

# Dell Active Fabric Manager for Microsoft Cloud Platform System 2.1(0.0)P3 Release Notes

This document describes the new features, enhancements, and fixed issues for Active Fabric Manager for Microsoft Cloud Platform (AFM-CPS).

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## Document Revision History

**Table 1. Revision History**

Revision	Date	Description
A00	2016-04	Updated fixed issues for AFM-CPS 2.0(0.0)P6 Release.
A01	2016-05	Updated for AFM-CPS 2.0(0.0)P7 Release.
A02	2016-06	Updated for AFM-CPS 2.1(0.0) Release.
A03	2016-08	Updated for AFM-CPS 2.1(0.0)P1 Release.
A04	2016-09	Updated for AFM-CPS 2.1(0.0)P2 Release.
A05	2016-12	Updated for AFM-CPS 2.1(0.0)P3 Release.

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## Features and Requirements

The following requirements apply to AFM-CPS.

### AFM-CPS Supported Hardware

AFM-CPS 2.1(0.0)P3 supports the following devices.

**Table 2. CPS Supported Hardware**

Hardware Version	Supported Devices	Version
CPS 2016	S3048-ON	9.11(0.0)
	S4048-ON	9.11(0.0)
CPS 2014	S4810	9.11(0.0)
	S55	8.3.5.6

AFM-CPS 2.1(0.0)P3 also supports CPS 2016 racks with S3048-ON and S4048-ON devices and CPS 2014.

**Table 3. Supported Rack Deployments**

AFM-CPS 2.1(0.0)P3	Supported Rack Deployments
CPS 2016	<p>One to four racks. Each CPS 2016 rack can include:</p> <ul style="list-style-type: none"> <li>• One S3048-ON switch</li> <li>• Five S4048-ON switches (one for aggregation, two tenant switches configured as a VLT pair, and two data center switches)</li> </ul>
CPS 2014	<p>Each CPS 2014 rack can include:</p> <ul style="list-style-type: none"> <li>• One S55 switch</li> <li>• Five S4810 switches (one for aggregation, two tenant switches configured as a VLT pair, and two data center switches)</li> </ul>

### About CPS 2016 Racks

- The aggregation, tenant, and data center switches are connected using a distributed core mesh.

- AFM-CPS uses virtual link trunking (VLT) in the access fabric to connect the rack switches to the server and internal BGP (iBGP) for the traffic in the fabric.
- Each S4048-ON switch in the same rack connects to the S3048-ON switch from ports 37–41.
- Each aggregation switch connects to the S3048-ON switch from ports 7–52.
- Port 42 is reserved for the AFM-CPS 2.1(0.0)P3 laptop to connect to the S3048-ON switch in each rack for deployment and management of the switches.
- Each rack has its own subnet and default gateway.
- The S3048-ON in each rack is not directly connected to the switches in the other racks.
- The aggregation switch contains the L3 uplink running BGP connected to the edge router in the network.
- The edge router is not considered part of any single fabric because it is shared with multiple fabrics.
- To run validation checks on the racks and route traffic across the switches, manually configure any edge routers for AFM CPS.
- To validate the link between the management port on the S4048-ON switch and the S3048-ON switch, use the `ping` command.
- With AFM-CPS 2.1(0.0)P3, you can expand the racks to a maximum of four racks.

## AFM-CPS Server and Client Requirements

The following tables describe the hardware requirements for the server and client switches.

**Table 4. AFM-CPS Server Requirements**

Hardware	Requirement
Processor	Intel® Xeon® E5620 2.4Ghz, 12M cache, Turbo, HT, 1066 MHz Max memory
Operating System	Windows Server 2012 R2
Memory	32GB memory (8x4GB) minimum, 1333 MHz Dual Ranked LV RDIMMs for 2 processors, Advanced ECC
Disk Space	1TB 7.2K RPM SATA 3.5 hot plug hard drive

**Table 5. AFM-CPS Client Requirements**

Hardware	Requirement
Processor	Intel® Core (TM) i5-2520 M CPU @2.50Ghz
Operating System	Windows 8.1 64-bit
Memory	8 GB (minimum)

## AFM-CPS Client Requirements

To install and deploy AFM-CPS and to deploy the racks, use a laptop as a host for the AFM-CPS virtual machine (VM). You install the AFM-CPS virtual hard disk (VHDx) on the laptop Hyper-V virtual machine. For information about how to import or export files using Hyper-V, see the Microsoft Hyper-V Documentation.

