

Dell Command | Configure

Version 4.2 User's Guide



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.

Chapter 1: Introduction to Dell Command Configure 4.2.....	5
What's new in this release.....	5
Other documents you may need.....	6
Accessing documents from the Dell EMC support site.....	6
Chapter 2: Windows SMM Security Mitigations Table (WSMT) Compliance for Dell Command Configure 4.2.....	7
Chapter 3: Using graphical user interface for Dell Command Configure 4.2.....	8
Accessing Dell Command Configure within Microsoft Windows system.....	8
Accessing Dell Command Configure within Linux.....	8
Files and folders of Dell Command Configure	8
Accessing the Dell Command Configure GUI.....	9
Creating a BIOS package using the GUI.....	9
Configuration options.....	10
Configuring the setup, system, and hard disk drive passwords.....	11
Clearing setup, system and hard disk drive passwords using the existing password.....	11
Password protection screen.....	11
Configuring the autoon option.....	12
Configuring the bootorder option.....	12
Boot order screen.....	13
Adding a new device to the boot order.....	13
Boot order type.....	13
Configuring the primarybatteryconfig option.....	14
Configuring the advbatterychargecfg option.....	14
Configuring the peakshiftcfg option.....	15
Configuring the keyboardbacklightcolor option.....	15
Advanced System Management.....	16
Setting the non-critical threshold values.....	16
BIOS option validation.....	17
Validating a multiplatform package or saved package.....	17
Validating a local system package.....	17
Exporting the BIOS configuration.....	17
Exporting the SCE (.EXE) file.....	17
Exporting the configuration without setting values.....	18
Target system configuration.....	18
Applying INI or CCTK file.....	19
Applying a shell script on Linux.....	19
Applying a SCE file.....	19
Log details in Package History.....	20
Viewing a log file.....	20
Deleting log details.....	20
Providing feedback on Dell Command Configure	20


Chapter 4: Troubleshooting scenarios in Dell Command | Configure 4.2..... 21
 Contacting Dell.....22

Chapter 5: Third-party licenses..... 24

Introduction to Dell Command | Configure 4.2

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

For more information on using the CLI, see *Dell Command | Configure Command Line Interface Reference Guide* available at [Dell.com/DellClientCommandSuiteManuals](https://dell.com/DellClientCommandSuiteManuals). Dell Command | Configure supports the following Windows and Linux operating systems: Windows 7, Windows 8, Windows 8.1, and Windows 10, Windows Preinstallation Environment (Windows PE), Red Hat Enterprise Linux 6, Red Hat Enterprise Linux 7, Ubuntu Desktop 16.04, and Ubuntu core 16.


 **NOTE:** This software was rebranded as Dell Command | Configure after Dell Client Configuration Toolkit version 2.2.1.

Topics:

- [What's new in this release](#)
- [Other documents you may need](#)

What's new in this release

The new features for this release include:

- Updated attribute names and possible values
 -  **NOTE:** To view the complete list of the new and the older names.
 - Go to **Dell Knowledge Library** and search for Dell Command | Configure page using the **Search box** at the top-right corner of the page.
 - On the Dell Command | Configure page, click **Reference list for updated names of attributes and possible values**.
- Support for the following new BIOS attributes:
 - `--FingerprintReader`
 - `--FingerprintReaderSingleSignOn`
 - `--SgxLaunchControl`
 - `--PowerOnLidOpen`
 - `--AmtCap`
 - `--PowerUsageMode`
 - `--Absolute`
 - `--IgnitionSwitchEnable`
 - `--IgnitionSwitchOnDelay`
 - `--IgnitionSwitchOffDelay`
 - `--IgnitionSwitchDebounceCycle`
 - `--IntelSpdSelTech`
 - `--AmdSmartShift`
 - `--PrivacyScreen`
 - `--WWanBusMode`
 - `--WdtOsBootProtection`
 - `--AmdTSME`
 - `--FrontPowerButton`
 - `-IoModule2`
 - `--IoModule3`
 - `--IoModule4`
 - `--ExpansionBay1`

- o --ExpansionBay2
- o --ExpansionBay3
- o --DynBacklightCtrl
- o --NumlockLed
- o --GraphicSpecMode
- o --Thunderbolt
- o --VmdPcieSlot
- o --FanSpdAutoLvlonCpuMemZone
- o --FanSpdAutoLvlonPcieZone
- o --FanSpdAutoLvlonUpperPcieZone
- o --FanSpdAutoLvlonFlexBayZone

Other documents you may need

In addition to this guide, you can access the following guides available at dell.com/dellclientcommandsuite manuals.

In addition to this guide, you can access the following guides:

- The *Dell Command | Configure Installation Guide* provides information about installing Dell Command | Configure on supported client systems. The guide is available as part of the Dell Command | Configure download.
- The *Dell Command | Configure Command Line Interface Reference Guide* provides information about configuring the BIOS options on supported Dell client systems.

Additionally, the *Release Notes* file, which is available as part of the Dell Command | Configure download and at dell.com/dellclientcommandsuite manuals, provides the latest available information for the installation and operation of Dell Command | Configure .

Accessing documents from the Dell EMC support site

You can access the required documents using the following links:

- For Dell EMC Enterprise Systems Management documents — www.dell.com/esmmanuals
- For Dell EMC OpenManage documents — www.dell.com/openmanagemanuals
- For Dell EMC Remote Enterprise Systems Management documents — www.dell.com/esmmanuals
- For iDRAC and Dell Lifecycle Controller documents — www.dell.com/idracmanuals
- For Dell EMC OpenManage Connections Enterprise Systems Management documents — www.dell.com/esmmanuals
- For Dell EMC Serviceability Tools documents — www.dell.com/serviceabilitytools
- 1. Go to www.dell.com/support.
- 2. Click **Browse all products**.
- 3. From **All products** page, click **Software**, and then click the required link from the following:
 - o **Analytics**
 - o **Client Systems Management**
 - o **Enterprise Applications**
 - o **Enterprise Systems Management**
 - o **Public Sector Solutions**
 - o **Utilities**
 - o **Mainframe**
 - o **Serviceability Tools**
 - o **Virtualization Solutions**
 - o **Operating Systems**
 - o **Support**
- 4. To view a document, click the required product and then click the required version.
- Using search engines:
 - o Type the name and version of the document in the search box.

