, the GPU property is available in Assembler where the user can provide the inputs for this.

  The number of GPU can be provided in YAML.

- **Storage policy support for plugin based resource**

  VMware Aria Automation now supports Storage policies for VCT to have resources from plugin based architecture.

  Storage Allocation supports cloud specific inputs. Storage profile filtering logic is same as for classic resources.

- **Manage shielded instance resources in GCP**

  VMware Aria Automation supports the creation of shielded instances in GCP by using the shielded property. It provides a capability to identify shielded instance.

  It is possible to set a shielded instance integrity policy to a GCP VM resource. It is also possible to update a shielded instance config of an instance resource.

- **When onboarding machines, ability to also onboard the connected NSX-T networks**

  When virtual machines are onboarded, you can now also onboard connected NSX networks. As part of that, the networks appear in related deployments and the VM IP address state will be maintained when VM is removed.

- **Support for GCP VMs**

  VMware Aria Automation supports the provisioning of virtual machines (VM) hosted on Google Cloud Platform (GCP). This is possible through the plugin based architecture. The classic GCP VM objects in Aria Automation that are available in assembler has limited set of properties. However, with plugin based architecture, the VM objects provide all properties that are available in Google Cloud Platform.

  The benefits of this is that the user can provide inputs for all or any of the properties instead of a predefined set by Aria Automation. For example, a GPU property that was not available in classic GCP VM object in Aria Automation. However, with plugin based architecture, the GPU property is available in assembler where the user can provide the inputs.

Read the following topics next:

- Resolved Issues
- Known Issues

Resolved Issues

- **Unable to configure LDAP Authentication**

  Previously, the LDAP integration caused searches for LDAP users and groups to be scoped too widely. For very large directories, this meant that sometimes users and groups that definitely existed in the directory could not be found because of Active Directory enforced limits on number of records returned.

  Additionally, the usernames or group names would appear in the list of checkboxes, but after checking them and clicking 'save', the selections were not maintained and the checkboxes would be empty again.

Now, this has been corrected and no longer occurs. However, if after upgrading to 8.12.2, you are still experiencing situations where Aria Automation Config cannot seem to find existing users and groups, you can add additional qualifiers to the User Search DN Filter and Group Search DN Filter:

- For example, assuming your corporate directory has a BaseDN of 'dc=corp,dc=example,dc=com'. Users that should be allowed access to AAC belong to the Active Directory Security Group with a distinguishedName of 'cn=ops,cn=groups,ou=Engineering,dc=corp,dc=example,dc=com'. You can set the Group Search DN Filter to 'cn=groups,ou=Engineering,dc=corp,dc=example,dc=com'. This would scope the list of groups to all groups in the Engineering OU, which would be far less than all groups in the directory.

- If you want to set permissions directly on users, you could set the User Search DN Filter to just return users in the Engineering OU with this filter: ou=Engineering,dc=corp,dc=example,dc=com'. This would cause only Engineering users to show in the user lists.

It's important to remember that these are only search filters. When users and groups are checked in the Users and Groups tab in the Authentication workspace, AAC saves the distinguishedName of the users and/or group and creates a link internally to the distinguishedName. LDAP-based servers can always look up an object by distinguishedName. Changing the search criteria on the initial authorization tab will not remove these links, it will just change the lists of users and groups that can be found and selected.

- **Timeout errors would occur when AD/LDAP was used to authenticate Ansible Tower with Aria Automation**

  Previously, Basic Authentication was used to authenticate Ansible Tower with Aria Automation. This would cause timeout errors when AD/LDAP credentials were used.

  With this release, Aria Automation now uses OAuth2 Token Authentication to connect with Ansible Tower (based on Red Hat Ansible Platform recommended approach). For more information see the Summary of Authentication Methods in Red Hat Ansible Tower blog.

- **Workflow Request Runs are deleted after 24 hours regardless of their status**

  In previous releases, a scheduled job would delete all requested workflow runs older than 24 hours, regardless of their status. This resulted in errors when a workflow run took longer than 24 hours to complete. To resolve this issue, we have made improvements to the deletion process and introduced changes to the query.

  - Updated the scheduled job to consider the final statuses of workflow executions as a part of the deletion process.

  - Modified the query to ensure that only workflow runs with final statuses are taken into account for deletion.

  These enhancements ensure that workflow executions remain open until they reach a final state

- **The external validation parameter bound to the Request Info projectId field has a null value**

  This issue occurs when a day2 custom form has an external validation element with the parameter bound to the **Request Info** > **Project ID** field. When running the validation action, the **projectId** value is null. This issue does not have a workaround and is fixed for the 8.12.2 release.

- **Can't scale a load balancer through the IaaS API**

  When Aria Automation creates a load balancer, we check to see if there are 0 machines, if so we skip creating Pools/Virtual Servers/etc. When scaling out a load balancer, it will fail if there are 0 Pools since Aria Automation does not have logic to create these resources during update time.

  Aria Automation now includes a feature toggle to always create Pools/VirtualServers/etc. no matter how many machines are attached to the load balancer. This means that when a load balancer with 0 machines is created, Aria Automation creates Pools for it, and when you scale out you do not encounter a no pools error message.

  To enable the new behavior, set "nsxt.policy.create.lb.resources.without.machines" (via the Configuration Properties UI) to true *before* provisioning a load balancer.

- **When you have a switch in a Automation Orchestrator workflow the step does not run**

  In product versions 8.11.0 to 8.12.1, when workflow elements are dropped on an arrow going out of a switch element, they are not performed when the workflow is run.

- **Setting parameters for Cloud.Service.AWS.API.Gateway.Method**

  In previous releases, users of Aria Automation Assembler resource Cloud.Service.AWS.API.Gateway.Method were able to set the property value for method.request.querystring.tableName with string values like 'true' or 'false'. Starting this release, users are required to use boolean literals instead of string values. Using string values will result in failure to udpate the property value.