Using AFM-CPS 2.1(0.0)P3, connect the laptop to each S3048-ON switch in the rack for the initial deployment or after replacement or redeployment of aggregation switches.

**Table 6. AFM-CPS Client Requirements**

Hardware	Requirement
Processor	Intel® Core (TM) i5-2520 M CPU @2.50Ghz
Operating System	Windows 8.1 64-bit OS or Windows Server 2012 R2
Memory	4 GB (minimum)
Software	Microsoft Hyper-V Microsoft System Center Virtual Machine Manager (SCVMM) (required for Hyper-V)

## Software Requirements

This section describes information about the virtual machine, client, and server software.

### Virtual Machine Requirements

AFM-CPS runs as a virtual machine and requires the following software.

**Table 7. AFM-CPS Virtual Machine Software**

Hypervisor	Version
Microsoft Hyper-V	6.3.9600.16384
Microsoft System Center Virtual Machine Manager (SCVMM)—Microsoft Hyper-V requires SCVMM.	

### AFM Client Software Requirements

The AFM client and server requires the following software.

**Table 8. AFM Client and Server Software**

Software	Description
Server OS	Windows Server 2012 R2 Windows requires Administrator permission on the target server. Ensure that you have modification permissions on the network service account for the system temp directory: <code>%systemroot%\temp</code>
Client OS	Windows 8.1 64-bit System Center 2012 R2 Windows Azure
Browser	Internet Explorer 9 or higher Firefox 12 or higher

### Rack Expansion

The rack expansion feature requires switches running CPS 2016.

# IP Address Requirements

Before deployment, verify that you have the following IP address information available.

- The AFM-CPS laptop IP address
- The AFM-CPS IP address and Default Gateway for each rack—The IP addresses are different for each rack because each rack has its own subnet and Default Gateway.
- The final AFM-CPS IP address in the infrastructure rack.

# Port Configuration Requirements

AFM-CPS requires the following AFM port configurations.

**Table 9. Port Configuration**

Port	Protocol
20 and 21	FTP
22	SSH and SCP (communication to the switches and CLI access to AFM)
23	Telnet (communication to the switches)
67 and 68	DHCP
69	TFTP
80	AFM server port listening for client connection and requests
123	NTP
161	SNMP get and set protocol between AFM server and switch.
162	SNMP trap listener between AFM and switch.
443	HTTPS communication protocol where the AFM takes requests from the client browser.
5432	Database server
8080	TCP/UDP
61616	ActiveMQ

# New in this Release

AFM-CPS 2.1(0.0)P3 includes the following features:

- Keystore installation support
- Secure Copy (SCP) support
- Debian operating system support

# Known Issues

Known issues are reported using the following definitions.

<b>Category</b>	<b>Description</b>
<b>PR#</b>	Problem Report number that identifies the issue.
<b>Synopsis</b>	Synopsis is the title or short description of the issue.
<b>Release Notes</b>	Release Notes description contains more detailed information about the issue.
<b>Work around</b>	Work around describes a mechanism for circumventing, avoiding, or recovering from the issue. It might not be a permanent solution.  Issues listed in the "Closed Caveats" section should not be present, and the work around is unnecessary, as the version of code for which this release note is documented has resolved the caveat.
<b>Severity</b>	<p><b>S1</b> — Crash: A software crash occurs in the kernel or a running process that requires a restart of AFM, the router, switch, or process.</p> <p><b>S2</b> — 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.</p> <p><b>S3</b> — Major: An issue that effects the functionality of a major feature or negatively effects the network for which there exists a work around that is acceptable to the customer.</p> <p><b>S4</b> — 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.</p>

<b>Category</b>	<b>Description</b>
<b>PR#</b>	136879
<b>Synopsis</b>	AFM-CPS For any switches deployed after the initial full fabric deployment, user will need to manually enable Data collection Job for those switches
<b>Release Notes</b>	AFM-CPS For any switches deployed after the initial full fabric deployment, user will need to manually enable Data collection Job for those switches
<b>Work around</b>	User will have to use the "Jobs" menu in the left side panel, and select "Data Collection" tab to manually enable Data Collection support for the appropriate switches within the fabric.
<b>Severity</b>	S3

<b>Category</b>	<b>Description</b>
<b>PR#</b>	138430
<b>Synopsis</b>	AFM-CPS Once you deploy a switch in a fabric, you cannot change the management IP settings for that switch, including gateway/route
<b>Release Notes</b>	AFM-CPS Once you deploy a switch in a fabric, you cannot change the management IP settings for that switch, including gateway/route
<b>Work around</b>	There is no workaround for this issue, it will need to be addressed in a future release to allow user to update management network gateway / route values. Otherwise, if user really has to change this then they will have to delete this fabric from AFM and create a new one.
<b>Severity</b>	S3

<b>Category</b>	<b>Description</b>
<b>PR#</b>	158857
<b>Synopsis</b>	"python: not found" errors seen after upgrading with AFM.