Windows SMM Security Mitigations Table (WSMT) Compliance for Dell Command | Configure 4.2

The Windows (SMM) Security Mitigations Table contains information about the ACPI table that was created for the Windows operating system, which supports Windows virtualization-based security (VBS) features. Dell Command | Configure is WSMT compatible. This is used for configuring the platform features on Dell Client Systems with WSMT enabled BIOS.

Following are the behavioral changes due to WSMT compliance:

- Configuration functionalities are available on the Dell Client Platforms which have the compatible version of BIOS supporting WMI/ACPI. For more information on the platform list, see [Supported Platforms](#).
- The following limited functionalities are available when the systems are having incompatible BIOS:
 - Dell Command | Configure GUI is used for viewing all the configuration features.
 - Dell Command | Configure generates SCE for multiplatform packages.
 - Dell Command | Configure generates the reports with the configured values.
 - Dell Command | Configure opens a saved package.

You may see the following warning messages when the systems are having incompatible BIOS.

- During installation:

This system does not have a WMI-ACPI compliant BIOS, so the limited functionality is available. Update the BIOS with a compatible version, if available. For more information, see Dell Command | Configure Release Notes.

- Using CLI:

This system does not have a WMI-ACPI compliant BIOS. Update the BIOS with a compatible version, if available.

- For local system package in GUI:

This system does not have a WMI-ACPI compatible BIOS, and the local system SCE package does not work on this system. Update the BIOS with a compatible version, if available.

- While running the SCE packages:

This system does not have a WMI-ACPI compliant BIOS. Update the BIOS with a compatible version, if available.

Using graphical user interface for Dell Command | Configure 4.2

Dell Command | Configure Graphical User Interface (Dell Command | Configure GUI) displays all BIOS configurations that are supported by Dell Command | Configure . Using the Dell Command | Configure GUI, you can do the following:

- Create BIOS configuration for client systems. For more information, see [Creating a BIOS Package using GUI](#).
- Validate the BIOS configuration against the BIOS configuration of the host system. For more information, see [BIOS option validation](#).
- Export the customized BIOS configurations as a configuration file (**INI** or **CCTK**), Self-Contained Executable (**SCE**), shell script, or report. For more information, see [Exporting the BIOS configuration](#).

NOTE: To apply the configuration using the Dell Command | Configure Command Line Interface (CLI), run the required file (**INI**, **CCTK** or **SCE**).

NOTE: This system does not have a WMI-ACPI compliant BIOS, so the limited functionality is available. Update the BIOS with a compatible version, if available. For more information, see Dell Command | Configure Release Notes.

Topics:

- [Accessing Dell Command | Configure within Microsoft Windows system](#)
- [Accessing Dell Command | Configure within Linux](#)
- [Files and folders of Dell Command | Configure](#)
- [Accessing the Dell Command | Configure GUI](#)
- [Creating a BIOS package using the GUI](#)
- [Advanced System Management](#)
- [BIOS option validation](#)
- [Exporting the BIOS configuration](#)
- [Target system configuration](#)
- [Log details in Package History](#)

Accessing Dell Command | Configure within Microsoft Windows system

Click **Start** > **All Programs** > **Dell** > **Command Configure** > **Dell Command | Configure Command Wizard**.

Click **Start** > **All Programs** > **Client** > **Dell Command | Configure Command Wizard**.

Accessing Dell Command | Configure within Linux

Browse to `/opt/dell/dcc` directory.

NOTE: On the systems running Ubuntu Core, Dell Command | Configure can be accessed from any location using the following command: `dcc.cctk`.

Files and folders of Dell Command | Configure

The following table displays the files and folders of Dell Command | Configure on systems running the Windows operating system.

Table 1. Files and folders of Dell Command | Configure

Files/Folders	Description
Dell Command Configure Command Prompt	Allows access to the Dell Command Configure command prompt.
Dell Command Configure Wizard	Allows access to the Dell Command Configure GUI.
Dell Command Configure WINPE	Allows access to the Windows PE scripts to create a bootable image. For more details, see the Dell Command Configure Installation Guide available at dell.com/dellclientcommandsuitemanuals .
User's Guide Online	Provides access to the Dell Command Configure documentation that is available at dell.com/dellclientcommandsuitemanuals .

Accessing the Dell Command | Configure GUI

 **NOTE:** Dell Command | Configure GUI is supported only on systems running the Windows operating system.

To access the GUI, click **Start > All Programs > Dell > Dell Command | Configure Wizard** or double-click **Dell Command | Configure Wizard** on the desktop.

Creating a BIOS package using the GUI

Using the Dell Command | Configure GUI, you can create a BIOS package containing valid settings to apply to target client systems.

To create a BIOS package:

1. Access the Configuration wizard.

For more information, see [Accessing Dell Command | Configure GUI](#).

The **Create Multiplatform Package** screen is displayed with the following configuration options:

- **Create Multiplatform Package** — Click to view the BIOS settings that are supported on all possible client systems. Configure, validate, and export the settings as **INI**, **CCTK**, **EXE**, **shell script**, or **HTML** file.
- **Create Local System Package** — Click to view the BIOS settings of the host system. Configure, validate, and export the settings as **INI**, **CCTK**, **EXE**, or **HTML** file. The file displays the supported and unsupported BIOS options for the system.
- **Open a Saved Package** — Click to import a saved configuration file. Configure, validate, and export the settings as **INI**, **CCTK**, **EXE**, **shell script**, or **HTML** file.

 **NOTE:** To open a saved package, click **Open a Saved Package**, browse to the file location and then click **Open**.

2. Click the required option.


All the options that are supported for configuration are displayed. For more information, see [Configuration options](#).

3. Click **Edit** or double-click the option.

4. From the **Value to Set** drop-down list, select the values of the required option. The **Apply Settings** check box of the edited options are displayed as selected.

