



## High Availability

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### High-Availability Cluster-Mode

Cisco UCS Central provides native high-availability (H/A) features primarily for deployments that do not contain a native hypervisor. In general, use a native hypervisor, if available. In cases where native hypervisor H/A is not available or active, you can safely run Cisco UCS Central in standalone mode without using Cisco UCS Central's native H/A clustering.

If your host hypervisor does not provide H/A support, then it is generally a best practice to take advantage of Cisco UCS Central's H/A capabilities.



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**Note**

In general, we do not recommend running both Cisco UCS Central H/A and a native hypervisor concurrently.

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Keep in mind that Cisco UCS Central can incur a temporary outage without disrupting service. This is because Cisco UCS Central only operates on the control-management plane, not the data plane. If Cisco UCS domains, registered to Cisco UCS Central, lose visibility to the Cisco UCS Central server, services within each Cisco UCS domain continue to operate normally. However, configuration changes to the environment require you to restore Cisco UCS Central server.



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**Note**

For situations where Cisco UCS Central is down, and you have to make an administrative edit to a global service profile, you can localize the global service profile such that Cisco UCS Manager can then edit it. This is only recommended for the scenario when you have to edit a service profile when Cisco UCS Central is down.

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H/A with Cisco UCS Central in cluster-mode refers to a single logical instance of Cisco UCS Central, using a primary and a subordinate Cisco UCS Central VM with a shared clustered third disk.

You can also achieve H/A by taking advantage of native hypervisor H/A capabilities. In this case, do not use Cisco UCS Central's H/A capabilities. They are not required.

Administrators looking for true DR capabilities are required to leverage any back-end VM DR capabilities that they may have in place.

Achieve H/A with Cisco UCS Central using one of two methods:

- Method 1:
  - Install a new Cisco UCS Central instance as an H/A cluster
  - Convert standalone Cisco UCS Central to an H/A cluster
- Method 2:
  - Take advantage of native hypervisor capabilities
  - Leverage RDM clustering or NFS clustering

Refer to the [Installation and Upgrade Guide](#), before attempting to use either of these methods.

## Recommendations for NFS Cluster-Mode

When deploying in NFS cluster-mode, make sure that:

- Both VMs are on separate physical hosts with access to shared storage NFS server
- Both VMs are running the same version of ESX or Hyper-V
- Both VMs are running the same version of Cisco UCS Central
- Both VMs are on the same subnet

Cluster H/A mode requires the configuration of an NFS server and 40GB+ volume:

- 1 Export the NFS directory per the Cisco UCS Central [Installation and Upgrade Guide](#).
- 2 Restart the NFS service.
- 3 Delete or modify any firewall rules on the NFS server that could block the NFS server directories from mounting on the Cisco UCS Central VMs.
- 4 Specify the IP address of the NFS server during Cisco UCS Central installation.
- 5 Specify the directory of the NFS server.
- 6 Use configuration scripts to migrate the database and images from the primary VM to NFS.
- 7 Mount the NFS server directories on the primary node after election completes.

## Transitioning from Standalone HA

You can switch from an existing standalone Cisco UCS Central implementation to an H/A configuration. You can also switch from an RDM implementation to an NFS-based implementation. Consult the [Installation and Upgrade Guide](#) for further information about the necessary steps.

## Recommendations

- If considering Cisco UCS Central H/A options, we recommended using NFS-based H/A.
- If using features such as suspend, resume or restoring VM snapshots, be careful to not create a shared storage conflict of ownership. Always mount shared storage on the primary VM. If the secondary VM claims ownership while the primary is still active, it may result in a crash or the cluster failing.
- If your system has native hypervisor H/A capabilities, then take advantage of those, and only deploy Cisco UCS Central in standalone mode.
- Register all domains to your HA-capable Cisco UCS Central instance at the primary site.
- Perform scheduled backups of Cisco UCS Central and all registered Cisco UCS Manager instances through the Cisco UCS Central interface.
- If a disaster occurs, you can restore Cisco UCS Central to the new site through the backups.



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**Note**

Cisco UCS Central is not required for Cisco UCS domain availability, since Cisco UCS Central is not in the primary data path. Cisco UCS Central is the mechanism to configure, manage, and view the domain, from the control plane.

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