<b>Category</b>	<b>Description</b>
<b>Release Notes</b>	Error messages might be seen when upgrading S4810 switches to a 9.9x software release. The "python: not found" errors were fixed after manually clearing all packages and reinstalling SmartScripts.
<b>Work around</b>	Uninstall existing packages from the S4810 switches using the CLI "package clear-all" before upgrading the switches using CPS.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	159322
<b>Synopsis</b>	AFM Predeployment Configuration wizard shows the prior software version as the correct version
<b>Release Notes</b>	The AFM Predeployment Configuration wizard incorrectly shows the previous software version even though the AFM upgrade completed successfully and the new switch firmware version is available.
<b>Work around</b>	None.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	159323
<b>Synopsis</b>	After switch upgrade, AFM validation shows config mismatch errors due to software version
<b>Release Notes</b>	Running validation on some switches after software upgrade might result in configuration mismatch errors in multiple tabs since the validation is using the previous version.
<b>Work around</b>	None.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	159339
<b>Synopsis</b>	IPv6 loopback ping validation on AFM may present false positive errors
<b>Release Notes</b>	During validation, AFM might ping an incorrect IPv6 address, resulting in AFM reporting the address is unreachable.
<b>Work around</b>	None.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	159344
<b>Synopsis</b>	"IOError [Errno 61] Connection refused" seen after upgrading with AFM
<b>Release Notes</b>	Error messages might be seen when upgrading S4810 switches to a 9.9x software release. These errors were seen in conjunction with "python: not found" errors and disappeared after clearing all packages with the CLI "package clear-all". This issue is not reproducible.
<b>Work around</b>	None.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	159750

<b>Category</b>	<b>Description</b>
<b>Synopsis</b>	Configuration changes during rack expansion is not pushed when deployed using Apply configuration option
<b>Release Notes</b>	Configuration changes during rack expansion is not pushed when deployed using "Apply configuration changes to the switch" option.
<b>Work around</b>	For redeployment of switches use "Overwrite entire configuration of the switch " option to push the configuration changes.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	160008
<b>Synopsis</b>	Activate Standby image Job scheduling not working for All Racks option
<b>Release Notes</b>	Standby software versions are not listed and job schedule fails when "All Racks" option selected for Standby partition upgrade
<b>Work around</b>	User should choose "All devices" option instead of "All Racks"
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	160030
<b>Synopsis</b>	Config mismatch error report for logging source-interface ManagementEthernet command
<b>Release Notes</b>	Logging source-interface managementethernet 1/1 not accepted in switches when user upgrade the image from 9.9.x.x version to 9.10..0.1P3.
<b>Work around</b>	Push the configuration using custom templates
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	160082
<b>Synopsis</b>	AFM database accessible from external system
<b>Release Notes</b>	AFM Database access currently available from external system with default port
<b>Work around</b>	None
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	160084
<b>Synopsis</b>	AFM dependent management services like Telnet,ftp needs to be disabled
<b>Release Notes</b>	Ftp and telnet protocols support not disabled.
<b>Work around</b>	User should select secured protocol SSHV2 for deployment instead of telnet. No alternate option available for ftp.
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	160085
<b>Synopsis</b>	Centos Security updates for Kernel and utilities

