# DELL Technologies S3100 Series Networking Release Notes User Guide



**DELL Technologies S3100 Series Networking Release Notes User Guide**

Contents



## INSTRUCTION

This document contains information about open and resolved issues, and operational information specific to the Dell EMC

**Networking operating software (OS) and the S3100 Series platform.**
**Current Release Version:** 9.14(2.11)
**Release Date:** 2021-11-25
**Previous Release Version:** 9.14(2.10)

**Topics**



**NOTE:** This document may contain language that is not consistent with current guidelines of Dell Technologies. There are plans to update this document over subsequent releases to revise the language accordingly

Incorrect behavior or unexpected caveats are listed as the Problem Report (PR) numbers within the appropriate sections.

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

## Document Revision History

**Table 1. Revision History**

| Date | Description |
|---|---|
| 2021–11 | Initial release. |

## Requirements

The following requirements apply to the S3100 Series.

**Hardware Requirements**
The following table lists the Dell EMC S3100 Series hardware requirements:

**Table 2**. System Hardware Requirements

| Platforms | Hardware Requirements |
|---|---|

| | |
|---|---|
| S3124 chassis | • Twenty-four Gigabit Ethernet 10/100/1000BASE-T RJ-45 ports that support auto-negotiation for speed, flow control, and duplex.<br>• Two SFP 1G combo ports.<br>• Two SFP+ 10G ports.<br>• 20G expansion slot that supports an optional small form-factor pluggable plus (SFP+) or 10GBase-T module<br>• Two fixed mini Serial Attached SCSI (mini-SAS) stacking ports HG[21] to connect up to twelve S3100 series switches. |
| S3124F chassis | • Twenty-four Gigabit Ethernet 100BASEFX/1000BASE-X SFP ports.<br>• Two 1G copper combo ports.<br>• Two SFP+ 10G ports.<br>• 20G expansion slot that supports an optional small form-factor pluggable plus (SFP+) or 10GBase-T module.<br>• Two fixed mini Serial Attached SCSI (mini-SAS) stacking ports HG[21] to connect up to twelve S3100 series switches. |
| S3124P chassis | • Twenty-four Gigabit Ethernet 10/100/1000BASE-T RJ-45 ports for copper that support auto-negotiation for speed, flow control, and duplex.<br>• Two SFP 1G combo ports.<br>• Two SFP+ 10G ports.<br>• Supports PoE+.<br>• 20G expansion slot that supports an optional small form-factor pluggable plus (SFP+) or 10GBase-T module.<br>• Two fixed mini Serial Attached SCSI (mini-SAS) stacking ports HG[21] to connect up to twelve S3100 series switches. |

| | |
|---|---|
| S3148P chassis | • Forty-eight Gigabit Ethernet 10BASE-T, 100BASE-TX, 1000 BASE-T RJ-45 ports that support auto-negotiation for speed, flow control, and duplex.<br>• Two SFP 1G combo ports.<br>• Two SFP+ 10G ports<br>• Supports PoE+.<br>• 20G expansion slot that supports an optional small form-fact or pluggable plus (SFP+) or 10GBase-T module.<br>• Two fixed mini Serial Attached SCSI (mini-SAS) stacking port s HG[21] to connect up to twelve S3100 series switches. |
| S3148 chassis | • Forty-eight Gigabit Ethernet 10BASE-T, 100BASE-TX, 1000 BASE-T RJ-45 ports that support auto-negotiation for speed, flow control, and duplex.<br>• Two SFP 1G combo ports.<br>• Two SFP+ 10G ports.<br>• 20G expansion slot that supports an optional small form-fact or pluggable plus (SFP+) or 10GBase-T module.<br>• Two fixed mini Serial Attached SCSI (mini-SAS) stacking port s HG[21] to connect up to twelve S3100 series switches. |

## Software Requirements

The following table lists the Dell EMC S3100 Series software requirements:

**Table 3. System Software Requirements**

| Software | Minimum Release Requirement |
|---|---|
| Dell EMC Networking OS | 9.14(2.11) |

## New Dell EMC Networking OS Version 9.14(2.11) Features

The following features are integrated into the Dell EMC Networking 9.14.2 branch through this release: None