  APIMethod:

    type: Cloud.Service.AWS.API.Gateway.Method

    properties:

     request_parameters:

      # Please use boolean literal values true or false instead of 'true' or 'false'

      method.request.querystring.tableName: true

- **Remove the functionality of the saveToVersionRepository scripting method**

  Performance issues were caused by a version history repository storing a large amount of versions of configuration and/or resource elements, as a result of automated version generation caused by **saveToVersionRepository** method calls.

The functionality of the **saveToVersionRepository** method, that is exposed to ConfigurationElement and ResourceElement instances in the Automation Orchestrator scripting API, has been removed. The method is still available in the Automation Orchestrator scripting API, however it simply generates a log message as part of the Workflow logs that states that it is no longer functional and that it will be removed in a future release. The method has been marked as deprecated.

Whenever users, who have a Configuration or Resource element which has been updated from both the Automation Orchestrator client and the Automation Orchestrator scripting API (Workflow runs), decide to Pull from or Push to a remote Git repository with which they have an active integration, the current state of the given Configuration or Resource element will be used, given that the Configuration or Resource element is affected by this operation.

Automation Orchestrator workflow developers should revise any workflows and/or actions which previously called the **saveToVersionRepository** method and remove those calls from their code.

- **Creating instances with status other than RUNNING does not get applied**

Google Compute Engine automatically starts newly deployed instances. Previously, idem-gcp plugin simply ignored the value of status property, (optionally) passed as part of the SLS used to create the instance.

This is resolved by having the idem-gcp plugin fetch the value of this property and try to put the instance to the desired state specified by this property immediately after the instance is deployed.

- **Rest plugin does not handle API keys for authorization**

The VMware Aria Automation Orchestrator HTTP REST Plugin did not handle the authorization of APIs with custom defined API keys in the past.

As a result, when invoking operations such as REST APIs from workflows, inputs for API keys did not appear in the workflow form.

With this resolution, the REST plugin is able to parse api Key authorization with input type "header" and "query" for both Swagger2 and OpenAPI3. As a result, the user is able to give values for these input types on workflow forms.

- **When running a simple VM deployment, with the configuration property PREVENT_COMPUTE_STORAGE_OVERALLOCATION set to true. There is a chance that the boot disk is provisioned on a datastore not matching the storage profile constraints.**

During the allocation phase of a deployment, when a datastore is being selected for the disks included in the deployment, it is possible that the storage profiles are not taken into account. Hence, a datastore that does not mach the constraints set by the storage profiles could be selected for the disk.

This issue can happen:

1) only when the configuration property PREVENT_COMPUTE_STORAGE_OVERALLOCATION is set to true (which is false by default);

2) only when running 10 or more deployments in parallel;

Resolution: Starting 8.11.2 and higher, this issue is now fixed. During VM deployment, boot disk is provisioned on a datastore matches with the storage profile constraints as expected.

Known Issues

■ **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

`"Something went wrong in a backend service."`

This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

■ **Issues with importing Automation Orchestrator workflows**

You can experience issues importing an Automation Orchestrator workflow into the VMware Aria Automation catalog content sources if the workflow inputs or fields include the `"project"` ID element as it is a system property. Having the ID added to the workflow inputs or fields can cause you to receive an error message similar to the following: `"Error downloading catalog item '/workflow/<workflowId>' (Error: Content provider error).".`

Note: This issue is only valid for `"project"` ID elements manually added to workflows. It does not relate to automatically generated project fields created when a workflow or cloud template is imported into Service Broker.

Workaround: Remove the `"project"` ID element from the workflow inputs or fields.

■ **You might receive a error if your custom form field includes regex constrains**

If your custom form includes one or more fields with a regex constraint, you can receive a error message similar to the following: `"Some data cannot be retrieved. If the problem persists, contact your system administrator. Failed request: <action name>".`

Workaround: Ensure that the regex adheres to both Java and JavaScript compliance standards. When this adjustment is made, the issue is resolved.

■ **Boot disk is provisioned on a datastore that does not match storage profile constraints**

During the allocation phase of a deployment, when a datastore is being selected for the disks included in the deployment, it is possible that the storage profiles are not taken into account. Therefore, a datastore that does not match the constraints set by the storage profiles can be selected for the disk.

This issue can happen:

1) Only when the configuration property **PREVENT_COMPUTE_STORAGE_OVERALLOCATION** is set to true (which is false by default).

2) Only when running 10 or more deployments in parallel.

Starting 8.11.2 and higher, this issue is now fixed. During VM deployment, boot disk is provisioned on a datastore that matches the expected storage profile constraints.

- **Virtual Machine (VM) deployments fail with "Getting virtual machine on NSX-T policy endpoint"**

  Special characters cannot be used in the name of a VM when NSX tags are used.

  No workaround.

- **Integrate plug-in version 0.21.0 into project Flagman**

  In cloud templates for **idem.gcp** resources, users should use **type_** and not **type**.

  There are two different identified cases:

  In **instance -> network_interfaces**, the property **type_** can easily be mistaken and written as **type**. If **type** is used, VMware Aria Automation does not notify the user (as expected), but the property is skipped over and the wanted value is not set.

```
network_interfaces:
        - access_configs:
            - kind: compute#accessConfig
              name: External NAT
              network_tier: PREMIUM
              set_public_ptr: false
              type_: ONE_TO_ONE_NAT
          kind: compute#networkInterface
          name: nic0
          network: https://www.googleapis.com/compute/v1/projects/tango-gcp/global/networks/
default
          stack_type: IPV4_ONLY
          subnetwork: https://www.googleapis.com/compute/v1/projects/tango-gcp/regions/us-
central1/subnetworks/default
```

  The other use case is in **disk**. The last property **type_** can easily be mistaken and written as **type**. This leads to the same result as described above - the user is not notified in any way, the property is skipped over, and the value is set to the default value, not the specified value in the cloud template.

```
  Idem_GCP_COMPUTE_DISK_2:
    type: Idem.GCP.COMPUTE.DISK
    properties:
      name: e2e-idem-disk-2-${input.UUID}
      account: ${resource.Allocations_Compute_1.selectedCloudAccount.name}
      size_gb: 1
      project: $
```

```
{resource.Allocations_Flavor_1.selectedCloudAccount.additionalProperties.gcp.project}
      zone: ${resource.Allocations_Compute_1.selectedPlacementCompute.name}
      type_: ${'/projects/' +
resource.Allocations_Flavor_1.selectedCloudAccount.additionalProperties.gcp.project + '/
zones/' + resource.Allocations_Compute_1.selectedPlacementCompute.id + '/diskTypes/pd-
ssd'}
```

No workaround.

