

Date: October 30, 2019

Revision	Date	Changes
1.0	October 30, 2019	Initial release
1.1	November 11, 2019	Added 7150SC Series
1.2	April 30, 2020	About for EOS 4.24 and above added

Category: Hardware

Notification about bug 419257 affecting a range of fixed system switches

Affected Products:

The table below shows the summary set of affected products. The products affected include all systems within the listed product, with either forward or reverse airflow, optional SSD or expanded memory configurations.

Arista Product Number	Arista Product Number	Arista Product Number
DCS-7010T-48	DCS-7050SX3-48YC12	DCS-7020TR-48
DCS-7010T-48-DC	DCS-7050CX3-32S	DCS-7020TRA-48
DCS-7050TX-48	DCS-7060CX-32S	DCS-7020SR-24C2
DCS-7050TX-64	DCS-7060CX2-32S	DCS-7020SRG-24C2
DCS-7050TX-72	DCS-7060SX2-48YC6	DCS-7280TR-48C6
DCS-7050TX-72Q	DCS-7160-48YC6	DCS-7280TRA-48C6
DCS-7050TX-96	DCS-7160-48TC6	DCS-7280SR-48C6
DCS-7050TX2-128	DCS-7160-32CQ	DCS-7280SRA-48C6
DCS-7050SX-64	DCS-7280SE-64	DCS-7280SRAM-48C6
DCS-7050SX-72	DCS-7280SE-68	DCS-7280SR2K-48C6-M
DCS-7050SX-72Q	DCS-7280SE-72	DCS-7280SR2-48YC6
DCS-7050SX2-72Q	DCS-7150SC-24-CLD	DCS-7280SR2A-48YC6
DCS-7050SX-96	DCS-7150SC-64-CLD	DCS-7280SRM-40CX2
DCS-7050SX2-128		DCS-7280QR-C36
DCS-7050QX-32S		DCS-7280QRA-C36S

DCS-7050QX2-32S		
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In a small set of cases the systems listed above may experience an unexpected reboot. The reload is due to an uncorrectable ECC error caused by a corner case timing conflict on the CPU sub-system tracked by bugID 419257. This bug affects the range of CPU models present in these products. The affected systems are not restricted by specific serial numbers or date code ranges and the reload is unpredictable.

The bug is resolved via a new Aboot/BIOS image with updated memory controller settings. Arista Aboot is the system BIOS and manages system settings prior to EOS initialization.

Systems not listed in the table are not affected by this issue

Resolution:

An updated version of Aboot is available to address reloads due to this bug. A system reload is required for the Aboot changes to take effect. It is recommended that the updated version of Aboot is applied to systems that have experienced at least one reload as shown below:

```
switch#show reload cause
Reload Cause:
-----
Unknown

Debugging Information:
-----
None available.
```

There are currently 4 release trains of Aboot across these systems: 4.0.x and 4.1.x, 6.0.x and 6.1.x. A single common patch file will introduce the update across all release trains, and is not platform or version specific. The Aboot upgrade is independent of EOS versions, and can be applied to any affected system.

Systems running Aboot6 BIOS revision lower than 6.1.7 or 6.0.9 and Aboot4 BIOS revision lower than 4.1.1 or 4.0.7 do not include the memory controller optimizations. To verify the current version of Aboot the following command can be executed on any system:

```
switch#show version detail | grep Aboot-norcal
Aboot                               Aboot-norcal6-6.1.2-4757975
```

The version output may vary, but if it's lower than the version numbers listed the system may be susceptible.

If a system running the fixed versions of Aboot experiences a unknown reload please contact Arista TAC.

About Installation Steps:

Note: Removal of power during the upgrade process may result in an unrecoverable system.

The Aboot upgrade requires a reload of the system to take effect. Two installation file options are provided, an auto-reload version and a version that requires a manual or scheduled reload post installation. Please select the appropriate option. Both Aboot files for installation are available from the links below.

