Dell EMC SD-WAN Edge 600 Series Release Notes September 2019

This document describes the new features, enhancements, and fixed issues for the Dell EMC SD-WAN Edge 600 Series (610, 620, 640, and 680) platforms.

Topics:

Document revision history

Table 1. Revision history

Revision	Date	Description
A00	2019–09	Initial release.

Features and requirements

The following requirements apply to the Edge 600 Series:

Hardware description

- Edge 610—two-core CPU
- Edge 620—four-core CPU
- Edge 640—eight-core CPU
- Edge 680—sixteen-core CPU
- Six 1 GbE networking ports
- Two 1 GbE SFP or 10 GbE SFP+ ports, depending on the platform
- One dedicated MiniUSB 2.0 console port for out-of-band management
- Two USB 3.0 Type A ports on each side of the platform
- One M.2 SATA SSD with 120 GB or 240 GB capacity for the Edge 620, 640, and 680 platforms
- DDR4 with ECC
- Memory by SKU:
  - Edge 610—4 GB on-board
  - Edge 620—8 GB on board
  - Edge 640 and Edge 680—16 GB on-board + 16 GB SO-DIMM
- Zero, one, or two fans with airflow from the sides and back of the platform
- External power supply
- Desktop mount with rubber feet and wall mount accessories included
- Optional rack mount accessory available

Firmware requirements

Table 2. Firmware requirements

Software	Minimum Release Requirement
BIOS	• Edge 610 and Edge 620: v3.43.0.9-6 • Edge 640 and Edge 680: v3.48.0.9-6
Bluetooth	v02.02.02
CPLD	• Edge 610 and Edge 620: 0x1F • Edge 640 and Edge 680: 0x0F
PIC	v20I

New in this release

The Edge 600 Series offers the following new features and enhancements:

This version is the initial release of the Edge 600 Series platform. See this section in later versions of this release note.

BIOS

Initial release.

The following describes the BIOS version nomenclature. The version X.Y.Z.U-V:

X	The processor family. For example, 3 for X86 on an Edge 600 Series platform.
Y	The platform ID within the processor family. For example, the Edge 600 Series platform is 43.
Z*	The image type. For example, BIOS = 0.
U	The bit definitions for the BIOS are 0 through 5, as shown in the table.
V	The image version.

Table 3. BIOS bit definitions

Bit	Feature	State
0	Partition	0=MBR, 1=UEFI
1	Baud rate	0=115200, 1=9600
2	N/A	N/A
3	PXE	1=supported
4	N/A	N/A
5	Bootloader	0=AMI BIOS

*BIOS=0, ONIE=1, Grub=2, PXE=3, N/A=4, and ONIE FW Updater=5.

CPLD

Initial release.

Documentation corrections

None.

Important information

The following is important information that you must know when working with your switch:

LED operation

The light emitting diodes (LEDs) provide a multifunction reporting capability alerting you to the current operational status. These LEDs provide the port status of the RJ45 ports and the SFP+ ports.

Table 4. SFP/SFP+ port status indicator LEDs

	Status	Link and speed
Left side (bicolor green/ amber):	Solid green	Link up, 1 Gbps—for SFP
	Solid green	Link up, 10 Gbps—for SFP+
	Solid amber	Link up, 100 Mbps—for SFP
	Solid amber	Link up, 1 Gbps—for SFP+
	Off	Link down
Right side (green):	Solid green	No activity
	Blinking green	Activity

Table 5. RJ45 port status indicator LEDs

	Status	Link and speed
Left side (bicolor green/ amber):	Solid green	Link up, 1 Gbps
	Solid amber	Link up, 10 Mbps or 100 Mbps
	Off	Link down
Right side (green):	Solid green	No activity
	Blinking green	Activity

Power cycle the platform

CAUTION: After turning off the platform and *before* power cycling the platform back on, ensure that the PSU LED indicator is off and no color displays.

Fixed issues

Fixed issues are reported using the following definitions:

Category	Description
PR#	Problem Report number that identifies the issue.
Synopsis	Synopsis is the title or short description of the issue.
Release Notes	Release Notes description contains more detailed information about the issue.
Work around	Work around describes a mechanism for circumventing, avoiding, or recovering from the issue. It might not be a permanent solution.
Severity	S1—Crash: A software crash occurs in the kernel or a running process that requires a restart of AFM, the router, switch, or process. S2—Critical: An issue that renders the system or a major feature unusable. An issue that has a pervasive impact on the system or network, and for which there is no work-around acceptable to the customer. S3—Major: An issue that affects the functionality of a major feature or negatively effects the network for which there exists a work-around that is acceptable to the customer.

