

ISAAC Quorum Appliance Spare Unit Quick Start Guide

Congratulations on your new Extended Coverage for Nemesis! As part of Nemesis systems extended coverage, is provided a Quorum Appliance spare unit, should the main unit encountered an issue and needed to be replaced. This Quick Start Guide will help you with device installation and setup.



1. Overview

The Quorum Appliances (Main and Spare units) come each with the following accessories:

- 1x Power supply kit (with Power Terminal Block).
- 1x Extra Power Terminal Block.
- 1x Com Terminal Block.
- 1x DIN Rail Mounting Kit (Edge).

While the Quorum Appliance main unit is installed as part of the Nemesis cluster (please refer to the Nemesis 83x Series or Nemesis 83x Series Quick Start Guides for installation), the Quorum Appliance spare unit is intended to be used as a **cold spare unit**. This means that the unit can be physically present in your equipment rack, but must **not be connected to the cluster**.

Since the Quorum Appliance doesn't have a power button, it will power on as soon as the power connector will be plugged in. Therefore, it is **recommended to not connect the spare unit to its power source until it is needed**.

The following part of this guide explains the process of replacing the main Quorum Appliance with the spare unit.

2. Prerequisites

Both Hosts must be online and the cluster must be healthy. To check the status:

- Open a new browser window and connect to Proxmox on any Host using the Proxmox management interface IP address (please refers to the Nemesis 83x Series or Nemesis 83x Series Quick Start Guides to identify this address, if you don't know it) on port **8006** and the credentials provided with your system.
- On the navigation menu, locate Host 1 or 2 and select **Shell**.
- Type the command **pvecm status**.
- Look for **Quorate: Yes** in the Quorum information section.

```
root@isaac-nemesis-1:~# pvecm status
Cluster information
-----
Name:                ISAAC
Config Version:      3
Transport:           knet
Secure auth:         on

Quorum information
-----
Date:                Wed Jun 26 15:34:08 2024
Quorum provider:     corosync_votequorum
Nodes:               2
Node ID:              0x00000001
Ring ID:              1.44
Quorate:              Yes
```

3. Unit Replacement

Removal of the main unit

- Before disconnecting, identify the network cables that are on Ethernet port 1 and port 2.
- Disconnect and physically uninstall the main appliance.

Dissociation of the main unit

This operation as well as the following operations requires a computer connected to the switch where the two hosts are connected (ports labeled 5, in Quorum Appliance connections schemas below).

- Open a new browser window and connect to Proxmox on any Host using the Proxmox management interface IP address (please refers to the Nemesis 83x Series or Nemesis 83x Series Quick Start Guides to identify this address, if you don't know it) on port **8006** and the credentials provided with your system.
- On the navigation menu, locate Host 1 or 2 and select **Shell**.
- Type the command **pvecm qdevice remove** (This operation only needs to be done on one host).
- While on this Host, type the command **ssh-keygen -f "/root/.ssh/known_hosts" -R "10.254.254.245"**
- On the navigation menu, locate the other Host (If you have first selected Host 1 then select Host 2) and select **Shell** (this last operation needs to be performed on both Hosts).
- Type the command **ssh-keygen -f "/root/.ssh/known_hosts" -R "10.254.254.245"**



Note: You can also use an ssh session as an alternative method to perform the same command.

Installation & Connections of the spare unit

- If the Quorum Appliance spare unit is not physically already installed near the main unit, place the spare unit in place of the main unit which has been removed in the step above.
- Reconnect the network cables (see **Quorum Appliance connections** for reference).
- Use the provided power supply and cables to connect the Quorum Appliance spare unit to a power socket. Alternatively, the power cable of the removed main unit can be used.



Note: The Quorum Appliance doesn't have a power button, therefore it will power on as soon as the power connector will be plugged in.



Note: Please refer to Nemesis Quick Start Guides for initial Quorum Appliance installation.

Association of the spare unit

The association of the Quorum Appliance spare unit will happen **automatically**, as the Hosts have a discovery mechanism (triggered on an interval) which has been re-activated when dissociating the main unit. To check the association status follow the instructions below. This operation requires a computer connected to the switch where the two hosts are connected (ports labeled 5, in Quorum Appliance connections schemas).

- Open a new browser window and connect to Proxmox on any Host using the Proxmox management interface IP address (please refers to the Nemesis 83x Series or Nemesis 83x Series Quick Start Guides to identify this address, if you don't know it) on port **8006** and the credentials provided with your system.
- On the navigation menu, locate Host 1 or 2 and select **Shell**.
- Type the command **systemctl list-timers** and look for **isaac-qdevice-join** in the output to monitor when the trigger happens.

```
root@isaac-nemesis-1:~# systemctl list-timers
NEXT           LEFT           LAST           PASSED        UNIT                                ACTIVATES
Wed 2024-06-26 15:39:00 EDT 3min 27s left Wed 2024-06-26 15:29:00 EDT 6min ago isaac-qdevice-join.timer          isaac-qdevice-join.service
Thu 2024-06-27 00:00:00 EDT 8h left           -              -              dpkg-db-backup.timer            dpkg-db-backup.service
Thu 2024-06-27 00:00:00 EDT 8h left           -              -              logrotate.timer                 logrotate.service
Thu 2024-06-27 01:02:21 EDT 9h left           -              -              man-db.timer                    man-db.service
Thu 2024-06-27 02:58:50 EDT 11h left          -              -              apt-daily.timer                 apt-daily.service
Thu 2024-06-27 04:32:50 EDT 12h left          -              -              pve-daily-update.timer          pve-daily-update.service
Thu 2024-06-27 06:27:03 EDT 14h left          -              -              apt-daily-upgrade.timer         apt-daily-upgrade.service
Thu 2024-06-27 15:21:11 EDT 23h left          -              -              systemd-tmpfiles-clean.timer    systemd-tmpfiles-clean.service
Sun 2024-06-30 03:10:00 EDT 3 days left       -              -              e2scrub_all.timer              e2scrub_all.service
Mon 2024-07-01 00:44:03 EDT 4 days left       -              -              fstrim.timer                    fstrim.service
-              -              -              -              isaac-disable-eee.timer         isaac-disable-eee.service

11 timers listed.
Pass --all to see loaded but inactive timers, too.
root@isaac-nemesis-1:~#
```

