

BIOS and BIOS Settings Update Procedure on Windows 10 IoT Enterprise for Dell Wyse 7040 Thin Client



Notes, cautions, and warnings



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



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



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

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Introduction

This document provides the steps to update/flash the BIOS on Dell Wyse Windows 10 IoT Enterprise for Wyse 7040 Thin Client. The BIOS can be updated using the following methods:

- BIOS update by WDM Server
- BIOS update by SCCM Server
- Manual BIOS Update
- BIOS update using Dell Command Configure (DCC)

BIOS Update using WDM Server

Prerequisites

The following are the requirements to update the BIOS using WDM server:

- WDM Server Setup (version 5.7.0 or later)
- WDM Package for BIOS
- Target thin clients (Wyse 7040 thin client)

Following are the four methods to update BIOS onto Windows 10 IoT for Dell Wyse 7040 thin client using WDM server:

- Pushing the BIOS through WDM MMC console using .RSP file
- Pushing the BIOS through WDM WebUI using .RSP file
- Pushing the BIOS through WDM MMC console using .exe file
- Pushing the BIOS through WDM WebUI using .exe file

Pushing the BIOS through WDM MMC console using .RSP file

The following are the steps to update the BIOS through WDM MMC console using .RSP file:

1. Download the WDM BIOS package from [Dell support website](#).
2. Extract and keep the package in Local repository/WDM server.
3. Open the WDM server, and then open WDM console.
4. Expand the **Wyse Device Manager** → **Package Manager** → **Other Packages**.



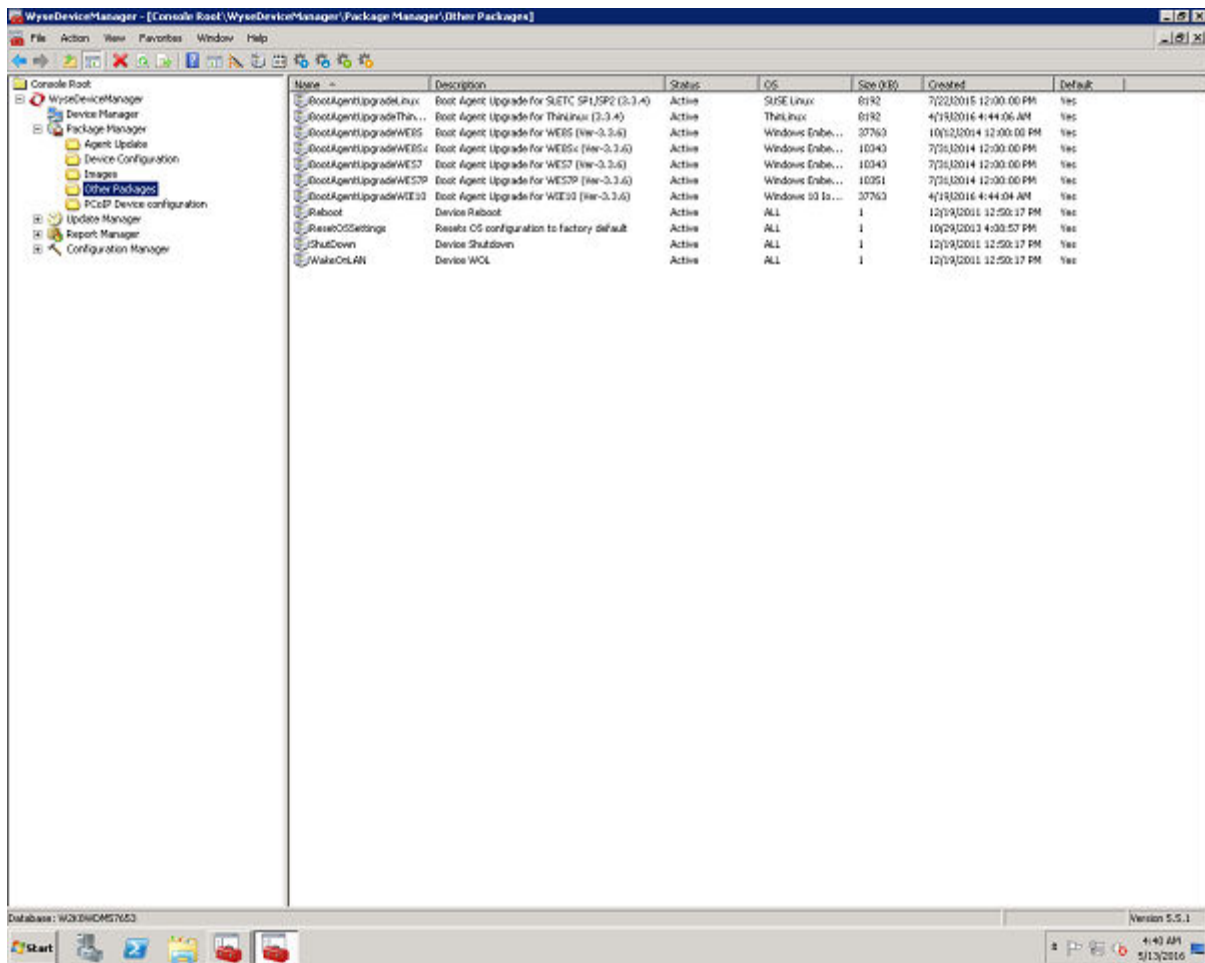


Figure 1. Other Packages

- Right-click **Other Packages**, and then add a new package. The **Package Wizard** page is displayed. Click the **Register a Package from a Script file (.RSP)** radio button.

