Supported fabric-attached configurations

ONTAP FlexArray

NetApp
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Supported fabric-attached configurations

Various fabric-attached configurations are supported for all the storage array vendors unless mentioned otherwise.

The Interoperability Matrix contains additional information about specific array models.

Related information

NetApp Interoperability Matrix Tool

Stand-alone basic configuration

The stand-alone basic configuration of an ONTAP system that uses array LUNs is a simple, fabric-attached configuration with a single FC initiator port pair accessing a single LUN group.

This configuration is supported for use with all storage arrays listed in the Interoperability Matrix as supported for the release of ONTAP running on your system.

The following illustration shows this configuration:

Related information

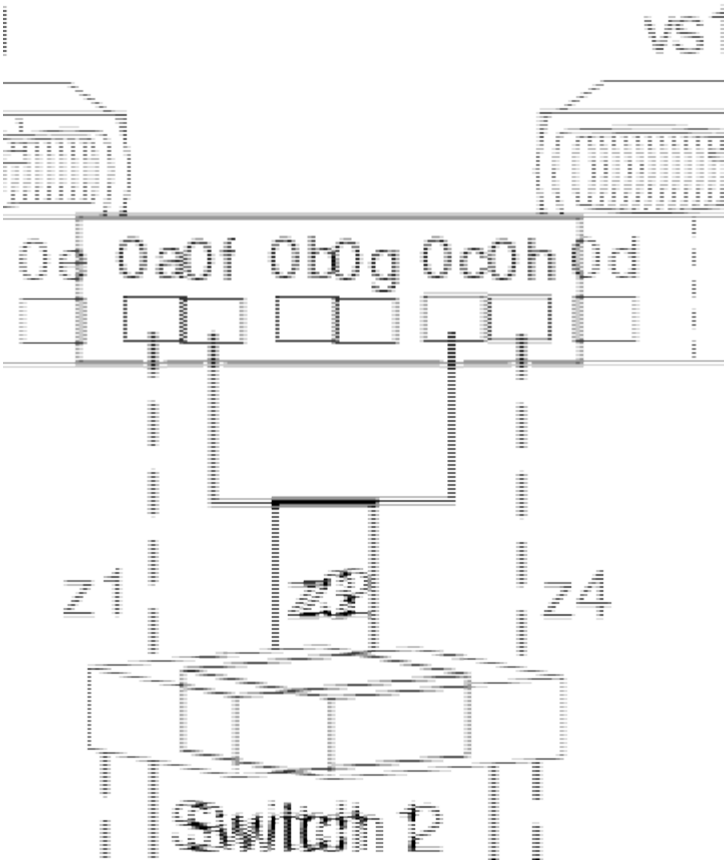
NetApp Interoperability Matrix Tool

Stand-alone system with two 2-port array LUN groups

In a stand-alone ONTAP system that is in a fabric-attached simple configuration, each FC initiator port pair present on the ONTAP system accesses a separate array LUN group.

This configuration is supported for use with all storage arrays listed in the Interoperability Matrix as supported for the release of ONTAP running on your system.

The following illustration shows fabric-attached simple configuration:



Related information

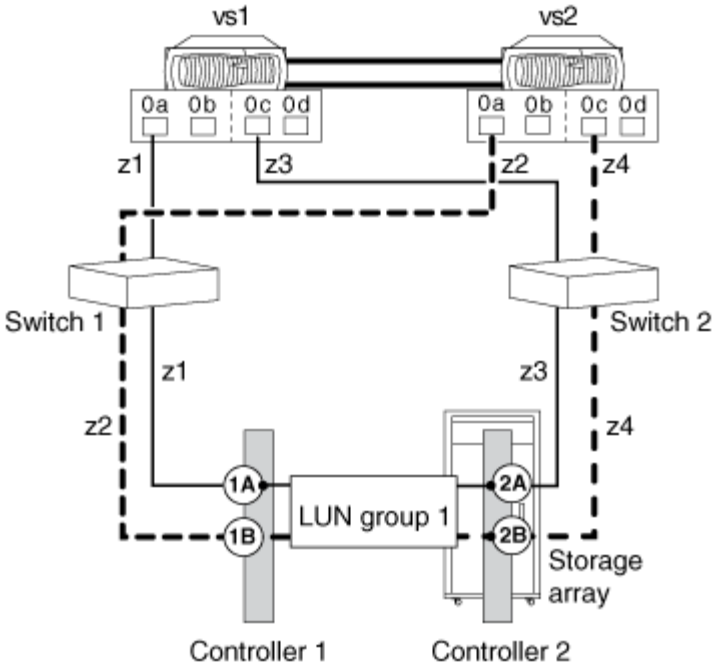
NetApp Interoperability Matrix Tool

Single 4-port array LUN group configuration

This configuration contains a single, 4-port LUN group with each target port accessed by a single ONTAP FC initiator port from the HA pair. Due to zoning, only two paths are allowed to a specific array LUN from each of the ONTAP system.

