Dell Encryption Personal

Installation Guide v11.9

January 2024
Rev. A01

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.

Contents

1

Overview

This guide assumes that Advanced Authentication is installed with Encryption Personal.

Encryption Personal

The purpose of Encryption Personal is to protect data on your computer, even if the computer is lost or stolen.

To ensure the security of your confidential data, Encryption Personal encrypts data on your Windows computer. You can always access the data when logged into the computer, but unauthorized users do not have access to this protected data. Data always remains encrypted on the drive, but because encryption is transparent, there is no need to change the way you work with applications and data.

Normally, the application decrypts data as you work with it. Occasionally, an application may try to access a file at the same moment that the application is encrypting or decrypting it. If this happens, after a second or two, a dialog is displayed that gives you the option of waiting or canceling the encryption/decryption. If you choose to wait, the application releases the file as soon as it is finished (generally within a few seconds).

Advanced Authentication

The Data Security Console is the interface that guides users through configuring their PBA credentials and self-recovery questions, based on policy set by the local administrator.

See Configure Advanced Authentication Administrator Settings and refer to the *Dell Data Security Console User Guide* to learn how to use advanced authentication.

Contact Dell ProSupport for Software

Call 877-459-7304, extension 4310039 for 24x7 phone support for your Dell product.

Additionally, online support for Dell products is available at dell.com/support. Online support includes drivers, manuals, technical advisories, FAQs, and emerging issues.

Be sure to help us quickly connect you to the right technical expert by having your Service Tag or Express Service Code available when you call.

For phone numbers outside of the United States, see Dell ProSupport for Software international phone numbers.

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Requirements

These requirements detail everything needed for Encryption Personal installation.

Encryption

- Encryption Personal requires an entitlement to successfully install. The entitlement is supplied when you purchase Encryption Personal. Depending on how you purchase Encryption Personal, you may manually install the entitlement, using the simple instructions that accompany it. You may also enter the entitlement at the command line. If Encryption Personal is installed using Dell Digital Delivery, the entitlement installation is taken care of by the Dell Digital Delivery service. (The same binaries are used for Encryption Enterprise and Encryption Personal. The entitlement tells the installer which version to install.)
- Microsoft and Office 365 accounts are supported when running Encryption Personal v11.0 or later on Windows 10.
- To activate a Microsoft Live account with Encryption Personal, refer to KB article 124722.
- A Windows password is required (if one does not already exist) to protect access to your encrypted data. Creating a password for your computer prevents others from logging on to your user account without your password. Encryption Personal will fail to activate if a password is not created.

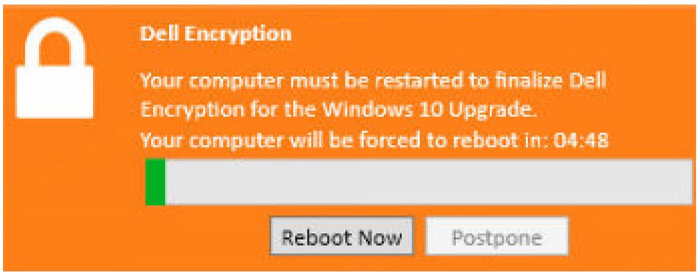
- Dell Encryption cannot be upgraded to v10.7.0 from versions earlier than v8.16.0. Endpoints running versions prior to v8.16.0 must upgrade to v8.16.0 then upgrade to v10.7.0.
- Dell Encryption uses Intel's encryption instruction sets, Integrated Performance Primitives (IPP). For more information, see KB article 126015.

1. Go to the Windows Control Panel (**Start** > **Control Panel**).
2. Click the **User Accounts** icon.
3. Click **Create a password for your account**.
4. Enter a new password and re-enter the password.
5. Optionally enter a password hint.
6. Click **Create Password**.
7. Restart your computer.

- IT best practices should be followed during deployment. This includes, but is not limited to, controlled test environments for initial tests, and staggered deployments to users.
- The user account performing the installation/upgrade/uninstallation must be a local or domain administrator user, which can be temporarily assigned by a deployment tool such as Microsoft SMS. A non-administrator user that has elevated privileges is not supported.
- Back up all important data before beginning installation/uninstallation/upgrade.
- Do not make changes to the computer, including inserting or removing external (USB) drives during installation/uninstallation/upgrade.
- To reduce initial encryption time (as well as decryption time if uninstalling), run the Windows Disk Cleanup Wizard to remove temporary files and any other unnecessary data.
- Turn off sleep mode during the initial encryption sweep to prevent an unattended computer from going to sleep. Encryption cannot occur on a sleeping computer (nor can decryption).
- The Encryption client does not support dual boot configurations since it is possible to encrypt system files of the other operating system, which would interfere with its operation.
- The master installer does not support upgrades from pre-v8.0 components. Extract the child installers from the master installer and upgrade the component individually. Should you have questions or concerns, contact Dell ProSupport.
- The Encryption client now supports Audit Mode. Audit Mode allows administrators to deploy the Encryption client as part of the corporate image, rather than using a third-party SCCM or similar solutions to deploy the Encryption client. For instructions about how to install the Encryption client in a corporate image, see KB article 129990.
- The TPM is used for sealing the General Purpose Key. Therefore, if running the Encryption client, clear the TPM in the BIOS before installing a new operating system on the target computer.
- Encryption client is tested against and is compatible with several popular signature-based antiviruses and AI-driven antivirus solutions including McAfee Virus Scan Enterprise, McAfee Endpoint Security, Symantec Endpoint Protection, CylancePROTECT, CrowdStrike Falcon, Carbon Black Defense, and several others. Hard-coded exclusions are included by default for many antivirus providers to prevent incompatibilities between antivirus scanning and encryption.

If your organization uses an unlisted antivirus provider or any compatibility issues are being seen, please see KB article 126046 or Contact Dell ProSupport for assistance validating configuration for interoperation between your software solutions and Dell Data Security solutions.

- Operating system re-install is not supported. To re-install the operating system, perform a backup of the target computer, wipe the computer, install the operating system, then recover the encrypted data following established recovery procedures.
- Be sure to periodically check dell.com/support for the most current documentation and Technical Advisories.
- Following Windows 10 feature upgrade, a restart is **required** to finalize Dell Encryption. The following message displays in the notification area after Windows 10 feature upgrades:



Dell Encryption

Your computer must be restarted to finalize Dell Encryption for the Windows 10 Upgrade.

Your computer will be forced to reboot in: 04:48

Prerequisites

- Microsoft .Net Framework 4.5.2 (or later) is required for the master and child installers. The installer does not install the Microsoft .Net Framework component.

  NOTE: .Net Framework 4.6 (or later) is required when running FIPS mode.

- The master installer installs the following prerequisites if not already installed on the computer. **When using the child installer**, you must install this component before installing Encryption.

Prerequisite
○ Visual C++ 2012 Update 4 or later Redistributable Package (x86 or x64) ○ Visual C++ 2017 Update 3 or later Redistributable Package (x86 or x64) ○ Applications and installation packages signed with SHA1 certificates will function but an error will display on the endpoint during installation or execution of the application without these updates installed

Hardware

- The following table details the minimum supported computer hardware.

Hardware
○ Intel Pentium or AMD Processor ○ 110 MB of available disk space ○ 512MB RAM **NOTE:** Additional free disk space is required to encrypt the files on the endpoint. This size varies based on policies and capacity of the drive.

- The following table details supported optional computer hardware.

Optional Embedded Hardware
○ TPM 1.2 or 2.0

Operating Systems

- The following table details supported operating systems.

Windows Operating Systems (32- and 64-bit)
○ Windows 10: Education, Enterprise, Pro v1909-v22H2 (November 2019 Update/19H2 - November 2022 Update/22H2) **Note:** OEMs and ODMs do not ship Windows 10 v2004 (May 2020 Update/20H1 and later) with 32-bit architecture. For more information, see https://docs.microsoft.com/windows-hardware/design/minimum/minimum-hardware-requirements-overview. ▪ Windows 10 2019 LTSC ▪ Windows 10 2021 LTSC ○ Windows 11: Enterprise, Pro v21H2 - 22H2

Operating Systems Encryption External Media

- External media must have approximately 55MB available plus open space on the media that is equal to the largest file to be encrypted to host Encryption External Media.
- The following details supported operating systems when accessing Dell-protected media.

Windows Operating Systems Supported to Access Encrypted Media (32- and 64-bit)
○ Windows 10: Education, Enterprise, Pro v1909-v22H2 (November 2019 Update/19H2 - November 2022 Update/22H2) **Note:** OEMs and ODMs do not ship Windows 10 v2004 (May 2020 Update/20H1 and later) with 32-bit architecture. For more information, see https://docs.microsoft.com/windows-hardware/design/minimum/minimum-hardware-requirements-overview. ▪ Windows 10 2019 LTSC ▪ Windows 10 2021 LTSC ○ Windows 11: Enterprise, Pro v21H2 - 22H2

Mac Operating Systems Supported to Access Encrypted Media (64-bit kernels)
○ macOS High Sierra 10.13.5 - 10.13.6 ○ macOS Mojave 10.14.0 - 10.14.4 ○ macOS Catalina 10.15.5 - 10.15.6

Localization

- Encryption is multilingual user interface compliant and is localized in the following languages.

Language Support	
○ EN - English	○ JA - Japanese
○ ES - Spanish	○ KO - Korean
○ FR - French	○ PT-BR - Portuguese, Brazilian
○ IT - Italian	○ PT-PT - Portuguese, Portugal (Iberian)
○ DE - German	

SED Manager

- IPv6 is not supported.

- Be prepared to shut down and restart the computer after you apply policies and are ready to begin enforcing them.
- Computers equipped with self-encrypting drives cannot be used with HCA cards. Incompatibilities exist that prevent the provisioning of the HCA. Dell does not sell computers with self-encrypting drives that support the HCA module. This unsupported configuration would be an after-market configuration.
- If the computer targeted for encryption is equipped with a self-encrypting drive, ensure that the Active Directory option, *User Must Change Password at Next Logon*, is disabled. Preboot Authentication does not support this Active Directory option.
- SED Manager is not supported with multi-drive configurations.
- **NOTE:**

  Due to the nature of RAID and SEDs, SED Manager does not support RAID. The issue with *RAID=On* with SEDs is that RAID requires access to the disk to read and write RAID-related data at a high sector not available on a locked SED from start and cannot wait to read this data until after the user is logged on. Change the SATA operation in the BIOS from *RAID=On* to *AHCI* to resolve the issue. If the operating system does not have the AHCI controller drivers pre-installed, the operating system will crash when switched from *RAID=On* to *AHCI*.

- The master installer installs the following prerequisites if not already installed on the computer. **When using the child installer**, you must install this component before installing SED Manager.

Prerequisite
○ Visual C++ 2017 Update 3 or later Redistributable Package (x86 or x64)
○ Applications and installation packages signed with SHA1 certificates will function but an error will display on the endpoint during installation or execution of the application without these updates installed

- Configuration of self-encrypting drives for SED Manager differ between NVMe and non-NVMe (SATA) drives, as follows.
  - Any NVMe drive that is being leveraged for PBA:
    - If the Dell device was manufactured in 2018 or later: Either RAID ON or AHCI may be leveraged with NVMe drives.
    - The BIOS boot mode must be set to Unified Extensible Firmware Interface (UEFI). Legacy operation ROMs must be disabled.
  - Any non-NVMe drive that is being leveraged for PBA:
    - BIOS SATA operation can be set to either AHCI or RAID ON.
    - The operating system will crash when switched from RAID ON > AHCI if the AHCI controller drivers are not pre-installed. For instructions on how to switch from RAID > AHCI (or vice versa), see KB article 124714.

  Supported OPAL compliant SEDs require updated Intel Rapid Storage Technology Drivers, located at www.dell.com/support. Dell recommends the latest Intel Rapid Storage Technology Driver with NVMe drives.

  NOTE: The Intel Rapid Storage Technology Drivers are platform dependent. You can find your system's driver at the link above based on your computer model.

- Multi-disk encryption configurations with SED Manager require the following:
  - All disks in the target system must be SEDs.
  - All disks in the target system must be configured in the same boot mode.
  - In UEFI boot mode, the operating system can be installed on any target disk.
  - In Legacy boot mode, the operating system must be installed on the first disk (Disk #0). If the operating system is not installed on the first disk, Multi-disk encryption is disabled.
- Some BIOS versions may enable Block SID by default, which can inhibit SED Manager. For more information, see KB article 126083.
- Direct Feature Updates from Windows 10 v1607 (Anniversary Update/Redstone 1), to the Windows 10 v1903 (May 2019 Update/19H1) are not supported with Dell Encryption. Dell recommends updating the operating system to a newer Feature Update if updating to Windows 10 v1903. Any attempts to update directly from Windows 10 v1607 to v1903 results in an error message and the update is prevented.
- **NOTE:** A password is required with Pre-boot Authentication. Dell recommends setting a minimum password of 9 or more characters.
- **NOTE:** A password is required for all users added in the *Add User* panel. Zero-length password users will be locked out of the computer following activation.

- ⓘ **NOTE:** Computers protected by SED Manager must be updated to Windows 10 v1703 (Creators Update/Redstone 2) or later before updating to Windows 10 v1903 (May 2019 Update/19H1) or later. If this upgrade path is attempted, an error message displays.
- SED Manager requires the use of the Dell custom Credential Provider to synchronize Windows password changes and data encryption keys. If you require use of third-party applications that use custom Credential Providers running on computers protected SED Manager, you must initiate Windows password changes through the Data Security Console. For information about changing your password in the Data Security Console, see the *Password* chapter in the Data Security Console User Guide.

Hardware

- For the most up-to-date list of Opal compliant SEDs supported with the SED Manager, see KB article 126855.
- For the most up-to-date list of platforms supported with the SED Manager, see KB article 126855.
- For a list of docking stations and adapters supported with SED Manager, see KB article 124241.

International Keyboards

The following table lists international keyboards supported with Pre-boot Authentication on UEFI and non-UEFI computers.

International Keyboard Support - UEFI	
DE-FR - (French Swiss)	EN-GB - English (British English)
DE-CH - (German Swiss)	EN-CA - English (Canadian English)
EN-US - English (American English)	

International Keyboard Support - Non-UEFI	
AR - Arabic (using Latin letters)	EN-US - English (American English)
DE-FR - (French Swiss)	EN-GB - English (British English)
DE-CH - (German Swiss)	EN-CA - English (Canadian English)

Operating Systems

- The following table details the supported operating systems.

Windows Operating Systems (32- and 64-bit)
○ Windows 10: Education, Enterprise, Pro v1909-v22H2 (November 2019 Update/19H2 - November 2022 Update/22H2) **Note:** OEMs and ODMs do not ship Windows 10 v2004 (May 2020 Update/20H1 and later) with 32-bit architecture. For more information, see https://docs.microsoft.com/windows-hardware/design/minimum/minimum-hardware-requirements-overview. ■ Windows 10 2019 LTSC ■ Windows 10 2021 LTSC ○ Windows 11: Enterprise, Pro v21H2 - 22H2

Authentication features are available only when Pre-boot Authentication is enabled.

Localization

SED Manager is a multilingual user interface compliant and is localized the following languages. UEFI mode and Pre-boot Authentication are supported in the following languages:

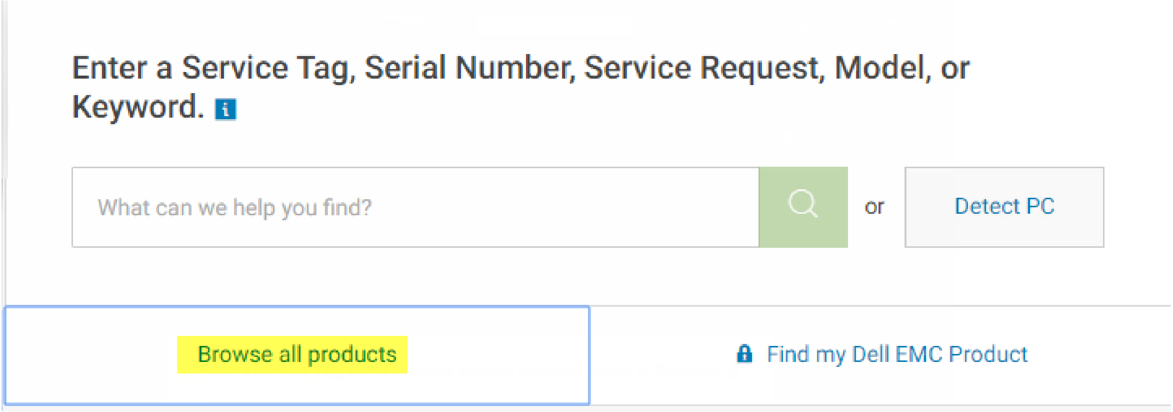
Language Support	
● EN - English	● JA - Japanese
● FR - French	● KO - Korean
● IT - Italian	● PT-BR - Portuguese, Brazilian
● DE - German	● PT-PT - Portuguese, Portugal (Iberian)
● ES - Spanish	

Download the Software

This section details obtaining the software from dell.com/support. If you already have the software, you can skip this section.

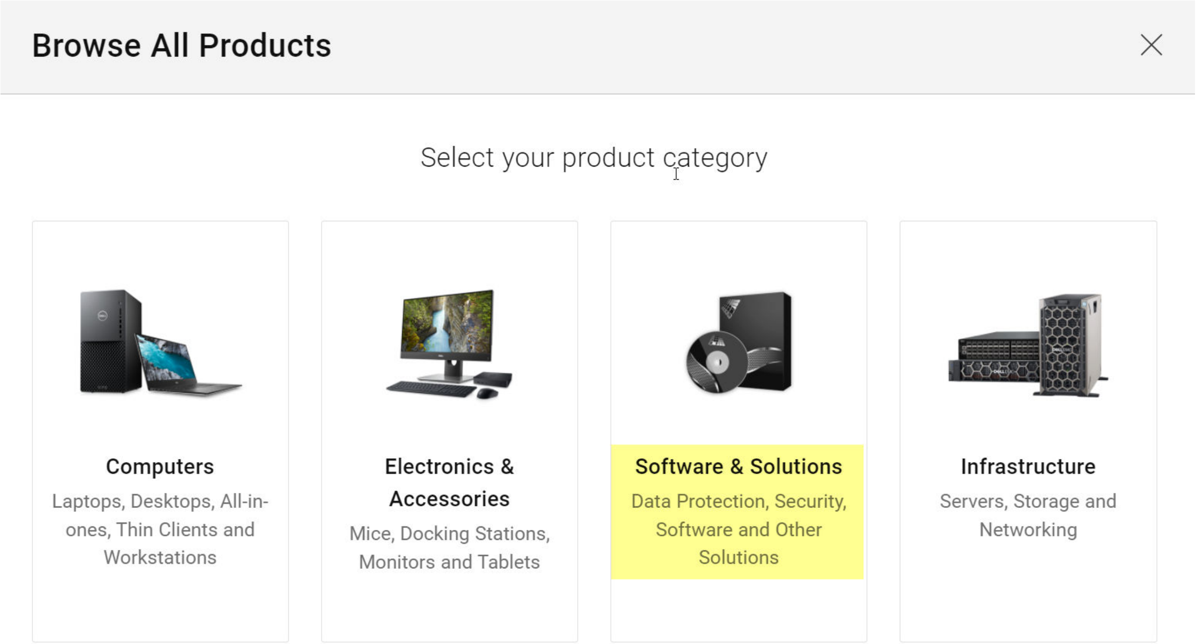
Go to dell.com/support to begin.

1. On the Dell Support webpage, select **Browse all products**.



Enter a Service Tag, Serial Number, Service Request, Model, or Keyword.

2. Select **Security** from the list of products.



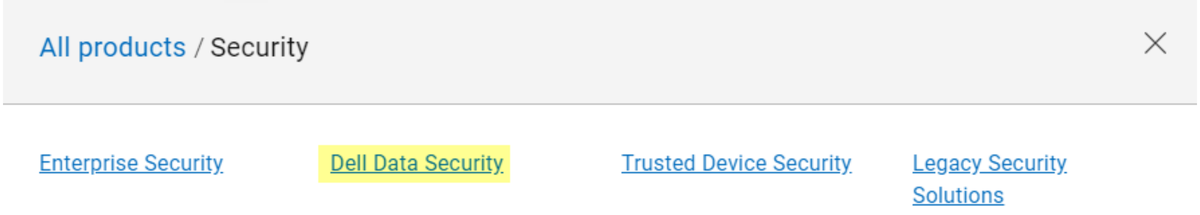
Browse All Products

Select your product category

Computers
Laptops, Desktops, All-in-ones, Thin Clients and Workstations
Electronics & Accessories
Mice, Docking Stations, Monitors and Tablets
Software & Solutions
Data Protection, Security, Software and Other Solutions
Infrastructure
Servers, Storage and Networking

3. Select **Dell Data Security**.

   After this selection has been made once, the website remembers.



All products / Security

Enterprise Security | Dell Data Security | Trusted Device Security | Legacy Security Solutions

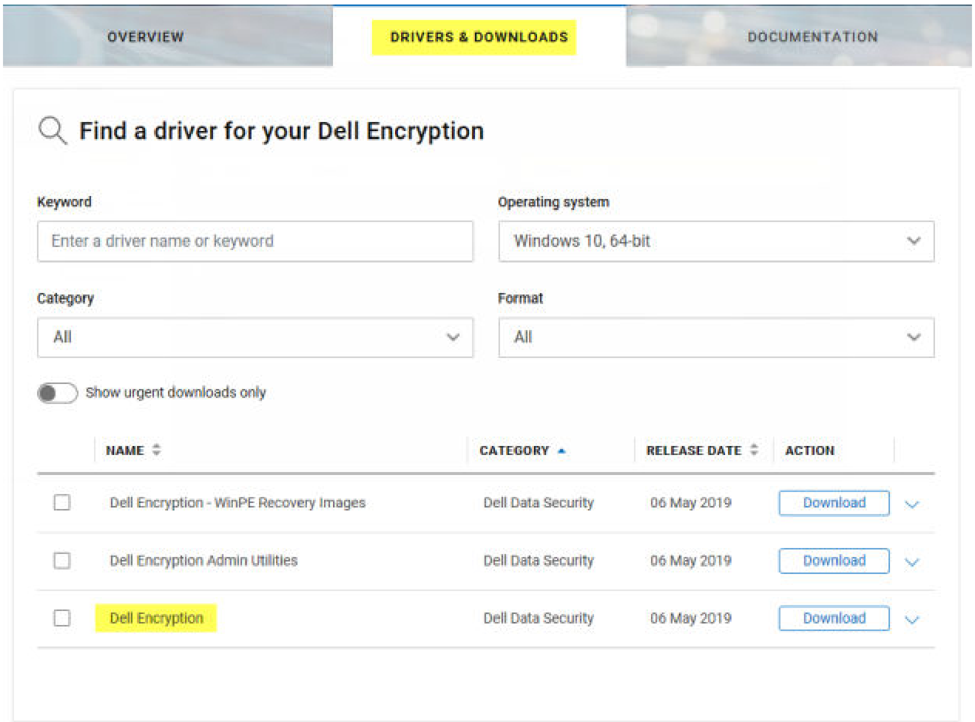
4. Select the Dell product.

   Examples:

   Dell Encryption Enterprise

   Dell Endpoint Security Suite Enterprise

5. Select **Drivers & downloads**.
6. Select the desired client operating system type.
7. Select **Dell Encryption** in the matches. This is only an example, so it will likely look slightly different. For example, there may not be four files to choose from.



Find a driver for your Dell Encryption

Keyword: Enter a driver name or keyword

Operating system: Windows 10, 64-bit

Category: All

Format: All

Show urgent downloads only

	NAME	CATEGORY	RELEASE DATE	ACTION
□	Dell Encryption - WinPE Recovery Images	Dell Data Security	06 May 2019	Download
□	Dell Encryption Admin Utilities	Dell Data Security	06 May 2019	Download
□	Dell Encryption	Dell Data Security	06 May 2019	Download

8. Select **Download** .

   Proceed to Install Encryption Personal.

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Installation

You can install Encryption Personal using the master installer (recommended), or by extracting the child installers from the master installer. Either way, Encryption Personal can be installed by user interface, command line or scripts, and using any push technology available to your organization.

Users should see the following help files for application assistance:

> **NOTE:** If Policy-Based Encryption is installed before the Encryption Management Agent, computer crash may occur. This issue is caused by failure to load the encryption Sleep driver that manages the PBA environment. As a workaround, use the master installer or ensure that Policy-Based Encryption is installed after the Encryption Management Agent.

- See the *Dell Encrypt Help* to learn how to use the features of Encryption. Access the help from `<Install dir>\Program Files\Dell\Dell Data Protection\Encryption\Help`.
- See the *Encryption External Media Help* to learn how the features of Encryption External Media. Access the help from `<Install dir>\Program Files\Dell\Dell Data Protection\Encryption`.
- See the *Encryption Personal Help* to learn how to use the features of Advanced Authentication. Access the help from `<Install dir>\Program Files\Dell\Dell Data Protection\Security Tools\Help`.

Import Entitlement

Installation of Encryption Personal requires a registry key on the target computer. This registry key is added through Command Line interface during installation or through the GUI prior to installation.

To add the registry key through Command Line interface, see Command-Line Installation .

To add the registry key through the GUI:

1. Open a text editor.
2. Add the following text.

   ```
   [HKEY_LOCAL_MACHINE\Software\Dell\Dell Data Protection\Entitlement]
   ```

   ```
   "SaEntitlement"="1:PE:{XXXXX-XXX-XXXX-XXX-XXXX-
   XXXXXXXXXXXX}:xXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX="
   ```
3. Save the text file with the `.reg` extension.
4. Double-click the saved registry file to import the Encryption Personal entitlement.

