Configuring Dell Business Client Systems using Dell Command | Configure

Dell Engineering
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Table of contents

Executive summary

This white paper describes how you can configure BIOS settings of a system by using the Dell Command | Configure command line interface (CLI) and graphical user interface (GUI). You can also use Dell Command | Configure to apply the configured settings on other target systems. In addition, this white paper outlines some specific features of the Dell Command | Configure GUI which can help you in configuring the BIOS settings.

1   Introduction

Dell Command | Configure is a packaged software that provides BIOS configuration capabilities on the Dell business client systems such as OptiPlex, Precision, Latitude, XPS, and Venue Pro tablets. Dell Command | Configure is accessible through the command line interface (CLI) and graphical user interface (GUI). You can use either the GUI or CLI for configuring the BIOS settings on client systems.

Dell Command | Configure is supported on the following operating systems:
- Microsoft Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Windows pre-installation environment (WinPE)
- Red Hat Enterprise Linux 6
- Red Hat Enterprise Linux 7
- Ubuntu Desktop 16.04

Note: The Dell Command | Configure GUI is not available on Linux operating systems.

For information on installing Dell Command | Configure, see the *Dell Command | Configure Installation Guide* accessible from the Documentation section of the wiki page.

2 Configuring and applying BIOS settings using the CLI

You can configure the BIOS settings by using the **Dell Command Configure Prompt**. To configure and apply a particular BIOS setting or option on the target system, you can run certain commands. To replicate the BIOS settings of a particular host system on target systems, the configuration file (.ini or .cctk) must be exported from the host system.

Note: The configuration file can also be generated by using the GUI. The GUI-generated configuration file can also be used to apply that configuration settings by using CLI.

To configure and apply BIOS settings by using the CLI, start the **Dell Command Configure Prompt** as an administrator by using one of the following methods:

- From the Start menu: Click **Start→ All Programs→ Dell→ Command Configure→ Dell Command Configure Prompt**.
- Open a Command Prompt and navigate to the folder where the **cctk.exe** file is available.

2.1 Configuring and applying BIOS settings on the local or host system

Before you configure the BIOS settings, see the in-built help to learn about the available settings and options. The in-built help describes the supported BIOS options on the local or host system.

To access the in-built help, use the following command.

Command: cctk.exe –h

Figure 1   Listing of supported BIOS settings on the local system

To see more details about the particular BIOS option, use the following command syntax.

Command: cctk -h <option name>

Example: cctk -h autoon


```
C:\Program Files (x86)\Dell\Command Configure\X86_64>cctk -h autoon

autoon:  This option sets the configuration when you would like the system to turn on automatically.

disable - Disables auto-on capabilities.
everyday - Enables auto-on capabilities every day of the week.
weekdays - Enables auto-on capabilities for the weekdays (Monday to Friday) only.
selectdays - Enable the auto-on capabilities as per user selected days (Sunday to Saturday : sun,mon,tue,wed,thu,fri,sat).
.
Note: The other days not specified will be disabled.

Arguments: disable+ | everyday+ | weekdays+ | selectdays+

Note : + Indicates the arguments supported in the current machine.
```

Figure 2   Viewing details about the autoon feature

To get the current value of host supported BIOS options, use the following command syntax.

Command: cctk --<option name>

Example: cctk –autoon

To configure the BIOS settings, use the following command:

Command: cctk --<option name>=<value>

Note: If the system is configured with a setup (admin) password or system (user) password, you must provide the password with the command.

If Setup/Admin Password is set, use the following command syntax:

Command: cctk --<option name>=<value> --valsetuppwd=<password>

If System/User Password is set, use the following command syntax:

Command: cctk --<option name>=<value> --valsyspwd=<password>

Example:

cctk --numlock=on

cctk --autoon=selectdays:sun,mon,thu

```
C:\Program Files (x86)\Dell\Command Configure\X86_64>cctk --autoon
autoon=disable

C:\Program Files (x86)\Dell\Command Configure\X86_64>cctk --autoon=selectdays:mon,tue,thu
autoon=selectdays:Mon,Tue,Thu

C:\Program Files (x86)\Dell\Command Configure\X86_64>
```

Figure 3   Checking current value of autoon and changing it to selectdays (Mondays, Tuesdays and Thursdays)

2.2   Configuring and applying BIOS settings on the target systems

To configure or replicate the same BIOS settings on multiple systems:

1. Export the configuration file (.ini or .cctk) from the local or host system–the BIOS settings of the system that has to be replicated on other target systems.

    Command: cctk -o <filename>

    Example:
    cctk -o config.ini
    cctk -o c:\<path>\config.cctk

2. Import the .ini or .cctk file on other systems

    Command: cctk -i <file_name>

    Example:
    cctk -i config.ini
    cctk -i c:\<path>\config.cctk

Note: To apply more settings which may be applicable to the other systems, you can open the configuration file and add more options. After updating the configuration file, import the file on the other systems.

For information on all the BIOS options that are supported by Dell Command | Configure, see the *Dell Command | Configure Command Line Interface Reference Guide* accessible from the Documentation section of the [wiki](#) page.

3 Configuring and applying BIOS settings using the GUI

Using the **Dell Command | Configure Wizard**, you can:

- Export the settings to a configuration file (.ini or .cctk), self-contained executable file (.exe) or report file (.html) to either the local/host system or other systems

- Validate and edit the BIOS options

- Open the saved configuration file (.ini or .cctk) and modify the settings

- View the Package History

- Provide the feedback about the product

To configure and apply BIOS settings by using the GUI, start the **Dell Command Configure Wizard** as an administrator, by using one of the following methods:

- Double-click the Desktop shortcut icon
- From the Start menu: Click **Start→ All Programs→ Dell→ Command Configure→ Dell Command Configure Wizard**.
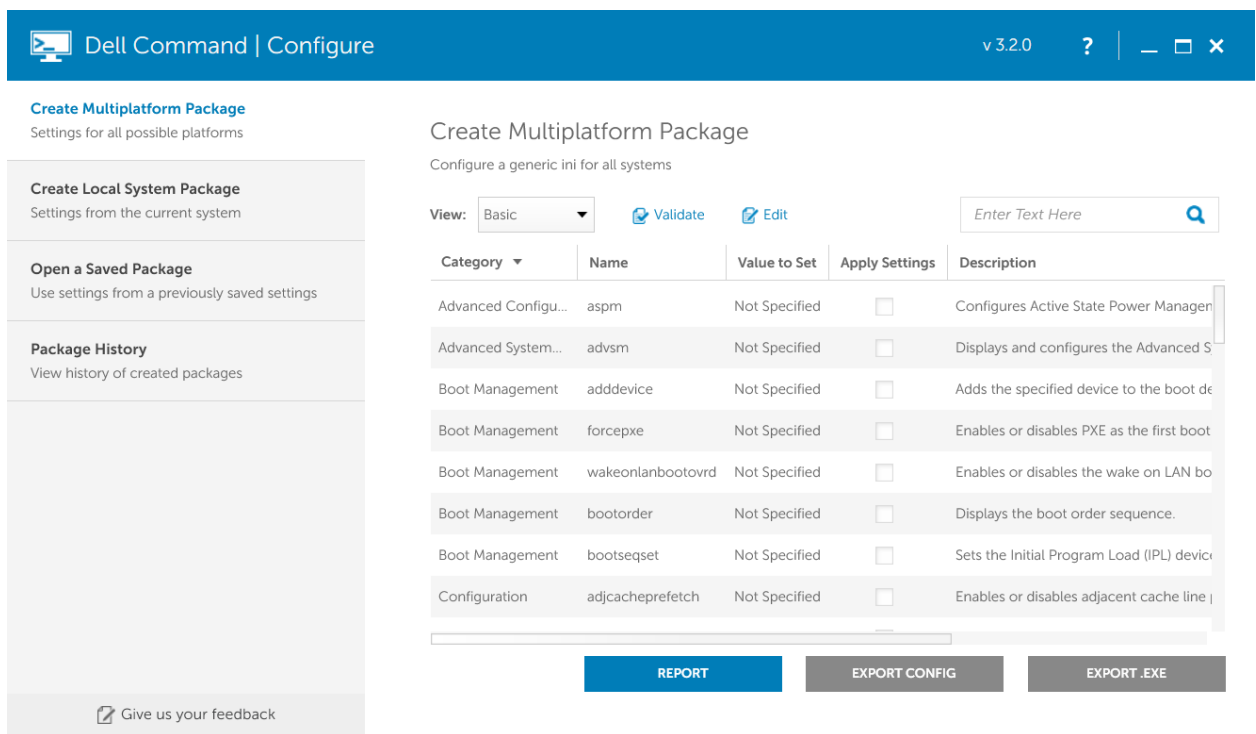

Figure 4   Dell Command | Configure GUI

You can configure the BIOS settings as follows:

- **Multiplatform Package** – If you want to configure the BIOS settings for multiple systems without depending on the host system supported BIOS settings, click the **Create Multiplatform Package** option.

