

# DELL EMC System Update Version 1.7

User's Guide

## Notes, cautions, and warnings

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

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

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

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# Introduction to Dell System Update

DELL EMC System Update (DSU) is an application used to distribute Dell updates for Linux, Microsoft Windows Operating Systems and updates through iDRAC and operating systems to iDRAC passthrough. DSU is a software designed to facilitate the application of updates on various Dell systems. Using DSU you can:

- Identify the available updates, select the relevant updates, and deploy the updates on multiple systems.
- Maintain consistency in terms of interface and versions across Operating Systems, Repositories, and Systems.

The DSU distributes:

- BIOS, driver and firmware updates for different servers
- OS Application

Topics:

- [How does Dell System Update work](#)
- [What is new in this release](#)
- [Other documents you might need](#)

## How does Dell System Update work

Dell System Update is designed to facilitate the consumption of the updates referred in the catalog or repository. It is designed to be the choice for deploying updates in various contexts. Dell System Update (DSU) is an application designed to facilitate the application of updates on various Dell systems.

DSU references Catalog to get updates and apply on to the target systems. It can work online and offline. DSU can be used for automating the update management through scripts.

### DSU for Linux:

DSU extensively uses Yum and Zypper.

- **Yellowdog Updater, Modified**

Yellowdog Updater, Modified (YUM) is an open source command line package management utility used for Linux Operating Systems. Yellowdog Updater, Modified (YUM) primarily helps to perform automatic updates, package and dependency management, mainly for RedHat Package Manager (RPM) based distributions. Yellowdog Updater, Modified (YUM) has a command line interface and it is implemented in the Python programming language and it also has a good informational output syntax.

- **Zypper**

Zypper is used for installing, removing, updating, and querying software packages of local and remote networked media. It has been extensively used for the openSUSE Operating Systems. It is a package management engine that powers Linux applications like Yet another Setup Tool (YaST). Zypper can download several update packages, and install them at once. Zypper is one of the fastest and powerful package manager for the Linux environment.

### DSU for Microsoft Windows:

DSU supports Microsoft Windows Server operating system.

# What is Remote DSU feature

Option to enable updates to another system from the host system. The following options are the methods to use connect with remote system for updates either using single command or updated on multiple systems

## Remote option for single systems

- **Command to use remote option on Microsoft Windows Operating System**

The following option is to enable the remote option on Microsoft Windows systems: `dsu /remote=domain \credentials@hostname`

- **Command to use remote option on Linux Operating System**

The following option to enable for a single machine can be used in the config file or only as the single command in the prompt.

```
--remote="username:password@hostIP"
```

- **Remote option for multiple systems**

The config file is used when we need multiple connections.

When using the `remote` option with two separate credentials and IP address.

```
dsu --remote=root:password1@100.100.10.11,root:password2@100.100.10.22
```

If using the config file for the two IP address

```
dsu --remote --config=/root/dsuconfig.xml
```

Below is the DSU config file - Method 1

```
<DSUConfig>
<RemoteSystem>
  <System Address="100.100.10.11">
    <AuthenticationSequence>
      <Authentication Type="PLAIN" Username="root" Password="password1" ExecProto="SSH"/>
    </AuthenticationSequence>
  </System>
  <System Address="100.100.10.22">
    <AuthenticationSequence>
      <Authentication Type="PLAIN" Username="root" Password="password2" ExecProto="SSH"/>
    </AuthenticationSequence>
  </System>
</RemoteSystem>
</DSUConfig>
```

The DSU config file with Authentication Sequence - Method 2 : In this case, authentication sequence is provided globally for the system hence avoiding duplication of the same.

```
<DSUConfig>
  <AuthenticationSequence>
    <Authentication Type="PLAIN" ExecPort="22" Username="name" Password="password1"
OrderID="1"
    ExecProto="SSH"/>
    <Authentication Type="PLAIN" ExecPort="22" Username="name" Password="password2"
OrderID="2"
    ExecProto="SSH"/>
  </AuthenticationSequence>
  <RemoteSystem>
    <System Address="100.100.10.11"> </System>
    <System Address="100.100.10.22"> </System>
```

```
</RemoteSystem>  
</DSUConfig>
```

- ① **NOTE:** The command line options provided will take precedence over the config file options.
- ① **NOTE:** The above sample config files provides scripts to handle many IP addresses with different password and not adjusting the scripts for each IP address every time.
- ① **NOTE:** For the usage of remote option actual root account only can be used. Sudo users cannot be used.  
The remote system must have default **PermitRootLogin** pre-enabled in `/etc/ssh/sshd_config`.