Choose an Installation Method

There are two methods to install the client, select **one** of the following:

- Install Interactively - RECOMMENDED
- Command-Line Installation

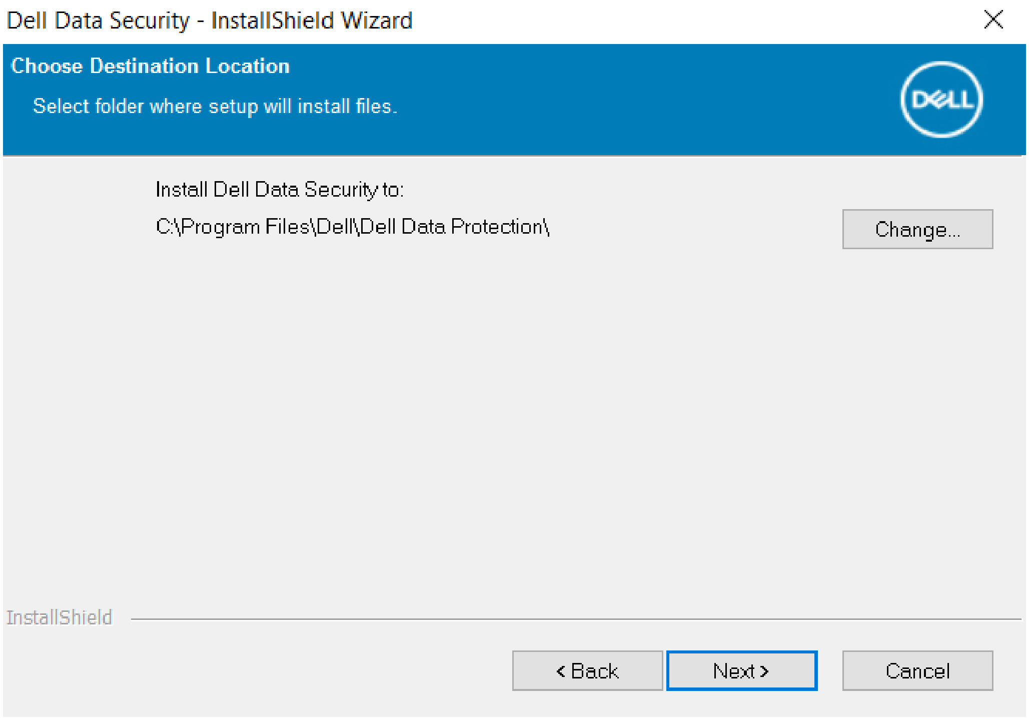
Interactive Installation

To install Encryption Personal, the installer must find the appropriate entitlement on the computer. If the appropriate entitlement is not found, Encryption Personal cannot be installed.

- The Master Installer installs multiple clients. In the case of Encryption Personal, it installs Encryption and SED management.
- Master installer log files are located at `C:\ProgramData\Dell\Dell Data Protection\Installer.`

1. Install the entitlement on the target computer if needed. Instructions for adding the entitlement to the computer are included with the email that discusses license information.

2. Copy DDSSetup.exe to the local computer.
3. Double-click DDSSetup.exe to launch the installer.
4. A dialog displays that alerts you to the status of installing prerequisites. It takes a few minutes.
5. Click **Next** at the Welcome screen.
6. Read the license agreement, agree to the terms, and click **Next**.
7. Click **Next** to install Encryption Personal in the default location of `C:\Program Files\Dell\Dell Data Protection\`.



Dell Data Security - InstallShield Wizard

Choose Destination Location

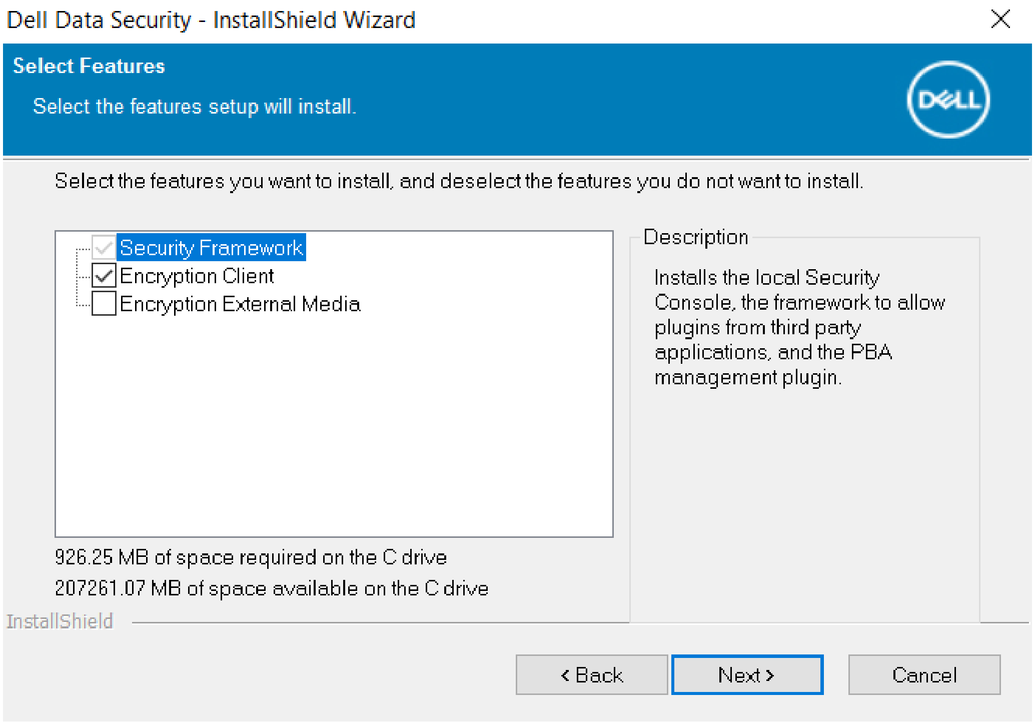
Select folder where setup will install files.

Install Dell Data Security to:

C:\Program Files\Dell\Dell Data Protection\

8. Authentication is installed by default and cannot be deselected. This is listed as Security Framework in the installer.

   Click **Next**.



Dell Data Security - InstallShield Wizard

Select Features

Select the features setup will install.

Select the features you want to install, and deselect the features you do not want to install.

☑ Security Framework
☑ Encryption Client
☐ Encryption External Media

Description

Installs the local Security Console, the framework to allow plugins from third party applications, and the PBA management plugin.

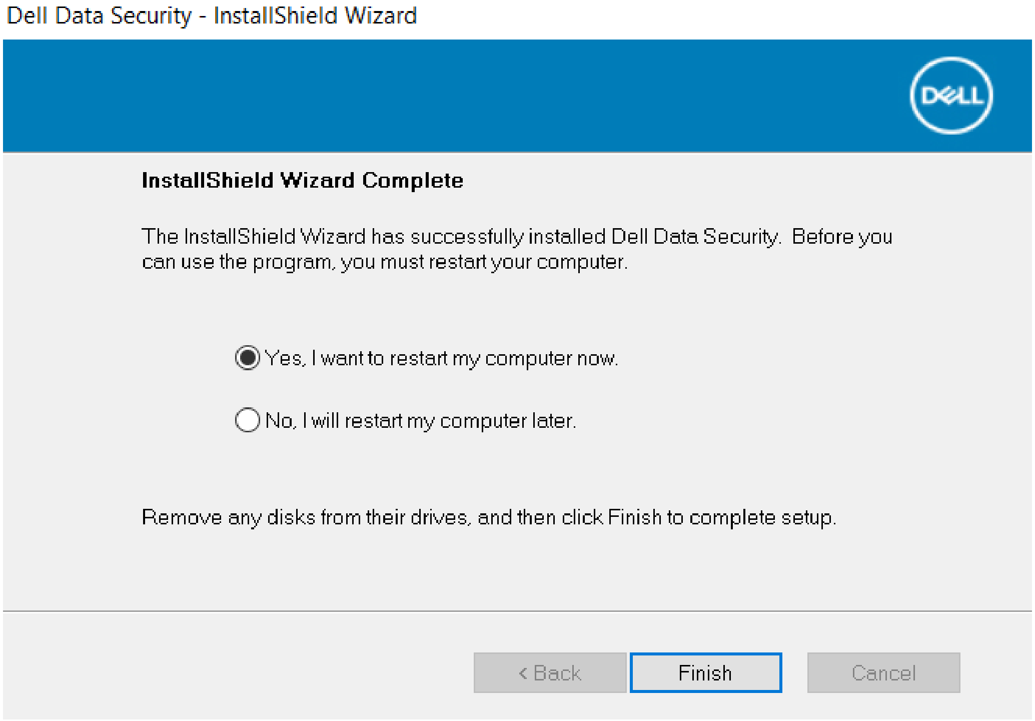
926.25 MB of space required on the C drive

207261.07 MB of space available on the C drive

9. Click **Install** to begin the installation.

A status window displays. This takes several minutes.

10. Select **Yes, I want to restart my computer now** and click **Finish**.



Dell Data Security - InstallShield Wizard

InstallShield Wizard Complete

The InstallShield Wizard has successfully installed Dell Data Security. Before you can use the program, you must restart your computer.

● Yes, I want to restart my computer now.

○ No, I will restart my computer later.

Remove any disks from their drives, and then click Finish to complete setup.

11. Once the computer restarts, authenticate to Windows.

Installation of Encryption Personal and Advanced Authentication is complete.

Encryption Personal Setup Wizard and Configuration is covered separately.

Once the Encryption Personal Setup Wizard and Configuration is complete, launch the Encryption Personal Administrator Console.

The rest of this section details more installation tasks and may be skipped. Proceed to Advanced Authentication and Encryption Personal Setup Wizards.

Command-Line Installation

To install Encryption Personal using command-line, the child executable files must first be extracted from the master installer. See Extract the Child Installers from the Master Installer. Once complete, return to this section.

- Install the entitlement on the target computer if needed.
- **NOTE:** Dell Encryption logs do not specify if insufficient disk storage caused installation failure.
- Switches:

  For a command-line installation, the switches must be specified first. The following table details the switches available for the installation.

Switch	Meaning
/s	Silent mode
/z	Pass data to the InstallScript system variable CMDLINE

- Parameters:

  The following table details the parameters available for the installation.

Parameters
InstallPath=path to alternate installation location.
FEATURE=PE
ENTITLEMENT=1:PE:{Encryption Personal Entitlement key here} ⓘ **NOTE:** This parameter can **only** be used with Encryption Personal

- Example Command-Line Installation

  The reboot has been suppressed in the command line examples. However, an eventual reboot is required.

  Policy Based Encryption cannot begin until the computer has rebooted.

  Be sure to enclose a value that contains one or more special characters, such as a blank space, in escaped quotation marks.

  Command lines are case-sensitive.

- The following example installs Encryption client (silent installation, no reboot, and installed the default location of `C:\Program Files\Dell\Dell Data Protection`) passing the entitlement key directly to the installer.

  DDPE_XXbit_setup.exe /s /v"ENTITLEMENT=1:PE:{XXXXX-XXX-XXXX-XXX-XXXX-XXXXX-XXXXXXX}:xXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX= /l*v c:\Shieldinstall.log /qn /norestart"

- The following example installs Encryption Personal and Advanced Authentication (silent installation, no reboot, and installed in the default location of `C:\Program Files\Dell\Dell Data Protection`).

  ```
  DDSSetup.exe /s /z"\"FEATURE=PE\""
  ```

- The following example installs Encryption Personal and Advanced Authentication (silent installation, no reboot, and installed in an alternate location of `C:\Program Files\Dell\My_New_Folder`).

  ```
  DDSSetup.exe /s /z"\"FEATURE=PE, InstallPath=C:\Program Files\Dell\My_New_Folder\""
  ```

  Once the computer is restarted, authenticate to Windows.

  Installation of Encryption Personal and Advanced Authentication is complete.

  Encryption Personal Setup Wizard and Configuration is covered separately.

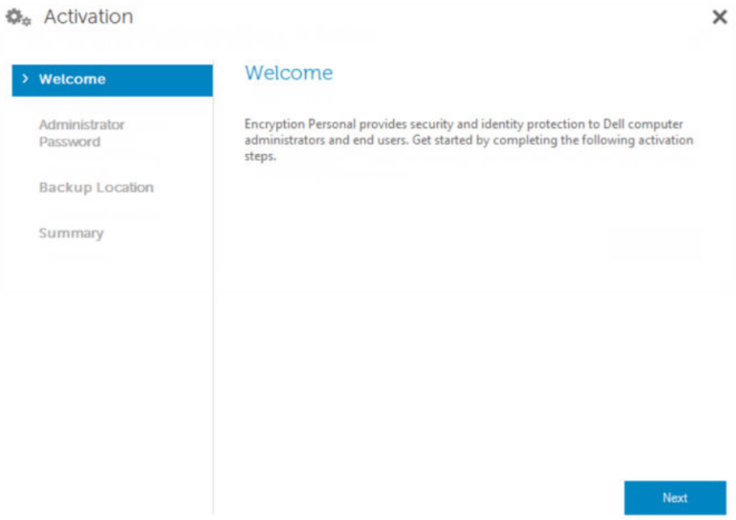
  Once the Encryption Personal Setup Wizard and Configuration is complete, launch the Encryption Personal Administrator Console.

  The rest of this section details more installation tasks and may be skipped. Proceed to Advanced Authentication and Personal Edition Setup Wizards.

Advanced Authentication and Encryption Personal Setup Wizards

Log on with your Windows user name and password. You are seamlessly passed through to Windows. The interface may look different than you are accustomed to seeing.

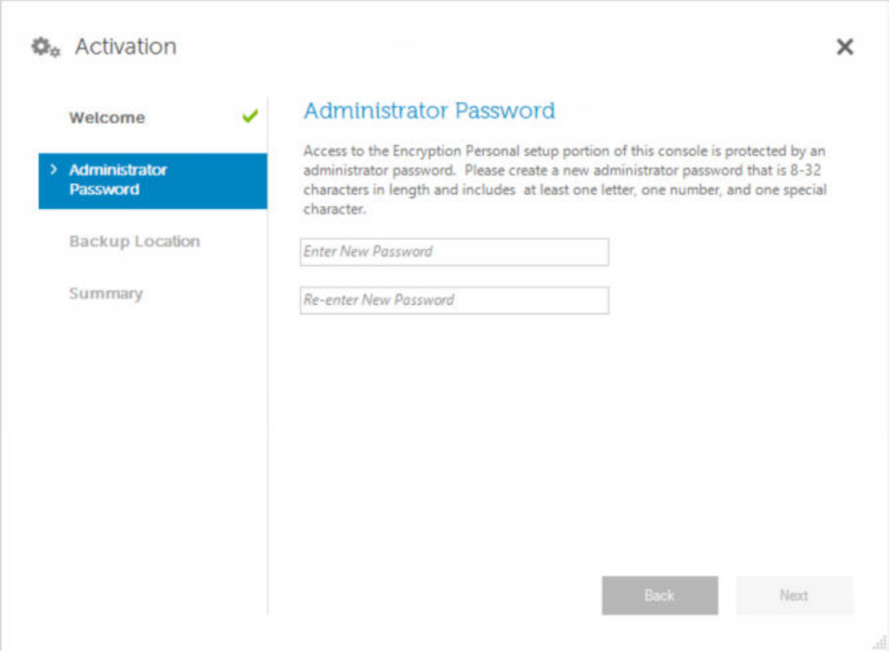
1. You may be prompted by UAC to run the application. If so, click Yes.
2. After the initial installation reboot, the Advanced Authentication activation wizard displays. Click **Next**.



Encryption Personal provides security and identity protection to Dell computer administrators and end users. Get started by completing the following activation steps.

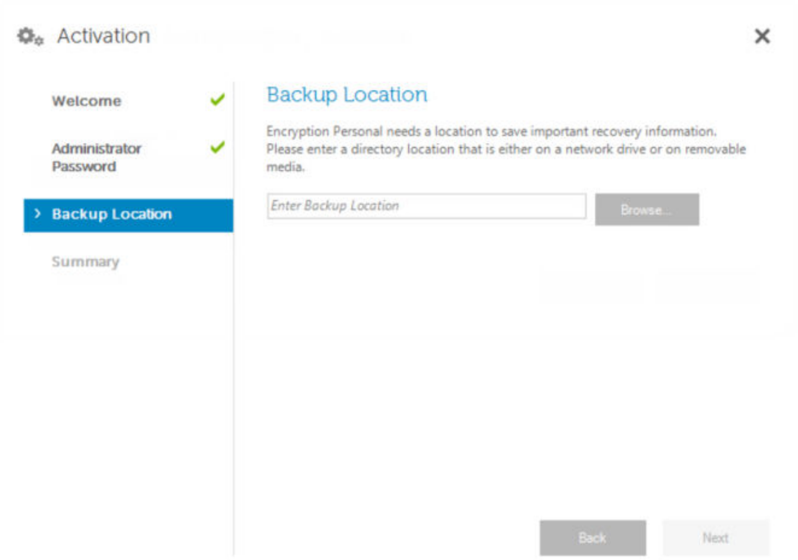
3. Type and re-enter a new Encryption Administrator Password (EAP). Click **Next**.

   Note: The Encryption Administrator Password must be a minimum of eight characters and can not exceed 127 characters.



Access to the Encryption Personal setup portion of this console is protected by an administrator password. Please create a new administrator password that is 8-32 characters in length and includes at least one letter, one number, and one special character.

4. Enter a backup location on a network drive or removable media to store recovery information and click **Next**.



Activation

Welcome ✓

Administrator Password ✓

› Backup Location

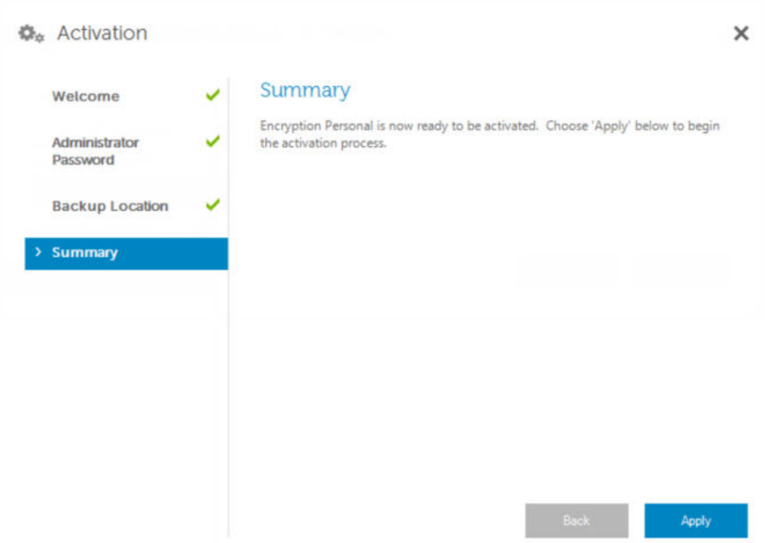
Summary

Backup Location

Encryption Personal needs a location to save important recovery information. Please enter a directory location that is either on a network drive or on removable media.

Enter Backup Location

5. Click **Apply** to begin Advanced Authentication activation.



Activation

Welcome ✓

Administrator Password ✓

Backup Location ✓

› Summary

Summary

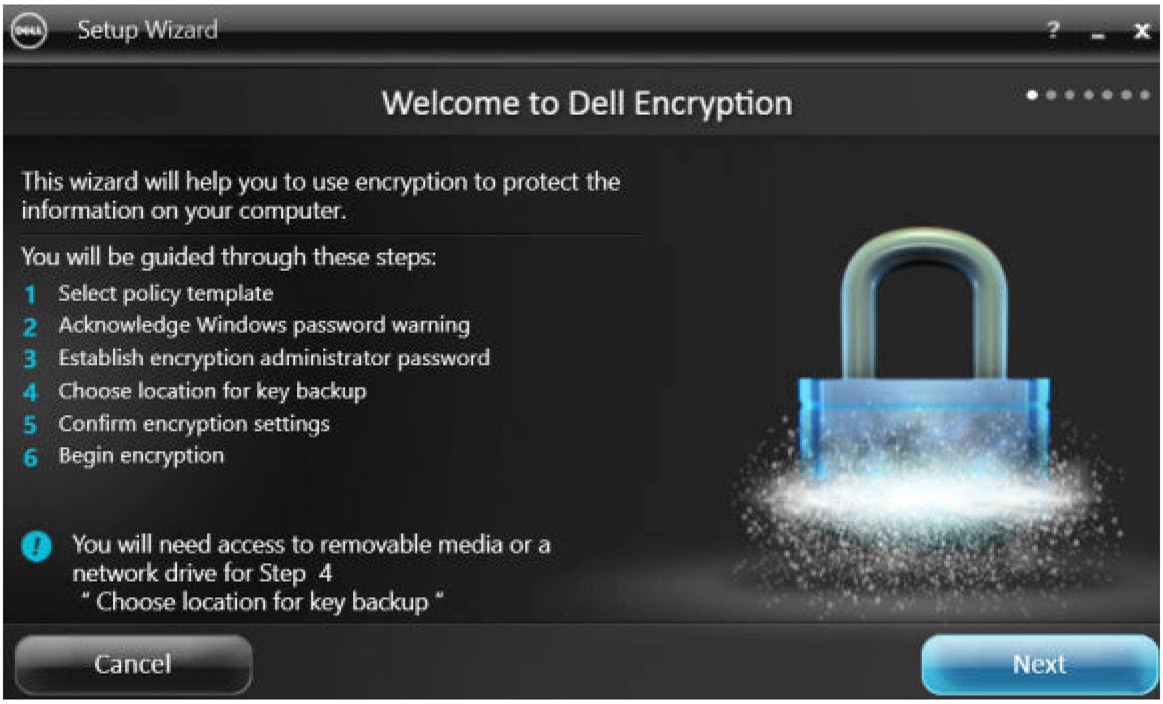
Encryption Personal is now ready to be activated. Choose 'Apply' below to begin the activation process.

After the Advanced Authentication activation wizard is finished, proceed to the next step.

6. Launch the Encryption Personal setup wizard from the Dell Encryption icon in the notification area (it may launch on its own).

   This Setup Wizard helps you use encryption to protect the information on this computer. If this wizard is not completed, encryption cannot begin.

   Read the Welcome screen and click **Next**.



Welcome to Dell Encryption

This wizard will help you to use encryption to protect the information on your computer.

You will be guided through these steps:

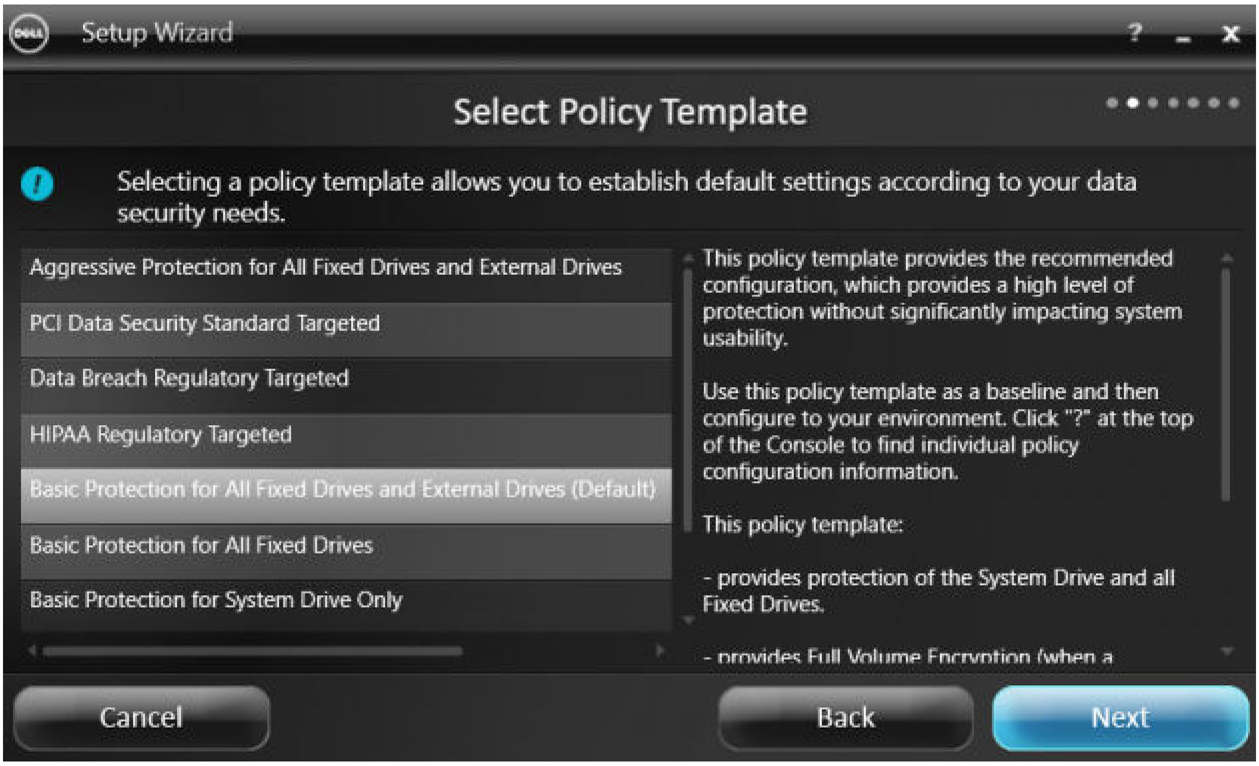
1. Select policy template
2. Acknowledge Windows password warning
3. Establish encryption administrator password
4. Choose location for key backup
5. Confirm encryption settings
6. Begin encryption

You will need access to removable media or a network drive for Step 4 " Choose location for key backup "

7. Select a policy template. The policy template establishes the default policy settings for encryption.

   You can easily apply a different policy template or customize the selected template in the Local Management Console once initial configuration is complete.

   Click **Next**.



Select Policy Template

Selecting a policy template allows you to establish default settings according to your data security needs.

- Aggressive Protection for All Fixed Drives and External Drives
- PCI Data Security Standard Targeted
- Data Breach Regulatory Targeted
- HIPAA Regulatory Targeted
- Basic Protection for All Fixed Drives and External Drives (Default)
- Basic Protection for All Fixed Drives
- Basic Protection for System Drive Only

This policy template provides the recommended configuration, which provides a high level of protection without significantly impacting system usability.

Use this policy template as a baseline and then configure to your environment. Click "?" at the top of the Console to find individual policy configuration information.

This policy template:

- provides protection of the System Drive and all Fixed Drives.

- provides Full Volume Encryption (when a

8. Read and acknowledge the Windows password warning. If you wish to create a Windows password now, see Requirements.
9. Create a 8-127 character Encryption Administrator Password (EAP) and confirm. The password should contain alphabetic, numeric, and special characters. This password can be the same as the EAP you set up for Advanced Authentication, but is not related to it. **Record and save this password in a safe place**. Click **Next**.

   Note: The Encryption Administrator Password must be a minimum of eight characters and can not exceed 127 characters.

10. Click **Browse** to choose a network drive or removable storage to back up your encryption keys (which are wrapped in an application named LSARecovery_[hostname].exe).

    In the event of certain computer failures, these keys are used to recover your data.