## Restrictions

- Prerequisite steps to upgrade the Dell EMC Networking OS from earlier version to 9.14.2.0 or later:
    1. Uninstall the older version of the Open Automation (OA) package
    2. Upgrade the Dell EMC Networking OS to 9.14.2.0 or later version
    3. Install the following OA packages from the respective upgraded version:

        **a**. SmartScripts

**b**. Puppet

**c**. Open management infrastructure (OMI)

**d**. SNMP MIB

Prerequisite steps to downgrade the Dell EMC Networking OS from 9.14.2.0 or later to the earlier version:

1. Uninstall the OA package of 9.14.2.0 or later version
2. Downgrade the Dell EMC Networking OS to an earlier version
3. Install the respective OA package from an earlier version

For more information about installing, uninstalling and upgrading the Dell EMC Networking OS and OA package, refer the respective Dell EMC System Release Notes.

- If you downgrade the Dell EMC Networking OS version from 9.14.2.11 to 9.11.0.0 or any older versions, the system displays the following error message even though there is no functional impact:

  ```
  CDB boot error:    C.cdb file format
  ```

  Before downgrading, save the current configuration and then remove the CDB files (confd_cdb.tar.gz.version and confd_cdb.tar.gz). To remove the files, use the following steps

  ```
  DellEMC#write memory
  DellEMC#delete flash://confd_cdb.tar.gz.version
  DellEMC#delete flash://confd_cdb.tar.gz
  DellEMC#reload
  ```

- While deploying the system in the normal-reload mode in BMP configuration, use the ip ssh server enable command at the beginning of the startup configuration if the write memory command is used at the end of the configuration.
- REST API does not support AAA authentication.
- The following features are not available in the Dell EMC 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)
- Half-Duplex mode is not supported.
- When FRRP is enabled in a VLT domain, no flavor of Spanning tree should concurrently be enabled on the nodes of that specific VLT domain. In essence FRRP and xSTP should not co-exist in a VLT environment.

#### Changes to Default Behavior and CLI Syntax

- From 9.14(2.4P1) onwards, a new nand chip ships on the S3100 series switch. This chip supports the new UBoot version 5.2.1.10.

#### Documentation Corrections

This section describes the errors identified in the current release of the Dell EMC Networking OS.

- The router bgp command allows you to configure only one L3 interface with an IPv4 address. The

Configuration guide does not mention this limitation and will be corrected in the next release of the guide.

## Deferred Issues

Issues that appear in this section were reported in a previous version of Dell Networking OS version as open, but have since been deferred. Deferred issues are the issues that are found to be invalid, not reproducible, or not scheduled for resolution.

Deferred 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 r estart of AFM, the router, switch, or process. S2 — Critical: An issue that renders the sys tem or a major feature unusable, which can have a pervasive impact on the system or ne twork, and for which there is no work-around acceptable to the customer. S3 — Major: A n issue that affects the functionality of a major feature or negatively effects the network f or 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 th ere 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 w hich this release note is documented has resolved the caveat. |

### Deferred S3100 series 9.14(2.0) Software Issues

Issues that appear in this section were reported in Dell EMC Networking OS version 9.14(2.0) as open, but have since been deferred. Deferred caveats are those that are found to be invalid, not reproducible, or not scheduled for resolution. 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 rest art of AFM, the router, switch, or process. S2 — Critical: An issue that renders the system o r a major feature unusable, which can have a pervasive impact on the system or network, a nd 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.<br>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 iss ue. It might not be a permanent solution. Issues listed in the “Closed Caveats” section shoul d not be present, and the work-around is unnecessary, as the version of code for which this release note is documented has resolved the issue. |

#### Fixed S3100 Series 9.14(2.11) Software Issues

**NOTE:** Dell EMC Networking OS 9.14(2.11) includes fixes for caveats addressed in the previous 9.14 releases. See the respective release notes documentation for the list of caveats fixed in the earlier 9.14 releases.

