

Ultra-M AutoVNF에 대한 재배포 절차

목차

[소개](#)

[사전 검사](#)

[AutoVNF 백업](#)

[AutoVFN 재배포](#)

[백업 복원](#)

[사후 확인](#)

소개

이 문서에서는 Ultra-M에서 AutoVNF를 재구축하는 데 필요한 단계에 대해 설명합니다. AutoVNF는 개별 VNFM(Virtual Network Function Manager) 및 VNF(Virtual Network Function)를 가져오기 위한 책임이 있습니다.

사전 검사

1. OSPD(OpenStack Platform Director)에 로그인하고 상태 보고서에서 가상 머신(VM)의 상태를 확인합니다.

```
[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/*.report | grep -i xxx
```

```
[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/ultram_health_uas.report
```

```
----- VNF-ID/VNFD-ID | UAS Node | Status| Error Info, if any -----  
-----  
10.10.10.40/LABPGW300-UAS | autovnf | :- ) | LABPGW300-UAS:(alive) | | | labucs300-UAS-LABPGW300-  
UAS-core-UAS2-2:(alive) | | | labucs300-UAS-LABPGW300-UAS-core-UAS2-1:(alive)  
10.10.10.40/LABPCF300-UAS | autovnf | :- ) | LABPCF300-UAS:(alive) | | | labucs300-UAS-LABPCF300-  
UAS-core-UAS1-2:(alive) | | | labucs300-UAS-LABPCF300-UAS-core-UAS1-1:(alive)  
10.10.10.45/LABPCF300-UGP | vnf-em | :- ) | LABPCF300-UGP:(alive) | | | LABPCF300-LABPCF300-UGP-  
core-EM1-3:(alive) | | | LABPCF300-LABPCF300-UGP-core-EM1-2:(alive) | | | LABPCF300-LABPCF300-  
UGP-core-EM1-1:(alive) 10.10.10.45/LABPCF300-ESC | esc | :- ) | LABPCF300-ESC:(alive) | | |  
LABPCF300-LABPCF300-ESC-core-ESC1-1:(alive) | | | LABPCF300-LABPCF300-ESC-core-ESC1-2:(alive)  
10.10.10.45/LABPCF300-UGP | vnf | :- ) | LABPCF300-UGP:(alive) | | | LABPCF300-LABPCF300-UGP-  
core-LABPCF300-CF-VDU-1:(alive) | | | LABPCF300-LABPCF300-UGP-core-LABPCF300-CF-VDU-0:(alive) |  
| | LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-3:(alive) | | | LABPCF300-LABPCF300-UGP-core-  
LABPCF300-SF-VDU-2:(alive) | | | LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-1:(alive) | | |  
LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-0:(alive) | | | LABPCF300-LABPCF300-UGP-core-  
LABPCF300-SF-VDU-6:(alive) | | | LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-5:(alive) | | |  
LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-4:(alive) 10.10.10.48/LABPGW300-UGP | vnf-em | :- )  
| LABPGW300-UGP:(alive) | | | LABPGW300-LABPGW300-UGP-core-EM2-2:(alive) | | | LABPGW300-  
LABPGW300-UGP-core-EM2-3:(alive) | | | LABPGW300-LABPGW300-UGP-core-EM2-1:(alive)  
10.10.10.48/LABPGW300-ESC | esc | :- ) | LABPGW300-ESC:(alive) | | | LABPGW300-LABPGW300-ESC-  
core-ESC2-1:(alive) | | | LABPGW300-LABPGW300-ESC-core-ESC2-2:(alive) 10.10.10.48/LABPGW300-UGP  
| vnf | :- ) | LABPGW300-UGP:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-VDU-  
4:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-VDU-5:(alive) | | | LABPGW300-  
LABPGW300-UGP-core-LABPGW300-SF-VDU-6:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-  
VDU-0:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-VDU-1:(alive) | | | LABPGW300-  
LABPGW300-UGP-core-LABPGW300-SF-VDU-2:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-
```

```
VDU-3:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-CF-VDU-0:(alive)
| | | LABPGW300-LABPGW300-UGP-core-LABPGW300-CF-VDU-1:(alive)
```

2. AutoVNF 상태를 확인합니다.

```
[stack@labucs300-ospd ~]$ source *core
[stack@labucs300-ospd ~]$ nova list | grep LABPGW300-UAS-core-UAS2
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7
|
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16
```

```
labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNFM2-UAS-VIP Primary
```

```
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary
```