VMware Aria Automation May 2023/8.12.1 What's New

14

- **Ability to re-provision a vSphere machine through day 2 action**

  This day2 action replaces the existing VM with a brand new VM, configured by the same name, ID and IP assignment. The action is available by default for assembly admins, service broker admins, project admins, and deployment owners.

  Note: In order to rebuild a day2 action:

  a   A non-persistent disk attached to a VM is wiped clean once a rebuild action is called on the VM.

  b   If there's an FCD present, the FCD is detached from the VM but remains unchanged when rebuild action is called.

  c   Rebuild is applicable to VM at all states except the Missing State.

  d   Limited to deployed vsphere VMs only in this release.

  e   Onboarded and Migrated vshpere VMs are not supported in this release.

  f   Rebuild action can take a longer time when compared to other day 2 actions as it involves re-provisioning the VM.

  It is advised to take a snapshot of the resource before performing Rebuild Day2 operation.

- **Ability to reserve/unreserve an IP address to make it unavailable/available for deployment**

  You can query available IP addresses from Aria Automation internal IPAM and reserve one or more IP addresses to make them unavailable for a deployment. These operations are supported via API only. See the Managing IP Addresses section in the API programming guide for additional information.

Read the following topics next:

- Resolved Issues
- Known Issues

Resolved Issues

- **Azure Premium SSD Disks with Invalid Performance Tier**

When provisioning an Azure Virtual Machine with an attached Premium SSD storage disk, Aria Automation allows users to select non-compliant performance tiers that are not compatible with Premium SSD disks.

When deploying to Azure the performance tier is updated to a compliant option in Azure, but Aria Automation shows the previously non-compliant selection. The same behavior is present when customers resize these disks through Aria Automation regardless of if the disk is attached to a VM or standalone. Customers should cross-reference Azure documentation to select appropriate performance tiers.

- **Exporting a Package with "Edit contents" unlocks system content**

   Plugin content (e.g. Workflows) are no longer be affected by the "View contents", "Add to package" and "Edit contents" settings of imported packages.

- **Ensure vCOIN plugin appears as VMware Certified**

   VMware Aria Automation Orchestrator Plugin for vSphere Web Client was showing as not VMware Certified in the Client Plugins section of the vSphere Client.

   This has been fixed in the latest release and the plugin would list as VMware Certified for new registrations. Already existing plugin registrations need to be re-registered to be shown as VMware Certified.

- **Workflow developers can override content that is not part of their permissions**

   The Automation Orchestrator shows an alert when the currently logged in user does not have permissions to override specific elements they are trying to import with a package and these elements are not selectable within the package import dialog.

   The REST API will now return error within the response, when the user does not have permissions to override content.

- **Changes to Aria Automation Per-user session token authentication**

   Customers using Aria Orchestrator plugin for Aria Automation with 'Session Per User' connections were facing the issue of user access token being stale and incorrect when used with multiple user log-ins. This impacted all the Aria Automation API calls using Session Per User for workflow, action and inventory look-ups resulting in failures/incorrect API responses when executed both from Aria Automation or Aria Orchestrator.

   Starting this release, the Orchestrator plugin for Aria Automation includes a fix to correctly handle the user Access tokens. All workflows, actions, inventory lookups using Session Per User to execute Aria Automation APIs should work seamlessly when executed directly from Orchestrator or through Aria Automation when used in multiple logged-in user environments.

- **Pushing an object using the version button after changing the remote branch results in all local changes being pushed**

Whenever you had an integrated active remote Git repository and you attempted to push a single content object using the **Version** button, items outside of the one selected, could be pushed to the remote Git repository. This issue could occur after a **Remote Branch** change, or after switching between active repositories.

■ **Revisit content sharing policy to use content-sources rather than content-items when source is present in policy**

Content sharing policy updates for this release include:

1. Content Sharing policies with content-sources are now enforced with sources as the target and not the content-items within the content-source. The enforcements tab now shows content-sources as the target item as well

2. Once Aria Automation is upgraded to 8.12.1 or higher all content-sharing policies are reinforced one time to allow changes from point 1 to be incorporated. This is a one time action where the re-enforcement is scheduled evenly over the first two hours.

Known Issues

■ **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

```
"Something went wrong in a backend service."
```

This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

■ **Using Python scripts with the latest version of the requests library or urllib3 v2 client causes extensibility actions to fail with a "urllib3 v2.0 only supports OpenSSL 1.1.1+" error.**

The latest version of requests library and urllib3 v2 currently cannot be used in extensibility actions, as these dependencies require an OpenSSL version later than 1.1.1.

Workaround: In the dependencies text box of the extensibility action editor, specify a version of the request library that is earlier than 2.29.0, or if you are using urllib3, specify a version that is earlier than 2.

■ **After upgrading, if the deployment specifies a boot disk size that is less than the image boot disk size, the deployment will fail.**

This known issue occurs when upgrading to 8.11.1 and later.

■ **Workflows for Aria Automation user interaction times out if there is no response for a long time**

Manual user interactions cannot be answered from Aria Automation if more than 24 hours have passed, however, they can still be answered from Automation Orchestrator. On an attempt to answer the manual user interaction from Aria Automation, this error message appears:

"Could not process request due to: Could not find information about request ID: '<request id>' for resource: '<resource id>'"

- **When creating an instance, creating disks with labels fails due to unexpected snake case transformation**

  This is a bug that is a part of a very unlikely scenario.

  On instance creation, when a user attempts to create an instance with disks, using initialize_params and assigns labels to that disk that contain snake case format (ex. "first_key": "first_value"), the key will be converted to "firstKey" which is not a valid label format.

