

Dell System S4048–ON 9.10(0.1P13) Release Notes

This document contains information on open and resolved caveats, and operational information specific to the Dell Networking OS software and the S4048-ON platform.

Caveats are unexpected or incorrect behavior, and are listed in order of Problem Report (PR) number within the appropriate sections.

NOTE: Customers can subscribe to caveat update reports or use the BugTrack search tool to read current information about open and closed software caveats. To subscribe or use BugTrack, visit iSupport at: <https://www.force10networks.com/CSPortal20/BugTrack/SearchIssues.aspx>. BugTrack currently tracks software caveats opened in Dell Networking OS version 6.2.1.1 and later. All Release Notes are available on the Software Center tab of iSupport. The link to the relevant Release Notes for each software version is next to the link for that version: <https://www.force10networks.com/CSPortal20/Software/Downloads.aspx>.

For more information on hardware and software features, commands, and capabilities, refer to the Dell Networking website at: <https://www.dell.com/networking>.

Current Version: 9.10.0.1P13

Release Date: 2016-09-12

Previous Version: 9.10.0.1P12

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Document Revision History

Table 1. Revision History

Date	Description
2016-09	Initial release.

Supported Hardware

The following hardware is supported with this platform:

Hardware
S4048-ON chassis
Forty eight SFP+ ports (10 Gbps)
Six QSFP+ ports (40 Gbps)
Two AC/DC PSUs
Three fan subsystems

NOTE: If all the three fan trays are found to be empty or faulty, the system shuts down after one minute.

Supported Software

The following software is supported with this platform:

Software	Minimum Release Requirement
Dell Networking OS	9.10(0.1)
ONIE	v3.21.1.1

NOTE: For information on non-Dell OS versions, refer the Release Notes for the Hardware Platform S4048-ON.

New Dell Networking OS Version 9.10(0.1) Features

The following features have been added to the S4048-ON with Dell Networking OS version 9.10(0.1):

Feature	Description
Internal BGP next hop self	Dell Networking OS enhances the capability of route reflector to set its own IP address as the next hop for both iBGP and eBGP-learned routes.

Restrictions

- You can use non-Dell qualified cables, adapters, and optics in a S4048-ON switch, but Dell Networking does not guarantee their performance as the S4048-ON does not support non-Dell qualified 40G transceivers. If you insert a non-Dell qualified 40G transceiver into a S4048-ON 40GbE port, the switch places the interface in an error-disabled (operationally down) state and generates a syslog message, such as: %S4048LC0640:8 %IFAGT-2-TRANSCEIVER_UNSUPPORTED_ERROR: Transceiver in slot 1 port 49 unrecognized, putting interface in operational-down state.

To verify the error-disabled status of an interface, enter any of the following show commands.

```
Dell# show inventory media
Slot  Port  Type      Media      Serial Number  F10Qualified
-----
 1     49  UNKNOWN  UNKNOWN    USC1D6J        No**
 1     50  QSFP     40GBASE-LR4  UQ90C7B        No**
 1     51  QSFP     40GBASE-SR4  7503835V009Y   Yes
 1     52  QSFP     40GBASE-CR4  10190002        No
 1     53  QSFP     40GBASE-SR4  FE2429470007   Yes
 1     54                Media not present or accessible
** Interface is down(error disabled) as transceiver is not F10Qualified
```

```
Dell# show interfaces fortyGigE 1/49
fortyGigE 1/49 is up, line protocol is down(error-disabled[Transceiver Unsupported])
...
```

- When configuring **CAM ACL** using the `cam-acl 12acl 2 ipv4acl 2 ipv6acl 0 ipv4qos 1 12qos 2 12pt 0 ipmacacl 0 vman-qos 0 ecfmac1 2 fcoe1 4 iscsiop1 0` command and reloading, the system fails due to a limitation in the BCM SDK 6.3.4.
- Dell Networking OS does not support encapsulated remote switched port analyzer (ERSPAN) and remote switched port analyzer (RSPAN) in a VLT setup.
- The following features are not available in the Dell Networking OS from version 9.7(0.0):
 - PIM ECMP
 - Static IGMP join (`ip igmp static-group`)
 - IGMP querier timeout configuration (`ip igmp querier-timeout`)
 - IGMP group join limit (`ip igmp group join-limit`)

- You can use the `negotiation auto` command to turn auto-negotiation on or off only on fiber interfaces operating at 1G speed.

Changes to Default Behavior and CLI Syntax

Autoneg is enabled by default for the 1G interfaces.

Autoneg is disabled by default for the 40G cr4 interface.

The S4048-ON system supports Dell-qualified transceivers and only some of the non Dell-qualified transceivers. If the system displays an error message similar to the following, the transceiver is not Dell-qualified. The Dell Networking OS places the interface in error-disabled (operationally down) state.

```
Apr 29 05:09:16: %S4048-ON:1 %IFAGT-2-TRANSCIEVER_UNSUPPORTED_ERROR: Transceiver in slot 1 port
50 unrecognized, putting interface in operat
ional-down state
```

The following command output displays that the interface is in error-disabled state:

```
Dell#show interfaces fortyGigE 1/50
fortyGigE 1/50 is up, line protocol is down(error-disabled[Transceiver Unsupported])
Hardware is DellEth, address is 34:17:eb:f2:25:c6
  Current address is 34:17:eb:f2:25:c6
Non-qualified pluggable media present, QSFP type is 40GBASE-SR4
  Wavelength is 850nm
  No power
Interface index is 2103813
Internet address is not set
Mode of IPv4 Address Assignment : NONE
DHCP Client-ID :3417ebf225c6
MTU 1554 bytes, IP MTU 1500 bytes
LineSpeed 40000 Mbit
<output truncated for brevity>
```

For information about which optics and transceivers are supported, contact your Dell representative.

Dell Networking OS enhances the `show hardware drops` command to display the number of dropped packets in the ingress buffer.

For SCP, FTP, and HTTP copy operations done through external servers, the password you specify can be a string of up to 32 characters in length.

Dell Networking OS enhances the **`show hardware stack-unit`** command to display the data plane or management plane input and output statistics of the designated component of the designated stack member.

Dell Networking OS enhances the **`show hardware buffer interface`** command to display the buffer statistics for a specific interface.

Dell Networking OS enhances the **`show hardware buffer-stats-snapshot`** command to display the buffer statistics tracking resource information for a specific interface.

Dell Networking OS enhances the **`show hardware stack-unit buffer-stats-snapshot`** command to view the buffer statistics tracking resource information depending on the type of buffer information. The buffer information comprises of device-level details, port-level counters, queue-based snapshots, or priority group-level snapshot in the egress and ingress direction of traffic.

Dell Networking OS enhances the **`show hardware counters interface`** command to display the counter information for a specific interface.

Dell Networking OS displays whether there is a change in privilege or role to the administrator's account since last login.

Dell Networking OS supports DNS Query for both IP and IPv6. In a dual stack setup, the system sends both A (request for IPv4 — RFC 1035) and AAAA (request for IPv6 — RFC 3596) record requests to a DNS server even if only the ip name-server command is configured.

You can use the **show pfc statistics** command even without enabling DCB on the system.

