

Heal VNF

MTAS

OPERATING INSTRUCTIONS

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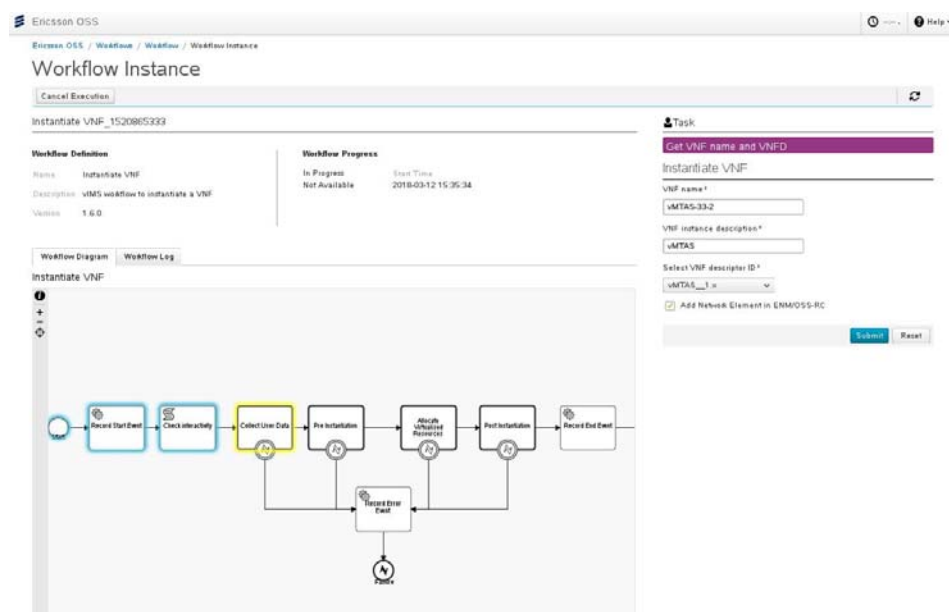




1 Description

This instruction describes how to heal a Virtualized 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.



For more information about the VNF-LCM, see MTAS VNF Lifecycle Management.

2 Procedure

2.1 Heal a VNF

Prerequisites

- No tools are required.
- The following conditions must apply:
 - The VNF is instantiated and scaled out.



- The VNF-LCM is available using either the Operations Support System for Radio and Core (OSS-RC) or the Ericsson Network Manager (ENM).
- An Ericsson Command-Line Interface (ECLI) session in Exec mode is in progress (if a VNF is to be healed manually).

Steps

1. Select the appropriate action:
 - Heal the VNF automatically, triggered on the reception of the CLM `Cluster Node Unavailable` alarm from the VNF instance, proceed with Section 2.2 Heal a VNF Automatically on page 2.
 - Heal the VNF manually, proceed with Section 2.3 Heal a VNF Manually on page 3.

2.2 Heal a VNF Automatically

Prerequisites

- The VNF is onboarded using the VNF-LCM. During onboarding, an `autostart-rule` is specified in Onboard VNF Package on VNF-LCM , 141/1543-AVA 901 29/9 Uen.

Steps

1. Track the progress of the auto-heal VNF workflow in the **Instance Activity** view.

The Heal VNF workflow consists of a forceful scale-in and a scale-out operation. The following three workflow instances are shown for the auto-heal VNF workflow in the **Instance Activity** view:

- Heal VNF
- Scale-in (Heal VNF)
- Scale-out (Heal VNF)

Note: It is recommended to lower the node (VM) alarm time-out on the VNF instance from 15 minutes to 5 minutes to trigger the CLM `Cluster Node Unavailable` alarm, if a VM has lost contact with the remaining cluster members for more than 5 minutes. To lower the value of the node (VM) alarm time-out, use command `cmw-node-alarm-timeout 300`.

The Heal VNF workflow can only heal the VNF if sufficient compute resource is available for OpenStack's Nova scheduler.

Healing of non-scalable VMs (SC-1, SC-2, PL-3, PL-4) is not possible.

