DELLTechnologies

Dell S4820T System Release Notes, OS Version 9.14(1.10)

This document contains information on open and resolved caveats, and operational information specific to the Dell Networking OS software and the S4820T platform.
Current Release Version: 9.14(1.10)
Release Date: 2021-09-30
Previous Release Version: 9.14(1.9P4)

Topics:

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

Document Revision History

Table 1. Revision History

Date	Description
2021–09	Initial release.

Supported Hardware

The following hardware is supported with this platform:

Table 2. Supported Hardware

Hardware
48 port 10-G Base-T ports with 4 QSFP+ 40G ports
48 port 10-G Base-T ports with 4 QSFP+ 40G ports, 2 DC power supply and 2 fan subsystem with airflow from I/O side to power supply unit (PSU) side

Table 2. Supported Hardware (continued)

Hardware
48 port 10-G Base-T ports with 4 QSFP+ 40G ports, 2 AC power supply and 2 fan subsystem with airflow from I/O side to power supply unit (PSU) side
48 port 10-G Base-T ports with 4 QSFP+ 40G ports, 2 DC power supply and 2 fan subsystem with airflow from power supply unit (PSU) side to I/O side
48 port 10-G Base-T ports with 4 QSFP+ 40G ports, 2 AC power supply and 2 fan subsystem with airflow from power supply unit (PSU) side to I/O side
S4820T Series – Fan with airflow from I/O side to power supply unit (PSU) side
S4820T Series – Fan with airflow from PSU side to I/O side
S4820T Series – DC Power supply with airflow from I/O side to power supply unit (PSU) side
S4820T Series – DC power supply with airflow from power supply unit (PSU) side to I/O side
S4820T Series – AC Power supply with airflow from I/O side to power supply unit (PSU) side
S4820T Series – AC Power supply with airflow from power supply unit (PSU) side to I/O side

(i) **NOTE:** Fan Modules and Power supplies (PSUs) are field replaceable units. Dell Networking does not support a mix of power supply types (i.e., AC and DC) in the same switch.

(i) **NOTE:** All fans and PSUs must have the same airflow direction. Should a mixed airflow configuration happen, the switch detects the discrepancy and performs a shutdown, if the module is not replaced within few minutes.

(i) **NOTE:** Due to hardware limitation, 1G copper and fiber SFP with QSA is not supported.

New Dell Networking OS Version 9.14(1.10) Features

The following features have been added to the S4820T with Dell Networking OS version 9.14(1.10):

None.

Restrictions

If an Intel X520 CNA adapter is used as an FCoE initiator, follow these steps to establish FCoE sessions to send and receive traffic on an S4820T switch:

1. On the server, uninstall the old Intel driver (version 13.0.0 or older).
2. Re-install the Intel driver using version 13.5 A00 (or later) from the http://www.dell.com website. Important: During the installation, do not select the ISCSI part of the driver; select only the FCoE check box.
3. On each server-facing port, enter the following commands in interface configuration mode. The `dcbx version cee` command configures a port to use the CEE (Intel 1.01) version of DCBX. Configure server-facing ports with the `shutdown` and `no shutdown` commands as needed. For example:

```
Dell# interface tenGigabitEthernet 0/1
Dell(conf-if-te-0/1)# portmode hybrid
Dell(conf-if-te-0/1)# switchport
Dell(conf-if-te-0/1)# protocol lldp
Dell(conf-lldp)# dcbx port-role auto-downstream
Dell(conf-lldp)# dcbx version cee
Dell(conf-lldp)# exit
Dell(conf-if-te-0/1)# spanning-tree pvst edge-port
Dell(conf-if-te-0/1)# no shutdown
```

```
Dell(conf-if-te-0/1)# exit
Dell#
```

4. Display information on FIP-snooped sessions and check the entries in ENode Interface fields to see if you have established the FCoE session on a server-facing port.

   `show fip-snooping sessions`

   EXEC Privilege

- REST API does not support AAA authentication.
- 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`)
- If you use the `interface range` command to select multiple interfaces that are added to the management VRF, the `ipv6 address` command does not display the `autoconfig` option. You can configure the `autoconfig` command on individual interfaces.