The following caveats have been fixed in the Dell EMC Networking OS version 9.14(2.11):

| | |
|---|---|
| PR# 170066 | |
| Severity: | Sev 3 |
| Synopsis: | In certain scenarios, performing ssh to a switch may not work as expected. |
| Release Notes: | In certain scenarios, performing ssh to a switch may not work as expected |
| Workaround: | None |
| PR# 170093 | |
| Severity | Sev 3 |
| Synopsis: | OpenSSH version 8.6p1 that is bundled with 9.14.2.11, fixes vulnerabilities reported by CV E-2020-12062 and CVE-2020-15778 |
| Release Notes: | OpenSSH version 8.6p1 that is bundled with 9.14.2.11, fixes vulnerabilities reported by CV E-2020-12062 and CVE-2020-15778. |
| Workaround: | None |
| PR# 170151 | |
| Severity: | Sev 2 |
| Synopsis | A memory leak and stacking protocol loop may be seen when more than two stack links are connected in a stack group. |

| | |
|---|---|
| Release Notes: | A memory leak and stacking protocol loop may be seen when more than two stack links are connected in a stack group. |
| Workaround: | None |
| PR# 170159 | |
| Severity: | Sev 3 |
| Synopsis: | SSH connections with Cipher Block Chaining (CBC) ciphers are vulnerable |
| Release Notes: | SSH connections with Cipher Block Chaining (CBC) ciphers are vulnerable |
| Workaround: | Configure a stronger Cipher/MAC/KEX setting using the ip ssh server command |
| PR# 170161 | |
| Severity: | Sev 2 |
| Synopsis | SSH connections may be vulnerable with switches running on a 1024 bit RSA key. |
| Release Notes: | SSH connections may be vulnerable with switches running on a 1024 bit RSA key. |
| Workaround: | Create a new 2048 bit RSA key using the crypto key generate rsa command. |
| PR# 170179 | |
| Severity: | Sev 2 |
| Synopsis: | In certain scenarios, the switch may encounter an exception when trying to ssh into it |
| Release Notes: | In certain scenarios, the switch may encounter an exception when trying to ssh into it. |
| Workaround: | None |
| PR# 170187 | |
| Severity: | Sev 2 |
| Synopsis | In certain scenarios, the switch may encounter an exception when a kernel thread occupies the CPU without context switching. |
| Release Notes: | In certain scenarios, the switch may encounter an exception when kernel thread occupies t he CPU without context switching. |
| Workaround: | None |
| PR# 170198 | |
| Severity: | Sev 2 |
| Synopsis: | A BGP route added using the network command does not get deleted even when the contri buting route is deleted |
| Release Notes: | A BGP route added using the network command does not get deleted even when the contri buting route is deleted. |
| 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 rest art of AFM, the router, switch, or process. S2 — Critical: An issue that renders the system o r a major feature unusable, which can have a pervasive impact on the system or network, a nd 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 a n issue in a minor feature with little or no network impact for which there might be a work-ar ound. |
| 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 iss ue. It might not be a permanent solution. Issues listed in the “Closed Caveats” section shoul d 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 S3100 Series 9.14(2.11) Software Issues

The following caveats are open in Dell Networking OS version 9.14(2.11): None.

## Upgrade Instructions

The following upgrades are available for the Dell EMC Networking operating system (OS) on S3100 series switches:

1. Upgrade the Dell EMC Networking OS image on S3100 series switches.
2. Upgrade the UBoot from Dell EMC Networking OS.
3. Upgrade the CPLD image.
4. Upgrade the PoE controller.

#### Upgrading the Operating Software Image

Upgrade the OS image on S3100 series switches by following the procedure in this section.

**NOTE:** The configurations shown here are examples only and are not intended to duplicate any real system or network.

**NOTE:** If you installed the Open Automation (OA) package on the S3100 series switch, Dell EMC Networking strongly recommends uninstalling the OA package before you upgrade the Dell EMC Networking OS image. Then reinstall a compatible OA package. In this way, the system installs enhancements and uninstalls incompatible OA packages after the Dell EMC Networking OS upgrade.

**NOTE:** Dell EMC Networking strongly recommends using the Management Interface to upgrade the new image in both BMP mode and the Upgrade System CLI. Using front-end ports takes more time (approximately 25

minutes) to download and install new image due to the large file size.

