# Setting Up Multiple HX Clusters

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Multiple HyperFlex clusters may coexist under the same UCS domain (pair of fabric interconnects). The following guidelines should be followed to ensure smooth ongoing operations for all equipment connected to the domain.

**Note** Having HX clusters with two different HX releases on the same UCSM domain is a supported configuration as long as the UCSM infrastructure release supports the needed server firmware bundles. HXDP releases are mapped to UCSM server firmware bundles per the release notes. The release of UCSM infrastructure is independent.

**Recommendations**

- The number of compute-only nodes must be less than or equal to the number of converged nodes when using the standard HXDP license. The enterprise HXDP licenses allows a maximum 2:1 ratio of compute to converged nodes.

- To create a new HyperFlex cluster, ensure that all the requirements listed in Chapter 2 are met. In addition, follow the process as outlined in Chapter 4.

- All nodes in an HX cluster should reference the same policies and service profiles.

**Note** Editing the HyperFlex Service Profile templates is not recommended.

- Assign a unique name for each HX cluster.

- Each HX cluster will be created in a unique sub-org as part of installation. Do not modify this hierarchy as it ensures unique policies are created per cluster.

- Each cluster should use a unique storage data VLAN to keep all storage traffic isolated. Reuse of this VLAN across multiple clusters is highly discouraged.

- Cisco requires unique storage data VLAN for each Fabric Interconnect attached cluster, including Stretch Clusters. Use of a shared VLAN for storage data in such deployments is not supported, as it can lead to cluster outages.

  For other deployment types, it is strongly recommended to use a unique storage data VLAN for each cluster to keep all storage traffic isolated. Ensure proper network isolation if you are using the same storage data VLAN for multiple clusters. Using the same storage data VLAN on multiple clusters without proper network isolation is not supported.

- When reusing VLANs (e.g. management and guest traffic VLANs), create a new unique VLAN name for each VLAN even if it already exists in UCSM. This will ensure no disruption to other clusters and servers in that domain.

- Ensure that you select the compatible Cisco UCS Manager and Cisco HyperFlex releases.

  For the latest compatibility matrix, refer to the *Software Versions* table in the latest Release Notes for Cisco HX Data Platform.

- Ensure that you clear browser cache before setting up a second cluster on a different vCenter using the same Cisco HX Data Platform Installer. This avoids issues such as caching the older cluster's IP address which could result in deployment failure.

**Note** You may need to add more uplink ports depending on your traffic.

**Note** It is possible to use the same VLANs across multiple clusters connected to the same pair of Fabric Interconnects, for example - Management, vMotion and VM guest VLANs. This is possible as long as you do not overlap IPs. It is, however, recommended to keep the HX storage VLANs different per cluster to ensure storage traffic is secure and isolated. If deciding to reuse the storage VLAN against best practices, be extremely vigilant to avoid duplicate IPs. A duplicate IP can disrupt existing storage traffic on another cluster.

**Step 1** Log into the HX Data Platform Installer.

**Step 2** Follow the **Create Cluster** workflow for a standard cluster to create additional clusters. See Configure Cisco HyperFlex Systems for more details.