  It is recommended to add the labels separately using the disk resource, or use an underscore in the label key.

- **Python packages not downloading from private registries that require setuptools**

  When using a private python repository that is based on setuptools package, the dependencies cannot be downloaded.

- **Creating instance with status other than RUNNING does not get applied**

  When a new VM instance is created, the Google Compute Engine automatically provisions it in a RUNNING state, even when the deployment template specifies another desired runtime status (eg. TERMINATED).

VMware Aria Automation April 2023/8.12.0 What's New

<div style="text-align: right">15</div>

- **Introducing the New VMware Aria Family Name**

  Introducing the New VMware Aria Family Name!

  The Merriam-Webster dictionary defines an aria as "an accompanied, elaborate melody sung (as in an opera) by a single voice." VMware Aria – a single cloud management solution – is the voice that promises to remove multi-cloud complexity that manifests itself as so much "noise" and restore melodious, harmonious cloud operations back to our customers.

  Notes:

  - Users may have to delete cookies/ refresh cache for rebranding changes to get reflected on some pages.

  - Older events generated by the system (e:g in Audit logs) will not contain rebranded names.

- **New Aria Automation unified tile with rebranded service names (SaaS only)**

  All Aria Automation Cloud services are grouped under a unified service "Aria Automation" tile. Depending on the user license and role, you will see "Aria Automation Assembler" (formerly Cloud Assembly), "Aria Automation Service Broker", "Aria Automation Pipeline" (formerly Code Stream) and "Aria Automation Config" (formerly SaltStack Config) as a family of services under "Aria Automation".

  A new landing page also explains the details of this new structure and provides an introduction to Aria Automation. A new service switcher enables quick and easy navigation between services under Aria Automation. This configuration will be seamlessly enabled for all Aria Automation users.

  Note: This is not available for users accessing existing Aria Automation services from VMware Cloud Partner Navigator. In that scenario, the experience is not changed.

  You might have to delete cookies/ refresh the cache for rebranding changes to get reflected on some pages.

  Older events generated by the system, for example in Audit logs, will not contain rebranded names.

  For more information on VMware Aria Automation, see the Getting Started with VMware Aria Automation guide.

- **New timeout options for extensibility action flows**

  Users can now choose from two options for the setting maximum timeout during the initialization of ABX action flows:

  - Set timeout value up to 5 hours

  - Set no limit for flow run by leaving the timeout text box blank

- **Ability to use Aria Automation to provision storage disk with thin provisioning type**

  You can now set the provisioning type as thick/thin/eager or both on the storage profile and in cloud template as a property in attached disks.

  When the thin provisioning type is used, disk provisioning will proceed successfully even if there is not enough space in the datastore. This feature will be available for attached/ independent disks.

- **Introducing a new plug-in architecture for faster access to updated Native Public Cloud provider settings and a more agile Automation Assembler user experience**

  Public cloud resources are continuously updated with new properties and operations. To enable quicker public cloud resource consumption, Aria Automation delivers new plug-in based designs and deployments model in Automation Assembler. The plug-in architecture results in faster access to updated provider settings and a more agile Automation Assembler user experience. When a cloud provider, such as AWS, adds more resources and properties, those resources and properties are easily added to the associated plug-in.

  Allocation policy is available for all new cloud resources. These resources can be used to create Virtual Cloud Templates and can be exposed as catalog items.

  This new architecture allows us to deliver new AWS services like EC2, S3 bucket, GP3, IO2 in cloud assembly canvas.

  Notes:

  - 8.12 on-prem Aria Automation requires 48GB of memory. Before upgrading make sure you have secured the required memory.

  - Some components are beta

- **Ability to filter Audit Log from Aria Automation**

  The Audit Log now allows administrators to track usage and consumption with Aria Automation. This feature includes these enhancements:

  - Filter search for audit logs

- **Ability to display version history for content sources in Custom forms**

  Custom forms in Aria Automation Service Broker now supports version history. Additionally, you can now apply custom forms to different versions of VMware Cloud Template.

  The custom forms author can now:

  - Create multiple versions of a custom form

- Review a list for all versions of a custom form

- Restore to a previous version of the custom form

- Create a new version of custom form based off the latest custom form version

- Attach a custom form to a specific version of the content source item (only for Cloud Templates)

Note: Legacy custom forms (migrated from previous versions of Aria Automation) are bound to and shared across all versions of a specific Cloud Template. If you delete the legacy custom form, it is deleted for all versions of the Cloud Template. If you want to bind a legacy custom form to a specific version of Cloud Template, you need to Enable/Disable the custom form for that specific version of Cloud Template by clicking the Cloud Template version -> Customize form -> Enabled/Disabled -> Save button.

For more information on version history for content sources in custom forms, see the Custom Forms Version History Blog Post.

- **Upcoming deprecation of the Virtual Private Zones functionality**

  VMware is announcing intent to deprecate Virtual Private Zone and image mapping from provider to child tenant's functionality. All customers using this functionality should start making plans to remove the configuration as the functionality will be removed in a future Aria Automation release with exact dates along with additional guidance to be announced. Please reach to your VMware contact for more information.

- **IaaS API - Support for creating IPAM integration endpoint**

  Previously, there was no API to create an IPAM integration endpoint in Aria Automation. Now, there is an API that allows admins to perform this task without going to UI. For information on how to use the IPAM integration endpoint, refer to How do I import an IPAM package.

- **Ability to run Custom Actions and Out Of Box Day2 Actions in parallel**

  VMware Aria Automation supports custom actions and out of box actions running on same resource or deployment, with these considerations:

  - The custom action has to start first before the out of box action

  - If there is one resource out of box action in progress, you can not start another action (neither custom action nor out of box action) on same resource or deployment; If there is one deployment out of box action in progress, you can not start another action (neither custom action nor out of box action) on same deployment or any of the resource

  - If there is one resource custom action in progress, you can not start another custom action on same resource or deployment; If there is one deployment custom action in progress, you can not start another custom action on same deployment or any of the resource

- If there is in progress request on resource, day2 actions which end up deleting the resource will be blocked (e.g. deployment.delete, deployment.update, machine.delete, machine.remove disk). However, the removal operations (except the deployment related) are still allowed through IAAS API's

- Parallel running actions might fail if they are conflicting with each other: running a custom action to install apache on a machine and out of box action Reboot on the same machine at the same time

- **Ansible Automation Controller (previously Ansible Automation Tower) Support**

  Aria Automation supports Automation Controller (previously Ansible Tower), which is part of Ansible Automation Platform.