**NOTE:** If you are using bare metal provisioning (BMP), see the Bare Metal Provisioning chapter in the Open Automation Guide

1. Save the running configuration on the switch.
   EXEC Privilege mode
2. Back up your startup configuration to a secure location (for example, an FTP server as shown here). EXEC Privilege mode
   copy startup-config destination

```
DellEMC# copy running-config ftp:
Address or name of remote host []: 10.10.10.10
Destination file name [startup-config]: startup-config
User name to login remote host: host
Password to login remote host: xxxx
!
5179 bytes successfully copied
DellEMC#
```

3. Upgrade the Dell EMC Networking OS on a S3100 series switch. EXEC Privilege mode
   upgrade system {flash: | ftp: | nfsmount: | scp: | stack-unit: | tftp:| usbflash:} fileurl [A: | B:] **Where {flash:** | ftp: | scp: | tftp:| usbflash:} file-url specifies the file transfer method and location of the software image file used to upgrade the S3100 series, and is in one of the following formats:
   - **flash:**//directory-path/filename — Copy from flash file system.
   - **ftp:**//user-id:password@host-ip/file-path — Copy from remote (IPv4 or IPv6) file system.
   - **nfsmount:**//mount-point/filepath — Copy from NFS mount file system.
   - scp://user-id:password@host-ip/file-path — Copy from remote (IPv4 or IPv6) file system.
   - **stack-unit:** — Synchronize image to the specified stack unit.
   - **tftp:**//host-ip/file-path — Copy from remote (IPv4 or IPv6) file system.
   - **usbflash:**//directory-path/filename — Copy from USB flash file system

     **NOTE:** Dell EMC Networking recommends using FTP to copy the new image with the upgrade system command due to the large file size.

```
DellEMC#upgrade system ftp: a:
Address or name of remote host []: 192.168.1.1
Source file name []: FTOS-S3100-9.14.2.11.bin
User name to login remote host: ftpuser
Password to login remote host:
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!.!.....................
.............................................................
.............................................................
.....................!
50155103 bytes successfully copied
System image upgrade completed successfully.
```

4. In case of a stack setup, upgrade the Dell EMC Networking OS for the stacked units. EXEC Privilege mode
   upgrade system stack-unit [1–12 | all] [A: | B:] If A: is specified in the command, the Dell EMC Networking OS version present in Management unit's A: partition will be pushed to the stack units. If B: is specified in the command, the Management unit's B: will be pushed to the stack units. Upgrade of stack units can be done on individual units by specifying the unit id [1–12] or on all units by using  all in the command.

```
DellEMC#upgrade system stack-unit all A:
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
Image upgraded to all
DellEMC#
```

5. Verify the Dell EMC Networking OS has been upgraded correctly in the upgraded flash partition EXEC Privilege mode

   show boot system stack-unit [1-12 | all] The Dell EMC Networking OS versions present in A: and B: can be viewed for individual units by specifying the stack unit id [1–12] in the command or for all the stack units by specifying all in the command.

```
DellEMC#show boot system stack-unit all

Current system image information in the system:
================================================
Type            Boot  Type            A                    B
------------------------------------------------
stack-unit 1    FLASH BOOT    9.14(2.11)        9.14(2.9) [boot]
stack-unit 2    FLASH BOOT    9.14(2.11)        9.14(2.9) [boot]
stack-unit 3    FLASH BOOT    9.14(2.11)        9.14(2.9) [boot]
stack-unit 4 is not present.
stack-unit 5 is not present.
stack-unit 6 is not present.
stack-unit 7 is not present.
stack-unit 8 is not present.
stack-unit 9 is not present.
stack-unit 10 is not present.
stack-unit 11 is not present.
stack-unit 12 is not present.
DellEMC#
```

6. Change the primary boot parameter to the upgraded partition (A: or B:). **CONFIGURATION mode**

   boot system stack-unit {1-12 | all} {default | primary | secondary} {flash://file-name | ftp://file-url | system: {A: | B:} | tftp://file-url }

```
DellEMC(conf)#boot system stack-unit all primary system: a:
DellEMC(conf)#
```

