



# Ultra M Troubleshooting

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## Ultra M Component Reference Documentation

The following sections provide links to troubleshooting information for the various components that comprise the Ultra M solution.

### UCS C-Series Server

- [Obtaining Showtech Support to TAC](#)
- [Display of system Event log events](#)
- [Display of CIMC Log](#)
- [Run Debug Firmware Utility](#)
- [Run Diagnostics CLI](#)
- [Common Troubleshooting Scenarios](#)
- [Troubleshooting Disk and Raid issues](#)
- [DIMM Memory Issues](#)
- [Troubleshooting Server and Memory Issues](#)
- [Troubleshooting Communication Issues](#)

### Nexus 9000 Series Switch

- [Troubleshooting Installations, Upgrades, and Reboots](#)
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- [Troubleshooting Ports](#)

- [Troubleshooting vPCs](#)
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- [Troubleshooting Packet Flow Issues](#)
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## Catalyst 2960 Switch

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- [Switch POST Results](#)
- [Switch LEDs](#)
- [Switch Connections](#)
- [Bad or Damaged Cable](#)
- [Ethernet and Fiber-Optic Cables](#)
- [Link Status](#)
- [10/100/1000 Port Connections](#)
- [10/100/1000 PoE+ Port Connections](#)
- [SFP and SFP+ Module](#)
- [Interface Settings](#)
- [Ping End Device](#)
- [Spanning Tree Loops](#)
- [Switch Performance](#)
- [Speed, Duplex, and Autonegotiation](#)
- [Autonegotiation and Network Interface Cards](#)
- [Cabling Distance](#)
- [Clearing the Switch IP Address and Configuration](#)

- [Finding the Serial Number](#)
- [Replacing a Failed Stack Member](#)

## Red Hat

- [Troubleshooting Director issue](#)
- [Backup and Restore Director Undercloud](#)

## OpenStack

- [Red Hat Openstack Troubleshooting commands and scenarios](#)

## UAS

Refer to the *USP Deployment Automation Guide*.

## UGP

Refer to the *Ultra Gateway Platform System Administration Guide*.

# Collecting Support Information

## From UCS:

- Collect support information:

```
chassis show tech support
show tech support (if applicable)
```

- Check which UCS MIBS are being polled (if applicable). Refer to [https://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/sw/mib/c-series/b\\_UCS\\_Standalone\\_C-Series\\_MIBRef/b\\_UCS\\_Standalone\\_C-Series\\_MIBRef\\_chapter\\_0100.html](https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/sw/mib/c-series/b_UCS_Standalone_C-Series_MIBRef/b_UCS_Standalone_C-Series_MIBRef_chapter_0100.html)

## From Host/Server/Compute/Controller/Linux:

- Identify if Passthrough/SR-IOV is enabled.
- Run sosreport:




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**Note** This functionality is enabled by default on Red Hat, but not on Ubuntu. It is recommended that you enable *sysstat* and *sosreport* on Ubuntu (run **apt-get install sysstat** and **apt-get install sosreport**). It is also recommended that you install *sysstat* on Red Hat (run **yum install sysstat**).

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- Get and run the **os\_ssd\_pac** script from Cisco:

- Compute (all):

```
./os_ssd_pac.sh -a
./os_ssd_pac.sh -k -s
```




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**Note** For initial collection, it is always recommended to include the **-s** option (*sosreport*). Run **./os\_ssd\_pac.sh -h** for more information.

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- Controller (all):

```
./os_ssd_pac.sh -f
./os_ssd_pac.sh -c -s
```




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**Note** For initial collection it is always recommended to include the **-s** option (*sosreport*). Run **./os\_ssd\_pac.sh -h** for more information.

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- For monitoring purposes, from *crontab* use option: **-m** ( for example run every 5 or 10 minutes)

## From Switches

From all switches connected to the Host/Servers. (This also includes other switches which have same vlans terminated on the Host/Servers.)

```
show tech-support
syslogs
snmp traps
```




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**Note** It is recommended that mac-move notifications are enabled on all switches in network by running mac address-table notification mac-move.

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## From ESC (Active and Standby)



**Note** It is recommended that you take a backup of the software and data before performing any of the following operations. Backups can be taken by executing `opt/cisco/esc/esc-scripts/esc_dbtool.py backup`. (Refer to [https://www.cisco.com/c/en/us/td/docs/net\\_mgmt/elastic\\_services\\_controller/2-3/user/guide/Cisco-Elastic-Services-Controller-User-Guide-2-3/Cisco-Elastic-Services-Controller-User-Guide-2-2\\_chapter\\_010010.html#id\\_18936](https://www.cisco.com/c/en/us/td/docs/net_mgmt/elastic_services_controller/2-3/user/guide/Cisco-Elastic-Services-Controller-User-Guide-2-3/Cisco-Elastic-Services-Controller-User-Guide-2-2_chapter_010010.html#id_18936) for more information.)

```
/opt/cisco/esc/esc-scripts/health.sh
/usr/bin/collect_esc_log.sh
./os_ssd_pac -a
```

## From UAS

- Monitor ConfD:

```
confd -status
confd --debug-dump /tmp/confd_debug-dump
confd --printlog /tmp/confd_debug-dump
```