5. Select the required export option to export the edited options.

For more information, see [Exporting the BIOS configuration](#).

 **NOTE:** If you do not want to export an option, and then clear the **Apply Settings** check box.

 **NOTE:**

If the option accepts the string as an input, and then it is not required to add an escape sequence to that option.

Related Links:

- [Configuration options](#)
- [Configuring the setup, system, and hard disk drive passwords](#)
- [Clearing setup, system and hard disk drive passwords](#)
- [Configuring auto on option](#)

- [Configuring boot order](#)
- [Configuring primary battery charging](#)
- [Configuring advanced battery charging](#)
- [Configuring peak shift battery charging](#)
- [Configuring keyboard backlight color option](#)

Configuration options

You can customize the BIOS settings and create a configuration package using the available configuration options that are described in the following table:

Table 2. Configuration options









Options	Description
View/Change	Click to view or change the selected configuration and load a new configuration. When you click View/Change to load a new configuration, the configuration screen is displayed. After you have made the preferred modifications, click Save to save the changes, or click Cancel to return to the previous configuration.  NOTE: If you try to load a new configuration without exporting the configured BIOS options, and then a screen is displayed. Click Discard Changes to discard the configured values or click Cancel to go to the same configuration.
Edit	Click to edit the loaded configuration.
Advanced view	Click to view the configuration details such as command line options, possible values that you can set for the option, current value of the option, options to apply settings, and the description of the option.  NOTE: You can view the current value of an option if you have loaded the settings of the host system.
Basic view	Click to view the configuration details such as category to which the option belongs, name of the option, possible values that you can set for the option, current value of the option, options to apply settings, and the description of the option.  NOTE: You can view the current value of an option if you have loaded the settings of the host system.
Validate	Click to validate the loaded configuration against the configuration of the host system. For more information, see BIOS option validation .
Search	Search for a text string in the table. Type the text in the search box and the first occurrence of the text in the table is selected.
Category	Click to select the required categories from the drop-down list.  NOTE: You can view this option only in Basic View .
Name	Displays the name of the options.  NOTE: You can view this option only in Basic View .
Value to set	Displays the value of the option. Double-click the row or click Edit to change the values.
Present Value	Displays the current value of the option.  NOTE: You can view this option if you have loaded the settings of the host system.
Apply settings	Select the check box to export the option. By default, all the options having a value in the Value to set column are selected.
Description	Displays a short description of the option.



Table 2. Configuration options (continued)

Options	Description
Command Line Options	Displays the command line representation of the options.  NOTE: You can view this option only in Advance View .
Status	Displays the status of the options of the loaded configuration.  NOTE: The Status column is displayed only when you validate.

Configuring the setup, system, and hard disk drive passwords


You can set or change the setup password (**setuppwd**) also known as BIOS password, the system password (**syspwd**), and the hard disk drive password (**hddpwd**).

To edit the setup, system, or hard disk drive password:


1. In the **Edit** mode, click the **Value to Set** text box of the required option.
The corresponding password screen is displayed.
 **NOTE:** To display the password as clear text, select **Show Password**. When you select **Show Password**, then the **Confirm Password** text box is not displayed. Type the password in the **Password** text box.
 **NOTE:** The setup and system passwords must contain a minimum of four characters.
2. Type the same password in the **Confirm Password** text box to confirm the password.
If both the entries match, then a green color check mark is displayed next to the **Confirm Password** text box, else a red **X** mark is displayed.
3. Click **SUBMIT**.
4. To apply the modifications, export the configuration in .ini or .exe format. See, [Exporting the BIOS configuration](#).

Clearing setup, system and hard disk drive passwords using the existing password

You can clear the configured setup, system and hard disk drive passwords using the existing password.

 **NOTE:** It is not possible to clear the password without knowing the existing password.

To clear the passwords:

1. In the **Edit** mode, click the **Value to Set** text box of the required option.
The corresponding password screen is displayed.
 **NOTE:** To display the password as clear text, select **Show Password**. If you select **Show Password**, then the **Confirm Password** text box is not displayed.
2. Enter a blank space in the **Password** text box.
3. Enter a blank space in the **Confirm Password** text box to confirm the password.
If both the entries match, the a green check mark is displayed next to the **Confirm Password** text box, else, a red **X** mark is displayed.
4. Click **SUBMIT**.
5. To apply the modifications, export the configuration in .ini or .exe format. See, [Exporting the BIOS configuration](#).

Password protection screen


While exporting a file or report with system or setup password, a password protection screen is displayed. To export the file with the password as clear text, click **Continue**. To export the file without the password, click **Mask**.

Configuring the autoon option

You can configure the days on which you want the system to automatically turn on using the **autoon** option from the **Power and Performance Management** category.

To configure the days:

1. Click the required option:
 - **Create Multiplatform Package**
 - **Create Local System Package**
 - **Open a Saved Package**


 **NOTE:** To open a saved package, click **Open a Saved Package**, browse to the file location, and then click **Open**.
2. Click **Edit**, or double-click the option.
3. In the **autoon** option row, click **View/Change** in the **Value to set** column.
The auto on screen is displayed.
4. Select one of the following options from **Auto On** screen:
 - **Disabled** — To turn off the feature.
 - **Weekdays** — To turn on the target system automatically only on weekdays.
 - **Every Day** — To turn on the target system automatically everyday.
 - **Selected Days** — To choose the days on which the target system has to turn on automatically.
5. Click **OK**.
6. To apply the modifications, export the configuration in, ini or .exe format. See, [Exporting the BIOS configuration](#).


Configuring the bootorder option

You can configure the boot order of a client system using the **bootorder** option from the **Boot Management** category. You can add, remove, enable, disable, or change the boot order of the legacy and Unified Extensible Firmware Interface (UEFI) boot items.

To configure the boot order:

1. Click the required option:
 - **Create Multiplatform Package**
 - **Create Local System Package**
 - **Open a Saved Package**

 **NOTE:** To open a saved package, click **Open a Saved Package**, browse to the file location, and then click **Open**.
2. Click **Edit**, or double-click the option.
3. In the **bootorder** option row, click **View/Change** in the **Value to set** column.
The boot order screen is displayed with the current boot order type and boot order options. For more information, see [Configure boot order](#).
 - To create a multiplatform package, you can add devices.
 - To create a local system package and to open a saved package, you can add devices and edit the existing boot order, if present.