    In addition, future policy changes sometimes require that your encryption keys get backed up again. If the network drive or removable storage is available, backing up of your encryption keys is done in the background. However, if the location is not available (such as the original removable storage device not being inserted into the computer), policy changes do not take effect until the encryption keys are manually backed up.

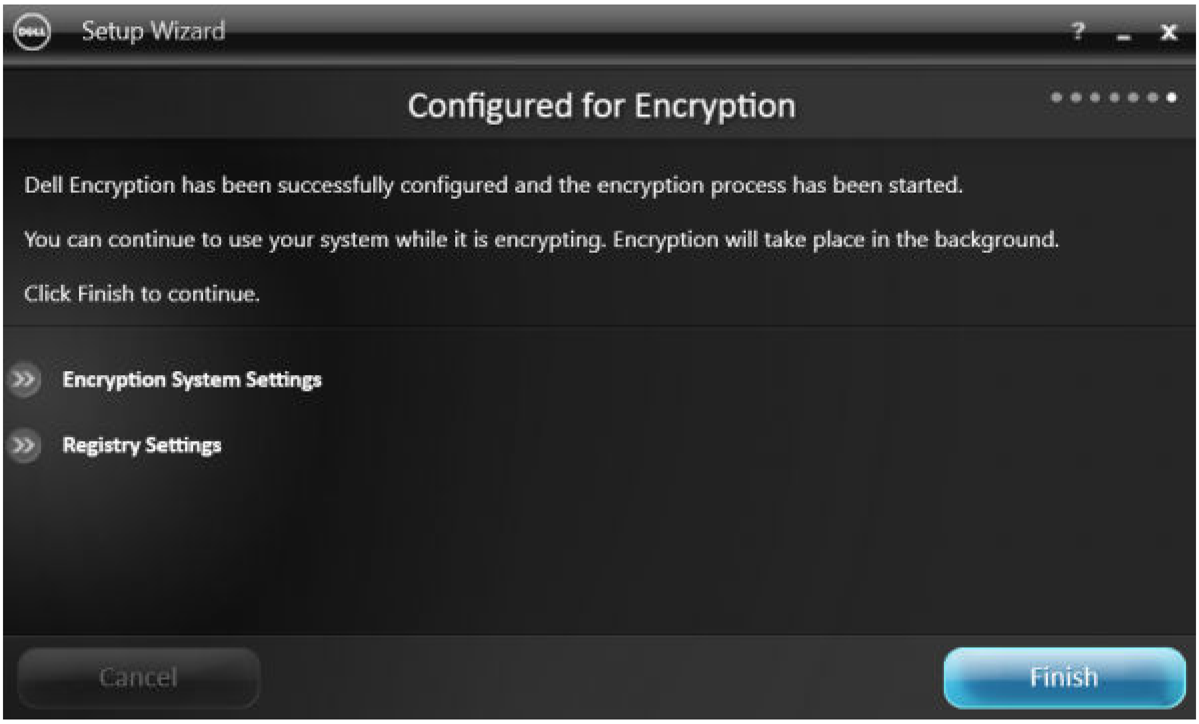
    ⓘ **NOTE:** To learn how to manually back up encryption keys, click "**? > Help**" in the upper right corner of the Local Management Console or click **Start > Dell > Encryption Help**.

    Click **Next**.

11. On the Confirm Encryption Settings screen, a list of Encryption Settings display. Review the items and when satisfied with the settings, click **Confirm**.

    Configuration of the computer begins. A status bar informs you of the progress of configuration.

12. Click **Finish** to complete the configuration.



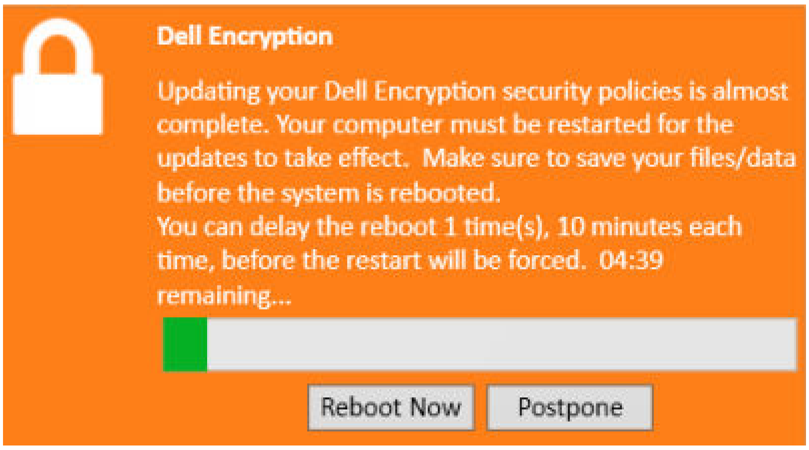
Configured for Encryption

Dell Encryption has been successfully configured and the encryption process has been started.

You can continue to use your system while it is encrypting. Encryption will take place in the background.

Click Finish to continue.

13. A reboot is required once the computer is configured for encryption. Click **Reboot Now** or you can postpone the reboot 5x20 minutes each.


Dell Encryption

Updating your Dell Encryption security policies is almost complete. Your computer must be restarted for the updates to take effect. Make sure to save your files/data before the system is rebooted.
You can delay the reboot 1 time(s), 10 minutes each time, before the restart will be forced. 04:39 remaining...

14. Once the computer is rebooted, open the Local Management Console from the Start menu to see the status of encryption.

Encryption takes place in the background. The Local Management Console can be opened or closed. Either way, encryption of files progresses. You can continue to use your computer as usual while it is encrypting.

15. When the scan is complete, the computer reboots once more.

    Once all encryption sweeps and reboots are complete, you can verify compliance status by launching the Local Management Console. The drive is labeled as "In Compliance".

6

Configure Console Settings

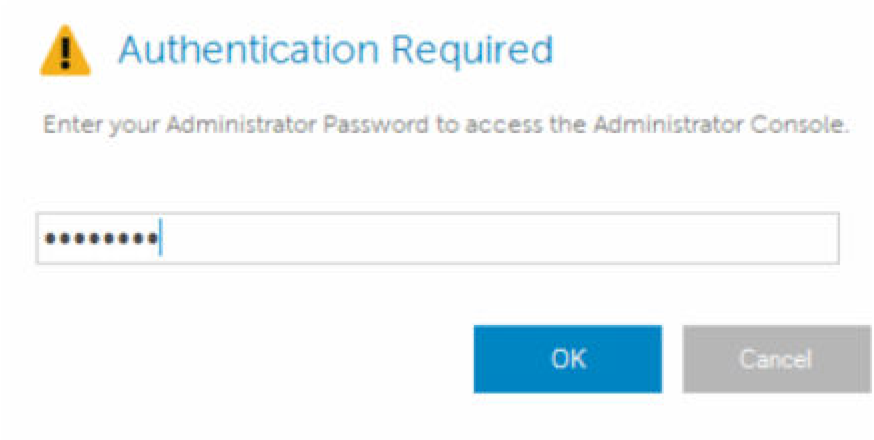
Default settings allow administrators and users to use advanced authentication immediately after activation, without additional configuration. Users are automatically added as advanced authentication users when they log on to the computer with their Windows passwords but, by default, multi-factor Windows authentication is not enabled.

To configure advanced authentication features, you must be an administrator on the computer.

Change the Administrator Password and Backup Location

After advanced authentication activation, the administrator password and backup location can be changed, if necessary.

1. As an administrator, launch the Dell Data Security Console from the desktop shortcut.
2. Click the **Administrator Settings** tile.
3. In the Authentication dialog, enter the administrator password that was set up during activation, and click **OK.**



Authentication Required

Enter your Administrator Password to access the Administrator Console.

4. Click the **Administrator Settings** tab.
5. In the Change Administrator Password page, to change the password, enter a new password that is between 8-32 characters and includes at least one letter, one number, and one special character.
6. Enter the password a second time to confirm it, then click **Apply**.
7. To change the location where the recovery key is stored, in the left pane, select **Change Backup Location**.
8. Select a new location for the backup, and click **Apply**.

   The backup file must be saved either on a network drive or onto removable media. The backup file contains the keys that are needed to recover data on this computer. Dell ProSupport must have access to this file to help you recover data.

   Recovery data is automatically backed up to the specified location. If the location is not available (for instance, if your backup USB drive is not inserted), Advanced Authentication prompts for a location to back up your data. Access to recovery data is required to begin encryption.

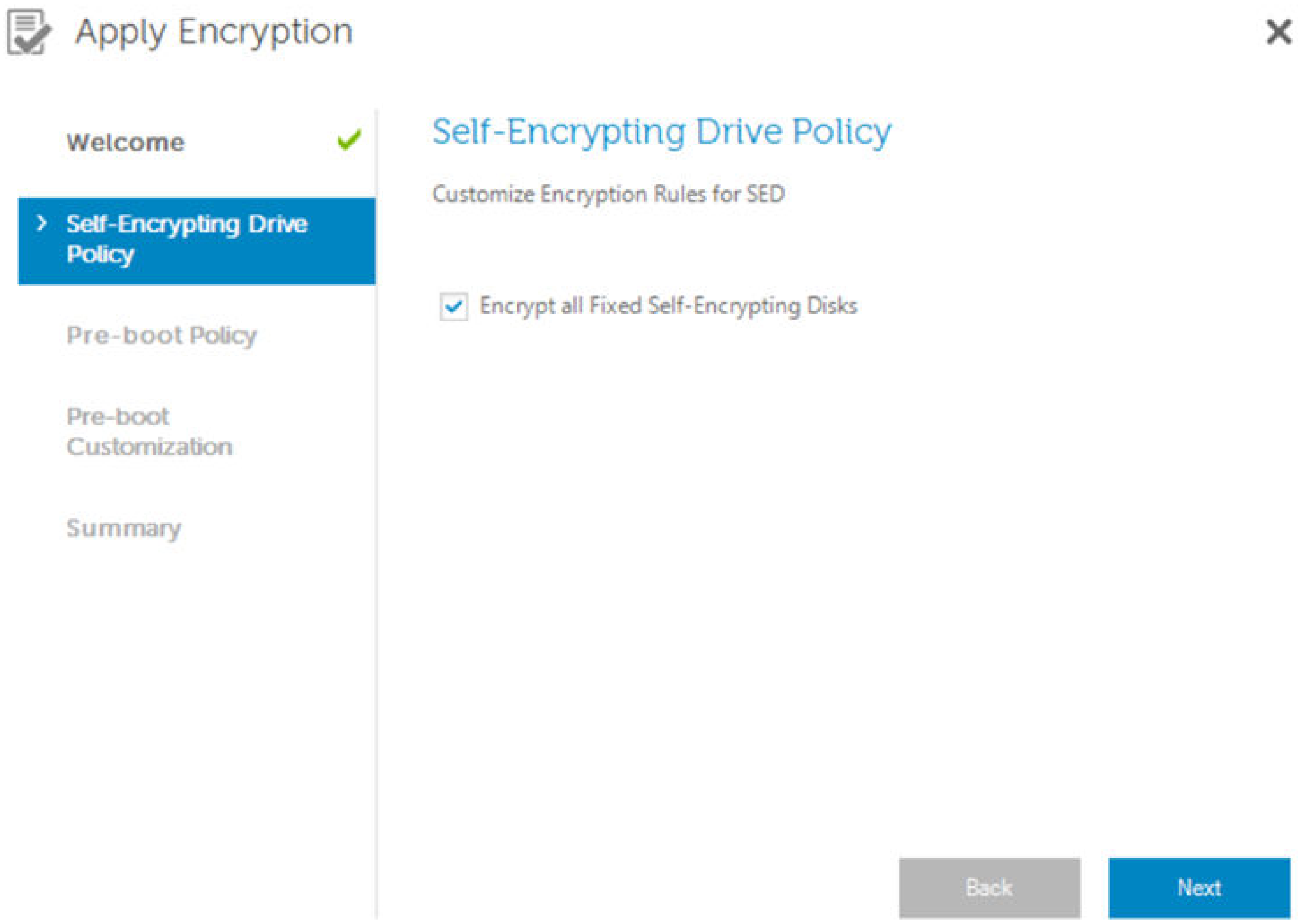
Configure Pre-Boot Authentication

PBA is available if your computer is equipped with an SED. PBA is configured through the Encryption tab. When SED Manager takes ownership of the SED, PBA is enabled.

To enable SED management:

1. In the Data Security Console, click the **Administrator Settings** tile.
2. Ensure that the backup location is accessible from the computer.

   If *Backup Location not found* displays and the backup location is on a USB drive, either your drive is not connected or is connected to a different slot than the one used during backup. If the message displays, and the backup location is on a network drive, the network drive is inaccessible from the computer. If it is necessary to change the backup location, from the **Administrator Settings** tab, select **Change Backup Location** to change the location to the current slot or accessible drive. A few seconds after reassigning the location, the process of enabling encryption can proceed.
3. Click the **Encryption** tab and then click **Encrypt**.
4. At the Welcome page, click **Next**.
5. Select **Encrypt all Fixed Self-Encrypting Disks** to enable Multi-disk encryption.



Self-Encrypting Drive Policy

Customize Encryption Rules for SED

☑ Encrypt all Fixed Self-Encrypting Disks

6. In the Pre-boot Policy page, change or confirm the following values, and click **Next**.

Attempts at non-cached user login	Number of times an unknown user can attempt to log in (a user that has not logged in to the computer before [no credentials have been cached]).
Attempts at cached user login	Number of times can a known user attempt to log in.
Attempts at answering recovery questions	Number of times the user can attempt to enter the correct answer.
Enable Crypto Erase Password	Select to enable.
Enter the Crypto Erase Password	A word or code of up to 100 characters used as a fail-safe security mechanism. Entering this word or code in the user name or password field during Pre-boot authentication initiates a crypto erase, which removes

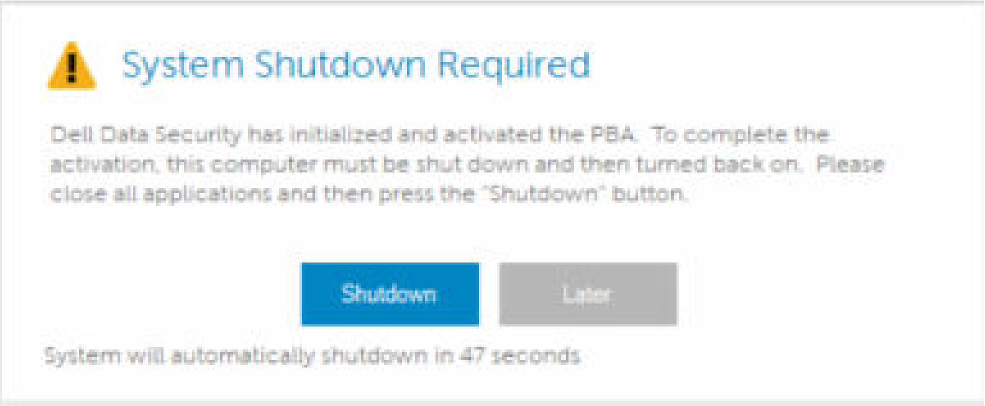
	the keys from secure storage. Once this process is invoked, the drive is unrecoverable. Leave this field blank if you do not want a crypto erase password available in case of emergency. Leave this field blank if you do not want to have a crypto erase password available in case of emergency.
Remember Me	Enables or disables the ability for users to select Remember Me on the PBA login screen.

7. In the Pre-boot Customization page, enter customized text to display on the Pre-boot Authentication (PBA) screen, and click **Next.**

Pre-boot Title Text	This text displays on the top of the PBA screen. If you leave this field blank, no title will be displayed. The text does not wrap, so entering more than 17 characters may result in the text being cut off.
Support Information Text	Text to display on the PBA support information screen. Customize the message to include details about how to contact a help desk or security administrator. Not entering text in this field results in no support contact information being available to the user. Text wrapping occurs at the word level, not the character level. If a word is more than approximately 50 characters, it does not wrap and no scroll bar is present, truncating the text.
Legal Notice Text	This text displays before the user is allowed to log on to the device. For example: "By clicking OK, you agree to abide by the acceptable computer use policy." Not entering text in this field results in no text or OK/Cancel buttons being displayed. Text wrapping occurs at the word level, not the character level. For instance, if you have a single word that is more than approximately 50 characters in length, it does not wrap and no scroll bar is present, therefore the text is truncated.

8. At the Summary page, click **Apply**.
9. When prompted, click **Shutdown**.

   A full shutdown is required before encryption can begin.



System Shutdown Required

Dell Data Security has initialized and activated the PBA. To complete the activation, this computer must be shut down and then turned back on. Please close all applications and then press the "Shutdown" button.

System will automatically shutdown in 47 seconds

10. After shutdown, restart the computer.

    Authentication is now managed by the Encryption Management Agent. Users must log in at the PBA screen with their Windows passwords.

Change SED Management and PBA Settings

After you first enable encryption and configure Pre-boot Policy and Customization, the following actions are available from the Encryption tab:

- Change Pre-boot Policy or Customization - Click the **Encryption** tab and then click **Change**.

- Disable SED management, for example for uninstallation - Click **Decrypt**.

After you first enable SED management and configure Pre-boot Policy and Customization, the following actions are available from the Pre-boot Settings tab:

- Change Pre-boot Policy or Customization - Click the **Pre-boot Settings** tab and select **Self-Encrypting Drive Policy**, **Pre-boot Policy**, or **Pre-boot Customization**.

Manage Users and Users' Authentication

Add User

Windows users automatically become Encryption Personal users when they either log on to Windows or enroll a credential.

The computer must be connected to the domain to add a domain user from the Data Security Console Add User tab.

1. On the left pane of the Administrator Settings tool, select **Users**.
2. At the upper right of the User page, click **Add User** to begin the enrollment process for an existing Windows user.
3. When the Select User dialog displays, select **Object Types**.
4. Enter a user’s object name in the text box and click **Check Names**.
5. Click **OK** when finished.

Delete User

1. On the left pane of the Administrator Settings tool, select **Users**.
2. To delete a user, locate the user's column and click **Remove**. (Scroll to the bottom of the user's column to see the Remove option.)

Remove All of a User's Enrolled Credentials

1. Click the **Administrator Settings** tile and authenticate with your password.
2. Click the **Users** tab and find the user you want to remove.
3. Click **Remove**. (The Remove command appears in red at the bottom of the user's settings).

   After removal, the user will not be able to log on to the computer unless they re-enroll.

Uninstall the Master Installer

- Each component must be uninstalled separately, followed by uninstallation of the master installer. The clients must be uninstalled in a **specific order to prevent uninstallation failures**.
- Follow the instructions in Extract the Child Installers from the Master Installer to obtain child installers.
- Ensure that the same version of master installer (and thereby clients) is used for uninstallation as installation.
- This chapter refers you to another chapter that contains *detailed* instructions of how to uninstall the child installers. This chapter explains the last step **only**, uninstalling the master installer.

Uninstall the clients in the following order.

1. Uninstall Encryption Client.
2. Uninstall Encryption Management Agent.

The Driver package does not need to be uninstalled.

Proceed to Choose an Uninstallation Method.

Choose an Uninstallation Method

There are two methods to uninstall the master installer, select **one** of the following:

- Uninstall from Add/Remove Programs
- Uninstall from the Command Line

Uninstall Interactively

1. Go to *Uninstall a Program* in the Windows Control Panel (in the search box on the taskbar, type **Control Panel**, then select Control Panel from the results).
2. Highlight **Dell Installer** and left-click **Change** to launch the Setup Wizard.
3. Read the Welcome screen and click **Next**.
4. Follow the prompts to uninstall and click **Finish**.
5. Restart your computer and log in to Windows.

   The master installer is uninstalled.

Uninstall from the Command Line

- The following example silently uninstalls the master installer.

  ```
  "DDSSetup.exe" /s /x
  ```

  Reboot the computer when finished.

  The master installer is uninstalled.

  Proceed to Uninstall Using the Child Installers.

8

Uninstall Using the Child Installers

- Dell recommends using the Data Security Uninstaller to remove Encryption Personal.
- The user performing decryption and uninstallation must be a local or domain administrator. If uninstalling by command line, domain administrator credentials are required.
- If you installed Encryption Personal with the master installer, the child executable files must first be extracted from the master installer before uninstallation, as shown in Extract the Child Installers from the Master Installer.
- Ensure that the same version of clients is used for uninstallation as installation.
- Plan to decrypt overnight, if possible.
- Turn off sleep mode to prevent an unattended computer from going to sleep. Decryption cannot occur on a sleeping computer.
- Shut down all processes and applications to minimize failures because of locked files.

Uninstall Encryption

- **Before beginning the uninstall process**, see (Optional) Create an Encryption Removal Agent Log File. This log file is useful for troubleshooting an uninstall/decryption operation. If you do not intend to decrypt files during the uninstall process, you do not need to create an Encryption Removal Agent log file.

  NOTE: Before uninstalling, ensure all policy templates are set to Disabled and insert any encrypted external media for graceful decryption.

  This video details changing policy templates in the Local Management Console.
- Run WSScan to ensure that all data is decrypted after uninstallation is complete, but before restarting the computer. See Use WSScan for instructions.
- Periodically Check Encryption Removal Agent Status. Data decryption is still in process if the Encryption Removal Agent service still exists in the services panel.
-

Choose an Uninstallation Method

There are two methods to uninstall the Encryption client, select **one** of the following:

- Uninstall Interactively
- Uninstall from the Command-Line

Uninstall Interactively

1. Go to *Uninstall a Program* in the Windows Control Panel (in the search box on the taskbar, type **Control Panel**, and then select **Control Panel** from the results).
2. Highlight **Dell Encryption XX-bit** and left-click **Change** to launch the Encryption Personal Setup Wizard.
3. Read the Welcome screen and click **Next**.
4. At the Encryption Removal Agent Installation screen, select either:

   NOTE: The second option is enabled by default. **If you wish to decrypt files, be sure you change the selection to option one**.

   - Encryption Removal Agent - Import Keys from a File

     For SDE, User, or Common encryption, this option decrypts files and uninstalls the Encryption client. ***This is the recommended selection.***

- Do not install Encryption Removal Agent

  This option uninstalls the Encryption client *but does not decrypt files*. This option should be used **only** for troubleshooting purposes, as directed by Dell ProSupport.

  Click **Next**.

5. In *Backup File*, enter the path to the network drive or removable media location of the backup file or click **...** to browse to the location. The format of the file is LSARecovery_[hostname].exe.

   Enter your Encryption Administrator Password. This is the password from Setup Wizard when the software was installed.

   Click **Next**.

6. At *Dell Decryption Agent Service Logon As* select **Local System Account** and click **Finish**.
7. Click **Remove** at the Remove the Program screen.
8. Click **Finish** at the Configuration Complete screen.
9. Restart your computer and log on to Windows.

Decryption is now in progress.

The decryption process could take several hours, depending on the number of drives being decrypted and the amount of data on those drives. To check the decryption process, see Check Encryption Removal Agent Status.

Uninstall from the Command-Line

- Command line switches and parameters are case-sensitive.
- Be sure to enclose a value that contains one or more special characters, such as a blank space in the command line, in escaped quotation marks. Command line parameters are case-sensitive.
- Use these installers to uninstall the clients using a scripted installation, batch files, or any other push technology available to your organization.
- Log files

  Windows creates unique child installer uninstallation log files for the logged in user at %temp%, located at `C:\Users\<UserName>\AppData\Local\Temp.`

  If you decide to add separate a log file when you run the installer, ensure that the log file has a unique name, as child installer log files do not append. The standard .msi command can be used be create a log file by using /l `C:\<any directory>\<any log file name>.log`. Dell does not recommend using "/l*v" (verbose logging) in a command line uninstallation, as the username/password is recorded in the log file.

- All child installers use the same basic .msi switches and display options, except where noted, for command line uninstallations. The switches must be specified first. The /v switch is required and takes an argument. Other parameters go inside an argument that is passed to the /v switch.

  Display options can be specified at the end of the argument passed to the /v switch to achieve the expected behavior. Do not use both /q and /qn in the same command line. Only use ! and - after /qb.

Switch	Meaning
/v	Pass variables to the .msi inside the setup.exe
/s	Silent mode
/x	Uninstall mode

Option	Meaning
/q	No Progress dialog, restarts itself after process completion
/qb	Progress dialog with **Cancel** button, prompts for restart
/qb-	Progress dialog with **Cancel** button, restarts itself after process completion
/qb!	Progress dialog without **Cancel** button, prompts for restart

Option	Meaning
/qb!-	Progress dialog without **Cancel** button, restarts itself after process completion
/qn	No user interface

- Once extracted from the master installer, the Encryption client installer can be located at `C:\extracted\Encryption\DDPE_XXbit_setup.exe`.
- The following table details the parameters available for the uninstallation.

Parameter	Selection
CMG_DECRYPT	Property for selecting the type of Encryption Removal Agent installation: 2 - Get keys using a forensic key bundle 0 - Do not install Encryption Removal Agent
CMGSILENTMODE	Property for silent uninstallation: 1 - Silent - required when running with msiexec variables containing /q or /qn 0 - Not Silent - only possible when msiexec variables containing /q are not present in the command line syntax
DA_KM_PW	The password for the domain administrator account.
DA_KM_PATH	Path to the key material bundle.

- The following example uninstalls the Encryption client without installing Encryption Removal Agent.

  ```
  DDPE_XXbit_setup.exe /s /x /v"CMG_DECRYPT=0 CMGSILENTMODE=1 DA_KM_PATH=C:
  \FullPathToLSA.exe DA_KM_PW=password /qn /l C:\ddpe_uninstall.txt"
  ```

- The following example uninstalls the Encryption client using a forensic key bundle. Copy the forensic key bundle to the local disk and then run this command.

  ```
  DDPE_XXbit_setup.exe /s /x /v"CMG_DECRYPT=2 CMGSILENTMODE=1 DA_KM_PATH=C:
  \FullPathToForensicKeyBundle DA_KM_PW=password /qn /l C:\ddpe_uninstall.txt"
  ```

  Reboot the computer when finished.

  The decryption process could take several hours, depending on the number of drives being decrypted and the amount of data on those drives. To check the decryption process, see Check Encryption Removal Agent Status.

Uninstall Encryption Management Agent

Choose an Uninstallation Method

There are two methods to uninstall the Encryption Management Agent, select **one** of the following:

- Uninstall Interactively
- Uninstall from the Command-Line

Uninstall Interactively

1. Go to *Uninstall a Program* in the Windows Control Panel (in the search box on the taskbar, type **Control Panel**, and then select **Control Panel** from the results).
2. Highlight **Dell Encryption Management Agent** and left-click **Change** to launch the Setup Wizard.
3. Read the Welcome screen and click **Next**.
4. Follow the prompts to uninstall and click **Finish**.
5. Restart your computer and log on to Windows.

