AVIGILON™

Avigilon Hard Disk Drive Accessories Guide

For Avigilon Systems

NVR5 Premium (96-160TB)
NVR5 Premium FIPS Series (96-160TB)
NVR5 Standard (16-64TB)
NVR5 Value (6-24TB)

NVR4/4X Premium (128-157TB)
NVR4/4X Premium (64-96TB)
NVR4X Premium FIPS Series (64-96TB)
NVR4/4X Standard (16-48TB)
NVR4 Value (6-24TB)

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Before You Start

You can upgrade hard drives or replace the spare hard drives with hot swappable drives. The hard drives in the front and back drive bays are hot-swappable. The hard drives in the internal drive bays are not hot-swappable. A hard drive is referred to also as a hard disk drive (HDD).

TIP

For assistance with any of the procedures in the document, contact Avigilon Technical Support at avigilon.com/contact at any time.

Product Compatibility

Hard Drive Part Number	Compatible NVRs
NVR5-HDDS-HOT-16TB-A1	NVR5 Premium 128/160TB NVR5 Premium 128/160TB (FIPS Series)
NVR5-HDDS-HOT-12TB	NVR5 Premium 96TB NVR5 Premium 96TB (FIPS Series)
NVR5-HDD-HOT-8TB	NVR5 Standard 32/48/64TB NVR5 Value 16/24TB
NVR5-HDD-HOT-4TB	NVR5 Standard 16/24TB NVR5 Value 12TB
NVR5-HDD-HOT-2TB	NVR5 Value 6TB
NVR4-HDDS-HOT-16TB	NVR4/4X Premium 128/157TB
NVR4-HDDS-HOT-12TB	NVR4/4X Premium 96TB NVR4X Premium 96TB (FIPS Series)
NVR4-HDDS-HOT-8TB	NVR4X Premium 64TB NVR4X Premium 64TB (FIPS Series) NVR4/4X Standard 32/48TB NVR4 Value 16/24TB
NVR4-HDDS-HOT-4TB	NVR4/4X Standard 16/24TB NVR4 Value 12TB
NVR4-HDDS-HOT-2TB	NVR4 Value 6TB

Overview

Complete this procedure from a web browser running on a computer on the same area network and with the same subnet mask as the NVR.

To replace the hard drive:

1. Use the iDRAC 9 Web Interface to determine if the problem you are seeing with your NVR is due to a failed hard drive. See *Step 1: Verifying a Hard Disk Failure* on the next page.
2. Identify the physical hard drive that is affected. See *Step 2: Identifying the Failed Physical Hard Drive* on page 8.
3. Create a SupportAssist Collection and save it locally. See *Step 3: Generating a SupportAssist Collection File and Attaching to Support Request* on page 9.
4. Open a support request with Avigilon Support and attach the SupportAssist Collection to the request as proof of the failed hard drive.
5. Avigilon Support will arrange for a technician to deliver the replacement drive, replace the failed drive if you haven't already, and take away the failed drive.
6. If you have a replacement hard drive already available you can install it now. See *Step 4: Replacing Hard Drives* on page 10 if you are installing it yourself.

IMPORTANT

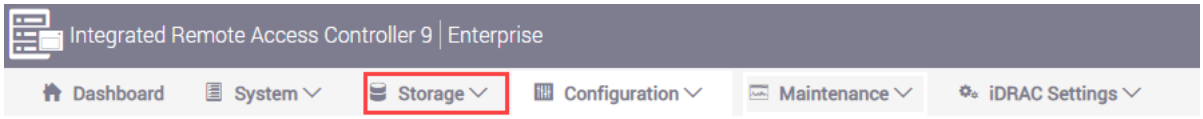
Only replace a hard drive if the hard drive LED indicator and the iDRAC 9 Web Interface displays an error.

Step 1: Verifying a Hard Disk Failure

To check if the issue is due to a failed hard drive, use the iDRAC 9 Web Interface.

Complete this procedure from a web browser running on a computer on the same area network and with the same subnet mask as the NVR that will connect to iDRAC 9 Web Interface.

1. Log in to the iDRAC9 Web Interface by going to `192.168.0.120` or the address set by your DHCP server.
2. If a security certificate warning is displayed, click **Continue to this website**.
3. Navigate to the **Storage** tab.



4. In the Storage pane, go to **PERC H**** Mini (Embedded)** > **Enclosure** > **Physical Disks**.
5. Locate the affected hard drive. The last number in the disk name corresponds to the drive number. For example, Physical Disk 0:1:5 corresponds to the hard drive in the fifth slot of the NVR.

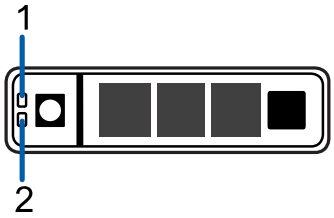
Step 2: Identifying the Failed Physical Hard Drive

Hard drives are located at the front and rear drive bays.

1. Visually inspect the hard drive status indicators to determine which hard drive is affected.
2. Look for one of the three indications that a hard drive needs replacing:

LED Indicator	Description
Flashes green, orange, then off	The hard drive is predicted to fail.
Four short orange flashes per second	The hard drive has failed.
Blinks green for three seconds, orange for three seconds, and off for six seconds	The hard drive rebuild has been aborted.