- **Local System Package** – If you want to configure the same BIOS settings on other systems same or you want to modify host system BIOS settings or add some more settings, then click the **Create Local System Package** option.

- **Saved Package** – If you already have the saved configuration file, but want to either modify the settings or add some more settings to that file, click the **Create Saved Package** option.

For more information on Dell Command | Configure, see the wiki page.

3.1   Configuring and applying the BIOS settings on the local or host system

To configure and apply the BIOS settings for the local system, click the **Create Local System Package** option.
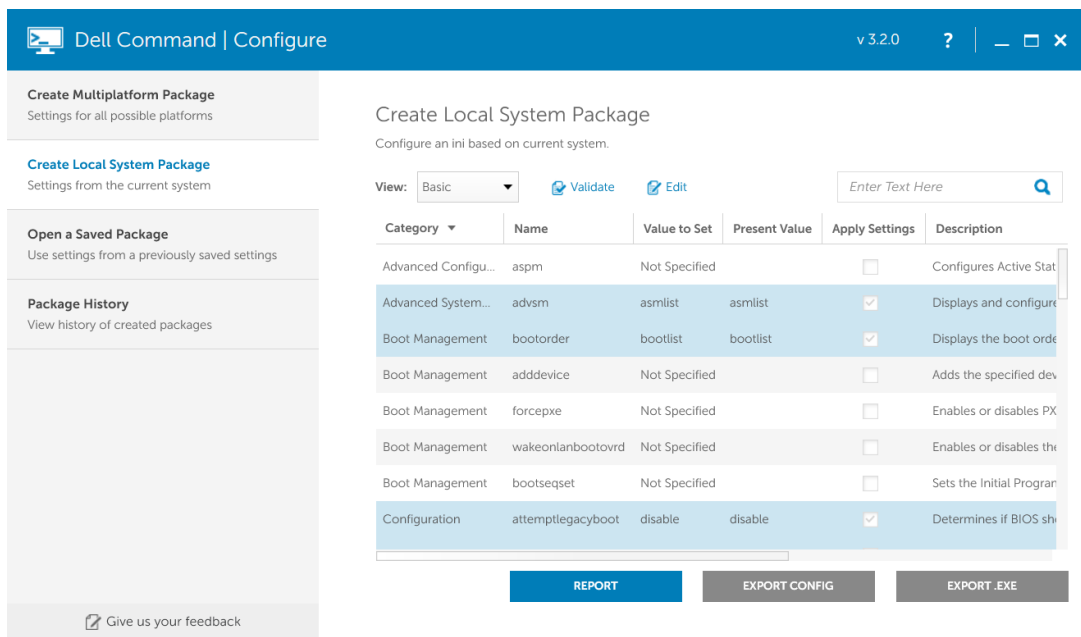
Figure 5   Checking BIOS settings of the local system

The BIOS options that are supported by the local system are highlighted in light blue color. The **Present Value** column displays the current value of the supported BIOS options. The white or gray colored rows display the tokens that are not supported tokens by the host system. For not supported tokens, the **Present Value** column is blank, and the **Value to Set** column displays **Not Specified**.

1. If you want to configure the BIOS settings on other systems with the same settings as on the host system BIOS settings, you can export the settings to a configuration file or .exe file and use that file on other systems. For more information on exporting the settings, see Exporting the configured settings.

2. If you want to edit the host machine BIOS settings or add some more BIOS options, click **Edit**. Figure 6 shows an example of the edit operation.
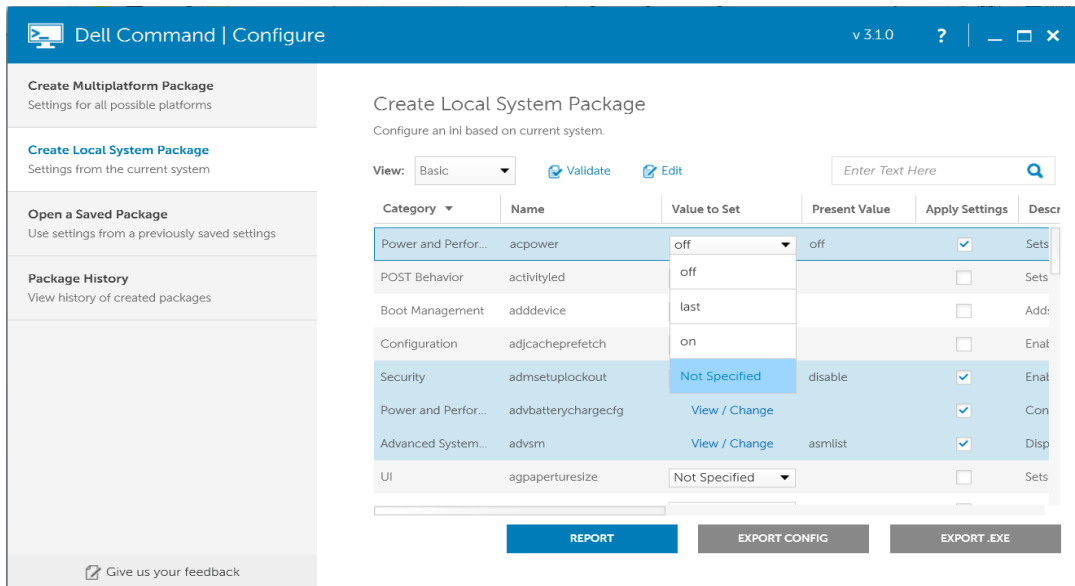
Figure 6   Editing acpower BIOS setting of host system

    a. To edit an option, select the desired value for the BIOS option from the **Value to Set** column.

    b. To add more options that are not supported by the host system, but may be supported by other systems, click an option where the "**Value to Set**" column displays **Not Specified** and the **Apply Settings** box is not selected. After selecting the option, select the appropriate value for the option. After you select the value, the **Apply Settings** box is automatically selected.

    c. After configuring the settings, export the configuration file or .exe file. For more information on exporting the settings, see Exporting the configured settings.

3. When configuring the BIOS settings, you can use the features supported by GUI, such as validate, sort, search, and category filter. For more information about the features, see Features Supported by the GUI.

