D⦵LL Technologies

Dell PowerEdge FN I/O Module 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 on the Dell PowerEdge FN I/O Module.
Current Release Version: 9.14(1.10)
Release Date: 2021-09-30
Previous Release Version: 9.14(1.9P4)

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

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.

Pre−requisites

The Dell Chassis Management Controller (CMC) version 1.41 is required to use an FN I/O module switch running Dell Networking OS version 9.9.0.0 or later.

You can use the CMC out-of-band management interface to access and manage an FN IOM Switch using the Dell Networking OS command-line interface. For more information, see the Dell Chassis Management Controller Firmware User's Guide on the Dell Support website at http://support.dell.com/support/edocs/systems/pem/en/index.htm.

Supported Hardware

The following hardware is supported with this platform:

Hardware
FN 410S I/O Aggregator: 4x10G SFP+
FN 410T I/O Aggregator: 4x10G Base-T
FN 2210S I/O Aggregator: 4x10G Combo ports with Ethernet and Fibre Channel

ⓘ **NOTE:** The FN I/O Module does not support using the cable Cisco SFP-H10GB-ACU10M revision 37-1150-01

New Dell Networking OS Version 9.14(1.10) Features

The following features have been added to the Dell PowerEdge FN I/O Module with Dell Networking OS Version 9.14(1.10):

None.

Important Points to Remember

When an FN I/O Module is installed in a Dell PowerEdge FX2 server chassis:
- Starting 9.4(0.0) release, only ESC key can be used to break into the BLI/X-loader of the FN I/O Module during boot/reload procedure. For this feature to be effective, upgrade the boot selector as explained in Upgrading the Dell Networking OS Image section.
- FCoE traffic drops/outage is observed when the DCBx parameters are changed when the Module is operational. Outage is more with Broadcom CNAs (40 seconds) compared to Intel CNAs (10 seconds). Configure all CNAs and the required DCBx parameters before on boarding and making the FN I/O Module operational.
- Avoid connecting both the switch management interfaces (in band and out of band interfaces) to the same subnet.

Restrictions and Known Issues with Other Devices

- 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.
- Connections between an FN I/O Module and the following devices are not supported:
  - Cisco fabric extenders (FEXes): Storage deployments are not supported; LAN deployments are supported.
- When an FN I/O Module interoperates with a Brocade B8000 switch, when you reboot the FN I/O Module, B8000 switch generates more PFC frames, which may result in the failure to establish the iSCSI sessions.
- In connections with a server using a Q-LOGIC CNA for converged traffic, a FIP snooping session may flap when non-standard LAN traffic is transmitted with SAN traffic.
- In connections with a server using a Q-LOGIC CNA, FCoE sessions are cleared when the keepalive parameter in fcoe-map is toggled (disabled and enabled).
- In connections with a server using an Intel X520 CNA, the server may fail to boot from the SAN network if a Brocade CNA is also installed in the server.
- If an Intel X520 CNA adapter is used for any DCB connection, follow these steps to establish sessions to send and receive traffic on an FN I/O Module:
  ⓘ **NOTE:** The interface connected to the Intel X520 CNA adapter must be manually shut/no shut for the full functionality after making the following changes.

1. 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:

```
DellEMC# interface tenGigabitEthernet 0/1
DellEMC(conf-if-te-0/1)# protocol lldp
DellEMC(conf-lldp)# dcbx version cee
DellEMC(conf-lldp)# exit
DellEMC(conf-if-te-0/1)# no shutdown
DellEMC(conf-if-te-0/1)# exit
DellEMC#
```

2. 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

- To ensure interoperability, the recommended LLDP and LACP timeout values that should be configured in devices to which the FN I/O Module connects (such as ToR switch and servers) are:
  - LLDP timeout: 30 seconds
  - LACP long timeout
- When 68-byte frames are sent at line rate to a server, the server-facing LACP connection may flap. This behavior is due to the server's inability to send LACP control packets when handling incoming line-rate traffic.
- If a Brocade VDX6730 switch is used for any DCB connection, enter the following commands for each port connected from the FN I/O Module to the Brocade switch:

```
DellEMC# interface tenGigabitEthernet 1/8
DellEMC(conf-if-te-1/8)# protocol lldp
DellEMC(conf-lldp)# dcbx version cee
DellEMC(conf-lldp)# exit
```

  (i) **NOTE:** The interfaces or port channel connected to the Brocade switch must be manually shut/no shut after making the above changes. The `dcbx version cee` command configures a port to use the CEE (Intel 1.01) version of DCBX.