When you reload the system, you can use Dell Networking OS CLI and select whether to reload into Dell Networking OS or ONIE.

From the Dell Networking OS version 9.10(0.0), the support for hmac-sha2-256-96 hashing algorithm option is discontinued.

From the Dell Networking OS version 9.10(0.0), SupportAssist is enabled by default on the system.

Documentation Corrections

This section describes the error identified in the current releases of the Dell Networking OS.

- The *Dell Networking OS Command Line Reference Guide* incorrectly mentions a note on multi-process OSPF. It will be corrected in the next release by including the following note:
 - The Dell Networking OS versions 9.4(0.0) and 9.7(0.0) introduce support for VRF on OSPFv2 and OSPFv3 respectively. The multi-process OSPF feature supported on Dell Networking OS version 7.8.1.0 is modified. In earlier versions, multiple OSPF processes were created without VRF (prior to 9.4(0.0)). In the Dell Networking OS versions 9.4(0.0) and 9.7(0.0) (for OSPFv3), multiple OSPF processes can be created on a router, but with only one OSPF process per VRF. However, there can be one OSPFv2 and one OSPFv3 on the same VRF.
- The following note will be added to *Open Shortest Path First (OSPFv2 and OSPFv3)* topic of the *Dell Networking OS Command Line Reference Guide*:
 - OSPFv2 is supported on IPv6 tunnels only and OSPFv3 is supported on IPv4 tunnels only.
- The following Usage Information will be added to `router ospf` command of the *Dell Networking OS Command Line Reference Guide*:
 - You can create only one OSPFv2 process per VRF.
- The Dell Command Line Reference Guide for the S4048–ON System and Dell Configuration Guide for the S4048–ON System mention that the system supports up to eight ACL VLAN groups. But the system supports up to 31 ACL VLAN groups.

Deferred Issues

Issues that appear in this section were reported in Dell Networking OS version 9.10(0.1) as open, but have since been deferred. Deferred caveats are those that are found to be invalid, not reproducible, or not scheduled for resolution.

Deferred S4048–ON 9.10(0.1) Software Issues

None

Fixed Issues

Fixed issues are reported using the following definitions.

Category	Description
PR#	Problem Report number that identifies the issue.
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.

Category	Description S2 — Critical: An issue that renders the system or a major feature unusable, which can have 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.
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. Issues listed in the "Closed Caveats" section should not be present, and the work-around is unnecessary, as the version of code for which this release note is documented has resolved the caveat.

Fixed S4048–ON 9.10(0.1P13) Software Issues

The following issues have been resolved in the Dell Networking OS version 9.10(0.1P13):

PR# 160829

Severity:	Sev 2
Synopsis:	In certain scenarios, if the next hop for the management VRF route is reachable also through default VRF, then management route is not reachable.
Release Notes:	In certain scenarios, if the next hop for the management VRF route is reachable also through default VRF, then management route is not reachable. The issue is dependent on the order in which the management VRF is created.
Workaround:	Use interface name, that is "managementethernet" instead of the next-hop address in the route configuration.

Fixed S4048–ON 9.10(0.1P12) Software Issues

The following issues have been resolved in the Dell Networking OS version 9.10(0.1P12):

PR# 160705

Severity:	Sev 3
Synopsis:	LLDP fails when the management interface on the switch is assigned to the management VRF.
Release Notes:	LLDP fails when the management interface on the switch is assigned to the management VRF. However, LLDP works

without any issue when the management interface is assigned to the default VRF.

Workaround:

None.

PR# 160787

Severity:

Sev 3

Synopsis:

After upgrading to Dell Networking OS version 9.9(0.0) or later, the system may display EAPOL error messages.

Release Notes:

After upgrading to Dell Networking OS version 9.9(0.0) or later, the system may display the following EAPOL error message if Dot1x is disabled in the previous version: EAPOL Frame MsgQ Send Err.

Workaround:

None.

Fixed S4048–ON 9.10(0.1P8) Software Issues

The following issues have been resolved in the Dell Networking OS version 9.10(0.1P8):

PR# 160261

Severity:

Sev 2

Synopsis:

While using 40GE link for stacking, the LED displays amber instead of green.

Release Notes:

While using 40GE link for stacking, the LED displays amber instead of green. There is no functional impact for stacking.

Workaround:

None.

PR# 160561

Severity:

Sev 4

Synopsis:

SSH is upgraded from 6.9p1 to 7.2p2 from Dell Networking OS version 9.10(0.1P8) onwards.

Release Notes:

SSH is upgraded from 6.9p1 to 7.2p2 from this release.

Workaround:

None.

PR# 160609

Severity:

Sev 3

Synopsis:

In certain scenarios, the fan runs at 10000 RPM.

Release Notes:

In certain scenarios, the fan runs at 10000 RPM, even though the temperature is below the upper threshold limit.

Workaround:

None.

Fixed S4048–ON 9.10(0.1P7) Software Issues

The following issues have been resolved in the Dell Networking OS version 9.10(0.1P7):

PR# 151003

Severity:	Sev 3
Synopsis:	Intel based platforms that use GRUB do not have some entries in the environment variables.
Release Notes:	Intel based platforms that use GRUB do not have some entries in the environment variables. The following entries are missing in the environment variables: ethaddr, ipaddr, ipmask, ntaddr and gwaddr.
Workaround:	None.

PR# 155147

Severity:	Sev 3
Synopsis:	The static multicast MAC address configuration is not applied to one of the interfaces in the specified range.
Release Notes:	The static multicast MAC address configuration is not applied to one of the interfaces in the specified range.
Workaround:	None.

PR# 158792

Severity:	Sev 2
Synopsis:	In certain rare scenarios, the telnet process experiences a software exception.
Release Notes:	In certain rare scenarios, the telnet process experiences a software exception. This does not affect user traffic.
Workaround:	None.

PR# 158903

Severity:	Sev 3
Synopsis:	The show monitor session command does not display the session status.
Release Notes:	The show monitor session command has been enhanced to display whether the remote monitoring session is enabled or disabled in the system.
Workaround:	None.

PR# 158985

Severity:	Sev 2
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Synopsis:	When one peer runs version below 9.9.0.0 and the other runs version 9.9.0.0 or above, VLT does not function correctly for some features.
Release Notes:	<p>When one VLT device is upgraded from Dell Networking OS version lesser than 9.9.0.0 to 9.9.0.0 or later, and the peer VLT device still runs a version less than 9.9.0.0, VLT does not function correctly for specific features due to mismatch in the feature related VLT message exchanges. The affected features comprise of:</p> <ol style="list-style-type: none"> 1 PVST 2 VLT QinQ 3 CLI Batch 4 Provider bridge Group <p>Once the problem manifests, the behavior persists even after the peer VLT device is upgraded to the same version. It recovers only when both the VLT peers reboot simultaneously.</p>
Workaround:	<ul style="list-style-type: none"> • Upgrade the VLT secondary switch and reboot. • Before VLT secondary switch comes up and establishes VLT, shutdown ICL on the primary device. • Upgrade the VLT primary and reboot. • Once the VLT primary device is up, no shutdown ICL.
PR# 159149	
Severity:	Sev 1
Synopsis:	After upgrading to 9.9.0.0P9, the switch does not come up.
Release Notes:	After upgrading to 9.9.0.0P9 and rebooting, the switch does not come up due to corruption in the file system.
Workaround:	None.
PR# 159302	
Severity:	Sev 2
Synopsis:	The system loses FCOE sessions after the server reboots.
Release Notes:	In certain scenarios, due to a race condition, the established FCOE session gets lost after the server reboots.
Workaround:	Use the shutdown and no shutdown commands to restart the server interface.
PR# 159437	
Severity:	Sev 2
Synopsis:	The system displays an authentication error with SNMP v3.
Release Notes:	While using SNMP v3 Get request, the system displays an authentication error even if it is in the discovery phase and hence, it is not valid error condition.
Workaround:	None.
PR# 159697	

