EMC Symmetrix storage arrays

ONTAP FlexArray

NetApp
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Table of Contents

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You must meet specific requirements when configuring storage arrays to work with ONTAP systems that use array LUNs. These requirements include setting configuration parameters on your storage arrays and deploying only supported configurations.

Required Parameter settings on the storage array for ONTAP systems

Certain parameter settings are required on the storage array for the storage array to work successfully with ONTAP systems.

Required host channel director port configuration parameters

The host channel director port configuration parameters that must be set on the storage array are shown in the following table:

Parameter (names might differ between GUI and CLI)	Setting
`Common SN` (Common Serial Number or C-bit parameter)	Enable
`PP` (Point-to-Point parameter)	Enable
`SC3` (SCSI-3)	Enable
`SPC-2` (SCS2_Protocol_version, SCSI Primary Command 2 parameter, or `Allow inquiry data to be compiled to the standard`)	Enable
`UWN` (Unique Worldwide Name)	Enable
`Volume Set Addressing`	Disable

The `Volume Set Addressing` parameter must be set the same way on all channel director ports to which the LUN is mapped. If the settings are different, ONTAP reports this as a LUN ID mismatch in `storage errors show` output and in an EMS message.

Related information

FlexArray virtualization installation requirements and reference

Requirements for implementing LUN security on EMC Symmetrix storage arrays

You use LUN security to eliminate the possibility of a host writing data to a LUN that is not owned by that host.

To eliminate the possibility of a non-ONTAP host overwriting EMC Symmetrix array LUNs owned by an ONTAP system or vice versa, you must present the Symmetrix logical devices through the host (channel) director ports in one of the following ways:

- Present only the Symmetrix logical devices for ONTAP on specific Symmetrix host (channel) director ports that are dedicated to ONTAP use.

  If ports cannot be dedicated to ONTAP, you should confirm that all other hosts using those ports are compatible with ONTAP requirements. This is because each host connected to the Symmetrix array has requirements for different port attribute settings. Sharing ports between multiple hosts that are connected to the Symmetrix storage array might result in an impossible-to-implement configuration.

- For VMAX storage arrays, create masking views for required mapping and masking by creating port groups, Storage Groups, and initiator groups.

  To achieve this, you must first enable the ACLX port attribute on the VMAX storage array ports.

Do not present the VCMDB LUN to all hosts by default. Configure the global setting to restrict visibility to the VCMDB unless it has been specifically made visible to a particular host.

Caution about using the VCMDB LUN

For the VCMDB (Volume Configuration Management Database) to be enabled, the VCMDB LUN must exist. The VCMDB LUN is a `command` type LUN, not a storage LUN. The VCMDB is typically mapped to LUN 0, but can be mapped to an array LUN other than LUN 0.

If the VCMDB LUN is mapped to an ONTAP system, ONTAP periodically logs a message that the VCMDB LUN is less than the minimum size required, and it marks the VCMDB LUN as failed. The ONTAP system continues to function normally after logging this error message, but it cannot use the LUN.

A VCMDB LUN should be unmapped from an ONTAP system.

Caution about using the ACLX LUN

On VMAX arrays, the ACLX (Access Control Logix) LUN is created during initialization if the customer requests that ACLX be used. The ACLX LUN is not a storage LUN, so it should not be mapped to ONTAP.

If the ACLX LUN is mapped to an ONTAP system, ONTAP logs a message that the ACLX LUN is less than the minimum size required, and it marks the LUN as failed. The ONTAP system continues to function normally after logging this error message, but it cannot use the LUN.

The ACLX LUN should be unmapped from the front-end director ports on the ONTAP system.

Restriction on using gatekeeper LUNs

If a gatekeeper logical device (LUN) is presented, you must not map it to the ONTAP system. ONTAP systems cannot use gatekeeper LUNs. A gatekeeper LUN is a Symmetrix logical device through which SYMAPI or the ControlCenter agent communicates with the storage array.

EMC Symmetrix storage array families

ONTAP does not support mixing some types of storage in aggregates. To help you determine the array LUNs that can be mixed in an aggregate, the storage arrays from each vendor are grouped into families. When you create aggregates, you cannot mix array LUNs from different vendors and from different storage array families in the same aggregate.

The following EMC Symmetrix storage array families are supported with ONTAP systems:

- Family 1: VMAX
- Family 2: VMAX3

The Interoperability Matrix is the final authority for information about the storage arrays supported for each vendor.

Related information

NetApp Interoperability Matrix Tool