AVIGILON™

Troubleshooting ACC Software and Hardware Issues on Avigilon Servers

Including Virtual Machines, Out-of-Warranty Servers, and 3rd-Party Servers

Avigilon Corporation
avigilon.com

PDF-S-SERVERS-TROUBLESHOOTING-A

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Overview

This document provides support for Avigilon partners and certified technicians troubleshooting Avigilon Control Center Server software displaying issues on out-of-warranty Avigilon servers or 3rd-party-supplied servers. There is also support for troubleshooting server hardware issues and using diagnostic tools to generate and view hardware reports.

If, after following the troubleshooting steps, you need to contact Avigilon Technical Support, ensure that you have collected all the necessary diagnostic reports.

Before Your On-site Visit

1. Download the **nABR program** (Advanced Bug Report - nABR) to create a bug report that will help with troubleshooting system issues.
2. Download the appropriate firmware and drivers available under each model. See *Troubleshooting Server Models* on the next page.

On-site Troubleshooting

As you troubleshoot the server, it is important to make notes. These notes will help in advanced troubleshooting should you need to contact Avigilon Technical Support.

Disabling the ACC Server Service

Before troubleshooting, you must disable the ACC service on the server. By default, ACC server software is set to start up automatically.

1. In the Windows search box, enter **`services`** > Select **Services App**.
2. In the Services window, right-click **Avigilon Control Center Server** > Select **Properties**.
3. On the General tab, set the ACC service **Startup type** to **Disabled**.
4. Click **OK** to save and close.

Running the nABR Program on Non-Linux Appliances

To run the nABR program:

1. Right-click the EXE file and select **Run as administrator**.
2. Click the **Auto Compress Report** box.
3. At the top of the program, click **Create Bug Report**. This creates a folder/ZIP file for the advanced System Bug Report.
4. Wait for the nABR report to complete. It will display a pop-up window with a white background.

Troubleshooting Server Models

Note: If unsure about the server model or warranty status of the Dell rackmount server, go to Dell.com. You can enter your service tag in the search field.

Click the server model link below to begin troubleshooting:

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For other models, contact **Avigilon Customer Support**.

AINVR-VAL

1. Generate a Technical Support report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.

d. Reconnect the power and network cables.
e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
f. Power up the system.

3. Verify storage and hardware performance:
   a. Check the hardware status in the Site Health Report. For more information, see **Site Health**.
   b. Check the storage via its web user interface. For more information, see **OS Storage**.
4. If:
   - The hardware is performing as expected:
     a. It is best practice to update the AI Appliance / AI NVR system firmware. This includes the BIOS and hardware firmware.
     b. If you cannot upgrade the system firmware, download and upgrade the **BIOS and firmware**.
   - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Obtain the system logs:
   a. Access https://<machine_ip>/device.
   b. Select Device Logs.
   c. Click the download button.
6. Perform *General System Checks* on page 26.

AINVR-STD-xxTB

1. Generate a Technical Support report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
   a. Power down the server.
   b. Disconnect the server from all power and network cables.
   c. Press and hold the power button for at least 10 seconds.
   d. Reconnect the power and network cables.
   e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
   f. Power up the system.

   In the next step, you will check the performance of the hardware.
3. Check storage performance:
   a. Check the hardware status using the **Site Health Report**.
   b. Check the storage status, see **Manage Storage**.
4. If:

- The hardware is performing as expected:
    a. It is best practice to update the **AI Appliance / AI NVR system firmware**.
    b. If you cannot upgrade the system firmware, download and upgrade the **BIOS and firmware**.
- You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next steps.

5. Obtain the system logs:
    a. Access https://<machine_ip>/device.
    b. Select Device Logs.
    c. Click the download button.
6. Before contacting Avigilon Technical Support, see *Final Troubleshooting Steps* on page 27.

AINVR-PRM

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. To load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the **BIOS and firmware**.
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Obtain the system logs:
    a. Access https://<machine_ip>/device.
    b. Select Device Logs.
    c. Click the download button.
6. Perform *General System Checks* on page 26.

AINVR-PRM-PLUS

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the **BIOS and firmware**.
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Obtain the system logs:
    a. Access https://<machine_ip>/device.
    b. Select Device Logs.
    c. Click the download button.
6. Perform *General System Checks* on page 26.