- **Ability to change project on a deployment that contains migrated, provisioned, and onboarded resources**

  You can now use the change project functionality on deployments that contain any combination of deployed, migrated and onboarded resources.

  Supported resources include these resource types and constraints: Deployments with deployed resources can contain virtual machines, disks, load balancers, networks, security groups, Azure groups, NATs, gateways, custom resources, Terraform configurations, and Ansible and Ansible Tower resources.

Read the following topics next:

- Automation Config What's New

- Automation for Secure Hosts What's New

- Automation Orchestrator What's New

- Resolved Issues

- Known Issues

Automation Config What's New

- **Display latest salt grains data to users of Cloud Assembly for a more detailed resource view**

  For VMs deployed using Automation Assembler with a Config resource, the latest salt grains data is displayed in the resource view (updated periodically every 6 hours).

Automation for Secure Hosts What's New

- **VMware Aria Automation for Secure Hosts supports CIS Benchmark for Windows 2022**

  VMware Aria Automation for Secure Hosts now has the latest CIS benchmark for Windows Server 2022.

Automation Orchestrator What's New

- **VMware vCenter 8 APIs are now available through the Automation Orchestrator plug-ins**

  The following VMware vCenter APIs are now available through the Automation Orchestrator plug-ins:

  - VMware vCenter 8 API through VMware Aria Automation Orchestrator Plug-in for vCenter Server

  - VMware vCenter 8 Update Manager API through VMware Aria Automation Orchestrator Plug-in for vSphere Update Manager

  - VMware vCenter 8 Auto Deploy API through VMware Aria Automation Orchestrator Plug-in for vSphere Auto Deploy

  All new features and APIs definitions can be found here. The vSphere Management SDK is a bundle that contains a set of vSphere software development kits: vSphere Web Services SDK, vSphere Storage Policy SDK, vSphere Storage Management SDK, vSphere ESX Agent Manager SDK, and SSO Client SDK. These SDKs provide documentation, libraries, and code examples needed for developers to rapidly build solutions integrated with VMware virtualization platforms.

Resolved Issues

- **Boot disk is provisioned on a datastore does not match the storage profile constraints.**

  When running a simple VM deployment, with the configuration property PREVENT_STORAGE_OVER_ALLOCATION set to true, the boot disk is provisioned on a datastore does not match the storage profile constraints. This issue can occur for versions older than 8.11.2.

  This issue can happen:

  a   When the configuration property PREVENT__COMPUTE_STORAGE_OVERALLOCATION is set to true (which is false by default)

  b   When running 10 or more deployments in parallel

  Resolution: Starting 8.11.2 and higher, this issue is now fixed. During VM deployment, the boot disk is provisioned on a datastore and matches the storage profile constraints as expected.

- **Check for read/write permissions of VMware Aria Automation Orchestrator folders before running workflows**

  The "Copy file from vCO to guest" and "Copy file from guest to vCO" workflows runs may fail due to read/write permission errors. When this happens, update the js-io-rights.conf with the desired read/write permissions for files and folders.

- **Aria Automation workflow run intermittently fails to continue after answering user interaction**

When a workflow is waiting for an input from a user, the workflow run does not continue after the user answers the user interaction. The issue can be seen intermittently when the token that was used to start the workflow run has been revoked.

- **In some scenarios users are not able to login to a provisioned VM using username/ password**

  After provisioning a VM with remoteAccess and usernamePassword authentication method, in some cases users were unable to login to the VM with the credentials from the Cloud Template.

  This issue is now fixed. After provisioning a VM, users can now login with username/ password included in the Cloud Template.

- **Tags on Azure cloud zone and compute deleted after upgrade**

  Previously, when upgrading to vRealize Automation 8.11.0, some users noticed that tags on Azure availability zone computes were no longer available. Now, tags are not deleted after upgrading to a new release version.

- **Running the 'vracli cap' enable/disable command that already has the same desired value returns error and non-zero exit code**

  Previously, these commands would exit with a non-zero exit code if the given capability was already enabled (or disabled respectively).

  ```
  vracli capabilities <capability-name> --enable
  vracli capabilities <capability-name> --disable
  ```

  With the latest fix, these are not considered an error anymore and the aforementioned commands will exit with exit code 0 in these situations.

  Impacts: For typical usage (manually running the command), there is no impact. If automated scripts use these commands and expect them to exit with non-zero status and the capability does not need toggling, they might need to be updated.

- **Not possible to add regex while comparing branch name in Git Webhooks**

  You can pass regex as a branch name when configuring a Git webhook in Automation Pipelines.

  In previous releases, you were required to create a Git webhook per repository branch which resulted in multiple webhooks. Now, by providing a suitable regex, you can link a single webhook resource to multiple branches resulting in fewer webhooks both in Git and in Automation Pipelines.

- **New runtimes available in VMware Aria Automation Orchestrator**

  In previous releases of Automation Orchestrator, polyglot library versions were NodeJs - 14, Powershell - 6.2 or 7.1 (PowerCLI 11 or 12), and Python - 3.7. Users were unable to add a package supported by newer version of Polyglot and faced the *TLS should be 1.2 or higher* error.

Now, these new runtimes were added in Automation Orchestrator Polyglot - Powershell 7.3.3 and Python 3.10. Users are now able to update packages without error using these environments.

- **Automation Orchestrator using credentials of currently logged in user when updating scheduled tasks**

    Previously, when a user attempted to update a scheduled task that they had created, the **Use current user** button did not use the credentials of the logged in user. Now, the **Use current user** button uses the correct user credentials.

