NetApp

How array LUNs become available for ONTAP storage use

ONTAP FlexArray

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An ONTAP system cannot use an array LUN presented to it until ONTAP has been configured to use the array LUN.

Although the storage array administrator makes an array LUN accessible to ONTAP, ONTAP cannot use the array LUN for storage until both of the following tasks are completed:

1. One ONTAP system (licensed to use array LUNs) must be assigned to be the *owner* of the array LUN.
2. The array LUN must be added to an aggregate.

When you assign an array LUN to an ONTAP system, ONTAP writes data to the array LUN to identify the assigned system as the owner of the array LUN. This logical relationship is referred to as *disk ownership*.

When you assign an array LUN to an ONTAP system, it becomes a spare LUN owned by that system and it is no longer available to any other ONTAP system.

A spare array LUN cannot be used for storage until you add it to an aggregate. Thereafter, ONTAP ensures that only the owner of the array LUN can write data to and read data from the LUN.

In an HA pair, both nodes must be able to see the same storage, but only one node in the pair is the owner of the array LUN. The partner node takes over read/write access to an array LUN in case of a failure of the owning node. The original owning node resumes ownership after the problem that caused unavailability of the node is fixed.

Considerations when planning for disk ownership

If you are deploying multiple ONTAP systems for use with array LUNs, you must determine which system *owns* which array LUNs. Disk ownership ensures that only the ONTAP system that owns a particular array LUN can read data from and write data to the array LUN.

You should consider the following when planning which system will own which array LUNs:

- The maximum assigned device limit supported by your platform

  The *Hardware Universe* shows the maximum assigned device limit that is supported for different platforms. This is a hard-coded limit. If your system uses both array LUNs and disks, this maximum limit is the maximum of disks and array LUNs combined. You must account for both types of storage when determining how many array LUNs and disks you can assign to a system.

- The amount of load that you expect to be generated by different applications used in your environment

  Some types of applications are likely to generate a lot of requests, whereas other applications (for example, archival applications) generate fewer requests. You might want to consider weighing ownership assignments based on expected load from specific applications.

Related information

[NetApp Hardware Universe](#)

Array LUN assignment changes

You can change assignment of a *spare* array LUN from one ONTAP system to another. You might want to change ownership for load balancing over nodes.

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