This configuration is supported for use with all storage arrays listed in the Interoperability Matrix as supported for the release of ONTAP running on your system.

The following illustration shows this configuration:



Related information

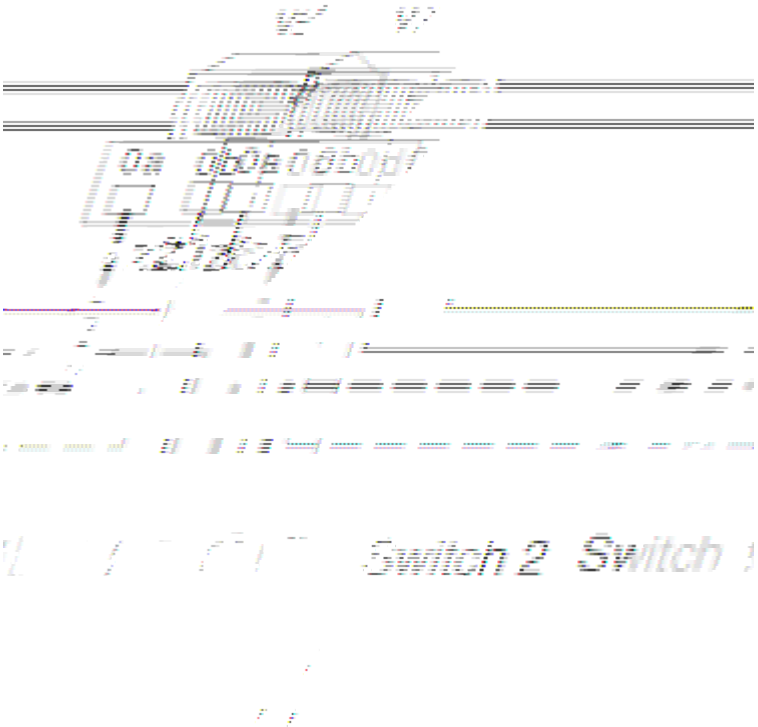
NetApp Interoperability Matrix Tool

Two 4-port array LUN group configuration

In this configuration, each ONTAP FC initiator port pair accesses a separate array LUN group. The zoning is a single ONTAP FC initiator to a single array target port.

This configuration is supported for use with all storage arrays listed in the Interoperability Matrix as supported for the release of ONTAP running on your system.

The following illustration shows a block diagram of this configuration:



Related information

NetApp Interoperability Matrix Tool

Eight-port array LUN group configuration

An eight-port LUN group configuration is supported on clustered V-Series systems and on ONTAP systems that can use array LUNs.

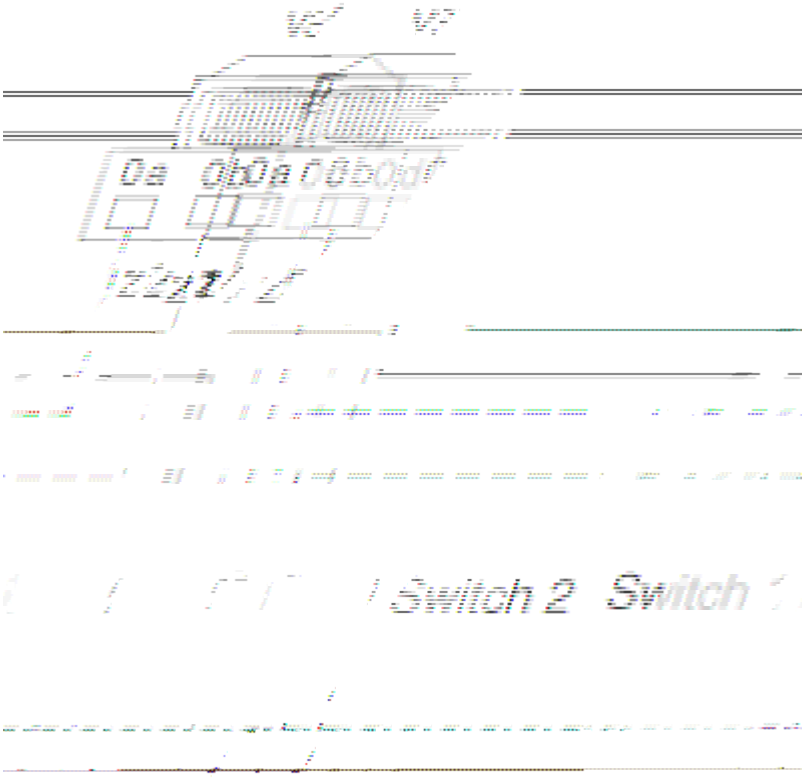
This configuration is supported for use with all storage arrays listed in the Interoperability Matrix as supported for the release of ONTAP running on your system.

