A man in a white shirt and glasses is working on a server rack in a data center. The image is in grayscale, with an orange circle highlighting the man's arm.

# Troubleshooting Hardware for N5850-48X6C Switch

This document provides guidance for troubleshooting hardware alarms on the N5850-48X6C switch and for reinstalling the PicOS® operating system. It covers LED alarm types, chassis alarm messages, and step-by-step procedures for upgrading or recovering PicOS®. Following this guidance will help you quickly resolve hardware issues and restore device functionality.

## Switch Hardware Fault Maintenance

### System Fault

Check the system status (Diag) LED on the front panel to identify potential issues. Refer to the table below for fault symptoms and recommended actions.

LED Status	Issue Description	Recommended Action
The Diag LED is Amber.	System self-diagnostic test detected a fault (fan, thermal, or interface).	<ol style="list-style-type: none"> <li>1. Determine whether the fault occurred immediately after the switch was powered on, or after a period of normal operation.</li> <li>2. Log in to the switch via the console port and collect the switch version and diagnostic logs for further analysis.</li> <li>3. If you are unable to log in to the switch via the console port, power cycle the switch to determine whether the fault persists.</li> <li>4. If restarting the switch does not resolve the issue, check the system diagnostic LED:</li> </ol>
The Diag LED is off.	The system is not receiving power or not operating even after receiving power	<ol style="list-style-type: none"> <li>1. Check the power cord connection.</li> <li>2. Replace the power cord and/or power supply, then verify whether the switch is functioning properly.</li> <li>3. If the issue persists, replace the power cord and/or power supply again, and verify functionality.</li> <li>4. If the problem remains, collect and print the console logs, then contact us for support.</li> </ol>

### Power Supply Fault

1. Check the power status LED on the front panel:

- Solid Green: The power module is powered on.
- Solid Amber: The power module is not powered on or is faulty.
- Off: The power module is not receiving power or not operating even after receiving power.

2. Verify the power module via command line:

Execute Show power to confirm if the power supply is functioning properly. The command is as follow:

```
admin@picos> show system rpsu
```

3. If the power shows any problems, check the table below to see what the LED indicators mean and what actions to take.

LED Status	Issue Description	Recommended Action
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<ul style="list-style-type: none"> <li>• The PSU LED is amber.</li> <li>• The power status LED is off.</li> </ul>	<p>The power module is not functioning properly.</p>	<ol style="list-style-type: none"> <li>1. Check the power supply system connected to the device to confirm that it is delivering power and that the voltage is within the normal range.</li> <li>2. Check whether the power cord is loose. If necessary, replace the power cord or try a different power outlet to see if the issue persists.</li> <li>3. Remove and reinstall the power module. If the issue persists, replace the power module to determine whether the problem lies with the module or the power slot.</li> <li>4. Verify the current power status of the switch by running the "show system rpsu" command.</li> <li>5. Collect the above information for further analysis.</li> </ol>
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### Fan Fault

Check the fan status LED on the front panel:

- Solid Green: The fan works normally.
- Solid Amber: The system is faulty.
- Off: The power module is not receiving power or not operating even after receiving power.

Verify the fan module via command line:

Execute Show fan to confirm if the fan is functioning properly. The command is as follow:

```
admin@picos> show system fan
```

If the fan shows any problems, check the table below to see what the LED indicators mean and what actions to take.

LED Status	Fault Symptom	Suggested Action
<p>The fan status LED is off or amber.</p>	<p>The system is functioning but with a fan anomaly.</p>	<ol style="list-style-type: none"> <li>1. Check the physical fan status of the switch to identify any fans with abnormal speeds or noises. If two or more fans are faulty, power down the switch until the fans are replaced.</li> <li>2. Verify the fan status and operating temperature with the commands "run show system fan" and "run show system temperature." If the operating temperature exceeds 40°C, shut down the switch immediately.</li> <li>3. Replace the faulty fan module and confirm that the fan is operating normally. Gather the above information for further analysis.</li> </ol>

### Switch System Fault Maintenance

In certain situations, the PicOS® software on your device may become corrupted or fail to boot. To recover the system, you can either upgrade the existing software or use an emergency boot device to perform a fresh installation.

#### Software Upgrade

Before you begin, you need to download the installation media image for your device from the corresponding software download

documentation.

To upgrade the software package, you need to:

1. Download the required version.
2. Open a file transfer tool, such as WinSCP, XShell, or MobaXterm; then log in by entering the hostname, username, and password.
3. After the connection is established, upload the downloaded version.
4. Log in to the switch and enter:

```
admin@PICOS> start shell sh
admin@PICOS:~$ sudo su
root@PICOS:/home/admin# ls
PicOS-4.7.0E-DCN-c94c584003-fs-x86.bin
root@PICOS:/home/admin# upgrade PicOS-4.7.0E-DCN-c94c584003-fs-x86.bin
```

```
Verifying image checksum ... OK.
Preparing image archive ... OK.
Checking prerequisites
  Hardware compatibility (as5835) [OK]
  Configuration file (/pica/config/pica_startup.boot) [OK]
  License () [OK]
  GRUB partition mount [OK]
  Boot option (PICOS-4.6.0E-DCN-1929b76f86) [OK]
  Partition label [OK]
Stopping PICOS
Stage 1 of upgrade
  Extracting kernel and ramdisk [OK]
Stage 1 of PICOS-4.7.0E-DCN upgrade successful!
Please find log at /cftmp/upgrade.log!
PRESS SPACE KEY TO STOP REBOOT
Countdown: 10 9 8 7 6 5 4 3 2 1 ...
Rebooting...
root@PICOS:/home/admin# [ 775.405032] reboot: Restarting system
```

```
Booting `PICOS-4.7.0E-DCN`
Loading, please wait...
Stage 2 of upgrade
  Data backuping [OK]
  Format current partition [OK]
  Extract files to /dev/sda5, taking about 3 minutes [OK]
  Data restoring [OK]
Upgrade to 4.7.0E-DCN successful!
```

5. Log in and verify the software version.

```
admin@PICOS> show version
Copyright : Copyright (C) 2009-2025 Pica8, Inc. All Rights Reserved.
Model : N5850-48X6C
Software Version : 4.7.0E-DCN/c94c584003-fs
Software Released Date : 11/20/2025
Serial Number : HWCG2312185480N00018
System Uptime : 0 day 0 hour 3 minute
Hardware ID : 3C4D-865E-B02E-6E0D
```

```
License Type : Uninstalled
Device MAC Address : 64:9d:99:6a:dc:01
admin@PICOS>
```

## Device ONIE

If PicOS® on your device is damaged in some way that prevents the software from loading correctly, you may need to perform a recovery installation using an emergency boot device (for example, a USB flash drive) to restore the default factory installation. Once you have recovered the software, you need to restore the device configuration. You can either create a new configuration as you did when the device was shipped from the factory, or if you saved the previous configuration, you can simply restore that file to the device. Use the following procedure to create an emergency boot device.

1. Please contact customer support to obtain the RBoot installation package.
2. Insert a USB drive into the computer and copy the installation version to the USB drive.

 **onie-installer.bin**

2025/11/21 15:21

BIN

3. Insert the USB drive into the device.
4. Log in to the switch and install the software version using a USB drive.

```
admin@PICOS# run start shell sh
admin@PICOS:~$ sudo nos-boot-mode install
Type 'yes' to install NOS!
Type 'no' to exit
[no]/yes: yes
The next reboot will enter ONIE install mode.
Reboot required to take effect.
admin@PICOS:~$ sudo reboot -f
```

```
admin@PICOS# run start shell sh
admin@PICOS:~$ sudo nos-boot-mode install
Type 'yes' to install NOS!
Type 'no' to exit
[no]/yes: yes
The next reboot will enter ONIE install mode.
Reboot required to take effect.
admin@PICOS:~$ sudo reboot -f
Rebooting.
[ 410.258416] reboot: Restarting system
```

The switch automatically enters ONIE install OS mode to perform the software installation.

GNU GRUB version 2.02

```
+-----+
| PICOS-4.6.0E-DCN-1929b76f86 |
| *ONIE                       |
+-----+
```

Use the ^ and v keys to select which entry is highlighted.  
 Press enter to boot the selected OS, `e` to edit the commands  
 before booting or `c` for a command-line.  
 The highlighted entry will be executed automatically in 0s.  
 Booting `ONIE`

loading ONIE ...  
 welcome to GRUB!

GNU GRUB version 2.02

```
+-----+
| *ONIE: Install OS          |
| ONIE: Rescue              |
| ONIE: Uninstall OS       |
| ONIE: Update ONIE        |
| ONIE: Embed ONIE         |
| DIAG: Accton Diagnostic (accton_as7816_64x) |
+-----+
```

Use the ^ and v keys to select which entry is highlighted.  
 Press enter to boot the selected OS, `e` to edit the commands  
 before booting or `c` for a command-line.  
 The highlighted entry will be executed automatically in 0s.  
 Booting `ONIE: Install OS`

```
+-----+
| *PICOS-4.7.0E-DCN-c94c584003 |
| ONIE                          |
+-----+
```

Use the ^ and v keys to select which entry is highlighted.  
 Press enter to boot the selected OS, `e` to edit the commands  
 before booting or `c` for a command-line.  
 The highlighted entry will be executed automatically in 0s.  
 Booting `PICOS-4.7.0E-DCN-c94c584003`

Loading, please wait...

5. Log in to the switch to verify the version.

```
admin@PICOS> show version
Copyright : Copyright (C) 2009-2025 Pica8, Inc. All Rights Reserved.
Model : N5850-48X6C
Software Version : 4.7.0E-DCN/c94c584003-fs
Software Released Date : 11/20/2025
Serial Number : HWCG2312185480N00018
System Uptime : 0 day 0 hour 3 minute
Hardware ID : 3C4D-865E-B02E-6E0D
License Type : Uninstalled
Device MAC Address : 64:9d:99:6a:dc:01
admin@PICOS>
```



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