- Type the command **pvecm status** and look for **Quorate: Yes** in the Quorum information section and a **QDevice membership** entry into the Membership information section to verify that the Quorum Appliance spare unit has joined and the cluster is healthy.

```
root@isaac-nemesis-1:~# pvecm status
Cluster information
-----
Name: ISAAC
Config Version: 3
Transport: knet
Secure auth: on

Quorum information
-----
Date: Wed Jun 26 15:34:08 2024
Quorum provider: corosync_votequorum
Nodes: 2
Node ID: 0x00000001
Ring ID: 1.44
Quorate: Yes

Votequorum information
-----
Expected votes: 3
Highest expected: 3
Total votes: 3
Quorum: 2
Flags: Quorate Qdevice

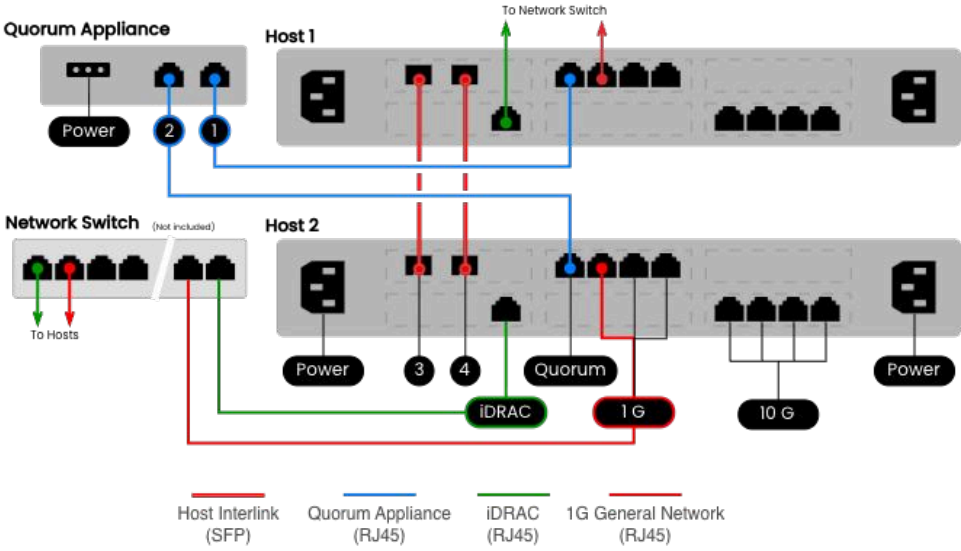
Membership information
-----
Nodeid      Votes  Qdevice Name
0x00000001  1      A,V,NMW 10.254.254.249 (local)
0x00000002  1      A,V,NMW 10.254.254.250
0x00000000  1      Qdevice

root@isaac-nemesis-1:~#
```

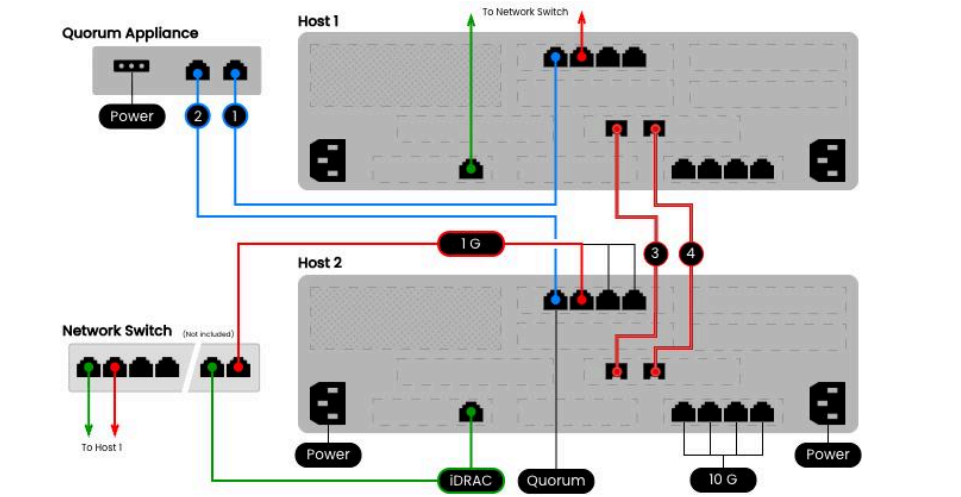
Quorum Appliance connections

- Connect the network cable between the port labeled **1** on the first Host and the port labeled **1** on the Quorum Appliance.
- Connect the network cable between the port labeled **1** on the second Host and the port labeled **2** on the Quorum Appliance.

Nemesis 63x Series Wiring Diagram



Nemesis 83x Series Wiring Diagram



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