<b>Category</b>	<b>Description</b>
<b>Release Notes</b>	Centos 6 security updates like Kernel,ntp,openssl,wget,sudo,python,openssh are not addressed.
<b>Work around</b>	None.
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	160806
<b>Synopsis</b>	Config Mismatch Error will be shown, when redeploy fabric with only "Apply configuration changes to the switch"
<b>Release Notes</b>	When AFM server upgraded from AFM-CPS build 2.0.0.P7 or below to build 2.1.0.0P2 and redeploy the existing fabric via "Apply configurations changes to switch" ,will get the configuration mismatch error.
<b>Work around</b>	Redeploy the existing fabric using "Overwrite entire configuration on the switch"
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	160882
<b>Synopsis</b>	On multiple flips in SNMP version between v2 to v3, along with a password change, sometimes, the SNMP password change is not pushed to the device
<b>Release Notes</b>	On multiple flips in SNMP version between v2 to v3, along with a password change, sometimes, the SNMP password change is not pushed to the device. When this happens the device is not reachable.
<b>Work around</b>	There is no workaround, except to recreate the fabric.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	161062
<b>Synopsis</b>	Switching from SNMP V2 to SNMP v3 using "Apply Configuration" fails in AFM
<b>Release Notes</b>	When user flips from SNMP v2 to V3 and uses the "Apply Configuration" method, deployment is successful and Validation fails with message 'Switch not discovered'.
<b>Work around</b>	Always use "Overwrite Configuration" when changing from v2 to v3. If "Apply Configuration" is used by mistake, the recovery mechanism is re-deploy fabric using "Overwrite entire configuration on the switch" option.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	161920
<b>Synopsis</b>	Help Link Logo, picture not displayed properly in all screens
<b>Release Notes</b>	Help package images and links are broken in some pages. Hence the images and links may not work in some pages.
<b>Work around</b>	None
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	161990
<b>Synopsis</b>	Auto-generated configuration in Advanced Configuration screen is not visible in specific versions of IE
<b>Release Notes</b>	In Specific versions of IE, the advanced configuration screen does not load fully and the contents are not visible.

<b>Category</b>	<b>Description</b>
<b>Work around</b>	The workaround for this issue to use Chrome or Firefox for these pages alone.
<b>Severity</b>	S2
<b>Category</b>	<b>Description</b>
<b>PR#</b>	162012
<b>Synopsis</b>	Default SCP credential is afm/Superuser1 instead of superuser/Superuser1
<b>Release Notes</b>	Its a change is behavior in centos and debian In Debian 'superuser' is added to sudo usergroup. So when we use superuser for SCP, the system tries to get the sudo user password, and tries to display the prompt for entering password whichis not supported in SCP and it fails.
<b>Work around</b>	Instead of superuser/Superuser1 credential afm/Superuser1 has to be used for SCP file transfer.
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	162117
<b>Synopsis</b>	A broken pipe message is printed in the console when the ip address is configured
<b>Release Notes</b>	A broken pipe error message is printed in the console when the ip address is configured. This has no impact on the end user
<b>Work around</b>	No workaround needed as there is no impact to the functionality.
<b>Severity</b>	S3
<b>Category</b>	<b>Description</b>
<b>PR#</b>	162169
<b>Synopsis</b>	Deployment of S55 using SCP fails when Reset to factory defaults option is checked.
<b>Release Notes</b>	Deployment of S55 using SCP fails(gets struck in image upgrade task for a very long time) when Reset to factory defaults(BMP) option is checked as DHCP OFFER gets rejected.This issue is specific to S55 and SCP.
<b>Work around</b>	Deployment is successful without "Reset to factory defaults" option checked.
<b>Severity</b>	S2

## Fixed Issues

Fixed issues are reported using the following definitions.

<b>Category</b>	<b>Description</b>
<b>PR#</b>	Problem Report number that identifies the issue.
<b>Synopsis</b>	Synopsis is the title or short description of the issue.
<b>Release Notes</b>	Release Notes description contains more detailed information about the issue.
<b>Work around</b>	Work around describes a mechanism for circumventing, avoiding, or recovering from the issue. It might not be a permanent solution.
	Issues listed in the "Closed Caveats" section should not be present, and the work around is unnecessary, as the version of code for which this release note is documented has resolved the caveat.

Category	Description
Severity	<p><b>S1</b> — Crash: A software crash occurs in the kernel or a running process that requires a restart of AFM, the router, switch, or process.</p> <p><b>S2</b> — 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.</p> <p><b>S3</b> — Major: An issue that effects the functionality of a major feature or negatively effects the network for which there exists a work around that is acceptable to the customer.</p> <p><b>S4</b> — 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.</p>

## Fixed Issues in this Release

Category	Description
PR#	153929
Synopsis	MSFT CPS - Multiple sessions are created when validating configuration, leaving idle sessions after completion
Release Notes	When validating configuration, AFM creates multiple sessions. After completing the validation, some sessions are left idle. The validation module was modified to remove initiation of the extra sessions.
Work around	None.
Severity	S2
Category	Description
PR#	161146
Synopsis	MSFT CPS - AFM disconnecting intermittently after upgrade
Release Notes	AFM crashes due to an hbase checksum error when AFM is restarted after collecting performance data. To prevent this issue, the hbase checksum files are deleted as part of the AFM startup procedure.
Work around	None.
Severity	S2
Category	Description
PR#	162186
Synopsis	MSFT CPS - The /var partition on the AFM dis can run out of available space
Release Notes	AFM rotates the log files based on size and keeps a limited number of backup log files. Under CentOS, the /var partition can become completely full. The Debian OS will not restrict the disk size for /var so this issue is resolved by the change to the Debian OS.
Work around	None.
Severity	S2