7. Save the upgrade configuration so that it is retained after a reload.

   EXEC Privilege mode

   write memory

```
DellEMC#write memory

!!!
Oct 18 17:01:33: %STKUNIT2-M:CP %FILEMGR-5-FILESAVED: Copied running-config to
startup-config in flash by default
..Synchronizing data to peer stack-unit
!!!!!!!!!!!!!!!!!

DellEMC#
```

8. Reload the switch so that the Dell EMC Networking OS image is retrieved from flash. EXEC Privilege mode

   reload

```
DellEMC#reload

Proceed with reload [confirm yes/no]: yes...
```

9. Verify that the switch is upgraded to the latest Dell EMC Networking OS version. EXEC Privilege mode

   show version

```
DellEMC#show version
Dell EMC Real Time Operating System Software
Dell EMC Operating System Version:  2.0
Dell EMC Application Software Version:  9.14(2.11)
Copyright (c) 2000-2021 by Dell Inc. All Rights Reserved.
Build Time: Mon Oct 18 11:34:10 2021
Build Path: /build/build01/SW/SRC
Dell EMC Networking OS uptime is 1 hour(s), 31 minute(s)

System image file is "system://A"
```

```
System Type: S3124P
Control Processor: Broadcom 56340 (ver A0) with 2 Gbytes (2147483648 bytes) of
memory, core(s) 1.

1G bytes of boot flash memory.

  1 52-port GE/TE (S3100)
  1 28-port GE/TE (S3100)
  1 28-port GE/TE (S3100)
 96 GigabitEthernet/IEEE 802.3 interface(s)
  8 Ten GigabitEthernet/IEEE 802.3 interface(s)
DellEMC#
```

10. Check if all the stack units are online after reload. EXEC Privilege mode show system brief

```
DellEMC#show system brief

Stack MAC                : 00:11:33:44:77:86
Reload-Type              : normal-reload [Next boot : normal-reload]

--  Stack Info  --
Unit  UnitType     Status         ReqTyp          CurTyp          Version     Ports
-----------------------------------------------------------------------------------
  1   Member       online         S3148           S3148           9.14(2.11)  54
  2   Management   online         S3124P          S3124P          9.14(2.11)  30
  3   Standby      online         S3124F          S3124F          9.14(2.11)  30
```

### Upgrade the UBoot from Dell EMC Networking OS

To upgrade the UBoot from Dell EMC Networking OS, perform the following steps:

1. Upgrade the S3100 Series Boot Flash (UBoot) image. EXEC Privilege mode upgrade boot bootflash-image stack-unit [ | all] [booted | flash: | ftp: | scp: | tftp: | usbflash:] Dell EMC Networking OS version 9.14(2.11) requires S3100 Series Boot Flash (UBoot) image version 5.2.1.10. The booted option is used to upgrade the Boot Flash (UBoot) image to the image version packed with the loaded Dell EMC Networking OS image. The Boot Flash (UBoot) image version packed with the loaded Dell EMC Networking OS can be found using the show os-version command in EXEC Privilege mode. To upgrade the Boot Flash image of all stack-units, the option all can be used.

```
DellEMC#upgrade boot bootflash-image stack-unit all booted

Current Boot information in the system:
==========================================================================
  Card                        BootFlash       Current Version  New Version
--------------------------------------------------------------------------
     Unit1                     Boot Flash            5.2.1.8      5.2.1.10
     Unit2                     Boot Flash            5.2.1.8      5.2.1.10
     Unit3                     Boot Flash            5.2.1.8      5.2.1.10

    ************************************************************************
    *  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 Boot Flash image for all units [yes/no]: yes

!!!!!.!.!!
```

```
Bootflash image upgrade for all completed successfully.
DellEMC#
```

```
DellEMC#show system brief

Stack MAC                : 00:11:33:44:77:86
Reload-Type              : normal-reload [Next boot : normal-reload]

--  Stack Info  --
Unit  UnitType     Status         ReqTyp          CurTyp          Version     Ports
-------------------------------------------------------------------------------
  1   Member       online         S3148           S3148           9.14(2.11)  54
  2   Management   online         S3124P          S3124P          9.14(2.11)  30
  3   Standby      online         S3124F          S3124F          9.14(2.11)  30
```