There are two ways of deploying this configuration: crossed and uncrossed back-end connections.

Crossed back-end connections

In this configuration with the back-end connections crossed, the FC connections from the same storage array controller go to both fabric switches (redundant).

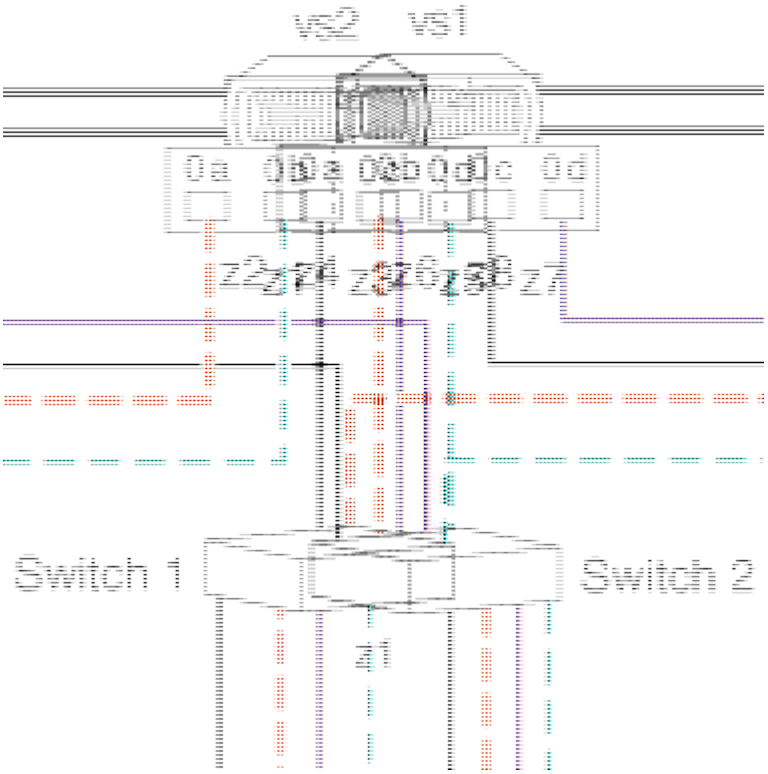
In this illustration of crossed back-end connections, note how the nodes are attached to the switches and to the storage array. Vs1 uses switch 1 when attaching to the storage array Controller 1 port 1A and Controller 2 port 2C, and uses switch 2 when attaching to storage array Controller 2 ports 2A and Controller 1 port 1C. This optimizes the use of switch ports and array ports, which reduces the impact of a switch or storage array controller failure.



Back-end connections are not crossed

In this configuration in which the back-end connections are not crossed, the FC connections from the same storage array controller go to only one fabric switch.

The following illustration shows this configuration when the back-end connections are not crossed.