HD-NVR

1. Generate an Advanced DSET report. See *Compiling a Dell System E-Support Tool (DSET) Report* on page 29.

    If your server is not booting into Windows, generate a diagnostic report to provide to Avigilon Technical Support. For information on generating this report, see **Guide to download DSET report from live image Dell tool**.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.

3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the following firmware and drivers from **BIOS and firmware**.
        - BIOS
        - iDRAC with Lifecycle Controller
        - SAS RAID - Dell PERC PERC6i Adapter firmware release OR SAS RAID - Dell PERC H700 Adapter firmware release
        - Network - Broadcom NetXtreme network device firmware
        - Network - Broadcom Windows 64bit driver update for NetXtreme Ethernet adapters
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

HD-NVR2

1. Generate an Advanced DSET report. See *Compiling a Dell System E-Support Tool (DSET) Report* on page 29.

    If your server is not booting into Windows, generate a diagnostic report to provide to Avigilon Technical Support. For information on generating this report, see **Guide to download DSET report from live image Dell tool**.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

HD-NVR3-VAL

1. Generate a Technical Support report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administratorr (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

HD-NVR3-STD and HD-NVR3-PRM

1. Generate a Technical Support report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:

- The hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
- You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.

5. Perform *General System Checks* on page 26.

NVR4-VAL

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR4-STD (All Models)

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA) and confirm that your hardware status is

healthy.

a. Open OMSA by double-clicking on the OMSA icon on the Desktop.
b. Log in with a Windows administrator account.

4. If:
   - The hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
   - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR4-PRM

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
   a. Power down the server.
   b. Disconnect the server from all power and network cables.
   c. Press and hold the power button for at least 10 seconds.
   d. Reconnect the power and network cables.
   e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
   f. Power up the system.

   In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
   a. On the desktop, double-click the **OMSA** icon.
   b. Log in with a Windows administrator account.
4. If:
   - The hardware is performing as expected, download and upgrade the **BIOS and firmware**.
   - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR4X-STD (All Models)

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
   a. Power down the server.
   b. Disconnect the server from all power and network cables.
   c. Press and hold the power button for at least 10 seconds.

d. Reconnect the power and network cables.
e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
f. Power up the system.

In the next step, you will check the performance of the hardware.

3. Load the Dell OpenManage Server Administrator (OMSA) and confirm that your hardware status is healthy.
   a. Open OMSA by double-clicking on the OMSA icon on the Desktop.
   b. Log in with a Windows administrator account.
4. If:
   - The hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
   - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR4X-PRM-64/96/128/157TB

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
   a. Power down the server.
   b. Disconnect the server from all power and network cables.
   c. Press and hold the power button for at least 10 seconds.
   d. Reconnect the power and network cables.
   e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
   f. Power up the system.

   In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA) and confirm that your hardware status is healthy.
   a. Open OMSA by double-clicking on the OMSA icon on the Desktop.
   b. Log in with a Windows administrator account.
4. If the:
   - Hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
   - Avigilon servers are not performing as expected, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR4X-PRM-192TB and 217TB

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the **BIOS and firmware**.
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR4X-PRM-FIPS-64/96/128/157TB

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA) and confirm that your hardware status is healthy.
    a. Open OMSA by double-clicking on the OMSA icon on the Desktop.
    b. Log in with a Windows administrator account.
4. If:

- The hardware is performing as expected, download and upgrade the appropriate firmware and drivers **BIOS and firmware**.
- You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.

5. Perform *General System Checks* on page 26.

NVR5-STD

Note: The instructions below do not apply to the NVR5-PRM-252/288/360/432TB model.

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
   a. Power down the server.
   b. Disconnect the server from all power and network cables.
   c. Press and hold the power button for at least 10 seconds.
   d. Reconnect the power and network cables.
   e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
   f. Power up the system.

   In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
   a. On the desktop, double-click the **OMSA** icon.
   b. Log in with a Windows administrator account.
4. If:
   - The hardware is performing as expected, download and upgrade the **BIOS and firmware**.
   - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR5-PRM-96-160TB

Note: The instructions below do not apply to the NVR5-PRM-252/288/360/432TB model.

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:
    - The hardware is performing as expected, download and upgrade the **BIOS and firmware**.
    - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.
5. Perform *General System Checks* on page 26.

NVR5-PRM-192/224TB

Note: The instructions below do not apply to the NVR5-PRM-252/288/360/432TB model.