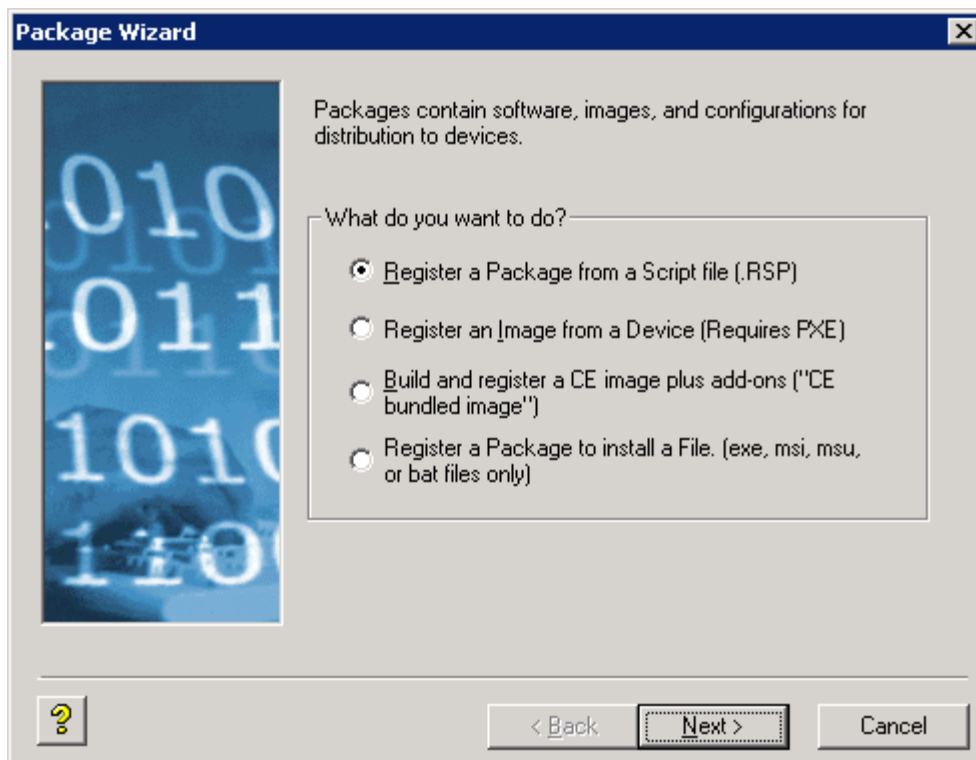


Figure 2. Package Wizard

6. Click **Next**, and browse the .rsp file from the file location where you have downloaded the BIOS package.

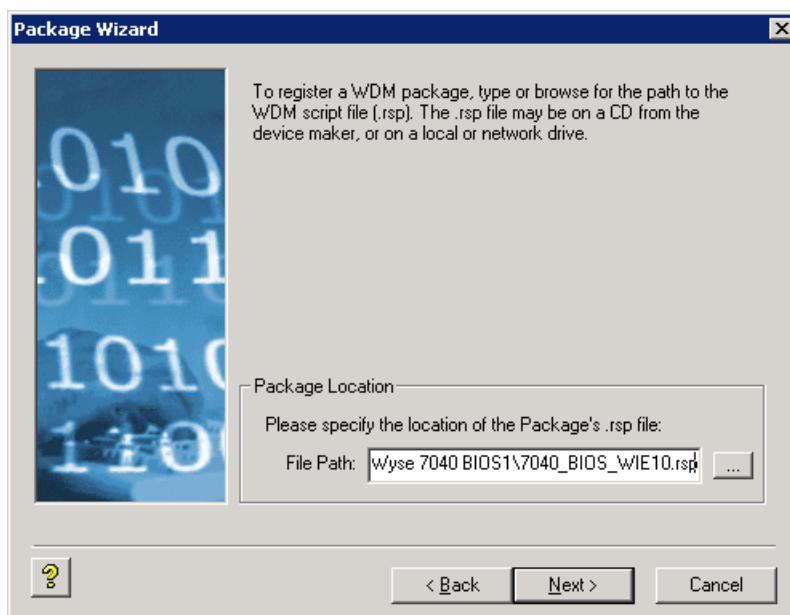


Figure 3. File Path

7. Complete the wizard and the BIOS package gets registered under **Other Packages**.

Name	Description	Status	OS	Size (KB)	Created	Default
7040_BIOS_WESTP	BIOS update for DELL Wyse 7040 Devices	Active	Windows Embe...	6377	5/24/2016 3:19:33 AM	No
jBootAgentUpgradeLinux	Boot Agent Upgrade for SUSE SP1/SP2 (3.3.4)	Active	SUSE Linux	6192	7/22/2015 12:00:00 PM	Yes
jBootAgentUpgradeThin...	Boot Agent Upgrade for ThinLinux (3.3.4)	Active	ThinLinux	6192	5/19/2016 12:32:51 AM	Yes
jBootAgentUpgradeWEBSv	Boot Agent Upgrade for WEBS (Ver-3.3.7)	Active	Windows Embe...	37763	10/12/2014 12:00:00 PM	Yes
jBootAgentUpgradeWESv	Boot Agent Upgrade for WESv (Ver-3.3.7)	Active	Windows Embe...	10343	7/31/2014 12:00:00 PM	Yes
jBootAgentUpgradeWES7	Boot Agent Upgrade for WES7 (Ver-3.3.7)	Active	Windows Embe...	10343	7/31/2014 12:00:00 PM	Yes
jBootAgentUpgradeWES7P	Boot Agent Upgrade for WES7P (Ver-3.3.7)	Active	Windows Embe...	10051	7/31/2014 12:00:00 PM	Yes
jBootAgentUpgradeWIE10	Boot Agent Upgrade for WIE10 (Ver-3.3.7)	Active	Windows 10 to ...	37763	5/19/2016 12:32:49 AM	Yes
jConfirmUser	Confirm User	Active	Windows Embe...	1	5/23/2016 10:27:34 AM	No
jHAgent_6.3.5.16_WEBS	HAgent_6.3.5.16_WEBS	Active	Windows Embe...	4510	5/19/2016 1:23:18 AM	No
jHAgent_Test_WEBS	Testing HAgent commands	Active	Windows Embe...	1	5/20/2016 6:34:49 AM	No
jReboot	Device Reboot	Active	ALL	1	12/19/2011 12:50:17 PM	Yes
jResetOSSettings	Resets OS configuration to factory default	Active	ALL	1	10/29/2013 4:00:57 PM	Yes
jShutDown	Device Shutdown	Active	ALL	1	12/19/2011 12:50:17 PM	Yes
jWakeOnLAN	Device WOL	Active	ALL	1	12/19/2011 12:50:17 PM	Yes

Figure 4. Package details

- Drag and drop the registered package on Device manager. **Package Distribution Wizard** page is displayed.

Please select the device(s) to which you want to distribute the selected package. Click the "Select All" button to choose all devices in the list.

Search Criteria Field(s)

 All Columns

Name	LAN MAC Address	Active IP Address
ComptestBIOS	1866DA05BF74	10.150.214.65
WES1866DA0...	1866DA05D6C8	10.150.214.63

Selected Devices

Name

Figure 5. Package Distribution Wizard

- Select the clients where you want to update the BIOS and complete the wizard. Use the **Scheduled Package** option to verify the progress of BIOS flash.

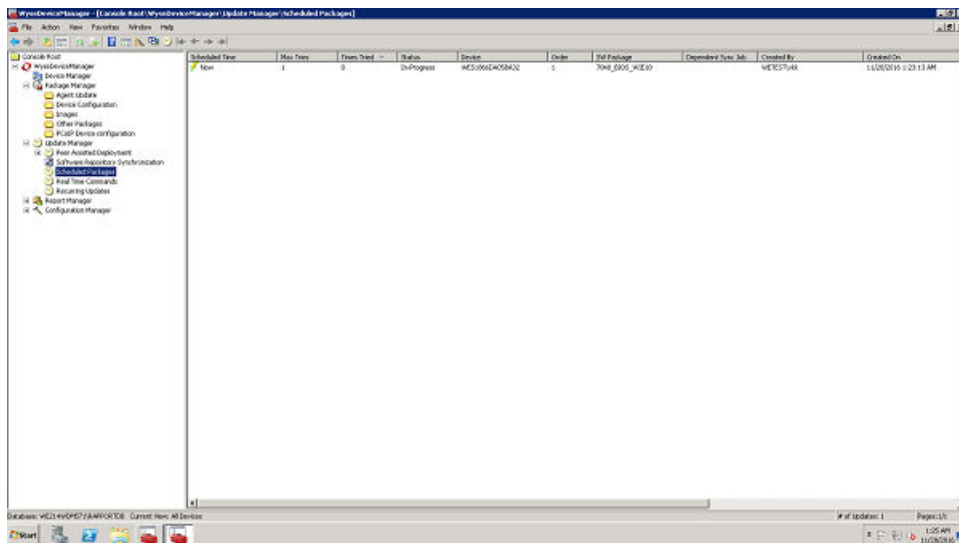


Figure 6. BIOS Flash status

- The target client reboots and a flash progress bar on the Dell logo screen is displayed as the BIOS update is being performed and boots into OS.

Pushing the BIOS through WDM WebUI using .RSP file

The following are the steps to update the BIOS through WDM WebUI using .RSP file:

- Download the WDM BIOS package from the [Dell support website](#).
- Extract and keep the package in Local repository/WDM server.
- Open the WDM server, and then open WDM WebUI. Login with WDM server credentials.
- Expand **Applications** → **Other Packages**.

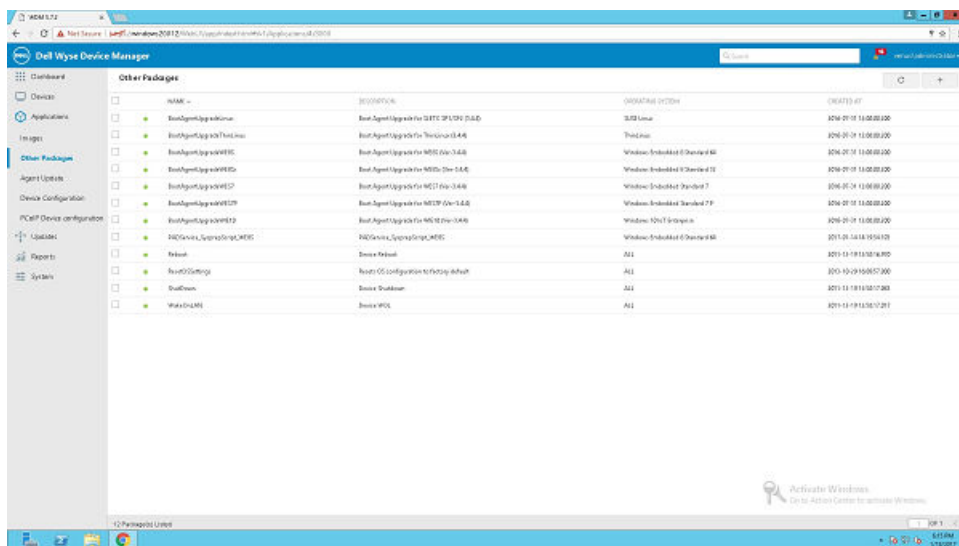


Figure 7. Other Packages

- Click the plus icon in the upper right corner, and then click **download**. Open the downloaded package and the **WDM Package Registration Utility** window opens.



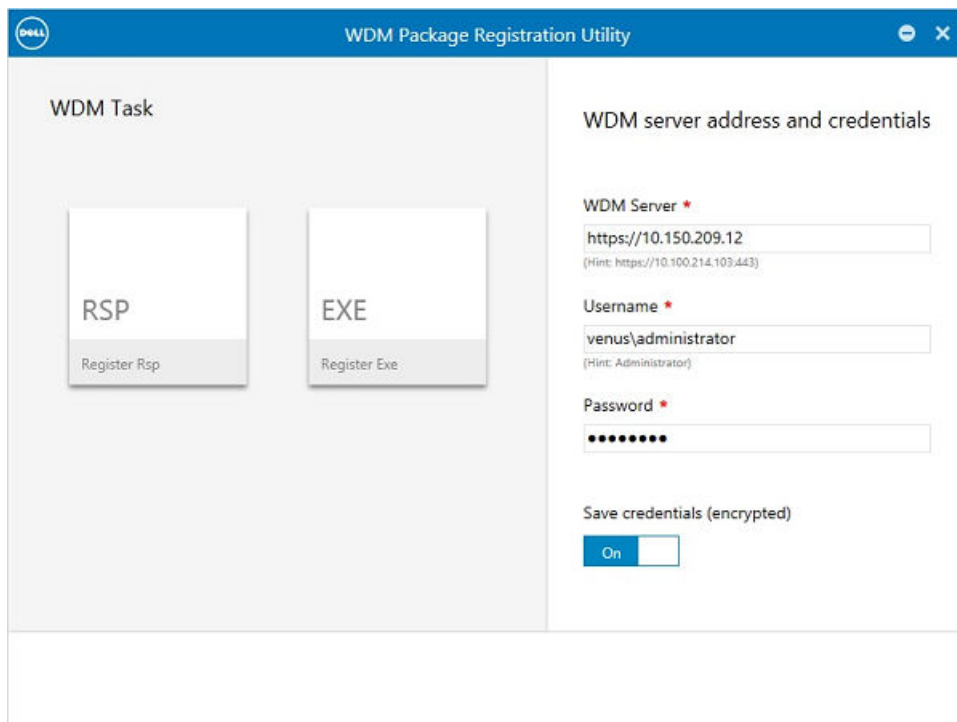


Figure 8. WDM Package Registration Utility

6. Click **RSP** in the left pane and browse the **.rsp** file from the file location where you downloaded the BIOS package.

