


```

| 59a02ec2-bed6-4ad8-81ff-e8a922742f7b | vnfd1-deployment_s3_0_f9f6b7a6-1458-4b22-b40f-
33f8af3500b8 | ACTIVE | - | Running | ultram-vnfm1-service-network1=10.10.10.4;
orchestr=172.16.180.17; ultram-vnfm1-di-internall=192.168.1.6 |

| 52e9a2b0-cf2c-478d-baea-f4a5f3b7f327 | vnfd1-deployment_s4_0_8c78cfd9-57c5-4394-992a-
c86393187dd0 | ACTIVE | - | Running | ultram-vnfm1-service-network1=10.10.10.11;
orchestr=172.16.180.20; ultram-vnfm1-di-internall=192.168.1.3 |

| bd7c6600-3e8f-4c09-a35c-89921bbf1b35 | vnfd1-deployment_s5_0_f1c48ea1-4a91-4098-86f6-
48e172e23c83 | ACTIVE | - | Running | ultram-vnfm1-service-network1=10.10.10.12;
orchestr=172.16.180.13; ultram-vnfm1-di-internall=192.168.1.2 |

| 085baf6a-02bf-4190-ac38-bbb33350b941 | vnfd1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-
0c9df963162c | ERROR | - | NOSTATE
|
|

| ea03767f-5dd9-43ed-8e9d-603590da2580 | vnfd1-deployment_s7_0_e887d8b1-7c98-4f60-b343-
b0be7b387b32 | ACTIVE | - | Running | ultram-vnfm1-service-network1=10.10.10.10;
orchestr=172.16.180.18; ultram-vnfm1-di-internall=192.168.1.9 |

```

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
-----+

```

After ESC tries to recover the failed VM, it marks the VM as fail instances in OpenStack and doesn't retry to recover from now on.

Here are logs from ESC where VM recovery fails:

```

15:11:04,617 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====
15:11:04,617 11-Aug-2017 WARN Type: VM_RECOVERY_INIT
15:11:04,617 11-Aug-2017 WARN Status: SUCCESS
15:11:04,617 11-Aug-2017 WARN Status Code: 200
15:11:04,617 11-Aug-2017 WARN Status Msg: Recovery event for VM [vnfd1-
deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] triggered.
15:11:04,617 11-Aug-2017 WARN Tenant: core
15:11:04,617 11-Aug-2017 WARN Service ID: NULL
15:11:04,617 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187
15:11:04,617 11-Aug-2017 WARN Deployment name: vnfd1-deployment-1.0.0-1
15:11:04,617 11-Aug-2017 WARN VM group name: s6
15:11:04,618 11-Aug-2017 WARN VM Source:
15:11:04,618 11-Aug-2017 WARN VM ID: 4d6blb6f-6137-4e8e-b61c-66d5fb59ba0d
15:11:04,618 11-Aug-2017 WARN Host ID:
20b7df6d083651eb04f1f014e8a4958ddf9c1654cb3ad9057adc7e73
15:11:04,618 11-Aug-2017 WARN Host Name: ultram-rcdnlab-compute-4.localdomain
15:11:04,618 11-Aug-2017 WARN [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
15:11:04,618 11-Aug-2017 WARN ===== SEND NOTIFICATION ENDS =====

```

15:16:38,019 11-Aug-2017 WARN

15:16:38,020 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====

15:16:38,020 11-Aug-2017 WARN Type: VM_RECOVERY_REBOOT

15:16:38,020 11-Aug-2017 WARN Status: FAILURE

15:16:38,020 11-Aug-2017 WARN Status Code: 500

15:16:38,020 11-Aug-2017 WARN Status Msg: VM [vnfd1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] failed to be rebooted.

15:16:38,020 11-Aug-2017 WARN Tenant: core

15:16:38,020 11-Aug-2017 WARN Service ID: NULL

15:16:38,020 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187

15:16:38,020 11-Aug-2017 WARN Deployment name: vnfd1-deployment-1.0.0-1

15:16:38,020 11-Aug-2017 WARN VM group name: s6

15:16:38,021 11-Aug-2017 WARN VM Source:

15:16:38,021 11-Aug-2017 WARN VM ID: 4d6b1b6f-6137-4e8e-b61c-66d5fb59ba0d

15:16:38,021 11-Aug-2017 WARN Host ID:
20b7df6d083651eb04f1f014e8a4958ddf9c1654cb3ad9057adc7e73

15:16:38,021 11-Aug-2017 WARN Host Name: ultram-rcdnlab-compute-4.localdomain

15:16:38,021 11-Aug-2017 WARN [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;

15:16:38,021 11-Aug-2017 WARN ===== SEND NOTIFICATION ENDS =====

15:16:48,286 11-Aug-2017 WARN

15:16:48,286 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====

15:16:48,286 11-Aug-2017 WARN Type: VM_RECOVERY_UNDEPLOYED

15:16:48,286 11-Aug-2017 WARN Status: SUCCESS

15:16:48,286 11-Aug-2017 WARN Status Code: 204

15:16:48,286 11-Aug-2017 WARN Status Msg: VM [vnfd1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] has been undeployed.

15:16:48,286 11-Aug-2017 WARN Tenant: core

15:16:48,286 11-Aug-2017 WARN Service ID: NULL

15:16:48,286 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187

15:16:48,286 11-Aug-2017 WARN Deployment name: vnfd1-deployment-1.0.0-1

15:16:48,286 11-Aug-2017 WARN VM group name: s6

15:16:48,286 11-Aug-2017 WARN VM Source:

15:16:48,286 11-Aug-2017 WARN VM ID: 4d6b1b6f-6137-4e8e-b61c-66d5fb59ba0d

15:16:48,286 11-Aug-2017 WARN Host ID:

```

20b7df6d083651eb04f1f014e8a4958ddf9c1654cb3ad9057adc7e73
15:16:48,286 11-Aug-2017 WARN      Host Name: ultram-rcdnlab-compute-4.localdomain
15:16:48,287 11-Aug-2017 WARN      [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
15:16:48,287 11-Aug-2017 WARN      ===== SEND NOTIFICATION ENDS =====
15:18:04,418 11-Aug-2017 WARN
15:18:04,418 11-Aug-2017 WARN      ===== SEND NOTIFICATION STARTS =====
15:18:04,418 11-Aug-2017 WARN      Type: VM_RECOVERY_COMPLETE
15:18:04,418 11-Aug-2017 WARN      Status: FAILURE
15:18:04,418 11-Aug-2017 WARN      Status Code: 500
15:18:04,418 11-Aug-2017 WARN      Status Msg: Error deploying VM [vnfd1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] as part of recovery workflow. VIM Driver: VM booted in ERROR state in Openstack: No valid host was found. There are not enough hosts available.
15:18:04,418 11-Aug-2017 WARN      Tenant: core
15:18:04,418 11-Aug-2017 WARN      Service ID: NULL
15:18:04,418 11-Aug-2017 WARN      Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187
15:18:04,418 11-Aug-2017 WARN      Deployment name: vnfd1-deployment-1.0.0-1
15:18:04,418 11-Aug-2017 WARN      VM group name: s6
15:18:04,418 11-Aug-2017 WARN      VM Source:
15:18:04,418 11-Aug-2017 WARN      VM ID: 4d6b1b6f-6137-4e8e-b61c-66d5fb59ba0d
15:18:04,418 11-Aug-2017 WARN      Host ID:
20b7df6d083651eb04f1f014e8a4958ddf9c1654cb3ad9057adc7e73
15:18:04,418 11-Aug-2017 WARN      Host Name: ultram-rcdnlab-compute-4.localdomain
15:18:04,418 11-Aug-2017 WARN      [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
15:18:04,418 11-Aug-2017 WARN      ===== SEND NOTIFICATION ENDS =====

```

Solution

1. Power up the computer with power on button and wait till hypervisor comes up:

```

[root@ultram-ospd ~]# su - stack
[stack@ultram-ospd ~]$ source stackrc
[stack@ultram-ospd ~]$ nova hypervisor-list
+----+-----+-----+-----+-----+
| ID | Hypervisor hostname | State | Status |
+----+-----+-----+-----+
| 3 | ultram-rcdnlab-compute-10.localdomain | up | enabled |

```

6	ultram-rcdnlab-compute-5.localdomain	up	enabled
9	ultram-rcdnlab-compute-6.localdomain	up	enabled
12	ultram-rcdnlab-compute-3.localdomain	up	enabled
15	ultram-rcdnlab-compute-9.localdomain	up	enabled
18	ultram-rcdnlab-compute-1.localdomain	up	enabled
21	ultram-rcdnlab-compute-8.localdomain	up	enabled
24	ultram-rcdnlab-compute-4.localdomain	down	enabled
27	ultram-rcdnlab-compute-7.localdomain	up	enabled
30	ultram-rcdnlab-compute-2.localdomain	up	enabled
33	ultram-rcdnlab-compute-0.localdomain	up	enabled

```
[stack@ultram-ospd ~]$ nova hypervisor-list
```

ID	Hypervisor hostname	State	Status
3	ultram-rcdnlab-compute-10.localdomain	up	enabled
6	ultram-rcdnlab-compute-5.localdomain	up	enabled
9	ultram-rcdnlab-compute-6.localdomain	up	enabled
12	ultram-rcdnlab-compute-3.localdomain	up	enabled
15	ultram-rcdnlab-compute-9.localdomain	up	enabled
18	ultram-rcdnlab-compute-1.localdomain	up	enabled
21	ultram-rcdnlab-compute-8.localdomain	up	enabled
24	ultram-rcdnlab-compute-4.localdomain	up	enabled
27	ultram-rcdnlab-compute-7.localdomain	up	enabled
30	ultram-rcdnlab-compute-2.localdomain	up	enabled
33	ultram-rcdnlab-compute-0.localdomain	up	enabled

2. Identify Instance ID in Nova List:

```
[root@ultram-ospd ~]# su - stack
[stack@ultram-ospd ~]$ source corerc
```

```
[stack@ultram-ospd ~]$ nova list | grep ERROR
```

```
| 085baf6a-02bf-4190-ac38-bbb33350b941 | vnf1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c | ERROR | - | NOSTATE |
```

3. Initiate manual recovery on ESC with the CLI and instance ID from previous step:

```
[admin@ultram-vnfml-esc-0 ~]$ cd /opt/cisco/esc/esc-confd/esc-cli
```

```
[admin@ultram-vnfml-esc-0 esc-cli]$ ./esc_nc_cli recovery-vm-action DO vnf1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c
```

Recovery VM Action

```
/opt/cisco/esc/confd/bin/netconf-console --port=830 --host=127.0.0.1 --user=admin --privKeyFile=/home/admin/.ssh/confd_id_dsa --privKeyType=dsa --rpc=/tmp/esc_nc_cli.hZsdLQ2Mle
```

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
```

```
<ok/>
```

```
</rpc-reply>
```