Client Security Framework is uninstalled.

Uninstall from the Command-Line

- Once extracted from the master installer, the Encryption Management Agent installer can be located at `C:\extracted\Encryption Management Agent\EMAgent_XXbit_setup.exe`.
- The following example silently uninstalls SED management.

  ```
  EMAgent_XXbit_setup.exe /x /s /v" /qn"
  ```

  Shut down and restart the computer when finished.

9

Data Security Uninstaller

Uninstall Encryption Personal

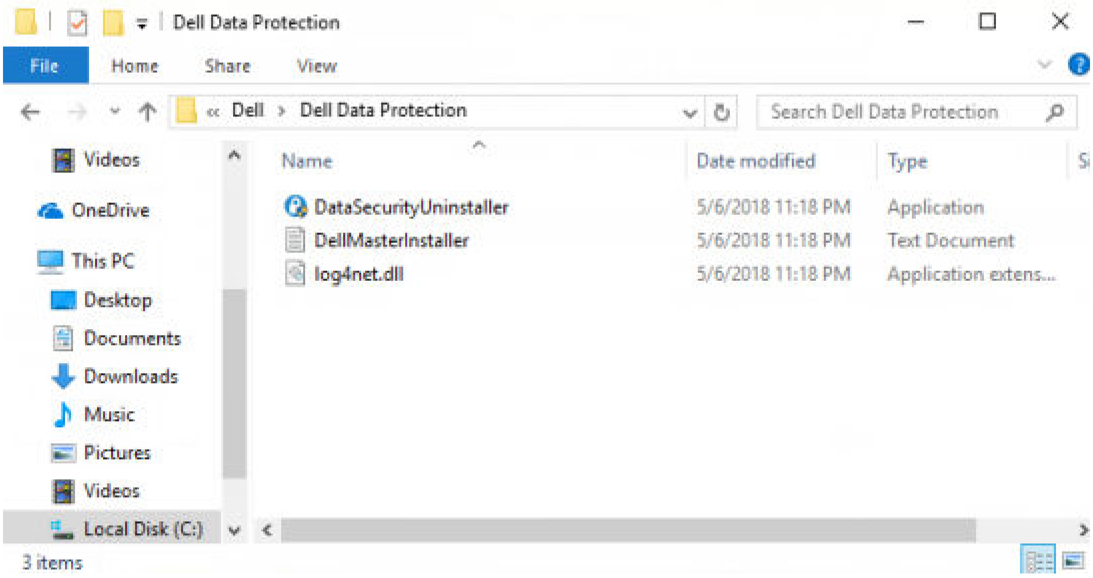
Dell provides the Data Security Uninstaller as a master uninstaller. This utility gathers the currently installed products and removes them in the appropriate order.

This Data Security Uninstaller is available in: `C:\Program Files (x86)\Dell\Dell Data Protection`

For more information or to use command line interface (CLI), see KB article 125052.

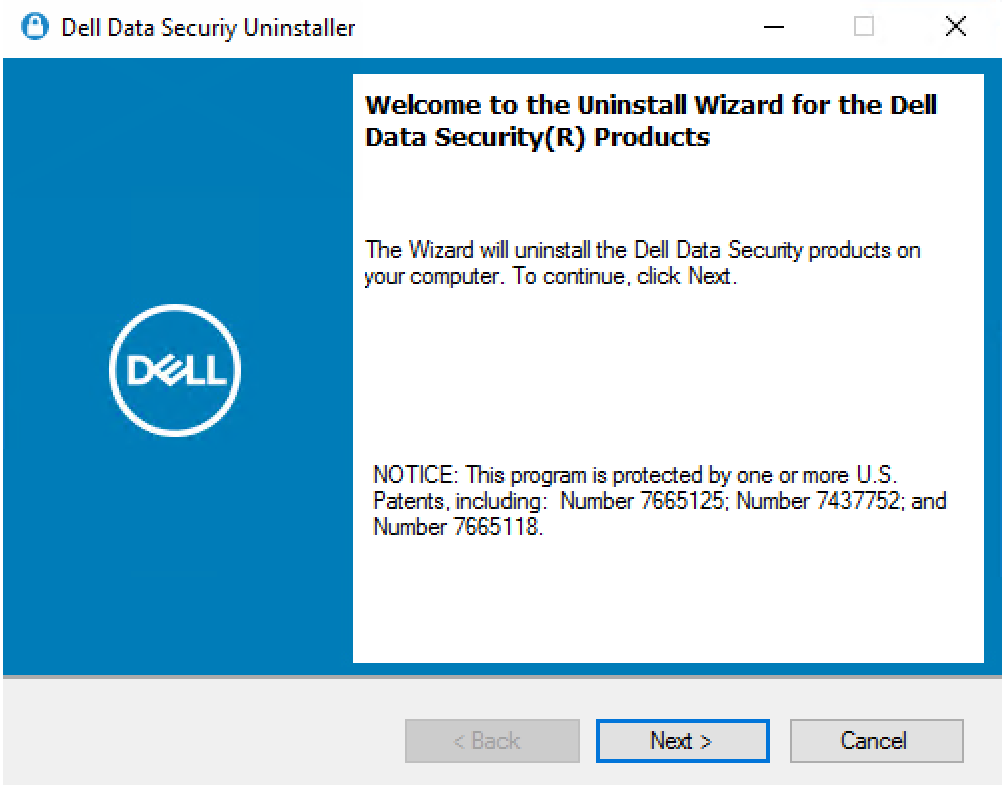
Logs are generated in `C:\ProgramData\Dell\Dell Data Protection\` for all of the components that are removed.

To run the utility, open the containing folder, right-click **DataSecurityUninstaller.exe**, and select **Run as administrator**.



Name	Date modified	Type
DataSecurityUninstaller	5/6/2018 11:18 PM	Application
DellMasterInstaller	5/6/2018 11:18 PM	Text Document
log4net.dll	5/6/2018 11:18 PM	Application extens...

Click **Next**.



Dell Data Securiy Uninstaller

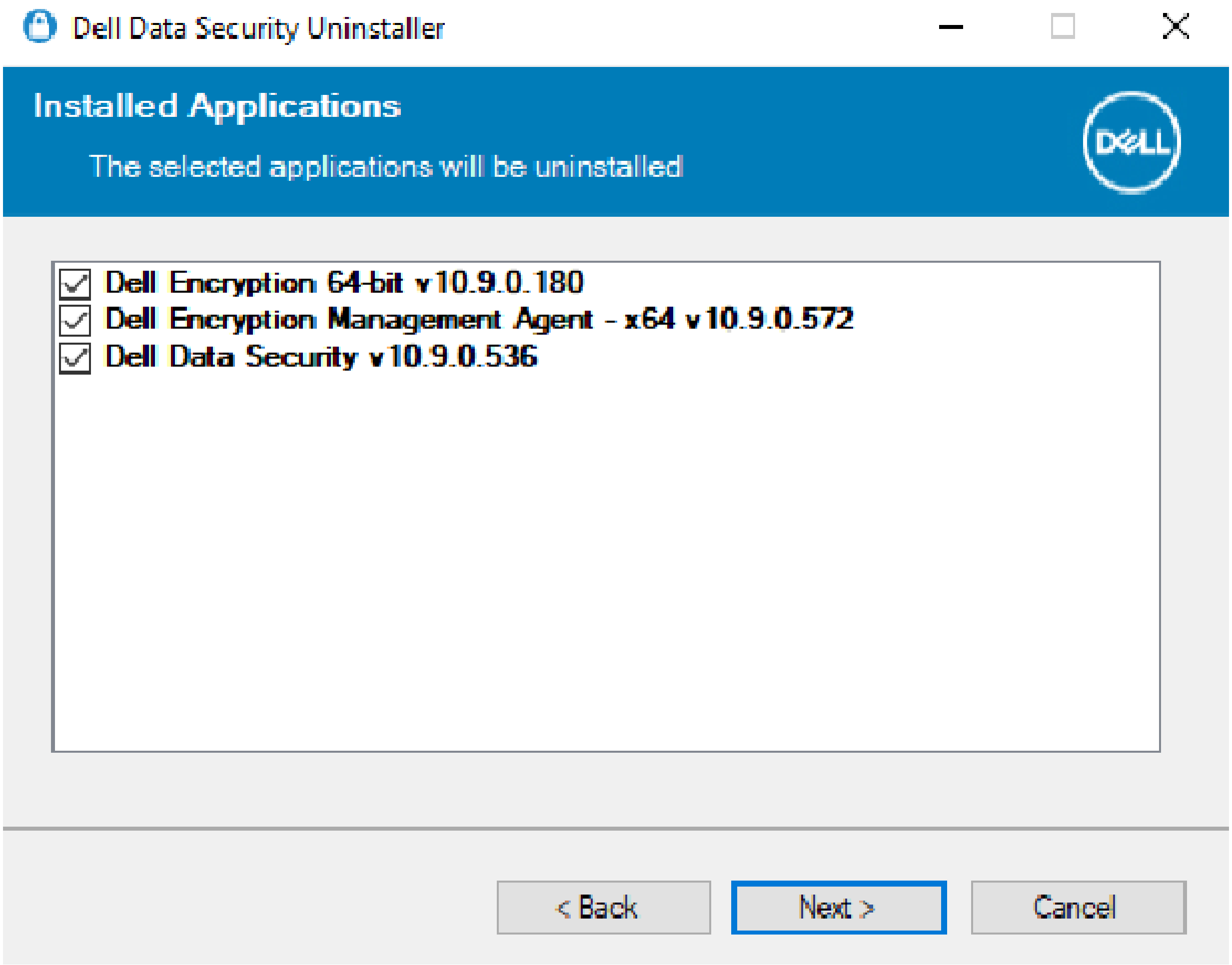
Welcome to the Uninstall Wizard for the Dell Data Security(R) Products

The Wizard will uninstall the Dell Data Security products on your computer. To continue, click Next.

NOTICE: This program is protected by one or more U.S. Patents, including: Number 7665125; Number 7437752; and Number 7665118.

Optionally clear any application from removal and click **Next**.

Required dependencies are automatically selected or cleared.

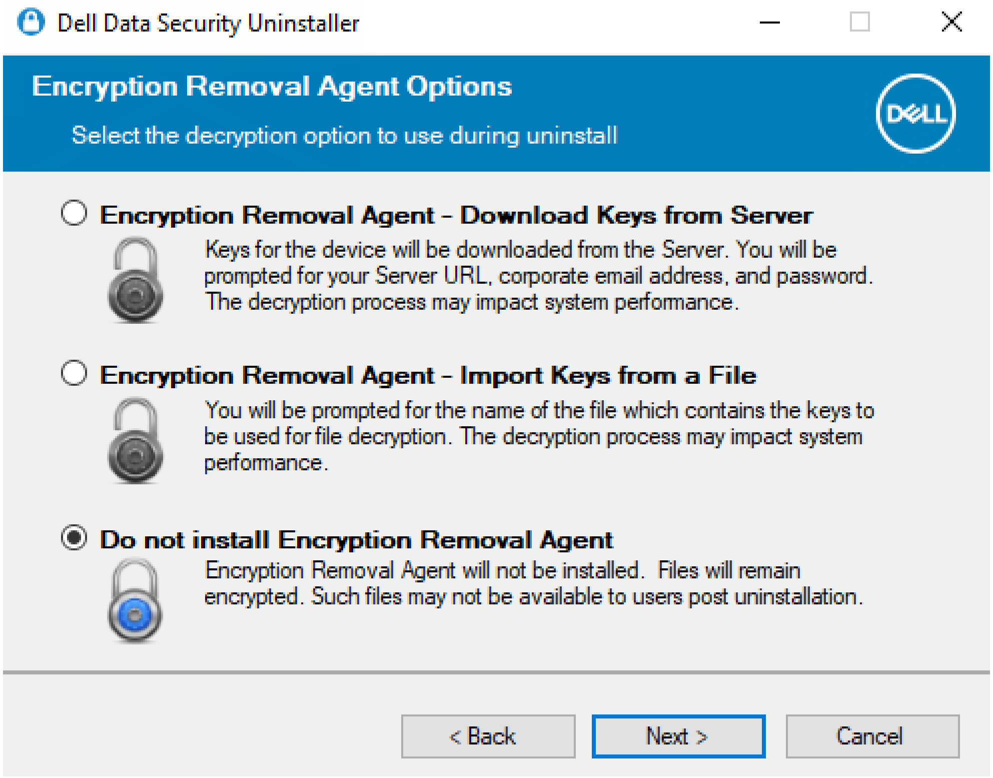

Dell Data Security Uninstaller

Installed Applications

The selected applications will be uninstalled

☑ Dell Encryption 64-bit v10.9.0.180
☑ Dell Encryption Management Agent - x64 v10.9.0.572
☑ Dell Data Security v10.9.0.536

To remove applications without installing the Encryption Removal Agent, choose **Do not install Encryption Removal Agent** and select **Next**.


Dell Data Security Uninstaller

Encryption Removal Agent Options

Select the decryption option to use during uninstall

○ Encryption Removal Agent - Download Keys from Server

Keys for the device will be downloaded from the Server. You will be prompted for your Server URL, corporate email address, and password. The decryption process may impact system performance.

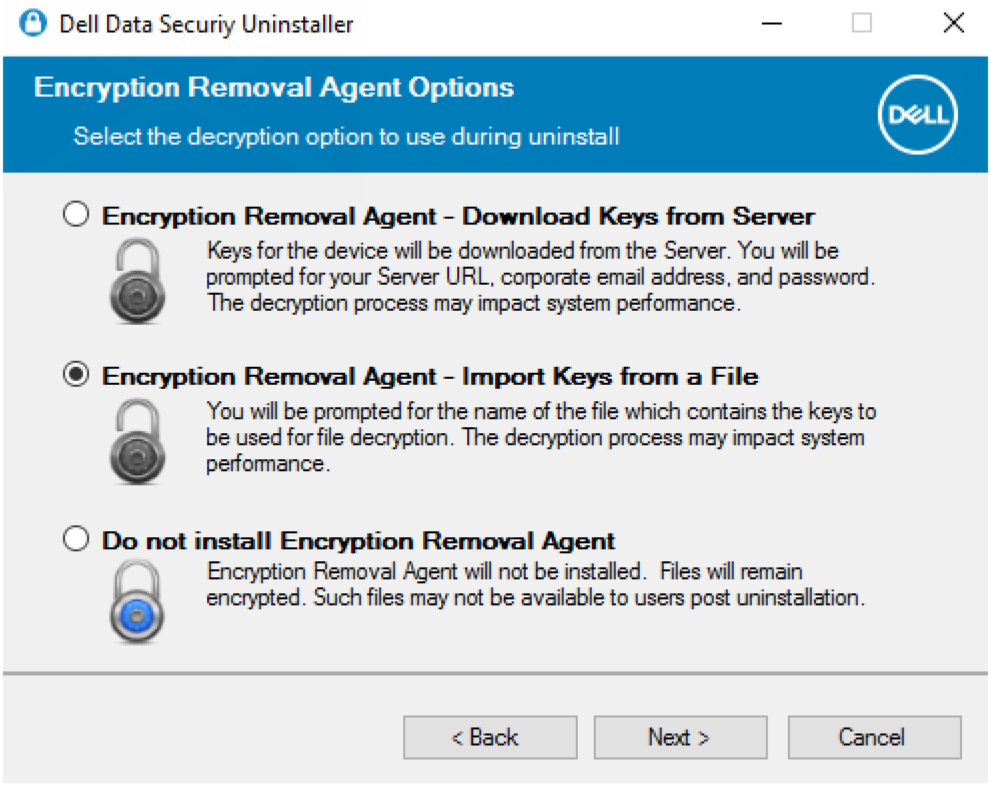
○ Encryption Removal Agent - Import Keys from a File

You will be prompted for the name of the file which contains the keys to be used for file decryption. The decryption process may impact system performance.

● Do not install Encryption Removal Agent

Encryption Removal Agent will not be installed. Files will remain encrypted. Such files may not be available to users post uninstallation.

Select **Encryption Removal Agent - Import Keys from a File** then select **Next**.



Dell Data Securiy Uninstaller

Encryption Removal Agent Options

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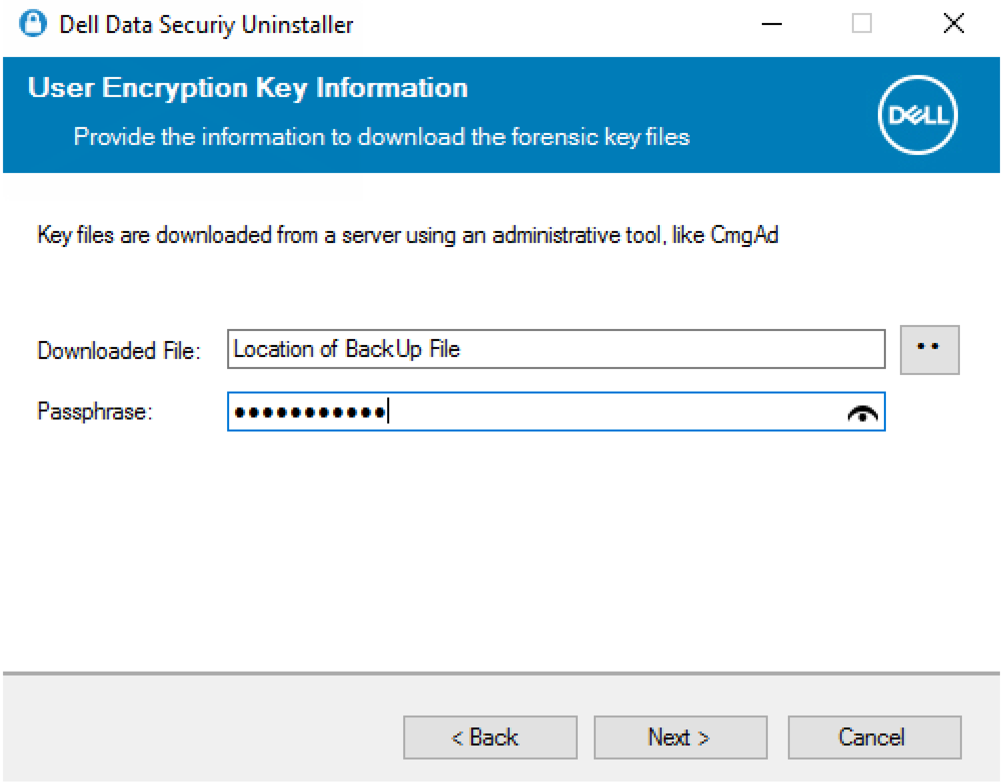
● Encryption Removal Agent - Import Keys from a File

You will be prompted for the name of the file which contains the keys to be used for file decryption. The decryption process may impact system performance.

○ Do not install Encryption Removal Agent

Encryption Removal Agent will not be installed. Files will remain encrypted. Such files may not be available to users post uninstallation.

Browse to the location of the recovery keys and then enter the Passphrase for the file and click **Next**.



Dell Data Securiy Uninstaller

User Encryption Key Information

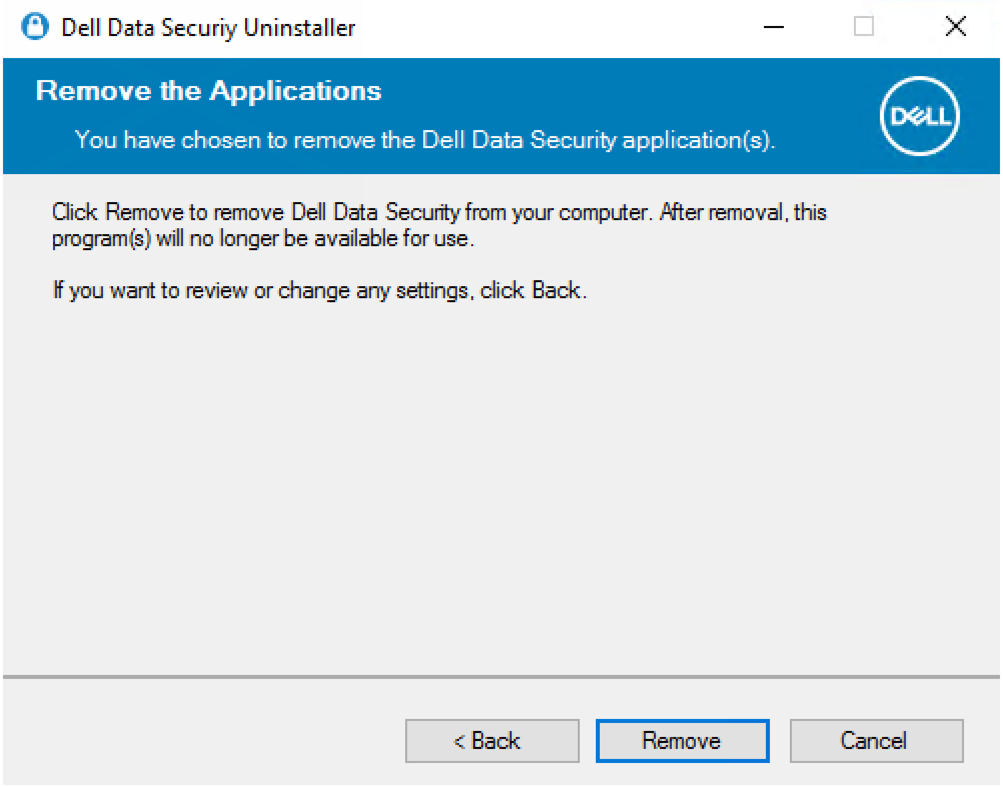
Provide the information to download the forensic key files

Key files are downloaded from a server using an administrative tool, like CmgAd

Downloaded File: Location of BackUp File

Passphrase: ●●●●●●●●●●●

Select **Remove** to begin the uninstall.



Dell Data Securiy Uninstaller

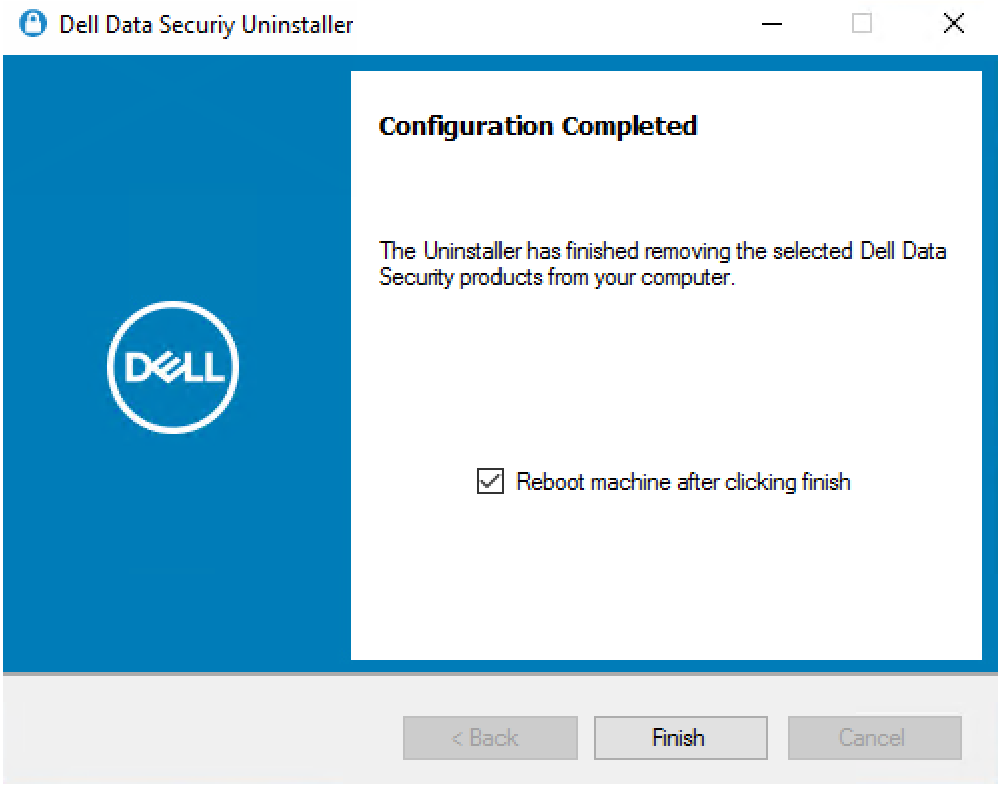
Remove the Applications

You have chosen to remove the Dell Data Security application(s).

Click Remove to remove Dell Data Security from your computer. After removal, this program(s) will no longer be available for use.

If you want to review or change any settings, click Back.

Click **Finish** to complete removal and reboot the computer. **Reboot machine after clicking finished** is selected by default.



Dell Data Securiy Uninstaller

Configuration Completed

The Uninstaller has finished removing the selected Dell Data Security products from your computer.

☑ Reboot machine after clicking finish

Uninstallation and removal is complete.

10

Policies and Template Descriptions

Tooltips display when you hover your mouse over a policy in the Local Management Console.

Policies

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
Fixed Storage Policies										
SDE Encryption Enabled	True								False	This policy is the "master policy" for all other System Data Encryption (SDE) policies. If this policy is False, no SDE encryption takes place, regardless of other policy values. A True value means that all data not encrypted by other Policy-Based Encryption policies are encrypted per the SDE Encryption Rules policy. Changing the value of this policy requires a reboot.
SDE Encryption Algorithm	AES256									AES-256, AES-128
SDE Encryption Rules										Encryption rules to be used to encrypt/not encrypt certain drives, directories, and folders. Contact Dell ProSupport for guidance if you are unsure about changing the default values.
General Settings Policies										
Encryption Enabled	True							False		This policy is the "master policy" for all General Settings policies. A False

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										value means that no encryption takes place, regardless of other policy values. A True value means that all encryption policies are enabled. Changing the value of this policy triggers a new sweep to encrypt/decrypt files.
Common Encrypted Folders										String - maximum of 100 entries of 500 characters each (up to a maximum of 2048 characters) A list of folders on endpoint drives to be encrypted or excluded from encryption, which can then be accessed by all managed users who have access to the endpoint. The available drive letters are: #: Refers to all drives f#: Refers to all fixed drives r#: Refers to all removable drives Important: Overriding directory protection can result in an unbootable computer and/or require reformatting drives. If the same folder is specified in both this policy and the User Encrypted Folders policy, this policy prevails.
Common Encryption Algorithm	AES256									AES-256, Rijndael 256, AES 128, Rijndael 128 System paging files are encrypted using AES-128.