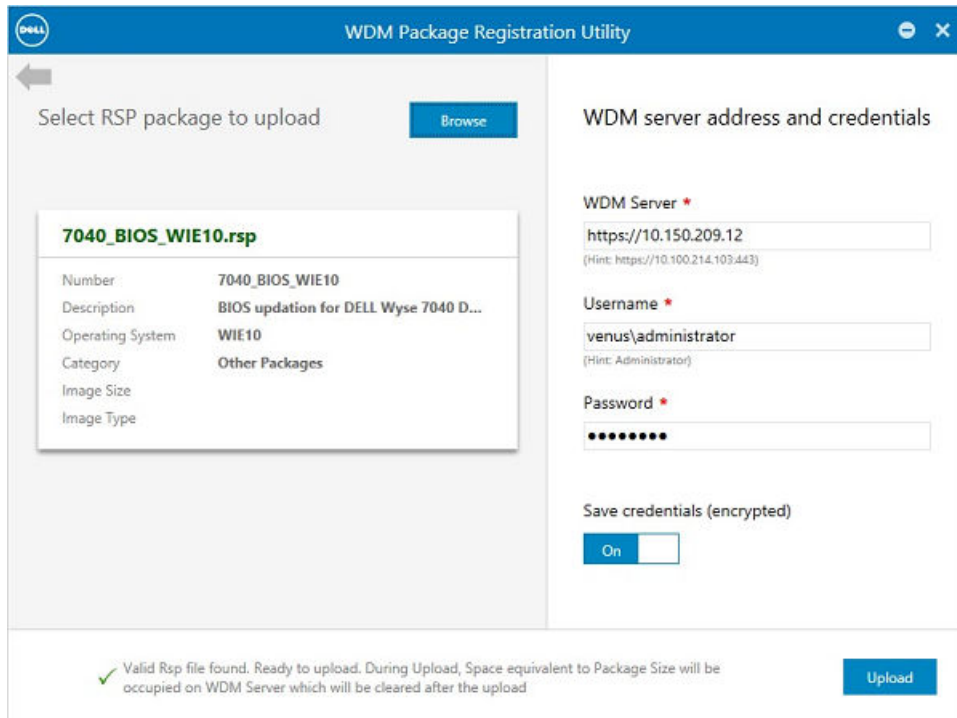
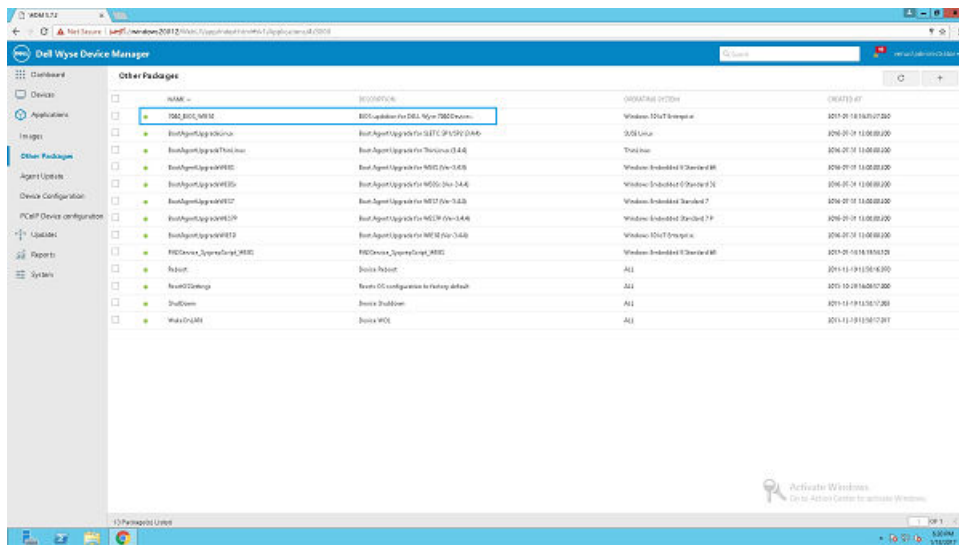
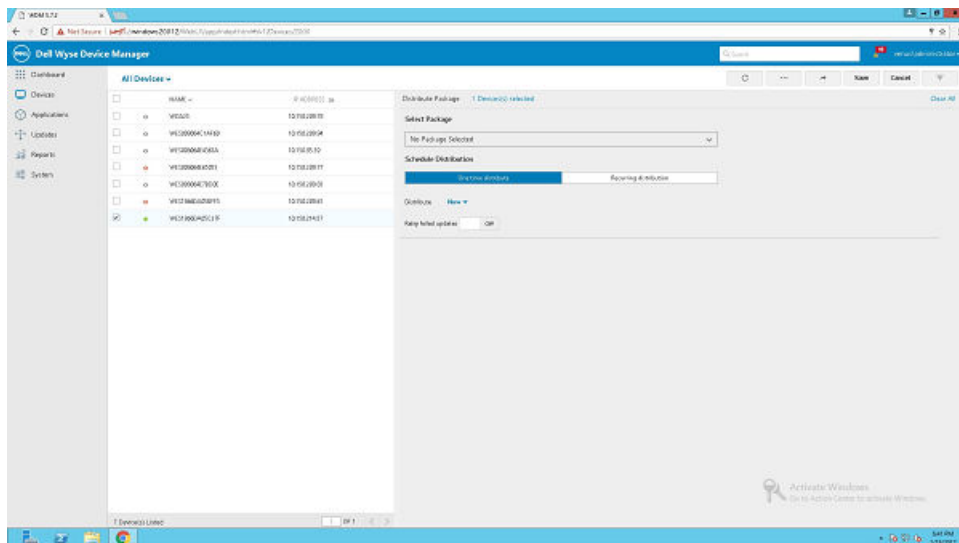


Figure 9. RSP file selected

7. Click **Upload**. The BIOS package gets registered under Other Packages. After the upload process is complete, close the window.



8. Click **Devices** in the left pane, select the checked-in devices where you want to update BIOS and click the **update** button.



9. Under Select Package, click **Other Packages** and the select registered BIOS package and click **save**.



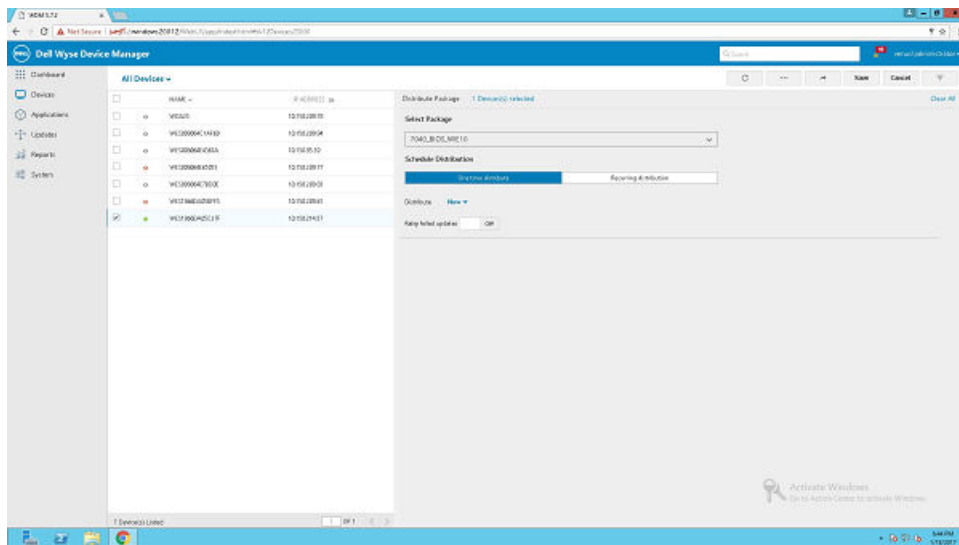


Figure 12. BIOS Flash Package selected in wizard

10. The target client reboots and a flash progress bar on the Dell logo screen is displayed as the BIOS update is being performed and boots into OS.

Pushing the BIOS through WDM MMC console using .exe file

The following are the steps to update the BIOS through WDM server using .exe file:

1. Download the .exe file from [Dell support website](#).
2. Extract and keep in Local repository / WDM server.
3. Open the WDM server, and then open WDM console.
4. Expand **Wyse Device Manager** → **Package Manager** → **Other Packages**.