 **NOTE:** Use the arrow buttons at the bottom of the **Boot Order** screen to change the boot order of the devices.
4. Click **OK** to save the configuration, or click **CLOSE** to discard the changes and close the **Boot Order** screen.
5. To apply the modifications, export the configuration in, ini or .exe format. See, [Exporting the BIOS configuration](#).



Related Links:

- [Adding a new device to the boot order](#)
- [Boot order type](#)

Boot order screen

The following table displays the available options on the **Dell Command | Configure - Boot Order** screen.

Table 3. Options on the boot order screen

Options	Description
Active Boot List	You can configure or modify the Active Boot List for UEFI or Legacy based on the requirement. If the active boot list is ON , and then the system boots with UEFI or Legacy based on the boot order type.  NOTE: In Local System Package , you cannot modify Active Boot List if the system supports only UEFI.
Device Type	Displays the type of device.
Device Instance	Displays a unique number to identify the device on the system.
Shortform	Displays the short form of the device name. If the system has many devices of the same device type, and then the short form of the device is displayed with a .<number> notation. For example, if the system has an internal hard drive, eSATA HDD, and eSATA Dock HDD, and then the short forms are displayed as hdd.1, hdd.2, and hdd.3 respectively.
Description	Displays a short description for the device.
Status	Displays if the device is turned on or off.
Delete	Removes the device from the boot order. Click X to remove a device.  NOTE: You can view this option if the boot order screen is in Edit mode.

Adding a new device to the boot order

To add a new device to the boot order:

1. Click **Add Device** on the **Boot Order** screen.
2. Select the device from the **Device Type** drop-down list.
The **Shortform**, **Description**, and **Status** fields are automatically populated. By default, the **Status** of the device is **On**.
3. Select an instance for the device from the **Device Instance** drop-down list.
4. Click **OK**.

 **NOTE:** If you select the same **Device Type** and **Device Instance** in the **Boot Order Type** for UEFI or Legacy, and then the following warning message "**Remove the duplicate entry from the input list.**" is displayed.

Boot order type

The boot order type displays the type of the loaded configuration. The two types of boot order are Legacy and UEFI. If the host system file is loaded, and then it displays the currently active boot order type. If a saved file is loaded, and then it displays the boot order type that is saved in the file.

The common scenarios for boot order type are:


- If boot order type is not specified in the file and if any UEFI devices are present on the system, and then the system displays the boot order type as UEFI.
- If the boot order type is not specified in the file and if any legacy devices (other than **hdd**) are present on the system, and then the system displays the boot order type as Legacy.
- If the boot order type is not specified and the loaded configuration file has only **hdd** items, and then the system prompts the user to select the boot order type.
- If the boot order type is not specified for a legacy system and if both UEFI and legacy devices are present, and then the system displays a warning message and removes the legacy or UEFI devices depending on the order of occurrence of the device.


Configuring the primarybatterycfg option

You can configure the primary battery charging mode using the **primarybatterycfg** option from the **Power and Performance Management** category.

To configure the primary battery charging option:

1. Click the required option:
 - **Create Multiplatform Package**
 - **Create Local System Package**
 - **Open a Saved Package**

 **NOTE:** To open a saved package click **Open a Saved Package**, browse to the file location and then click **Open**.
2. Click **Edit**, or double-click the option.
3. In the **primarybatterycfg** option row, click **View/Change** in the **Value to set** column. The **Primary Battery** screen is displayed.
4. Select the mode to charge the battery in the **Primary Battery** screen.
 - **Standard Charge** — Charges the battery over a longer period of time.
 - **Express Charge** — Charges the battery using the express charging algorithm, Dell's fast charging technology.
 - **AC Use** — Charges the battery while plugged-in.
 - **Auto Charge** — Charges the battery based on a periodic evaluation of battery usage to deliver the best balance capacity.
 - **Custom Charge** — The battery charging starts and stops based on user settings.


 **NOTE:** If you have selected **Custom Charge**, then specify the **Start Charging (50 – 95 %)** and **Stop Charging (55 – 100 %)** values.
5. Click **OK**.
6. To apply the modifications, export the configuration in .ini or .exe format. See, [Exporting the BIOS configuration](#).


Configuring the advbatterychargecfg option


You can configure the advanced battery charging mode using the **advbatterychargecfg** option from the **Power and Performance Management** category. Advanced Battery charge mode uses standard charging algorithm and other methods during non-working hours to maximize battery health. During working hours, ExpressCharge is used to charge the batteries faster. You can configure the days and the work period during which the battery has to be charged. To enable advanced battery charging, provide the day, start time, and the duration of charging (optimal usage duration).

To configure the advanced battery charging option:

1. Click the required option:
 - **Create Multiplatform Package**
 - **Create Local System Package**
 - **Open a Saved Package**

 **NOTE:** To open a saved package, click **Open a Saved Package**, browse to the file location, and then click **Open**.
2. Click **Edit** or double-click the option.
3. In the **advbatterychargecfg** option row, click **View/Change** in the **Value to set** column. The **Advanced Battery Settings** screen is displayed.
4. Enable Advanced Battery Charge.

 **NOTE:** If advanced battery charge mode is enabled in the **BIOS Setup** screen, the **Enable Advanced Battery Charge** is selected by default.
5. Select the day of the week.

 **NOTE:** To apply the same settings to all the days select the **Apply these settings to other days** option.
6. In the **Beginning of Day** drop-down list, select the time at which the advanced charging has to start.
7. In the **Work Period** drop-down list, select the duration of advanced charging.


8. Click **OK**.
9. To apply the modifications, export the configuration in .ini or .exe format. See, [Exporting the BIOS configuration](#).