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
Application Data Encryption List	winword.exe excel.exe powerpnt.exe msaccess.exe winproj.exe outlook.exe acrobat.exe visio.exe mspub.exe notepad.exe wordpad.exe winzip.exe winrar.exe onenote.exe onenotem.exe									String - maximum of 100 entries of 500 characters each Dell recommends not adding explorer.exe or iexplorer.exe to the ADE list, as unexpected or unintended results may occur. However, explorer.exe is the process used to create a new Notepad file on the desktop using the right-click menu. Setting encryption by file extension, instead of the ADE list, provides more comprehensive coverage. List process names of applications (without paths) whose new files you want encrypted, separated by carriage returns. Do not use wildcards. Dell recommends not listing applications/ installers that write system-critical files. Doing so could result in encryption of important system files, which could make a computer unbootable. Common process names: outlook.exe, winword.exe, powerpnt.exe, msaccess.exe, wordpad.exe, mspaint.exe, excel.exe The following hard-coded system and installer process names are ignored if specified in this policy: hotfix.exe, update.exe, setup.exe, msiexec.exe, wuauclt.exe, wmiprvse.exe, migrate.exe, unregmp2.exe, ikernel.exe, wssetup.exe, svchost.exe

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
Application Data Encryption Key	Common									Common or User Choose a key to indicate who can access files encrypted by Application Data Encryption List, and where. Common for these files to be accessible to all managed users on the endpoint where they were created (the same level of access as Common Encrypted Folders), and encrypted with the Common encryption algorithm. User for these files to be accessible only to the user who created them, only on the endpoint where they were created (the same level of access as User Encrypted Folders), and encrypted with the User encryption algorithm. Changes to this policy do not affect files already encrypted because of this policy.
Encrypt Outlook Personal Folders	True							False		True encrypts Outlook Personal Folders.
Encrypt Temporary Files	True							False		True encrypts the paths listed in the environment variables TEMP and TMP with the User data encryption key.
Encrypt Temporary Internet Files	True	False								True encrypts the path listed in the environment variable CSIDL_INTERNET_CACHE with the User data encryption key. To reduce encryption sweep time, the client clears the contents of

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										CSIDL_INTERNET_CACHE for initial encryption, as well as updates to this policy. This policy is applicable when using Microsoft Internet Explorer only.
Encrypt User Profile Documents	True								False	True encrypts: • The users profile (`C:\Users\jsmith`) with the User data encryption key • \Users\Public with the Common encryption key
Encrypt Windows Paging File	True								False	True encrypts the Windows paging file. A change to this policy requires a reboot.
Managed Services										String - maximum of 100 entries of 500 characters each (up to a maximum of 2048 characters) When a service is managed by this policy, the service is started only after the user is logged in and the client is unlocked. This policy also ensures that the service managed by this policy is stopped before the client is locked during logoff. This policy can also prevent a user logoff if a service is unresponsive. Syntax is one service name per line. Spaces in the service name are supported. Wildcards are not supported. Managed services are not started if an unmanaged user logs on.

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
Secure Post-Encryption Cleanup	Three Pass Overwrite	Single Pass Overwrite							No Overwrite	No Overwrite, Single-pass Overwrite, Three-pass Overwrite, Seven-pass Overwrite Once folders specified via other policies in this category have been encrypted, this policy determines what happens to the unencrypted residue of the original files: • No Overwrite deletes it. This value yields the fastest encryption processing. • Single-pass Overwrite overwrites it with random data. • Three-pass Overwrite overwrites it with a standard pattern of 1s and 0s, then with its complement, and then with random data. • Seven-pass Overwrite overwrites it with a standard pattern of 1s and 0s, then with its complement, and then with random data five times. This value makes it most difficult to recover the original files from memory, and yields the most secure encryption processing.
Secure Windows Hibernation File	True					False		True	False	When enabled, the hibernation file is encrypted only when the computer enters hibernation. The client disengages protection when the computer comes out of hibernation, providing protection without impacting users or applications while the computer is in use.

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
Prevent Unsecured Hibernation	True					False		True	False	When enabled, the client does not allow computer hibernation if the client is unable to encrypt the hibernation data.
Workstation Scan Priority	High	Norm								Highest, High, Normal, Low, Lowest Specifies the relative Windows priority of encrypted folder scanning.
User Encrypted Folders										String - maximum of 100 entries of 500 characters each (up to a maximum of 2048 characters) A list of folders on the endpoint hard drive to be encrypted with the User data encryption key or excluded from encryption. This policy applies to all drives classified by Windows as Hard Disk Drives. You cannot use this policy to encrypt drives or removable media whose type displays as Removable Disk, use EMS Encrypt External Media instead.
User Encryption Algorithm	AES256									AES 256, Rijndael 256, AES 128, Rijndael 128 Encryption algorithm used to encrypt data at the individual user level. You can specify different values for different users of the same endpoint.
User Data Encryption Key	User	Common		User	Common				User	Common or User Choose a key to indicate who can access files encrypted by the following policies, and where: · User Encrypted Folders · Encrypt Outlook Personal folders

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										• Encrypt Temporary Files (\Documents and Settings\username\Local Settings\Temp only) • Encrypt Temporary Internet Files • Encrypt User Profile Documents Select: • Common for User Encrypted Files/Folders to be accessible by all managed users on the endpoint where they were created (the same level of access as Common Encrypted Folders), and encrypted with the Common encryption algorithm. • User for these files to be accessible only to the user who created them, only on the endpoint where they were created (the same level of access as User Encrypted Folders), and encrypted with the User encryption algorithm. If you elect to incorporate an encryption policy to encrypt entire disk partitions, it is recommended to use the default SDE encryption policy, rather than Common or User. This ensures that any operating system files that are encrypted are accessible during states when the managed user is not logged in.
Hardware Crypto Accelerator (supported only with v8.3 through v8.9.1 Encryption clients)										
Hardware Crypto Accelerator (HCA)	False									This policy is the “master policy” for all other Hardware Crypto Accelerator (HCA) policies.

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										If this policy is False, no HCA encryption takes place, regardless of other policy values. HCA policies can only be used on computers equipped with a Hardware Crypto Accelerator.
Volumes Targeted for Encryption	All Fixed Volumes									All Fixed Volumes or System Volume Only Specify which volume(s) to target for encryption.
Forensic Meta Data Available on HCA Encrypted Drive	False									True or False When True, forensics meta data is included on the drive to facilitate forensics. Meta data included: ● Machine ID (MCID) of the current machine ● Device ID (DCID/ SCID) of the current Encryption client installation When False, forensics meta data is not included on the drive. Switching from False to True re-sweeps, based on the policies to add forensics.
Allow User Approval of Secondary Drive Encryption	False									True allows users to decide if additional drives are encrypted.
Encryption Algorithm	AES256									AES-256 or AES-128
Port Control Policies										

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
Port Control System	Disabled									Enable or Disable all Port Control System policies. If this policy is set to Disable, no Port Control System policies are applied, regardless of other Port Control System policies values. PCS policies require a reboot before the policy takes effect. **NOTE:** Blocking device operations results in device names displaying blank.
Port: Express Card Slot	Enabled									Enable, Disable, or Bypass ports exposed through the Express Card Slot.
Port: eSATA	Enabled									Enable, Disable, or Bypass port access to external SATA ports.
Port: PCMCIA	Enabled									Enable, Disable, or Bypass port access to PCMCIA ports.
Port: Firewire (1394)	Enabled									Enable, Disable, or Bypass port access to external Firewire (1394) ports.
Port: SD	Enabled									Enable, Disable, or Bypass port access to SD card ports.
Subclass Storage: External Drive Control	Blocked	Read Only			Full Access			Read Only	Full Access	CHILD of Class: Storage. Class: Storage must be set to Enabled to use this policy. This policy has interactions with PCS. See Encryption External Media and PCS Interactions. Full Access: External Drive port does not have read/write data restrictions applied

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										Read Only: Allows read capability. Write data is disabled Blocked: Port is blocked from read/write capability This policy is endpoint-based and cannot be overridden by user policy.
Port: Memory Transfer Device (MTD)	Enabled									Enable, Disable, or Bypass access to Memory Transfer Device (MTD) ports.
Class: Storage	Enabled									PARENT to the next 3 policies. Set this policy to Enabled to use the next 3 Subclass Storage polices. Setting this policy to Disabled disables all 3 Subclass Storage policies - no matter what their value.
Subclass Storage: Optical Drive Control	Read Only	UDF Only				Full Access		UDF Only	Full Access	CHILD of Class: Storage. Class: Storage must be set to Enabled to use this policy. Full Access: Optical Drive port does not have read/write data restrictions applied UDF Only: Blocks all data writes that are not in the UDF format (CD/DVD burning, ISO burning). Read data is enabled. Read Only: Allows read capability. Write data is disabled Blocked: Port is blocked from read/write capability This policy is endpoint-based and cannot be overridden by user policy. Universal Disk Format (UDF) is an implementation of the specification known as ISO/IEC 13346 and

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										ECMA-167 and is an open vendor-neutral file system for computer data storage for a broad range of media. This policy has interactions with PCS. See Encryption External Media and PCS Interactions.
Subclass Storage: Floppy Drive Control	Blocked	Read Only				Full Access		Read Only	Full Access	CHILD of Class: Storage. Class: Storage must be set to Enabled to use this policy. Full Access: Floppy Drive port does not have read/write data restrictions applied Read Only: Allows read capability. Write data is disabled Blocked: Port is blocked from read/write capability This policy is endpoint-based and cannot be overridden by user policy.
Class: Windows Portable Device (WPD)	Enabled									PARENT to the next policy. Set this policy to Enabled to use the Subclass Windows Portable Device (WPD): Storage policy. Setting this policy to Disabled disables the Subclass Windows Portable Device (WPD): Storage policy - no matter what its value. Control access to all Windows Portable Devices.
Subclass Windows Portable Device (WPD): Storage	Enabled									CHILD of Class: Windows Portable Device (WPD) Class: Windows Portable Device (WPD) must be set to Enabled to use this policy. Full Access: Port does not have read/write data restrictions applied.

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										Read Only: Allows read capability. Write data is disabled. Blocked: Port is blocked from read/write capability.
Class: Human Interface Device (HID)	Enabled									Control access to all Human Interface Devices (keyboards, mice). **Note:** USB port-level blocking and HID class-level blocking is only honored if the computer chassis type can be identified as a laptop/ notebook form-factor. The computer's BIOS is relied on for the identification of the chassis.
Class: Other	Enabled									Control access to all devices not covered by other Classes.
Removable Storage Policies										
EMS Encrypt External Media	True					False		True	False	This policy is the "master policy" for all Removable Storage policies. A False value means that no encryption of removable storage takes place, regardless of other policy values. A True value means that all Removable Storage encryption policies are enabled. This policy has interactions with PCS. See Encryption External Media and PCS Interactions.
EMS Exclude CD/DVD Encryption	False								True	False encrypts CD/DVD devices. This policy has interactions with PCS. See Encryption External Media and PCS Interactions.

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
EMS Access to unShielded Media	Block		Read only			Full Access		Read only	Full Access	Block, Read Only, Full Access This policy has interactions with PCS. See Encryption External Media and PCS Interactions. When this policy is set to Block Access, you have no access to removable storage unless it is encrypted. Choosing either Read-Only or Full Access allows you to decide what removable storage to encrypt. If you choose not to encrypt removable storage and this policy is set to Full Access, you have full read/ write access to removable storage. If you choose not to encrypt removable storage and this policy is set to Read-Only, you cannot read or delete existing files on the unencrypted removable storage, but the client does not allow any files to be edited on, or added to, the removable storage unless it is encrypted.
EMS Encryption Algorithm	AES256									AES-256, Rijndael 256, AES-128, Rijndael 128
EMS Scan External Media	True	False								True allows removable media to be scanned every time it is inserted. When this policy is False and the EMS Encrypt External Media policy is True, only new and changed files are encrypted. A scan occurs at every insertion so that any files added to the

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										removable media without authenticating can be caught. Files can be added to the media if authentication is declined, but encrypted data cannot be accessed. The files added are not encrypted in this case, so the next time the media is authenticated (to work with encrypted data), any files that may have been added are scanned and encrypted.
EMS Access Encrypted Data on unShielded Device	True									True allows the user to access encrypted data on removable storage whether the endpoint is encrypted or not.
EMS Device Whitelist										This policy allows the specification of removable media devices to exclude from encryption. Any removable media devices not on this list are protected. Maximum of 150 devices with a maximum of 500 characters per PNPDeviceID. Maximum of 2048 total characters allowed. To find the PNPDeviceID for removable storage: 1. Insert the removable storage device into a Encrypted computer. 2. Open the EMSService.log in C:\Programdata\Dell\Dell Data Protection\Encryption\EMS. 3. Find "PNPDeviceID=" For example: 14.03.18 18:50:06.834 [I] [Volume "F:\"] PnPDeviceID =

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										USBSTOR\DISK&VEN_SEAGATE&PROD_USB&REV_0409\2HC015KJ&0 Specify the following in the EMS Device Whitelist policy: VEN=Vendor (Ex: USBSTOR\DISK&VEN_SEAGATE) PROD=Product/Model Name (Ex: &PROD_USB); also excludes from EMS Encryption all of Seagate's USB drives; a VEN value (Ex: USBSTOR\DISK&VEN_SEAGATE) must precede this value REV=Firmware Revision (Ex: &REV_0409); also excludes the specific model being used; VEN and PROD values must precede this value Serial number (Ex: \2HC015KJ&0); excludes only this device; VEN, PROD, and REV values must precede this value Allowed Delimiters: Tabs, Commas, Semi colons, Hex character 0x1E (Record separator character)
EMS Alpha Characters Required in Password	True									True requires one or more letters in the password.
EMS Mixed Case Required in Password	True	False								True requires at least one uppercase and one lowercase letter in the password.

<table>
<tr><th>Policy</th><th>Aggressive Protection for All Fixed Drives and External Drives</th><th>PCI Regulation</th><th>Data Breach Regulation</th><th>HIPAA Regulation</th><th>Basic Protection for All Fixed Drives and Ext Drives (Default)</th><th>Basic Protection for All Fixed Drives</th><th>Basic Protection for System Drive Only</th><th>Basic Protection for External Drives</th><th>Encryption Disabled</th><th>Description</th></tr>
<tr><td>EMS Number of Characters. Required in Password</td><td colspan="5">8</td><td colspan="2">6</td><td colspan="2">8</td><td>1-40 characters
Minimum number of characters required in the password.</td></tr>
<tr><td>EMS Numeric Characters Required in Password</td><td>True</td><td colspan="8">False</td><td>True requires one or more numeric characters in the password.</td></tr>
<tr><td>EMS Password Attempts Allowed</td><td>2</td><td colspan="4">3</td><td colspan="2">4</td><td colspan="2">3</td><td>1-10
Number of times the user can attempt to enter the correct password.</td></tr>
<tr><td>EMS Special Characters Required in Password</td><td>True</td><td colspan="7">False</td><td>True</td><td>True requires one or more special characters in the password.</td></tr>
<tr><td>EMS Cooldown Time Delay</td><td colspan="9">30</td><td>0-5000 seconds
Number of seconds the user must wait between the first and second rounds of access code entry attempts.</td></tr>
<tr><td>EMS Cooldown Time Increment</td><td>30</td><td colspan="4">20</td><td>10</td><td>30</td><td colspan="2">10</td><td>0-5000 seconds
Incremental time to add to the previous cooldown time after each unsuccessful round of access code entry attempts.</td></tr>
<tr><td>EMS Encryption Rules</td><td colspan="9"></td><td>Encryption rules to encrypt/not encrypt certain drives, directories, and folders.</td></tr>
</table>

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										A total of 2048 characters are allowed. Space and Enter characters used to add lines between rows count as characters used. Any rules exceeding the 2048 limit are ignored. Storage devices which incorporate multi-interface connections, such as Firewire, USB, eSATA, etc. may require the use of both Encryption External Media and encryption rules to encrypt the device. This is necessary due to differences in how the Windows operating system handles storage devices based on interface type. See How to Encrypt an iPod with Encryption External Media.
EMS Block Access to UnShieldable Media	True								False	Block access to any removable media that is less than 55 MB and thus has insufficient storage capacity to host Encryption External Media (such as a 1.44MB floppy disk). All access is blocked if EMS and this policy are both True. If EMS Encrypt External Media is True, but this policy is False, data can be read from the unencryptable media, but write access to the media is blocked. If EMS Encrypt External Media is False, then this policy has no effect and access to unencryptable media is not impacted.
User Experience Control Policies										

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
Force Reboot on Update	True								False	Setting the value to True causes the computer to immediately reboot to allow processing of encryption or updates related to device-based policy, such as System Data Encryption (SDE).
Length of Each Reboot Delay	5	10				20		15		The number of minutes to delay when the user chooses to delay reboot for device-based policy.
Number of Reboot Delays Allowed	1					5		3		The number of times the user is allowed to delay reboot for device-based policy.
Suppress File Contention Notification	False									This policy controls whether users see notification pop-ups if an application attempts to access a file while the client is processing it.
Display Local Encryption Processing Control	False		True					False		Setting the value to True allows the user to see a menu option in the notification area icon that allows them to pause/resume encryption/ decryption (depending on what Encryption is currently doing). Allowing a user to pause encryption could allow the user to prevent the Encryption client from fully encrypting or decrypting data per policy.
Allow Encryption Processing Only When Screen is Locked	False		User-Optional					False		True, False, User-Optional When True, there is no encryption or decryption of data while the user is actively working. The client only processes data when the screen is locked. User-Optional adds an option to the notification

Policy	Aggressive Protection for All Fixed Drives and External Drives	PCI Regulation	Data Breach Regulation	HIPAA Regulation	Basic Protection for All Fixed Drives and Ext Drives (Default)	Basic Protection for All Fixed Drives	Basic Protection for System Drive Only	Basic Protection for External Drives	Encryption Disabled	Description
										area icon allowing the user to turn this feature on or off. When False, encryption processing occurs any time, even while the user is working. Enabling this option significantly extends the amount of time it takes to complete encryption or decryption.

Template Descriptions

Aggressive Protection for All Fixed Drives and External Drives

This policy template is designed for organizations with a primary goal of enforcing strong security and risk avoidance across the entire enterprise. It is best used when security is significantly more important than usability and the need for less secure policy exceptions for specific users, groups or devices is minimal.

This policy template:

- is a highly restricted configuration, providing greater protection.
- provides protection of the System Drive and all Fixed Drives.
- encrypts all data on removable media devices, and prevents the use of non-encrypted removable media devices.
- provides read-only optical drive control.

PCI Regulation Targeted

Payment Card Industry Data Security Standard (PCI DSS) is a multi-faceted security standard that includes requirements for security management, policies, procedures, network architecture, software design, and other critical protective measures. This comprehensive standard is intended to set the guidelines for organizations to proactively protect customer account data.

This policy template:

- provides protection of the System Drive and all Fixed Drives.
- prompts users to encrypt removable media devices.
- provides the ability to write only UDF CD/DVDs. Port control configuration allows read access to all optical drives.

Data Breach Regulation Targeted

The Sarbanes-Oxley Act requires adequate controls for financial information. Because much of this information resides in electronic format, encryption is a key control point when this data is stored or transferred. The Gramm-Leach-Bliley (GLB) Act (also known as the Financial Services Modernization Act) guidelines do not require encryption. However, the Federal Financial Institutions Examination Council (FFIEC) recommends that, "Financial institutions should employ encryption to mitigate the risk of disclosure or alteration of sensitive information in storage and transit." California Senate Bill 1386 (California's Database

Security Breach Notification Act) aims to protect California residents from identity theft by requiring organizations that have had computer security breaches to notify all affected individuals. The only way an organization can avoid notifying customers is to be able to prove all personal information was encrypted prior to a security breach.

This policy template:

- provides protection of the System Drive and all Fixed Drives.
- prompts users to encrypt removable media devices.
- provides the ability to write only UDF CD/DVDs. Port control configuration allows read access to all optical drives.

HIPAA Regulation Targeted

The Health Insurance Portability and Accountability Act (HIPAA) mandates that healthcare organizations implement a number of technical safeguards to protect the confidentiality and integrity of all individually identifiable health information.

This policy template:

- provides protection of the System Drive and all Fixed Drives.
- prompts users to encrypt removable media devices.
- provides the ability to write only UDF CD/DVDs. Port control configuration allows read access to all optical drives.

Basic Protection for All Fixed Drives and External Drives (Default)

This policy template provides the recommended configuration, which provides a high level of protection without significantly impacting system usability.

This policy template:

- provides protection of the System Drive and all Fixed Drives.
- prompts users to encrypt removable media devices.
- provides the ability to write only UDF CD/DVDs. Port control configuration allows read access to all optical drives.

Basic Protection for All Fixed Drives

This policy template:

- provides protection of the System Drive and all Fixed Drives.
- provides the ability to write CD/DVDs in any supported format. Port control configuration allows read access to all optical drives.

  This policy template does not:

- provide encryption for removable media devices.

Basic Protection for System Drive Only

This policy template:

- provides protection of the System Drive, typically the C: drive, where the operating system is loaded.
- provides the ability to write CD/DVDs in any supported format. Port control configuration allows read access to all optical drives.

  This policy template does not:

- provide encryption for removable media devices.

Basic Protection for External Drives

This policy template:

- provides protection of removable media devices.
- provides the ability to write only UDF CD/DVDs. Port control configuration allows read access to all optical drives.

This policy template does not:

- provide protection for the System Drive (typically the C: drive, where the operating system is loaded) or other Fixed Drives.

Encryption Disabled

This policy template does not provide encryption protection. Take additional measures to safeguard devices from loss and theft when using this template.

This template is useful for organizations that prefer to start with no active encryption to transition into security. As the organization becomes comfortable with their deployment, encryption can be enabled slowly by adjusting individual policies or by applying stronger templates for portions of or for the entire organization.

11

Extract Child Installers

- To install each client individually, extract the child executable files from the installer.
- If the master installer has been used to install, the clients must be uninstalled individually. Use this process to extract the clients from the master installer so that they can be used for uninstallation.

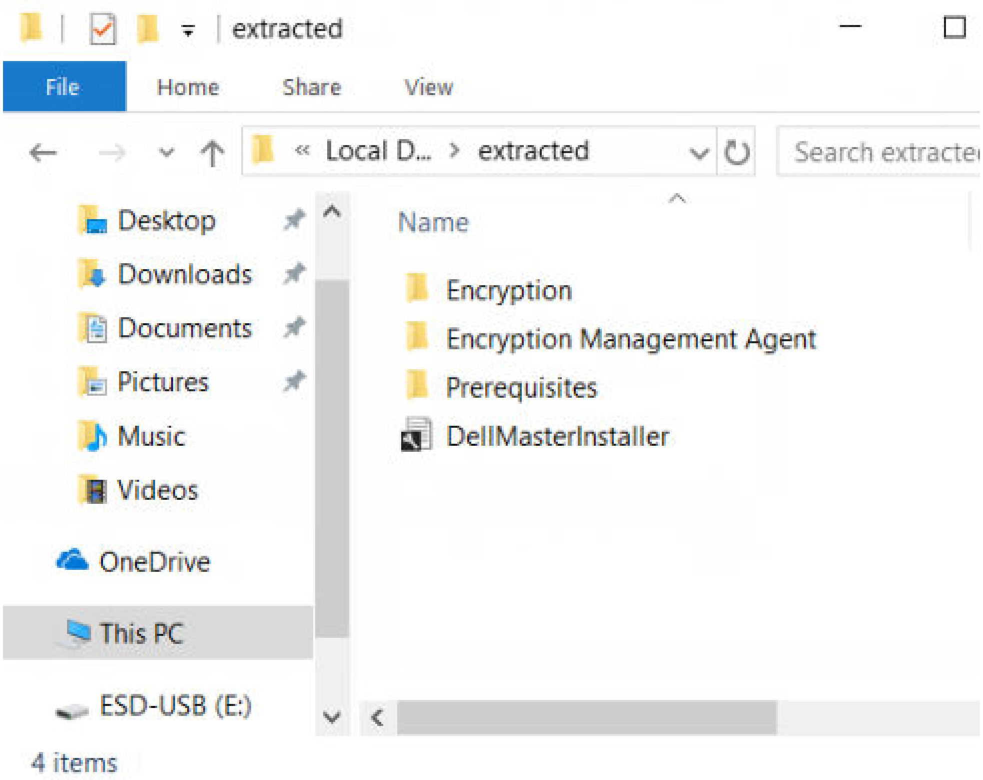
1. From the Dell installation media, copy the `DDSSetup.exe` file to the local computer.
2. Open a command prompt in the same location as the `DDSSetup.exe` file and enter:

   ```
   DDSSetup.exe /s /z"\"EXTRACT_INSTALLERS=C:\Extracted""
   ```

   The extraction path cannot exceed 63 characters.

   Before you begin installation, ensure that all prerequisites have been met and all required software has been installed for each child installer that you plan to install. Refer to Requirements for details.

   The extracted child installers are located at `C:\extracted\`.



Proceed to Troubleshooting.

12

Troubleshooting

Upgrading using Windows 10 or Windows 11 Feature Updates

To upgrade Windows 10 or Windows 11 using Feature Updates, follow the instructions in KB article 125419.

Dell Encryption Troubleshooting

(Optional) Create an Encryption Removal Agent Log File

- Before beginning the uninstall process, you can optionally create an Encryption Removal Agent log file. This log file is useful for troubleshooting an uninstall/decryption operation. If you do not intend to decrypt files during the uninstall process, you do not need to create this log file.
- The Encryption Removal Agent log file is not created until after the Encryption Removal Agent service runs, which does not happen until the computer is restarted. Once the client is successfully uninstalled and the computer is fully decrypted, the log file is permanently deleted.
- The log file path is `C:\ProgramData\Dell\Dell Data Protection\Encryption`.
- Create the following registry entry on the computer targeted for decryption.

  [HKLM\Software\Credant\DecryptionAgent]

  "LogVerbosity"=DWORD:2

  0: no logging

  1: logs errors that prevent the service from running

  2: logs errors that prevent complete data decryption (recommended level)

  3: logs information about all decrypting volumes and files

  5: logs debugging information

Find TSS Version

- TSS is a component that interfaces with the TPM. To find the TSS version, go to (default location) `C:\Program Files\Dell\Dell Data Protection\Drivers\TSS\bin > tcsd_win32.exe`. Right-click the file and select **Properties**. Verify the file version on the **Details** tab.