Category	Description
	S4—Minor: A cosmetic issue or an issue in a minor feature with little or no network impact for which there might be a work-around.

Fixed issues in this release

None.

Fixed issues in previous releases

None.

Known issues

Known issues are reported using the following definitions:

Category	Description
PR#	Problem Report number that identifies the issue.
Synopsis	Synopsis is the title or short description of the issue.
Release Notes	Release Notes description contains more detailed information about the issue.
Work around	Work around describes a mechanism for circumventing, avoiding, or recovering from the issue. It might not be a permanent solution.
Severity	S1—Crash: A software crash occurs in the kernel or a running process that requires a restart of AFM, the router, switch, or process. S2—Critical: An issue that renders the system or a major feature unusable. An issue that has a pervasive impact on the system or network, and for which there is no work-around acceptable to the customer. S3—Major: An issue that affects the functionality of a major feature or negatively effects the network for which there exists a work-around that is acceptable to the customer. S4—Minor: A cosmetic issue or an issue in a minor feature with little or no network impact for which there might be a work-around.

Known issues in this release

Category	Description
PR#	OEM-27
Synopsis	During HA activation, if the GE2 port of any node running rel-3.3.0-R330-MTHD-20190328-GA-2 is connected, HA activation may not complete. Stand-by node does not activate.
Release Notes	If Stand-by mode does not happen, the node gets incorrect MAC address table entries; this causes the HA link to not establish a connection with the buddy node.
Work around	Disconnect/unplug the GE2 port from the active/standby node before Stand-by node is added as the HA buddy. Reboot the system.
Severity	P2

Category	Description
PR#	OEM-28
Synopsis	Denverton LAN controller firmware does not handle different speed SFP swap correctly.
Release Notes	The 610 system does not support 10G SFP. If system is booted with 10G SFP and then swapped with 1G SFP, the SFP port retains the old 10G speed and becomes non-operational. The best practice is to use SFPs that advertise 1G speed only. Avoid multi-speed copper or fiber SFPs.
Work around	To use this port with 1G SFP, reboot system.