Known Issues

- **Unable to add a VMware Cloud Foundation (VCF) cloud account domain in VMware Aria Automation**

    When attempting to add a VCF cloud account domain to VMware Aria Automation, you receive the following error message:

    `"Something went wrong in a backend service."`

    This error occurs when a user is adding a VCF cloud account domain in VMware Aria Automation while another domain creation is in progress in the SDDC Manager.

    Workaround: Wait until the domain is created successfully and then add the VCF cloud account domain.

- **Service and role names are replaced with old values when deploy.sh is ran for second time**

    This important issue has been identified with the Aria Automation 8.12 release. Refer to KB 92018 for more details before upgrading or installing.

- **Some services are not accessible after associating a tenant with Aria Automation 8.12 through LCM**

    After associating a tenant with VMware Aria Automation 8.12 through LCM, users may not be able to access the following services:

    - Assembler

    - Migration Assistant

    - Pipelines

    - Config

    Workaround:

    a   Login to the tenant as a user with Organization Owner privileges.

    b   Under Identity & Access Management, click the Active Users tab.

    c   Select the affected user and click Edit Roles.

d   To grant the user access to Assembler and Migration Assistant, click Add Service Access and select Cloud Assembly.

e   To grant the user access to Pipelines, click Add Service Access and select Code Stream.

f   To grant the user access to Config, click Add Service Access and select SaltStack Config.

■   **The Automation Orchestrator debugger does not step into sub-actions**

The Automation Orchestrator action debugger does not step into inner actions called using the *System.getModule(module).action()* method.

Workaround: Use the root action as the only element in a new workflow and debug the workflow using the workflow debugger.

■   **Inconsistent performance tier information for Azure machine when managed disk is resized using day 2 actions**

When an Azure disk with a Premium managed disk is resized with day 2 actions in Aria Automation, the baseline performance tier is updated accordingly in the Azure portal. However, the performance tier remains the same in the template in the Aria Automation custom properties. This leads to inconsistent performance tier information.

No workaround.

API Documentation and Versioning

16

Notice: Release Notes for previous releases are archived yearly:

- vRealize Automation Release Notes Archive (8.8.1 - 8.11.2) . The list of API changes for each release starts on page 47.

API documentation is available with the product. To access all Swagger documents from a single landing page, go to:

- https://<*appliance.domain.com*>/automation-ui/api-docs for vRealize Automation 8.x, where *appliance.domain.com* is your vRealize Automation appliance.

Before using the API, consider the latest API updates and changes for this release, and note any changes to the API services that you use. If you have not locked your API using the apiVersion variable before, you might encounter a change in an API response. Any API updates and changes are provided in the What's New section for each release.

For unlocked APIs, the default behavior varies depending upon the API.

- For Cloud Assembly IaaS APIs, all requests which are executed without the apiVersion parameter will be redirected to the first version which is 2019-01-15. This redirect will allow every user who did not previously specify the apiVersion parameter to transition smoothly to the latest version without experiencing breaking changes.

  Note: For the Automation Assembly IaaS APIs, the latest version is apiVersion=2021-07-15. If left unlocked, IaaS API requests will be redirected to the first version which is 2019-01-15. The first version is deprecated and will be supported for 24 months. To ensure a smooth transition to the new version, lock your IaaS API requests with the apiVersion parameter assigned to 2021-07-15.

- For other APIs, your API requests will default to the latest version. If you select one of the earlier version dates listed for the Swagger spec, the API behavior will reflect APIs that were in effect as of that date and any date until the next most recent version date. APIs are not versioned for every vRealize Automation release and not all APIs support the apiVersion parameter.

For more information about using the apiVersion parameter, see the Programming Guides listed in:

- Aria Automation APIs and CLI

- vRealize Automation APIs and CLI

API updates and changes for each release are covered in the following sections:
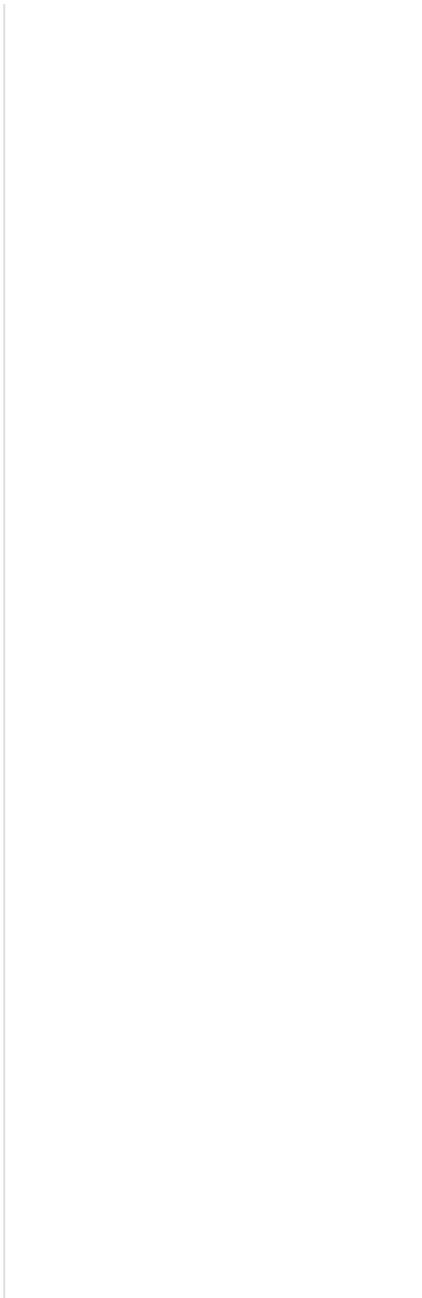
Read the following topics next:

- VMware Aria Automation February 2024 API Changes

- VMware Aria Automation December 2023 API Changes

- VMware Aria Automation November 2023 API changes

- VMware Aria Automation October 2023 API Changes

- VMware Aria Automation August 2023 API Changes

- VMware Aria Automation July 2023 API Changes

- VMware Aria Automation June 2023 API Changes

- VMware Aria Automation May 2023 API Changes

- VMware Aria Automation April 2023 API Changes

VMware Aria Automation February 2024 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
Content Gateway Service	Connect to your infrastructure as code content in external content sources, such as Source Code Management providers.	A new endpoint to get content sources: - `GET /content/api/sources/list` Replaces the endpoint to get content sources that has been deprecated: - `GET /content/api/sources`