Encryption External Media and PCS Interactions

To Ensure Media is Not Read-Only and the Port is Not Blocked

The EMS Access to unShielded Media policy interacts with the Port Control System - Class: Storage > Subclass Storage: External Drive Control policy. If you intend to set the EMS Access to unShielded Media policy to *Full Access*, ensure that the Subclass Storage: External Drive Control policy is also set to *Full Access* to ensure that the media is not set to read-only and the port is not blocked.

To Encrypt Data Written to CD/DVD

- Set Windows Media Encryption = On.
- Set EMS Exclude CD/DVD Encryption = not selected.

- Set Subclass Storage: Optical Drive Control = UDF Only.

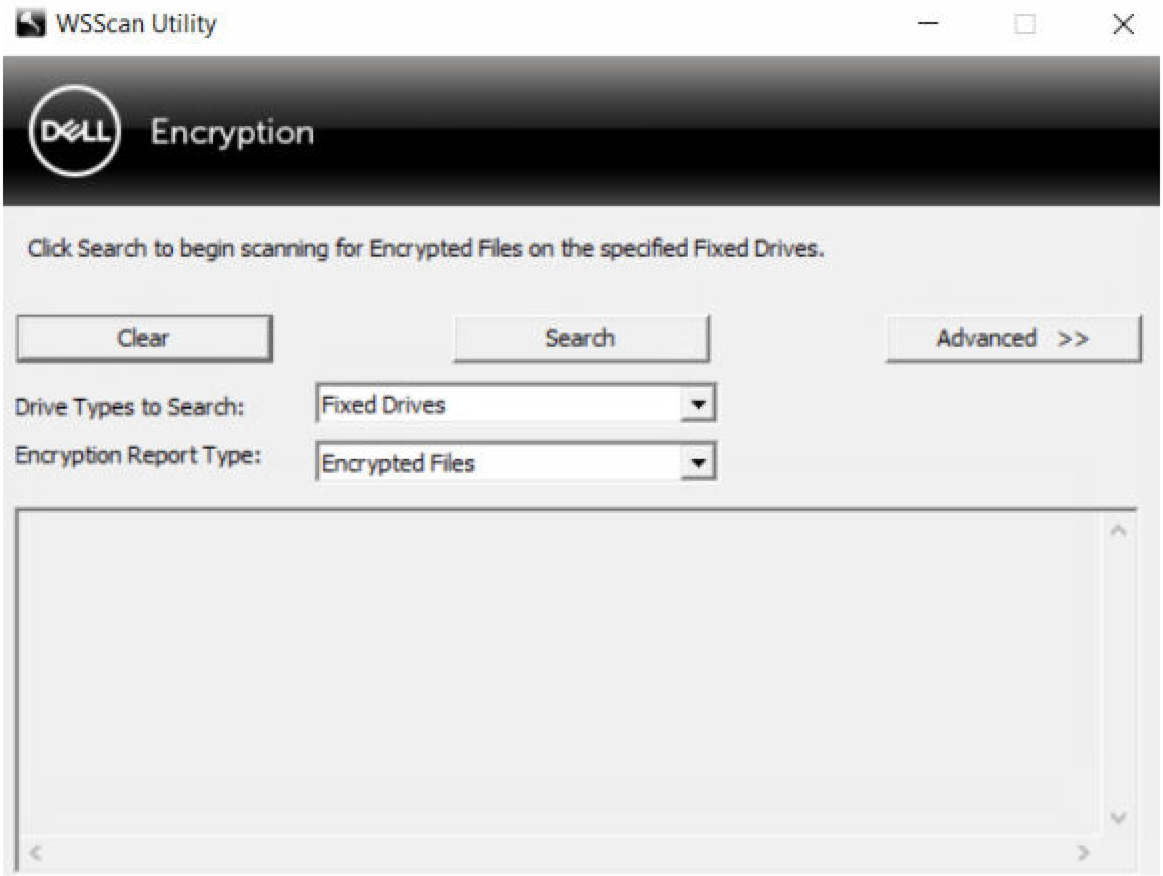
Use WSScan

- WSScan allows you to ensure that all data is decrypted when uninstalling Encryption as well as view encryption status and identify unencrypted files that should be encrypted.
- Administrator privileges are required to run this utility.

> **NOTE:** WSScan must be run in System Mode with the PsExec tool if a target file is owned by the system account.

Run WSScan

1. From the Dell installation media, copy WSScan.exe to the Windows computer to scan.
2. Launch a command line at the location above and enter **wsscan.exe** at the command prompt. WSScan launches.
3. Click **Advanced**.
4. Select the type of drive to scan: *All Drives, Fixed Drives*, *Removable Drives*, or *CDROMs/ DVDROMs*.
5. Select the Encryption Report Type: *Encrypted FIles*, *Unencrypted FIles*, *All FIles*, or *Unencrypted FIles in Violation*:
    - *Encrypted FIles* - To ensure that all data is decrypted when uninstalling Encryption. Follow your existing process for decrypting data, such as issuing a decryption policy update. After decrypting data, but before performing a restart in preparation for uninstall, run WSScan to ensure that all data is decrypted.
    - *Unencrypted FIles* - To identify files that are not encrypted, with an indication of whether the files should be encrypted (Y/N).
    - *All FIles* - To list all encrypted and unencrypted files, with an indication of whether the files should be encrypted (Y/N).
    - *Unencrypted FIles in Violation* - To identify files that are not encrypted that should be encrypted.
6. Click **Search**.



Click Search to begin scanning for Encrypted Files on the specified Fixed Drives.

Drive Types to Search: Fixed Drives

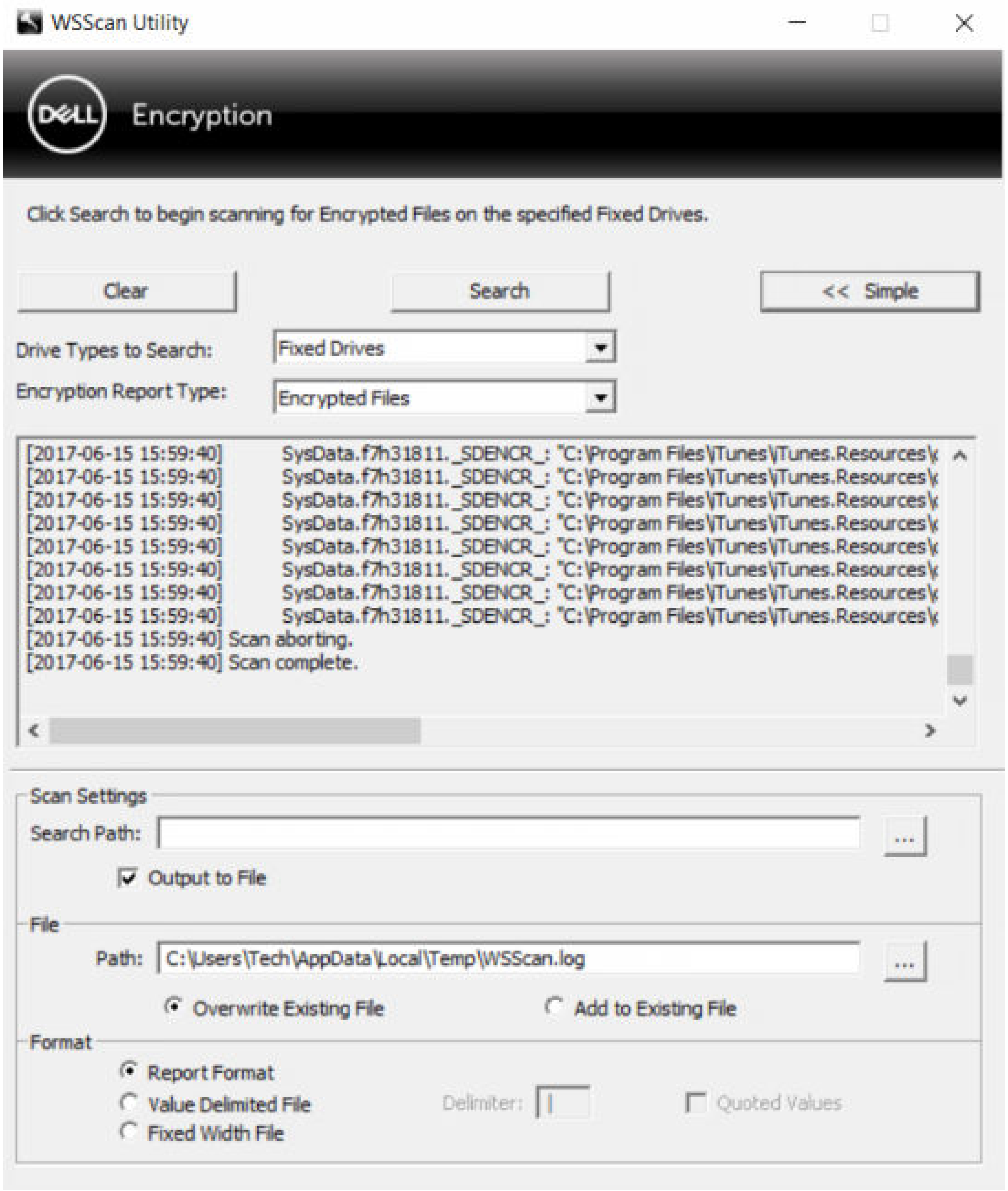
Encryption Report Type: Encrypted Files

OR

1. Click **Advanced** to toggle the view to **Simple** to scan a particular folder.
2. Go to Scan Settings and enter the folder path in the *Search Path* field. If this field is used, the selection in the menu is ignored.

3. If you do not want to write WSScan output to a file, clear the **Output to File** check box.
4. Change the default path and file name in *Path*, if desired.
5. Select **Add to Existing File** if you do not want to overwrite any existing WSScan output files.
6. Choose the output format:
   - Select Report Format for a report style list of scanned output. This is the default format.
   - Select Value Delimited File for output that can be imported into a spreadsheet application. The default delimiter is "|", although it can be changed to up to 9 alphanumeric, space, or keyboard punctuation characters.
   - Select the Quoted Values option to enclose each value in double quotation marks.
   - Select Fixed Width File for non-delimited output containing a continuous line of fixed-length information about each encrypted file.
7. Click **Search**.

   Click **Stop Searching** to stop your search. Click **Clear** to clear displayed messages.



Click Search to begin scanning for Encrypted Files on the specified Fixed Drives.

Drive Types to Search: Fixed Drives

Encryption Report Type: Encrypted Files

```
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40]      SysData.f7h31811._SDENCR_: "C:\Program Files\iTunes\iTunes.Resources\
[2017-06-15 15:59:40] Scan aborting.
[2017-06-15 15:59:40] Scan complete.
```

Scan Settings

Search Path:

☑ Output to File

File

Path: C:\Users\Tech\AppData\Local\Temp\WSScan.log

● Overwrite Existing File ○ Add to Existing File

Format

● Report Format
○ Value Delimited File
○ Fixed Width File

Delimiter: |

□ Quoted Values

WSScan Output

WSScan information about encrypted files contains the following information.

Example Output:

```
[2015-07-28 07:52:33] SysData.7vdlxrsb._SDENCR_: "c:\temp\Dell - test.log" is still AES256 encrypted
```

Output	Meaning
Date/time stamp	The date and time the file was scanned.
Encryption type	The type of encryption used to encrypt the file. **SysData:** SDE key. **User:** User encryption key. **Common:** Common encryption key. WSScan does not report files encrypted using Encrypt for Sharing.
KCID	The Key Computer ID. As shown in the example above, "**7vdlxrsb**" If you are scanning a mapped network drive, the scanning report does not return a KCID.
UCID	The User ID. As shown in the example above, "**_SDENCR_**" The UCID is shared by all the users of that computer.
File	The path of the encrypted file. As shown in the example above, "**c:\temp\Dell - test.log**"
Algorithm	The encryption algorithm being used to encrypt the file. As shown in the example above, "**is still AES256 encrypted**" RIJNDAEL 128 RIJNDAEL 256 AES-128 AES-256 3DES

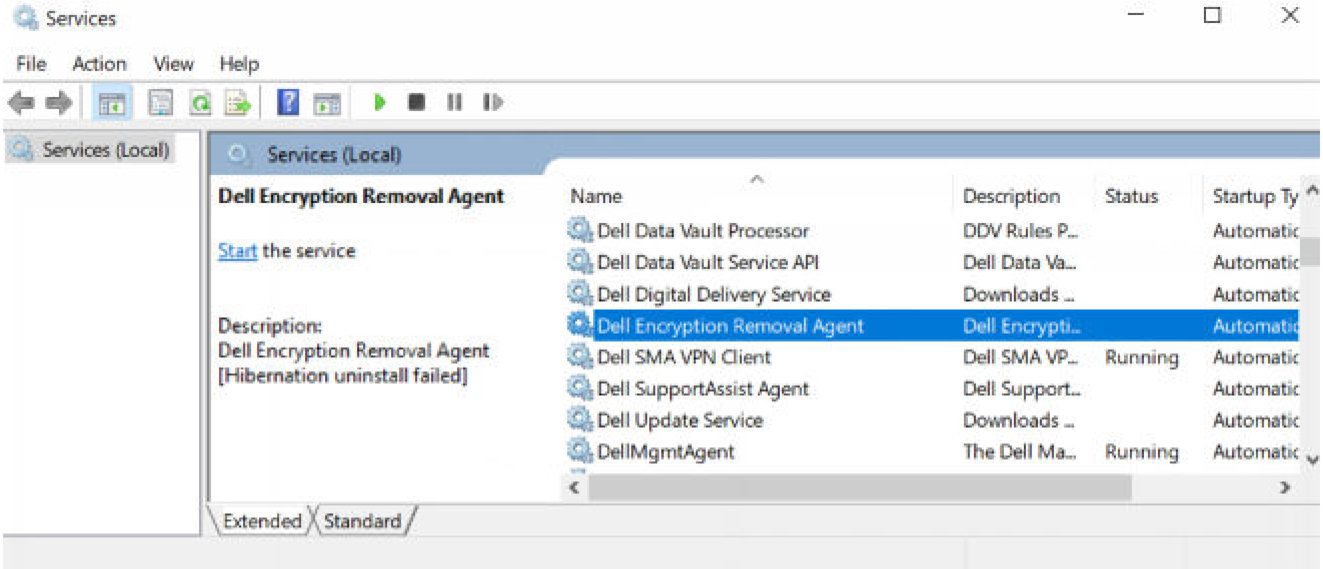
Check Encryption Removal Agent Status

The Encryption Removal Agent displays its status in the description area of the services panel (Start > Run > services.msc > OK) as follows. Periodically refresh the service (highlight the service > right-click > Refresh) to update its status.

- **Waiting for SDE Deactivation** - Encryption is still installed, is still configured, or both. Decryption does not start until Encryption is uninstalled.
- **Initial sweep** - The service is making an initial sweep, calculating the number of encrypted files and bytes. The initial sweep occurs one time.
- **Decryption sweep** - The service is decrypting files and possibly requesting to decrypt locked files.
- **Decrypt on Reboot (partial)** - The decryption sweep is complete and some locked files (but not all) are to be decrypted on the next restart.
- **Decrypt on Reboot** - The decryption sweep is complete and all locked files are to be decrypted on the next restart.
- **All files could not be decrypted** - The decryption sweep is complete, but all files could not be decrypted. This status means one of the following occurred:
    - The locked files could not be scheduled for decryption because they were too big, or an error occurred while making the request to unlock them.
    - An input/output error occurred while decrypting files.
    - The files could not be decrypted by policy.
    - The files are marked as should be encrypted.
    - An error occurred during the decryption sweep.

- In all cases, a log file is created (if logging is configured) when LogVerbosity=2 (or higher) is set. To troubleshoot, set the log verbosity to 2 and restart the Encryption Removal Agent service to force another decryption sweep.

- **Complete** - The decryption sweep is complete. The service, the executable, the driver, and the driver executable are all scheduled for deletion on the next restart.



Dell Encryption Removal Agent

Start the service

Description:
Dell Encryption Removal Agent
[Hibernation uninstall failed]

Name	Description	Status	Startup Ty
Dell Data Vault Processor	DDV Rules P...		Automatic
Dell Data Vault Service API	Dell Data Va...		Automatic
Dell Digital Delivery Service	Downloads ...		Automatic
Dell Encryption Removal Agent	Dell Encrypti...		Automatic
Dell SMA VPN Client	Dell SMA VP...	Running	Automatic
Dell SupportAssist Agent	Dell Support...		Automatic
Dell Update Service	Downloads ...		Automatic
DellMgmtAgent	The Dell Ma...	Running	Automatic

How to Encrypt an iPod with Encryption External Media

These rules disable or enable encryption for these folders and file types for all removable devices - not just an iPod. Use care when defining rules.

- Dell does not recommend the use of the iPod Shuffle, as unexpected results may occur.
- As iPods change, this information could also change, so caution is advised when allowing the use of iPods on Encryption External Media-enabled computers.
- Because folder names on iPods are dependent on the model of the iPod, Dell recommends creating an exclusion policy which covers all folder names, across all iPod models.
- To ensure encrypting an iPod via Encryption External Media does not make the device unusable, enter the following rules in the Encryption External Media Encryption Rules policy:

  -R#:\Calendars

  -R#:\Contacts

  -R#:\iPod_Control

  -R#:\Notes

  -R#:\Photos

- You can also force encryption of specific file types in the directories above. Adding the following rules will ensure that ppt, pptx, doc, docx, xls, and xlsx files are encrypted in the directories *excluded* from encryption via the previous rules:

  ^R#:\Calendars;ppt.doc.xls.pptx.docx.xlsx

  ^R#:\Contacts;ppt.doc.xls.pptx.docx.xlsx

  ^R#:\iPod_Control;ppt.doc.xls.pptx.docx.xlsx

  ^R#:\Notes;ppt.doc.xls.pptx.docx.xlsx

  ^R#:\Photos;ppt.doc.xls.pptx.docx.xlsx

- Replacing these five rules with the following rule will force encryption of ppt, pptx, doc, docx, xls, and xlsx files in any directory on the iPod, including Calendars, Contacts, iPod_Control, Notes, and Photos:

  ^R#:\;ppt.doc.xls.pptx.docx.xlsx

- Rules have been tested against these iPods:

  iPod Video 30gb fifth generation

iPod Nano 2gb second generation

iPod Mini 4gb second generation

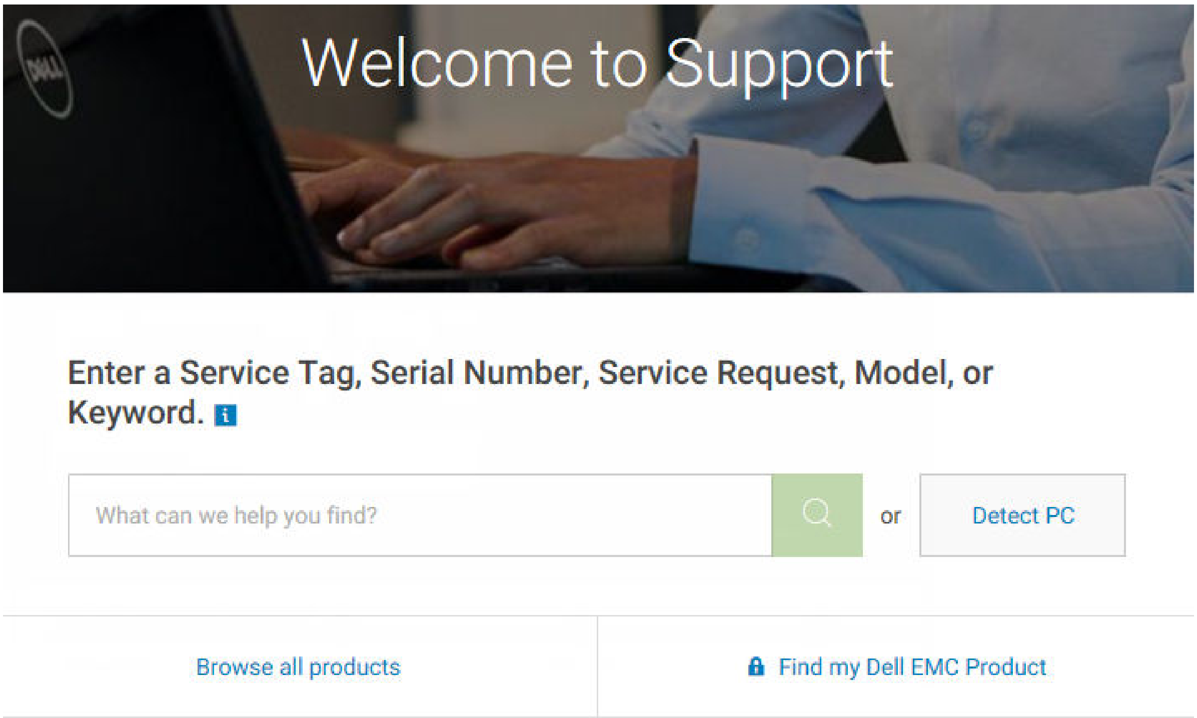
Dell ControlVault Drivers

Update Dell ControlVault Drivers and Firmware

- Dell ControlVault drivers and firmware that are installed on Dell computers at the factory are outdated and should be updated by following this procedure, in this order.
- If an error message is received during client installation prompting you to exit the installer to update Dell ControlVault drivers, the message may be safely dismissed to continue with the installation of the client. The Dell ControlVault drivers (and firmware) can be updated after the client installation is complete.

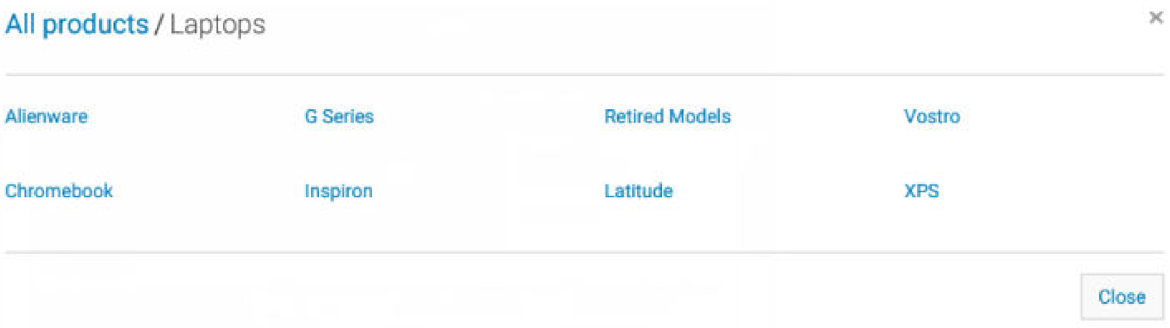
Download Latest Drivers

1. Go to dell.com/support.

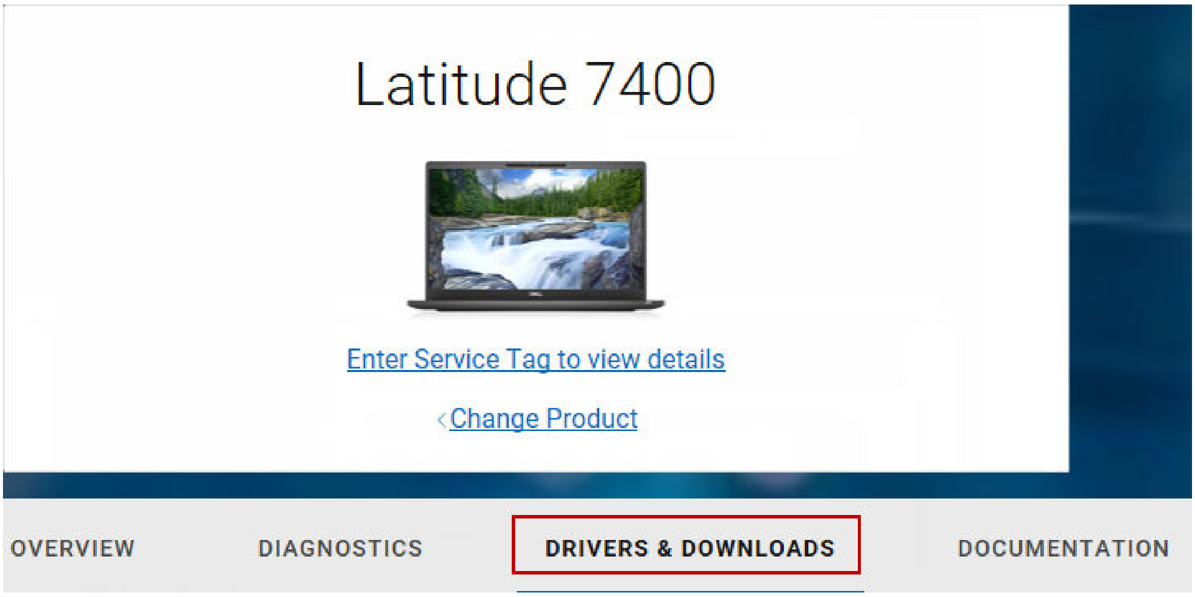


Welcome to Support
Enter a Service Tag, Serial Number, Service Request, Model, or Keyword.
What can we help you find?
or
Detect PC
Browse all products
Find my Dell EMC Product

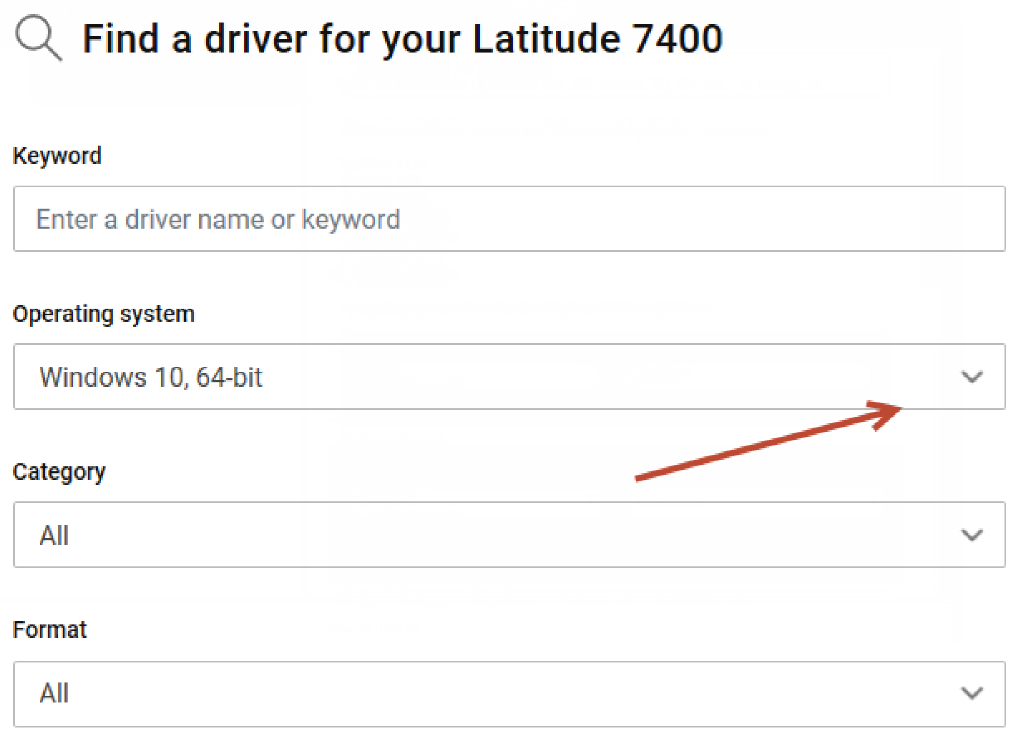
2. Select your computer model.