1. Generate a Technical Support Report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
    a. Power down the server.
    b. Disconnect the server from all power and network cables.
    c. Press and hold the power button for at least 10 seconds.
    d. Reconnect the power and network cables.
    e. To allow iDRAC time to initialize, wait about 2 minutes before powering up the server.
    f. Power up the system.

    In the next step, you will check the performance of the hardware.
3. Load the Dell OpenManage Server Administrator (OMSA):
    a. On the desktop, double-click the **OMSA** icon.
    b. Log in with a Windows administrator account.
4. If:

- The hardware is performing as expected, download and upgrade the **BIOS and firmware**.
- You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next step.

5. Perform *General System Checks* on page 26.

VMA-AIAx-CGx-xx

1. Generate a Technical Support report. See *Compiling a Technical Support Report (TSR)* on page 30.
2. Flush excess power from the server:
   a. Shut down the OS and server.
   b. Disconnect the power cable.
   c. Press and hold the power button for 30 seconds.
   d. Reconnect the power cable.
   e. Power up the server.

   In the next step, you will check the performance of the hardware.
3. Check storage performance:
   a. Check the hardware status using the **Site Health Report**.
   b. Check the storage status, see **Manage Storage**.
4. If:
   - The hardware is performing as expected:
     a. It is best practice to update the **AI Appliance / AI NVR system firmware**.
     b. If you cannot upgrade the system firmware, download and upgrade the **BIOS and firmware**.
   - You detected any issues on your Avigilon server hardware, contact **Avigilon Customer Support** immediately. For other hardware, resolve the issues and complete the next steps.
5. Obtain the system logs:
   a. Access https://<machine_ip>/device.
   b. Select Device Logs.
   c. Click the download button.
6. Before contacting Avigilon Customer Support, see *Final Troubleshooting Steps* on page 27.

VMA-AS1 - Black Avigilon Appliance 8/16/24 Port Built-In Switch

1. (For the 8-port appliance only) Before step 2, complete the instructions in *Just a bunch of Disks (JBOD) Troubleshooting* on page 25.
2. (For the 8-port,16-port and 24-port switch appliances) Log in to Windows.
3. Run JMicron.
4. Select **Start** > **All Programs** > **JMicron HW RAID Manager** > **JMicron HW RAID Manager**.
5. In the **Basic** tab, select **RAID** and **Disk Information**.
6. Verify if:

- One or more hard drives are listed as failed.
- The RAID Status is Degraded.
- Failed disks are highlighted in red.

7. Highlight the failed hard drive to view details, and take a screen-shot of the JMicron status.

   Next, you will identify the correct drive to ensure that you replace the correct drive.
8. To identify the drive, note the serial number of the failed drive.

9. Replace any failed hard drives.
10. Proceed with needed driver updates.
11. Download the listed firmware and drivers:
    - For Windows 10 OS units, see **HDVA VMA-AS1 JMicron Windows 10 Drivers**.
    - For Windows 7 OS units, see **Where to download HDVA VMA-AS1 Windows 7 drivers**.
12. Perform *General System Checks* on page 26.

VMA-AS2/AS3 - Avigilon White Appliance with 8/16/24 Port Built-In Switch

If it's a 16-port or 24-port switch appliance, follow the next steps. If it's an 8-Port switch unit, go to: JBOD Troubleshooting.

1. (For the 8-port appliance only) Before step 2, complete the instructions in *Just a bunch of Disks (JBOD) Troubleshooting* on page 25.
2. (For 8-port,16-port and 24-port switch appliances) Log in to Windows.
3. Open a web browser and go to the Marvell web interface: `http://127.0.0.1:8845` or `http://localhost:8845`.

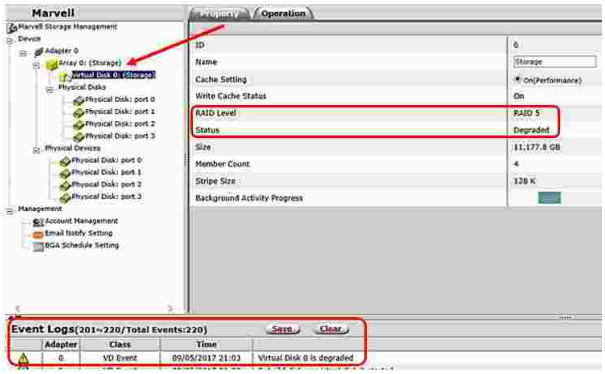
   Note: This can be accessed only via a loopback IP address.
4. Log in using a Windows account with administrator rights.
5. Check for missing hard drives.

a. Navigate to Physical Disks and expand the hard drive list. There should be four hard drives: Physical Disk: port 0 up to Physical Disk: port 3.

b. If the list is missing at least one hard drive (see the example below), note the missing unit. This screen shows that Physical Disk: port 3 is missing and may have already failed.

c. If you have a hard drive missing, expand the Array 0 tree.

d. Click on Virtual Disk 0: (Storage).



