

Scale in OpenStack VNF Using VNF-LCM

Call Session Control Function

OPERATING INSTRUCTIONS

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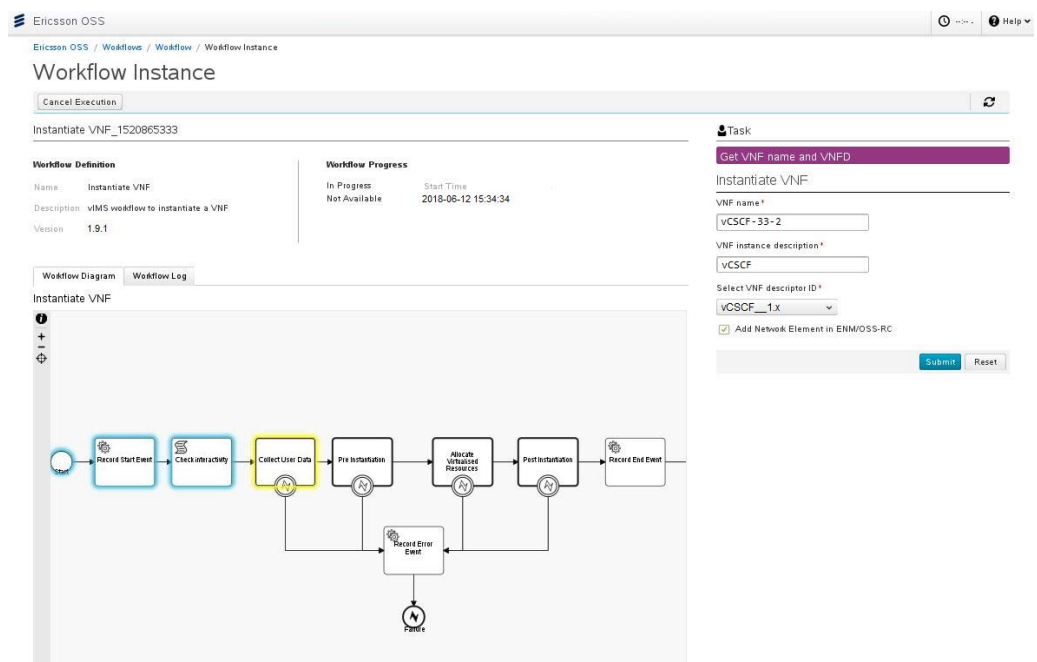




1 Description

This instruction describes how to scale in a Virtual Network Function (VNF) in the VNF Lifecycle Management (VNF-LCM).

The VNF-LCM procedures use workflow instances. The following figure shows an example of a workflow instance, where workflow progress can be tracked in the **Workflow Diagram** view. The boxes in the **Workflow Diagram** only represent the stages of the various procedures; operations are performed in the **Task** view.







2 Procedure

2.1 Scale in a VNF

Prerequisites

- The following virtual and physical hardware and software are required:
 - The VNF is scaled out using the VNF-LCM.
 - VNF-LCM is available using either Operations Support System for Radio and Core (OSS-RC) or Ericsson Network Manager (ENM).
 - One of the following Virtual Infrastructure Managers (VIMs) is used:
 - OpenStack Mitaka or newer
 - CEE R6 or newer
 - The VIM is configured in VNF-LCM:

The VIM configuration in VNF-LCM can be checked with the `vnflcm vim list` command. For more information on VIM configuration, see VNF Lifecycle Manager System Administrator Guide, 1543-APR 901 0578 Uen.
 - The version of the used VNF-LCM is v18.10 (the VNF Lifecycle Automation Framework (VNF-LAF) image is 4.3.13) or higher.
- No documents are required.
- No tools are required.
- The following condition must apply:
 - The VNF-LCM is available using either the Operations Support System for Radio and Core (OSS-RC) or the Ericsson Network Manager (ENM).
 - The Call Session Control Function (CSCF) workflow software package contains more files than are described in this instruction. These unmentioned files are only used in special deployment scenarios that are outside the scope of this instruction. Only use the files that are explicitly mentioned in the instruction.



Attention!

Risk of system malfunction or traffic disturbance.