- The following features are not available in the Dell Networking OS:
  - 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
- 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.
- When SupportAssist is configured on the device, the company or person information is partly lost after the device reboots.
- REST API does not support AAA authentication.

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.

Upgrading the Dell Networking OS Image, Boot Flash and Boot Selector Images

This section describes the procedure to upgrade Boot Flash and Boot Sector Images in Dell PowerEdge FN I/O Module.

The FN I/O Module is preloaded with default Dell Networking OS. Each system must be upgraded individually to a new Dell Networking OS release.

(i) **NOTE:** The upgrade can also be performed through the Chassis Management Controller (CMC) user interface. See the Dell Chassis Management Controller (CMC) User's Guide on the Dell Support website at http://support.dell.com.

To upgrade the Dell Networking OS, Boot Flash and Boot Selector Images, use the following steps:

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: | usbflash:] [A:| B:]
   ```

   EXEC Privilege

   ```
   DellEMC# upgrade system tftp://10.16.127.149/dell-FN-B B:
   04:06:16 : Discarded 1 pkts. Expected block num : 51. Received block num: 50
   04:06:19 : Discarded 1 pkts. Expected block num : 65. Received block num: 64
   !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!.
   Erasing IOM Secondary Image, please wait
   ............................................................................
   ............Writing ........................................................
   ............................................................................
   .............................................Sep 24 14:24:16: %STKUNIT0-M:CP
   %SYSADM-5-CPU_THRESHOLD: Overall cpu usage of management-unit is above threshold.
   Cpu1minUsage (97%)
   ....Sep 24 14:24:16: %STKUNIT0-M:CP %SYSADM-5-TASK_CPU_THRESHOLD: 1min cpu
   utilization of management-unit has exceeded the threshold. Top three processes are
   sysd (92.76%), tTftpTask (27.24%), system (5.94%)
   ............................................................................
   ...........!
   45815213 bytes successfully copied
   System image upgrade completed successfully.
   DellEMC#Sep 24 14:24:33: %STKUNIT0-M:CP %DOWNLOAD-6-UPGRADE: Upgrade completed
   successfully
   Sep 24 14:24:57: %STKUNIT0-M:CP %SYSADM-5-CPU_THRESHOLD_CLR: Overall cpu usage of
   management-unit drops below threshold. Cpu1minUsage (61%)

   DellEMC#
   ```

3. Upgrade the Dell Networking OS for the stacked units.

   ```
   upgrade system stack-unit [0-5 | 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.

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

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

    `show boot system stack-unit [0-5 | 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 [0-5]** in the command or for all the stack units by specifying all in the command.

```
DellEMC# show boot system stack-unit 0
Current system image information in the system:
========================================================
Type            Boot Type          A                      B
--------------------------------------------------------
Stack-unit 0 FLASH BOOT    9.14.1.10[boot]         9.14.1.9P4
```

5. Upgrade the FN I/O Module Boot Flash and Boot Selector image.

    `upgrade boot [all | bootflash-image | bootselector-image] stack-unit [0-5 | all] [booted | flash: | ftp: | scp: | tftp: | usbflash:] [A: | B:]`