- If you use the `interface range` command to select multiple interfaces that are added to the management VRF, the `ipv6 nd` command displays the following options but they do not take effect if you use them:

  - dns-server
  - hop-limit
  - managed-config-flag
  - max-ra-interval
  - mtu
  - other-config-flag
  - prefix
  - ra-guard
  - ra-lifetime
  - reachable-time
  - retrans-timer
  - suppress-ra

Changes to Default Behavior and CLI Syntax

Following default behavior and CLI syntax changes occurred during the Dell EMC Networking OS release:
- To enhance security, the default RSA key size has been changed to 2048 bits from 1024 bits from 9.14.1.10 onwards.

S4820T Upgrade Procedures: Overview

To upgrade the Dell Networking OS on a S4820T switch, complete these steps:
- Upgrading the S4820T Dell Networking OS Image and Boot Code

- Upgrading the CPLD

- VLT Upgrade Procedure

Upgrading the S4820T Dell Networking OS Image and Boot Code

The S4820T system is pre-loaded with default Dell Networking OS software.

ⓘ **NOTE:** If VLT configurations exist on a switch that runs Dell Networking OS version 9.2(0.0) or prior, ensure that all switches in the VLT domain are upgraded to 9.3(0.0) before upgrading to version 9.14(1.10).

> **NOTE:** You can directly upgrade a switch that runs Dell Networking OS version 8.3.19.0 (or later) to version 9.14(1.10), if VLT configurations do not exist on that switch.

Bare Metal Provisioning

> **NOTE:** If you are using Bare Metal Provisioning (BMP), refer to the Bare Metal Provisioning chapter in the Dell Networking OS Configuration Guide or the Open Automation Guide.

Manual Upgrade Procedure

Follow these steps to upgrade your S4820T system:

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: | scp: | tftp:] [A: | B:]`

   EXEC Privilege

   ```
   Dell#upgrade system ftp: a:
   Address or name of remote host []: 10.16.127.35
   Source file name []: FTOS-SE-9.14.1.10.bin
   User name to login remote host: ftpuser
   Password to login remote host:
   !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
   Erasing Sseries Primary Image, please wait
   ...........................................................................Writing
   ...............
   44220292 bytes successfully copied
   System image upgrade completed successfully.
   Dell#
   ```

3. In case of a stack setup, upgrade the Dell Networking OS for the stacked units.

   `upgrade system stack-unit [0-11 | all] [A: | B:]`

   EXEC Privilege

   If A: is specified in the command, the Dell 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 [0-11] or on all units by using all in the command.

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

4. Verify the Dell Networking OS has been upgraded correctly in the upgraded flash partition

   `show boot system stack-unit [0-11 | all]`

   EXEC PRIVILEGE

   The Dell Networking OS versions present in A: and B: can be viewed for individual units by specifying the stack unit id [0-11] in the command or for all the stack units by specifying all in the command.

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

   Current system image information in the system:
   ===============================================================
   Type          Boot Type        A              B
   ---------------------------------------------------------------
   stack-unit 0  FLASH BOOT   9.14(1.10)      9.14(1.9P4)[boot]
   stack-unit 1  FLASH BOOT   9.14(1.10)      9.14(1.9P4)[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.
   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.
Dell#
```

5. Upgrade the S4820T Boot Code.

   ```
   upgrade boot [flash: | ftp: | scp: | tftp:]
   ```

   EXEC Privilege

   Dell Networking OS version 9.14(1.10) requires S4820T Boot Code version 1.2.0.5. If any higher versions of Boot Code are present in the unit, do not upgrade the Boot Code.

   ```
   Dell#upgrade boot ftp:
   Address or name of remote host []: 10.16.127.35
   Source file name []: U-boot.1.2.0.5.bin
   User name to login remote host: ftpuser
   Password to login remote host:
   !....!
   524528 bytes successfully copied
   Dell#
   ```

6. In case of a stack setup, upgrade the S4820T Boot Code to the stack units.

   ```
   upgrade boot stack-unit [0-11 | all]
   ```

   EXEC Privilege

   The S4820T Boot Code can be upgraded to individual units by specifying the stack unit ID [0-11] in the command or it can be upgraded on all stack units by specifying all in the command.

   ```
   Dell#upgrade boot stack-unit all
   !!!!!!!!!!
   Dell#
   ```

7. Change the Primary Boot Parameter of the S4820T to the upgraded partition A: or B:

   ```
   boot system stack-unit [0-11 | all] primary [system A: | system B: | tftp://URL
   ```

   CONFIGURATION

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

   ```
   write [memory]
   ```

   EXEC PRIVILEGE

   In case of a stack setup, the configuration will be saved in the Management as well as the Standby units.

   ```
   Dell#write memory
   !
   Synchronizing data to peer Stack-unit
   !!!!!!!!
   Dell#
   ```

9. Reload the unit

   ```
   reload
   ```

   EXEC PRIVILEGE

   ```
   Dell#reload

