

Scale in OpenStack VNF Using VNF-LCM

Call Session Control Function

OPERATING INSTRUCTIONS

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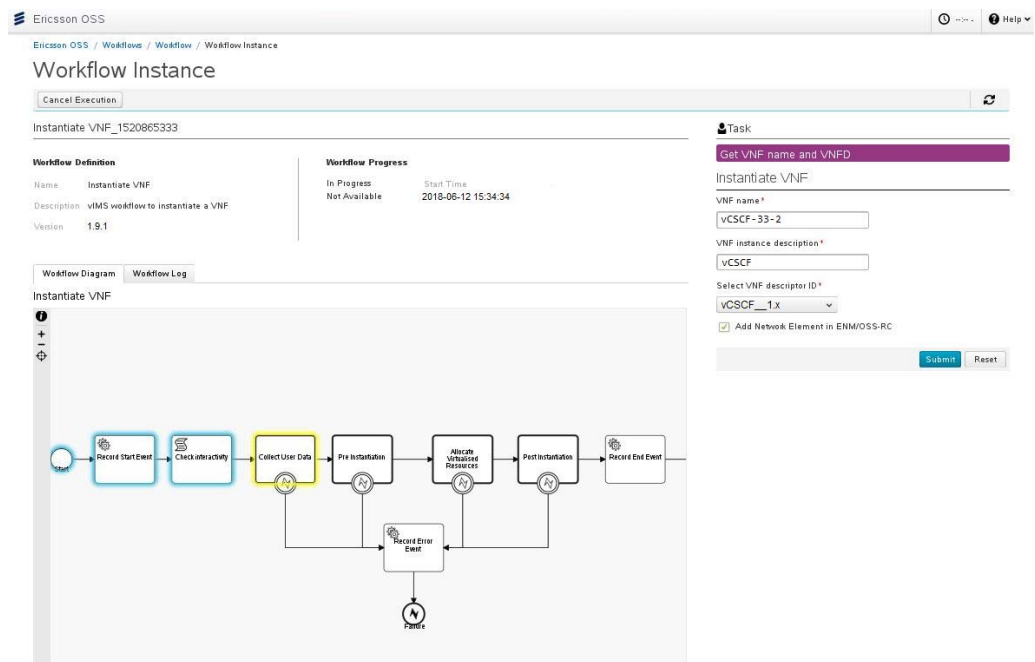


1 Description

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

The 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.

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.



For more information about the VNF-LCM, see [CSCF VNF Lifecycle Management](#).



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.
- The Virtual Infrastructure Manager (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.

— This instruction references the following documents:

- CSCF Troubleshooting Guideline
- CSCF VNF Lifecycle Management
- VNF Lifecycle Manager System Administrator Guide

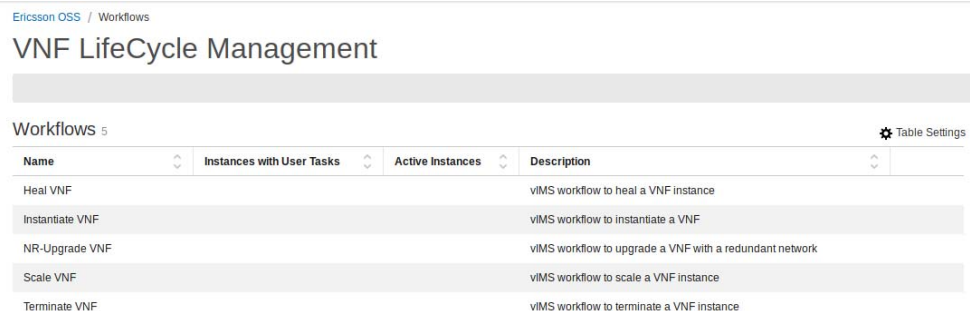
— No tools are required.

— The following conditions 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).

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's a breadcrumb 'Ericsson OSS / Workflows'. Below the title, there's a 'Workflows 5' section with a 'Table Settings' icon. The table has five columns: 'Name', 'Instances with User Tasks', 'Active Instances', 'Description', and an empty column. The rows 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** view, 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, select **Scale-in type**, specify the needed parameters, and then click **Submit**.

Note: If the EO and the VNF-LCM are in a mutually granting connection, the number of scaled PLs appears in the EO after a successful scale-in from the VNF-LCM.

Optional scale-in parameters:

- Specific VMs to be scaled in
- Scale-in type (**Graceful** or **Forceful**)

Note: FORCEFUL scale-in is a disruptive action, therefore it is only to be used to scale in unavailable or failed PLs. The virtual resources reserved for the PLs are freed up first and then the CSCF cluster is “cleaned”.

- 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

Note: If any UUID is specified, the VMs with the specified UUIDs are deleted. Otherwise, VMs with the highest index in their name in the OpenStack are deleted.



Attention!

Risk of system malfunction or traffic disturbance.

During the scaling, the optional user input **Cancel LCM Hook** is available. Do not click **Submit**. This is not supported in the current release.



Task

OPTIONAL: Override User Input

OPTIONAL: Cancel LCM hook

This user form is a possibility to gracefully or forcefully cancel LCM hook in case of unexpectedly long execution time, faulty initial inputs or other cases. It is not mandatory, and the execution may complete without it being submitted. To keep track of progress, please use the refresh button occasionally.

Select cancellation method:

Gracefully cancel executi... ▼

Submit

Reset

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.