Configuring the peakshiftcfg option


You can configure the Peak Shift battery charging mode using the **peakshiftcfg** option from the **Power and Performance Management** category. Using Peak Shift configuration, you can minimize the consumption of AC power during the peak power usage period of the day. You can set a start and end time for the Peak Shift period. During this period, the system runs on battery if the battery charge is above the set battery threshold value. After the Peak Shift period, the system runs on AC power without charging the battery. The system functions normally by using AC power and recharging the battery at the specified Charge Start Time.

To configure the Peak Shift Battery charging option:


1. Click the required option:
 - **Create Multiplatform Package**
 - **Create Local System Package**
 - **Open a Saved Package**

 **NOTE:** To open a saved package, click **Open a Saved Package**, browse to the file location and click **Open**.
2. Click **Edit**, or double-click the option.
3. In the **peakshiftcfg** option row, click **View/Change** in the **Value to set** column.
The **Peak Shift** screen is displayed.
4. Enable the peak shift settings option.
5. Select the day of the week.

 **NOTE:** To apply the same settings to all the days select the **Apply these settings to other days** option.
6. From the **Operate only on battery** drop-down list, select the time from when you want the system to operate only on battery.
7. From the **Operate only on AC** drop-down list, select the time from when you want the system to operate only on AC.
8. From the **Resume normal power/charge** drop-down list, select the time from when the system has to start using the AC power and recharging the battery.

 **NOTE:** The system adjusts the value in the drop-down list to meet the following criteria:

 - **Operate only on battery** time should be less than or equal to the time specified for **Operate only on AC**.
 - **Operate only on battery** time and **Operate only on AC** time should be less than or greater than the **Resume normal power/charge** time.
9. Click **OK**.

 **NOTE:** Select **Apply these settings to other days** check box to apply the same settings for all days of the week.
10. To apply the modifications, export the configuration in .ini or .exe format. See, [Exporting the BIOS configuration](#).

Configuring the keyboardbacklightcolor option

You can configure the keyboard backlight color for the Dell Latitude rugged Extreme systems using the **keyboardbacklightcolor** option from the **System Configuration** category. You can enable supported colors, set active color, and configure customcolor1 and customcolor2.

To configure the keyboard backlight color:

1. Click the required option:
 - **Create Multiplatform Package**
 - **Create Local System Package**
 - **Open a Saved Package**

 **NOTE:** To open a saved package click **Open a Saved Package**, browse to the file location and then click **Open**.

2. Click **Edit** or double-click the option.
3. In the **keyboardbacklightcolor** option row, click **View/Change** in the **Value to set** column. The **Keyboard Backlight Color** screen is displayed.
4. Select the colors that you want to enable for the keyboard backlight from the list **Enable**.

NOTE:

- You can select and enable multiple colors at a time.
- If you select **None**, no color will be enabled. You cannot select other colors if you have selected the option **None**.

5. Select the color that you want to set as an active color for the keyboard backlight from the list **Active**.

NOTE: You can select only one active color for your keyboard backlight at a time.

6. Configure the Red, Green, and Blue (RGB) values if you have selected **CustomColor1** or **CustomColor2**. To configure the RGB values for customcolor1 or customcolor2,
 - a. Click **CHANGE**.
 - b. Choose the color from the color canvas.
 - c. Click **Select**.
7. Click **OK**.
8. To apply the modifications, export the configuration in .ini or .exe format. See, [Exporting the BIOS configuration](#).

Advanced System Management

Advanced System Management (ASM) is a feature supported on Dell Precision R7610, T5810, T7810, T7910 and later workstations. The feature displays information about voltage, temperature, current, cooling device, and power supply probes. The feature also allows you to set the non-critical upper threshold values of voltage, current, cooling, and temperature probes. Contact the support team for information on system models with this feature.

Setting the non-critical threshold values

NOTE: You can set the critical and non-critical upper threshold values only for voltage, current, cooling and temperature probes.

To set the non-critical threshold values for the probes:

1. Click the required option:
 - **Create Multiplatform Package**
 - **Create Local System Package**
 - **Open a Saved Package**

NOTE: To open a saved package, click **Open a Saved Package**, browse to the file location, and then click **Open**.
2. Click **Edit**, or double-click the option.
3. In the **advsm** option row, click **View/Change** in the **Value to set** column. The **Advanced System Management** screen is displayed.

NOTE:

 - If you are setting the non-critical threshold values for **Create Local System Package**, the columns displayed are: **Description**, **Type**, **Index**, **Location**, **Minimum**, **Maximum**, **Critical Upper Threshold**, **NonCritical Upper Threshold**, and **Delete**. The system displays the details of the available probes. You cannot edit the **Type** and **Index** fields of the listed probes.
 - If you are setting the non-critical threshold values for **Create Multiplatform System Package**, the columns displayed are: **Type**, **Index**, **NonCritical Upper Threshold** and **Delete**. The system does not display any values for the probes. You have to set the values for **Index**, and **NonCritical Upper Threshold** fields for each of the selected probes. Set the value of **Index** depending on the number of instances of the probes running on the system. The value of **NonCritical Upper Threshold** must be within the critical upper threshold range.
4. To set the non-critical threshold values for a new probe, click **Add Probe**, and then type the values in the required fields.

5. To set the non-critical threshold value for the listed probes, provide the value in the respective column.
6. To delete a probe, click **X** mark.
7. Click **OK**.
8. To apply the modifications, export the configuration in .ini or .exe format. See, [Exporting the BIOS configuration](#).

BIOS option validation

You can validate the options of a BIOS package against the configuration of the host system using the **Validate** option. You can validate the settings of a multiplatform package, local system package, or a saved package. You can validate all the options except the **bootorder**, **syspwd**, and **setuppwd** options.

Validating a multiplatform package or saved package

To validate the options of a multiplatform or saved package:

On the **Create Multiplatform Package** screen, click **Validate**.


- If the option and the configured value are supported on the host system, then a green check mark is displayed in the **Status** column.
- If the option is supported and if the configured value is not supported on the host system, then a red **X** mark is displayed in the **Status** column.
- All unsupported options are greyed out and the **Status** column remains blank.
- All the supported options on the host system are highlighted and the **Status** column remains blank with the **Value to Set** field as **Not Specified**.