   Proceed with reload [confirm yes/no]: yes
   Sep 24 21:32:27: %STKUNIT0-M:CP %CHMGR-5-RELOAD: User request to reload the chassis
   syncing disks... done
   ```

   (i) **NOTE:** The upgrade to 9.14(1.10) may take some time because of a new microcode installed on the 10GBASE-T phy chips.

10. Verify the S4820T has been upgraded to the Dell Networking OS version 9.14(1.10).

    ```
    show version
    ```

    EXEC PRIVILEGE

    ```
    Dell#show version
    Dell Real Time Operating System Software
    ```

```
Dell Operating System Version:  2.0
Dell Application Software Version:  9.14(1.10)
Copyright (c) 1999-2021 by Dell Inc. All Rights Reserved.
Build Time: Fri Sep 24 16:58:02 2021
Build Path: /build/build02/SW/SRC
Dell Networking OS uptime is 2 minute(s)

System image file is "system://A"


System Type: S4810
Control Processor: Freescale QorIQ P2020 with 2 Gbytes (2147483648 bytes) of memory,
core(s) 1.

128M bytes of boot flash memory.

  1 52-port GE/TE/FG (SE)
 48 Ten GigabitEthernet/IEEE 802.3 interface(s)
  4 Forty GigabitEthernet/IEEE 802.3 interface(s)
Dell#
```

11. Verify the S4820T has been upgraded to the latest Boot Code

    `show system stack-unit [0-11]`

    EXEC PRIVILEGE

```
Dell#show system stack-unit 0

--  Unit 0 --
Unit Type                   : Management Unit
Status                      : online
Next Boot                   : online
Required Type               : S4820T - 52-port GE/TE/FG (SE)
Current Type                : S4820T - 52-port GE/TE/FG (SE)
Master priority             : 0
Hardware Rev                : 1.0
Num Ports                   : 64
Up Time                     : 5 min, 5 sec
Dell Networking OS Version  : 9.14(1.10)
Jumbo Capable               : yes
POE Capable                 : no
FIPS Mode                   : disabled
Boot Flash                  : 1.2.0.5
Memory Size                 : 2147483648 bytes
Temperature                 : 50C
Voltage                     : ok
Serial Number               : SWDL132D20003
Part Number                 : MHDJ7      Rev 01
Vendor Id                   : 07
Date Code                   : 01072013
Country Code                : 02
Piece Part ID               : CN-0MHDJ7-28298-32D-0003
PPID Revision               : A00
Service Tag                 : DNZVTS1
Expr Svc Code               : 297 491 639 05
Auto Reboot                 : enabled
Burned In MAC               : 90:b1:1c:f4:27:c0
No Of MACs                  : 3


-- Power Supplies --
Unit   Bay   Status   Type    FanStatus  FanSpeed  InPwr  AvgInPwr  AvgInPwrStartTime
----------------------------------------------------------------------------------
  1     1    absent           absent     0          0      0        N/A
  1     2    up     AC         up         14752     61     54       09/24/2021-02:42
-- Fan  Status --
Unit Bay   TrayStatus Fan0    Speed   Fan1    Speed
---------------------------------------------------------
 0    0      up          up    13466   up      13466
 0    1      up          up    13466   up      13466