4. Check logs, OpenStack Horizon to confirm that the instance has been recovered:

```
[admin@ultram-vnfml-esc-0 ~]$ tail -f /var/log/esc/yangesc.log
```

```
16:41:54,445 11-Aug-2017 INFO ===== RECOVERY VM ACTION REQUEST RECEIVED =====
16:41:54,445 11-Aug-2017 INFO Type: DO
16:41:54,445 11-Aug-2017 INFO Recovery VM name: vnf1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c
16:41:58,092 11-Aug-2017 INFO ===== RECOVERY VM ACTION REQUEST ACCEPTED =====
16:41:58,673 11-Aug-2017 WARN
16:41:58,673 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====
16:41:58,674 11-Aug-2017 WARN Type: VM_RECOVERY_INIT
16:41:58,674 11-Aug-2017 WARN Status: SUCCESS
16:41:58,674 11-Aug-2017 WARN Status Code: 200
16:41:58,674 11-Aug-2017 WARN Status Msg: Recovery event for VM [vnf1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] triggered.
16:41:58,674 11-Aug-2017 WARN Tenant: core
16:41:58,674 11-Aug-2017 WARN Service ID: NULL
16:41:58,674 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187
16:41:58,674 11-Aug-2017 WARN Deployment name: vnf1-deployment-1.0.0-1
16:41:58,674 11-Aug-2017 WARN VM group name: s6
16:41:58,674 11-Aug-2017 WARN VM Source:
16:41:58,674 11-Aug-2017 WARN VM ID: 085baf6a-02bf-4190-ac38-bbb33350b941
16:41:58,674 11-Aug-2017 WARN Host ID:
16:41:58,674 11-Aug-2017 WARN Host Name:
16:41:58,674 11-Aug-2017 WARN [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
16:41:58,674 11-Aug-2017 WARN ===== SEND NOTIFICATION ENDS =====
16:42:19,794 11-Aug-2017 WARN
16:42:19,794 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====
16:42:19,794 11-Aug-2017 WARN Type: VM_RECOVERY_REBOOT
16:42:19,794 11-Aug-2017 WARN Status: FAILURE
16:42:19,794 11-Aug-2017 WARN Status Code: 500
16:42:19,794 11-Aug-2017 WARN Status Msg: VM [vnf1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] failed to be rebooted.
16:42:19,794 11-Aug-2017 WARN Tenant: core
16:42:19,795 11-Aug-2017 WARN Service ID: NULL
```