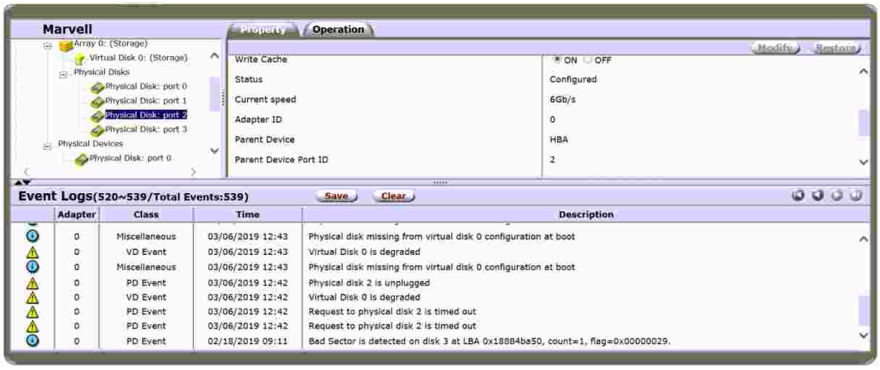
6. On the right pane, check the RAID level and status. The RAID Level should be RAID 5 and Status as Functional.

a. If the Status shows Degraded or PD Missing, at least one hard drive is failing or has failed already. Click Physical Disk: port 0 to port 3 to check the Status.

b. Take a screenshot of this screen.

c. Check the LED status lights of the hard drives on the front panel to know which hard drive is defective.

d. Check the Event Logs for more details. See the examples below.



e. The Event Logs in the above screenshot show Physical Disk 2 (PD2) is unplugged or offline. PD2 needs to be replaced. It also shows that Physical Disk 3 has 1 bad sector.

f. Click on the first hard drive in the list of Physical Devices.

g. If the Status field shows Configured (functional hard drive), copy the serial number.

h. Repeat for the other hard drives. This helps to ensure that you replace the faulty HDD.

i. If it is still under warranty, submit an online RMA for the failed hard drives.

7. Download BIOS driver updates.

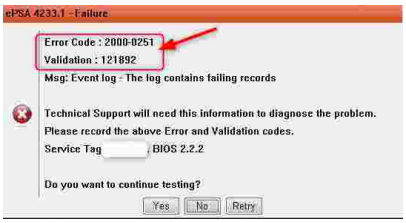
- For VMA-AS2, see **How to Upgrade the Phison SSD Firmware of HDVA VMA-AS2-xPx**.
- For VMA-AS3, go to **Software Downloads** and download the BIOS.

8. Perform *General System Checks* on page 26.

Avigilon Workstations

1. Flush excess power from the server:
   a. Shut down the OS and server.
   b. Disconnect the power cable.
   c. Press and hold the power button for 30 seconds.
   d. Reconnect the power cable.
   e. Power up the server.
2. Run the Dell pre-boot system assessment (ePSA):
   a. When the system is booting, press F12.
   b. Select **Diagnostics**.

      A graphical menu listing all discovered devices in the system is displayed and the hardware diagnostics should run.
   c. When the ePSA reaches memory tests, it asks if you want to proceed because it may take about 30 minutes.
   d. Click **Yes** if you suspect you have a possible memory issue.
   e. Click **No** to skip memory diagnostics.
   f. If the ePSA finds a hardware issue, it displays an error message like the image below:



   g. Note the Error Code and Validation number number or take a photo of it.
3. Perform *Just a bunch of Disks (JBOD) Troubleshooting* on page 25.
4. Perform *General System Checks* on page 26.

3rd Party Server

1. Verify that the RAID Controller software on the server is in an optimal state including each virtual drive.
2. Take screenshots of the RAID controller results.
3. If the server is set up using Just a bunch of Disks (JBOD), complete the steps in *Just a bunch of Disks (JBOD) Troubleshooting* on page 25.
4. Ensure that the server's firmware is up-to-date.
5. Perform *General System Checks* on page 26.