Validating a local system package

To validate the options of a local system package:

On the **Create Local System Package** screen, click **Validate**.

- All the options that are applicable on the host system are highlighted, and a green check mark is displayed in the **Status** column.
- All unsupported options are greyed out, and the **Status** column remains blank.

 **NOTE:** You can configure the supported options on the host system even after you validate the local system package.

Exporting the BIOS configuration

You can export a customized configuration to apply the same settings on a target client system. You can export both supported and unsupported options. You can export certain options (**asset** and **propowntag**) without specifying any values.

To export an option:

Select the **Apply Settings** check box of that option, and then export in any of the following formats:

- **Self-Contained Executable** — Click **EXPORT.EXE** to export the configuration settings as a SCE (EXE file). For more information, see [Setup, system, or hard disk drive passwords screen](#).
- **Report** — Click **Report** to export the configuration settings as a read-only HTML file.
- **Configuration file** — Click **EXPORT CONFIG** to export the configuration settings as a CCTK or INI file.

 **NOTE:** To display and configure the options on the GUI, double-click the CCTK file.

- **Shell script** — The shell script is generated at the location where the SCE file is exported, and contains the same configuration as that of the SCE file. The shell script is used to configure a system running the Linux operating system.

Exporting the SCE (.EXE) file

Perform the following steps to export the BIOS configuration:

1. Click the **EXPORT.EXE** option to export the BIOS configuration as an .exe file.
2. The **Setup, System or Hard Disk Drive Password** screen is displayed prompting you to type a password.
3. Depending on the type of password set on the target system, determine which password to provide based on the table below:

Settings you want to configure	Passwords set on the target system						
	Setup Password	System Password	Hard Disk Drive Password	Setup and System Passwords	Setup and Hard Disk Drive Passwords	System and Hard Disk Drive Passwords	System, Setup and Hard Disk Drive Passwords
BIOS Tokens/features	Setup Password	System Password	Not Required	Setup Password	Setup Password	System Password	Setup Password
Setup Password	Setup Password	System Password	Not Required	Setup Password	Setup Password	System Password	Setup Password
System Password	Setup Password	System Password	Not Required	Setup and System Passwords	Setup Password	System Password	Setup and System passwords
Hard Disk Drive Password	Setup Password	System Password	Hard Disk Drive Password	Setup Password	Setup and Hard Disk Drive Passwords	System and Hard Disk Drive Passwords	Setup and Hard Disk Drive Passwords

Figure 1. Password Reference Table

For example,

- If the setup password is set in the system, and you want to configure BIOS tokens/features, you need to provide setup password.
 - If the setup and system passwords are set in the system, and you want to configure BIOS tokens/features, you need to provide setup password.
 - If the setup and system passwords are set in the system, and if you want to configure BIOS tokens/features as well as change system password, you need to provide both system and setup passwords.
 - If the setup, system and hard disk drive passwords are set in the system, and if you want to configure BIOS tokens/features as well as change hard disk drive password, you need to provide both setup and hard disk drive passwords.
4. Provide appropriate password(s) in order to be able to configure the desired settings.
 - To provide a setup password, click **Setup Password**, then select the **Use the password information below** option, and then type the setup password.
 - To provide a system password, click **System Password**, then select the **Use the password information below** option and type the system password.
 - To provide a hard disk drive password, click **Hard Disk Drive Password**, then select the **Use the password information below** option and type the hard disk drive password.
 5. If the target system does not have a setup, system, or hard disk drive password, then select **No password is required**.
 6. The following warning message **By exporting this BIOS configuration, your system, setup and hdd passwords will no longer be secure. If you would like to proceed with your passwords displayed in clear text, select Continue. If you want to hide your passwords, select Mask** is displayed. Click MASK to protect your password, else click Continue.
 7. Click **OK**.

 **NOTE:** SCE can be generated on non WMI-ACPI system using multi-system package.

Exporting the configuration without setting values

To export **asset** and **propowntag** without specifying changes to values:

Select the **Apply Settings** check box of the corresponding option and export.

Target system configuration

You can apply the exported INI, CCTK, SCE, and shell script files to configure the target client systems.

Related Links:

- [Applying a INI or CCTK file](#)
- [Applying a shell script on Linux systems](#)
- [Applying a SCE file](#)

Applying INI or CCTK file

The prerequisites for applying INI file or CCTK file are as follows:

- Administrator privileges
- Dell Command | Configure installed on the client system

To apply INI file or CCTK file, run `cctk -i <filename>`.

NOTE: For systems running Ubuntu Core operating system, copy the file at `var/snap/dcc/current` and run, `dcc.cctk -i /var/snap/dcc/current/<filename>.ini`

Applying a shell script on Linux

1. Copy the script to a system running the Linux operation system.
2. Run `dos2unix` on the system.
3. Run the script as: `sh <filename.sh>`

Applying a SCE file

NOTE: You must have Administrator privileges.

To apply SCE on a target system:

Double-click the SCE, or from the command prompt, browse to the directory where SCE is located and type the name of the SCE file.

For example, `C:\Users\SystemName\Documents>"<filename>"`.

NOTE: You cannot run SCE on Windows PE systems. For more information on applying SCE on target systems running the Windows PE operating systems, see [Troubleshooting](#).

NOTE: The generated SCE file does not work on non WMI-ACPI system.

SCE details

Some of the common scenarios in which you might use SCE are:

- When you apply SCE on a target system, it performs a silent installation for the BIOS settings on the target system. When the installation is complete, SCE generates a log file with the SCE name at the same location. The log file contains all the applied options and the status of the SCE file.
 - NOTE:** To generate the log file in the required location, specify the location of the log file. For example, `SCE.exe /l="<folder_path>\log.txt"`.
- When you apply SCE on a target system from a read-only location, provide the `/nolog` option to prevent generation of the log file. For example, `SCE.exe /nolog`. The `/nolog` option helps the SCE to run successfully and informs that a log file is not created as SCE is in a read-only location.
- If you run SCE from a read-only location without providing `/nolog`, then SCE fails to run.
- To apply SCE on Windows PE, extract SCE from a system running the Window operating system using the `/e` option. For example, `SCE.exe/e=<folder_path_to extract SCE>`.
- If you have configured a setup or system password on the target system, and while exporting SCE, if you have not provided the same password in the **Setup, System, or Hard Disk Drive Password** screen, then you cannot double-click and apply SCE on the target system. However, while applying SCE from the command prompt, you can provide the setup or system password of the target system.

