Abstract

This guide helps you to troubleshoot power supply failure alerts on an Isilon cluster.

June 6, 2018
## Contents and overview

**Note**
Follow all of these steps, in order, until you reach a resolution.

### 1. Follow these steps.

Before you begin
- [Page 3](#)

### 2. Perform troubleshooting steps in order.

Start troubleshooting
- [Page 4](#)

Check hardware status
- [Page 5](#)

Multiple – 1 or no readings reported
- [Page 7](#)

Single – 1 or no reading reported
- [Page 8](#)

Check power outlet
- [Page 9](#)

Reseat power supply
- [Page 10](#)

Recurring power supply issues
- [Page 11](#)

### 3. Appendixes

- [Appendix A](#)
  - If you need further assistance
- [Appendix B](#)
  - How to use this flowchart
Before you begin

**CAUTION!**

If the node, subnet, or pool that you are working on goes down during the course of troubleshooting and you do not have any other way to connect to the cluster, you could experience data unavailability.

Therefore, make sure that you have more than one way to connect to the cluster before you start this troubleshooting process. The best method is to have a serial cable available. This way, if you are unable to connect through the network, you will still be able to connect to the cluster physically.

For specific requirements and instructions for making a physical connection to the cluster, see [article 304071](http://bit.ly/isi-docfeedback) on the EMC Online Support site.

Before you begin troubleshooting, confirm that you can connect through either another subnet or pool, or that you have physical access to the cluster.

**Configure screen logging through SSH**

We recommend that you configure screen logging to log all session input and output during your troubleshooting session. This log file can be shared with EMC Isilon Technical Support, if you require assistance at any point during troubleshooting.

**Note:** The screen session capability does not work in OneFS 7.1.0.6 and 7.1.1.2. If you are running either of these versions, you can configure logging by using your local SSH client’s logging feature.

1. Open an SSH connection to the cluster and log in by using the root account.
   
   **Note:** If the cluster is in compliance mode, use the compadmin account to log in. All compadmin commands must be preceded by the `sudo` prefix.

2. Change the directory to `/ifs/data/Isilon_Support` by running the following command:

   ```
   cd /ifs/data/Isilon_Support
   ```

3. Run the following command to capture all input and output from the session:

   ```
   screen -L
   ```

   This will create a file named `screenlog.0` that will be appended to during your session.

4. Perform troubleshooting.
Start troubleshooting

Introduction
Start troubleshooting here. If you need help to understand the flowchart conventions that are used in this guide, see Appendix B: How to use this flowchart.

If you have not done so already, log in to the cluster and configure screen logging through SSH, as described on page 3.

Is any type of maintenance currently being performed on the cluster?

Yes

In-progress maintenance can trigger false positives. We suggest that you wait for the maintenance to complete to see if your power supplies return to normal functionality.

No

Did the power supplies return to normal functionality?

Yes

End troubleshooting

No

Go to Page 5
Check hardware status

You could have arrived here from:
- Page 4 – Start troubleshooting

Run the following command:

```bash
isi_hw_status
```

Using the output of the `isi_hw_status` command, review the values returned for the power supply and fan sensor values as shown in the note box on this page.

Are the values showing legitimate values (not 0, -1, or null value)?

- **Yes**
  - Go to Page 11

- **No**
  - Go to Page 6

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**Note**
Refer to the following lines of output for your node type. All the values in the examples shown below are legitimate, that is, they are not 0, -1 or null.

**For S/X200, X/NL400, 36/72/108NL, or 36/72000X nodes:**
- Power Supply 1 Fan
- Power Supply 2 Fan
- Power Supply 1 Input Voltage
- Power Supply 2 Input Voltage
- Temp Power Supply 1
- Temp Power Supply 2

**For S/X210, X410, NL410, or HD400 nodes:**
- PS FAN SPEED 1
- PS FAN SPEED 2
- PS IN VOLT 1
- PS IN VOLT 2
- PS OUT VOLT 1
- PS OUT VOLT 2
- PS TEMP 1
- PS TEMP 2
Check hardware status (2)

You could have arrived here from:

- Page 5 - Check hardware status

What is the value showing?

- If the output shows multiple values reporting -1, or if there is no reading. Go to Page 7
- If the output is reporting a single -1 on a specific value, or if there is no reading. Go to Page 8
- If the output is reporting 0 for any values. Go to Page 9
If the output shows multiple values reporting –1, or if there is no reading, refer to these documents to see if they can help to solve your problem:

- For S/X200, X/NL400, 36/72/108NL, or 36/7200X nodes: i2C bus stops responding, causing numerous false alerts, 471896

- For S210, X210, X410, NL410, or HD400 nodes: S210, X210, X410, NL410 or HD400 shows event: 'Node's Baseboard Management Controller (BMC) and/or Chassis Management Controller (CMC) are unresponsive', 466373

Did the documentation solve the issue?

