



# Troubleshoot hardware problems

## ONTAP System Manager

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# Troubleshoot hardware problems

Starting with ONTAP 9.8, you can use System Manager to view the configuration of hardware on your network and troubleshoot problems that might arise.

## *Before you Start*

For ONTAP 9.8, System Manager provides a *preview* of the capability to view hardware configurations. The preview only shows a limited number of AFF models.

## *Steps*

1. In System Manager, select **Cluster > Hardware**.
2. Hover your mouse over components to view status and other details.

You can view various types of information:

- [Information about nodes](#)
- [Information about disk shelves](#)
- [Information about storage switches](#)

## Information about nodes

You can view the following:

### **Nodes:**

- Front and rear views are displayed.
- Models with an internal disk shelf also show the disk layout in the front view.
- For ONTAP 9.8, only platform models C190, A220, A300, A400, and A700 are shown.

### **Ports:**

- Console ports are not shown in this preview.
- A port is red if it is down.
- The status of a port and other details are shown when you hover over the port.

### **FRUs:**

Information about FRUs appears only when the state of a FRU is non-optimal.

- Failed PSUs in nodes or chassis.
- High temperatures detected in nodes.
- Failed fans on the nodes or chassis.

### Adapter cards:

- Cards with defined part number fields are shown in the slots if external cards has been inserted.
- Ports on cards are shown.
- Certain cards are shown with specific images of the cards. If the card is not in the list of part numbers supported, then a generic graphic is displayed.

### FlashCache:

- Details about FlashCache are shown like an adapter card if slot information is available.

## Information about disk shelves

You can view the following:

### Disk shelves:

- Front and rear views are displayed.

### Shelf ports:

- Port status is displayed.
- Remote port information is shown if the port is connected.

### Shelf FRUs:

- PSU failure information is shown.

## Information about storage switches

- The display shows switches that act as storage switches used to connect shelves to nodes.
- For ONTAP 9.8, the following model can be viewed: X190100 (Cisco Nexus 3232).

You can view the following:

- **Storage switch** information includes switch name, IP address, serial number, SNMP version, and system version.
- **Storage switch port** information includes identity name, identity index, state, and other details, including remote connection.

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