4. After exporting the file, you can apply/deploy that file to a host or target system.

3.2 Configuring and applying the BIOS settings on other target systems

To configure and apply the BIOS settings for all types of systems or models, click the **Create Multiplatform Package** option. The **Create Multiplatform Package** page does not have present value column and the **Value to Set** column has the value as **Not Specified** for each option.
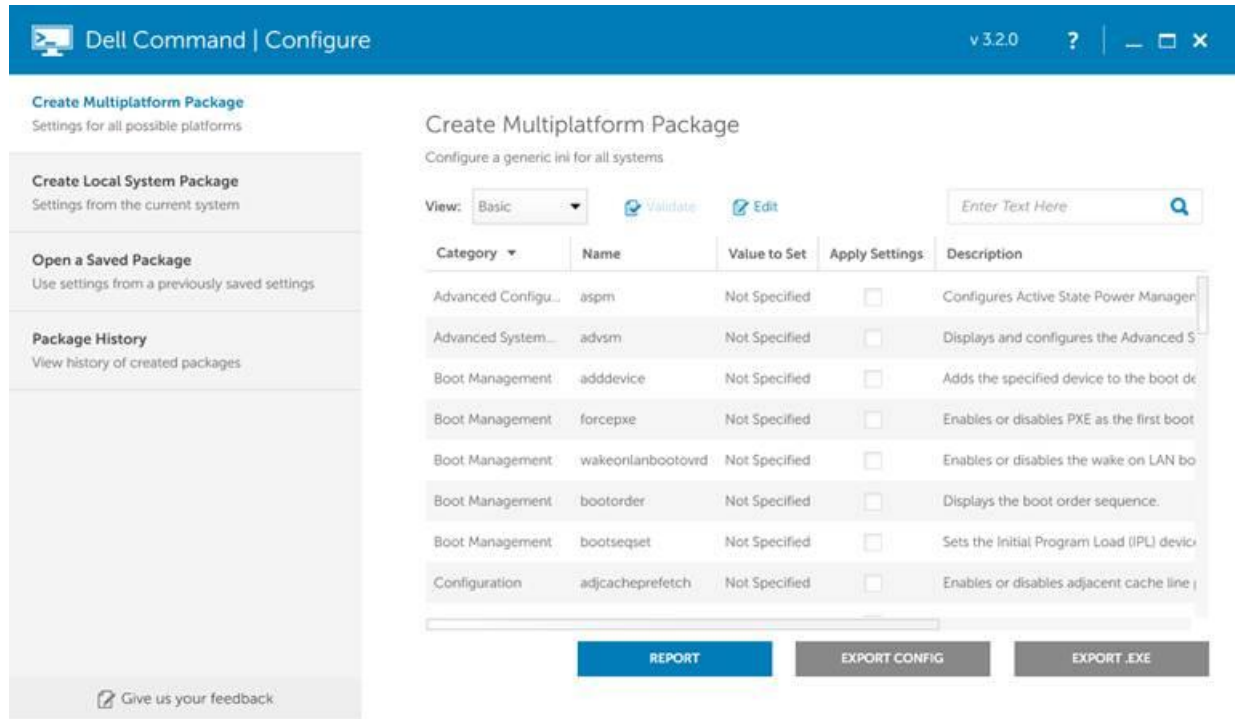

Figure 7   Multiplatform package page

1. To configure the BIOS settings, click **Edit**.

2. Select the appropriate value for each option. After you select the value, the **Apply Settings** box is automatically selected.
   Note: When configuring the BIOS settings, you can use the features supported by GUI, such as validate, sort, search, and category filter. For more information about the features, see Features Supported by the GUI.

3. After configuring the settings, export the configuration file or .exe file. For more information on exporting the settings, see Exporting the configured settings.

4. After exporting file, you can apply or deploy the configuration file to the host or target system.
   Note: When editing the BIOS options, the **Value to Set** column displays a text field for some options that require your input. Custom options that you can configure display a **View/Edit** link. For configuring a custom options, click **View/Edit**.

Figure 8 shows the following options: **autoon** – custom option; **autoonhr** and **autoonmn** – options that require your input).
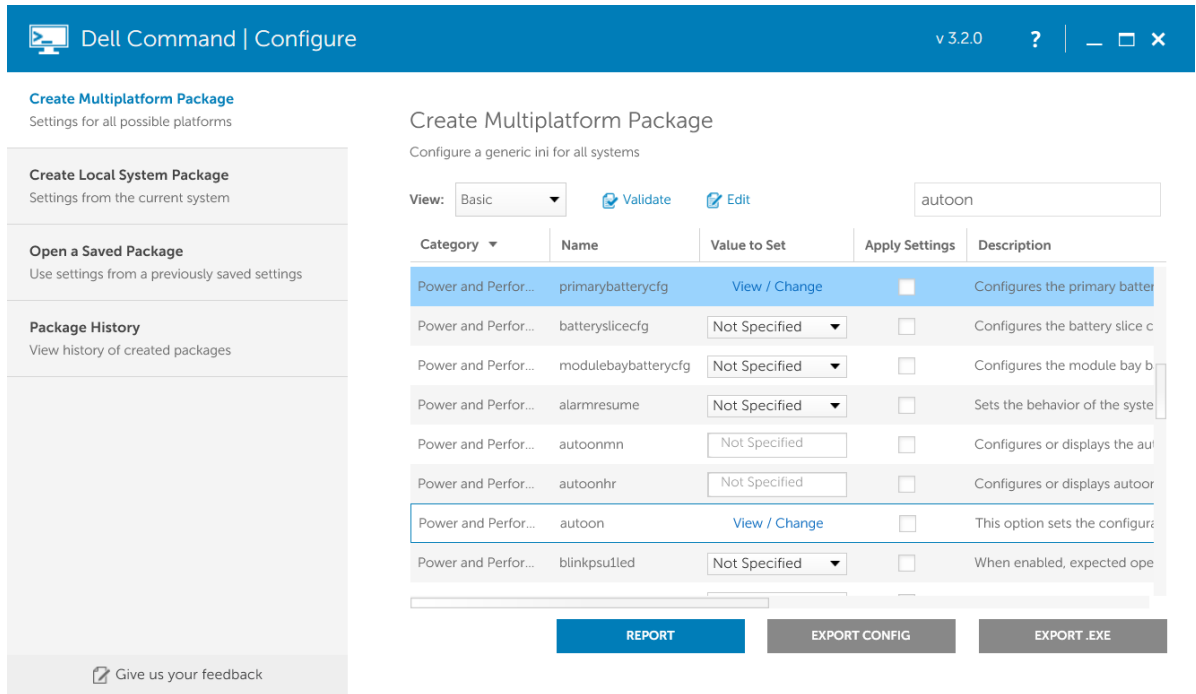

Figure 8   Custom options autoon, autoonhr and autoonmn after clicking on edit button

3.3   Features supported by the GUI

Dell Command | Configure provides many features that system administrators can use during BIOS configuration.

3.3.1   Validate

The Validate feature can be used to compare all BIOS options that are supported by Dell Command | Configure with the Host machine supported BIOS options and their values. To compare BIOS options, click **Validate**.

After the validation is complete, BIOS options that are not supported by the local or host system are grayed out. The possible values that are supported by the host system for a supported option are indicated by a ✅ icon, while the values that are not supported by the host system are indicated by a ❌ icon.

An example of the validation output is shown in Figure 9.
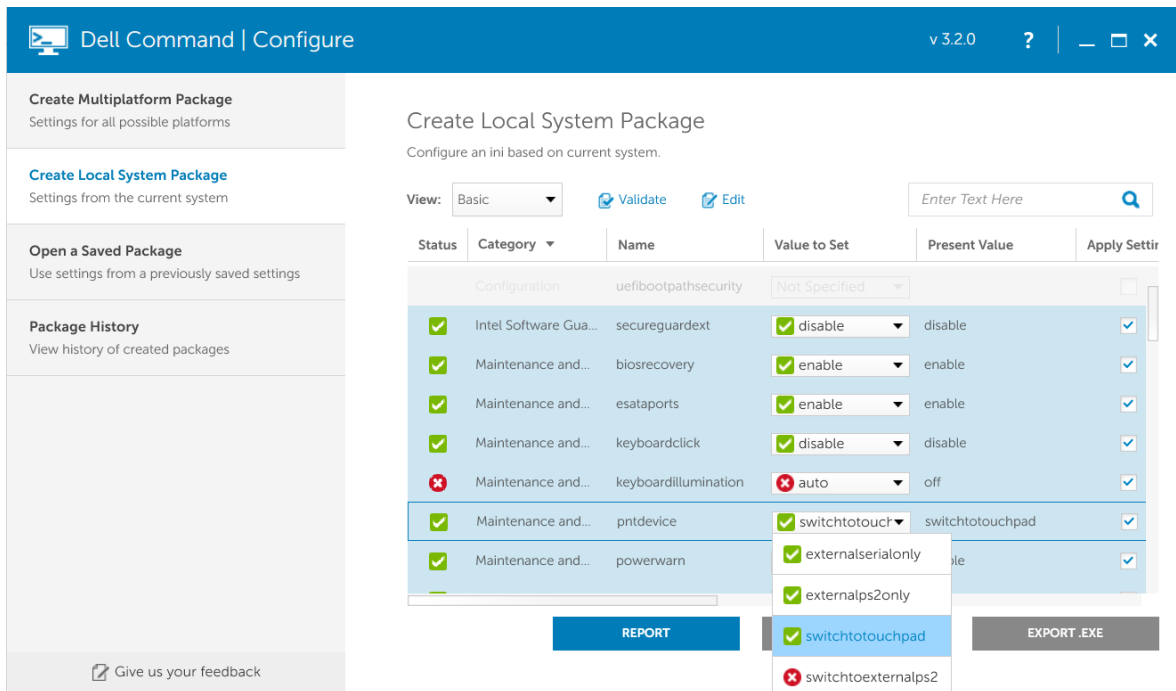
Figure 9   Validating BIOS settings on the host system