NOTE: Example of providing setup password: `C:\Windows\Command Configure\SCE>"<filename>" --valsetuppwd= <password string>`

NOTE: Example of providing system password: `C:\Windows\Command Configure\SCE>"<filename>" --valsypwd= <password string>`

Related Links:

- [Exporting the BIOS configuration](#)
- [Exporting the configuration without setting values](#)

Log details in Package History

You can view the details of the BIOS configuration exports in the **Package History** screen. The **Package History** displays the details such as time, date, type of export, and the location to which the file is exported.

Related Links:

- [Viewing a log file](#)
- [Deleting log details](#)

Viewing a log file

Click **Package History**, on the **Dell Command | Configure** page.

Deleting log details

On the **Package History** page, click the **Clear Log**.

Providing feedback on Dell Command | Configure

You can provide feedback on the Dell Command | Configure using the link on Dell Command | Configure GUI.

1. Click the **Give us your feedback** link to launch the online survey page.
2. Provide your feedback and satisfactory ratings.
3. **Submit** to share it with Dell.

Troubleshooting scenarios in Dell Command | Configure 4.2

Running Dell Command | Configure displays error messages

If you get the error message, `Required BIOS interface not found or HAPI load error`, and then uninstall and reinstall Hardware Application Programming Interface (HAPI).

Running Dell Command | Configure on 32-bit and 64-bit Windows supported system


Ensure that you are running `cctk.exe` based on the architecture of the system. If you are running Dell Command | Configure on a 32-bit supported system, browse to the `x86` directory in the installation directory, and run Dell Command | Configure commands. If you are running `cctk.exe` on a 64-bit supported system, and then browse to the `x86_64` directory and run Dell Command | Configure commands.

If you are running Dell Command | Configure for 32-bit supported systems on a 64-bit supported system, and then an error message is displayed: `HAPI Driver Load Error`.

If you are running Dell Command | Configure for 64-bit supported systems on a 32-bit supported system, and then an error message is displayed: `Not a valid Win32 application`.

Running Dell Command | Configure on Windows 7, Windows 8, Windows 8.1, or Windows 10 when user account control is enabled

To run Dell Command | Configure on systems running Windows 7 or later with User Account Control (UAC) enabled, right-click the **Dell Command | Configure Command Prompt** and select **Run as administrator**.

 **NOTE:** On a Windows 7, Windows 8, or Windows 8.1, if UAC is enabled, and then a user with Administrator privileges cannot install or uninstall Dell Command | Configure in silent mode.

Running Dell Command | Configure on Linux

When you install Dell Command | Configure on a system running the Linux operating system, the entry, `modprobe dcdbas`, is added in the `/etc/rc.modules` file. After uninstalling Dell Command | Configure, this entry is not removed.

TPM activation

Trusted Platform Module (TPM) is an industry standard cryptographic module that provides attestation, integrity metrics and reporting, and a secure key hierarchy. Client systems use TPM to verify if the state of the system has changed between two boot cycles.

To activate and check the TPM activation:

1. If not set, set the BIOS password on the system. Type:

```
cctk --setuppwd=<new-BIOS-password>
```

2. If not enabled, enable TPM. by typing the following command:

```
cctk --tpm=on
```

3. Reboot the system.
4. To activate TPM, type the following command:

```
cctk --tpmactivation=activate --valsetuppwd=<Setuppwd>
```

5. Reboot the system without interruption till the operating system loads.
6. To check the status of TPM. type:

```
cctk --tpmactivation
```


The status is displayed as **activate**.

SCE failing to run on Windows Preinstallation Environment (Windows PE)

The SCE generated using the Export option on the GUI is failing to run on Windows PE. To configure BIOS using SCE, on the target system running the Windows PE operating systems:

1. On systems running the Windows operating systems, extract the contents of SCE to a folder using the following command:

```
Sce.exe /e=<folder_path_to_extract_contents>
```

 **NOTE:** For more information on using the command, use /h switch.

2. Copy the extracted contents to an accessible location on the system.
3. From the location of the extracted contents, run the following command to apply the configuration:

```
applyconfig.bat /logfile <A valid and existing folder with write permission>\<A valid file name>
```

For example, applyconfig.bat /logfile C:\log.txt

To apply the configuration on a system, where setup or system password has been set, run the following command:
applyconfig.bat /logfile <A valid and existing folder with write permission>\<A valid file name> "--valsetuppwd= <setup password>"


Example 1: applyconfig.bat /logfile C:\log.txt "--valsetuppwd=password"

Example 2: applyconfig.bat /logfile C:\log.txt "--valsypwd=password"

Topics:

- [Contacting Dell](#)

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:

1. Go to **Dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.

4. Select the appropriate service or support link based on your need.

Third-party licenses

The table provides the details about third-party licenses.


Table 4. Third-party licenses

SI No	Component name	Version	License type
1	mini-XML(mxml1 library)	2.6	GNU Library General Public License version 2 (LGPL2)
2	miniunz.exe	no version	zlib license
3	zlibwapi.dll	1.2.3	zlib license
4	zip.exe	no version	zlib license
5	PiePiece.cs	0	Copyright (c) 2014 AlphaSierraPapa for the SharpDevelop Team
6	getoptl.c	1.15	Copyright (c) 2000 The NetBSD Foundation, Inc.

Generic disclaimer

>> Powershell PSReadline module saves every console command you enter to a text file. So, its strongly recommended to use "Get-Credential" comandlet to handle password securely.