Severity:	Sev 1
Synopsis:	When a large number of VLANs are configured using MSTP, the output of the show running-config command does not display all the configured VLANs.
Release Notes:	When a large number of VLANs are configured using the msti vlan command, the output of the show running-config spanning-tree mstp command does not display all the configured VLANs.
Workaround:	None.
PR# 159708	
Severity:	Sev 2
Synopsis:	After upgrading to Dell Networking OS 9.10.0.1, the fan speed in bay 2 and bay 3 are not set properly.
Release Notes:	After upgrading to Dell Networking OS 9.10.0.1, the fan speed in bay 2 and bay 3 are not set properly.
Workaround:	None.
PR# 159807	
Severity:	Sev 3
Synopsis:	In Openflow 1.3, for certain flows, the transport layer port type is incorrectly displayed.
Release Notes:	In Openflow 1.3, the flowstat oxm_field in the multipart reply message contains FPXMT_OFB_TCP_DST instead of OFPXMT_OFB_UDP_DST for UDP packets. There is no impact to the feature as the flow is installed correctly in the switch.
Workaround:	None.
PR# 159840	
Severity:	Sev 3
Synopsis:	VLAN Name displays an extra space.
Release Notes:	VLAN Name displays an extra space.
Workaround:	None.
PR# 160259	
Severity:	Sev 2
Synopsis:	The system running OpenFlow 1.3 does not support the multipart request for table features on certain controllers.
Release Notes:	The switch running OpenFlow 1.3 replies to a multipart table features request with a table length field set incorrectly as zero. This results in an incorrect reply to the controller's request.

Workaround:	None.
PR# 160282	
Severity:	Sev 1
Synopsis:	OpenFlow controller cannot ascertain whether or not an add flow request is successfully installed on the switch.
Release Notes:	OpenFlow controller cannot ascertain whether or not an add flow request is successfully installed on the switch. As a result, OpenFlow does not work for the default table ID.
Workaround:	Use table ID 40 as the default table ID on the controller.
PR# 160393	
Severity:	Sev 1
Synopsis:	Switch reloads while enabling flowcontrol negotiation.
Release Notes:	Switch reloads while enabling flowcontrol negotiation. This happens when the port comes up.
Workaround:	None.

Fixed S4048–ON 9.10(0.1P3) Software Issues

The following issues have been resolved in the Dell Networking OS version 9.10(0.1P3):

PR# 155356	
Severity:	Sev 3
Synopsis:	The show hardware stackunit 0 stack-ports command incorrectly displays valid stack ports as invalid.
Release Notes:	The show hardware stackunit 0 stack-ports command incorrectly displays valid stack ports as invalid.
Workaround:	None.
PR# 157143	
Severity:	Sev 2
Synopsis:	When the 7m SFP+ DAC cable is used to connect the S4048-ON and FN-IOM, CRC errors occur.
Release Notes:	When the 7m SFP+ DAC cable is used to connect the S4048-ON and FN-IOM, CRC errors occur.
Workaround:	None.

PR# 158135

Severity: Sev 2

Synopsis: If a blank password is used to establish a telnet session over port 21, the system crashes.

Release Notes: If a blank password is used to establish a telnet session over port 21, the system crashes.

Workaround: None.

PR# 158232

Severity: Sev 1

Synopsis: In a VLT environment, routes leaked between VRFs are incorrectly learnt without taking Administrative Distance into account.

Release Notes: In a VLT environment, routes leaked between VRFs are incorrectly learnt without taking Administrative Distance into account.

Workaround: None.

PR# 158462

Severity: Sev 2

Synopsis: In rare scenarios, LLDP VLAN name TLV values are interpreted wrongly.

Release Notes: In rare scenarios, LLDP VLAN name TLV values are interpreted wrongly.

Workaround: None.

PR# 158812

Severity: Sev 2

Synopsis: Under certain scenarios, NLB Multicast traffic is not sent to the range of interfaces specified in the static MAC entry.

Release Notes: Under certain scenarios, NLB Multicast traffic is not sent to the range of interfaces specified in the static MAC entry.

Workaround: None.

PR# 159000

Severity: Sev 2

Synopsis: The system does not allow IPv6 addresses ending with 0 using /128 bit mask.

Release Notes: The system does not allow IPv6 addresses ending with 0 using /128 bit mask.

Workaround: None.

PR# 159152

Severity:	Sev 2
Synopsis:	100Mbps link speed is not supported in the front-end ports of S4048.
Release Notes:	100Mbps link speed is not supported in the front-end ports of S4048, Only management ports support 100Mbps speed.
Workaround:	None.

PR# 159427

Severity:	Sev 1
Synopsis:	When an untagged VLAN which is part of an ACL-vlan group is removed and reapplied as a member, traffic from tagged VLANs is dropped.
Release Notes:	When an untagged VLAN which is part of an ACL-vlan group is removed and reapplied as a member, traffic from tagged VLANs is dropped. This issue happens when the same ports are members of tagged and untagged VLANs.
Workaround:	Use the shutdown and no shutdown commands on the interfaces.

PR# 159635

Severity:	Sev 2
Synopsis:	Using VRRP version 3 for IPv4 VRRP groups is not interoperable with other vendor routers
Release Notes:	This release fixes an issue that prevented interoperability of Dell OS9 routers with other vendor routers when using VRRP version 3 for IPv4 VRRP groups. Typically VRRPv2 is used for IPv4 VRRP groups and VRRPv3 for IPv6 groups. Those have always been interoperable. With this fix, using VRRPv3 for IPv4 VRRP groups will be interoperable as well.
Workaround:	When interoperating with other vendor routers use VRRP version 2 for all IPv4 VRRP groups.

Fixed S4048–ON 9.10(0.1) Software Issues

The following issues have been resolved in the Dell Networking OS version 9.10(0.1):

OS / OS Infrastructure (Resolved)

PR# 157527

Severity:	Sev 3
Synopsis:	In certain scenarios, the system hangs due to BMP process failure.
Release Notes:	In certain scenarios, the system hangs due to BMP process failure.
Workaround:	None.

Policy Based Routing (PBR) (Resolved)

PR# 158605

Severity:	Sev 2
Synopsis:	If static ARP is configured before configuring the same IP as nexthop IP Redirect List, PBR considers the IP as unreachable.
Release Notes:	If static ARP is configured before configuring the same IP as nexthop IP Redirect List, PBR considers the IP as unreachable.
Workaround:	None.