The following are the observations from Figure 9:

- The **uefibootpathsecurity** option is grayed out because this option is not supported on the host system.
- The **keyboardillumination** option is supported on the host system, but it is currently set to **auto value,** which is not supported on the host system, therefore, both **Status** and **Value to Set** display the ⊗ icon.
- The **pntdevice** option is has multiple values, out of which the **externalserialonly**, **externalps2only**, and **switchtotouchpad** values display the ✅ icon are because they are supported by the host system. The **switchtoexternalps2** value displays the ⊗ icon because it is not supported by host system.

3.3.2 Category filter

You can filter the categories of settings that are displayed in the GUI. To filter categories or configure the settings for specific categories, click the **Category** column. The available categories are displayed as shown in Figure 10. From the available categories, select or clear the categories that you want to filter.
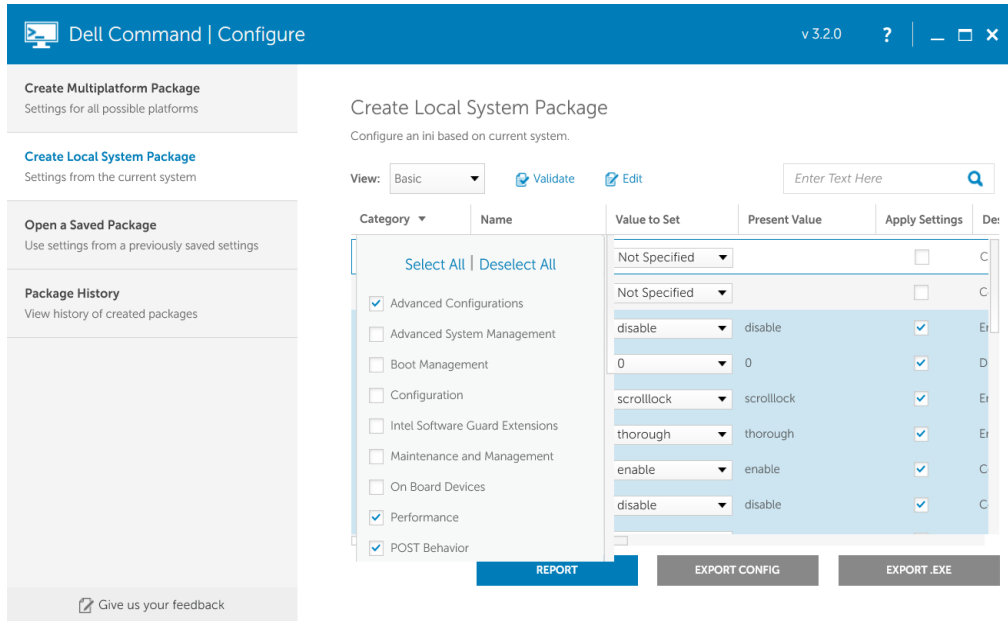
Figure 10   Filtering BIOS options in GUI based on Categories

In Figure 10, only three categories are selected, therefore, the GUI displays only the options related to those three categories.

3.3.3 Sort

You can also sort the options that are displayed in any column. To sort a column, click the **column header**. Figure 11 shows the options sorted by **Name** in descending order.

Figure 11   Sorting BIOS options on basis of name in descending order.

3.3.4 Search

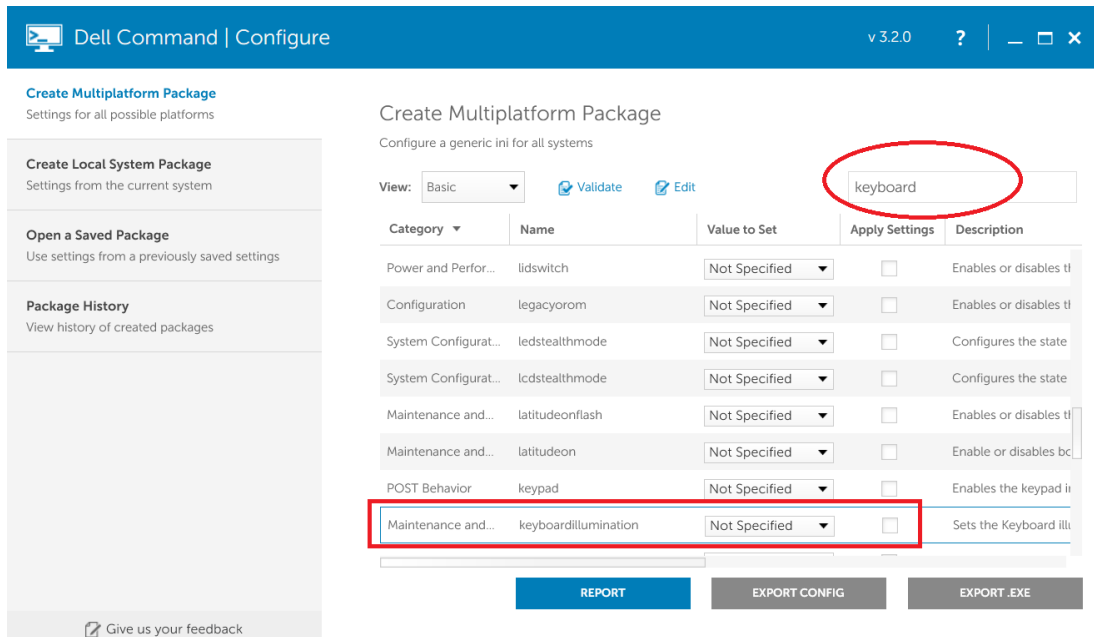You can search a particular option by typing a keyword in the search box.

Figure 12   Search for the keyboardillumination option

When you type the keyword, the GUI displays the first option that contains the keyword which that you searched for. If you press Enter, the GUI other options that contain the same keyword. You can continue to press Enter until you reach desired option name. The searched option will be displayed in a box with a blue border as shown in Figure 12.

3.4 Exporting the configured settings

After configuring the settings, you can export the configuration to a file. The exported configuration settings file can be used to apply the same configuration on target systems. There are two types of files which can be exported and deployed on the target systems.

- Exporting to .ini/.cctk: To export to a .ini or .cctk file, click **Export Config**. This file can be imported on the target systems with the help of CLI as described earlier in this white paper.

- Exporting to .exe: To export to a self-contained executable file (.exe), click **Export EXE**. When you click **Export EXE**, a separate GUI is displayed, where you can type the different type of passwords depending on which password(s) that are set on the target systems. After the .exe is generated, you can run the .exe on the target system. You can also deploy the .exe on multiple systems.
  Note: While exporting .exe file, a .sh file is also generated. You can use the .sh file to apply the settings on target systems running a Linux operating system.

- Exporting .html file – To export to a .html file, click **Export Report**. You can save your configured BIOS settings as an .html file.
  Note: The Package History page maintains the record of all the files that you exported. It keeps track of the file location, file types, and date/time when the file was exported.