## What is new in this release

This release of DSU supports the following new feature:

- Option for inventorying and updating systems remotely using iDRAC on 14G systems.
  - `--rsystemtype="iDRAC"`
- Option for inventorying and updating systems remotely using OS to iDRAC Pass-through on 14G systems.
  - `--use-idrac-passthrough`
- ① **NOTE:** Only Firmware update is supported when iDRAC is used for updating the system.
- ① **NOTE:** To install through iDRAC on Dell PowerEdge 14th generation servers, minimum version of iDRAC 3.30.30.30 is required.
- Options to import GPG keys and ignore signature.
  - `ignore signature : --ignore-signature`
  - `import public key : --import-public-key`
- Dell Public keys are available in the link: [https://linux.dell.com/repo/pgp\\_pubkeys/](https://linux.dell.com/repo/pgp_pubkeys/)
- ① **NOTE:** Ubuntu OS is pre-enabled on DSU, and the support is limited. For more information, see [Support for Ubuntu operating systems](#).
- ① **NOTE:** Driver support is available only for systems running on Microsoft Windows.

## Other documents you might need

In addition to this guide, you can access the following guides available at [dell.com/openmanagemanuals](https://dell.com/openmanagemanuals) and [dell.com/iDRACmanuals](https://dell.com/iDRACmanuals).

- *Dell EMC Systems Management - OpenManage Software Support Matrix.*
- *Dell EMC OpenManage Server Administrator Installation Guide.*
- *Dell EMC OpenManage Server Administrator User's Guide.*
- *Dell EMC OpenManage Deployment Toolkit User's Guide.*
- *Dell EMC OpenManage Deployment Toolkit Installation Guide.*
- *Integrated Dell Remote Access Controller User's Guide.*

\* This guide is also found on the Dell Systems Management Tools and Documentation DVD.

# Installing and upgrading the DSU

You can install DSU on Microsoft Windows and Linux operating systems through Dell Update Package (DUP).

This section lists the specifics for installing DSU.

- ① **NOTE:** You must have administrator privileges if DSU is installed on the supported Microsoft Windows operating system.
- ① **NOTE:** you must have root/super user permission if DSU is installed on the supported Linux operating system
- ① **NOTE:** For more information on the latest DSU RPM, see [https://linux.dell.com/repo/hardware/dsu/os\\_independent/x86\\_64/](https://linux.dell.com/repo/hardware/dsu/os_independent/x86_64/).

Topics:

- [Installing DSU DUP on Linux operating systems in the command line interface](#)
- [Installing DSU DUP on Microsoft Windows operating systems from command line interface](#)
- [Installing OpenManage Server Administrator](#)

## Installing DSU DUP on Linux operating systems in the command line interface

To install DSU on the supported Linux operating system, you must install Dell Update Package (DUP) using the following steps in the **Command Line Interface**:

- 1 Download the latest DUP from [support.dell.com](http://support.dell.com).
- 2 Launch the command terminal with super user or root privileges. From the folder where DUP executable file is available, run `./dupfile` command to install DUP on supported linux operating systems. For example, `./Systems-Management_Application_YH0VX_LN64_1.7.0_A00.BIN`

① **NOTE:** To install DUP using silent installation mode, run `./dupfile -q` command.

- 3 Enter `q` to continue the DUP execution.

To verify if the installation is successful, run `dsu -v` on the linux terminal session with super user or root privileges.