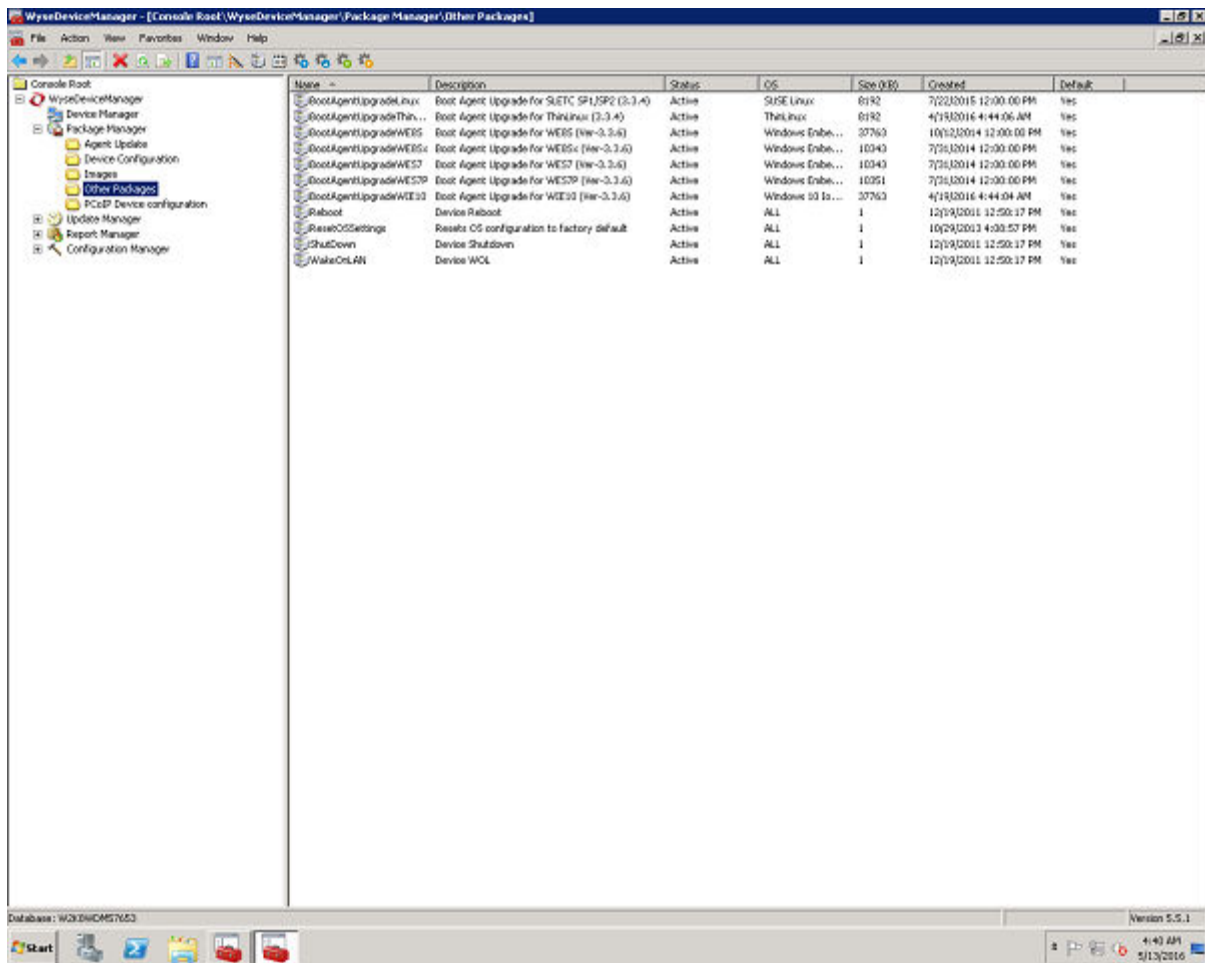


Figure 13. Other Packages

- Right-click **Other Packages**, and then add a new package. The **Package Wizard** page is displayed. Click the **Register a package to install a File. (exe, msi, msu, or bat files only)** radio button.

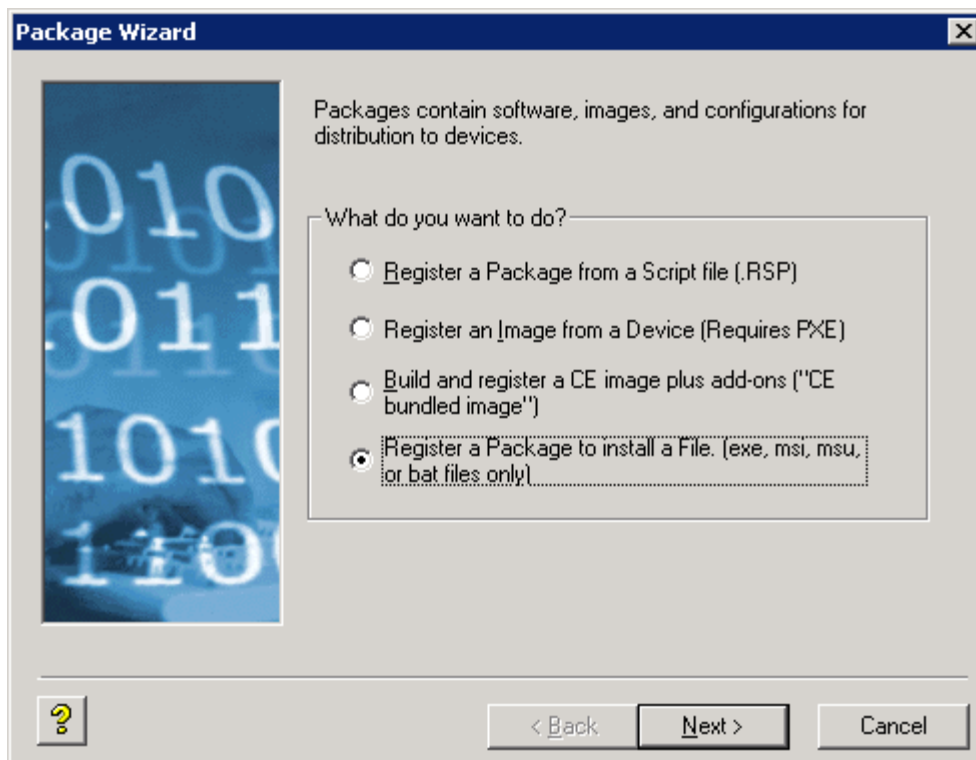


Figure 14. Package Wizard

6. Click **Next**, and browse the .exe file from the file location where you have downloaded the .exe file.

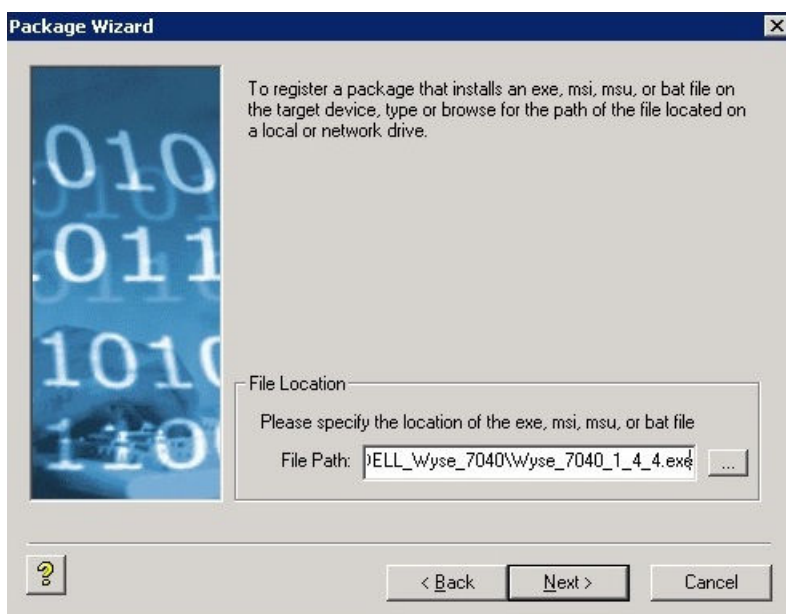
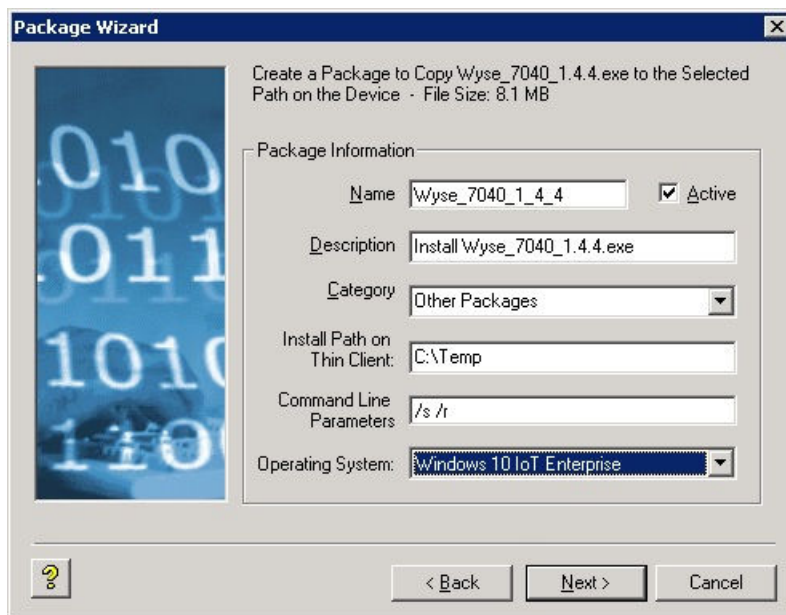


Figure 15. Package Wizard

7. Click **Next**, and enter the command line parameters and operating system details.



Package Wizard

Create a Package to Copy Wyse_7040_1.4.4.exe to the Selected Path on the Device - File Size: 8.1 MB

Package Information

Name: ☒ Active

Description:

Category:

Install Path on Thin Client:

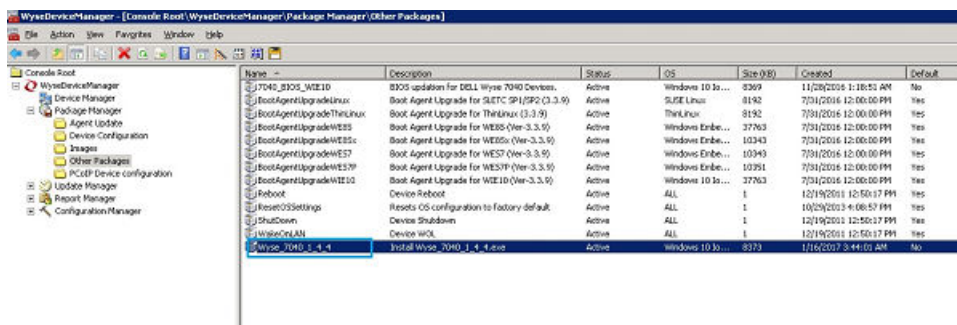
Command Line Parameters:

Operating System:

Figure 16. Command Line

Enter the Command Line Parameters as /s/r, and select the Operating System from the drop-down list.