4   Deploying the configured settings

You can use the following software to deploy the Dell Command | Configure Self Contained Executable (SCE) package (.exe):

Microsoft System Center Configuration Manager (SCCM)
System Center Configuration Manager is a system management software that enables managing large groups of Windows-based systems. For more information on SCCM, visit the following web pages:

https://technet.microsoft.com/en-us/library/gg682041.aspx
https://en.wikipedia.org/wiki/System_Center_Configuration_Manager

Dell Command | Integration Suite for System Center 2012
Dell Command | Integration Suite is a GUI-based tool that enables you to configure and deploy your Dell client systems. This suite is integrated directly into the Configuration Manager console. It eliminates the need for command line tools and scripts that are generally used. It also adds new functionality for remote management by using AMT, Intel's out-of-band technology. The features of this suite include:

- Importing Dell client driver packages.
- Dell Command | Monitor and Dell Command | Configure integration
- Dell warranty tracking
- Intel AMT out-of-band management

For more information on Dell Command | Integration Suite for System Center 2012, visit
http://www.dell.com/support/home/us/en/19/product-support/product/dell-command-integration-suite-v4.2/manuals

Active Directory
Active Directory is a database that keeps track of all the user accounts and passwords in your organization. It allows you to store the user accounts and passwords in a single protected location, thereby improving your organization's security.

Active Directory is subdivided into one or more domains. A domain is a security boundary. Each domain is hosted by a server known as a domain controller (DC). A domain controller manages all the user accounts and passwords of a domain.

You can deploy applications by using Group Policies. Group Policy is a feature of the Microsoft Windows NT family of operating systems. It controls the working environment of user accounts and computer accounts. Group Policy provides the centralized management and configuration of operating systems, applications, and users' settings in an Active Directory environment.

For more information on Active Directory, visit the following web pages:
http://en.wikipedia.org/wiki/Active_Directory
https://technet.microsoft.com/en-us/library/cc754678(v=ws.10).aspx

4.1 Deploying the configured settings using SCCM

To deploy the Dell Command | Configure SCE by using Configuration Manager (SCCM):

1. Create a package and program

2. Create and update distribution points

3. Create a task sequence

4. Deploy the task sequence

5. Initiate client actions by using the Configuration Manager

4.1.1 Create a package and program

1. Open Microsoft System Center Configuration Manager.

2. Navigate to Software Library→ Overview→ Application Management→ Packages.

3. Right-click **Packages** and click **Create Package**.

4. In the **Create Package and Program Wizard**, specify the details such as package name (example, Config_SCE), description, manufacturer, and so on.
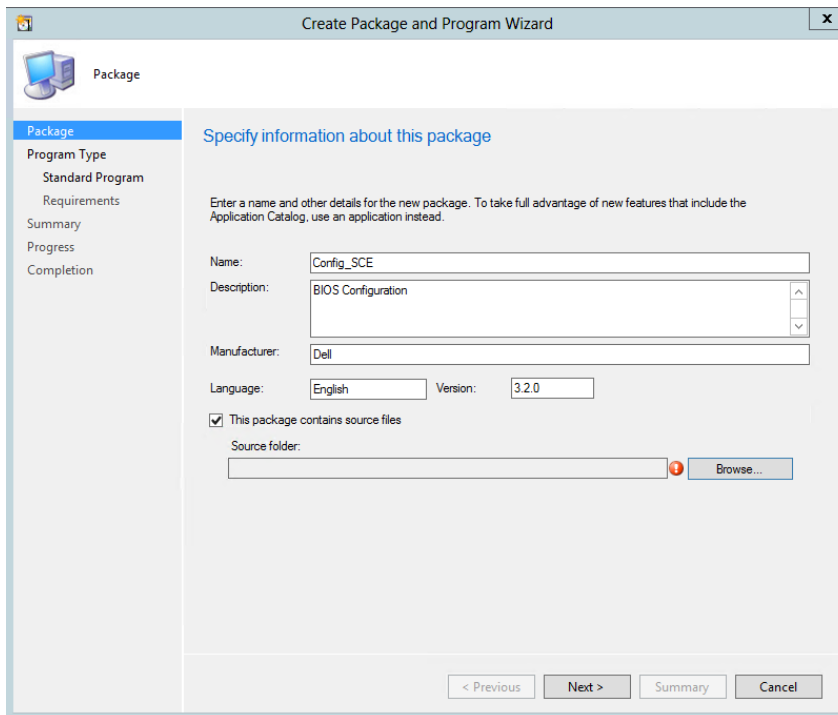
Figure 13   Specifying package information in the Create Package and Program Wizard

5. Select the **This package contains source files** check box, browse to the source folder where the Dell Command | Configure SCE files are saved, and then click **Next**.

Figure 14   Browsing to the source folder where the SCE file is saved

6. On the **Standard Program** page, browse to the source folder where the Dell Command | Configure SCE files are saved, and then click **Next**.

    Example: Multiplatform.exe /nolog

7. From the **Program can run list**, select **Whether or not a user is logged in**, and then click **Next**.

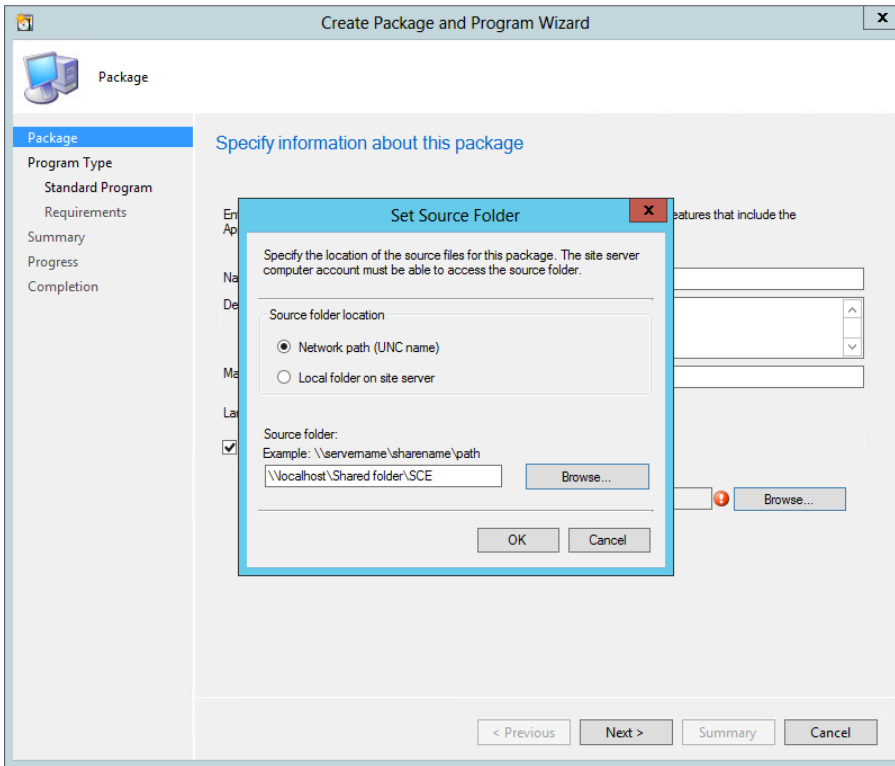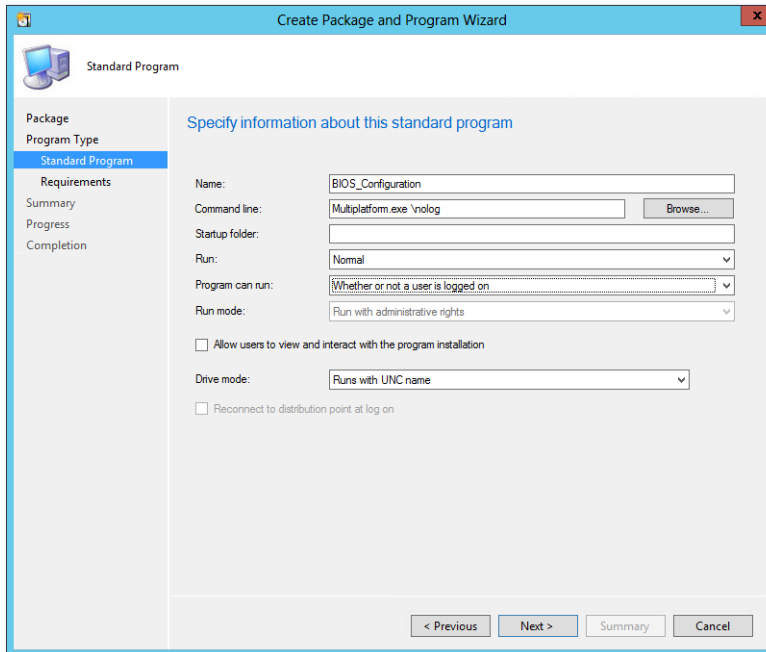

Figure 15   Specifying program information in the Create Package and Program Wizard

8. On the **Requirements** page, under **Platform requirements**, select the **This program can run on any platform** option, and then click **Next**.