3. Note the hard drive number which is printed on the recorder case below the front drives, and adjacent to the rear and internal drives. This hard drive number is required to turn the hard drive offline.



   a. Status indicator.
   b. Activity indicator.

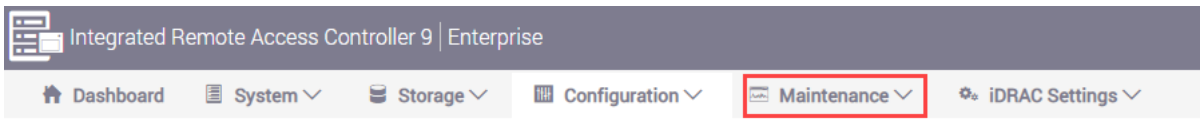
For more information about each indicator, refer to the user guide for the NVR.

Step 3: Generating a SupportAssist Collection File and Attaching to Support Request

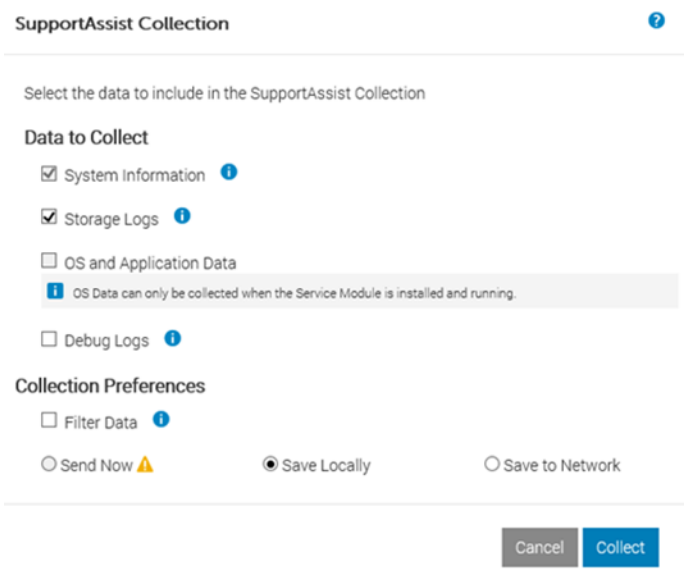
After you have identified a hard drive failure, generate a SupportAssist Collection and save it. You need to attach it to the Technical Support Issue you open, so that Avigilon Support can arrange for you to receive a replacement hard drive.

Complete this procedure from a web browser running on a computer on the same area network and with the same subnet mask as the NVR that will connect to iDRAC 9 Web Interface.

1. Log in to the iDRAC9 Web Interface by going to `192.168.0.120` or the address set by your DHCP server.
2. If a security certificate warning is displayed, click **Continue to this website**.
3. Navigate to the **Maintenance** tab.



4. In the Maintenance pane, go to **SupportAssist> Start a Collection**:



Data to Collect	For a hard drive failure, click to collect **System information** and **Storage Logs** data.
Collection Preferences	Click **Save Locally** to save the generated Collection on the local system, or **Save to Network** to save the generated Collection to a network share location.

5. Click **Collect** and then accept the End User Level Agreement (EULA) to complete the process.
6. In your web browser, open a Technical Support Issue with Avigilon, and upload the saved Collection file.

Step 4: Replacing Hard Drives

IMPORTANT

Only replace a hard drive if an error is displayed in the hard drive LED indicator, and the iDRAC 9 Web Interface.

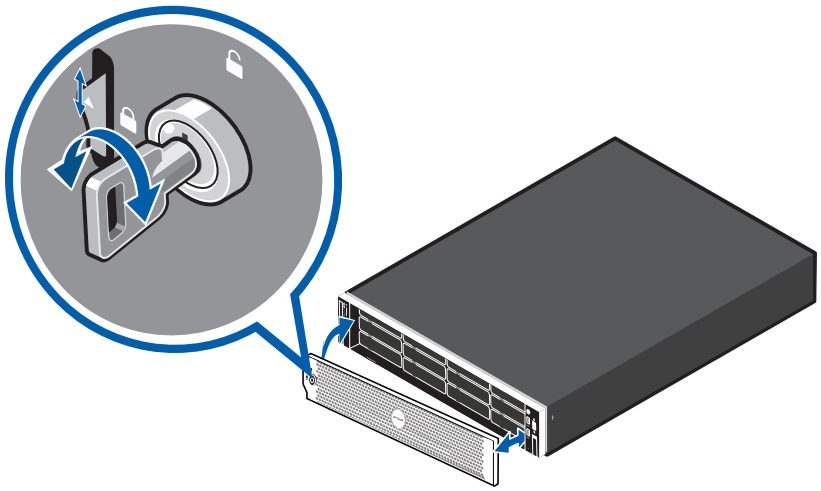
Installing a Hard Drive in an Empty Drive Bay

There may be hard drive blanks protecting empty drive bays at the front of the NVR. You can replace the blanks with hard drives to add additional storage as required.