**Note** Once the file `/tmp/confd_debug-dump` is collected, it can be removed (`rm /tmp/confd_debug-dump`).

- Monitor UAS Components:

```
source /opt/cisco/usp/uas/confd-6.1/confdrc
confd_cli -u admin -C
show uas
show uas ha-vip
show uas state
show confd-state
show running-config
show transactions date-and-time
show log | display xml
show errors displaylevel 64
show notification stream uas_notify last 1000
show autovnf-oper:vnfm
show autovnf-oper:vnf-em
show autovnf-oper:vdu-catalog
show autovnf-oper:transactions
show autovnf-oper:network-catalog
show autovnf-oper:errors
show usp
show confd-state internal callpoints
```

```
show confd-state webui listen
show netconf-state
```




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**Important** Executing the `confd_cli -u admin -C` command prompts you to enter *admin user* password.

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- Monitor Zookeeper:

```
/opt/cisco/usp/packages/zookeeper/current/bin/zkCli.sh -server
x.x.x.x:2181 ls /config/control-function
/opt/cisco/usp/packages/zookeeper/current/bin/zkCli.sh -server
x.x.x.x:2181 ls /config/element-manager
/opt/cisco/usp/packages/zookeeper/current/bin/zkCli.sh -server
x.x.x.x:2181 ls /config/session-function
/opt/cisco/usp/packages/zookeeper/current/bin/zkCli.sh -server
x.x.x.x:2181 ls /
/opt/cisco/usp/packages/zookeeper/current/bin/zkCli.sh -server
x.x.x.x:2181 ls /stat
/opt/cisco/usp/packages/zookeeper/current/bin/zkCli.sh -server
x.x.x.x:2181 ls /log
```




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**Note** Port number (2181) is not mandatory when executing the `zkCli.sh` command.

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- Collect Zookeeper data:

```
cd /tmp
tar zcfv zookeeper_data.tgz /var/lib/zookeeper/data/version-2/
ls -las /tmp/zookeeper_data.tgz
```

- Get support details

```
./os_ssd_pac -a
```

## From UEM (Active and Standby)

- Collect logs

```
/opt/cisco/em-scripts/collect-em-logs.sh
```

- Monitor NCS:

```
ncs -status
ncs --debug-dump /tmp/ncs_debug-dump
ncs --printlog /tmp/ncs_debug-dump
```




---

**Note** Once the file `/tmp/ncs_debug-dump` is collected, it can be removed (`rm /tmp/ncs_debug-dump`).

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- Collect support details:

```
./os_ssd_pac -a
```

## From UGP (Through StarOS)

- Collect the multiple outputs of the **show support details**.




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**Note** It is recommended to collect at least two samples, 60 minutes apart if possible.

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- Collect raw bulkstats before and after events.
- Collect syslogs and snmp traps before and after events.
- Collect PCAP or sniffer traces of all relevant interfaces if possible.




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**Note** Familiarize yourself with how running SPAN/RSPAN on Nexus and Catalyst switches. This is important for resolving Passthrough/SR-IOV issues.

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- Collect console outputs from all nodes.
- Export CDRs and EDRs.
- Collect the outputs of **monitor subscriber next-call** or **monitor protocol** depending on the activity
- Refer to [https://supportforums.cisco.com/sites/default/files/cisco\\_asr5000\\_asr5500\\_troubleshooting\\_guide.pdf](https://supportforums.cisco.com/sites/default/files/cisco_asr5000_asr5500_troubleshooting_guide.pdf) for more information.

## About Ultra M Manager Log Files

All Ultra M Manager log files are created under “`/var/log/cisco/ultram-manager`”.

```
cd /var/log/cisco/ultram-manager
ls -alrt
```

Example output:

```
total 116
drwxr-xr-x. 3 root root 4096 Sep 10 17:41 ..
-rw-r--r--. 1 root root    0 Sep 12 15:15 ultram_health_snmp.log
-rw-r--r--. 1 root root  448 Sep 12 15:16 ultram_health_uas.report
```

```
-rw-r--r--. 1 root root 188 Sep 12 15:16 ultram_health_uas.error
-rw-r--r--. 1 root root 580 Sep 12 15:16 ultram_health_uas.log
-rw-r--r--. 1 root root 24093 Sep 12 15:16 ultram_health_ucs.log
-rw-r--r--. 1 root root 8302 Sep 12 15:16 ultram_health_os.error
drwxr-xr-x. 2 root root 4096 Sep 12 15:16 .
-rw-r--r--. 1 root root 51077 Sep 12 15:16 ultram_health_os.report
-rw-r--r--. 1 root root 6677 Sep 12 15:16 ultram_health_os.log
```

**NOTES:**

- The files are named according to the following conventions:
  - ultram\_health\_os: Contain information related to OpenStack
  - ultram\_health\_ucs: Contain information related to UCS
  - ultram\_health\_uas: Contain information related to UAS
- Files with the “\*.log” extension contain debug/error outputs from different components. These files get added to over time and contain useful data for debugging in case of issues.
- Files with the “.report” extension contain the current report. These files get created on every tun.
- Files with the “.error” extension contain actual data received from the nodes as part of health monitoring. These are the events that causes the Ultra M health monitor to send traps out. These files are updated every time a component generates an event.