8. Complete the wizard and the BIOS package gets registered under **Other Packages**.



Name	Description	Status	OS	Size (KB)	Created	Default
7040_8305_WUE10	8305 updates for DELL Wyse 7040 Devices.	Active	Windows 10 IoT...	8369	11/28/2016 1:18:51 AM	No
BootAgentUpgradeLinux	Boot Agent Upgrade for SLETC SP1/SP2 (3.3.9)	Active	SUSE Linux	8192	7/31/2016 12:00:00 PM	Yes
BootAgentUpgradeThinLinux	Boot Agent Upgrade for ThinLinux (3.3.9)	Active	ThinLinux	8192	7/31/2016 12:00:00 PM	Yes
BootAgentUpgradeWEBS	Boot Agent Upgrade for WEBS (Ver-3.3.9)	Active	Windows Embe...	37763	7/31/2016 12:00:00 PM	Yes
BootAgentUpgradeWEBSv	Boot Agent Upgrade for WEBSv (Ver-3.3.9)	Active	Windows Embe...	10343	7/31/2016 12:00:00 PM	Yes
BootAgentUpgradeWE7	Boot Agent Upgrade for WE7 (Ver-3.3.9)	Active	Windows Embe...	10343	7/31/2016 12:00:00 PM	Yes
BootAgentUpgradeWE7SP	Boot Agent Upgrade for WE7SP (Ver-3.3.9)	Active	Windows Embe...	10351	7/31/2016 12:00:00 PM	Yes
BootAgentUpgradeWE10	Boot Agent Upgrade for WE10 (Ver-3.3.9)	Active	Windows 10 IoT...	37763	7/31/2016 12:00:00 PM	Yes
Reboot	Device Reboot	Active	ALL	1	12/19/2011 12:50:17 PM	Yes
ResetOSSettings	Resets OS configuration to factory default.	Active	ALL	1	10/29/2011 4:08:57 PM	Yes
Shutdown	Device Shutdown	Active	ALL	1	12/19/2011 12:50:17 PM	Yes
WakeOnLAN	Device WOL	Active	ALL	1	12/19/2011 12:50:17 PM	Yes
Wyse_7040_1_4_4	Install Wyse_7040_1.4.4.exe	Active	Windows 10 IoT...	8323	1/12/2017 3:44:07 AM	No

Figure 17. Package details

9. Drag and drop the registered package on Device manager. The **Package Distribution Wizard** page is displayed.

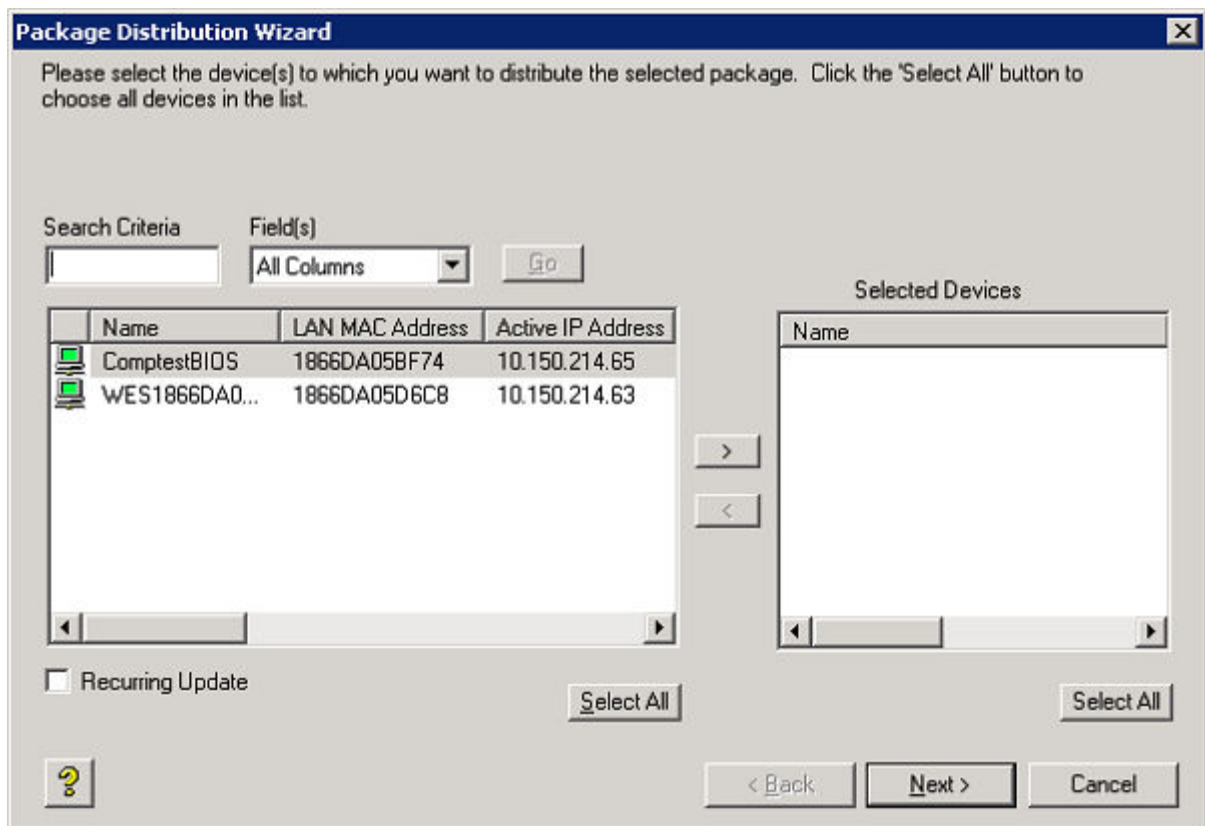


Figure 18. Package Distribution Wizard

10. Select the clients where you want to update the BIOS and complete the wizard. Use the **Scheduled Package** option to verify the progress of BIOS flash.

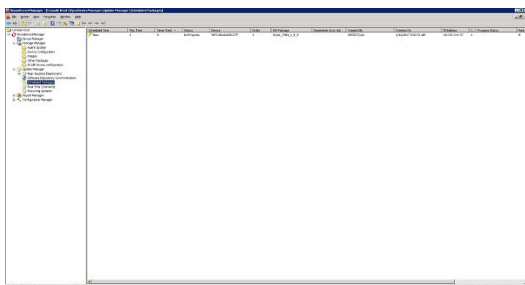


Figure 19. BIOS Flash status

11. The target client reboots three times to complete the BIOS update.

Pushing the BIOS through WDM WebUI using .exe file

The following are the steps to update the BIOS through WDM WebUI using .exe file:

1. Download the WDM BIOS package from [Dell support website](#).
2. Extract and keep in Local repository/WDM server.
3. Open the WDM server, and then open WDM WebUI. Login with WDM server credentials.
4. Expand **Applications** → **Other Packages**.

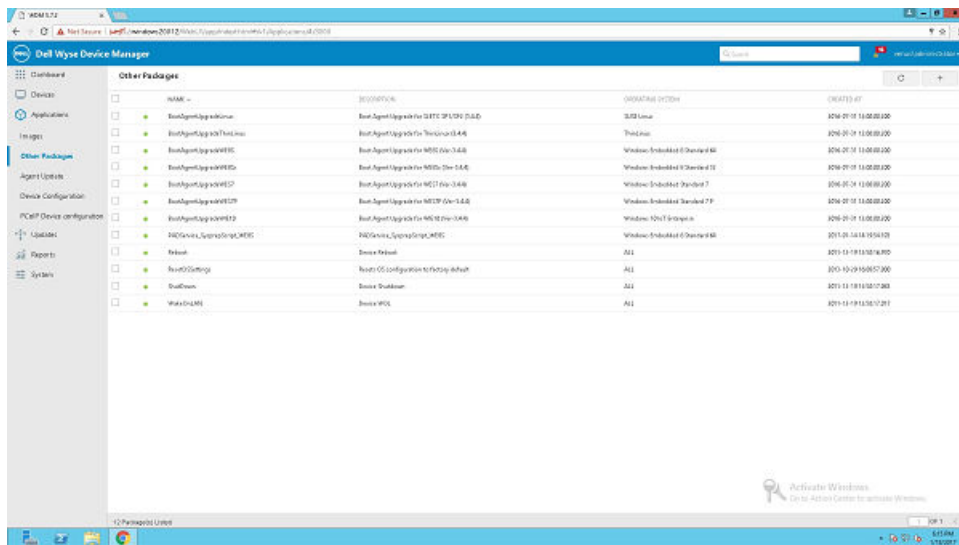


Figure 20. Other Packages

- Click the plus icon in the upper right corner of the screen, and then click download. Open the downloaded package, and then **WDM Package Registration Utility** window opens.