9. On the **Summary** page, verify the selected settings and click **Next**.
   The **Create Package and Program Wizard completed successfully** message is displayed.

Figure 16   Completion status for the Create Package and Program Wizard

10. Right-click the created package "Config_SCE" from the packages list and click **Properties**.
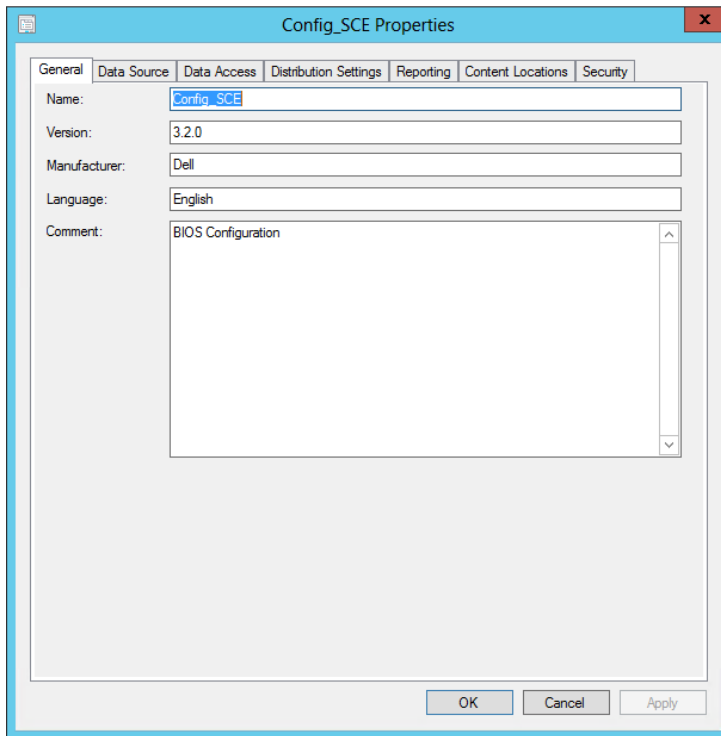
Figure 17   Editing the properties of a created package
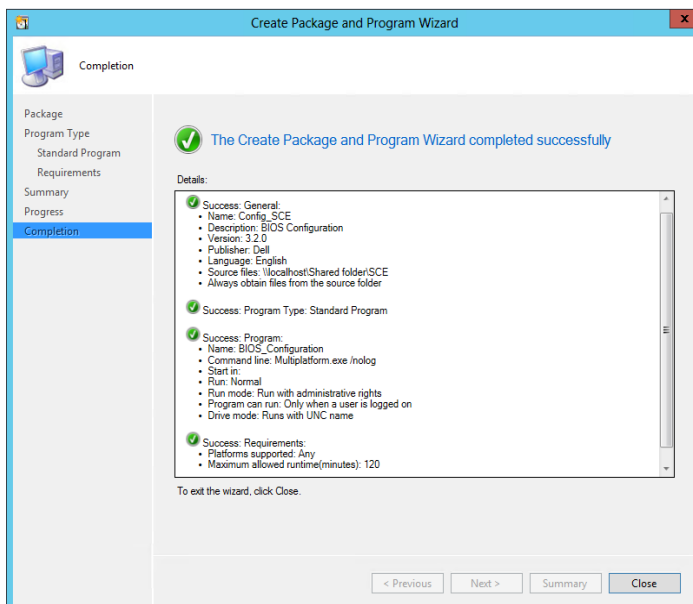
11. On the **Data Access** tab, select the **Copy the content in this package to a package share on distribution points** option.

12. On the Distribution Settings tab:

    a. Select the **Distribution Priority** as **High**.
    b. Select the **Distribute the content for this package to preferred distribution points** option.
    c. Select the **Automatically download content when packages are assigned to distribution points** option.

13. On the Reporting page, select the Use package properties for status MIF matching option.

14. On the **Security** page, specify the security rights.

15. Click **Apply** and then click **OK**.

4.1.2 Create and update distribution points

1. Right-click the created package "Config_SCE" from the packages list, and click the Distribution Point to open the **Distribution Content Wizard**.

2. On the **Content Destination** page, add the distribution points.

3. On the **Summary** page, verify the selected settings and click **Next**.
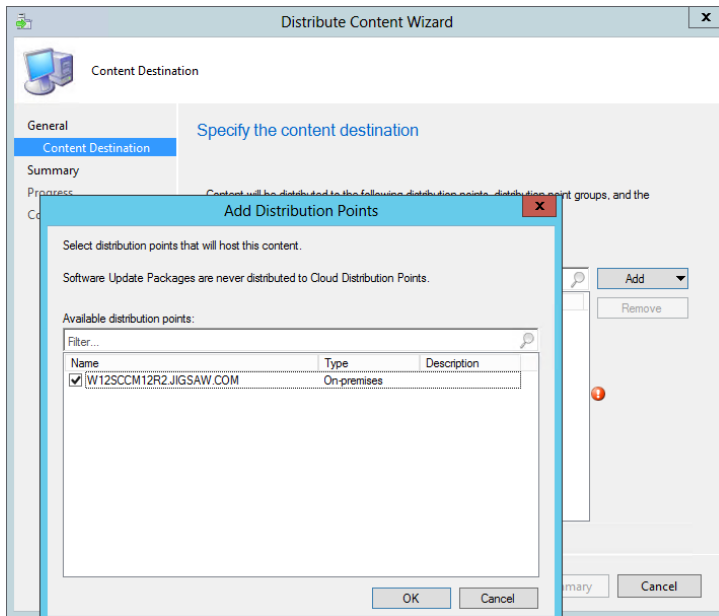
Figure 18   Adding distribution points in Distribution Content Wizard

4.1.3   Create a task sequence

1. Go to T**ask Sequence**, right-click and select **Create a task sequence** to open the **Create Task Sequence Wizard**.

2. Click **Create a new custom task sequence** and click **Next**.
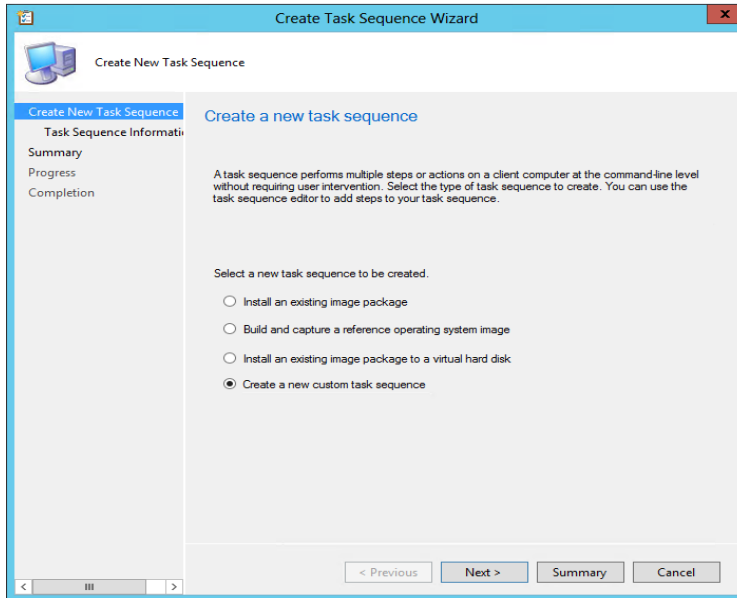
Figure 19   Creating a task sequence