SNMP (Resolved)

PR# 158767

Severity:	Sev 2
Synopsis:	In certain scenarios, the system experiences a software exception when the "show snmp engineID" command is used.
Release Notes:	In certain scenarios, the system experiences a software exception when the "show snmp engineID" command is used.
Workaround:	None.

SSH (Resolved)

PR# 158503

Severity:	Sev 2
Synopsis:	In certain scenarios, the SSH process remains active even after the session is closed, causing high CPU usage.
Release Notes:	In certain scenarios, the SSH process remains active even after the session is closed, causing high CPU usage.
Workaround:	None.

Known Issues


Known issues are reported using the following definitions.

Category	Description
PR#	Problem Report number that identifies the issue.
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, which can have 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.
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. Issues listed in the "Closed Caveats" section should not be present, and the work-around is unnecessary, as the version of code for which this release note is documented has resolved the caveat.

Known S4048–ON Software Issues

The latest information related to Open Caveats is available on support site through the BugTrack search tool. BugTrack currently tracks software caveats opened in Dell Networking OS version 6.2.1.1 and later.

 **NOTE:** You must have a user account to access the BugTrack tool.

To use the search tool:

- 1 Go the Main Customer Support page: <https://www.force10networks.com/csportal20/Main/SupportMain.aspx>.
- 2 Log in.
- 3 Click the BugTrack link, located in the Quick Links menu directly below the login bar.
This takes you to the BugTrack search page: <https://www.force10networks.com/csportal20/BugTrack/SearchIssues.aspx>.
- 4 Enter for a specific PR or select an Dell Networking OS version, platform, severity, or category to get a list of PRs.
- 5 Click the Search button.
- 6 Click the PR number to view specific PR details.

The PR (or PRs) appears on the page below the tool.

The following caveats are open in Dell Networking OS version 9.10(0.1):

ARP (Open)

PR# 140306

Severity:	Sev 1
Synopsis:	During a MAC move, ARP refresh does not happen for non-VLT ports
Release Notes:	During a MAC move, ARP refresh does not happen for non-VLT ports
Workaround:	None

PR# 152155

Severity:	Sev 3
Synopsis:	BFD over static route fails to come up when management route with subnet 0.0.0.0/0 is configured over the management interface.

Release Notes:	BFD over static route fails to come up when management route with subnet 0.0.0.0/0 is configured over the management interface.
Workaround:	Do not configure subnet 0.0.0.0/0 on management interface.
BGP (Open)	
PR# 159068	
Severity:	Sev 3
Synopsis:	The neighbor update-source BGP command supports all Layer 3 interfaces.
Release Notes:	The neighbor update-source BGP command supports all Layer 3 interfaces.
Workaround:	None.
FIB (Open)	
PR# 138294	
Severity:	Sev 2
Synopsis:	The maximum number of supported Microsoft NLB cluster IPs is increased from 8 to 11
Release Notes:	The maximum number of supported Microsoft NLB cluster IPs is increased from 8 to 11
Workaround:	None
Forwarding (Open)	
PR# 158705	
Severity:	Sev 2
Synopsis:	stack is not formed between a S4048-ON with E9.10 and a S4048-ON with E9.9
Release Notes:	stack is not formed between 4048-ON running E9.10 and E9.9. Hence any unit which has E9.9 is never part of the stack and hence auto sync fails.
Workaround:	As a workaround, stack should be formed with all the units running E9.9 and then an upgrade to E9.10 should be initiated which will upgrade all the units. Hence the entire stack moves from E9.9 to E9.10
IP Stack (Open)	
PR# 154677	
Severity:	Sev 2
Synopsis:	Ipv6 ping failure errors between the DC and TE devices
Release Notes:	As the routes / neighbors learnt via BGP / Node Discovery are pointing to Management Interface, interlink ipv6 ping error messages will be observed between DC and TE devices.

Workaround:	None
Layer 2 (Open)	
PR# 152033	
Severity:	Sev 3
Synopsis:	In Dell Networking OS release 9.9(0.0), VLT mismatch occurs with the default VLAN ID (VLAN ID 1) when VLT is activated.
Release Notes:	In Dell Networking OS release 9.9(0.0), VLT mismatch occurs with the default VLAN ID (VLAN ID 1) when VLT is activated.
Workaround:	Change the default VLAN ID to anything other than 1.
LLDP (Open)	
PR# 118185	
Severity:	Sev 3
Synopsis:	Tab completion doesn't work for the last keyword in "advertise management-tlv" command.
Release Notes:	Tab completion doesn't work for the last keyword in "advertise management-tlv" command.
Workaround:	NA
PR# 158462	
Severity:	Sev 2
Synopsis:	In rare scenarios, LLDP vlan name TLV values are interpreted wrongly.
Release Notes:	In rare scenarios, LLDP vlan name TLV values are interpreted wrongly.
Workaround:	None.
Microcode (Open)	
PR# 150842	
Severity:	Sev 2
Synopsis:	In certain scenarios, VRRP sessions flap when storm control is configured on the switch.
Release Notes:	In certain scenarios, VRRP sessions flap when storm control is configured on the switch.
Workaround:	None.
Multicast (Open)	
PR# 147768	

Severity:	Sev 2
Synopsis:	If IGMP receiver connected to VLT LAG makes a silent leave, VLT LAG is not removed from the member port list in IGMP Snooping table
Release Notes:	If IGMP receiver connected to VLT LAG makes a silent leave for a group, the VLT LAG would not be removed from the member port list of IGMP snooping table. This could happen when the VLAN interface having the VLT LAG is running IGMP version 2. Multicast data traffic would continue to flow to the VLT LAG.
Workaround:	Configure IGMP version 3 on the VLAN having the receivers. This problem would not be seen if the VLAN interface is running version 3 and having version2/version3 receivers. (or) Execute clear ip igmp snooping groups to clear out the stale entry
OS / OS Infrastructure (Open)	
PR# 108305	
Severity:	Sev 3
Synopsis:	NTP server configured with hostname is not updating the IP change for server
Release Notes:	NTP server configured with hostname is not updating the IP change for server
Workaround:	Unconfigure and reconfigure the NTP server and it resolves to the new IP.
PR# 146474	
Severity:	Sev 2
Synopsis:	intermittent i2c errors are seen in system eeprom access
Release Notes:	intermittent i2c errors are seen in system eeprom access
Workaround:	None
PR# 151003	
Severity:	Sev 3
Synopsis:	Intel based platforms that use GRUB do not have some entries in the environment variables.
Release Notes:	Intel based platforms that use GRUB do not have some entries in the environment variables. The following entries are missing in the environment variables: ethaddr, ipaddr, ipmask, ntaddr and gwaddr.
Workaround:	None.
PR# 158135	
Severity:	Sev 2
Synopsis:	If a blank password is used to establish a telnet session over port 21, the system crashes.