## Migrating AFM-CPS from CentOS to Debian

For AFM-CPS 2.1(0.0)P3, you can migrate the AFM-CPS database and configuration from CentOS (versions 2.1(0.0)P2 and earlier) to Debian.

Migration from CentOS to Debian involves the following steps:

- Backing up database and configuration from AFM-CPS CentOS VM using the AFM-CPS VM console.
- Transferring files to AFM-CPS Debian VM.
- Restoring database and configuration in AFM-CPS Debian VM using the AFM-CPS VM console.

- 1 Access the AFM-CPS CentOS VM console using SSH.
- 2 Log in as `superuser`.
- 3 Select **Backup Database**.

```
Active Fabric Manager (AFM) VIRTUAL APPLIANCE

AFM Portal:
  https://10.16.133.52/index.html

Use the <UP> and <DOWN> arrow keys to select an option:

Configure System
Install SSL
Change AFM superuser Password
Update AFM Server
Set AFM Software to Next Reboot
Restart AFM Application
Reboot AFM Server
Shutdown AFM Server
Transfer File
Edit File
Upload Switch Software Image
Backup Database
Restore Database
Log out
Press <Enter> to continue.
```

**Figure 1. AFM-CPS VM Console Menu Options**

The Backup Configuration and Database screen appears.

```
BACKUP CONFIGURATION AND DATABASE

Use <CTRL+C> key to return to previous page.
-----
Choose option for backup:

1. AFM Database
2. AFM Configuration and Database

Enter backup option (1 or 2): 2
```

**Figure 2. Backup Configuration and Database Screen**

- 4 Select a back up option:
  - **AFM Database**—Select to back up the AFM-CPS database files only. Switch configuration and `dhcpd.conf` files are not included.
  - **AFM Configuration and Database**—Select to back up the AFM configuration and database files.

AFM-CPS backs up the files.

```

pg_dump: dumping contents of table wnm_unit
pg_dump: dumping contents of table wnm_vlan
pg_dump: dumping contents of table wnm_vltdomain
pg_dump: dumping contents of table wnm_vltmember
pg_dump: dumping contents of table wnm_vltpeerlag
pg_dump: dumping contents of table wnm_vrrpoperation

Database backup created: /data/backup/postgres/afm-db-backup-2016_11_21-04_52_22.custom

Configuration and database backup created: /data/backup/config-db/afm-config-db-backup-2016_11_21-04_52_22.tar.gz

Backup completed. Press <Enter> to return main menu.

```

**Figure 3. AFM-CPS File Backup**

- 5 Copy the back up file from the AFM-CPS CentOS VM to the AFM-CPS Debian VM or to another server using Secure File Transfer Protocol (SFTP), File Transfer Protocol (FTP), or Secure Copy (SCP).
- 6 Access the AFM-CPS Debian VM using the AFM-CPS VM console.

```

Active Fabric Manager (AFM) VIRTUAL APPLIANCE

AFM Portal:
  https://10.16.133.52/index.html

Use the <UP> and <DOWN> arrow keys to select an option:

  Configure System
  Install SSL
  Change AFM superuser Password
  Update AFM Server
  Set AFM Software to Next Reboot
  Restart AFM Application
  Reboot AFM Server
  Shutdown AFM Server
  Transfer File
  Edit File
  Upload Switch Software Image
  Backup Database
  Restore Database
  Log out
Press <Enter> to continue.

```

**Figure 4. AFM-CPS VM Console Menu Options**

- 7 Select **Restore Database**.  
The Restore Configuration and Database screen appears.

```

RESTORE CONFIGURATION AND DATABASE

Use <CTRL+C> key to return to previous page.
-----

Choose option for restore:

1. AFM Database
2. AFM Performance Database
3. AFM Configuration and Database

Enter restore option (1, 2 or 3): 3

```

**Figure 5. Restore Configuration and Database Screen**

- 8 Select a restoration option: option 1 to restore only the AFM-CPS database; option 3 to restore both the AFM-CPS configuration and database.

