FlexArray Virtualization technology overview—using array LUNs for storage

ONTAP FlexArray

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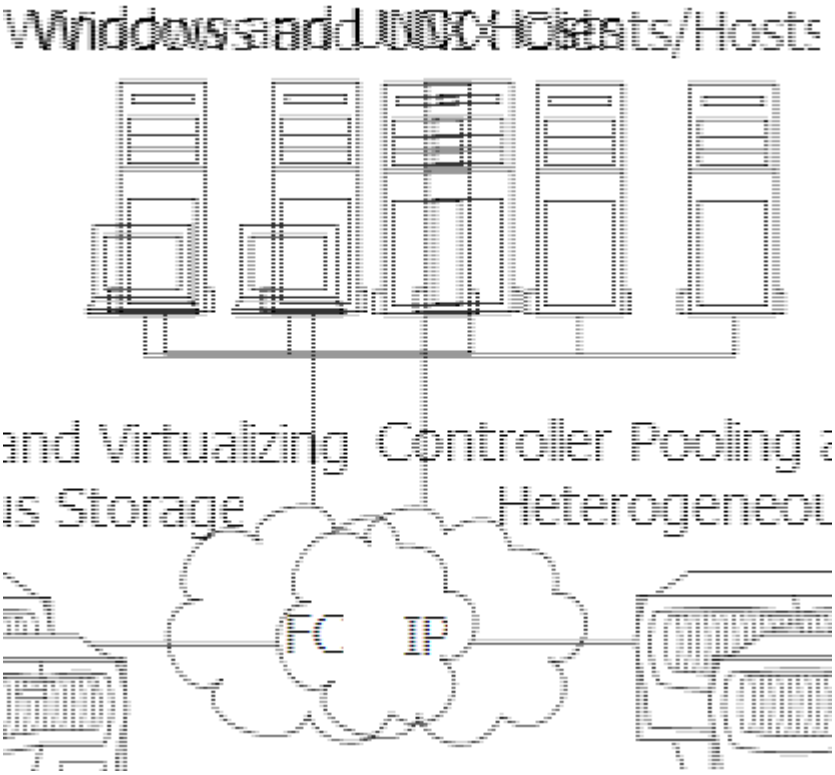
Table of Contents

FlexArray Virtualization technology overview—using array LUNs for storage . . . 1
ONTAP systems that can use array LUNs on storage arrays . . . 1
Considerations when connecting multiple storage arrays to an ONTAP system . . . 2
Supported methods for connecting an ONTAP system to a storage array . . . 2
Sharing storage arrays among hosts . . . 2
Requirements for MetroCluster configurations with array LUNs . . . 3

FlexArray Virtualization technology overview—using array LUNs for storage

The ONTAP software provides a unified storage software platform that simplifies managing both native disk shelves and LUNs on storage arrays. You can add storage when and where you require it, without disruption. This functionality is provided by *FlexArray Virtualization Software*, formerly known as V-Series.

The following illustration shows a configuration in which ONTAP systems that are licensed to attach to storage arrays are pooling LUNs from the storage arrays and presenting that storage to clients.



An ONTAP system presents storage to clients either in the form of ONTAP file system volumes, which you manage on the system by using ONTAP management features, or as a SCSI target that creates LUNs for use by clients. In both cases (file system clients and LUN clients), on the systems that can use array LUNs, you combine the array LUNs into one or more array LUN aggregates. In an ONTAP environment, you can associate these array LUN aggregates with storage virtual machines (SVMs), and create ONTAP volumes for presentation to the clients as files or as LUNs served by ONTAP.

ONTAP systems that can use array LUNs on storage arrays

You can use supported FAS and V-Series systems with array LUNs.

The NetApp Interoperability Matrix Tool lists the supported combinations of hardware and software.

Related information

NetApp Interoperability Matrix Tool

Considerations when connecting multiple storage arrays to an ONTAP system

Depending on the storage array models supported with ONTAP systems, you can connect either multiple storage arrays or a single storage array to the ONTAP system.

> The Interoperability Matrix identifies any storage array model for which only one storage array is supported with an ONTAP system.

Consider the following when connecting multiple storage arrays to an ONTAP system:

- If you can connect multiple arrays of the same supported storage array model to the ONTAP system, there is no limit on the number of storage arrays that you can deploy.
- The storage arrays can either be from the same supported vendor or from different vendors.

  If the storage arrays are from the same vendor, then they can be all from the same family or from different families.

> Storage arrays in the same family share the same performance and failover characteristics. For example, members of the same family all perform active-active failover, or they all perform active-passive failover. More than one factor might be used to determine storage array families. For example, storage arrays with different architectures would be in different families even though other characteristics might be the same.

Related information

FlexArray virtualization implementation for third-party storage

NetApp Interoperability Matrix Tool

Supported methods for connecting an ONTAP system to a storage array

You can connect ONTAP system in a fabric-attached configuration with storage arrays. Fabric-attached configurations are supported for both stand-alone systems and HA pairs. Direct-attached configurations are limited to some storage arrays and some ONTAP releases.

The Interoperability Matrix contains information about the connection methods supported for specific storage arrays and platforms running ONTAP.

Related information

NetApp Interoperability Matrix Tool

Sharing storage arrays among hosts

A typical storage array provides storage for hosts from different vendors. However,

ONTAP requires some storage arrays to be dedicated to ONTAP systems.

To determine whether your vendor's storage array must be dedicated to ONTAP systems, see the *Interoperability Matrix*.

Related information

NetApp Interoperability Matrix Tool

Requirements for MetroCluster configurations with array LUNs

Before you set up a MetroCluster configuration with array LUNs, you must ensure that the ONTAP systems and the storage used in the configuration follow basic supportability requirements.

The basic requirements for supporting MetroCluster configurations with array LUNs are as follows:

- You can use both V-Series systems and FAS systems with support for array LUNs in MetroCluster configurations.

  However you must ensure that all the ONTAP systems used in a MetroCluster configuration are of the same model.

- The ONTAP systems can use native disks only, LUNs on storage arrays only, or both.
- If you are setting up a MetroCluster configuration with both native disks and array LUNs, you must use FC-to-SAS bridges and native disks supported by those bridges.
- The ONTAP systems and storage arrays must be identified in the *Interoperability Matrix* as being supported in MetroCluster configurations.

Related information

NetApp Interoperability Matrix Tool

Fabric-attached MetroCluster installation and configuration

Stretch MetroCluster installation and configuration

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