Release Notes:	If a blank password is used to establish a telnet session over port 21, the system crashes.
Workaround:	None.
PR# 158196	
Severity:	Sev 2
Synopsis:	pagefault might occur at times during reload
Release Notes:	Issue occurs during reload whenever there is a heavy file activity. Whenever issue occurs box will automatically reload
Workaround:	No Workaround. System will be rebooted upon hitting pagefault.
PR# 158756	
Severity:	Sev 3
Synopsis:	The processing over head due to the increase in supported number of non-default VRFs causes the system to crash.
Release Notes:	The processing over head due to the increase in supported number of non-default VRFs causes the system to crash.
Workaround:	None.
PR# 159000	
Severity:	Sev 2
Synopsis:	The system does not allow /128 bit masks on loopback interfaces.
Release Notes:	The system does not allow /128 bit masks on loopback interfaces.
Workaround:	None.
OSPF (Open)	
PR# 158232	
Severity:	Sev 1
Synopsis:	In a VLT environment, routes leaked between VRFs are incorrectly learnt without taking Administrative Distance into account.
Release Notes:	In a VLT environment, routes leaked between VRFs are incorrectly learnt without taking Administrative Distance into account.
Workaround:	None.
Spanning Tree (Open)	
PR# 148466	
Severity:	Sev 2

Synopsis:	"show spanning-tree" commands displays the cost that is advertised to the downstream switch instead of the cost received from the upstream switch.
Release Notes:	"show spanning-tree" commands displays the cost that is advertised to the downstream switch instead of the cost received from the upstream switch.
Workaround:	None
Stacking (Open)	
PR# 155356	
Severity:	Sev 3
Synopsis:	The show hardware stackunit 0 stack-ports command incorrectly displays valid stack ports as invalid.
Release Notes:	The show hardware stackunit 0 stack-ports command incorrectly displays valid stack ports as invalid.
Workaround:	None.
Telnet (Open)	
PR# 158792	
Severity:	Sev 2
Synopsis:	In certain rare scenarios, the telnet process experiences a software exception.
Release Notes:	In certain rare scenarios, the telnet process experiences a software exception. This does not affect user traffic.
Workaround:	None.

Upgrading ONIE on the S4048-ON

To upgrade the ONIE package you have installed, use one of the following two processes: zero touch (dynamic) update or manual update.

- 1 Zero touch (dynamic): Copy the update ONIE installer and the DIAG installer for your system to the TFTP/HTTP server. Configure the DHCP options using the ONIE specifications shown at the following link: <http://opencomputeproject.github.io/onie/docs/design-spec/updater.html>
S4048-ON image >>>> onie-updater-x86_64-dell_s4000_c2338-r0
- 2 Manual: Copy the image onto the TFTP/HTTP servers and boot ONIE. Update the ONIE using the onie-self-update command, then download and run an ONIE updater image. The supported URL types are: HTTP, FTP, TFTP, and FILE.
S4048-ON image >>>> onie-updater-x86_64-dell_s4000_c2338-r0
- 3 UPGRADING ONIE ON AN EXISTING S4048-ON SYSTEM.
The following example uses HTTP to upgrade ONIE.

```
ONIE:/ # onie-self-update tftp://10.16.127.35/onie-updater-x86_64-dell_s4000_c2338-r0
Stopping: discover... done.
Info: Fetching tftp://10.16.127.35/onie-updater-x86_64-dell_s4000_c2338-r0 ...
onie-updater-x86_64- 100% |*****| 9021k 0:00:00 ETA
ONIE: Executing installer: tftp://10.16.127.35/onie-updater-x86_64-dell_s4000_c2338-r0
Verifying image checksum ... OK.
Preparing image archive ... OK.
```

```

ONIE: Version      : 3.21.1.1
ONIE: Architecture : x86_64
ONIE: Machine      : dell_s4000_c2338
ONIE: Machine Rev  : 0
ONIE: Config Version: 1
Installing ONIE on: /dev/sda
Rebooting...
ONIE:/ # umount: can't remount rootfs read-only
The system is going down NOW!
Sent SIGTERM to all processes
Sent SIGKILL tosd 4:0:0:0: [sda] Synchronizing SCSI cache
Restarting system.
machine restart

```

4 Upgrade the DIAG installer package.

```

ONIE:/ # onie-nos-install tftp://10.16.127.35/INSTALLER-DND-SK-1.0.0.11.bin
Stopping: discover... done.
Info: Fetching tftp://10.16.127.35/INSTALLER-DND-SK-1.0.0.11.bin...
INSTALLER-DND-SK-1.0 100% |*****| 27129k 0:00:00 ETA
ONIE: Executing installer: tftp://10.16.127.35/INSTALLER-DND-SK-1.0.0.11.bin
Verifying image checksum ... OK.
Preparing image archive from /installer ... Done.
Mounting /dev/sda3...Done.
Copying Images ...Done.
Installing Menu Entry ...Done
All Done
ONIE:/ # umount: can't remount rootfs read-only
The system is going down NOW!
Sent SIGTERM to all processes
Sent SIGKILL tosd 4:0:0:0: [sda] Synchronizing SCSI cache
Restarting system.
machine restart

```

```

BIOS (Dell Inc) Boot Selector
S4000 3.21.0.3 (48-port SFP+ 10G/6-port QSFP 40G)

```

```

POST Configuration
CPU Signature 406D8
CPU FamilyID=6, Model=4D, SteppingId=8, Processor=0
Microcode Revision 125
POST Control=0xEA000303, Status=0xE6009700
Platform ID: 10041836
PMG_CST_CFG_CTL: 40006
BBL_CR_CTL3: 7E2801FF
Misc EN: 4000840081
Gen PM Con1: 3008
Therm Status: 8842000F

```

BIOS initializations...

CPGC Memtest for Channel 0 PASS

ECC enabled: channel 0 DECCCTRL_DUNIT_REG=0x000200F3

```

POST:
RTC Battery OK at last cold boot
RTC date  Monday 6/15/2015 18:02:23

```

POST SPD test PASS

```

POST Lower DRAM Memory test
Short memory cell test
Perf cnt (curr/fixed): 322AC7D56/32D41ABEB

```

```

POST Lower DRAM Memory test ..... PASS
POST Lower DRAM ECC check ..... PASS
DxE POST

```

```
POST PCI test ..... PASS
POST NVRAM check ..... PASS
POST overall test results ..... PASS
```

```
NVRAM at POST exit: 00 97 00 E6 03 03 00 EA
```

```
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.
BIOS Date: 04/01/2015 19:03:09 Ver: 0ACBZ018
Press DEL or F2 to enter setup.
GRUB loading.
```

① **NOTE:** For the latest diagnostics version, see the *Dell S4048–Open Networking (ON) System Release Notes*.

- 5 Upgrade the BIOS image using the BIOS image and Flashrom utility included with the diagnostic package.

```
ONIE:/ # tftp -g -r S4000-BIOS-x.x.x.x-16MB.bin 10.11.8.12S4000-BIOS-x.x.x.x. 100% |
*****| 8192k 0:00:00 ETA
```

```
ONIE:/ #
```

```
ONIE:/ #
```

```
ONIE:/ # flashrom -E -p internal
```

```
Erasing and writing flash chip... Erase/write done.
```

```
ONIE:/ # flashrom -w ./ S4000-BIOS-x.x.x.x-16MB.bin -p internal
```

```
Erasing and writing flash chip... Erase/write done.
```

```
Verifying flash... VERIFIED.
```

```
ONIE:/ #
```

Installing Dell Networking OS on the S4048-ON using ONIE

① **NOTE:** The Dell Networking OS installer package, ONIE-FTOS-SK-9.10.0.1.bin, is required for installing Dell Networking OS on S4048-ON that has only ONIE.