3. AutoIT에 로그인하여 하트비트 로그를 확인합니다.

```
ubuntu@labucs300-autoit-2:~$ grep "'restarting'" /var/log/cisco/uas/heartbeat.log
2021-02-22 01:41:42,808 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-22 01:45:42,251 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-23 01:43:36,013 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-23 01:45:55,785 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-24 01:45:19,680 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
```

```
ubuntu@labucs300-autoit-2:~$ cd /var/log/cisco/uas
ubuntu@labucs300-autoit-2:/var/log/cisco/uas$ grep "Rebooting Instance" uas_USPCHBWorker.log
2019-06-26 18:26:13,088 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2019-06-29 03:45:12,710 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-17 00:46:25,800 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-18 00:47:13,347 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-18 05:11:11,133 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-18 5:16:07,333 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
```

AutoVNF 백업

AutoVNF는 개별 VNFM 및 VNF를 가동할 책임이 있습니다. AutoDeploy는 VNFM 및 VNF를 모두 인스턴스화하는 데 필요한 컨피그레이션을 AutoVNF로 전송하며 AutoVNF는 이 작업을 수행합니다. VNFM을 출시하려면

AutoVNF는 VIM/openstack에 직접 대화하고 VNFM이 작동하면 AutoVNF는 VNFM을 사용하여 VNF를 표시합니다.

AutoVNF는 1:1 리던던시를 지원하며 UltraM 설정에서는 HA 모드에서 실행되는 AutoVNF VM 2개를 제공합니다.

AutoVNF 백업 세부 정보:

- 실행 중인 컨피그레이션
- ConfD CDB DB
- AutoVNF 로그(AutoVNF의 각 인스턴스에서)

- Syslog 컨피그레이션

중요: 지정된 POD/사이트에서 활성화/비활성화하고 백업 서버에 업로드하기 전에 백업을 수행해야 합니다.

1. /opt/uas_baseconfig.txt에서 기본 및 보조 AutoIT 모두에서 ha_debug를 ON으로 설정합니다.

참고: ha_debug 플래그는 모두 자본입니다. 켜짐 또는 꺼짐.

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: ON
```

```
ubuntu@labucs300-autoit-1:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: ON
```

2. 다음 명령을 사용하여 기본 AutoIT에서 AutoIT 서비스를 중지합니다.

```
ssh ubuntu@ < AutoIT Floating IP>
sudo -i
service autoit stop
```

이는 AutoIT가 이후 단계에서 종료가 시작될 때 UAS(Ultra Automation Services)의 자동 복구를 트리거하지 못하도록 하기 위한 것입니다.

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~#
root@labucs300-autoit-2:~# service autoit status
autoit start/running, process 25001
root@labucs300-autoit-2:~# service autoit stop
```

3. /opt/uas_baseconfig.txt 파일의 기본 및 보조 UAS(AutoVNF)에서 ha_debug를 ON으로 설정합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
```

ha_debug: ON

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ ssh ubuntu@192.0.2.15
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: ON
```

4. 명령을 사용하여 OSPD에서 보조 UAS를 종료합니다.

```
. corerc ; openstack server stop <VMName>

labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNFM2-UAS-VIP Primary
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary

[stack@labucs300-ospd ~]$ nova list | grep LABPGW300-UAS-core-UAS2
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7
|
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16

[stack@labucs300-ospd ~]$. corerc ; openstack server stop labucs300-UAS-LABPGW300-UAS-core-UAS2-1
```

5. 다음 명령을 사용하여 UAS에서 uas-confd 및 autovnf 서비스를 중지합니다.

```
service uas-confd stop
service autovnf stop

ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd status
uas-confd start/running, process 1305
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf status
autovnf start/running, process 24208
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd stop
uas-confd stop/waiting
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf stop
autovnf stop/waiting
```