Virtual Machines

Avigilon has not performed formal tests with virtualization and therefore does not support this configuration. It is recommended that you run ACC within a native host OS on a physical server for the most reliable performance.

1. Read the article **Is the ACC Server or Client Supported to Run on a Virtual Machine or Virtual Environment**.
2. Ensure that all of the resources allocated for the virtual machine are still available and that the virtual machine is not running out of resources.
3. Ensure that the virtual machine has dedicated disk pooling and Network Interface Cards.
4. Ensure that all the hardware on the host machine has no issues.
5. Perform *General System Checks* on page 26.

Just a bunch of Disks (JBOD) Troubleshooting

Performing a Hard Drive Reseat

Issues may occur if the hard drive is not correctly connected or seated.

To reseat the hard drive:

1. Shut down Windows.
2. Power down the computer.
3. Disconnect the power cables.
4. Press and hold the power button to flush the remaining power out.
5. Release the power button after 30 seconds.
6. Open the chassis.
7. Disconnect and reconnect the plug at the back of the hard drive.
8. Close the chassis.
9. Reconnect the power cables.
10. Power up the system and start up Windows.

Troubleshooting with software

1. Install and run **Seagate SeaTools**.

   Note that there are other similar 3rd-party tools that you can use.
2. Select the check boxes for the hard drives.
3. Click **Basic Test** and click **Short Drive Self Test**.
4. Take a screenshot of the results of the test.
5. Click **Basic Test** and select **SMART test**.
6. Take a screenshot of the results of the test.
7. If any issues are detected, replace the hard drives.

General System Checks

1. Ensure that Volume C: has at least 20% of its capacity free.
2. Advise Technical Support if the server has this folder `C:\AvigilonData`. For more information, see:
   - **Drive C used as Data Volume**
   - **ACC Data for Device was Dropped Due to Storage System Performance**.
3. Run Windows Update. For more information, see **How to enable Windows updates**.
4. To configure Anti-Virus settings, see **AV exceptions**.
5. Ensure that the Avigilon folders have the correct permissions.
6. Open Windows File Explorer, navigate to ProgramData.
7. Apply the following steps to both the Avigilon folder and the AppData\Local folder:
   a. Right-click the folder > click **Properties** > Click **Security** tab > Click **Edit** to open the Permissions for Avigilon dialog box >
   b. Click the **Authenticated Users** group or click **Users group**.

      If the Security tab does not show Authenticated Users in `ProgramData\Avigilon\Client` (and files and folders inside this path), the issue may recur eventually. You can click Add and in the Check Names box, enter **Authenticated Users** > Click **OK**.

      a. In the Permissions box, select the **Allow** check box to grant permission.
      b. Click **Apply** > **OK**.
8. Before contacting Avigilon Technical Support, complete *Final Troubleshooting Steps* on the next page.

Final Troubleshooting Steps

1. Run the nABR report. For more information, see **How to use the nABR report**.
    a. To run the nABR program, right-click the EXE file and select **Run as administrator**.
    b. Click the **Auto Compress Report** box.
    c. At the top of the program, click **Create Bug Report**. This creates a folder/ZIP file for the advanced System Bug Report.

    > **Note:** Wait for the nABR report to complete. It will display a pop-up window with a white background.

2. If you have a Dell NVR requiring a firmware upgrade, generate a new TSR. See *Compiling a Technical Support Report (TSR)* on page 30.
3. Create a folder on your desktop that contains all the previously gathered troubleshooting and testing information for the Avigilon Technical Support to review.
4. Prepare the system for a remote session. Open this **link** to allow Avigilon Technical Support to provide you with a session code for the remote session to start.
5. If you are unable to install TeamViewer, click *Unable to Launch TeamViewer* on the next page.
6. After starting the session, enter the ID and password provided on the software.

    > **Note:** Avigilon Technical Support may request additional steps and verification that these steps were followed in order to resume normal operations of the NVR. For example, a RAID Storage Consistency Check on the full array on storage related issues.

7. Contact **Avigilon Customer Support**.

Unable to Launch TeamViewer

1. If aTeamViewer installation is not permitted, download **QuickSupport**.

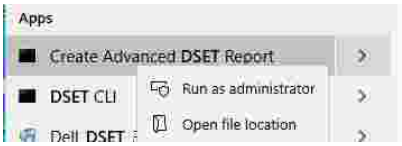
   > **Note:** Avigilon Customer Support may request additional steps and verification that these steps were followed in order to resume normal operations of the NVR, such as a RAID storage Consistency Check on the full array if any issues have been reported of storage related issues.