To install the Dell Networking OS version 9.10(0.1) on to the new S4048-ON device, perform the following steps:

- 1 Boot the system to the ONIE prompt. The following ONIE prompt appears:

```
ONIE:/ #
```

- 2 Stop the ONIE discovery process using the following command:

```
ONIE:/ # onie-discovery-stop
```

The following message appears:

```
Stopping: discover... done.
```

```
ONIE:/ #
```

- 3 Configure an interface and assign an IP address to that interface using the following command:

```
ONIE:/ # ifconfig eth0 ip-address/prefix up
```

- 4 Enter the following command to begin the installation process:

```
ONIE:/ # onie-nos-install tftp://10.16.127.35/ONIE-FTOS-SK-9.10.0.1.bin
```

① **NOTE:** After the Dell Networking OS installation is complete, the system automatically reboots.

Following is the installation and boot log of Dell Networking OS:

```
ONIE:/ #
```

```
ONIE:/ # onie-nos-install tftp://10.16.127.35/ONIE-FTOS-SK-9.10.0.1.bin
```

```
Stopping: discover... done.
```

```
Info: Fetching tftp://10.16.127.35/ONIE-FTOS-SK-9.10.0.1.bin ...
```

```
ONIE-FTOS-SK-9.10.0.1 100% |*****| 95605k 0:00:00 ETA
```

```
ONIE: Executing installer: tftp://10.16.127.35/ONIE-FTOS-SK-9.10.0.1.bin
```

```
Verifying image checksum ... OK.
```

```
Preparing image archive from /installer ... Done.
```

```
Verifying Product Platform...
```

```
Image File : ONIE-FTOS-SK-9.10.0.1.bin
```

```
Product Name          : S4048ON
Platform Verified     : OK
Deleting Extra partitions... Done.
Creating New partitions... Done.
Creating Hybrid MBR... Done.
Mounting /dev/sda4,/dev/sda5 and /dev/sda6... Done.
Installing GRUB on /dev/sda4...Done.
Copying Images... Done.
ONIE:/ # umount: can't remount rootfs read-only
The system is going down NOW!
Sent SIGTERM to all processes
Sent SIGKILL tosd 4:0:0:0: [sda] Synchronizing SCSI cache
Restarting system.
machine restart
```

```
BIOS (Dell Inc) Boot Selector
S4000 3.21.0.2 (48-port SFP+ 10G/6-port QSFP 40G)
```

```
POST Configuration
CPU Signature 406D8
CPU FamilyID=6, Model=4D, SteppingId=8, Processor=0
Microcode Revision 125
POST Control=0xEA000303, Status=0xE6009700
Platform ID: 10041836
PMG_CST_CFG_CTL: 40006
BBL_CR_CTL3: 7E2801FF
Misc_EN: 4000840081
Gen PM Con1: 3008
Therm Status: 8842000F
```

BIOS initializations...

CPGC Memtest for Channel 0 PASS

ECC enabled: channel 0 DECCCTRL_DUNIT_REG=0x000200F3

POST:

RTC Battery OK at last cold boot
RTC date Monday 6/15/2015 17:43:15

POST SPD test PASS

POST Lower DRAM Memory test

Short memory cell test
Perf cnt (curr/fixed): 3173479AC/321C6C2A9

POST Lower DRAM Memory test PASS

POST Lower DRAM ECC check PASS

DxE POST

POST PCI test PASS

POST NVRAM check PASS

POST overall test results PASS

NVRAM at POST exit: 00 97 00 E6 03 03 00 EA

Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

BIOS Date: 04/01/2015 19:03:09 Ver: 0ACBZ018

Press DEL or F2 to enter setup.

GRUB loading.

Welcome to GRUB!

Copyright (c) 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005,

2006, 2007, 2008, 2009, 2010 09:14:02 UTC 2015
The NetBSD Foundation, Inc. All rights reserved..1
Copyright (c) 1982, 1986, 1989, 1991, 1993
The Regents of the University of California. All rights reserved.m://A
Partition)

Dell Networking OS Release 9.10(0.1)
NetBSD 5.1_STABLE (S4048) #0: Fri Jun 12 22:23:35 PDT 2015

- 5 After the installation completes, the system displays the following DELL prompt:

Dell>

Upgrading the S4048-ON Dell Networking OS Image using the Dell Networking OS CLI

Bare Metal Provisioning

① **NOTE:** If you are using Bare Metal Provisioning (BMP), see the Bare Metal Provisioning topic in the Dell Networking OS Configuration Guide or the Open Automation Guide.

Manual Upgrade Procedure

Follow these steps carefully to upgrade your S4048-ON systems:

- 1 Dell Networking recommends that you back up your startup configuration and any important files and directories to an external media prior to upgrading the system.
- 2 Upgrade the Dell Networking OS in flash partition A: or B:

upgrade system [flash: | ftp: stack-unit <1-6> | tftp: | scp: | usbflash:] [A: | B:]

EXEC Privilege

```
Dell#upgrade system ftp: a:
Address or name of remote host []: 10.16.127.35
Source file name []: FTOS-SK-9.10.0.1.bin
User name to login remote host: ftpuser
Password to login remote host:
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!...
.....
.....
.....
.....
.....
.....
.....60413463 bytes successfully copied
System image upgrade completed successfully.
Dell#Apr 12 04:42:52: %STKUNIT1-M:CP %DOWNLOAD-6-UPGRADE: Upgrade completed successfully
```

Dell#

- 3 Verify that the Dell Networking OS has been upgraded correctly in the upgraded flash partition

show boot system stack-unit [1-6] | all

EXEC Privilege

Dell#show boot system stack-unit all

Current system image information in the system:
=====

Type	Boot Type	A	B

-			
stack-unit 1	FLASH BOOT	9.10(0.1)	9.10(0.0) [boot]
stack-unit 2	is not present.		


```
stack-unit 3 is not present.
stack-unit 4 is not present.
stack-unit 5 is not present.
stack-unit 6 is not present.
Dell#
```

- 4 Change the Primary Boot Parameter of the S4048-ON to the upgraded partition A: or B:

boot system stack-unit 1 primary system: [A: | B: | tftp: | ftp:]

CONFIGURATION

- 5 Save the configuration so that the configuration will be retained after a reload using write memory command.

write [memory]

EXEC PRIVILEGE

```
Dell#write memory
!
Apr 12 04:44:35: %STKUNIT1-M:CP %FILEMGR-5-FILESAVED: Copied running-config to startup-
config in flash by default
```

```
Dell#
```

- 6 Reload the unit

reload

EXEC PRIVILEGE

```
Command      : reload
Mode         : EXEC PRIVILEGE
Dell#reload
```

```
Proceed with reload [confirm yes/no]: y
Apr 12 04:44:42: %STKUNIT1-M:CP %CHMGR-5-RELOAD: User request to reload the chassis
syncing disks...
done
```