3. Select **Drivers & Downloads**.



4. Select the **Operating System** of the target computer.



Find a driver for your Latitude 7400

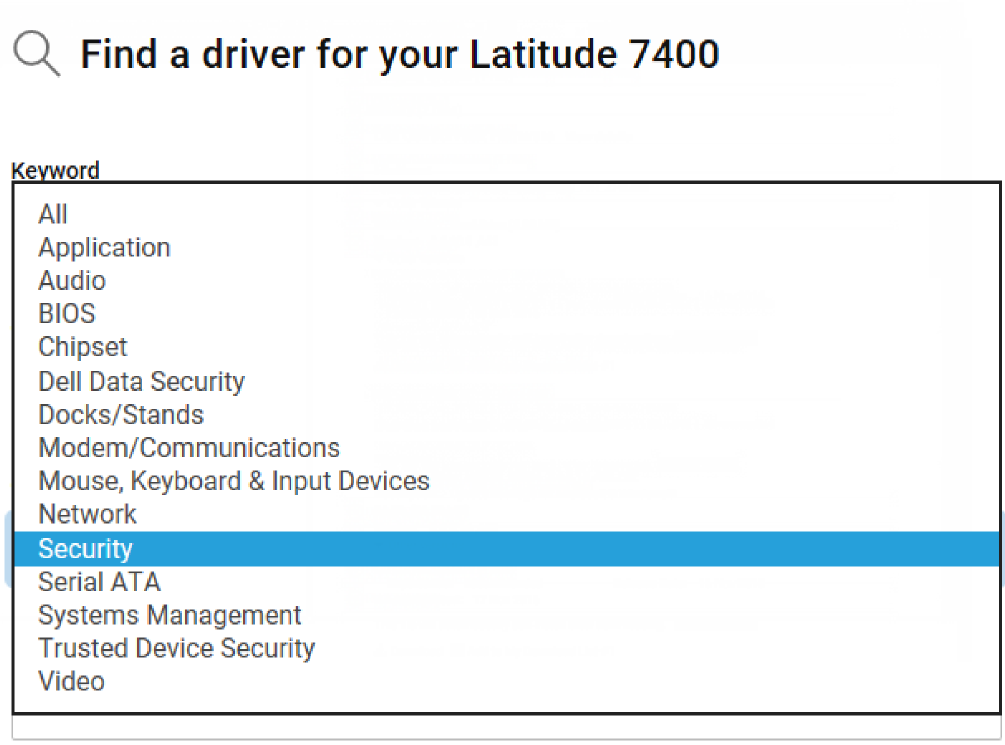
Keyword: Enter a driver name or keyword

Operating system: Windows 10, 64-bit

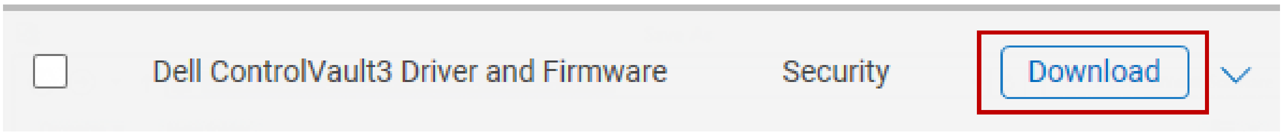
Category: All

Format: All

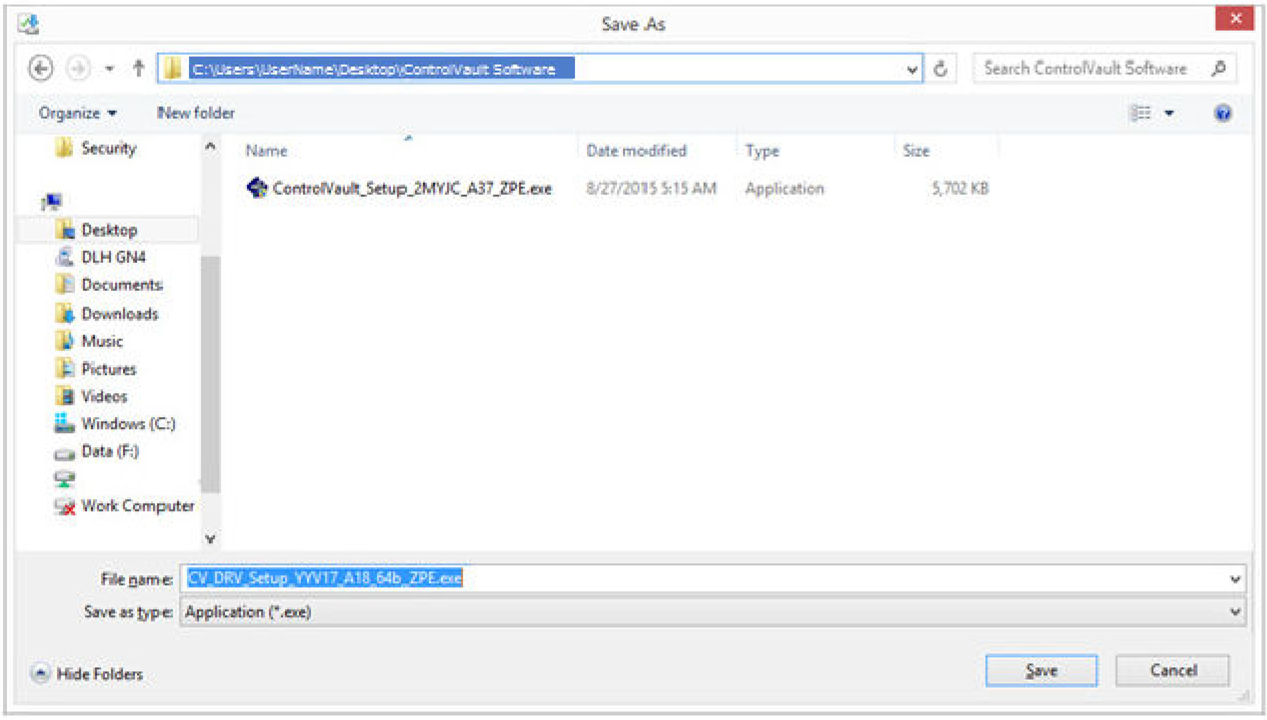
5. Select the **Security** category.



6. Download and save the Dell ControlVault Drivers.



7. Download and save the Dell ControlVault Firmware.



C:\Users\UserName\Desktop\ControlVault Software

ControlVault_Setup_2MYJC_A37_ZPE.exe 8/27/2015 5:15 AM Application 5,702 KB

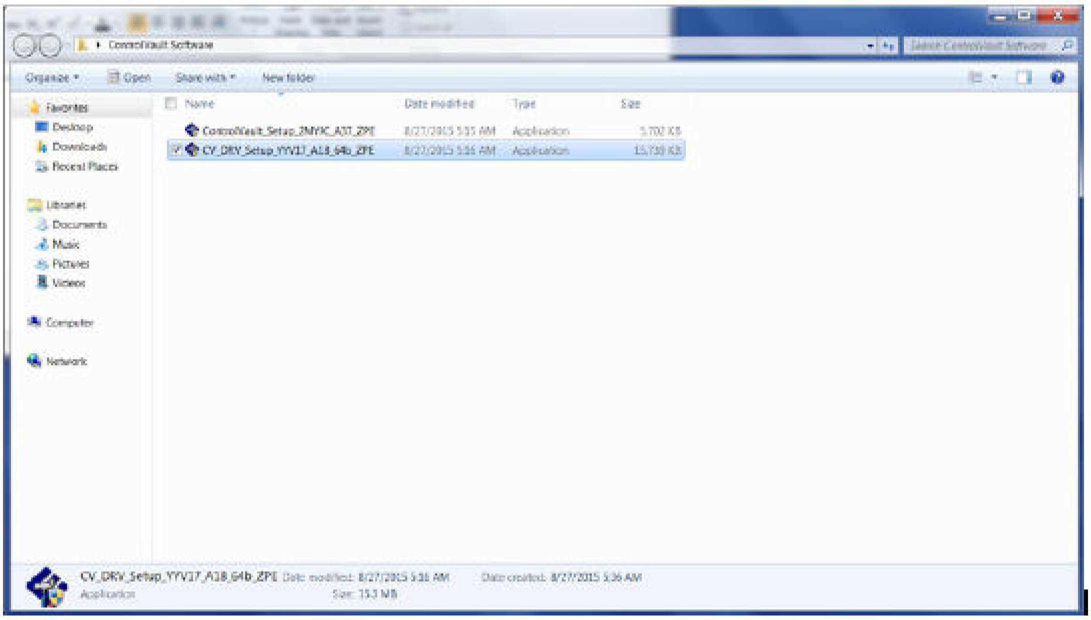
File name: CV_DRV_Setup_YVV17_A18_64b_ZPE.exe

Save as type: Application (*.exe)

8. Copy the drivers and firmware to the target computers, if needed.

Install Dell ControlVault Driver

1. Navigate to the folder which you downloaded the driver installation file.



Name	Date modified	Type	Size
ControlVault_Setup_2MYJC_A37_ZPE	8/27/2015 5:35 AM	Application	5,702 KB
CV_DRV_Setup_YYV17_A18_64b_ZPE	8/27/2015 5:36 AM	Application	15,730 KB

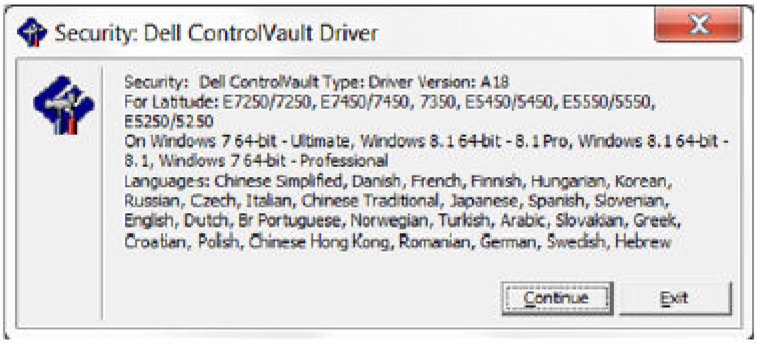
CV_DRV_Setup_YYV17_A18_64b_ZPE Date modified: 8/27/2015 5:36 AM Date created: 8/27/2015 5:36 AM
Application Size: 15.3 MB

2. Double-click the Dell ControlVault driver to launch the self-extracting executable file.

   NOTE:

   Be sure to install the driver first. The file name of the driver *at the time of this document creation* is ControlVault_Setup_2MYJC_A37_ZPE.exe.

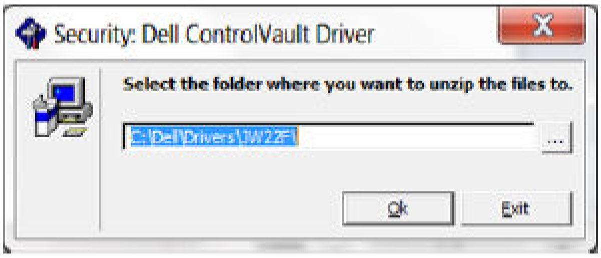
3. Click **Continue** to begin.



Security: Dell ControlVault Driver

Security: Dell ControlVault Type: Driver Version: A18
For Latitude: E7250/7250, E7450/7450, 7350, E5450/5450, E5550/5550, E5250/5250
On Windows 7 64-bit - Ultimate, Windows 8.1 64-bit - 8.1 Pro, Windows 8.1 64-bit - 8.1, Windows 7 64-bit - Professional
Languages: Chinese Simplified, Danish, French, Finnish, Hungarian, Korean, Russian, Czech, Italian, Chinese Traditional, Japanese, Spanish, Slovenian, English, Dutch, Br Portuguese, Norwegian, Turkish, Arabic, Slovakian, Greek, Croatian, Polish, Chinese Hong Kong, Romanian, German, Swedish, Hebrew

4. Click **Ok** to unzip the driver files in the default location of `C:\Dell\Drivers\<New Folder>`.

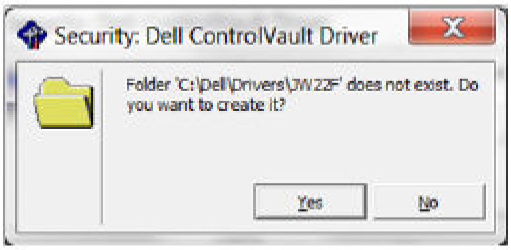


Security: Dell ControlVault Driver

Select the folder where you want to unzip the files to.

C:\Dell\Drivers\JW22F\

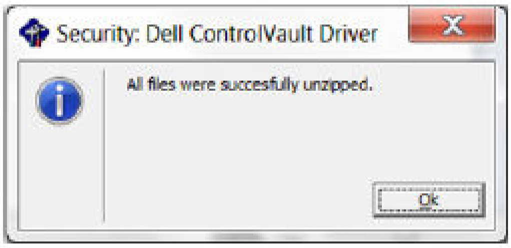
5. Click **Yes** to allow the creation of a new folder.



Security: Dell ControlVault Driver

Folder 'C:\Dell\Drivers\JW22F' does not exist. Do you want to create it?

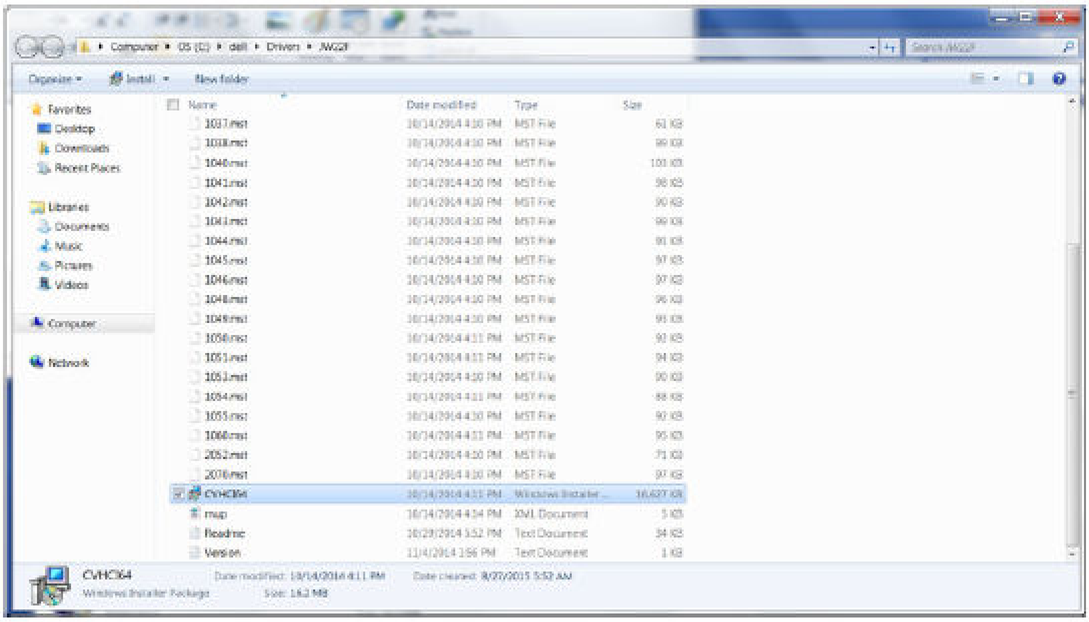
6. Click **Ok** when the successfully unzipped message displays.



Security: Dell ControlVault Driver

All files were succesfully unzipped.

7. The folder which contains the files should display after extraction. If not, navigate to the folder to which you extracted the files. In this case, the folder is **JW22F**.

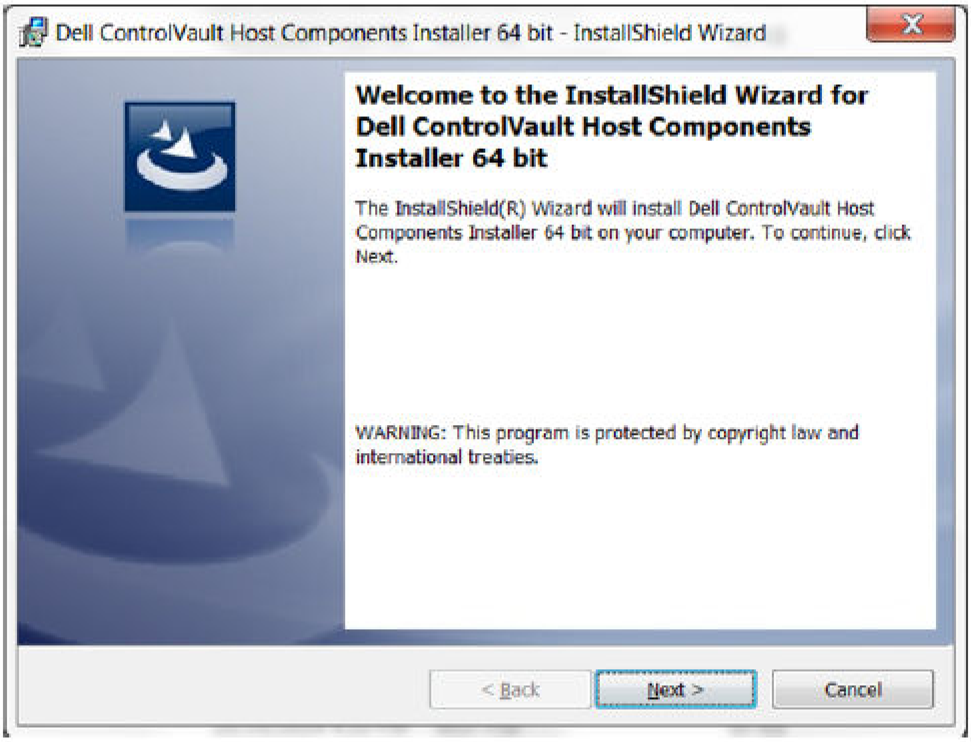


Computer ▸ OS (C:) ▸ dell ▸ Drivers ▸ JW22F

Name	Date modified	Type	Size
1037.mst	10/14/2014 4:10 PM	MST File	61 KB
1038.mst	10/14/2014 4:10 PM	MST File	99 KB
1040.mst	10/14/2014 4:10 PM	MST File	101 KB
1041.mst	10/14/2014 4:10 PM	MST File	98 KB
1042.mst	10/14/2014 4:10 PM	MST File	90 KB
1043.mst	10/14/2014 4:10 PM	MST File	99 KB
1044.mst	10/14/2014 4:10 PM	MST File	91 KB
1045.mst	10/14/2014 4:10 PM	MST File	97 KB
1046.mst	10/14/2014 4:10 PM	MST File	97 KB
1048.mst	10/14/2014 4:10 PM	MST File	96 KB
1049.mst	10/14/2014 4:10 PM	MST File	95 KB
1050.mst	10/14/2014 4:11 PM	MST File	92 KB
1051.mst	10/14/2014 4:11 PM	MST File	94 KB
1053.mst	10/14/2014 4:10 PM	MST File	90 KB
1054.mst	10/14/2014 4:11 PM	MST File	88 KB
1055.mst	10/14/2014 4:10 PM	MST File	92 KB
1060.mst	10/14/2014 4:11 PM	MST File	95 KB
2052.mst	10/14/2014 4:10 PM	MST File	71 KB
2070.mst	10/14/2014 4:10 PM	MST File	97 KB
CVHCI64	10/14/2014 4:11 PM	Windows Installer ...	16,627 KB
mup	10/14/2014 4:14 PM	XML Document	5 KB
Readme	10/28/2014 3:52 PM	Text Document	34 KB
Version	11/4/2014 1:56 PM	Text Document	1 KB

CVHCI64 Date modified: 10/14/2014 4:11 PM Date created: 8/27/2015 5:52 AM
Windows Installer Package Size: 16.2 MB

8. Double-click **CVHCI64.MSI** to launch the driver installer. [this example is **CVHCI64.MSI** in this example (CVHCI for a 32-bit computer)].
9. Click **Next** at the Welcome screen.

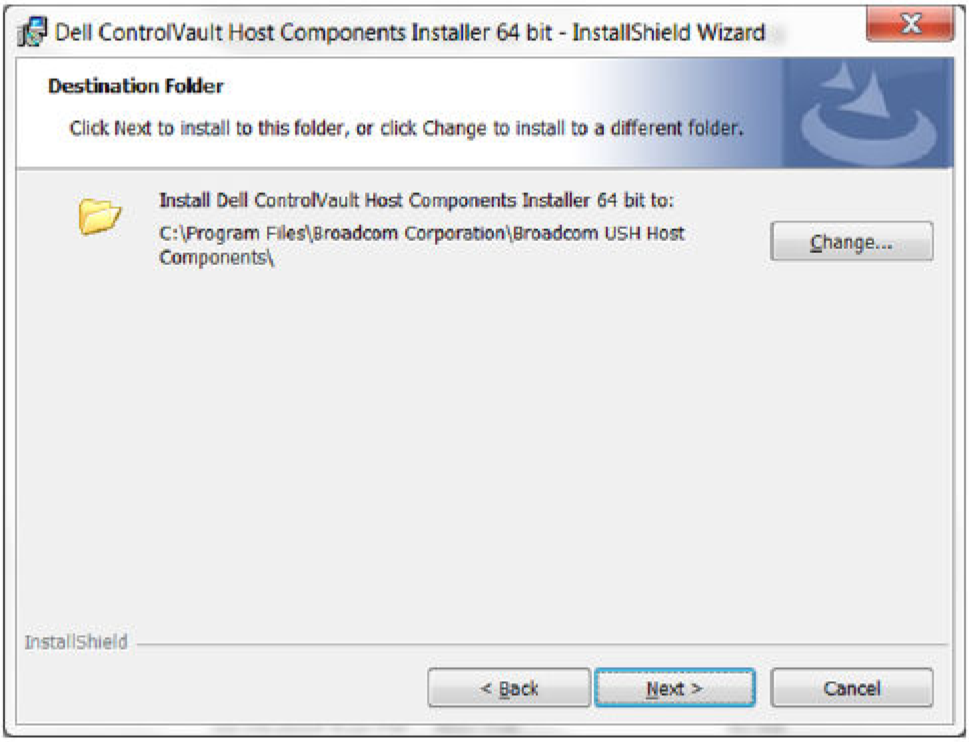

Dell ControlVault Host Components Installer 64 bit - InstallShield Wizard

Welcome to the InstallShield Wizard for Dell ControlVault Host Components Installer 64 bit

The InstallShield(R) Wizard will install Dell ControlVault Host Components Installer 64 bit on your computer. To continue, click Next.

WARNING: This program is protected by copyright law and international treaties.

10. Click **Next** to install the drivers in the default location of `C:\Program Files\Broadcom Corporation\Broadcom USH Host Components\`.

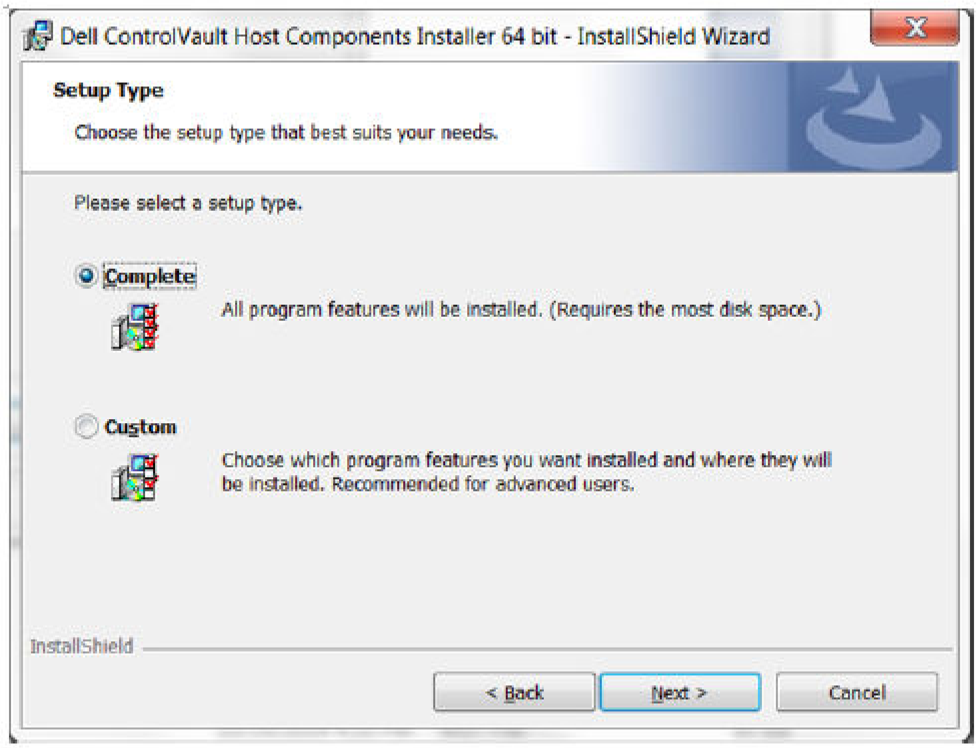

Dell ControlVault Host Components Installer 64 bit - InstallShield Wizard

Destination Folder

Click Next to install to this folder, or click Change to install to a different folder.

Install Dell ControlVault Host Components Installer 64 bit to:
C:\Program Files\Broadcom Corporation\Broadcom USH Host Components\

11. Select the **Complete** option and click **Next**.



Dell ControlVault Host Components Installer 64 bit - InstallShield Wizard

Setup Type

Choose the setup type that best suits your needs.

