Disks

System Manager Classic

NetApp
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Disks

View disk information with System Manager - ONTAP 9.7 and earlier

You can use the Disks window in ONTAP System Manager classic (available in ONTAP 9.7 and earlier) to view the name, size, and container details of disks along with graphical information about capacity disks and cache disks.

Steps

1. Click **Storage** > **Aggregates & Disks** > **Disks**.
2. Select the disk that you want to view information about from the displayed list of disks.
3. Review the disk details.

Related information

Disks window

How ONTAP reports disk types in System Manager - ONTAP 9.7 and earlier

ONTAP System Manager classic (available in ONTAP 9.7 and earlier) associates a type with every disk. ONTAP reports some disk types differently than the industry standards; you should understand how ONTAP disk types map to industry standards to avoid confusion.

When ONTAP documentation refers to a disk type, it is the type used by ONTAP unless otherwise specified. *RAID disk types* denote the role that a specific disk plays for RAID. RAID disk types are not related to ONTAP disk types.

For a specific configuration, the disk types that are supported depend on the storage system model, the shelf type, and the I/O modules that are installed in the system.

The following tables show how ONTAP disk types map to industry standard disk types for the SAS and FC storage connection types, and for storage arrays.

SAS-connected storage

ONTAP disk type	Disk class	Industry standard disk type	Description
BSAS	Capacity	SATA	Bridged SAS-SATA disks with added hardware to enable them to be plugged into a SAS-connected storage shelf

ONTAP disk type	Disk class	Industry standard disk type	Description
FSAS	Capacity	NL-SAS	Near Line SAS
MSATA	Capacity	SATA	SATA disk in multi-disk carrier storage shelf
SAS	Performance	SAS	Serial-Attached SCSI
SSD	Ultra-performance	SSD	Solid-state drives

FC-connected storage

ONTAP disk type	Disk class	Industry standard disk type
ATA	Capacity	SATA
FCAL	Performance	FC

Storage arrays

ONTAP disk type	Disk class	Industry standard disk type	Description
LUN	N/A	LUN	Logical storage device that is backed by storage arrays and used by ONTAP as a disk These LUNs are referred to as *array LUNs* to distinguish them from the LUNs that ONTAP serves to clients.

Related information

NetApp Hardware Universe

NetApp Technical Report 3437: Storage Subsystem Resiliency

Determine when it is safe to remove a multi-disk carrier with System Manager - ONTAP 9.7 and earlier

Removing a multi-disk carrier before it is safe to do so can result in one or more RAID groups becoming degraded, or possibly even a storage disruption. ONTAP System Manager classic (available in ONTAP 9.7 and earlier) enables you to determine when it is safe to remove a multi-disk carrier.

When a multi-disk carrier has to be replaced, the following events must have occurred before you can remove the carrier safely:

- An AutoSupport message must have been logged indicating that the carrier is ready to be removed.
- An EMS message must have been logged indicating that the carrier is ready to be removed.
- The state of both disks in the carrier must be displayed as `broken` in the Disks window.

  You must remove the disks only after the carrier mate of a failed disk is evacuated. You can click Details to view the disk evacuation status in the Properties tab of the Disks window.
- The fault LED (amber) on the carrier must be lit continuously indicating that it is ready for removal.
- The activity LED (green) must be turned off indicating there is no disk activity.
- The shelf digital display only shows the shelf ID number.

You cannot reuse the carrier mate of a failed disk. When you remove a multi-disk carrier that contains a failed disk, you must replace it with a new carrier.

Disks window in System Manager - ONTAP 9.7 and earlier

You can use the Disks window in ONTAP System Manager classic (avaiable in ONTAP 9.7 and earlier) to view all the disks in your storage system.

Command buttons

- **Assign**

  Assigns or reassigns the ownership of the disks to a node.

  This button is enabled only if the container type of the selected disks is unassigned, spare, or shared.
- **Zero Spares**

  Erases all the data, and formats the spare disks and array LUNs.
- **Refresh**

  Updates the information in the window.

Tabs

Summary

Displays detailed information about the disks in the cluster, including the size of the spare disks and assigned disks. The tab also graphically displays information about spare disks, aggregates, and root aggregates for HDDs and information about spare disks, disks in a storage pool, aggregates, Flash Pool aggregates, and root aggregates for cache disks (SSDs).

The HDD panel is not displayed for systems with All Flash Optimized personality.

The details panel provides additional information about partitioned and unpartitioned spare disks (disk type,

node, disk size, RPM, checksum, number of available disks, and spare capacity), in tabular format.

Inventory

- **Name**

  Displays the name of the disk.

- **Container Type**

  Displays the purpose for which the disk is used. The possible values are Aggregate, Broken, Foreign, Label Maintenance, Maintenance, Shared, Spare, Unassigned, Volume, Unknown, and Unsupported.

- **Partition Type**

  Displays the partition type of the disk.

- **Node Name**

  Displays the name of the node that contains the aggregate.

  This field is available only at the cluster level.

- **Home owner**

  Displays the name of the home node to which this disk is assigned.

- **Current owner**

  Displays the name of the node that currently owns this disk.

- **Root owner**

  Displays the name of the node that currently owns the root partition of this disk.

- **Data Owner**

  Displays the name of the node that currently owns the data partition of this disk.

- **Data1 Owner**

  Displays the name of the node that currently owns the data1 partition of the disk.

- **Data2 Owner**

  Displays the name of the node that currently owns the data2 partition of the disk.

- **Storage Pool**

  Displays the name of the storage pool with which the disk is associated.

- **Type**

  Displays the type of the disk.

- **Firmware Version**

Displays the firmware version of the disk.

- **Model**

  Displays the model of the disk.

- **RPM**

  Displays the effective speed of the disk drive when the option `raid.mix.hdd.rpm.capacity` is enabled, and displays the actual speed of the disk drive when the option `raid.mix.hdd.rpm.capacity` is disabled.

  This field is not applicable to SSDs.

- **Effective Size**

  Displays the usable space available on the disk.

- **Physical Space**

  Displays the total physical space of the disk.

- **Shelf**

  Displays the shelf on which the physical disks are located.

  This field is hidden by default.

- **Bay**

  Displays the bay within the shelf for the physical disk.

  This field is hidden by default.

- **Pool**

  Displays the name of the pool to which the selected disk is assigned.

  This field is hidden by default.

- **Checksum**

  Displays the type of the checksum.

  This field is hidden by default.

- **Carrier ID**

  Specifies information about disks that are located within the specified multi-disk carrier. The ID is a 64-bit value.

  This field is hidden by default.

Inventory details area

The area below the inventory tab displays detailed information about the selected disk, including information about the aggregate or volume (if applicable), vendor ID, zeroing state (in percent), serial number of the disk, and error details in case of a broken disk. For shared disks, the Inventory details area displays the names of all the aggregates, including the root and the non-root aggregates.

Related information

Viewing disk information

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