6. 다음 명령을 사용하여 UAS conf 데이터베이스의 백업을 수행하고 백업 서버에 복사합니다.

```
cd /opt/cisco/usp/uas/confd-latest/var/confd/
tar -cvf <pod>_<VNF>_UAS_cdb_backup.tar cdb/

root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# tar -cvf Autovnf_cdb_backup.tar cdb/
cdb/
cdb/0.cdb
cdb/C.cdb
cdb/aaa_init.xml
cdb/A.cdb
root@labucs300-uas-LABPGW300-uas-core-uas2-2:/opt/cisco/usp/uas/confd-latest/var/confd# ll
Autovnf_cdb_backup_cdb_backup.tar
total 1612
drwxr-xr-x 3 root root 4096 Jan 24 2017 ..
drwxr-xr-x 2 root root 4096 Jan 24 2017 log
```

```
drwxr-xr-x 8 root root 4096 Oct 11 11:30 webui
drwxr-xr-x 2 root root 4096 Oct 19 19:18 candidate
drwxr-xr-x 2 root root 4096 Oct 23 13:00 rollback
drwxr-xr-x 2 root root 4096 Oct 28 17:00 cdb
drwxr-xr-x 3 root root 4096 Oct 28 17:00 state
drwxr-xr-x 8 root root 4096 Oct 31 18:00 .
-rw-r--r-- 1 root root 1617920 Oct 31 18:00 Autovnf_cdb_backup.tar
```

7. 다음 명령을 사용하여 UAS에서 uas-config 및 autovnf 서비스를 다시 시작합니다.

```
service uas-confd start
service autovnf start
```

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd start
uas-confd start/running, process 13852
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf start
autovnf start/running, process 13853
```

8. 다음 명령을 사용하여 OSPD에서 보조 UAS를 다시 시작합니다.

```
. corerc ; openstack server start <VMName>
```

```
[stack@labucs300-ospd ~]$. corerc ; openstack server start labucs300-UAS-LABPGW300-UAS-core-
UAS2-1
```

9. 기본 및 보조 UAS가 모두 show uas 명령에 활성 상태로 표시되는지 확인합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 127.0.0.1 using console on labucs300-uas-LABPGW300-uas-core-uas2-2
labucs300-uas-LABPGW300-uas-core-uas2-2#show uas
uas version 6.2.0
uas state active
uas external-connection-point 192.0.2.8
INSTANCE IP STATE ROLE
-----
0.0.0.0 error CONFD-Secondary
192.0.2.15 alive CONFD-Secondary
192.0.2.17 alive CONFD-Primary
```

10. 파일의 UAS(기본 및 보조 AutoVNF)에서 ha_debug를 OFF로 변경합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ ssh ubuntu@192.0.2.15
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
```

ha_debug: OFF

11. 기본 AutoIT에서 **service autoit start** 명령을 사용하여 자동 서비스를 다시 시작합니다.

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~# service autoit start
```

12. 기본 및 보조 AutoIT가 모두 **show uas** 명령을 사용하여 활성 상태로 표시되는지 확인합니다.

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~# confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 127.0.0.1 using console on labucs300-autoit-2
labucs300-autoit-2#show uas
uas version 6.2.0
uas state active
uas external-connection-point 172.16.181.7
INSTANCE IP STATE ROLE
-----
172.16.181.5 alive CONFD-Secondary
172.16.181.8 alive CONFD-Primary
```

13. /opt/uas_baseconfig.txt 파일의 기본 및 보조 AutoIT에서 ha_debug를 OFF로 설정합니다.

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF
```

```
ubuntu@labucs300-autoit-1:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF
```

14. UAS에서 로그를 수집하고 백업 서버로 전송합니다.

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/
root@labucs300-uas-LABPGW300-uas-core-uas2-2:/opt/cisco/usp/uas/confd-latest/var/confd# cd
/opt/cisco/usp/uas/scripts/
root@labucs300-uas-LABPGW300-uas-core-uas2-2:/opt/cisco/usp/uas/scripts# sudo ./collect-uas-
logs.sh
Dumping output for show transaction in file /tmp/uas-logs/transactions.txt
Dumping output for show log in file /tmp/uas-logs/transactions.txt
Dumping output for show running-config in file /tmp/uas-logs/confd_output.txt
Dumping output for show uas in file /tmp/uas-logs/confd_output.txt
Dumping output for show usp in file /tmp/uas-logs/confd_output.txt
```

.....

15. 로그를 수집하고 백업 서버로 전송하려면 보조 AutoVNF에 로그인하고 이전 단계를 반복합니다

.

16. 기본 및 보조 AutoVNF VM에서 syslog 컨피그레이션을 백업하고 백업 서버로 전송합니다. 파일은 다음 디렉토리에 있습니다.

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# ls /etc/rsyslog.d/00-autovnf.conf
/etc/rsyslog.d/00-autovnf.conf
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# ls /etc/rsyslog.conf
/etc/rsyslog.conf
```

17. 기본 AutoIT에서 **service autoit start** 명령을 사용하여 자동 서비스를 활성화합니다.