2. Launch the software, and enter the ID and password.
3. Contact **Avigilon Customer Support**.

Compiling a Dell System E-Support Tool (DSET) Report

The DSET report compiles a list of system performance checks including logs.

1. Click the Windows Icon at the bottom left of the screen, and enter DSET. The option to Create an Advanced DSET Report appears.



   If the report does not appear, for the installation file, contact **Avigilon Customer Support**.
2. On the Welcome page, click **Next**.
3. Accept the Software License Agreement.
4. Select the location of the saved DSET report.
5. Choose the following options:
   - Hardware Information
   - Storage Information
   - Software Information
   - Log Files.
6. Click **Next**.
7. Click **Start** to start the report.
8. Click *HD-NVR* on page 11 to continue troubleshooting your server.

Compiling a Technical Support Report (TSR)

1. Complete the steps in *Compiling a TSR from the Windows Command Prompt (HD-NVR2 and newer NVRs)* below.

2. Complete the steps in *Compiling a TSR via iDRAC 7/8 SupportAssist Collection (HD-NVR2 and HD-NVR3)* on page 32

3. Complete the steps in *Compiling a TSR via iDRAC 9 SupportAssist Collection* on page 33.

4. Complete the steps in *Compiling a TSR on an AI-NVR* on page 34.

Compiling a TSR from the Windows Command Prompt (HD-NVR2 and newer NVRs)

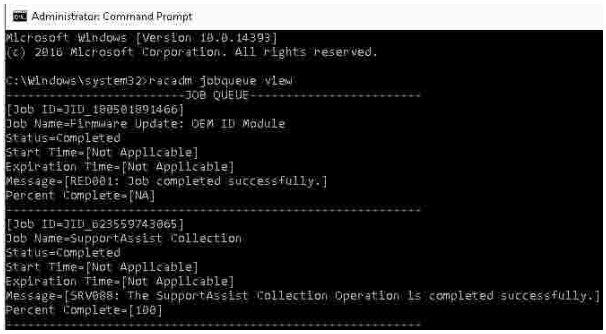
At the Windows command prompt:

1. Run CMD as administrator.
    - In the Windows taskbar search box, enter **cmd**. Ensure that the Command Prompt App is selected.
    - Click **Run as administrator**.
    - Click **Yes** in the UAC prompt.
    - Enter: `racadm techsupreport collect -t sysinfo,ttylog`.
2. If the *ERROR: RACADM is unable to process the requested subcommand because there is no local RAC configuration to communicate with* message appears:
    - Enter **`cd C:\Program Files\Dell\sysMgt\idracracadm techsupreport collect -t sysinfo,ttylog`** and wait 2-3 minutes.
    - To check the status on the job queue, enter **`racadm jobqueue view.`**

      The job (listed last) is complete when it displays 100%. You can re-enter the command to check on the progress.

      The image below shows when a job has started:

The image below shows when a job is completed:



3. To export the TSR, enter `racadm techsupreport export -f C:\[path]\TSR_[servicetag]_[date].zip`.
    - where: [path] is the path to a local folder
    - [servicetag] is the service tag of the system
    - [date] is the date you captured the TSR
    - This exports a ZIP file containing the TSR to the specified folder -- for example: C:\temp\TSR_1A2B3C4_20190520.zip.
4. Click a link below to continue troubleshooting your server:
    - *AINVR-VAL* on page 8
    - *AINVR-STD-xxTB* on page 9
    - *AINVR-PRM* on page 10
    - *AINVR-PRM-PLUS* on page 11
    - *HD-NVR2* on page 12
    - *HD-NVR3-VAL* on page 13
    - *HD-NVR3-STD and HD-NVR3-PRM* on page 13
    - *NVR4-VAL* on page 14
    - *NVR4-STD (All Models)* on page 14
    - *NVR4-PRM* on page 15
    - *NVR4X-STD (All Models)* on page 15
    - *NVR4X-PRM-64/96/128/157TB* on page 16
    - *NVR4X-PRM-192TB and 217TB* on page 17
    - *NVR5-STD* on page 18
    - *NVR5-PRM-96-160TB* on page 18
    - *NVR5-PRM-192/224TB* on page 19
    - *VMA-AIAx-CGx-xx* on page 20

Compiling a TSR via iDRAC 7/8 SupportAssist Collection (HD-NVR2 and HD-NVR3)

1. Open a web browser and navigate to iDRAC's IP address. The default address is `192.168.0.120`.
2. On the left menu, click **Troubleshooting**, and then click the **SupportAssist** tab (with iDRAC firmware version 2.30.30.30 and higher).