2. Reload the unit. EXEC Privilege mode reload
3. Verify the UBoot image. EXEC Privilege mode show system stack-unit <i

```
DellEMC#show system stack-unit 1

--  Unit 1 --
Unit Type                  : Management Unit
Status                     : online
Next Boot                  : online
Required Type              : S3124F - 28-port GE/TE (S3100)
Current Type               : S3124F - 28-port GE/TE (S3100)
Master priority            : 0
Hardware Rev               : 5.0
Num Ports                  : 30
Up Time                    : 4 min, 27 sec
Dell EMC Networking OS Version : 9.14(2.11)
Jumbo Capable              : yes
POE Capable                : no
FIPS Mode                  : disabled
Boot Flash                 : 5.2.1.10
Boot Selector              : Present
Memory Size                : 2147483648 bytes
Temperature                : 38C
Voltage                    : ok
Serial Number              :
Part Number                : Rev
Vendor Id                  :
Date Code                  :
Country Code               :
Piece Part ID              : N/A
PPID Revision              : N/A
Service Tag                : N/A
Expr Svc Code              : N/A
Auto Reboot                : disabled
Burned In MAC              : f8:10:16:17:18:17
No Of MACs                 : 3

--  Module 1 --
Status          : not present

--  Power Supplies  --
Unit   Bay   Status       Type    FanStatus   FanSpeed(rpm)
-------------------------------------------------------------
  1     1    up           AC      up          0
  1     2    absent               absent      0

--  Fan  Status  --
Unit Bay   TrayStatus  Fan1    Speed   Fan2    Speed
-------------------------------------------------
1    1     up          up      6956    up      7058
```

```
Speed in RPM

DellEMC#
```

### Upgrading the CPLD

The S3100 series with the Dell EMC Networking OS Version 9.14(2.11) requires System CPLD revision 24.

**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:

```
DellEMC#show revision

--  Stack unit 1  --
S3124F SYSTEM CPLD    : 24
DellEMC#
```

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

```
DellEMC#show os-version

RELEASE IMAGE INFORMATION :
------------------------------------------------------------------------
      Platform          Version        Size           ReleaseTime
 S-Series:S3100      9.14(2.11)    50155103   Oct 18 2021 12:52:25

TARGET IMAGE INFORMATION :
------------------------------------------------------------------------
          Type          Version                   Target    checksum
       runtime       9.14(2.11)        Control Processor      passed

BOOT IMAGE INFORMATION :
------------------------------------------------------------------------
          Type          Version                   Target    checksum
    boot flash          5.2.1.6        Control Processor      passed

FPGA IMAGE INFORMATION :
------------------------------------------------------------------------
         Card                        FPGA Name    Version
 stack-unit 1              S3148 SYSTEM CPLD         24

PoE-CONTROLLER IMAGE INFORMATION
------------------------------------------------------------------------
          Type          Version
PoE Controller             2.65
DellEMC#
```

### Upgrading the CPLD Image

**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 is accepted when entered as documented

**NOTE:** Ensure that the uBoot version is 5.2.1.8 or above. You can verify this version using show system stack-unit 1 command.

To upgrade the CPLD image on S3100 Series, follow these steps:

1. Upgrade the CPLD image. EXEC Privilege mode

   upgrade fpga-image stack-unit booted

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

Current information for the system:
=====================================================================
  Card                    Device Name    Current Version     New Version
---------------------------------------------------------------------
Unit1             S3124F SYSTEM CPLD                 23             24

    ***********************************************************************
    *  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 !                         *
    ***********************************************************************


    ***********************************************************************
    *  When the upgrade has successfully completed, the system will       *
    *  be automatically rebooted to reload the upgraded components.       *
    ***********************************************************************

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


System fpga upgrade in progress!!! Please do NOT power off the unit!!!

Upgrade result :
================
Unit 1 System fpga upgrade in progress.
It will take a few minutes for the upgrade to complete.
Unit 1 will auto reboot once the the upgrade is complete.