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~#
root@labucs300-autoit-2:~# service autoit start
autoit start/running, process 25001
```

18. 기본 AutoVNF 및 AutoIT의 /opt/uas_baseconfig.txt에서 ha_debug 플래그 모드를 OFF로 설정합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
```

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF
```

19. UAS에서 실행 중인 uas-config 및 autovnf 서비스를 확인합니다.

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd status
uas-confd start/running, process 1305
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf status
autovnf start/running, process 24208
```

AutoVFN 재배포

1. AutoDeploy에 로그인하여 UAS 인스턴스를 기록합니다.

```
ubuntu@labucs300-autodeploy-2:~$ sudo su
root@labucs300-autodeploy-2:/home/ubuntu# confd_cli -u admin -C
Welcome to the ConfD CLI
```

```

admin connected from 127.0.0.1 using console on labucs300-autodeploy-2
labucs300-autodeploy-2#show nsr
nsr LABSGW300-instance
nsd LABSGW300
vnfr [ LABPCF300-LABPCF300-ESC LABPCF300-LABPCF300-UGP ]
vnf-package [ usp_6_2_b8 ]
vim-artifact vim_art_rack
nsr LABPGW300-instance
nsd LABPGW300
vnfr [ LABPGW300-LABPGW300-ESC LABPGW300-LABPGW300-UGP ]
vnf-package [ usp_6_2_b8 ]
vim-artifact vim_art_rack
nsr labucs300-UAS-instance
  nsd      labucs300-UAS
  vnfr     [ labucs300-UAS-LABPCF300-UAS labucs300-UAS-LABPGW300-UAS ]
  vnf-package [ usp_6_2_b8 ]
  vim-artifact vim_art_rack

```

2. AutoDeploy에서 AutoVNF를 비활성화하고 nsd-id <nsd-id> vnfd <vnfd-id> 명령을 비활성화합니다.

```

ubuntu@labucs300-autodeploy-2:~$ /opt/cisco/usp/uas/confd-6.3.1/bin/confd_cli -u admin -C
Welcome to the Confd CLI
admin connected from 10.10.10.10 using ssh on labucs300-autodeploy-2
labucs300-autodeploy-2#nsd:deactivate nsd-id labucs300-UAS vnfd [LABPGW300-UAS]
transaction-id 1560431372-357328

```

3. 트랜잭션 상태를 확인합니다.

```

labucs300-autodeploy-2#show transaction
DEPLOYMENT STATUS
TX ID TX TYPE ID TIMESTAMP STATUS DETAIL
-----
1560431372-357328 activate-ns-deployment labucs300-UAS 2019-06-13T13:09:32.357355-00:00 in-
progress -
1560431372-357328/1560431373-102024 activate-ns-deployment labucs300-UAS 2019-06-
13T13:09:33.102041-00:00 in-progress -

```

4. 트랜잭션의 로그를 확인합니다. 이 경우 labucs300-UAS 트랜잭션은 다음과 같습니다.
1560431372-357328 및 1560431372-357328/1560431373-1024

```

labucs300-autodeploy-2#show log 1560431372-357328 | display xml
<config xmlns="http://tail-f.com/ns/config/1.0">
<log xmlns="http://www.cisco.com/usp/nfv/usp-transaction">
<tx-id>1560431372-357328</tx-id>
<log>
2019-06-13 13:09:33,367 - Send Deployment notification for: labucs300-UAS-instance
2019-06-13 13:09:33,375 - Deployment activate-ns-deployment: labucs300-UAS started
2019-06-13 13:09:33,378 - Adding NSR: labucs300-UAS-instance
2019-06-13 13:09:33,385 - Start pipeline of 1 tasks
2019-06-13 13:09:33,390 - Scheduling Task: labucs300-UAS
2019-06-13 13:09:33,400 - Waiting for all workers to finish the transactions
2019-06-13 13:15:00,006 - Deployment activate-ns-deployment: labucs300-UAS succeeded
2019-06-13 13:15:00,020 - Send Deployment notification for: labucs300-UAS-instance
2019-06-13 13:09:33,437 - Send Deployment notification for: labucs300-UAS-instance-deploy
2019-06-13 13:09:33,441 - Deployment activate-ns-deployment: labucs300-UAS started
.....