   In firmware version 2.10.10.10 up to version 2.30.30.30, the report is called Tech Support Report. Follow the setup assistant steps.
3. Click **Edit Collection Data**.
4. Select the check boxes for:
   a. Hardware
   b. RAID Controller Log
   c. OS and Application Data (Standard Data)
5. Click **Apply**.
6. Click **Export Support Collection**.

   The progress bar appears at the top of screen.
7. After the report/log is compiled, click **OK** to download the file.
8. Compress the file.
9. Click a link below to continue troubleshooting your server:
   - *AINVR-VAL* on page 8
   - *AINVR-STD-xxTB* on page 9
   - *AINVR-PRM* on page 10
   - *AINVR-PRM-PLUS* on page 11
   - *HD-NVR2* on page 12
   - *HD-NVR3-VAL* on page 13
   - *HD-NVR3-STD and HD-NVR3-PRM* on page 13
   - *NVR4-VAL* on page 14
   - *NVR4-PRM* on page 15
   - *NVR4-STD (All Models)* on page 14
   - *NVR4X-STD (All Models)* on page 15
   - *NVR4X-PRM-64/96/128/157TB* on page 16
   - *NVR4X-PRM-192TB and 217TB* on page 17
   - *NVR5-STD* on page 18
   - *NVR5-PRM-96-160TB* on page 18
   - *NVR5-PRM-192/224TB* on page 19
   - *VMA-AIAx-CGx-xx* on page 20

Compiling a TSR via iDRAC 9 SupportAssist Collection

1. Open a web browser and navigate to iDRAC's IP address. The default address is `192.168.0.120`.
2. On the menu, click **Maintenance**.
3. If a pop-up prompts you to register, click **Cancel**.
4. Click the **SupportAssist** tab (with iDRAC firmware version 2.30.30.30 and higher).
5. Click **Start a Collection**.
6. Select System information (default), Storage Logs, and OS and Application Data.
7. Ensure that the Filter Data check box is cleared.
8. Click **Collect**. The End User License Agreement Appears.
9. Click **I accept the terms of the license agreement** check box, and click **Continue**.

   The system starts collecting the data. You can view the progress bar.
10. Click **Save** and **View**.
11. Click **Save** to save the ZIP file.
12. Click **Save** to save the viewer.html file if you want to view the report on the server.
13. For older iDRAC 9 firmware, click **OK** when complete.

    The TSR file is generated and downloaded.
14. Contact **Avigilon Customer Support**.
15. Click a link below to continue troubleshooting your server:
    - *AINVR-VAL* on page 8
    - *AINVR-STD-xxTB* on page 9
    - *AINVR-PRM* on page 10
    - *AINVR-PRM-PLUS* on page 11
    - *HD-NVR2* on page 12
    - *HD-NVR3-VAL* on page 13
    - *HD-NVR3-STD and HD-NVR3-PRM* on page 13
    - *NVR4-VAL* on page 14
    - *NVR4-PRM* on page 15
    - *NVR4-STD (All Models)* on page 14
    - *NVR4X-STD (All Models)* on page 15
    - *NVR4X-PRM-64/96/128/157TB* on page 16
    - *NVR4X-PRM-192TB and 217TB* on page 17
    - *NVR5-STD* on page 18
    - *NVR5-PRM-96-160TB* on page 18
    - *NVR5-PRM-192/224TB* on page 19
    - *VMA-AIAx-CGx-xx* on page 20

Compiling a TSR on an AI-NVR

1. Open the AI NVR WebUI within a browser.
2. From the menu on the left, navigate to the Device section.
3. Search for the Support section, and click the **Dell Support Assist Collection** option.
    - The TSR report should start automatically downloading. (Click Ctrl+J to check ongoing downloads.)
    - The TSR report should be viewable and able to be transferred back, if needed.
4. Click a link below to continue troubleshooting your server:

- *AINVR-VAL* on page 8
- *VMA-AIAx-CGx-xx* on page 20
- *AINVR-PRM* on page 10
- *AINVR-PRM-PLUS* on page 11

Limited Warranty

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