    EXEC Privilege

    Dell Networking OS version 9.14(1.10) requires FN I/O Module Boot Flash image version 4.1.1.1 and Boot Selector image version 4.1.0.1. If any higher versions of Boot Flash or Boot Selector versions are present in the unit, do not upgrade the Boot Flash and Boot Selector images respectively. The Boot Flash and Boot Selector images can be upgraded at the same time by specifying all in the command. It can be upgraded separately by selecting `bootflash-image` or `bootselector-image` respectively. The Boot Flash and Boot Selector images can be upgraded for individual stack units by specifying the particular stack unit ID from the range [0-5] in the command. These can be upgraded to all the stack units together by selecting all option instead of the stack unit ID. The Boot Flash and Boot Selector images can be saved in two partitions A: and B: The user can select the partition and specify A: or B: in the command.

```
DellEMC#upgrade boot bootflash-image stack-unit 0 booted

Current Boot information in the system:
========================================================================
  Card                      BootFlash     Current Version     New Version
------------------------------------------------------------------------
    Unit1                   Boot Flash         4.1.1.1           4.1.1.1

    *********************************************************************
    *  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

Erasing IOM Secondary Bootflash Image, please wait
.!.!.!.!.!.!.!.!........................
Bootflash image upgrade for stack-unit 0 completed successfully.

DellEMC#upgrade boot bootselector-image stack-unit 0 booted

Current Boot information in the system:
========================================================================
  Card                      BootSelector  Current Version     New Version
------------------------------------------------------------------------
  Unit1                     Boot Selector      4.1.0.1           4.1.0.1

    *********************************************************************
    *  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

Erasing IOM Boot Selector Image, please wait
.!.!..!.!..!.!.......
Bootselector image upgrade for stack-unit 0 completed successfully.
DellEMC#
```

6. Change the Primary Boot Parameter of the FN I/O Module to the upgraded partition A: or B:

```
boot system stack-unit [0-5 | all] primary [system A: | system B: | tftp://]
```
CONFIGURATION

7. 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.
DellEMC#write memory
!
Synchronizing data to peer Stack-unit
!!!!!!!!
DellEMC#
```

8. Reload the unit.

```
reload
```
EXEC Privilege

```
DellEMC# 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
```

9. Verify the FN I/O Module has been upgraded to the Dell Networking OS version 9.14(1.10).

```
show version
```
EXEC Privilege

```
DellEMC#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 EMC Inc. All Rights Reserved.
Build Time: Fri Sep 24 08:41:19 2021
Build Path: /build/build04/SW/SRC
Dell Networking OS uptime is 2 day(s), 0 hour(s), 37 minute(s)

System image file is "system://A"

System Type: PE-FN-410S-IOM
Control Processor: MIPS RMI XLP with 2 Gbytes (2147483648 bytes) of memory, core(s) 1.

128M bytes of boot flash memory.

  1 12-port GE/TE (FN)
 12 Ten GigabitEthernet/IEEE 802.3 interface(s)
```

10. Verify the FN I/O Module has been upgraded to the latest Boot Flash and Boot Selector versions.

```
show system stack-unit [0-5]
```
EXEC Privilege

```
DellEMC#show system stack-unit 0

--  Unit 1 --
Unit Type                  : Management Unit
Status                     : online
Next Boot                  : online
Required Type              : PE-FN-410T-IOM - 12-port GE/TE (FN)
Current Type               : PE-FN-410T-IOM - 12-port GE/TE (FN)
Master priority            : 14
Hardware Rev               : X00
Num Ports                  : 12
Up Time                    : 6 day, 23 hr, 37 min
Dell Networking OS Version : 9.14(1.10)
Jumbo Capable              : yes
POE Capable                : no
FIPS Mode                  : disabled
```

```
Boot Flash                : A: 4.1.1.1    B: 4.1.1.1 [booted]
Boot Selector             : 4.1.0.1
Memory Size               : 2147483648 bytes
Temperature               : 42C
Voltage                   : ok
Switch Power              : GOOD
Product Name              : Dell PowerEdge FN 410T IOM
Mfg By                    : DELL
Mfg Date                  :
Serial Number             : TW000000000000
Part Number               : 000000X00
Piece Part ID             : TW-000000-00000-000-0000
PPID Revision             : X00
Service Tag               : N/A
Expr Svc Code             : N/A
Chassis Svce Tag          : test123
Fabric Id                 : A2
Asset tag                 :
PSOC FW Rev               : 0xd
ICT Test Date             : 0-0-0
ICT Test Info             : 0x0
Max Power Req             : 19712
Fabric Type               : 0x3
Fabric Maj Ver            : 0x1
Fabric Min Ver            : 0x2
SW Manageability          : 0x4
HW Manageability          : 0xd
Max Boot Time             : 3 minutes
Link Tuning               : unsupported
Auto Reboot               : enabled
Burned In MAC             : 00:1e:c9:ee:00:02
No Of MACs                : 3
```

Upgrading the CPLD

An FN I/O Module system with Dell Networking OS version 9.14(1.10) requires CPLD image 9.

Verify that a CPLD upgrade is required

To identify the CPLD version, use the following command:

```
DellEMC# show revision

--  Stack unit 0 --
IOM SYSTEM CPLD       : 9
```

To view CPLD version that is associated with the Dell Networking OS image, use the following command :

```
DellEMC#  show os-version

RELEASE IMAGE INFORMATION :
---------------------------------------------------------------------
      Platform          Version         Size          ReleaseTime
    F-Series:FN       9.14(1.10)     45304356      Sep 24 2021 12:45:01


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

BOOT IMAGE INFORMATION :
---------------------------------------------------------------------
        Type           Version                 Target       checksum
    boot flash          4.1.1.1          Control Processor      passed
```

```
BOOTSEL IMAGE INFORMATION :
---------------------------------------------------------------------
        Type            Version                 Target      checksum
 boot selector          4.1.0.1         Control Processor     passed

CPLD IMAGE INFORMATION :
---------------------------------------------------------------------
        Card                    CPLD Name      Version
 Stack-unit 0               IOM SYSTEM CPLD         9
```

Upgrading the CPLD Image

ⓘ **NOTE:** The `upgrade fpga-image stack-unit 0 booted` command is hidden when using the `?` feature in the CLI. However, it is a supported command and is accepted when entered as documented.

To upgrade the CPLD image on the FN I/O Module:

1. Upgrade the CPLD image.

   `upgrade fpga-image stack-unit [0-5] booted`

   EXEC Privilege

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

   Current information for the system:
   ========================================================================
    Card                     Device Name     Current Version     New Version
   ------------------------------------------------------------------------
    Unit0               IOM SYSTEM CPLD                 6               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 !                        *
        **********************************************************************

   Upgrade image for stack-unit 0 [yes/no]: yes


   FPGA upgrade in progress!!! Please do NOT power off the unit!!!
   !!!!!!!!!!!!!!!!!!Seo 24 12:45:02: %I/O-Aggregator:0 %DOWNLOAD-6-FPGA_UPGRADE: stack-
   unit 0 fpga upgrade success.


   Upgrade result :
   ================
   Unit 0 FPGA upgrade successful Unit 0. Please power cycle to take effect.
   ```

2. Power cycle the switch (IO module) using the CMC interface or remove and reinsert the switch (OIR) from the chassis so that the CPLD upgrade takes effect.

   ⓘ **NOTE:** The `powercycle stack-unit 0` command does not load the latest CPLD version.

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

   `show revision`

   EXEC PRIVILEGE

   ```
   DellEMC# show revision
   --  Stack unit 0 --
   IOM SYSTEM CPLD      : 9
   ```

Documentation Corrections

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

None.

Deferred Issues

Caveats that appear in this section were reported in Dell Networking OS version 9.14(1.0) as open, but have since been deferred. Deferred caveats are those that are found to be invalid, not reproducible, or not scheduled for resolution.

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 FN I/O Module 9.14(1.0) Software 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 caveats are those that are found to be invalid, not reproducible, or not scheduled for resolution.

The following issues have been deferred in the Dell Networking OS version 9.14(1.0):

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.

Category	Description
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 issue.

Fixed S/W Issues for the FN I/O Module in Dell Networking OS Version 9.14(1.10)

ⓘ **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#169428

Severity:	Sev 2
Synopsis:	In steady state, the physical link connected to the FN-IOM switch flaps and restores itself randomly.
Release Notes:	In steady state, the physical link connected to the FN-IOM switch flaps and restores itself randomly.
Workaround:	None

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. 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 S/W Issues for the FN I/O Module Switch in Dell Networking OS Version 9.14(1.10)

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 FN I/O Module system.

Documentation Resources

This document contains operational information specific to the FN I/O Module system.

For information about using the FN I/O Module, see the following documents at http://www.dell.com/support:
- *Installing the FN I/O Module System*
- *Quick Start Guide*
- *Dell Networking Command Line Reference Guide for the FN I/O Module System*
- *Dell Networking Configuration Guide for the FN I/O Module System*

For more information about hardware features and capabilities, see 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, see http://onie.org.

For more information about using the Web GUI – Dell Blade I/O Manager, see the *Dell Blade I/O Manager Online Help*.

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 FN I/O Module system.
- For information about using the FN I/O Module, see the documents at http://www.dell.com/support.
- For more information about hardware features and capabilities, see 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, see 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.**