3. Specify the task sequence name, for example, SCE Deployment.

4. Click **Browse** and select the boot images.

5. On the **Summary** page, verify the selected settings and click **Next**.
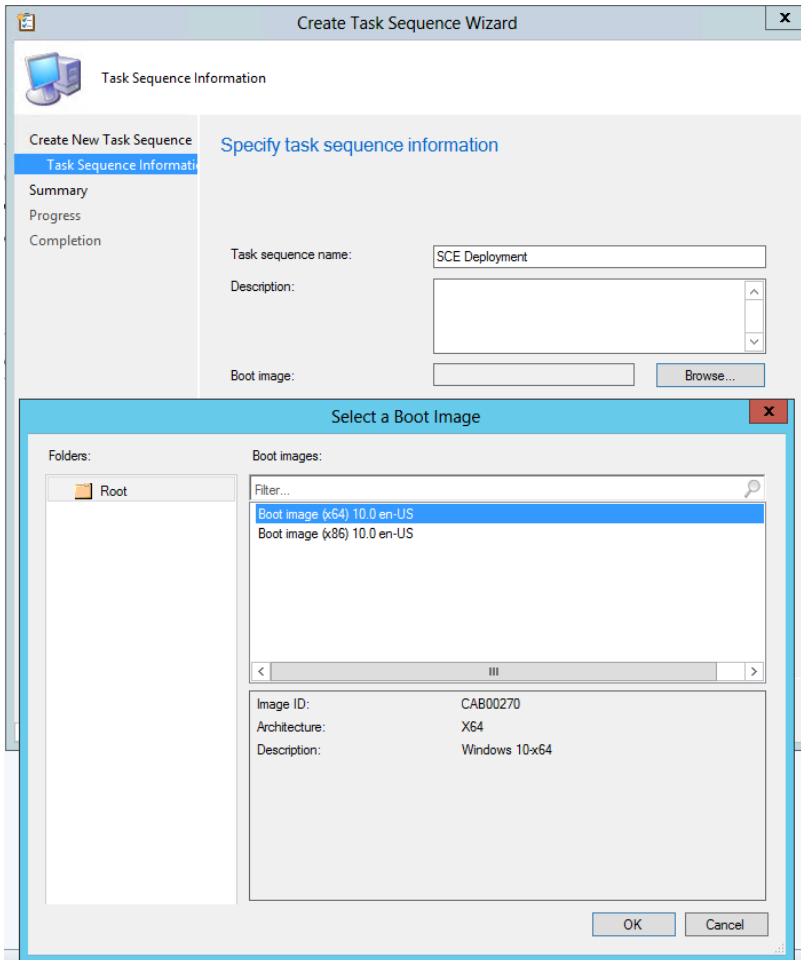
Figure 20   Selecting boot image in the Create Task Sequence Wizard

6. Right click on newly created task sequence and click **Edit**.

7. On the Task Sequence Editor, click **Add**→ **Software**→ **Install Package**.
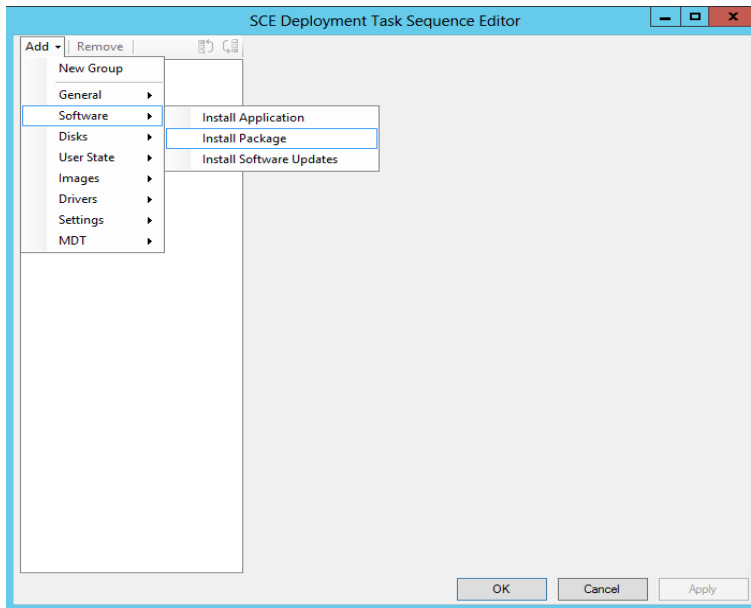
Figure 21   Editing task sequence and selecting the install package

8. Click Browse and select the package that was created in [Create a package and program](#) and click **OK**.
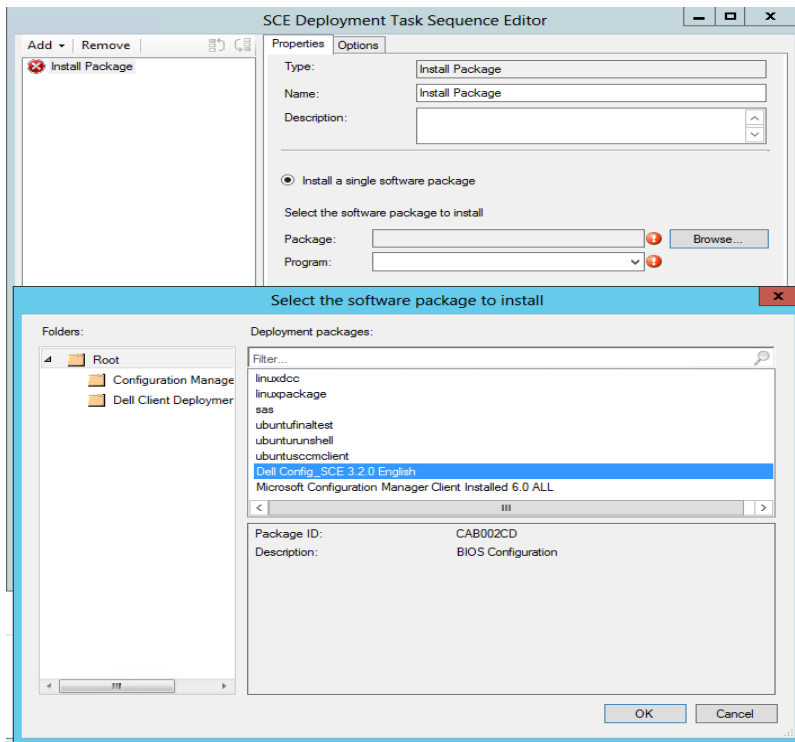
Figure 22   Selecting the package that has to be installed as part of the task sequence

4.1.4   Deploy the task sequence

1. Right click the newly created task sequence and click **Deploy** to open the **Deploy Software Wizard**.

2. Click **Browse** and select the collection for the distribution point.

Figure 23   Choosing the collection for distribution points

3. On the Deployment Settings page,

    a. Select the purpose as **Required**.
    b. From the **Make available to the following list**, select **Configuration Manager Clients, media and PXE** and click **Next**.