Please select a setup type.

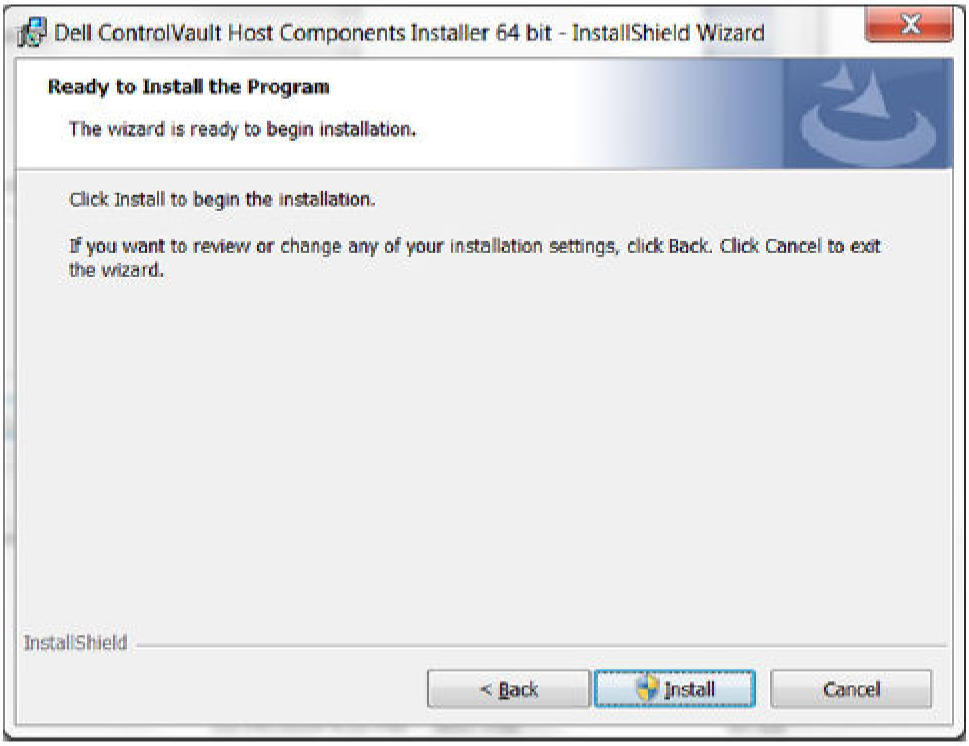
● Complete

All program features will be installed. (Requires the most disk space.)

○ Custom

Choose which program features you want installed and where they will be installed. Recommended for advanced users.

12. Click **Install** to begin the installation of the drivers.



Dell ControlVault Host Components Installer 64 bit - InstallShield Wizard

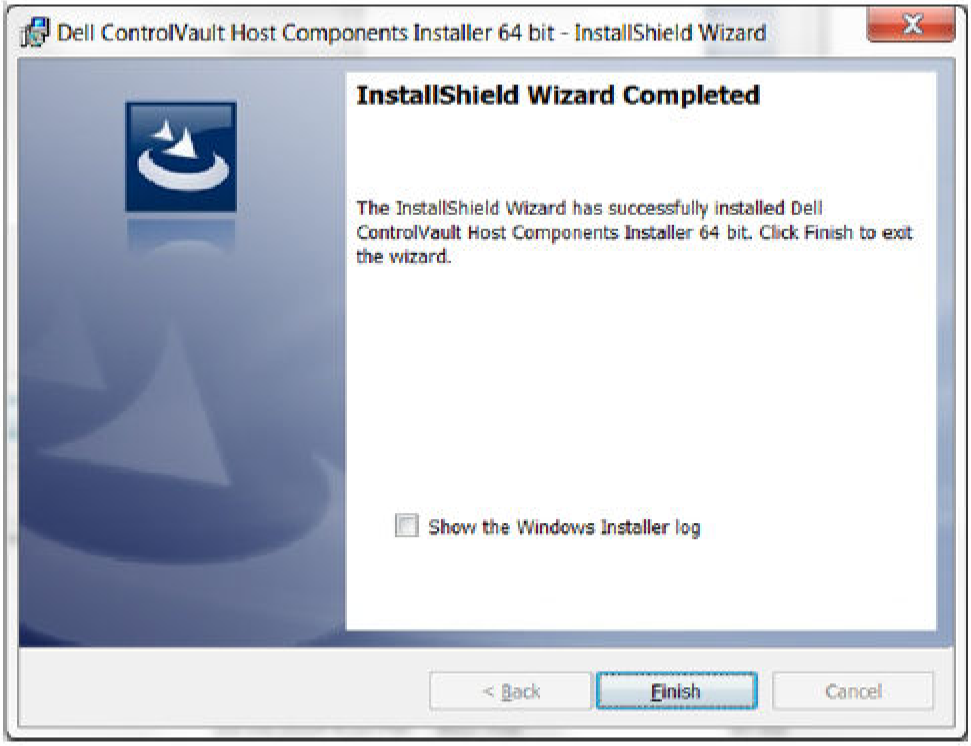
Ready to Install the Program

The wizard is ready to begin installation.

Click Install to begin the installation.

If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.

13. Optionally check the box to display the installer log file. Click **Finish** to exit the wizard.


Dell ControlVault Host Components Installer 64 bit - InstallShield Wizard

InstallShield Wizard Completed

The InstallShield Wizard has successfully installed Dell ControlVault Host Components Installer 64 bit. Click Finish to exit the wizard.

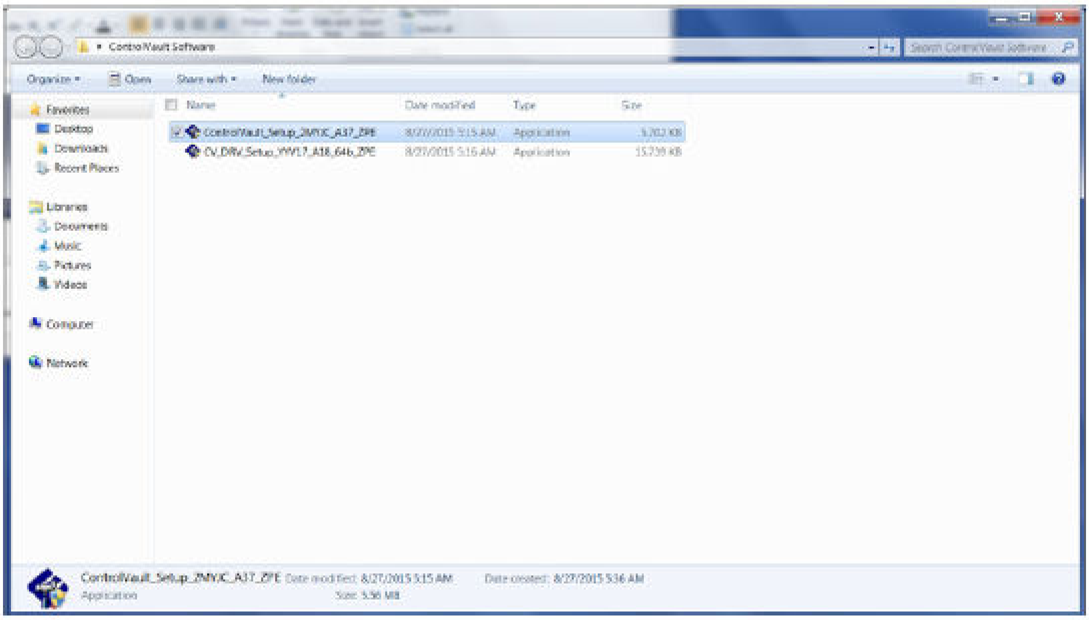
□ Show the Windows Installer log

Verify Driver Installation

- The Device Manager will have a Dell ControlVault device (and other devices) depending on the operating system and hardware configuration.

Install Dell ControlVault Firmware

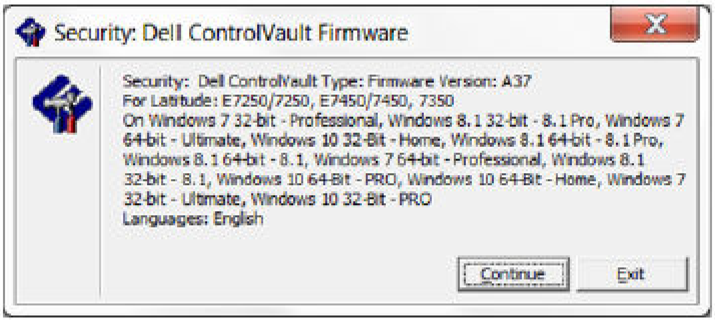
1. Navigate to the folder which you downloaded the firmware installation file.


ControlVault Software

Name	Date modified	Type	Size
ControlVault_Setup_2MYJC_A37_ZPE	8/27/2015 5:15 AM	Application	5,702 KB
CV_DRV_Setup_YYV17_A18_64b_ZPE	8/27/2015 5:16 AM	Application	15,739 KB

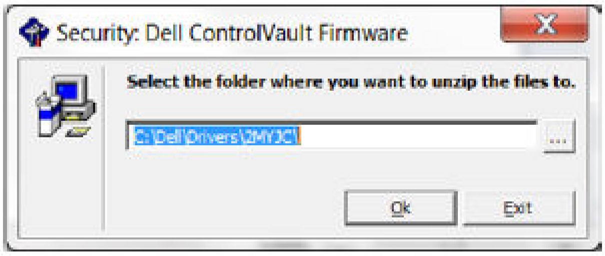
ControlVault_Setup_2MYJC_A37_ZPE Date modified: 8/27/2015 5:15 AM Date created: 8/27/2015 5:36 AM
Application Size: 5.56 MB

2. Double-click the Dell ControlVault firmware to launch the self-extracting executable file.
3. Click **Continue** to begin.



Security: Dell ControlVault Type: Firmware Version: A37
For Latitude: E7250/7250, E7450/7450, 7350
On Windows 7 32-bit - Professional, Windows 8.1 32-bit - 8.1 Pro, Windows 7 64-bit - Ultimate, Windows 10 32-Bit - Home, Windows 8.1 64-bit - 8.1 Pro, Windows 8.1 64-bit - 8.1, Windows 7 64-bit - Professional, Windows 8.1 32-bit - 8.1, Windows 10 64-Bit - PRO, Windows 10 64-Bit - Home, Windows 7 32-bit - Ultimate, Windows 10 32-Bit - PRO
Languages: English

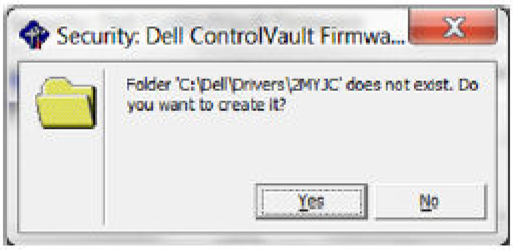
4. Click **Ok** to unzip the driver files in the default location of `C:\Dell\Drivers\<New Folder>`.



Select the folder where you want to unzip the files to.

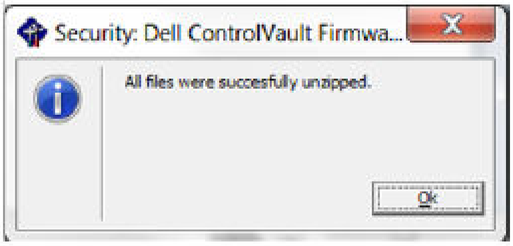
C:\Dell\Drivers\2MYJC\

5. Click **Yes** to allow the creation of a new folder.



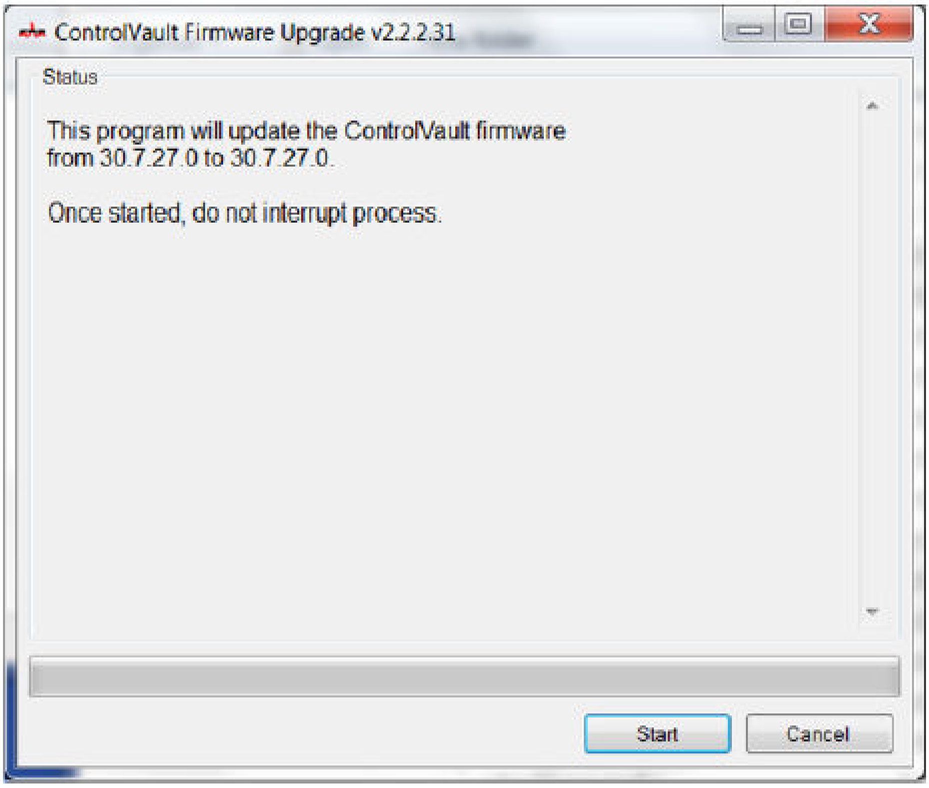
Folder 'C:\Dell\Drivers\2MYJC' does not exist. Do you want to create it?

6. Click **Ok** when the successfully unzipped message displays.



All files were succesfully unzipped.

7. The folder which contains the files should display after extraction. If not, navigate to the folder to which you extracted the files. Select the **firmware** folder.
8. Double-click **ushupgrade.exe** to launch the firmware installer.
9. Click **Start** to begin the firmware upgrade.



This program will update the ControlVault firmware from 30.7.27.0 to 30.7.27.0.

Once started, do not interrupt process.

NOTE:

You may be asked to enter the administrator password if upgrading from an older version of firmware. Enter **`Broadcom`** as the password and click **Enter** if presented with this dialog.

Several status messages display.

10. Click **Restart** to complete the firmware upgrade.

    The update of the Dell ControlVault drivers and firmware is complete.

Registry Settings

This section details all Dell ProSupport approved registry settings for local client computers.

Encryption

(Optional) Create an Encryption Removal Agent Log File

- Before beginning the uninstall process, you can optionally create an Encryption Removal Agent log file. This log file is useful for troubleshooting an uninstall/decryption operation. If you do not intend to decrypt files during the uninstall process, you do not need to create this log file.
- The Encryption Removal Agent log file is not created until after the Encryption Removal Agent service runs, which does not happen until the computer is restarted. Once the client is successfully uninstalled and the computer is fully decrypted, the log file is permanently deleted.
- The log file path is `C:\ProgramData\Dell\Dell Data Protection\Encryption.`
- Create the following registry entry on the computer targeted for decryption.

  [HKLM\Software\Credant\DecryptionAgent]

  "LogVerbosity"=DWORD:2

  0: no logging

  1: logs errors that prevent the service from running

  2: logs errors that prevent complete data decryption (recommended level)

3: logs information about all decrypting volumes and files

5: logs debugging information

Use Smart Cards with Windows Log On

- To determine if a smart card is present and active, ensure the following value is set:

  HKLM\SOFTWARE\Dell\Dell Data Protection\

  "SmartcardEnabled"=DWORD:1

  If SmartcardEnabled is missing or has a value of zero, the Credential Provider will display only Password for authentication.

  If SmartcardEnabled has a non-zero value, the Credential Provider will display options for Password and smart card authentication.

- The following registry value indicates whether Winlogon should generate a notification for logon events from smart cards.

  HKEY_LOCAL_MACHINE\Software\Microsoft\Windows NT\CurrentVersion\Winlogon\Notify

  "SmartCardLogonNotify"=DWORD:1

  0 = Disabled

  1 = Enabled

Preserve Temp Files During Installation

- By default, all temporary files in the c:\windows\temp directory are automatically deleted during installation. Deletion of temporary files speeds initial encryption and occurs before the initial encryption sweep.

  However, if your organization uses a third-party application that requires the file structure within the \temp directory to be preserved, you should prevent this deletion.

  To disable temporary file deletion, create or modify the registry setting as follows:

  [HKLM\SOFTWARE\CREDANT\CMGShield]

  "DeleteTempFiles"=REG_DWORD:0

  Not deleting temporary files increases initial encryption time.

Change the Default Behavior of the User Prompt to Begin or Delay Encryption

- The Encryption client displays the `length of each policy update delay` prompt for five minutes each time. If the user does not respond to the prompt, the next delay begins. The final delay prompt includes a countdown and progress bar, and it displays until the user responds, or the final delay expires and the required logoff/reboot occurs.

  You can change the behavior of the user prompt to begin or delay encryption, to prevent encryption processing following no user response to the prompt. To do this, set the registry the following registry value:

  [HKLM\Software\Microsoft\Windows NT\CurrentVersion\Winlogon\CMGShield]

  "SnoozeBeforeSweep"=DWORD:1

  Any non-zero value changes the default behavior to snooze. With no user interaction, encryption processing is delayed up to the number of configurable allowed delays. Encryption processing begins when the final delay expires.

  Calculate the maximum possible delay as follows (a maximum delay would involve the user never responding to a delay prompt, each of which displays for 5 minutes):

  (NUMBER OF POLICY UPDATE DELAYS ALLOWED × LENGTH OF EACH POLICY UPDATE DELAY) + (5 MINUTES × [NUMBER OF POLICY UPDATE DELAYS ALLOWED - 1])

Change the Default Use of SDUser Key

- System Data Encryption (SDE) is enforced based on the policy value for SDE Encryption Rules. Additional directories are protected by default when the SDE Encryption Enabled policy is Selected. For more information, search "SDE Encryption Rules" in AdminHelp. When Encryption is processing a policy update that includes an active SDE policy, the current user profile directory is encrypted by default with the SDUser key (a User key) rather than the SDE key (a Device key). The SDUser key is also used to encrypt files or folders that are copied (not moved) into a user directory that is not a encrypted with SDE.

  To disable the SDUser key and use the SDE key to encrypt these user directories, create the following registry entry on the computer:

  [HKEY_LOCAL_MACHINE\SOFTWARE\Credant\CMGShield]

"EnableSDUserKeyUsage"=DWORD:00000000

If this registry key is not present or is set to anything other than 0, the SDUser key is used to encrypt these user directories.

Disable/Enable Encrypt for Sharing in Right-click Context Menu

- To disable or enable the *Encrypt for Sharing* option in the right-click menu use the following registry key.

  HKEY_LOCAL_MACHINE\SOFTWARE\Dell\Dell Data Protection\Encryption

  "DisplaySharing"=DWORD

  0 = disable the Encrypt for Sharing option in the right-click context menu

  1 = enable the Encrypt for Sharing option in the right-click context menu

Disable/Enable the notification for Encryption Personal activation

- HKCU\Software\Dell\Dell Data Protection\Encryption

  "HidePasswordPrompt"=DWORD

  1 = disables the password prompt for Encryption Personal activation

  0 = enables the password prompt for Encryption Personal activation

Disable/Enable the reboot prompt after the Encryption Removal Agent finishes the final stage of decryption

- To disable prompting the user to reboot their computer after the Encryption Removal Agent finishes its final state in the decryption process, modify the following registry value.

  HKLM\Software\Dell\Dell Data Protection

  "ShowDecryptAgentRebootPrompt"=DWORD

  Default = enabled

  1 = enabled (displays prompt)

  0 = disabled (hides prompt)

Advanced Authentication

Disable Smart Card and Biometric Services (Optional)

If you do not want Advanced Authentication to change the services associated with smart cards and biometric devices to a startup type of "automatic", you can disable the service startup feature.

When disabled, Authentication does not attempt to start these three services:

- SCardSvr - Manages access to smart cards read by the computer. If this service is stopped, this computer is unable to read smart cards. If this service is disabled, any services that explicitly depend on it fail to start.
- SCPolicySvc - Allows the system to be configured to lock the user desktop upon smart card removal.
- WbioSrvc - The Windows biometric service gives client applications the ability to capture, compare, manipulate, and store biometric data without gaining direct access to any biometric hardware or samples. The service is hosted in a privileged SVCHOST process.

  Disabling this feature also suppresses warnings associated with the required services not running.

- By default, if the registry key does not exist or the value is set to 0, this feature is enabled.

  [HKEY_LOCAL_MACHINE\SOFTWARE\DELL\Dell Data Protection]

  SmartCardServiceCheck=REG_DWORD:0

  Set to 0 to Enable.

  Set to 1 to Disable

Use Smart Cards with Windows Log On

- To determine if the PBA is activated, ensure that the following value is set:

  [HKLM\SYSTEM\CurrentControlSet\services\DellMgmtAgent\Parameters]

  "PBAIsActivated"=DWORD (32-bit):1

A value of 1 means that the PBA is activated. A value of 0 means the PBA is not activated.

ⓘ **NOTE:** Manually deleting this key can create unintended results for users syncing with the PBA resulting in the need for manual recovery.

- To determine if a smart card is present and active, ensure the following value is set:

  HKLM\SOFTWARE\Dell\Dell Data Protection\

  "SmartcardEnabled"=DWORD:1

  If SmartcardEnabled is missing or has a value of zero, the Credential Provider will display only Password for authentication.

  If SmartcardEnabled has a non-zero value, the Credential Provider will display options for Password and smart card authentication.

- The following registry value indicates whether Winlogon should generate a notification for logon events from smart cards.

  HKEY_LOCAL_MACHINE\Software\Microsoft\Windows NT\CurrentVersion\Winlogon\Notify

  "SmartCardLogonNotify"=DWORD:1

  0 = Disabled

  1 = Enabled

  Proceed to Glossary.

- To prevent SED management from disabling third-party credential providers, create the following registry key:

  HKLM\SOFTWARE\Dell\Dell Data Protection\

  "AllowOtherCredProviders" = DWORD:1

  0=Disabled (default)

  1=Enabled

- The Encryption Management Agent no longer outputs policies by default. To output future consumed policies, create the following registry key:

  HKLM\Software\Dell\Dell Data Protection\

  DWORD: DumpPolicies

  Value=1

  Note: a reboot is required for this change to take effect.

- To suppress all Toaster notifications from the Encryption Management Agent, the following registry value must be set on the client computer.

  [HKEY_LOCAL_MACHINE\SOFTWARE\Dell\Dell Data Protection]

  "PbaToastersAllowClose" =DWORD:1

  0=Enabled (default)

  1=Disabled

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Glossary

Advanced Authentication - The Advanced Authentication product provides smart card reader options. Advanced Authentication helps manage these multiple authentication methods, supports login with self-encrypting drives, SSO, and manages user credentials and passwords.

Encryption Administrator Password (EAP) - The EAP is an administrative password that is unique to each computer. Most configuration changes made in the local Management Console require this password. This password is also the same password that is required to use your LSARecovery_[hostname].exe file to recover data. Record and save this password in a safe place.

Encryption Client - The Encryption client is the on-device component that enforces security policies, whether an endpoint is connected to the network, disconnected from the network, lost, or stolen. Creating a trusted computing environment for endpoints, the Encryption client operates as a layer on top of the device operating system, and provides consistently-enforced authentication, encryption, and authorization to maximize the protection of sensitive information.

Encryption keys - In most cases, Encryption uses the User encryption key plus two additional encryption keys. However, there are exceptions: All SDE policies and the Secure Windows Credentials policy use the SDE key. The Encrypt Windows Paging File policy and Secure Windows Hibernation File policy use their own key, the General Purpose Key (GPK). The Common encryption key makes files accessible to all managed users on the device where they were created. The User encryption key makes files accessible only to the user who created them, only on the device where they were created. The User Roaming encryption key makes files accessible only to the user who created them, on any encrypted Windows or Mac device.

Encryption sweep - The process of scanning folders to be encrypted to ensure the contained files are in the proper encryption state. Ordinary file creation and rename operations do not trigger an encryption sweep. It is important to understand when an encryption sweep may happen and what may affect the resulting sweep times, as follows: - An encryption sweep occurs upon initial receipt of a policy that has encryption enabled. This can occur immediately after activation if your policy has encryption enabled. - If the *Scan Workstation on Logon policy* is enabled, folders specified for encryption are swept on each user logon. - A sweep can be re-triggered under certain subsequent policy changes. Any policy change related to the definition of the encryption folders, encryption algorithms, encryption key usage (common verses user), triggers a sweep. In addition, toggling between encryption enabled and disabled triggers an encryption sweep.

Pre-boot Authentication (PBA) - Pre-boot Authentication serves as an extension of the BIOS or boot firmware and guarantees a secure, tamper-proof environment external to the operating system as a trusted authentication layer. The PBA prevents anything being read from the hard disk, such as the operating system, until the user has confirmed they have the correct credentials.

Single Sign-On (SSO) - SSO simplifies the logon process when multi-factor authentication is enabled at both preboot and Windows logon. If enabled, authentication is required at preboot only, and users are automatically logged on to Windows. If not enabled, authentication may be required multiple times.

System Data Encryption (SDE) - SDE is designed to encrypt the operating system and program files. To accomplish this purpose, SDE must be able to open its key while the operating system is booting. Its intent is to prevent alteration or offline attacks on the operating system by an attacker. SDE is not intended for user data. Common and User key encryption are intended for sensitive user data because they require a user password to unlock encryption keys. SDE policies do not encrypt the files needed by the operating system to start the boot process. SDE policies do not require preboot authentication or interfere with the Master Boot Record in any way. When the computer boots up, the encrypted files are available before any user logs in (to enable patch management, SMS, backup and recovery tools). Disabling SDE triggers automatic decryption of all SDE encrypted files and directories for the relevant users, regardless of other SDE policy values, such as SDE Encryption Rules.

Trusted Platform Module (TPM) - TPM is a security chip with three major functions: secure storage, measurement, and attestation. The Encryption client uses TPM for its secure storage function. The TPM can also provide encrypted containers for the software vault.