Speed in RPM
```

Upgrading the CPLD

The S4820T system with Dell Networking OS version 9.14(1.10) requires CPLD image 9.

Verify that a CPLD upgrade is required

Use the following command to identify the CPLD version loaded in the device:

```
Dell#show revision

--  Stack unit 0 --
S4820 SYSTEM CPLD        : 9
NPU PCI DEVICE ID        : 0xB846 (TRIDENT+)

--  Stack unit 1 --
S4820T SYSTEM CPLD       : 9
NPU PCI DEVICE ID        : 0xB846 (TRIDENT+)

--  Stack unit 2 --
S4820T SYSTEM CPLD       : 9
NPU PCI DEVICE ID        : 0xB846 (TRIDENT+)
```

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:  SE        9.14(1.10)   44220292    Sep 24 2021 17:24:13


TARGET IMAGE INFORMATION :
------------------------------------------------------------------
            Type        Version        Target          checksum
        runtime   9.14(1.10)   Control Processor     passed

CPLD IMAGE INFORMATION :
------------------------------------------------------------------
        Card                        CPLD Name              Version
 Stack-unit 0             S4820 SYSTEM CPLD                      9
Dell#

Dell#show revision

--  Stack unit 0 --
S4820 SYSTEM CPLD        : 9
NPU PCI DEVICE ID        : 0xB846 (TRIDENT+)

Dell#
```

Upgrading the CPLD Image

ⓘ **NOTE:** The upgrade fpga-image stack-unit {0-11} 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.

To upgrade the CPLD image on the S4820T:

1. Upgrade the CPLD image.
   ```
   upgrade fpga-image stack-unit [0-11] booted
   ```

EXEC Privilege

```
Dell# upgrade fpga-image stack-unit 0 booted

Current FPGA information in the system:
===========================================================
  Card        FPGA Name         Current Version      New Version
-----------------------------------------------------------
 Unit0    S4820 SYSTEM CPLD          9                9


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

stack-unit 0 will REBOOT to activate the latest Upgraded FPGA version!!!
Upgrade fpga image for stack-unit 0 [yes/no]: yes


FPGA upgrade in progress!!!
!!!!!!!!!!!!!!

Upgrade result :
================
Unit 0 FPGA upgrade successful. Unit 0 will now reboot to complete the upgrade.

Dell#
```

2. Check whether the CPLD has been upgraded to the latest version.

   show revision

   EXEC PRIVILEGE

```
Dell#show revision

--  Stack unit 0  --
S4820 SYSTEM CPLD        : 9
NPU PCI DEVICE ID        : 0xB846 (TRIDENT+)

Dell#
```

VLT Upgrade Procedure

To upgrade the Dell Networking OS in a VLT setup from version 9.2(0.0) to the latest version, upgrade Dell Networking OS to version 9.3(0.0) first and then to the newer version. If you are already running Dell Networking OS version 9.3(0.0) or later, you can directly upgrade the Dell Networking OS to the latest version. To upgrade the Dell Networking OS, on systems running VLT, perform the following steps:

1. Upgrade the system-flash partition A or B with the new image on both VLT peers.On both the VLT peers, set Primary boot parameter to boot the system from upgraded system flash partition [A or B]. You can enter one of the following options: **flash** — Copies from flash file system (flash://filepath).**ftp** — Copies from remote file system (ftp:// userid:password@hostip//filepath).**scp** — Copies from remote file system (scp://userid:password@hostip//filepath).**tftp** — Copies from remote file system (tftp://hostip/filepath).

   upgrade system [flash: | ftp: | scp: | tftp: | usbflash:] [A: | B:]

   EXEC Privilege

2. Reload or power-cycle one of the VLT peers (For Example, Peer 2).

   reload or power cycle

3. Wait for Peer 2 to come up; VLT adjacency will be established. (Peer 2 - new image and Peer 1 - old image).

4. Wait for the Peer 2 to bring up all VLT LAG ports. Use the command `show vlt detail` to confirm all VLT ports in the local chassis are active.

   show vlt detail

   EXEC Privilege

5. Following upgrade, use the `write memory` command to save the running-config to memory.

```
write memory
```
EXEC Privilege

6. Ensure both the nodes are now forwarding traffic.

7. When all VLT ports are active on the Peer 2, repeat steps 2 through 5 for the Peer 1.

   ⓘ **NOTE:** After upgrading to the latest Dell Networking OS version, upgrade the CPLD if required.