16:42:19,795 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187
16:42:19,795 11-Aug-2017 WARN Deployment name: vnfd1-deployment-1.0.0-1
16:42:19,795 11-Aug-2017 WARN VM group name: s6
16:42:19,795 11-Aug-2017 WARN VM Source:
16:42:19,795 11-Aug-2017 WARN VM ID: 085baf6a-02bf-4190-ac38-bbb33350b941
16:42:19,795 11-Aug-2017 WARN Host ID:
16:42:19,795 11-Aug-2017 WARN Host Name:
16:42:19,795 11-Aug-2017 WARN [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
16:42:19,795 11-Aug-2017 WARN ===== SEND NOTIFICATION ENDS =====
16:42:32,013 11-Aug-2017 WARN
16:42:32,013 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====
16:42:32,013 11-Aug-2017 WARN Type: VM_RECOVERY_UNDEPLOYED
16:42:32,013 11-Aug-2017 WARN Status: SUCCESS
16:42:32,013 11-Aug-2017 WARN Status Code: 204
16:42:32,013 11-Aug-2017 WARN Status Msg: VM [vnfd1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] has been undeployed.
16:42:32,013 11-Aug-2017 WARN Tenant: core
16:42:32,014 11-Aug-2017 WARN Service ID: NULL
16:42:32,014 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187
16:42:32,014 11-Aug-2017 WARN Deployment name: vnfd1-deployment-1.0.0-1
16:42:32,014 11-Aug-2017 WARN VM group name: s6
16:42:32,014 11-Aug-2017 WARN VM Source:
16:42:32,014 11-Aug-2017 WARN VM ID: 085baf6a-02bf-4190-ac38-bbb33350b941
16:42:32,014 11-Aug-2017 WARN Host ID:
16:42:32,014 11-Aug-2017 WARN Host Name:
16:42:32,014 11-Aug-2017 WARN [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
16:42:32,014 11-Aug-2017 WARN ===== SEND NOTIFICATION ENDS =====
16:43:13,643 11-Aug-2017 WARN
16:43:13,643 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====
16:43:13,643 11-Aug-2017 WARN Type: VM_RECOVERY_DEPLOYED
16:43:13,643 11-Aug-2017 WARN Status: SUCCESS
16:43:13,643 11-Aug-2017 WARN Status Code: 200
16:43:13,643 11-Aug-2017 WARN Status Msg: VM [vnfd1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c] has been deployed as part of recovery.
16:43:13,643 11-Aug-2017 WARN Tenant: core
16:43:13,643 11-Aug-2017 WARN Service ID: NULL
16:43:13,643 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187
16:43:13,643 11-Aug-2017 WARN Deployment name: vnfd1-deployment-1.0.0-1
16:43:13,643 11-Aug-2017 WARN VM group name: s6
16:43:13,643 11-Aug-2017 WARN VM Source:
16:43:13,643 11-Aug-2017 WARN VM ID: 085baf6a-02bf-4190-ac38-bbb33350b941
16:43:13,643 11-Aug-2017 WARN Host ID:
16:43:13,643 11-Aug-2017 WARN Host Name:
16:43:13,643 11-Aug-2017 WARN [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
16:43:13,643 11-Aug-2017 WARN VM Target:
16:43:13,644 11-Aug-2017 WARN VM ID: a313e8dc-3b0f-4b41-8648-f9b9419bc826
16:43:13,644 11-Aug-2017 WARN Host ID:
20b7df6d083651eb04f1f014e8a4958ddf9c1654cb3ad9057adc7e73
16:43:13,644 11-Aug-2017 WARN Host Name: ultram-rcdnlab-compute-4.localdomain
16:43:13,644 11-Aug-2017 WARN [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
16:43:13,644 11-Aug-2017 WARN ===== SEND NOTIFICATION ENDS =====
16:43:33,827 11-Aug-2017 WARN
16:43:33,827 11-Aug-2017 WARN ===== SEND NOTIFICATION STARTS =====
16:43:33,827 11-Aug-2017 WARN Type: VM_RECOVERY_COMPLETE
16:43:33,827 11-Aug-2017 WARN Status: SUCCESS
16:43:33,827 11-Aug-2017 WARN Status Code: 200
16:43:33,827 11-Aug-2017 WARN Status Msg: Recovery: Successfully recovered VM [vnfd1-deployment_s6_0_e03f87f5-63b6-4053-8d0f-0c9df963162c].
16:43:33,827 11-Aug-2017 WARN Tenant: core
16:43:33,827 11-Aug-2017 WARN Service ID: NULL
16:43:33,828 11-Aug-2017 WARN Deployment ID: b41ad0ec-bc74-4bb3-85b6-7ef430074187
16:43:33,828 11-Aug-2017 WARN Deployment name: vnfd1-deployment-1.0.0-1
16:43:33,828 11-Aug-2017 WARN VM group name: s6
16:43:33,828 11-Aug-2017 WARN VM Source:


```

16:43:33,828 11-Aug-2017 WARN      VM ID: 085baf6a-02bf-4190-ac38-bbb33350b941
16:43:33,828 11-Aug-2017 WARN      Host ID:
16:43:33,828 11-Aug-2017 WARN      Host Name:
16:43:33,828 11-Aug-2017 WARN      [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
16:43:33,828 11-Aug-2017 WARN      VM Target:
16:43:33,828 11-Aug-2017 WARN      VM ID: a313e8dc-3b0f-4b41-8648-f9b9419bc826
16:43:33,828 11-Aug-2017 WARN      Host ID:
20b7df6d083651eb04f1f014e8a4958ddf9c1654cb3ad9057adc7e73
16:43:33,828 11-Aug-2017 WARN      Host Name: ultram-rcdnlab-compute-4.localdomain
16:43:33,828 11-Aug-2017 WARN      [DEBUG-ONLY] VM IP: 10.10.10.9; 172.16.180.22; 192.168.1.12;
16:43:33,828 11-Aug-2017 WARN      ===== SEND NOTIFICATION ENDS =====

```

```
[local]rcdn-ulram-lab# show card table
```

Slot	Card Type	Oper State	SPOF	Attach
1: CFC	Control Function Virtual Card	Standby	-	
2: CFC	Control Function Virtual Card	Active	No	
3: FC	1-Port Service Function Virtual Card	Active	No	
4: FC	1-Port Service Function Virtual Card	Active	No	
5: FC	1-Port Service Function Virtual Card	Standby	-	
6: FC	1-Port Service Function Virtual Card	Active	No	
7: FC	1-Port Service Function Virtual Card	Active	No	

```
[local]rcdn-ulram-lab#
```