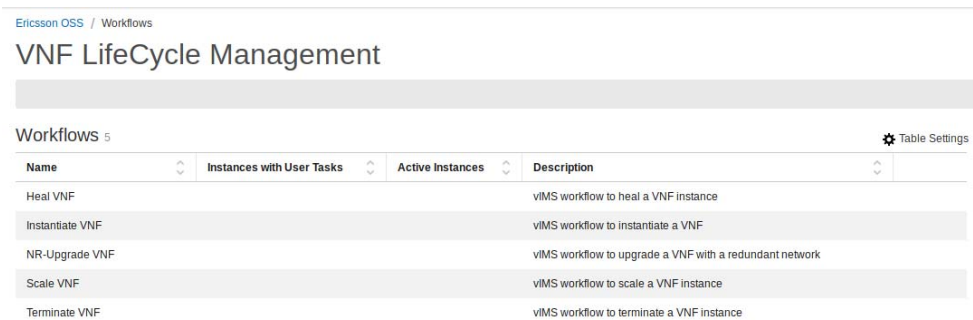


Do not execute a workflow instance on a VNF while another is in progress, as it can lead to unexpected behavior. If a new workflow procedure is needed, terminate the ongoing procedure before starting a new.

Continue with this procedure only if the VNF to be scaled out is instantiated using the VNF-LCM.

Steps

1. In the VNF-LCM, click **Start a Workflow**, and select **Scale VNF**, and then click **Start a New Instance**.



The screenshot shows the 'VNF LifeCycle Management' interface. At the top, there is a breadcrumb 'Ericsson OSS / Workflows'. Below the title, there is a 'Workflows 5' header with a 'Table Settings' icon. The table has four columns: 'Name', 'Instances with User Tasks', 'Active Instances', and 'Description'. The rows listed are: 'Heal VNF' (vIMS workflow to heal a VNF instance), 'Instantiate VNF' (vIMS workflow to instantiate a VNF), 'NR-Upgrade VNF' (vIMS workflow to upgrade a VNF with a redundant network), 'Scale VNF' (vIMS workflow to scale a VNF instance), and 'Terminate VNF' (vIMS workflow to terminate a VNF instance).

Name	Instances with User Tasks	Active Instances	Description
Heal VNF			vIMS workflow to heal a VNF instance
Instantiate VNF			vIMS workflow to instantiate a VNF
NR-Upgrade VNF			vIMS workflow to upgrade a VNF with a redundant network
Scale VNF			vIMS workflow to scale a VNF instance
Terminate VNF			vIMS workflow to terminate a VNF instance

2. In the **Start a Workflow** view, fill out the **Instance Name** field, and then click **Submit**.
3. Select the newly created workflow from the **Instance Activity** panel.
4. On the **Workflow Instance** screen, select the VNF to be scaled in, select **Scale In** for scaling type, specify the number of Virtual Machines (VMs) to be deleted from the VNF, and then click **Submit**.



Task

Collect user data for Scale

Scale VNF instance

Scale Data

Select VNF instance*

vCSCF__1.8.0

Select scaling type*

Scale In

Number of VMs to scale*

1

Submit

Reset

The following step is optional. If none of these parameters are needed, leave the fields blank.

5. In the **Collect extra parameters** view, specify the needed parameters, and then click **Submit**.

Optional scale-in parameters:

- Specific VMs to be scaled in
- Scale-in type (**Graceful** or **Forceful**)
- VM Universal Unique Identifiers (UUIDs) to scale in.

Task

Collect extra parameters

Input additional parameters for workflow

Optional: List of VM UUIDs to scale-in

Scale-in type

GRACEFUL

GRACEFUL

FORCEFUL

Submit

Reset

The VNF instance is scaled in and the specified number of PLs is deleted from the cluster.

Note: If any UUID was specified in Step 5, the VMs with the specified UUID are removed, otherwise PLs with the highest index.

2.2 Troubleshooting

If the workflow execution fails, inspect the relevant logs to identify the cause of the failure.

Steps

1. Increase the log level from INFO to DEBUG. For information on how to change log level, see VNF Lifecycle Manager System Administrator Guide, 1543-APR 901 0578.
2. Inspect the following logs to identify the cause of the failure:
 - Jboss Server log: /ericsson/3pp/jboss/standalone/log/server.log
 - System log: /var/log/messages
 - Workflow log: the **Workflow Log** view in the VNF-LCM
3. If the **Workflow Log** view reports Authentication failed, repair the Secure Shell (SSH) key between the VNF-LCM and the CSCF. See Section Check SSH Key for Authentication in CSCF Troubleshooting Guideline.



4. If a problem cannot be solved, consult the next level of maintenance support and provide the logs. Further actions are outside the scope of this instruction.