**NOTE:** Created back up files are type-specific. Use the Backup files created using the AFM Database option in step 4 only when selecting option 1. Similarly, only use a backup file created in the AFM Configuration and Database option in step 4 when selecting option 3.

- 9 At the **Enter database option** prompt, select **User specified location** as the location of the backup file.

```
Choose option to restore file from:
1. Default backup file location
2. User specified location

Enter database option (1 or 2): 2
```

**Figure 6. Enter database option Prompt**

- 10 At the **Shared Storage Location** prompt, enter the complete file path of the local backup file location copied from the AFM-CPS CentOS VM.

```
Enter the path and backup file name for shared storage location.
/data/backup/backupdirectory/backupfile.tar.gz

Shared Storage Location: 
```

**Figure 7. Shared Storage Location Prompt**

- 11 To restore the database and restart AFM-CPS, enter `y`.

After the backup is restored, verify the following:

- You can start AFM-CPS and log in.
- Confirm that fabrics created in AFM-CPS CentOS are listed in the AFM-CPS Debian user interface.

## Upgrading AFM-CPS

The AFM-CPS browser client can be used to upgrade AFM-CPS 2.1(0.0)P3 to a later version. You can view and manage AFM-CPS updates on the **Server Update**.

- 1 From the AFM-CPS browser client menu, click **Administration** and then click the **Server Update** tab.
- 2 In the **Select deb file location** area, select one of the following options:

- **Local Drive (DVD, USB)**
- **Remote Server**

**NOTE:** If the location is a remote server, enter the URL location of the deb file on the remote server.

- 1 From the **Protocol Type** menu, select the protocol type:
  - **https**
  - **ftp**
  - **sftp**
- 2 Specify the path of the deb package using the following formats:

**NOTE:** The deb filename must start with AFM and must end with `.noarch.deb` (for example, `AFM<version>.noarch.deb`).

- `https://ipaddress/path_to_deb.file`

- `ftp://ipaddress/path_to_deb.file`
  - `sftp://ipaddress/path_to_deb.file`
- 3 From the **Select the server update method** area, select:
    - **AFM Upload/Download** — Copy the update to the standby partition on the server but do not apply it or restart. To update, manually start the update from the AFM-CPS server update page.
  - 4 Click **Update**.  
An information note appears indicating that the server update job is scheduled. See the execution details in the **Job Results** tab. When the software image is available, it is listed in the Available Software Version column in the **Server Update** tab.
  - 5 Click **Activate Available Version**.
  - 6 Click **Yes** to enable the available AFM software and reboot the server. During the upgrade process, the AFM server restarts to enable the update in the standby partition. View the process details in the **Job Results** tab.  
When the upgrade is complete, you can confirm the update listed in the **Current Software Version** column in the **Server Upgrade** tab.

## Installing Keystores

AFM-CPS 2.1(0.0)P3 now supports the installation of third party Keystores that contain Secure Sockets Layer (SSL) certificates. To install an SSL certificate, you first must have a third party signed SSL certificate and corresponding Keystore file generated from a third party SSL certificate using a PEM file.

- 1 Use SSH to access the AFM Virtual Machine (VM) console.
- 2 Log in as `superuser`.
- 3 Select **Install Keystore**.

```
Active Fabric Manager (AFM) VIRTUAL APPLIANCE

AFM Portal:
  https://10.16.133.52/index.html

Use the <UP> and <DOWN> arrow keys to select an option:

Configure System
Install Keystore
Change AFM superuser Password
Update AFM Server
Set AFM Software to Next Reboot
Restart AFM Application
Reboot AFM Server
Shutdown AFM Server
Transfer File
Edit File
Upload Switch Software Image
Backup Database
Restore Database
Log out
Press <Enter> to continue.
```

Figure 8. AFM VM Console Menu

- 4 Select **Import Java Keystore**.

```

1. Import Java Keystore
2. Restore Default Keystore

Choose the option (1 or 2): 1

```

**Figure 9. Install Keystore Menu Options**

- 5 At the **URL location** prompt, enter the local or remote location of the Keystore file in one of the following formats:
  - Local Keystore file path
  - [s]ftp://[<user>:<pass>@]<address>[:port]/<Keystore file path>