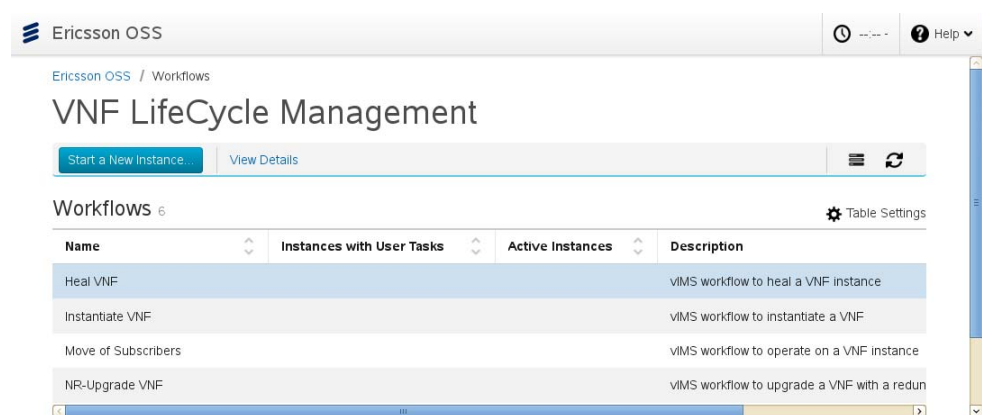


2. If the VNF to be healed was instantiated using the VNF-LCM and the Heal VNF workflow is to be started manually, then proceed with Section 2.3 Heal a VNF Manually on page 3.

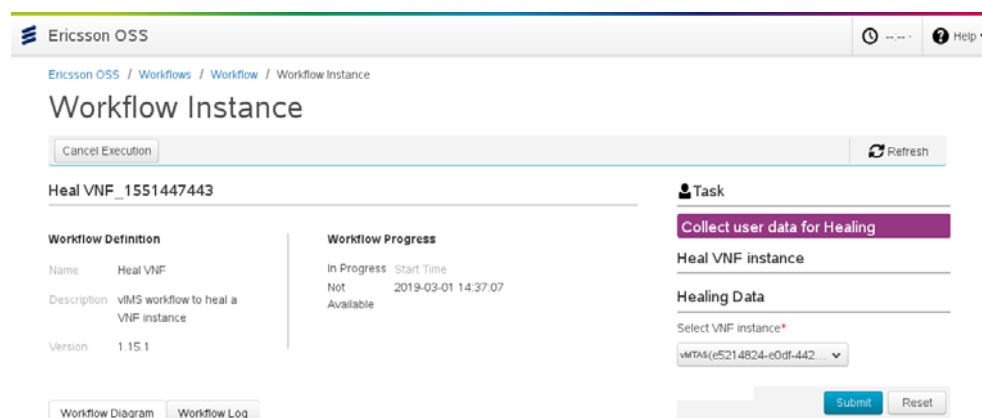
2.3 Heal a VNF Manually

Steps

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



2. In the **Start a Workflow** view, fill out the **Instance Name** field, and click **Submit**.
3. Select the newly created workflow from the **Instance Activity** panel.
4. In the **Workflow Instance** view, select the VNF instance to be healed, and then click **Submit**.



5. In the **Input additional parameters for workflow** view, specify the Universally Unique Identifier (UUID) of the VM to be removed from the cluster, and click **Submit**.



Ericsson OSS

Ericsson OSS / Workflows / Workflow / Workflow Instance

Workflow Instance

Cancel Execution Refresh

Heal VNF_1551447443

Workflow Definition		Workflow Progress	
Name	Heal VNF	In Progress	Start Time
Description	VIMS workflow to heal a VNF instance	Not Available	2019-03-01 14:37:07
Version	1.15.1		

Workflow Diagram Workflow Log

Task

Collect extra parameters

Provide additional parameters for the workflow

UUID of VM to be healed

ad370c-659b-4093-ac9b-cfa97f9657bd

Submit Reset

6. Get the UUID of unavailable or failed PL VM from the Ericsson Command-Line Interface (ECLI):

```
>show -r ManagedElement=1,Equipment=1
```

The VNF instance is scaled in and the specified VM is forcefully removed from the cluster. After this, the VNF instance is scaled out, and a PL is added to the cluster.

2.4 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 Administration 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 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.