Documentation Corrections

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

● The Dell Networking OS Command Line Reference and Configuration guides do not document the ICMP redirect feature. The Dell Networking OS supports the ICMP redirect feature that enables the switch to inform hosts, on the same subnetwork, regarding the existence of a better route to a specific destination. You can enable this feature using the `icmp6-redirect enable` command. This command is applicable for both IPv6 and IPv4 traffic. By default, this command enables ICMP redirect on VLAN interfaces. To enable the feature on physical interfaces and port channels, use the `cam-acl fedgovacl` command.

● The Dell Networking OS Configuration guides do not mention about the NAS-Port-Type attribute. The Configuration guides will be updated by including the following line:

   The NAS-Port-Type attribute indicates the type of the physical port of the NAS which is authenticating the user. It is used in Access-Request packets. The value of this attribute is set as Ethernet (15) for both EAP and MAB supplicants.

Deferred Issues

Issues that appear in this section were reported in Dell Networking OS version 9.14(1.0) as open, but have since been deferred. Deferred issues are those 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 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.
	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 "Fixed Issues" 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 issue.

Deferred S4820T 9.14(1.0) 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.
	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.
	The work-around is unnecessary, as the version of code for which this release note is documented has resolved the caveat.

Fixed S4820T 9.14(1.10) Software Issues

ⓘ **NOTE:** Dell Networking OS 9.14(1.10) includes fixes for issues addressed in previous 9.14 releases. Refer to the respective release notes documentation for the list of issues fixed in earlier 9.14 releases.

The following issues are fixed in Dell Networking OS version 9.14(1.10):

PR#170115

Severity:	Sev 3
Synopsis:	The switch may encounter an exception when an incorrect length field is specified in a TACACS packet.
Release Notes:	The switch may encounter an exception when an incorrect length field is specified in a TACACS packet.
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#170206

Severity:	Sev 2
Synopsis:	Addressed OpenSSL CVE's: CVE-2021-3711 and CVE-2021-3712.
Release Notes:	The following CVEs have been addressed: ● CVE-2021-3711 ● CVE-2021-3712 The CVE database can be accessed here: https://cve.mitre.org/cve/search_cve_list.html.
Workaround:	None

PR#170211

Severity:	Sev 2
Synopsis:	When a switch with scaled VLANs is reloaded, traffic drop may occur due to a delay in VLAN programming.
Release Notes:	When a switch with scaled VLANs is reloaded, traffic drop may occur due to a delay in VLAN programming.
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. **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.

Category	Description
	Issues listed in the "Fixed Issues" 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 issue.

Known S4820T Software Issues

The following issues are open in Dell Networking OS version 9.14(1.10):

PR#169841

Severity:	Sev 2
Synopsis:	In certain scenarios, an MSDP learnt PIM TIB entry stays in `registering` state indefinitely.
Release Notes:	In certain scenarios, an MSDP learnt PIM TIB entry stays in `registering` state indefinitely.
Workaround:	Set the affected node as a non-designated router in the RPF neighbor interface.

Support Resources

The following support resources are available for the S4820T system.

Documentation Resources

This document contains operational information specific to the S4820T system.

For information about using the S4820T, refer to the following documents at http://www.dell.com/support:
- *Installing the S4820T System*
- *Quick Start Guide*
- *Dell Networking Command Line Reference Guide for the S4820T System*
- *Dell Networking Configuration Guide for the S4820T 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.

Finding Documentation

This document contains operational information specific to the S4820T system.

- For information about using the S4820T, 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.dellemc.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.

Notes, cautions, and warnings

(i) **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.**