IaaS	Perform infrastructure setup tasks, including validation and provisioning of resources in an iterative manner. To access any updates or changes listed for the IaaS APIs, you must include **apiVersion=2021-07-15** in your call. For example: ``` GET https:// cloud.domain.com/iaas/api/ zones?apiVersion=2021-07-15 ```	Because of the case-insensitive nature of Microsoft Azure APIs as described here, Aria Automation enumeration logic has been updated to convert all Azure resource IDs to lower case for the following API endpoints: ■ Fabric Images `/iaas/api/fabric-images` ■ Fabric Networks `/iaas/api/fabric-networks` ■ Images `/iaas/api/images` ■ Load Balancers `/iaas/api/load-balancers` ■ Networks `/iaas/api/networks` ■ Security Groups `/iaas/api/security-groups` ■ Folders `/iaas/api/folders` If you have extensibility functions that rely on these APIs to return case-sensitive resource IDs, you must update those functions to use case-insensitive IDs.

| | | New public endpoint to retrieve task and project details from a provisioning request: `GET /iaas/api/request-graph` |
| | | New endpoints to support provisioning NSX Advanced Load Balancer (AVI LB):

■ List all AVI load balancer cloud accounts

`GET /iaas/api/cloud-accounts-avilb`

■ Create AVI load balancer cloud account

`POST /iass/api/cloud-accounts-avilb`

■ Get an AVI load balancer cloud account with specified ID

`GET /iaas/api/cloud-accounts-avilb/{id}`

■ Delete an AVI load balancer cloud account with specified ID

`DELETE /iaas/api/cloud-accounts-avilb/{id}`

■ Update and AVI load balancer cloud account with specified ID

`PATCH /iass/api/cloud-accounts-avilb/{id}`

`POST /iaas/api/cloud-accounts` endpoint to create a cloud account in an existing organization updated to accept `"cloudAccountType": "avilb"` and `cloudAccountProperties` input values for an AVI load balancer. |

VMware Aria Automation December 2023 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
IaaS	Perform infrastructure setup tasks, including validation and provisioning of resources in an iterative manner. To access any updates or changes listed for the IaaS APIs, you must include **apiVersion=2021-07-15** in your call. For example: **GET https://cloud.domain.com/iaas/api/zones?apiVersion=2021-07-15**	New endpoint to get event logs programmatically. `GET /iaas/api/event-logs`
Secrets	Provides access to operations with secrets.	Response values for the following endpoints with the definition "platform:2020-09-20" have changed: ■ `GET /platform/api/secrets/{id}` ■ `GET /platform/api/secrets/{projectId}/{name}` `projectIds` replaces `projectId` and `projectName` New definition "platform:2023-01-01" with the following endpoints to get, create, or update secrets, and to retrieve projects linked to one or more secrets: ■ `GET /platform/api/secrets` ■ `POST /platform/api/secrets` ■ `PATCH /platform/api/secrets/{id}` ■ `GET /platform/api/secrets/{id}/projects` ■ `GET /platform/api/secrets/project` To get all secrets for a specific project ID, use `GET /platform/api/secrets` with the new input parameter `projectId` instead of the OData filter on the project ID used for the endpoint with definition "platform:2020-09-20".

VMware Aria Automation November 2023 API changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
Deployment	Access deployment objects and platforms or blueprints that have been deployed into the system.	New parameter "syncStatus" added to `GET /deployment/api/resources` to find resources that match one of the sync status values: MISSING, STALE.
Identity	Authentication and authorization provider. On-prem only.	New endpoint for user search. `POST /csp/gateway/am/api/v2/users/search` The following endpoint has been deprecated. `GET /csp/gateway/am/api/orgs/{orgId}/users/search`

VMware Aria Automation October 2023 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
IaaS	Perform infrastructure setup tasks, including validation and provisioning of resources in an iterative manner. To access any updates or changes listed for the IaaS APIs, you must include **apiVersion=2021-07-15** in your call. For example: `GET https://cloud.domain.com/iaas/api/zones?apiVersion=2021-07-15`	New endpoint to delete tags: `DELETE /iaas/api/tags/{id}` NOTE: The delete action checks to ensure the tag is not associated with a resource before deleting it. New endpoint to get tag usage of tagIds provided in the payload: `POST /iaas/api/tags/tags-usage`

VMware Aria Automation August 2023 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes

IaaS	Perform infrastructure setup tasks, including validation and provisioning of resources in an iterative manner.
	
	To access any updates or changes listed for the IaaS APIs, you must include **apiVersion=2021-07-15** in your call. For example:
	
	`GET https://`
	`cloud.domain.com/iaas/api/`
	`zones?apiVersion=2021-07-15`
		(SaaS only) Updated endpoints to create a vSphere+ cloud account with either a type-agnostic or type-specific endpoint:
		■ For the type-agnostic endpoint `POST /iaas/api/cloud-account`, specify `"cloudAccountType": "vSphere"` and include `"environment": "aap"` as either a cloudAccountProperty or a customProperty.
		■ For the type-specific endpoint `POST /iaas/api/cloud-accounts-vsphere`, include `"environment": "aap"` in the payload.