## Installing DSU DUP on Linux operating systems in the graphical user interface

To install DSU on the supported Linux operating system, alternatively can use the wizard for installing from DSU DUP in **Graphical User Interface** :

- 1 Download the latest DUP.
- 2 From the folder where you have saved the DSU installation file, double-click on the installation file. You also have the option to open the Linux terminal session using super user or root privileges and run the DUP file.  
DSU installation wizard is displayed with the release title, release date, description, and supported devices information.
- 3 Click **Install** to begin the installation.

# Installing DSU DUP on Microsoft Windows operating systems from command line interface

To install DSU on the supported Microsoft Windows operating system, you must install Dell Update Package (DUP) using the following steps in the **command line interface** :

- 1 Download the latest DUP from support.dell.com.
- 2 Launch the command prompt with administrative privileges. From the folder where DUP executable file is available, run `dupfile /i` command to install DUP on Microsoft Windows. For example, `Systems-Management_Application_YH0VX_WN64_1.7.0_A00.EXE /i`.

① **NOTE:** To install DUP using silent installation mode, run `dupfile /s` command.

To verify if the installation is successful, run `dsu /h` on the command prompt or powershell with administrative privileges.

## Installing DSU on Microsoft Windows from DUP from graphical user interface

Install DSU on supported Microsoft Windows from Dell Update Package (DUP) using the following the steps in the from **graphical user interface**:

- 1 Download the latest DUP.
- 2 From the folder where you have saved the DSU installation file, double-click on the installation file. DSU installation wizard is displayed with the release title, release date, description, and supported devices information.
- 3 Click **Install** to begin the installation.

① **NOTE:** If any of the previous versions of DSU is not installed, a pop-up is displayed, asking the confirmation that you want to instal this particular version of DSU. Click **Yes** to continue.

① **NOTE:** The installation process may take several minutes. A message is displayed about the successful installation of DSU. A message is displayed about the successful installation of DSU.

① **NOTE:** The default location where the `dsu.exe` file is saved is `C:\Dell\DELL EMC System Update`.

## Installing OpenManage Server Administrator

Prerequisite to install Server Administrator : Repository configuration setting is required. For more information, see [linux.dell.com/repo/hardware](http://linux.dell.com/repo/hardware).

Go to [dell.com/support](http://dell.com/support).

Download the latest version of server administrator.

You can install OpenManage Server Administrator on Linux operating systems using one of the following commands:

- **Red Hat Enterprise Linux Servers**  
`yum install srvadmin-all`
- **SUSE Linux Enterprise Servers**  
`zypper install srvadmin-all`

To install OpenManage Server Administrator on Microsoft Windows operating systems, refer the latest *Dell OpenManage Server Administrator Installation Guide*.

- ① **NOTE:** Server Administrator does not support installation on unsupported systems. This is applicable to SC-class systems, as OMSA is not supported on these systems.
- ① **NOTE:** To use a 64-bit package on a 32-bit Dell package installed (srvadmin-dell) on the system, uninstall the 32-bit packages and install the 64-bit package.

# Supported platforms for DSU

This section lists the hardware and operating systems for installing DSU.

Topics:

- [Supported hardware](#)
- [Supported Operating Systems](#)

## Supported hardware

DSU is supported on 12th, 13th and 14th generation of Dell's PowerEdge servers.

For more information on supported hardware for Linux Operating Systems, see [linux.dell.com/repo/hardware/omsa.html#Supported\\_Hardware](https://linux.dell.com/repo/hardware/omsa.html#Supported_Hardware).

## Supported Operating Systems

This section describes the list of supported Linux and Microsoft Windows operating systems.

**NOTE: Community distros such as Fedora, CentOS, and openSUSE are not tested with this repository. Since most of the kernel drivers in this repository are in Dynamic Kernel Module Support (DKMS) format, community distros may work.**

The following Microsoft Windows Operating Systems are supported:

- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2016
- Microsoft Windows Server 2019

The following Linux Operating Systems are supported:

- Red Hat Enterprise Linux 8.0 (x86\_64)
- Red Hat Enterprise Linux 7.6 (x86\_64)
- SUSE Linux Enterprise Server 15 SP1 (x86\_64)

## Prerequisites for installing to remote systems

To connect to remote systems through host systems running on Linux and Microsoft Windows operating systems, the following protocol must be used.