1. \$cred = Get-Credential

 **NOTE:** A pop up will come up enter the username and password, example AdminPWD , Dell_123\$

2. \$BSTR = [System.Runtime.InteropServices.Marshal]::SecureStringToBSTR(\$cred.Password)

3. \$plainpwd=[System.Runtime.InteropServices.Marshal]::PtrToStringAuto(\$BSTR)

4. .\cctk.exe -setuppwd=\$plainpwd

License Details:

Mini-XML

The Mini-XML library and included programs are provided under the terms of the GNU Library General Public License version 2 (LGPL2) with the following exceptions: 1. Static linking of applications to the Mini-XML library does not constitute a derivative work and does not require the author to provide source code for the application, use the shared Mini-XML libraries, or link their applications against a user-supplied version of Mini-XML. If you link the application to a modified version of Mini-XML, then the changes to Mini-XML must be provided under the terms of the LGPL2 in sections 1, 2, and 4. 2. You do not have to provide a copy of the Mini-XML license with programs that are linked to the Mini-XML library, nor do you have to identify the Mini-XML license in your program or documentation as required by section 6 of the LGPL2. GNU LIBRARY GENERAL PUBLIC LICENSE Version 2, June 1991 Copyright (C) 1991 Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed. [This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.] Preamble The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General

Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This license, the Library General Public License, applies to some specially designated Free Software Foundation software, and to any other libraries whose authors decide to use it. You can use it for your libraries, too. When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things. To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library, or if you modify it. For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link a program with the library, you must provide complete object files to the recipients so that they can relink them with the library, after making changes to the library and recompiling it. And you must show them these terms so they know their rights. Our method of protecting your rights has two steps: (1) copyright the library, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the library. Also, for each distributor's protection, we want to make certain that everyone understands that there is no warranty for this free library. If the library is modified by someone else and passed on, we want its recipients to know that what they have is not the original version, so that any problems introduced by others will not reflect on the original authors' reputations. Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that companies distributing free software will individually obtain patent licenses, thus in effect transforming the program into proprietary software. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all. Most GNU software, including some libraries, is covered by the ordinary GNU General Public License, which was designed for utility programs. This license, the GNU Library General Public License, applies to certain designated libraries. This license is quite different from the ordinary one; be sure to read it in full, and don't assume that anything in it is the same as in the ordinary license. The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such. Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better. However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries. The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library. Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one. GNU LIBRARY GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION 0. This License Agreement applies to any software library which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Library General Public License (also called "this License"). Each licensee is addressed as "you". A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables. The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".) "Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library. Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does. 1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library. You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee. 2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions: a) The modified work must itself be a software library. b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change. c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License. d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful. (For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the

application does not supply it, the square root function must still compute square roots.) These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it. Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library. In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License. 3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices. Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy. This option is useful when you wish to copy part of the code of the Library into a program that is not a library. 4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange. If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code. 5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License. However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables. When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law. If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.) Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself. 6. As an exception to the Sections above, you may also compile or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications. You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things: a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.) b) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution. c) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place. d) Verify that the user has already received a copy of these materials or that you have already sent this user a copy. For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable. It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute. 7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things: a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above. b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work. 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses

terminated so long as such parties remain in full compliance. 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it. 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License. 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library. If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances. It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice. This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License. 12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License. 13. The Free Software Foundation may publish revised and/or new versions of the Library General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns. Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation. 14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally. NO WARRANTY 15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION. 16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. END OF TERMS AND CONDITIONS Appendix: How to Apply These Terms to Your New Libraries If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License). To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found. <one line to give the library's name and a brief idea of what it does.> Copyright (C) <year> <name of author> This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version. This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Library General Public License for more details. You should have received a copy of the GNU Library General Public License along with this library; if not, write to the Free Software Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA. Also add information on how to contact you by electronic and paper mail. You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names: Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker. < signature of Ty Coon>, 1 April 1990 Ty Coon, President of Vice That's all there is to it!>

Miniunz

Copyright (c) <"year"> <"copyright holders">

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software
3. This notice may not be removed or altered from any source distribution.

Zlibwapi

Copyright (c) <"year"> <"copyright holders">

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software
3. This notice may not be removed or altered from any source distribution.

Zip

Copyright (c) <"year"> <"copyright holders">

This software is provided 'as-is', without any express or implied warranty. In no event will the authors be held liable for any damages arising from the use of this software. Permission is granted to anyone to use this software for any purpose, including commercial applications, and to alter it and redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not claim that you wrote the original software. If you use this software in a product, an acknowledgment in the product documentation would be appreciated but is not required
2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software
3. This notice may not be removed or altered from any source distribution.

PiePiece

// Copyright (c) 2014 AlphaSierraPapa for the SharpDevelop Team // // Permission is hereby granted, free of charge, to any person obtaining a copy of this // software and associated documentation files (the "Software"), to deal in the Software // without restriction, including without limitation the rights to use, copy, modify, merge, // publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons // to whom the Software is furnished to do so, subject to the following conditions: // // The above copyright notice and this permission notice shall be included in all copies or // substantial portions of the Software. // // THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, // INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR // PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE // FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR // OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER // DEALINGS IN THE SOFTWARE..

getoptl

/*- * Copyright (c) 2000 The NetBSD Foundation, Inc. * All rights reserved. * * This code is derived from software contributed to The NetBSD Foundation * by Dieter Baron and Thomas Klausner. * * Redistribution and use in source and binary forms, with or without * modification, are permitted provided that the following conditions * are met: * 1. Redistributions of source code must retain the above copyright * notice, this list of conditions and the following disclaimer. * 2. Redistributions in binary form must reproduce the above copyright * notice, this list of conditions and the following disclaimer in the * documentation and/or

other materials provided with the distribution. * 3. All advertising materials mentioning features or use of this software * must display the following acknowledgement: * This product includes software developed by the NetBSD * Foundation, Inc. and its contributors. * 4. Neither the name of The NetBSD Foundation nor the names of its * contributors may be used to endorse or promote products derived * from this software without specific prior written permission. * * THIS SOFTWARE IS PROVIDED BY THE NETBSD FOUNDATION, INC. AND CONTRIBUTORS * ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED * TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR * PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE FOUNDATION OR CONTRIBUTORS * BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR * CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF * SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS * INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN * CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE * POSSIBILITY OF SUCH DAMAGE. */