① | **NOTE: Entering the FTP user name and password is optional.**

  - https://[<user>:<pass>@]<address>[:port]/<Keystore file path>

```

IMPORT JAVA KEYSTORE.

Use <CTRL+C> key to return to previous page.
-----

Enter URL location in following formats

Example 1: <local java keystore file path>
Example 2: ftp://[<user>:<pass>@]<address>[:port]/<java keystore filename>
Example 3: sftp://[<user>:<pass>@]<address>[:port]/<java keystore file path>
Example 4: https://[<user>:<pass>@]<address>[:port]/<java keystore file path>

URL location:

```

**Figure 10. URL Location Prompt**

- 6 At the **Keystore Password** prompt, enter the password. This entry should be the same password that generated the Keystore file from the PEM file.

```

Keystore Password (Enter password used in Java Keystore generation):
Confirm Password:

```

**Figure 11. Keystore Password and Confirm Password Prompts**

① | **NOTE: AFM VM does echo back the password.**

- 7 At the **Confirm Password** prompt, reenter the Keystore password.  
When the Keystore file successfully transfers and installs, you must restart the AFM-CPS server for your change to take effect.
- 8 At the **Restart AFM application now** prompt, enter Yes.

```
Java Keystore copied successfully. Keystore changes will be reflected only after AFM application restart.
Restart AFM application now? [Yes/No]:
```

Figure 12. Restart AFM application now Prompt

## Restoring Default Keystore Files

AFM-CPS 2.1(0.0)P3 now supports restoring default Keystore files.

- 1 Use SSH to access the AFM Virtual Machine (VM) console.
- 2 Log in as superuser.
- 3 Select **Install Keystore**.
- 4 Select **Restore Default Keystore**.

```
1. Import Java Keystore
2. Restore Default Keystore

Choose the option (1 or 2): 2
```

Figure 13. Keystore Menu Options

- 5 At the confirmation prompt, enter Y.

```
RESTORE DEFAULT KEYSTORE.

Use <CTRL+C> key to return to previous page.
-----
Are you sure want to restore
Y or N? :
```

Figure 14. Restore Default Keystore Confirmation Prompt

Restart the AFM-CPS server for the change to take effect.

- 6 At the **Restart AFM application now** prompt, enter Yes.

```
Default Keystore restored successfully. Keystore changes will be reflected only after AFM application restart.
Restart AFM application now? [Yes/No]:
```

Figure 15. Restart AFM Application Now Prompt

# Configuring SCP Support During AFM-CPS Setup

AFM-CPS 2.1(0.0)P3 supports configuration for secure copy (SCP) during initial AFM-CPS setup.

**NOTE:** S55 switches do not support SCP with BMP.

- 1 In the **Service Protocols** screen of the **AFM Setup** wizard, for the **File Transfer Protocol** setting, select **SCP**. Enter the user name and password to enable SCP for file transfer on the AFM-CPS server. The default user name is `afmuser`; the default password is `Superuser1`.

**NOTE:** You can modify these settings in the **Settings** tab of the **Administration** screen.

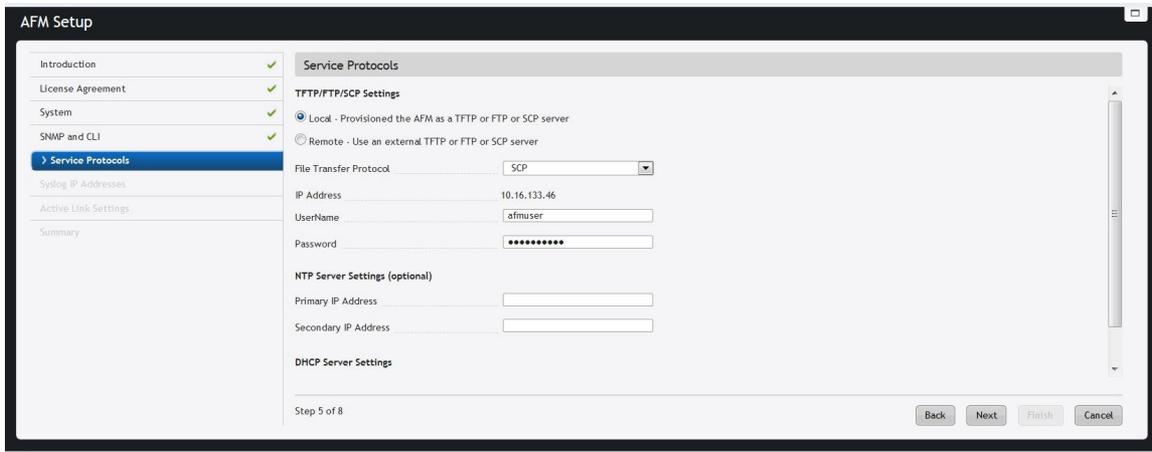


Figure 16. AFM Setup Wizard, Service Protocols Screen

- 2 Navigate to the **Summary** screen and confirm that the selected File Transfer Protocol setting is SCP. After configuring SCP, the following occurs in AFM-CPS:
  - In the **Predeployment Configuration** wizard, the **Introduction**, **Software Images**, **DHCP Integration**, and the **Summary** screens now refer to SCP.
  - For the job of updating switch software image, SCP site settings is displayed.