Related information

NetApp Interoperability Matrix Tool

Fabric-attached MetroCluster installation and configuration

Attaching FC initiator port to multiple targets ports

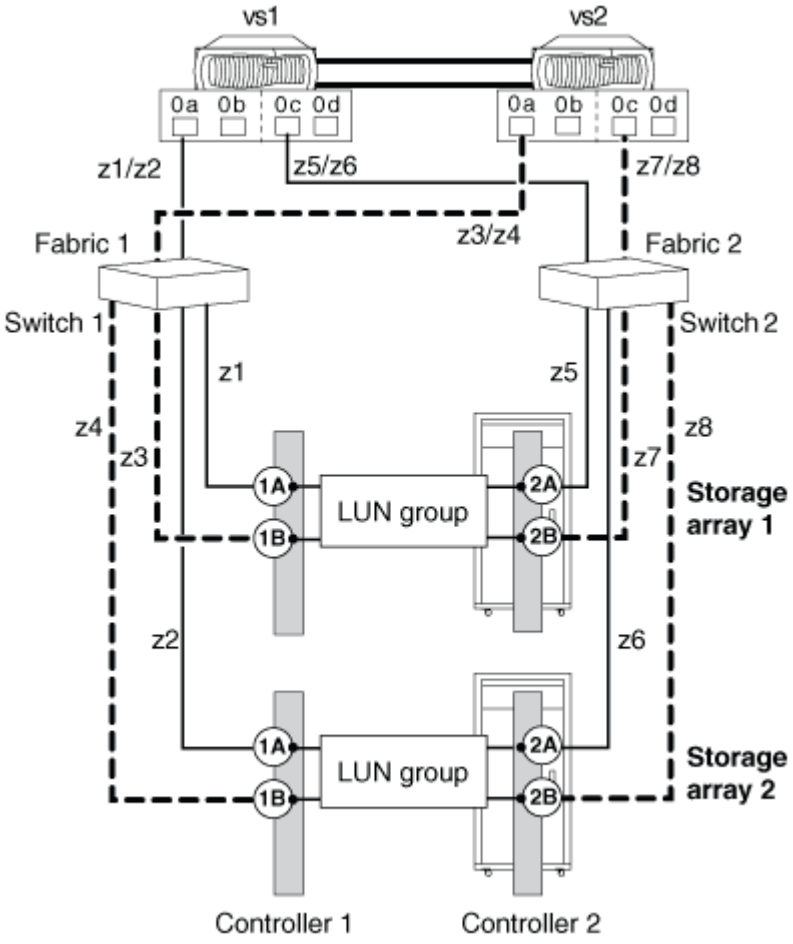
You can connect an FC initiator port on an ONTAP system to multiple target ports on separate storage arrays within the same family. This configuration is supported with MetroCluster configurations in ONTAP.

ONTAP supports sharing an FC initiator port with multiple target ports in both HA pairs and in stand-alone systems. This configuration is supported for use with all storage arrays listed in the Interoperability Matrix as supported for the release of ONTAP running on your system.

For details about sharing an FC initiator port with multiple target ports and zoning, see the information in the *FlexArray Virtualization Installation Requirements and Reference*

Single ONTAP FC initiator port connecting to target ports on separate storage arrays

The following example shows an HA pair in which a single ONTAP FC initiator port connects to multiple target ports on different storage arrays:



Related information

NetApp Interoperability Matrix Tool

FlexArray virtualization installation requirements and reference

Fabric-attached MetroCluster installation and configuration

Sharing a target port with two FC initiator ports

A maximum of two ONTAP FC initiator ports across nodes can be attached to a single target port on the storage array. This configuration is supported with MetroCluster configurations in ONTAP.

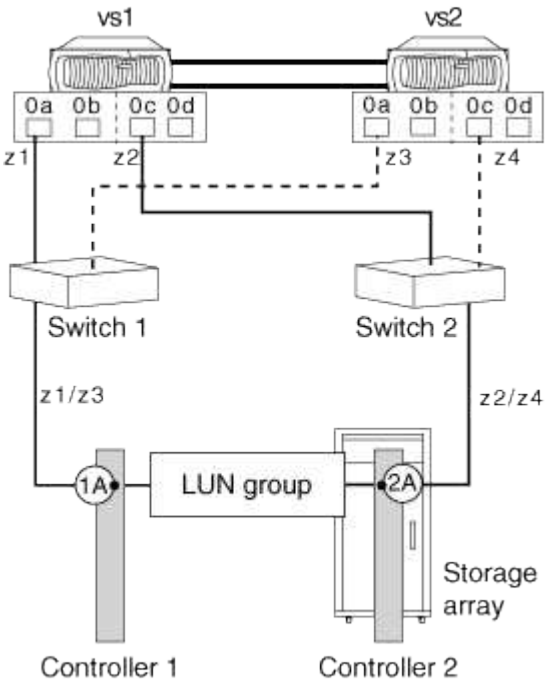
This configuration is supported for use with all storage arrays listed in the Interoperability Matrix as supported for the release of ONTAP running on your system.

The following illustration shows a shared target port configuration with an HA pair. Sharing a target port with two FC initiator ports is supported with both stand-alone systems and HA pairs.

For details about sharing an FC initiator port with multiple target ports and zoning, see the *FlexArray Virtualization Installation Requirements and Reference*

Shared target port attached to FC initiator ports

The following example shows an HA pair in which a single target port connects to two FC initiator ports:



The initiator ports 0a of controllers vs1 and vs2 are connected to the storage array port 1A and ports 0c of the controllers are connected to the storage array port 2A.

Related information

NetApp Interoperability Matrix Tool

FlexArray virtualization installation requirements and reference

Fabric-attached MetroCluster installation and configuration

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