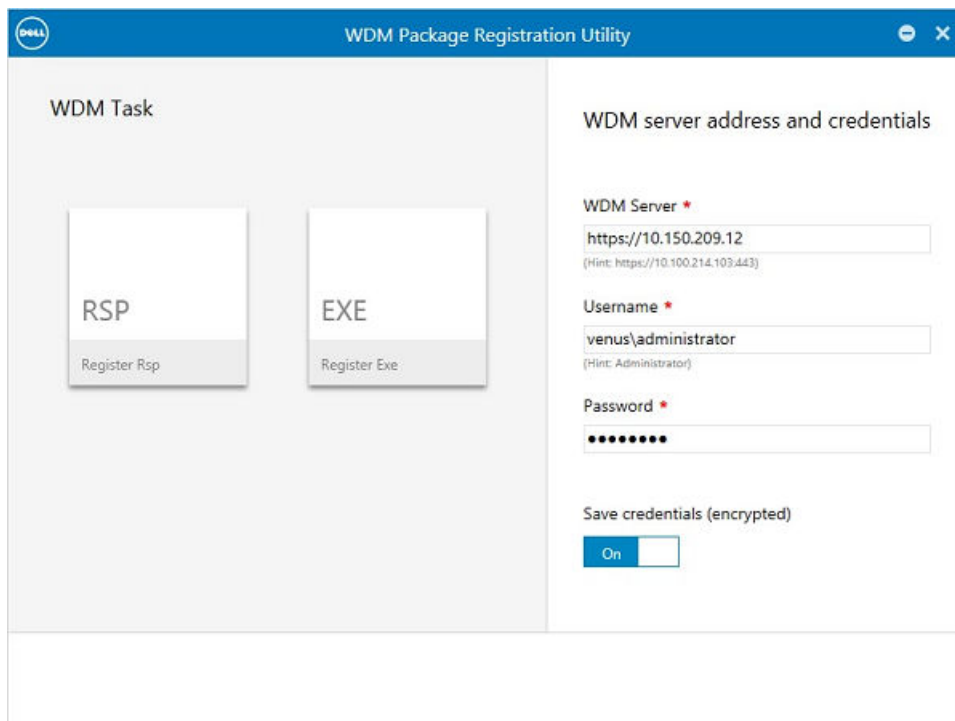


Figure 21. WDM Package Registration Utility

- Click EXE in the left pane and browse the **exe** file from the file location where you have downloaded the BIOS package. Select the target client operating system and pass the Command line parameters as shown in the following picture.

WDM Package Registration Utility

←

Select exe, msi, msu or bat to upload

Browse

Wyse_7040_WIE10.exe

Number	Wyse_7040_WIE10
Description	Wyse_7040_WIE10.exe
Operating System	WIE10
Category	Other Packages
Image Size	8373
Install Path	C:\Temp
Command Parameters	/s /r

Select Operating System * Windows 10 IoT Enterprise

Install Path on Thin Client * C:\Temp
(Must be a valid path on Thin Client)

Command Parameters /s /r
(Hint: some-file-name, or some-flag)

WDM server address and credentials

WDM Server *

https://10.150.209.12
(Hint: https://10.100.214.103:443)

Username *

venus\administrator
(Hint: Administrator)

Password *

••••••••

Save credentials (encrypted)

On

✓ Ready to upload Wyse_7040_WIE10.exe

Upload

Figure 22. EXE file selected

- Click **Upload**. The BIOS package gets registered under Other Packages. After the upload process is complete, close the window.

[illegible]

Figure 23. Package details

- Click the **Devices** option in the left pane, select the checked-in devices where you want to update BIOS and then click the **Update** button.

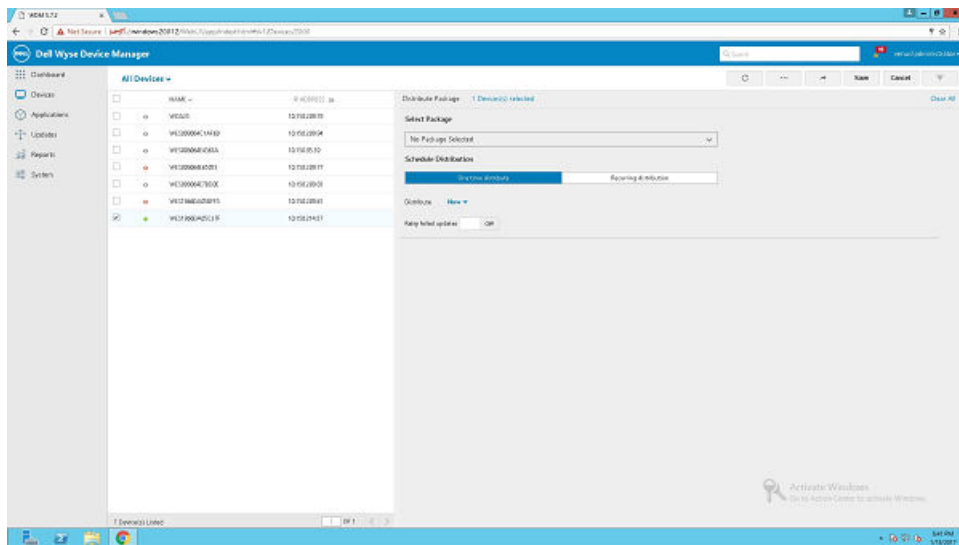


Figure 24. Package Distribution Wizard

9. Under select package, click **Other Packages** and then select the registered BIOS package and click **Save**.

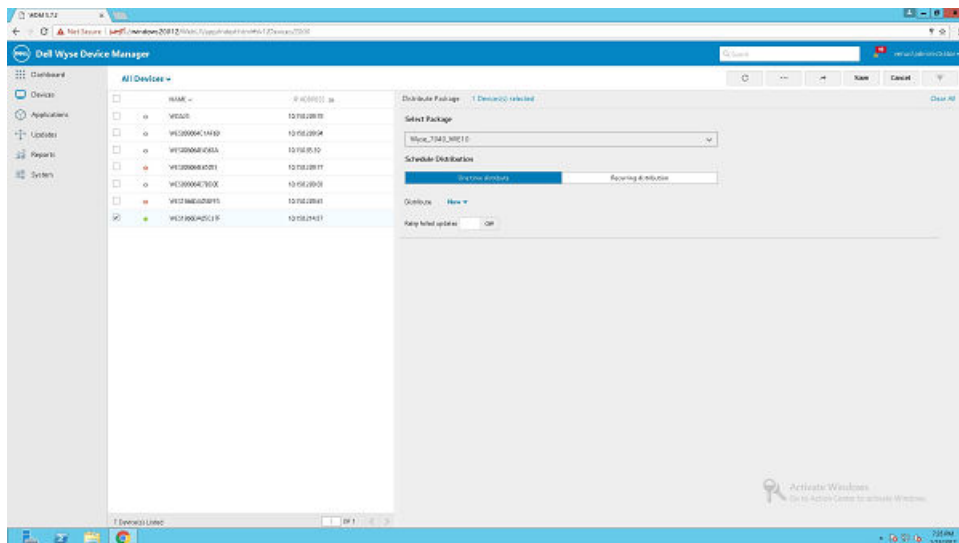


Figure 25. BIOS Flash Package selected in wizard

10. The target client reboots and a flash progress bar on the Dell logo screen is displayed as the BIOS update is being performed and boots into OS.

BIOS update using SCCM server

Prerequisites

The following are the requirements to update the BIOS using SCCM server:

- SCCM server 2012 R2
- BIOS .exe file
- Target Thin clients (Wyse 7040 thin client)

Following is the method to update BIOS onto Windows 10 IoT Enterprise for Wyse 7040 thin client using SCCM server:

- Pushing the BIOS through SCCM server using .exe file.

Creating a package

To create a package, do the following:

1. Create a folder on your **Configuration Manager Content Source Share** for packages.
2. Copy the installation package to the product folder .
3. Open the **System Centre Configuration Manager** Console and go to **Software Library** → **Application Management** → **Packages**.
4. Click **Packages** and then select **Create Package**.