Please do NOT power off or reload the unit!!!
```

2. The system reboots automatically and waits for the DellEMC prompt. The CPLD version can be verified using show revision command output. EXEC Privilege mode show revision

```
DellEMC#show revision

--  Stack unit 1  --
S3124F SYSTEM CPLD      : 24

DellEMC#
```

**NOTE:** Do not power off the system while FPGA upgrade is in progress. For any queries, contact technical support

**NOTE:** When you upgrade the standby and member units of CPLD, the following message displays in the management unit. The unit automatically reboots once the upgrade is complete and joins the stack with the upgraded CPLD.

```
DellEMC#upgrade fpga-image stack-unit 3 booted

Current information for the system:
=====================================================================
  Card                    Device Name    Current Version     New Version
---------------------------------------------------------------------
 Unit3             S3124F SYSTEM CPLD                 23             24

    ***********************************************************************
    *  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 !                         *
    ***********************************************************************


    ***********************************************************************
    *  When the upgrade has successfully completed, the system will       *
```

```
    *  be automatically rebooted to reload the upgraded components.       *
    ************************************************************************

Upgrade image for stack-unit 3 [yes/no]: yes


System fpga upgrade in progress!!! Please do NOT power off the unit!!!

Upgrade result :
================
Unit 3 System fpga upgrade in progress.
It will take a few minutes for the upgrade to complete.
Unit 3 will auto reboot once the the upgrade is complete.

Please do NOT power off or reload the unit!!!

DellEMC#
```

### Upgrading the PoE Controller

Upgrade the PoE controller image on a stack unit of the S3100 series switch.

1. Upgrade the PoE controller image on a specified stack unit. EXEC Privilege mode upgrade poe-controller stack-unit unit-number

```
DellEMC#upgrade poe-controller stack-unit 1

Current PoE-Controller information in the system:
=================================================
Stack Unit           Current Version        New Version
-------------------------------------------------
  1                       2.65                2.65

    ************************************************************************
    * Warning - Upgrading PoE Controller should only be attempted         *
    * when necessary. Stack-unit will be reset automatically after        *
    * upgrade. PoE to all ports of the unit would be suspended until      *
    * upgrade completes and unit gets reloaded successfully. Please do not*
    * Reset/Powercyle or Reload. Proceed with caution !                   *
    ************************************************************************


Upgrade PoE Controller Firmware for stack-unit 1 ? [yes/no]: yes

PoE Controller upgrade in progress. Please do NOT POWER-OFF the card.
!
Upgrade result :
================
Slot 1 PoE Controller FirmWare upgrade successful. Resetting the stack-unit.
DellEMC#
```

### Support Resources

The following support resources are available for the S3100 Series.

#### Documentation Resources

For information about using the S3100 Series, see the following documents at **http://www.dell.com/support**:

- Dell EMC Networking S3100 Series Installation Guide
- Quick Start Guide
- Dell EMC Command Line Reference Guide for the S3100 Series
- Dell EMC Configuration Guide for the S3100 Series

For more information about hardware features and capabilities, see the Dell EMC Networking website at https://**www.dellemc.com/networking**

### Issues

Incorrect behavior or unexpected caveats are listed in order of Problem Report (PR) number within the appropriate sections.

## Finding Documentation

This document contains operational information specific to the S3100 Series.

- For information about using the S3100 Series, see the documents at http://www.dell.com/support.
- For more information about hardware features and capabilities, see the Dell EMC Networking website at **https://www.dellemc.com/networking**.

## Contacting Dell EMC

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

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 EMC for sales, technical support, or customer service issues:

Go to **www.dell.com/support**.

### Notes, cautions, and warnings

**NOTE:** A NOTE indicates important information that helps you make better use of your product.

**CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

**WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

### Costumer Support



## Documents / Resources

| | |
|---|---|
|  | DELL Technologies S3100 Series Networking Release Notes [pdf] User Guide<br>S3124, S3124F, S3124P, S3148P, S3148, S3100 Series Networking Release Notes, Networking Release Notes, Release Notes |

## References

- Computers, Monitors & Technology Solutions | Dell USA
- Support | Dell US
- Support | Dell US
- Dell Networking Solutions | Dell USA
- Support | Dell US
- Dell Networking Solutions | Dell USA