



Manage your network with System Manager

ONTAP 9

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Manage your network with System Manager

Network management overview with System Manager

The topics in this section show you how to manage your storage system network — including IPspaces, broadcast domains, subnets, network interfaces, and Ethernet ports — with System Manager in ONTAP 9.7 and later releases.

If you are using the classic System Manager (available only in ONTAP 9.7 and earlier), see this topic:

- [Managing the network](#)

Viewing and managing your network

Beginning with ONTAP 9.8, you can use System Manager to display a graphic that shows the components and configuration of your network. Beginning with ONTAP 9.12.0, you can view the LIF and subnet association on the Network Interfaces grid.

The new network visualization feature enables users to see the network connections path across hosts, ports, SVMs, volumes, etc. in a graphical interface.

The graphic displays when you select **Network > Overview** or when you select  from the **Network** section of the Dashboard.

The following categories of components are shown in the graphic:

- Hosts
- Storage ports
- Network interfaces
- Storage VMs
- Data access components

Each section shows additional details that you can hover your mouse over or select to perform network management and configuration tasks.

Examples

The following are some examples of the many ways you can interact with the graphic to view details about each component or initiate actions to manage your network:

- Click on a host to see its configuration: the ports, network interfaces, storage VMs, and data access components associated with it.
- Hover the mouse over the number of volumes in a storage VM to select a volume to view its details.
- Select an iSCSI interface to view its performance over the last week.
- Click on  next to a component to initiate actions to modify that component.
- Quickly determine where problems might occur in your network, indicated by an "X" next to unhealthy components.



Automatic detection and repair recommendations for network wiring issues

ONTAP can automatically detect and recommend solutions to network wiring issues based on a broadcast domain constituent's (ethernet ports) layer-2 reachability.

Incorrect wiring during cluster setup or when a new node joins an existing cluster might cause an unexpected broadcast domain port assignment. Beginning with ONTAP 9.10.1, the cluster automatically checks for network wiring issues by verifying port reachability after cluster setup or when a new node joins an existing cluster.

If a port reachability issue is detected, System Manager recommends a repair operation to resolve the issue.

After you set up the cluster, network wiring issues are reported on the Dashboard.

After joining a new node to a cluster, network wiring issues appear on the Nodes page.

You can also view network wiring health on the network diagram. Port reachability issues are indicated on the network diagram by a red error icon.

Post cluster setup

After you set up the cluster, if the system detects a network wiring issue, a message appears on the Dashboard.



Steps

1. Correct the wiring as suggested in the message.
2. Click the link to launch the Update Broadcast Domains dialog.
The Update Broadcast Domains dialog opens.



3. Review the information about the port, including the node, the issues, the current broadcast domain, and the expected broadcast domain.
4. Select the ports that you want to repair and click **Fix**.
The system will move the ports from the current broadcast domain into the expected broadcast domain.

Post node join

After joining a new node to a cluster, if the system detects a network wiring issue, a message appears on the Nodes page.

ONTAP System Manager

Search actions, objects, and pages

DASHBOARD

STORAGE

Overview

Applications

Volumes

LUNS

Consistency Groups

NVMe Namespaces

Shares

Buckets

Qtrees

Quotas

Storage VMS

Tiers

NETWORK

EVENTS & JOBS

PROTECTION

HOSTS

SAN Initiator Groups

NVMe Subsystem

NFS Clients

CLUSTER

Overview

Settings

Overview

Overview

NAME

C1_sti75-vsim-ucs179a_1620738189

VERSION

NetApp Release Stormking_9.10.0: Mon May 10 13:29:41 UTC 2021

UUID

9957e052-b253-11eb-8094-005056ac85bc

LOCATION

sti

NTP SERVERS

10.235.48.111

DNS DOMAINS

ctl.gdlenglab.netapp.com, gdl.englab.netapp.com, rtp.netapp.com, eng.netapp.com, netapp.com

NAME SERVERS

10.224.223.131, 10.224.223.130

MANAGEMENT INTERFACES

172.21.105.181, fd20:8b1e:b255:91b6::3d2, fd20:8b1e:b255:91b6::9da

DATE AND TIME

May 25, 2021, 7:51 AM America/New_York

Nodes

Nodes	Name	Serial Number	Up Time	Utilization	Management IP	Service Processor IP	System ID
sti75-vsim-ucs179b / sti75-vsim-ucs179a							
	sti75-vsim-ucs179b	4086630-01-3	13 day(s), 22:39:02	6%	172.21.138.127, fd20:8b1e:b255:91af:29c		4086630013
	sti75-vsim-ucs179a	4086630-01-4	13 day(s), 22:39:02	19%	172.21.138.125, fd20:8b1e:b255:91af:29a		4086630014

One port cannot be reached because the broadcast domain configuration is not correct. Make sure the port cabling and the switch configuration are correct and update broadcast domains.

Update Broadcast Domains

Steps

1. Correct the wiring as suggested in the message.
2. Click the link to launch the Update Broadcast Domains dialog.
The Update Broadcast Domains dialog opens.

Update Broadcast Domains

The broadcast domains for the following ports are not correctly configured.

Port	Node	Issue	Current Broadca...	Expected Broadc...
e0g	sti75-vsim-...	Not reachable	mgmt_bd_1500	Default

Cancel

Fix

3. Review the information about the port, including the node, the issues, the current broadcast domain, and the expected broadcast domain.
4. Select the ports you want to repair and click **Fix**.
The system will move the ports from the current broadcast domain into the expected broadcast domain.

Downloading network data for reporting

Beginning with ONTAP 9.8, you can download the data that is displayed in System Manager about your network.

When you display information in a *List View*, you can click **Download**, and the list of objects displayed is downloaded.

- The list is downloaded in comma-separated values (CSV) format.

- Only the data in the visible columns is downloaded.
- The CSV filename is formatted with the object name and a time stamp.

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