

# Scale out OpenStack VNF Using VNF-LCM

Call Session Control Function

OPERATING INSTRUCTIONS

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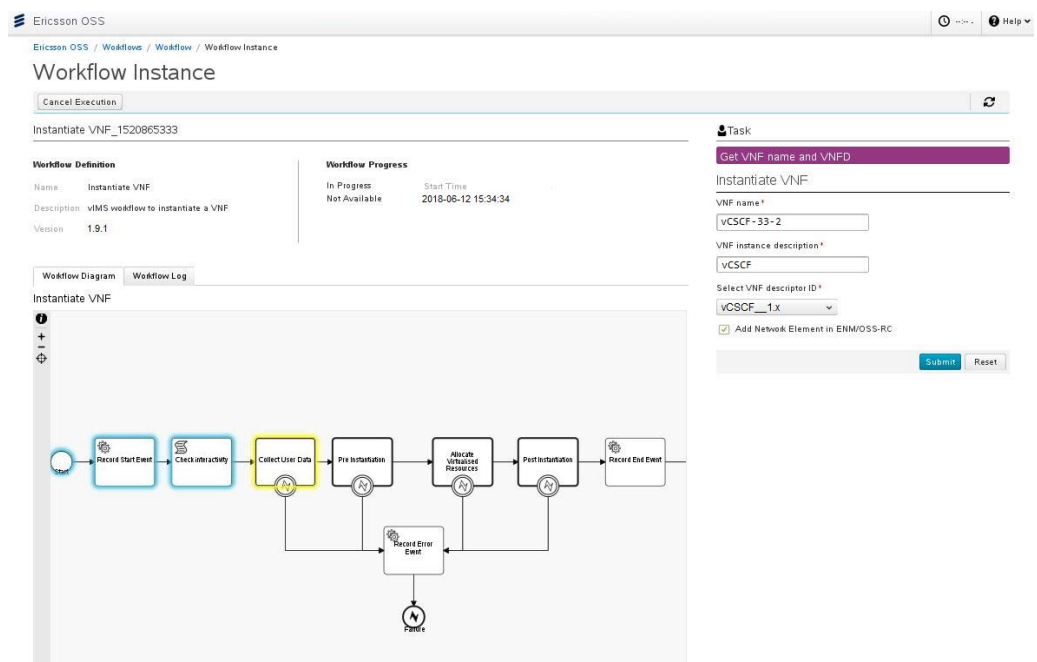




# 1 Description

This instruction describes how to scale out 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 out a VNF

#### Prerequisites

- The following virtual and physical hardware and software are required:
  - The VNF is instantiated 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.



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#### Attention!

Risk of system malfunction or traffic disturbance.

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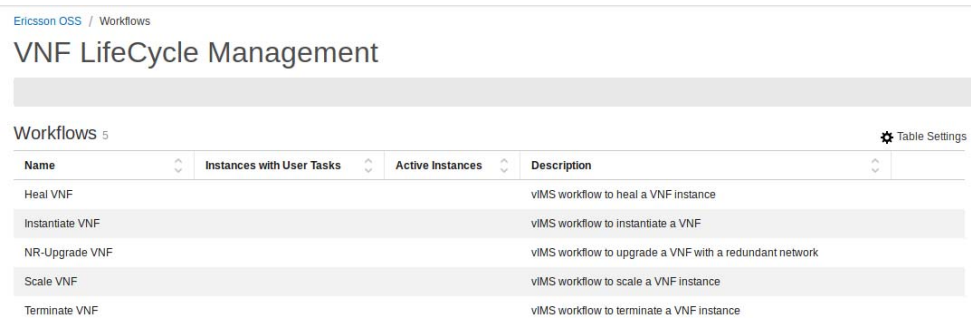


Do not execute a workflow instance on a VNF while another is in progress, as it can lead to unexpected behavior. If a new workflow procedure is needed, terminate the ongoing procedure before starting a new.

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

## Steps

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



Ericsson OSS / Workflows

### VNF LifeCycle Management

Workflows 5 ⚙️ Table Settings

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. In the **Workflow Instance** view, select **Scale Out** for scaling type, select the VNF to be scaled out, specify the number of Virtual Machines (VMs) to be added to 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 Out

Number of VMs to scale\*

1

Submit

Reset

#### Result:

The VNF instance is scaled out, new PLs are added to the cluster.

## 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.