Figure 24   Specifying deployment details in the Deploy Software Wizard

Configuring Dell Business Client Systems using Dell Command | Configure

4. On the **Scheduling** page, specify the schedule.

Figure 25   Scheduling deployment in Deploy Software Wizard
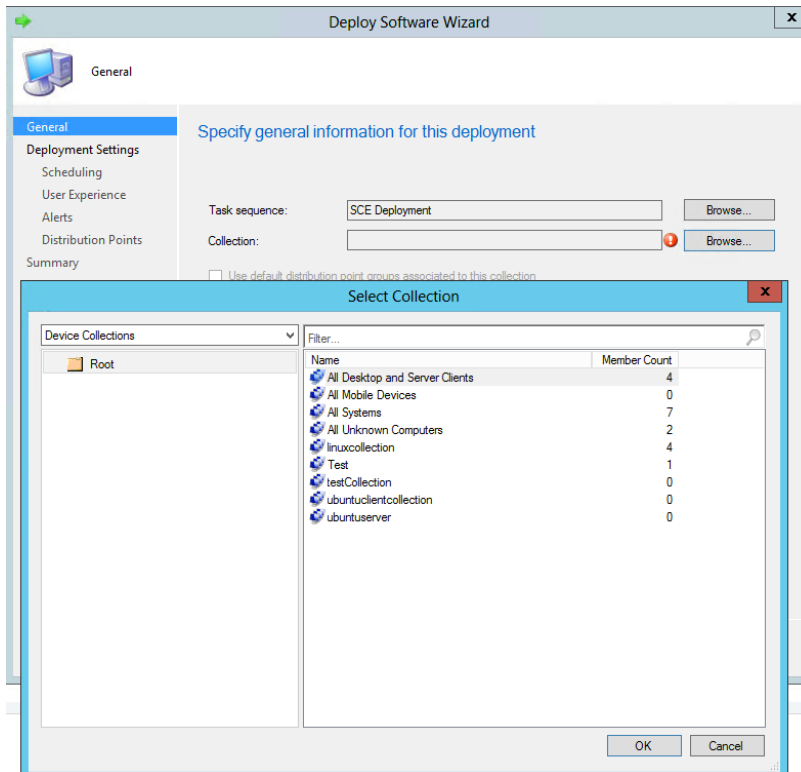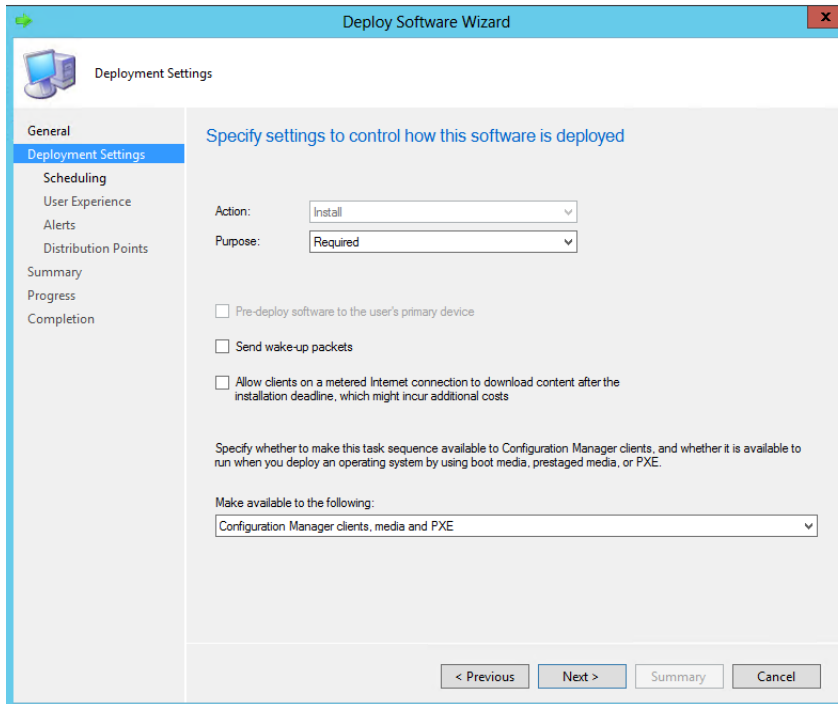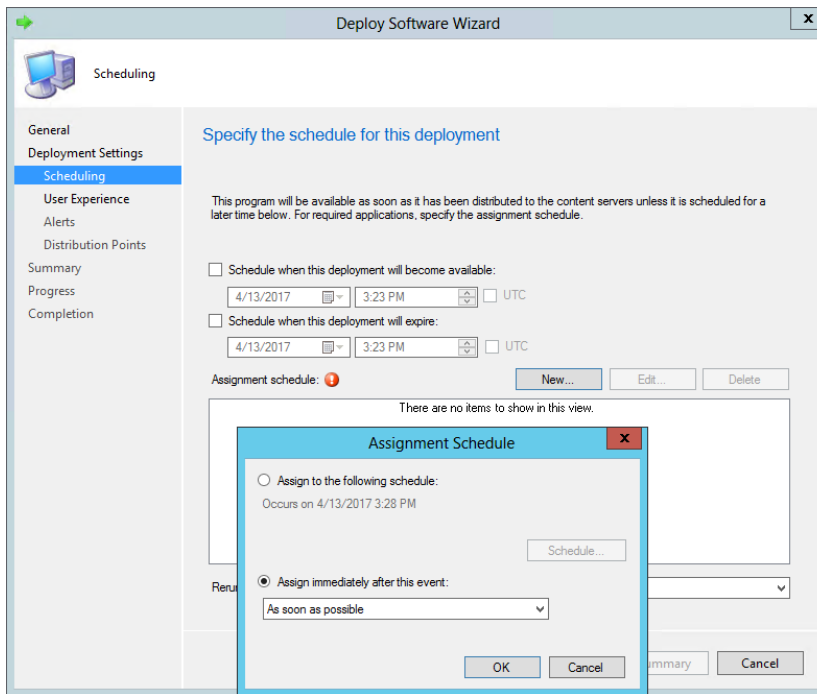
5. On the **User Experience** page, specify the user experience details.

6. On the **Alerts** page, specify the deployment alert details.

7. On the **Distribution Points** page, specify the deployment options.

8. On the **Summary** page, verify the selected settings click **Next**. You can messages that indicate successful completion of the deployment.

4.1.5   Initiate client actions using the Configuration Manager

After the task sequence is deployed, initiate client actions on the target client systems to see the advertised programs. To initiate client actions on clients:

1. Go to **Control Panel**.

2. Select **View by Large** icons.

3. Right-click **Configuration Manager** and select **Properties**.

4. On the **Configuration Manager Properties** window, click the **Actions** tab.

5. Select **Machine Policy Retrieval & Evaluation Cycle** and click **Initiate Actions**.

6. On the **Machine Policy Retrieval & Evaluation Cycle** window, click **OK**.

7. Select **Software Inventory Cycle** and click **Initiate Action**.

8. On the **Software Inventory Cycle** window, click **OK**.

9. Select **Software Update Deployment Evaluation Cycle** and click **Initiate Action**.

10. On the **Software Update Deployment Evaluation Cycle** window, click **OK**.
    The selected cycles initiate actions on the target systems and display a pop-up window.

11. Click **Run**.

4.2 Deploying the configured settings using Dell Command | Integration Suite for System Center 2012

To deploy the SCE using Dell Command | Integration Suite for System Center 2012:

1. Launch System Center Configuration Manager 2012.

2. On the Configuration Manager console, navigate to **Software Library**→ **Overview**→ **Application Management**→ **Packages**.

3. Right Click Packages, and then click Dell Command | Integration Suite→ Import Dell Command | Configure Package.

4. Click **Browse** on the **Import Wizard** and browse and select the SCE file.

5. Select your distribution point from the list available under **Select the Distribution Points to Distribute Content** to distribute the package automatically after it is created.

6. Click **OK** and follow the instructions on the screen to create a SCE package.

Note:
- If a package already exists in the Configuration Manager, a message is displayed asking if you want to recreate the package or continue. If you select No, the process does not recreate the package. Otherwise, the package is removed from Configuration Manager, and a new package is created.
- If the Invalid SCE file error message is displayed, then select a valid SCE package in step 4.

When the process is complete, a new package is created. After the package is created, the SCE software package is created under **Packages**→ **Dell Client Packages**. You can associate these packages with task sequences for pre-OS deployment or use them as software package during post-OS configuration.

4.3   Deploying the configured settings using Active Directory

1. Get the .exe (Self-contained executable - SCE).

2. Copy the SCE to a UNC share.

   a. Make sure that the share is accessible by the members of the OU you are going to assign it to.
   b. If you deploy by computers, make sure that all users or authenticated users have read permissions to the share.

3. Create Group Policy.

   a. Create a Group Policy Object to the OU you are deploying it to.
   b. Right-click the object and select **New Package**. Browse to the UNC location where the MSI is available.
   c. Use Assigned.

4. Testing

Wait until replication is complete and test on the computers that are a part of the OU that you assigned it to. Check the log generated by SC.

5 Sending feedback to Dell

To provide feedback about Dell Command | Configure, on the left pane, click **Give us your feedback**. On the feedback section, provide your feedback and satisfaction ratings and click **Submit**.

6   Additional resources

Dell Command | Configure on Dell TechCenter: You can find other related documents, white papers, blogs and videos on Dell Command | Configure at http://en.community.dell.com/techcenter/enterprise-client/w/wiki/7532.dell-command-configure