Category	Description
Severity	P3

The following 610 system output example shows an unsupported 10G SFP port booted and is non-operational:

```
vc-edge:~# ethtool -m sfp2
Identifier : 0x03 (SFP)
Extended identifier : 0x04 (GBIC/SFP defined by 2-wire interface ID)
Connector : 0x07 (LC)
Transceiver codes : 0x10 0x00 0x00 0x00 0x00 0x00 0x00 0x00
Transceiver type : 10G Ethernet: 10G Base-SR
Encoding : 0x06 (64B/66B)
BR, Nominal : 10300MBd
Rate identifier : 0x00 (unspecified)
Length (SMF,km) : 0km
Length (SMF) : 0m
Length (50um) : 80m
Length (62.5um) : 30m
Length (Copper) : 0m
Length (OM3) : 300m
Laser wavelength : 850nm
Vendor name : AVAGO
Vendor OUI : 00:17:6a
Vendor PN : AFBR-709SMZ-D1
Vendor rev : G4.1
Option values : 0x00 0x1a
Option : RX_LOS implemented
Option : TX_FAULT implemented
Option : TX_DISABLE implemented
BR margin, max : 0%
BR margin, min : 0%
Vendor SN : AD86TA01RR
Date code : 180630
Optical diagnostics support : Yes
Laser bias current : 6.112 mA
Laser output power : 0.5838 mW / -2.34 dBm
Receiver signal average optical power : 0.5225 mW / -2.82 dBm
Module temperature : 41.82 degrees C / 107.27 degrees F
Module voltage : 3.3000 V
Alarm/warning flags implemented : Yes
Laser bias current high alarm : Off
Laser bias current low alarm : Off
Laser bias current high warning : Off
Laser bias current low warning : Off
Laser output power high alarm : Off
Laser output power low alarm : Off
Laser output power high warning : Off
Laser output power low warning : Off
Module temperature high alarm : Off
Module temperature low alarm : Off
Module temperature high warning : Off
Module temperature low warning : Off
Module voltage high alarm : Off
Module voltage low alarm : Off
Module voltage high warning : Off
Module voltage low warning : Off
Laser rx power high alarm : Off
Laser rx power low alarm : Off
Laser rx power high warning : Off
Laser rx power low warning : Off
Laser bias current high alarm threshold : 10.500 mA
Laser bias current low alarm threshold : 2.500 mA
Laser bias current high warning threshold : 10.500 mA
Laser bias current low warning threshold : 2.500 mA
Laser output power high alarm threshold : 2.0000 mW / 3.01 dBm
Laser output power low alarm threshold : 0.1260 mW / -9.00 dBm
Laser output power high warning threshold : 0.7900 mW / -1.02 dBm
Laser output power low warning threshold : 0.3170 mW / -4.99 dBm
Module temperature high alarm threshold : 85.00 degrees C / 185.00 degrees F
Module temperature low alarm threshold : -5.00 degrees C / 23.00 degrees F
Module temperature high warning threshold : 80.00 degrees C / 176.00 degrees F
Module temperature low warning threshold : 0.00 degrees C / 32.00 degrees F
```

```
Module voltage high alarm threshold : 3.6000 V
Module voltage low alarm threshold : 3.0000 V
Module voltage high warning threshold : 3.4600 V
Module voltage low warning threshold : 3.1300 V
Laser rx power high alarm threshold : 2.0000 mW / 3.01 dBm
Laser rx power low alarm threshold : 0.0315 mW / -15.02 dBm
Laser rx power high warning threshold : 0.7900 mW / -1.02 dBm
Laser rx power low warning threshold : 0.0315 mW / -15.02 dBm

vc-edge:~# ip link show dev sfp2
4: sfp2: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN mode DEFAULT group
default qlen 1000

After Hotswap with 1G sfp , link status is still down.
vc-edge:~# ip link show dev sfp2
4: sfp2: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN mode DEFAULT group
default qlen 1000

After reboot.
vc-edge:~# ip link show dev sfp2
4: sfp2: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP mode DEFAULT group
default qlen 1000

vc-edge:~# ethtool -m sfp2
Identifier : 0x03 (SFP)
Extended identifier : 0x04 (GBIC/SFP defined by 2-wire interface ID)
Connector : 0x07 (LC)
Transceiver codes : 0x00 0x00 0x00 0x01 0x20 0x40 0x0c 0x05
Transceiver type : Ethernet: 1000BASE-SX
Transceiver type : FC: intermediate distance (I)
Transceiver type : FC: Shortwave laser w/o OFC (SN)
Transceiver type : FC: Multimode, 62.5um (M6)
Transceiver type : FC: Multimode, 50um (M5)
Transceiver type : FC: 200 MBytes/sec
Transceiver type : FC: 100 MBytes/sec
Encoding : 0x01 (8B/10B)
BR, Nominal : 2100MBd
Rate identifier : 0x00 (unspecified)
Length (SMF,km) : 0km
Length (SMF) : 0m
Length (50um) : 300m
Length (62.5um) : 150m
Length (Copper) : 0m
Length (OM3) : 0m
Laser wavelength : 850nm
Vendor name : FINISAR CORP.
Vendor OUI : 00:90:65
Vendor PN : FTLF8519P2BCL-PR
Vendor rev : A
Option values : 0x00 0x12
Option : RX_LOS implemented
Option : TX_DISABLE implemented
BR margin, max : 0%
BR margin, min : 0%
Vendor SN : PFN0958
Date code : 090525
```

Known issues in previous releases

None.

Support resources

The following support resources are available for the Edge 600 Series platform:

Documentation resources

For more information about the Dell EMC SD-WAN Edge 600 Series, see the following documents:

- *Dell EMC SD-WAN Edge 600 Series Quick Start Guide*
- *Dell EMC SD-WAN Edge 600 Series Installation Guide*

NOTE: For the most recent documentation, see the Dell EMC support site at www.dell.com/support.

Finding documentation

This document contains operational information specific to the Edge 600 platform.

- For information about using the Edge 600 platform, see the documents at www.dell.com/support.

Contacting Dell EMC

Dell EMC provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues, go to www.dell.com/support.