- 7 Verify the S4048 ON has been upgraded to the Dell Networking OS version 9.10(0.1)

show version

EXEC PRIVILEGE

```
Dell#show version
Dell Real Time Operating System Software
Dell Operating System Version: 2.0
Dell Application Software Version: 9.10(0.1)
Copyright (c) 1999-2016 by Dell Inc. All Rights Reserved.
Build Time: Sun Apr 10 06:42:55 2016
Build Path: /sites/eqx/work/swbuild01_1/build16/E9-10-0/SW/SRC
Dell Networking OS uptime is 2 hour(s), 24 minute(s)

System image file is "system://A"

System Type: S4048-ON
Control Processor: Intel Rangeley with 2 Gbytes (2127560704 bytes) of memory, core(s) 2.

8G bytes of boot flash memory.

 1 54-port TE/FG (SK-ON)
48 Ten GigabitEthernet/IEEE 802.3 interface(s)
 6 Forty GigabitEthernet/IEEE 802.3 interface(s)
Dell#
```

Upgrade the Boot Flash and BIOS from Dell Networking OS

To upgrade the Boot Flash and BIOS from Dell Networking OS, perform the following steps:

- 1 Upgrade the S4048-ON Boot Flash image.

```
upgrade boot bootflash-image stack-unit [<id> | all] [booted | flash: | ftp: | scp: | tftp: | usbflash:]
```

EXEC Privilege

```
Dell#upgrade boot bootflash-image stack-unit 1 booted
```

```
Current Boot information in the system:
```

=====

Card	BootFlash	Current Version	New Version
Unit1	Boot Flash	3.21.2.2	3.21.2.3

```
*****
* Warning - Upgrading boot flash is inherently risky and should only *
* be attempted when necessary. A failure at this upgrade may cause *
* a board RMA. Proceed with caution !                               *
*****
```

```
Proceed upgrade Boot Flash image for stack-unit 1 [yes/no]: yes
```

! ! ! ! !

```
Bootflash image upgrade for stack-unit 1 completed successfully.
```

- 2 Upgrade the S4048-ON Boot Selector image.

upgrade boot bootseletor-image stack-unit [*<id>* | all]

EXEC Privilege

Dell Networking OS version 9.10(0.1) requires S4048-ON Boot Selector image version 3.21.0.4 or higher. The booted option is used to upgrade the Boot Selector image to the image version packed with the loaded Dell Networking OS image. The Boot Selector image version packed with the loaded Dell Networking OS can be found using the **show os-version** command in EXEC Privilege mode.

```
Dell#upgrade boot bootselector-image stack-unit 1 booted
```

```
Current Boot information in the system:
```

=====

Card	BootSelector	Current Version	New Version
Unit1	Boot Selector	3.21.0.2	3.21.0.4

```
*****
* Warning - Upgrading boot selectors is inherently risky and should *
* only be attempted when necessary. A failure at this upgrade may *
* cause a board RMA. Proceed with caution ! *
*****
```

```
Proceed upgrade Boot Selector image for stack-unit 1 [yes/no]: yes
```

```
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!00:02:33: %S4048-ON:1 %CHMGR-2-
FAN_SPEED_CHANGE: Fan speed changed to 52 % of the full speed
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
Bootselector image upgrade for stack-unit 1 completed successfully.
Dell#
```

- 3 Reload the unit

reload

EXEC Privilege

- 4 Verify the Boot Selector image

show system stack-unit <id>

EXEC Privilege

```
Dell#show system stack-unit 1
```

```
-- Unit 1 --
Unit Type           : Management Unit
Status              : online
Next Boot           : online
Required Type       : S4048-ON - 54-port TE/FG (SK-ON)
Current Type        : S4048-ON - 54-port TE/FG (SK-ON)
Master priority     : 0
Hardware Rev        : 2.0
Num Ports           : 72
Up Time             : 1 hr, 11 min
Dell Networking OS Version : 9.10(0.1)
Jumbo Capable       : yes
POE Capable         : no
FIPS Mode           : disabled
Boot Flash          : 3.21.2.3
Boot Selector       : 3.21.0.4
Memory Size         : 2127560704 bytes
Temperature         : 32C
Voltage             : ok
```

Upgrading the CPLD

The S4048-ON system with Dell Networking OS Version 9.10(0.1) requires System CPLD revision 15, Master CPLD revision 12, and Slave CPLD revision 5.

NOTE: If your CPLD revisions are higher than the ones shown here, DO NOT make any changes. If you have questions regarding the CPLD revision, contact technical support.

Verify that a CPLD upgrade is required

Use the following command to identify the CPLD version:

```
Dell#show revision
```

```
-- Stack unit 1 --
S4048-ON SYSTEM CPLD      : 11
S4048-ON MASTER CPLD     : 9
S4048-ON SLAVE CPLD      : 4
```

```
Dell#
```

Use the following command to view CPLD version that is associated with the Dell Networking OS image:

```
Dell#show os-version
```

```
RELEASE IMAGE INFORMATION :
```

```
-----
Platform      Version      Size      ReleaseTime
S-Series:SK-ON 9.10(0.1) 62919509 Aug 27 2015 08:03:49
```

```
TARGET IMAGE INFORMATION :
```

Type runtime	Version 9.10(0.1)	Target Control Processor	checksum passed
BOOT IMAGE INFORMATION :			
Type boot flash	Version 3.21.2.3	Target Control Processor	checksum passed
BOOTSEL IMAGE INFORMATION :			
Type boot selector	Version 3.21.0.4	Target Control Processor	checksum passed
FPGA IMAGE INFORMATION :			
Card	FPGA Name	Version	
stack-unit 1	S4048-ON SYSTEM CPLD	15.1	
stack-unit 1	S4048-ON MASTER CPLD	12	
stack-unit 1	S4048-ON SLAVE CPLD	5	
Dell#			

Upgrading the CPLD Image

- ① **NOTE:** The upgrade fpga-image stack-unit 1 booted command is hidden when using the FPGA Upgrade feature in the CLI. However, it is a supported command and will be accepted when entered as documented.
- ① **NOTE:** Ensure that the BIOS version is 3.21.0.3 or above. You can verify this version using show system stack-unit 1 command.

To upgrade the CPLD image on S4048-ON, follow these steps.

- 1 Shut down all of the interfaces on the system.

shutdown

INTERFACE

- 2 Upgrade the CPLD image.

upgrade fpga-image stack-unit <id> booted

EXEC Privilege

De11#

```
Dell#upgrade fpga-image stack-unit 1 booted
```

Current information for the system:

=====

Card	Device Name	Current Version	New Version
Unit1	S4048-ON SYSTEM CPLD	11	15.1
Unit1	S4048-ON MASTER CPLD	9	12
Unit1	S4048-ON SLAVE CPLD	4	5

```
*****
* Warning - Upgrading FPGA is inherently risky and should *
* only be attempted when necessary. A failure at this upgrade may *
* cause a board RMA. Proceed with caution ! *
*****
```

```
Upgrade image for stack-unit 1 [yes/no]: yes
```

FPGA upgrade in progress!!! Please do NOT power off the unit!!!