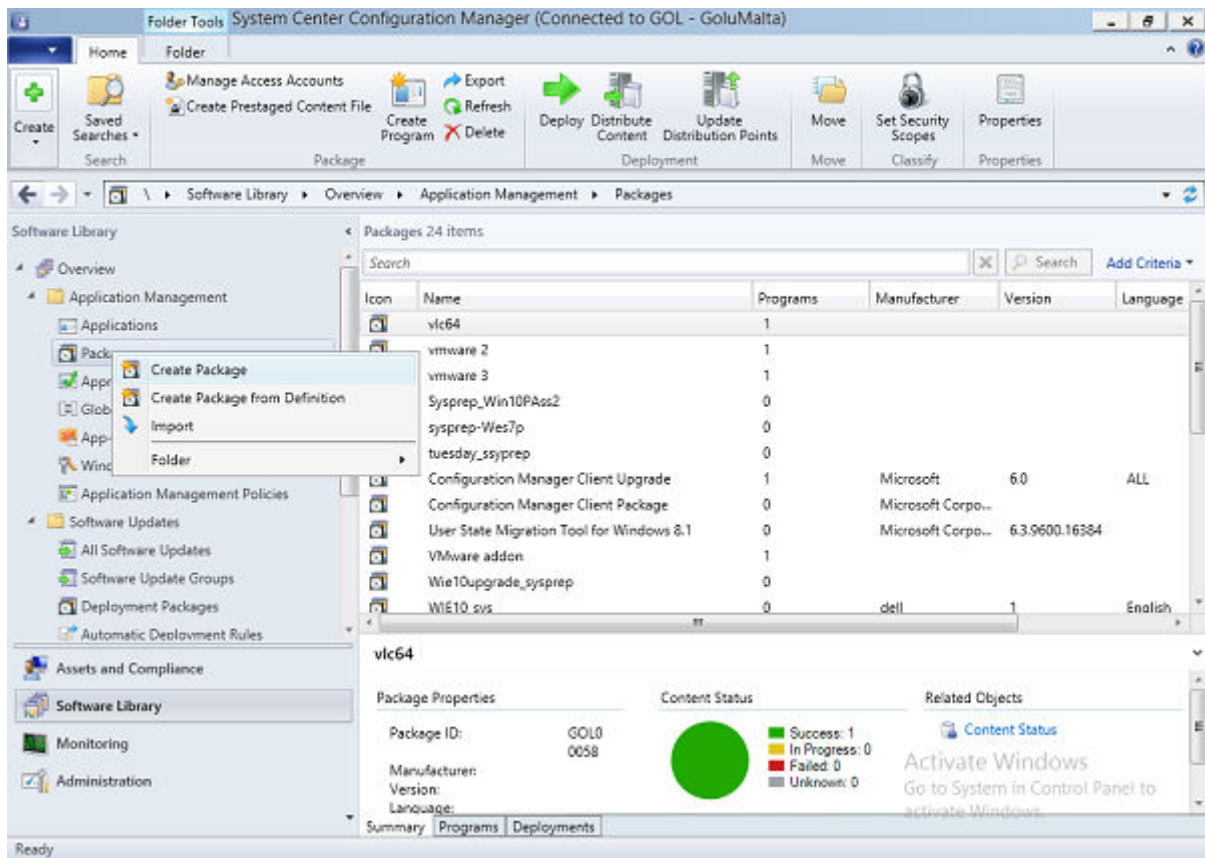


Figure 26. Create Package

Create Package and Program Wizard page is displayed.

Figure 27. Package

5. Click **Next** to continue.
The **Program Type** page is displayed.

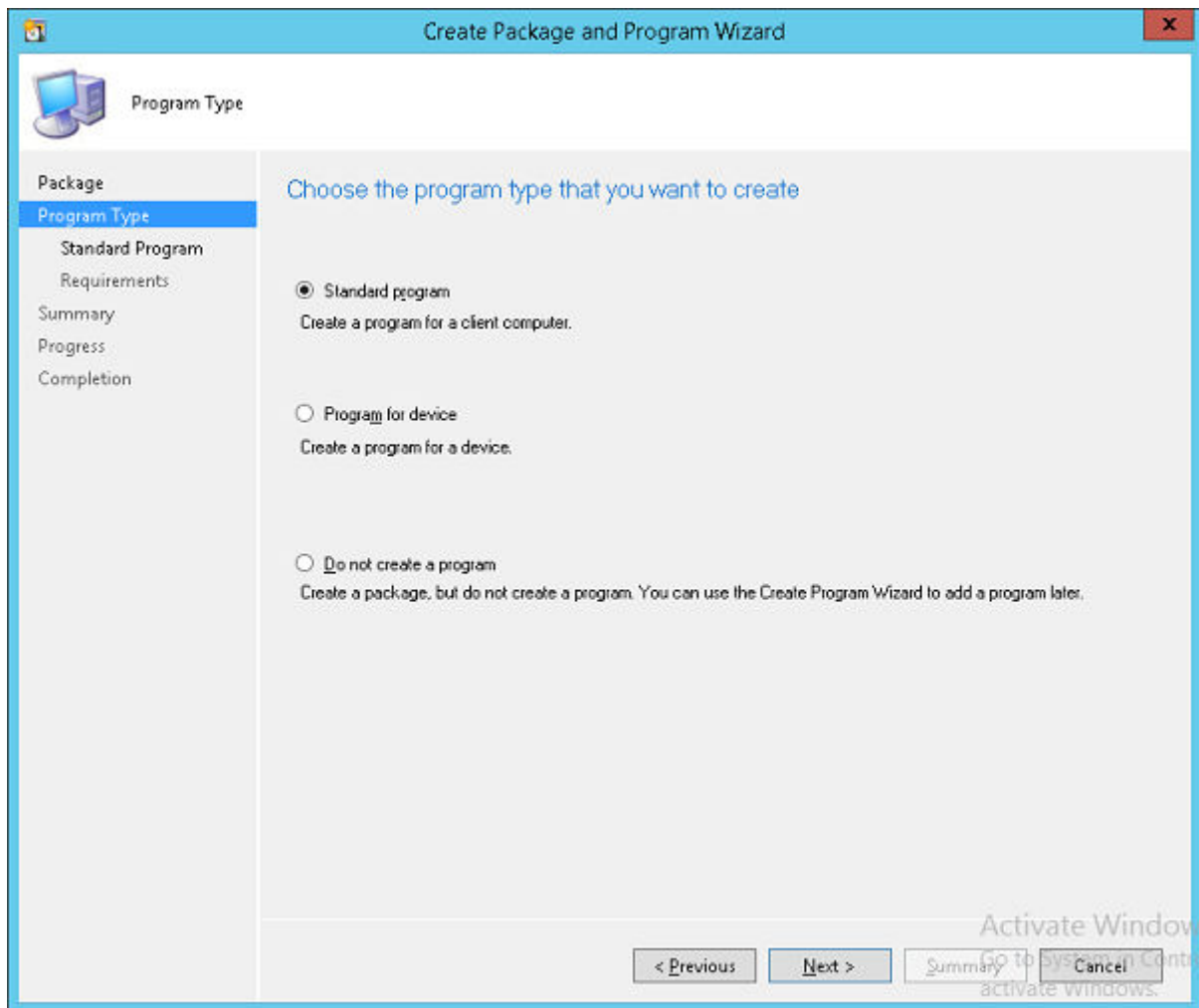


Figure 28. Program Type

6. Select the **Standard Program** option, and click **Next** to continue.
The **Standard Program** page is displayed.

Create Package and Program Wizard

Standard Program

Package
Program Type
Standard Program
Requirements
Summary
Progress
Completion

Specify information about this standard program

Name: BiosUpdate

Command line: Wyse_7040_1.4.4.exe **Browse...**

Startup folder:

Run: Normal

Program can run: Only when a user is logged on

Run mode: Run with user's rights

☒ Allow users to view and interact with the program installation

Drive mode: Runs with UNC name

☐ Reconnect to distribution point at log on

< Previous Next > Summary Cancel

Figure 29. Standard Program

7. In the **Standard Program** package, enter the package name, and in the **Command Line** field browse the path where the BIOS .exe file is located (setup.exe /s). Click **Next** to continue.
The **Requirements** page is displayed.

Create Package and Program Wizard

Requirements

Specify the requirements for this standard program

☐ **Run another program first**

Package:

Program:

☐ **Always run this program first**

Platform requirements

☒ **This program can run on any platform**

☐ **This program can run only on specified platforms**

- ☐ All Windows RT
- ☐ All Windows RT 8.1
- ☐ All Windows 10 Professional/Enterprise and higher (32-bit)
- ☐ All Windows 10 Professional/Enterprise and higher (64-bit)
- ☐ All Windows 7 (64-bit)
- ☐ All Windows 8 (64-bit)
- ☐ All Windows 8.1 (64-bit)
- ☐ Windows Embedded 8 Industry (64-bit)
- ☐ Windows Embedded 8 Standard (64-bit)
- ☐ Windows Embedded 8.1 Industry (64-bit)

Estimated disk space:

Maximum allowed run time (minutes):

< Previous Next > Summary Cancel

Figure 30. Requirements

8. Click **Next** to continue.
The **Summary** page is displayed.

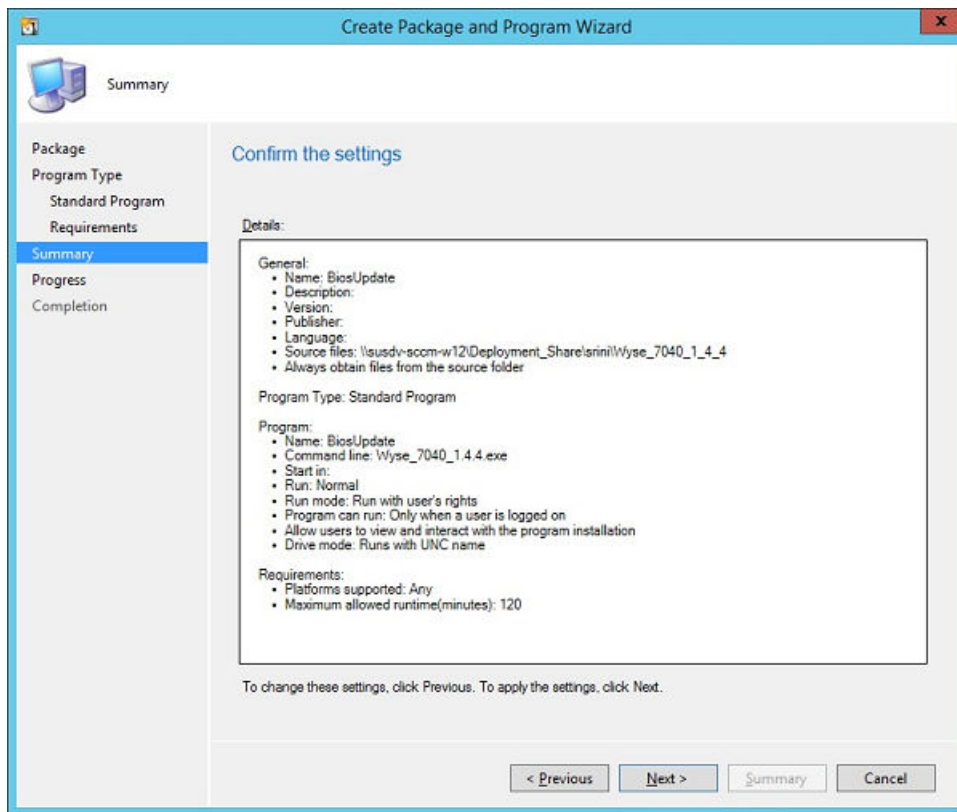


Figure 31. Summary

9. After you create the package, verify whether all the information is correct.
10. Click **Next** to continue.
The **Completion** page is displayed.