Option	Extension Name	Extension	MD5 Sum	EOS
Manual reload	Aboot-patch-v1.0 .2-419257.i686.r pm	i686.rpm	i686.md5sum	All EOS versions
Auto-reload	Aboot-patch-v1.0 .2-419257-auto- reload.i686.rpm	i686.rpm	i686.md5sum	All EOS versions
Manual reload	Aboot-patch-419 257.i686.rpm	i686.rpm	i686.md5sum	All versions up to EOS 4.23 (inclusive)
Auto-reload	Aboot-patch-419 257-auto- reload.i686.rpm	i686.rpm	i686.md5sum	All versions up to EOS 4.23 (inclusive)

The auto-reload RPM will automatically reload within one minute. Otherwise, the switch must be manually reloaded for the Aboot Upgrade to complete.

CLI Installation Steps

Before starting the installation process, please save any outstanding configuration changes.

1. Copy the RPM onto the flash of the switch and verify its location:

```
switch#dir flash:Aboot-patch-419257.i686.rpm
Directory of flash:/Aboot-patch-419257.i686.rpm
  -rw-      28592804          Oct 7 15:49
  Aboot-patch-419257.i686.rpm

29343125504 bytes total (26921005056 bytes free)
```

2. Copy the RPM from flash to the extension directory:

```
switch#copy flash:Abboot-patch-419257.i686.rpm extension:
Copy completed successfully.
switch#dir extension:
Directory of extension:/
      -rw-      28592804          Oct 7 15:54
Abboot-patch-419257.i686.rpm

29343125504 bytes total (26892337152 bytes free)
```

3. Validate the MD5 hash for the RPM from the extensions directory:

```
switch#verify /md5 extension:Abboot-patch-419257.i686.rpm
verify /md5 (extension:Abboot-patch-419257.i686.rpm) =
517073e920005cfff95ca32fa5ec04c3
```

4. Install the extension (this will take several seconds) and validate that it has been installed:

```
switch#extension Abboot-patch-419257.i686.rpm
switch#show extensions
```

Name	Version/Release	Status
Extension -----		

Abboot-patch-419257.i686.rpm	1.0.0/13680488\	A, I 1
	.edchienabootu\	
	pgrade0.6	

A: available | NA: not available | I: installed | NI: not installed | F: forced

5. Installation logging can be checked in /var/log/messages, where the messages should be similar to those shown below:

```
switch#bash sudo grep EXTENSION /var/log/messages
Sep 26 20:40:08 mn507 python: %EXTENSION-6-INSTALLING: Installing
extension Abboot-patch-419257.i686.rpm, version 1.0.0, SHA-1
0a87a06cfd34cbd5622d99d06d3de2c6cb8e7f73
Sep 26 20:40:10 mn507 root: %EXTENSION-6-INSTALL: Extension
Abboot-patch-419257 is being installed.
Sep 26 20:42:10 mn507 root: %EXTENSION-6-INSTALL: Extension
Abboot-patch-419257. Abboot is upgraded. Reboot required.
Sep 26 20:42:10 mn507 python: %EXTENSION-6-INSTALLED: Extension
Abboot-patch-419257.i686.rpm has been installed.
```

6. If the Auto-Reload RPM was applied the switch will automatically reload within one minute. Otherwise the switch must be manually reloaded for the Aboot Upgrade to complete. NOTE: It is not necessary to move the RPM to boot-extensions prior to reloading, and the Aboot Upgrade will be persistent across any future reloads or EOS Upgrades.

7. Once the device has fully booted validate that the Aboot Image is now updated:

```
switch#show version detail | grep Aboot-norcal  
Aboot                Aboot-norcal6-6.1.7-13531819
```

8. Once the system Aboot version is upgraded, the RPM is no longer needed and can be removed from extensions if desired.

```
switch#delete extension:Aboot-patch-419257.i686.rpm
```

If you experience any errors during RPM installation, or the Aboot version does not show the updated version number after reboot please collect the following and contact Arista Support (support@arista.com) for further assistance:

- show tech-support
- show version detail

For More Information If you require further assistance, or if you have any further questions regarding this field notice, please contact the Arista Networks Technical Assistance Center (TAC) by one of the following methods:

- Open a Service Request <http://arista.com>
- By email: support@arista.com
- By telephone: 408-547-5502 866-476-0000

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