Projects	Provide visibility and isolation of provisioned resources for users with a project role.	The following endpoint has been removed:
		`GET /project-service/api/`
		`projects/limit-usage`

VMware Aria Automation July 2023 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
ABX	Create or manage extensibility ctions and their versions. Run actions and flows.	The source code limit for extensibility actions is increased from 32,000 characters to 128,000 characters. This does not affect extensibility actions uploaded as a ZIP file.
Deployment	Access deployment objects and platforms or blueprints that have been deployed into the system.	New endpoint returns the number of billable objects such as the number of VMs, CPUs, and CPU cores. The number is tied to the user's organization. `GET /deployment/api/billing-metrics` New Boolean parameter "billable" added for the following endpoint. `GET /deployment/api/resources` If set to `true`, the response includes information about billable resources. New input parameter "imageRef" to specify the image when rebuilding a VM added for the following endpoint. `POST /deployment/api/resources/{resourceId}/requests` Sample payload to rebuild a VM with the image ID `205297c5c01c47e8f9f5451d8af9b87f64ed1bcd` ```{ "actionId": Cloud.vSphere.Machine.Rebuild, "inputs": { "imageRef": "/resources/images/205297c5c01c47e8f9f5451d8af9b87f64ed1bcd}``` NOTES: - To get the image ID, you can use `GET /iaas/api/fabric-images` - The image input is only required during rebuild if the image property is not set for the machine being rebuilt. This is usually the case for onboarded machines. - If the image is already set for a machine, the image cannot be modified and the "imageRef" input is ignored.

VMware Aria Automation June 2023 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
Infrastructure as a Service	Perform infrastructure setup tasks, including validation and provisioning of resources in an iterative manner. To access any updates or changes listed for the IaaS APIs, you must include `apiVersion=2021-07-15` in your call. For example: ```GET https://cloud.domain.com/iaas/api/zones?apiVersion=2021-07-15```	New endpoints to get associated IP ranges for networks, fabric networks, and fabric vSphere networks: ■ `GET /iaas/api/networks/{id}/network-ip-ranges` ■ `GET /iaas/api/fabric-networks/{id}/network-ip-ranges` ■ `GET /iaas/api/fabric-networks-vsphere/{id}/network-ip-ranges`

VMware Aria Automation May 2023 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
Infrastructure as a Service	Perform infrastructure setup tasks, including validation and provisioning of resources in an iterative manner. To access any updates or changes listed for the IaaS APIs, you must include `apiVersion=2021-07-15` in your call. For example: ```GET https://cloud.domain.com/iaas/api/zones?apiVersion=2021-07-15```	New and updated Network IP Range endpoints to support querying, allocating, and releasing network IPs: ■ `GET /iaas/api/network-ip-ranges/{id}` ■ `GET /iaas/api/network-ip-ranges/{id}/ip-addresses` ■ `GET /iaas/api/network-ip-ranges/{id}/ip-addresses/{ipAddressId}` ■ `POST /iaas/api/network-ip-ranges/{id}/ip-addresses/allocate` ■ `POST /iaas/api/network-ip-ranges/{id}/ip-addresses/release`

VMware Aria Automation April 2023 API Changes

The following table lists the API services with updates or changes since the previous release.

Service Name	Service Description	API Updates and Changes
Catalog	Access Service Broker catalog items and catalog sources, including content sharing and the request of catalog items.	New Catalog Admin Items endpoints to enable versioning custom forms: ■ `GET /catalog/api/admin/items/{id}/versions` ■ `GET /catalog/api/admin/items/:id/versions/{versionId}` ■ `PATCH /catalog/api/admin/items/{id}/versions/{versionId}`
CMX	When using Kubernetes integration, deploy and manage Kubernetes clusters and namespaces.	New input parameter "tagIds" added for the following Kubernetes Zones endpoints: ■ `POST /cmx/api/resources/k8s-zones` ■ `PUT /cmx/api/resources/k8s-zones/{id}`
Custom Forms	Define dynamic form rendering and customization behaviour in Service Broker and Assembler VMware services.	New endpoints to enable versioning custom forms. Form Version endpoints: ■ `GET /form-service/api/forms/versions` ■ `GET /form-service/api/forms/versions/{id}` ■ `POST /form-service/api/forms/versions/` ■ `PATCH /form-service/api/forms/versions/{id}/restore` Form Definition endpoints: ■ `GET /form-service/api/forms/search` ■ `DELETE /form-service/api/forms/deleteBySourceAndType`

Deployment	Access deployment objects and platforms or blueprints that have been deployed into the system.	New input option "expand=inprogressRequests" added for the following endpoints: ■ `GET /deployment/api/deployments/{deploymentId}/resources` ■ `GET /deployment/api/deployments/{deploymentId}/resources/{resourceId}` ■ `GET /deployment/api/resources` ■ `GET /deployment/api/resources/{resourceId}` If used, the response includes a key-value pair for inprogressRequests where: ■ Key is `count` ■ Value is the total number of current requests New Boolean parameter "inprogressRequests" added for the following endpoint: `GET /deployment/api/resources/{resourceId}/requests` If set to `true`, the response includes actively running requests only. Otherwise all requests are included.

Infrastructure as a Service	Perform infrastructure setup tasks, including validation and provisioning of resources in an iterative manner. To access any updates or changes listed for the IaaS APIs, you must include `apiVersion=2021-07-15` in your call. For example: ```GET https://cloud.domain.com/iaas/api/zones?apiVersion=2021-07-15```	New Package Import endpoints to support IPAM package import: ■ `POST /iaas/api/integrations-ipam/package-import` ■ `OPTIONS /iaas/api/integrations-ipam/package-import` ■ `HEAD /iaas/api/integrations-ipam/package-import/{id}` ■ `PATCH /iaas/api/integrations-ipam/package-import/{id}` Added Project endpoints to get and updated zones associated with a project: ■ `GET /iaas/api/projects/{id}/zones` ■ `PUT /iaas/api/projects/{id}/zones` New Tags endpoint to create tags: `POST /iaas/api/tags`
Orchestrator Gateway	Run workflows and actions to automate complex IT tasks.	The following endpoints have been removed: ■ `GET /vro/actions` ■ `POST /vro/actions` ■ `GET /vro/actions/{categoryName}/{actionName}` ■ `GET /vro/catalog/{namespace}/{type}/{id}/{relation}` ■ `GET /vro/catalog/{namespace}/{type}/{id}` ■ `GET /vro/catalog/{namespace}/{type}` ■ `GET /vro/catalog/{namespace}` ■ `GET /vro/catalog/types/{type}` ■ `GET /vro/catalog`