```

```

labucs300-autodeploy-2#show log 1560431372-357328/1560431373-102024 | display xml
<config xmlns="http://tail-f.com/ns/config/1.0">

```

```
<log xmlns="http://www.cisco.com/usp/nfv/usp-transaction">
<tx-id>1560431372-357328/1560431373-102024</tx-id>
<log>
2019-06-13 13:09:33,437 - Send Deployment notification for: labucs300-UAS-instance-deploy
2019-06-13 13:09:33,441 - Deployment activate-ns-deployment: labucs300-UAS started
2019-06-13 13:09:33,446 - Adding NSR: labucs300-UAS-instance, VNFR: labucs300-UAS-LABPCF300-UAS,
vlrs: None
2019-06-13 13:09:33,453 - Adding NSR: labucs300-UAS-instance, VNFR: labucs300-UAS-LABPGW300-UAS,
vlrs: None
2019-06-13 13:09:33,463 - VNF deployment pre-check success(all-not-present)
2019-06-13 13:09:33,472 - VNF-Package deployment pre-check success(all-not-present)
2019-06-13 13:09:33,481 - VIM-Artifact deployment pre-check success
2019-06-13 13:09:33,487 - Skipping VIM-Orch pre-deployment, since VIM-Orch is not defined
2019-06-13 13:09:33,496 - Skipping VIM pre-deployment, since VIM is not defined
2019-06-13 13:09:33,499 - NS pre-check success
2019-06-13 13:09:33,503 - Copying '/home/ubuntu/usp-6_2_b8.iso' to '/var/cisco/isos/labucs300-
UAS_osp_6_2_b8'
2019-06-13 13:09:53,359 - Updated path to URL 'http://172.16.181.14:5000/isos/labucs300-
UAS_osp_6_2_b8'
```

5. 트랜잭션이 완료될 때까지 기다렸다가 상태를 확인합니다.

```
labucs300-autodeploy-2#show transaction
DEPLOYMENT STATUS
TX ID TX TYPE ID TIMESTAMP STATUS DETAIL
-----
-----
1560431372-357328 activate-ns-deployment labucs300-UAS 2019-06-13T13:09:32.357355-00:00 success
-
1560431372-357328/1560431373-102024 activate-ns-deployment labucs300-UAS 2019-06-
13T13:09:33.102041-00:00 success -
```

6. **activate nsd-id <nsd-id> vnfd <vnfd-id>** 명령을 사용하여 AutoDeploy에서 AutoVNF VNFD를 활성화합니다.

```
ubuntu@labucs300-autodeploy-2:~$ /opt/cisco/usp/uas/confd-6.3.1/bin/confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 10.253.110.47 using ssh on labucs300-autodeploy-2
labucs300-autodeploy-2#nsd:activate nsd-id labucs300-UAS vnfd [LABPGW300-UAS]
transaction-id 1560431371-357330
```

7. 다음 명령을 사용하여 트랜잭션의 상태를 확인하고 트랜잭션에서 로그를 수집합니다.

```
show transaction
show log <transaction-id> | display xml
show log <transaction-id> | display xml
```

8. 트랜잭션이 완료될 때까지 기다립니다. **show transaction** 명령은 트랜잭션의 상태를 표시합니다.

백업 복원

1. 기본 AutoIT에서 ha_debug 플래그 모드를 /opt/uas_baseconfig.txt에서 ON으로 설정합니다.

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
```

```
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: ON
```

2. 기본 AutoIT에서 서비스 자동화를 중지합니다. 이 단계는 AutoIT가 UAS를 자동으로 복구하지 않도록 하는 것입니다.

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~#
root@labucs300-autoit-2:~# service autoit status
autoit start/running, process 25001
root@labucs300-autoit-2:~# service autoit stop
```

3. 기본 UAS에서 ha_debug 플래그 모드를 ON(/opt/uas_baseconfig.txt)으로 설정합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: ON
```

4. Secondary UAS에서 ha_debug 플래그 모드를 ON(/opt/uas_baseconfig.txt)으로 설정합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: ON
```

5. OSPD에서 OpenStack 명령을 사용하여 보조 UAS 서버를 중지합니다.

```
labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNFM2-UAS-VIP Primary
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary
```

```
[stack@labucs300-ospd ~]$ corerc ; openstack server stop labucs300-UAS-LABPGW300-UAS-core-UAS2-1
```