CAUTION

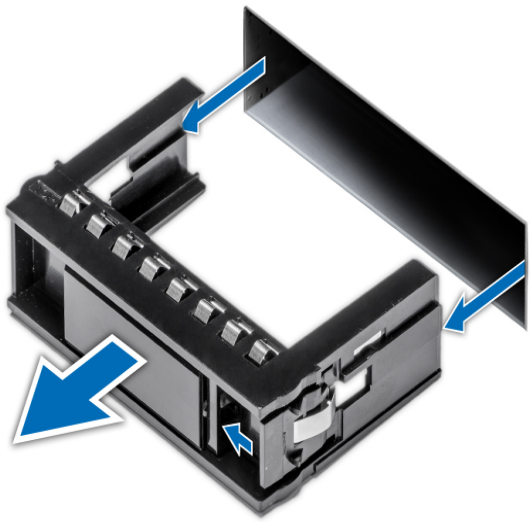
To maintain proper system cooling, drive blanks must be installed in all empty drive slots.

1. Remove the bezel.



   a. Unlock the bezel.
   b. Push the release button next to the lock.
   c. Pull the left end of the bezel then unhook the right end to remove the bezel.

2. Press the release button and slide the blank out of the hard drive slot.



3. Insert the hard drive all the way into the NVR and then push the handle against the hard drive to lock it into place.
4. Open the Server Administrator application and expand the System Tree.

   The new hard drive should be automatically added to the Physical Disks list. The list is typically available here: **System > Storage > PERC H**** > Connector 0 (RAID) > Enclosure (Backplane) > Physical Disks**.
5. Assign a task to the new hard drive or allow it to exist as an extra storage drive.

   It is recommended to use the new hard drive as a hot spare. Hot spares are hard drives that are available on standby in the event of a hard drive failure in the RAID. If that occurs, you can configure the system to automatically redirect recording to the unused hard drive.

   To assign the new hard drive as a hot spare:

   a. In the Task list, select **Assign and Unassign Global Hot Spare**.
   b. Click **Execute**.
6. Open the Server Management page and click Storage in the navigation bar.

Troubleshooting

If the new hard drive is not displayed in the Server Administrator, try one of the following:

- Refresh the browser.
- Reboot the NVR.
- In the System Administrator:
  1. Select **PERC H**** in the System Tree.
  2. Click the **Information/Configuration** tab.
  3. Select **Rescan from the Controller Tasks** list.
  4. Click **Execute**.

Replacing Hard Drives in Front or Rear Drive Bays

Before you replace the hard drive, remove the front bezel of the NVR.

For rear hard drive replacement, ensure the hard drive is visible and accessible.

IMPORTANT

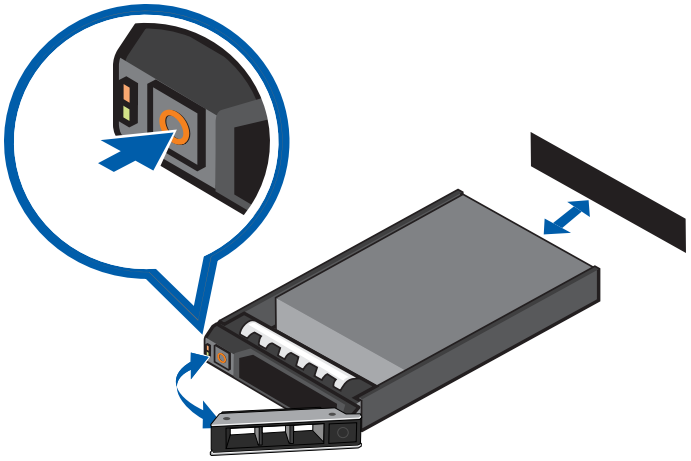
When installing a replacement hard drive, the hard drive automatically rebuilds. Existing data will be overwritten. Make sure the replacement hard drive is blank.

Materials and Equipment

- Replacement hard drive
- Installation instructions
- Physical drive disassembly

Replacing the Hard Drive

1. Locate the failed hard drive at the front or back of the NVR, depending on the model.



2. Press the release button on the front left of the hard drive.
3. When the handle is released, pull the hard drive out of the NVR.
4. Remove the four screws from the side of the hard drive carrier.
5. Lift the failed hard drive out of the carrier.
6. Insert the replacement hard drive into the carrier and screw it into place. The hard drive connectors should face the back.
7. When the hard drive is secured in the carrier, insert the hard drive back into the NVR.
8. Once the hard drive is inserted all the way in, push the handle against the hard drive to lock it into place.

The NVR immediately starts rebuilding the hard drive. The progress of the rebuilding is displayed in the Physical Disks panel or Server Administrator. This may take several hours.

More Information & Support

For additional product documentation and software and firmware upgrades, visit support.avigilon.com.

Product User Guides

For product user guides, visit the Downloads page at avigilon.com/video-infrastructure.

Technical Support

Contact Avigilon Technical Support at support.avigilon.com/s/contactsupport.

Limited Warranty

Avigilon warranty terms for this product are provided at avigilon.com/warranty.