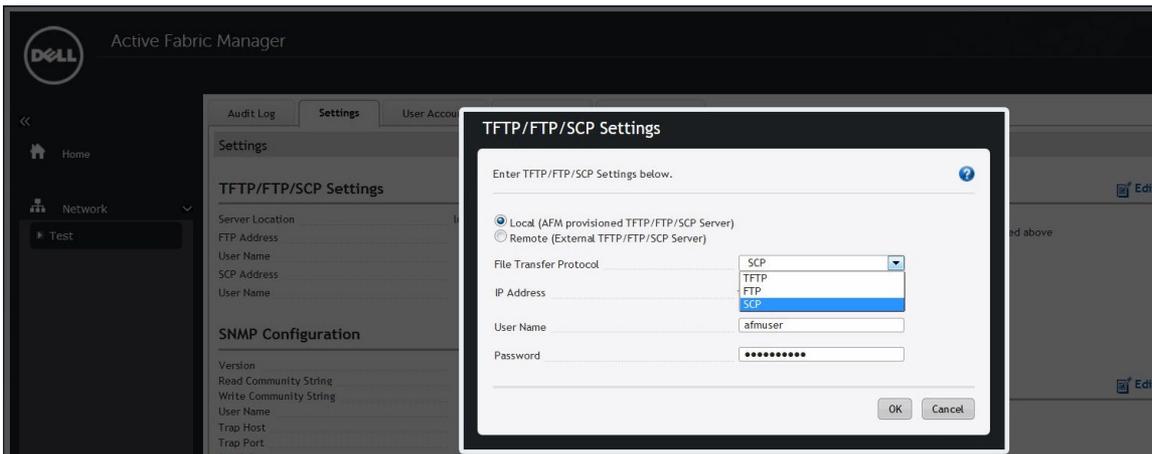
**NOTE:** For S3048-ON, S4048-ON, and S4810 switches, to use SCP for file transfer, the OS version must be 9.10(0.1)P13 or later.

## Configuring SCP from the Administration Screen

AFM-CPS 2.1(0.0)P3 supports configuration for secure copy (SCP) from the **Administration** screen.

**NOTE:** S55 switches do not support SCP with BMP.

- 1 From the menu, click **Administration**, and select the **Settings** tab.
- 2 In the **TFTP/FTP/SCP Settings** area, click **Edit**. The **TFTP/FTP/SCP Settings** dialog box appears.



**Figure 17. TFTP/FTP/SCP Settings Dialog Box**

- 3 Enter the user name and password to enable SCP for file transfer on the AFM-CPS server.

**NOTE:** For local SCP for the AFM-CPS server, the default user name is `afm` and the default password is `Superuser1`.

- 4 Navigate to the **Summary** screen and confirm that the selected File Transfer Protocol setting is SCP.

After you configure SCP, the following occurs in AFM-CPS:

- In the **Predeployment Configuration** wizard, the **Introduction**, **Software Images**, **DHCP Integration**, and the **Summary** screens now refer to SCP.
- For the job of updating switch software image, SCP site settings is displayed.

**NOTE:** For S3048-ON, S4048-ON, and S4810 switches, to use SCP for file transfer, the OS version must be 9.10(0.1)P13 or later.

## Support Resources

The following support resources are available for AFM-CPS.

## Documentation Resources

This document contains operational information specific to Active Fabric Manager for Microsoft Cloud Platform System (AFM-CPS) 2.1(0.0).

For information about using AFM-CPS, see the following documents at <http://www.dell.com/support>:

- *AFM-CPS 2.1(0.0) Installation Guide*
- *AFM-CPS 2.1(0.0) User Guide*

You can view the AFM-CPS documentation in AFM by selecting the documentation option from the **Help** menu in the AFM user interface.

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

## Issues

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

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

## Finding Documentation

This document contains operational information specific to AFM-CPS.

- For information about using AFM-CPS, 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.dell.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 [support.dell.com](http://support.dell.com).