6. 기본 UAS에서 QoS를 중지합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd status
uas-confd start/running, process 1305
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd stop
uas-confd stop/waiting
```

7. 기본 UAS에서 CDB의 백업 아카이브를 디렉토리/opt/cisco/usp/uas/confd-latest/var/confd/에 복사합니다.

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cp Autovnf_cdb_backup.tar to
/opt/cisco/usp/uas/confd-latest/var/confd/
```

8. 주요 업무시 도심지 디렉토리 안의 파일 삭제

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/ ;  
rm cdb/*
```

9. 기본 UAS에서 CDB 백업 파일에서 파일을 추출합니다.

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/ ;  
tar -xvf <archive_backup_tar_file>
```

10. OSPD에서 OpenStack 명령으로 기본 UAS를 재부팅합니다.

```
[stack@labucs300-ospd ~]$ source *core  
[stack@labucs300-ospd ~]$ nova list | grep LABPGW300-UAS-core-UAS2  
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE | - |  
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7  
|  
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE | - |  
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16
```

```
labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNFM2-UAS-VIP Primary  
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary
```

```
[stack@labucs300-ospd ~]$ nova reboot --hard 19f4496c-3907-4ea5-84c9-e5a6ef222392  
Request to reboot server <Server: auto-testautovnf1-uas-2> has been accepted.
```

11. 기본 UAS가 나타날 때까지 기다립니다. 재부팅한 후 기본 UAS에서 UAS 상태를 확인합니다. 기본 상태는 활성 상태이고 보조 상태는 unknown으로 표시됩니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i  
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# confd_cli -u admin -C  
Welcome to the ConfD CLI  
admin connected from 127.0.0.1 using console on labucs300-uas-LABPGW300-uas-core-uas2-2  
labucs300-uas-LABPGW300-uas-core-uas2-2#show uas  
uas version 6.2.0  
uas state active  
uas external-connection-point 192.0.2.8  
INSTANCE IP STATE ROLE  
-----  
192.0.2.15 unknown CONFD-Secondary  
192.0.2.17 alive CONFD-Primary
```

12. OSPD에서 OpenStack 명령으로 보조 UAS를 시작합니다.

```
[stack@labucs300-ospd ~]$. corerc ; openstack server start labucs300-UAS-LABPGW300-UAS-core-UAS2-1
```

13. OSPD에서 기본 및 보조 UAS의 상태가 활성인지 확인합니다.

```
[stack@labucs300-ospd ~]$ openstack server list | grep labucs300-UAS-LABPGW300  
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE |  
labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16 |  
labucs300-UAS-usp_6_2_b8-core-uas |  
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE |  
labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7 |  
labucs300-UAS-usp_6_2_b8-core-uas |
```

14. 기본 UAS에서 기본 및 보조 UAS의 상태가 활성 상태인지 확인합니다.

```
labucs300-uas-LABPGW300-uas-core-uas2-2#show uas
uas version 6.2.0
uas state active
uas external-connection-point 192.0.2.8
INSTANCE IP STATE ROLE
-----
192.0.2.15 alive CONFD-Secondary
192.0.2.17 alive CONFD-Primary
```

15. 기본 AutoIT에서 자동 서비스를 시작합니다.

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~# service autoit start
```

16. SSH(Secure Shell) 세션이 Primary 및 Secondary UAS에 대해 2분 동안 작동 중인지 확인합니다.

17. Primary UAS에서 ha_debug 플래그 모드를 OFF로 설정합니다. /opt/uas_baseconfig.txt

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
```

18. Secondary UAS에서 ha_debug 플래그 모드를 /opt/uas_baseconfig.txt에서 OFF로 설정합니다.

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
```

19. 기본 AutoIT에서 ha_debug 플래그 모드를 OFF로 /opt/uas_baseconfig.txt에서 설정합니다.

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF
```

20. AutoVNF에서 00-autovnf.conf 및 rsyslog.conf 파일을 확인하고 이전 백업에서 복원합니다.

```
ubuntu@autoit-tb1-autovnf1-core-avf-1:~#sudo su
root@autoit-tb1-autovnf1-core-avf-1:~#ls /etc/rsyslog.d/00-autovnf.conf
00-autovnf.conf
```

```
root@autoit-tb1-autovnf1-core-avf-1:~#/home/ubuntu#ls /etc/rsyslog.conf
rsyslog.conf
```

사후 확인

OSPD에서 두 AutoVNF가 모두 활성 상태인지 확인하고 Ultra-M 상태 확인 보고서를 확인합니다.

```
[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/*.report | grep -i xxx
```

```
[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/ultram_health_uas.report
```