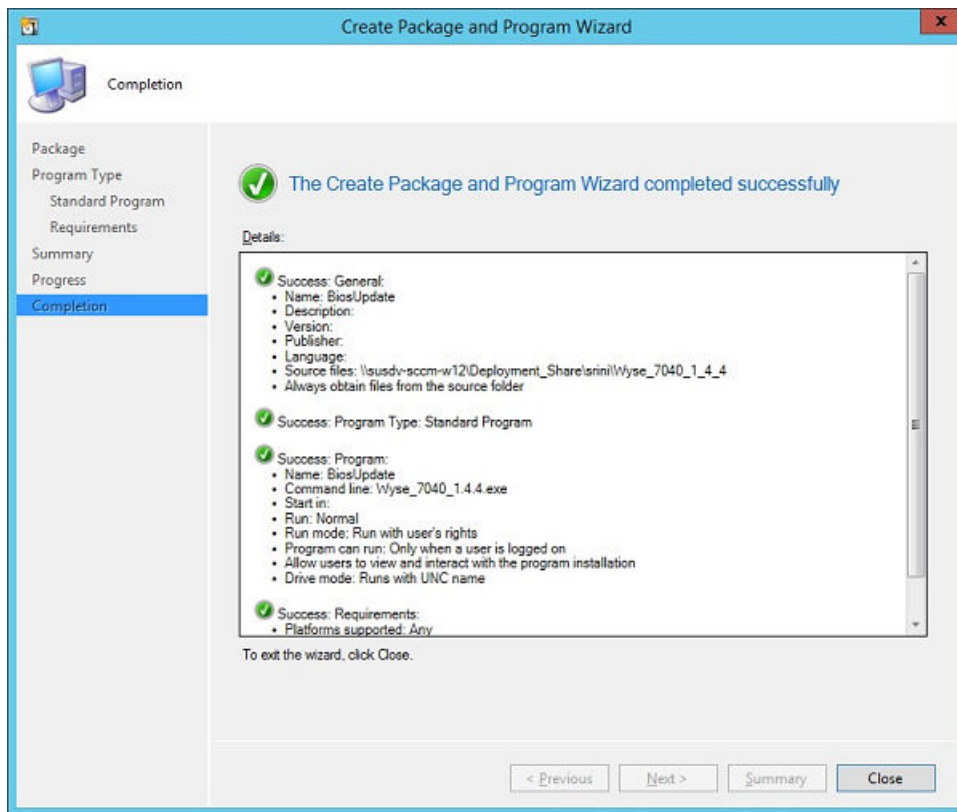


Figure 32. Completion

11. Click **Close** to complete the process.
12. Right-click the package created, and select the **Distribute Content** option.

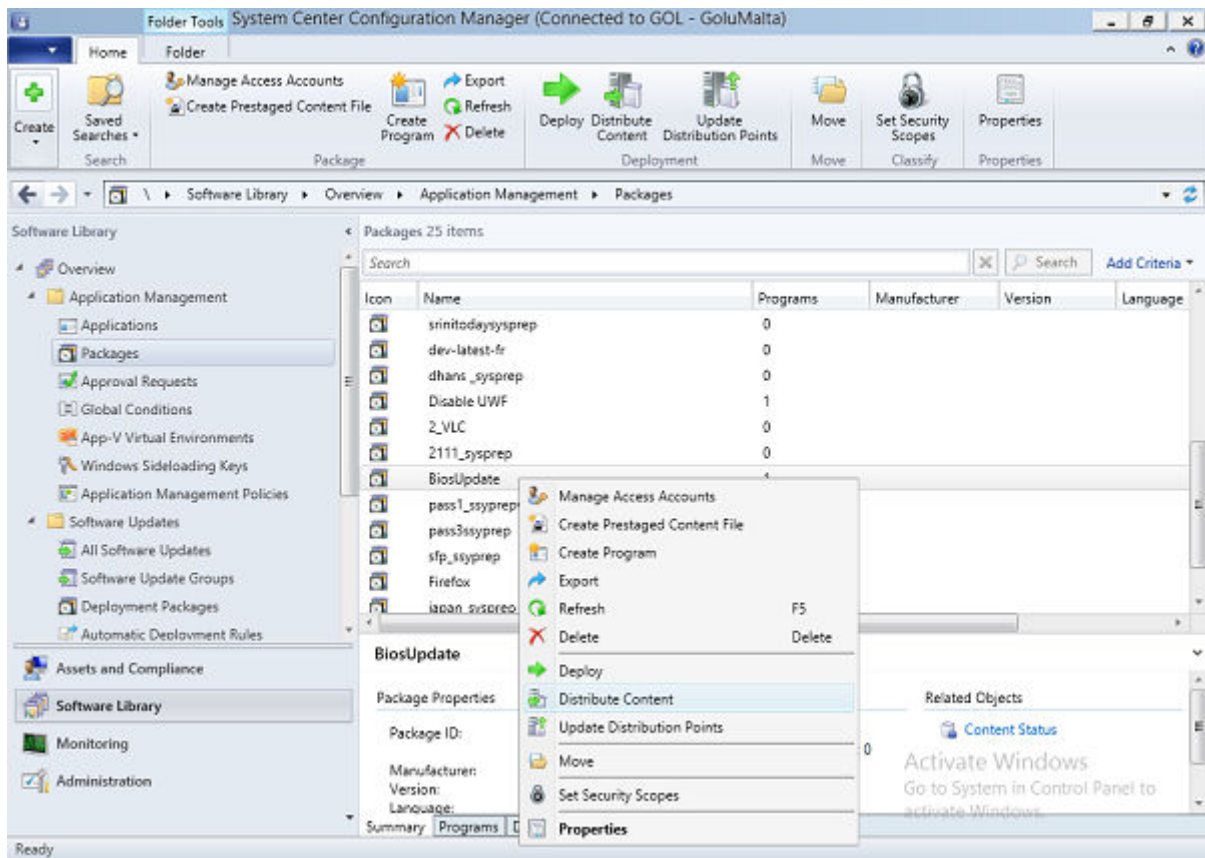


Figure 33. Distribute content

13. After the package content is distributed, check if the status of the package turns green.
14. Join the client to Domain.
15. Discover the client into SCCM server.
16. Check if the device is discovered, and go to **Assets and compliance** → **devices** and check the MAC id of the client.
17. Add the device to the device collection.

Manual Update of BIOS

Prerequisites

- BIOS Binary(.exe file)
- Target Thin clients (Dell Wyse Windows 10 IoT Enterprise for Wyse 7040 Thin Client)

The BIOS can be updated manually using the following methods:

- Updating the BIOS manually by BIOS boot menu.
- Updating the BIOS manually from OS.

Updating the BIOS Manually from OS

To update the BIOS manually from OS, do the following:

1. Download the BIOS binary (.exe file) to the target thin client. The .exe file can also be copied and executed from a USB key.
2. Execute the binary file. The user confirmation is required to update the BIOS. Click **Ok**, and then client reboots once.
The BIOS is updated.

Updating the BIOS Manually by BIOS Boot Menu

To update the BIOS manually by BIOS boot menu, do the following:

1. Copy the downloaded .exe file to a USB drive (It does not need to be bootable).
2. Plug in the USB drive into any USB port.
3. Turn on the system.
4. On the Dell logo screen, press the **F12** key to access the one time boot menu.
5. In the **Other Options** section, select **BIOS Flash Update**.
6. Browse the USB drive to locate the downloaded .exe file.
7. Select the required .exe file, and then click **Ok**.
8. Verify the existing system BIOS information and the BIOS update information.
Click **Begin Flash Update**.
9. After you review the warning message, click **Yes** to continue.
10. The system restarts, and displays a **Flash Progress** bar on the Dell logo screen as the BIOS is being updated.
11. The system restarts again after the flash update is complete.



BIOS Update by Using Dell Command Configure

Dell Command | Configure is a packaged software that provides configuration capability to business client systems. You can configure the client systems using a Graphical User Interface (GUI) or a Command Line Interface (CLI).

For more information on CLI, see *Dell Command | Configure Command Line Interface Reference Guide* available at www.dell.com/dellclientcommandsuite/manuals. You can use Dell Command | Configure in Red Hat Enterprise Linux environments and Microsoft Windows Preinstallation Environment (Windows PE), and on the Microsoft Windows Vista, Windows 7, Windows 8, Windows 8.1, and Windows 10 operating systems.

For more information about DCC configuration and Creating a BIOS package using DCC GUI, see *Dell Command | User's Guide* and *Dell Command | Deployment Guide* available at www.dell.com/support/home/us/en/19/product-support/product/dell-cmnd-config-v3.1/manuals.