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```
Upgrade result :
=====
```

```
Del1#00:22:35: %S4048-ON:1 %DOWNLOAD-6-FPGA UPGRADE: stack-unit 1 fpga upgrade success.
```

```

De11#
De11#

```

-  **NOTE:** Do not switch on the system with PSU-REAR LED glowing AMBER.

- [show revision](#)

Dell#show revision

```
-- Stack unit 1 --
S4048-ON SYSTEM CPLD      : 15.1
S4048-ON MASTER CPLD      : 12
S4048-ON SLAVE CPLD       : 5
Dell#
```

- ① **NOTE:** Do not use **power-cycle stack-unit <id>** command to power cycle the system and do not power off the system while FPGA upgrade is in progress. For any queries, contact technical support.

To uninstall the Dell Networking OS version 9.10.0.1) on to the new S4048-ON device, perform the following steps:

- ```
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.
BIOS Date: 04/01/2015 19:03:09 Ver: 0ACBZ018
Press or <F2> to enter setup.
GRUB loading.
Welcome to GRUB!
```

Grub

```
1.99~rc1 (Dell Inc)
Built by root at ubuntu on Mon5 3_06:48:51_UTC_2015
S4000 Boot Flash Label 3.21.2.3 NetBoot Label 3.21.2.3
```

Press Esc to stop autoboot ...

- ```
+-----+
| FTOS                                     |
| FTOS-Boot Line Interface                |
| DELL-DIAG                              |
| ONIE                                    |
+-----+
```

- 3 From the menu, choose the **ONIE** option.

① **NOTE:** To choose an option from the menu, highlight one of the options using the up or down arrow key and press **Enter**.

The following menu appears:

```
+-----+
| ONIE: Install OS                               |
| ONIE: Rescue                                   |
| *ONIE: Uninstall OS                           |
| ONIE: Update ONIE                             |
| ONIE: Embed ONIE                             |
| ONIE: Diag ONIE                              |
| DELL-DIAG                                     |
+-----+
```

- 4 From this menu, choose the **ONIE : Uninstall OS** option.

① **NOTE:** To choose an option from the menu, highlight one of the options using the up or down arrow key and press **Enter**.

The uninstall process begins. Following is the log generated by the system while Dell Networking OS 9.10.0.1 uninstalls:

```
ONIE: OS Uninstall Mode ...

Version : 3.21.1.1
Build Date: 2015-03-17T12:32-0700
Info: Mounting kernel filesystems... done.
Info: Mounting LABEL=ONIE-BOOT on /mnt/onie-boot ...
Info: Using eth0 MAC address: 34:17:eb:f2:04:c4
Info: Using eth1 MAC address: 34:17:eb:f2:04:c5
Info: eth0: Checking link... up.
Info: Trying DHCPv4 on interface: eth0
DHCPv4 on interface: eth0 failed
ONIE: Using default IPv4 addr: eth0:
192.168.3.10/255.255.255.0
Info: eth1: Checking link... down.
ONIE: eth1: link down. Skipping configuration.
ONIE: Failed to configure eth1 interface
Starting: dropbear ssh daemon... done.
Starting: telnetd... done.
discover: Uninstall mode detected. Running uninstaller.
Erasing internal mass storage device: /dev/sda4 (32MB)
  Percent complete: 100%
Erase complete.
Deleting partition 4 from /dev/sda
Erasing internal mass storage device: /dev/sda5 (300MB)
  Percent complete: 100%
Erase complete.
Deleting partition 5 from /dev/sda
Erasing internal mass storage device: /dev/sda6 (300MB)
  Percent complete: 100%
Erase complete.
Deleting partition 6 from /dev/sda
Erasing internal mass storage device: /dev/sda7 (6578MB)
  Percent complete: 100%
Erase complete.
Deleting partition 7 from /dev/sda
Installing for i386-pc platform.
Installation finished. No error reported.
Uninstall complete. Rebooting...
umount: can't remount rootfs read-only
The system is going down NOW!
Sent SIGTERM to all processes
Sent SIGKILL to all processes
Requesting system reboot
sd 4:0:0:0: [sda] Synchronizing SCSI cache
Restarting system.
machine restart
```

```
BIOS (Dell Inc) Boot Selector
S4000 3.21.0.4 (48-port SFP+ 10G/6-port QSFP 40G)
```

```
POST Configuration
CPU Signature 406D8
CPU FamilyID=6, Model=4D, SteppingId=8, Processor=0
Microcode Revision 125
POST Control=0xEA000303, Status=0xE6009700
Platform ID: 10041836
PMG_CST_CFG_CTL: 40006
BBL_CR_CTL3: 7E2801FF
Misc_EN: 4000840081
Gen PM Con1: 3008
Therm Status: 8841000F
```

```
BIOS initializations...
```

```
CPGC Memtest for Channel 0 ..... PASS
```

```
ECC enabled: channel 0 DECCCTRL_DUNIT_REG=0x000200F3
```

```
POST:
  RTC Battery OK at last cold boot
  RTC date Monday 6/15/2015 17:56:40
```

```
POST SPD test ..... PASS
```

```
POST Lower DRAM Memory test
  Short memory cell test
  Perf cnt (curr/fixed): 321C074CD/32C553963
```

```
POST Lower DRAM Memory test ..... PASS
POST Lower DRAM ECC check ..... PASS
DxE POST
POST PCI test ..... PASS
POST NVRAM check ..... PASS
POST overall test results ..... PASS
```

```
NVRAM at POST exit: 00 97 00 E6 03 03 00 EA
```

- 5 After the installation completes, the system displays the following ONIE prompt:

```
ONIE:/ #
```

Installing a Third Party Operating System

Apart from the Dell Networking OS, you can also install a supported third party operating system on the S4048-ON system. For more information on installing a third party operating system, refer to the third party OS vendor's website for OS installation instructions.

Support Resources

The following support resources are available for the S4048-ON system.

Documentation Resources

This document contains operational information specific to the S4048-ON system.

For information about using the S4048-ON, refer to the following documents at <http://www.dell.com/support>:

- *Installing the S4048-ON System*

- *Quick Start Guide*
- *Dell Networking Command Line Reference Guide for the S4048-ON System*
- *Dell Networking Configuration Guide for the S4048-ON System*

For more information about hardware features and capabilities, refer to the Dell Networking website at <https://www.dell.com/networking>.

For more information about the open network installation environment (ONIE)-compatible third-party operating system, refer to <http://onie.org>.

Issues

Issues are unexpected or incorrect behavior and are listed in order of Problem Report (PR) number within the appropriate sections.

NOTE: You can subscribe to issue update reports or use the BugTrack search tool to read current information about open and closed issues. To subscribe or use BugTrack, visit Dell Support at: <https://www.force10networks.com/CSPortal20/BugTrack/SearchIssues.aspx>.

Finding Documentation

This document contains operational information specific to the S4048-ON system.

- For information about using the S4048-ON, refer to the documents at <http://www.dell.com/support>.
- For more information about hardware features and capabilities, refer to the Dell Networking website at <https://www.dell.com/networking>.
- For more information about the open network installation environment (ONIE)-compatible third-party operating system, refer to <http://onie.org>.

Contacting Dell

NOTE: If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell 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.