Yes → End troubleshooting

No → Go to Page 9
The power supply could be bad if the below lines of output are reporting a single -1 for a specific value, or if there is no reading for any of the values:

**For S/X200, X/NL400, 36/72/108NL, or 36/72000X nodes:**
- Power Supply 1 Fan
- Power Supply 2 Fan
- Power Supply 1 Input Voltage
- Power Supply 2 Input Voltage
- Temp Power Supply 1
- Temp Power Supply 2

**For S210, X210, X410, NL410, or HD400 nodes:**
- PS FAN SPEED 1
- PS FAN SPEED 2
- PS IN VOLT 1
- PS IN VOLT 2
- PS OUT VOLT 1
- PS OUT VOLT 2
- PS TEMP 1
- PS TEMP 2

Note the page number that you are currently on. Upload log files and contact Isilon Technical Support, as instructed in Appendix A.
Reseat power supply

You could have arrived here from:
- Page 9 - Check power outlet

Reseat the power supply.

Is the problem resolved?

Yes → End troubleshooting

No

Note the page number that you are currently on.
Upload log files and contact Isilon Technical Support, as instructed in Appendix A.

For links to all Isilon customer troubleshooting guides, visit the Customer Troubleshooting - Isilon Info Hub.
Recurring power issues

You could have arrived here from:

- Page 5 - Check hardware status

---

Do you get the same issue on this power supply repeatedly?

- Yes
  - Refer to: S210 or X410 node incorrectly alerts for low power supply output voltage, 472056
  - Yes
    - End troubleshooting
  - No
    - Did the documentation solve the issue?
      - Yes
        - End troubleshooting
      - No
        - Monitor the power supply for 72 hours to see if the issue recurs.

- No
  - Did the issue recur?
    - Yes
      - Note the page number that you are currently on. Upload log files and contact Isilon Technical Support, as instructed in Appendix A.
    - No
      - End troubleshooting

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For links to all Isilon customer troubleshooting guides, visit the Customer Troubleshooting - Isilon Info Hub.

Appendix A: If you need further assistance

Contact EMC Isilon Technical Support

If you need to contact Isilon Technical Support during troubleshooting, reference the page or step that you need help with. This information and the log file will help Isilon Technical Support staff resolve your case more quickly.

Upload node log files and the screen log file to EMC Isilon Technical Support

1. When troubleshooting is complete, type `exit` to end your screen session.
2. Gather and upload the node log set and include the SSH screen log file by using the command appropriate for your method of uploading files. If you are not sure which method to use, use FTP.

   **ESRS:**
   
   `isi_gather_info --esrs --local-only -f /ifs/data/Isilon_Support/screenlog.0`

   **FTP:**
   
   `isi_gather_info --ftp --local-only -f /ifs/data/Isilon_Support/screenlog.0`

   **HTTP:**
   
   `isi_gather_info --http --local-only -f /ifs/data/Isilon_Support/screenlog.0`

   **SMTP:**
   
   `isi_gather_info --email --local-only -f /ifs/data/Isilon_Support/screenlog.0`

   **SupportIQ:**
   
   Copy and paste the following command. **Note:** When you copy and paste the command into the command-line interface, it will appear on multiple lines (exactly as it appears on the page), but when you press Enter, the command will run as it should.

   `isi_gather_info --local-only -f /ifs/data/Isilon_Support/screenlog.0 --noupload `
   `--symlink /var/crash/SupportIQ/upload/ftp`

3. If you receive a message that the upload was unsuccessful, refer to article 304567 on the EMC Online Support site for directions on how to upload files over FTP.
Appendix B: How to use this flowchart

Introduction
Describes what the section helps you to accomplish.

You could have arrived here from:
• Page # - Page title

Decision diamond
Yes
Process step
Optional process step
End point

No
Process step with command:
command xyz
Go to Page #

Note
Provides context and additional information. Sometimes a note is linked to a process step with a colored dot.

CAUTION!
Caution boxes warn that a particular step needs to be performed with great care, to prevent serious consequences.

Directional arrows indicate the path through the process flow.

Document Shape
Calls out supporting documentation for a process step. When possible, these shapes contain links to the reference document. Sometimes linked to a process step with a colored dot.