- SSH is the protocol used for Linux operating systems. This has to be enabled.
- WMI is the protocol used for Microsoft Windows operating systems. The WMI services are running and the user should have sufficient privileges.
- Redfish is to be enabled for iDRAC. For more information, refer the latest iDRAC9 User's Guide.

**NOTE: To install through iDRAC on Dell PowerEdge 14th generation servers, minimum version of iDRAC 3.30.30.30 is required.**

# Support for Ubuntu operating systems

Support for Ubuntu operating systems is pre-enabled and the support is limited. All the DSU commands may function as usual without any issues.

- Ubuntu 18.04.2

For more information on the catalog that has the updates for Ubuntu operating system, see <https://linux.dell.com/repo/hardware/ubuntu/catalog/>.

 **NOTE: Support for Ubuntu is pre-enabled only on 12th,13th, and 14th generation of PowerEdge systems.**

# Updating the system using DSU

For a list of CLI options for systems running DSU, a description of each option, and the command syntax see the following table:

**Table 1. DSU Commands for Linux and Microsoft Windows Operating Systems**

DSU Commands for Linux and Microsoft Windows Operating Systems	
<b>Using DSU Help</b>	
<b>Description</b>	To access the DSU Help.
<b>Command Syntax for Linux</b>	<code>dsu --help</code> or <code>dsu -h</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --help</code> , <code>dsu /?</code> , or <code>dsu /h</code>
<b>Getting the DSU utility version</b>	
<b>Description</b>	To get the DSU utility version.
<b>Command Syntax for Linux</b>	<code>dsu --version</code> or <code>dsu -v</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --version</code> or <code>dsu /v</code>
<b>Executing DSU</b>	
<b>Description</b>	To get the applicable updates.
<b>Command Syntax for Linux and Microsoft Windows</b>	<code>dsu</code>
<b>Run Non-Interactive Updates using DSU</b>	
<b>Description</b>	To run the Non-Interactive updates.
<b>Command Syntax for Linux</b>	<code>dsu --non-interactive</code> , <code>dsu -n</code> , or <code>dsu -q</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --non-interactive</code> , <code>dsu /n</code> , or <code>dsu /q</code>
<b>Viewing system inventory using DSU</b>	
<b>Description</b>	To see the System Inventory.
<b>Command Syntax for Linux</b>	<code>dsu --inventory</code> or <code>dsu -i</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --inventory</code> or <code>dsu /i</code>
<b>To provide location of catalog in DSU.</b>	
<b>Description</b>	To enable the user to specify the local location of the catalog in DSU.
<b>Command Syntax for Linux</b>	<code>dsu --catalog-location=&lt;filepath&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --catalog-location=&lt;filepath&gt;</code>

<b>DSU Commands for Linux and Microsoft Windows Operating Systems</b>	
<b>Getting supported category values using DSU</b>	
<b>Description</b>	To get all the supported category values and display the corresponding acronym for the category name from the catalog.
<b>Command Syntax for Linux</b>	<code>dsu --get-categories</code> <b>or</b> <code>dsu -g</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --get-categories</code> <b>or</b> <code>dsu /g</code>
<b>Getting all components of the specified categories using DSU</b>	
<b>Description</b>	To get all the upgradable components of the specified categories.
<b>Command Syntax for Linux</b>	<code>dsu --category= &lt;CATEGORY1,CATEGORY2, . . .&gt;</code> <b>or</b> <code>dsu -c</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --category= &lt;CATEGORY1,CATEGORY2, . . .&gt;</code> <b>or</b> <code>dsu /c</code>
<b>Getting the upgradable updates</b>	
<b>Description</b>	To get the list of upgradable components.
<b>Command Syntax for Linux</b>	<code>dsu --apply-upgrades</code> <b>or</b> <code>dsu -u</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --apply-upgrades</code> <b>or</b> <code>dsu /u</code>
<b>Getting the downgradable updates</b>	
<b>Description</b>	To get the list of downgradable components.
<b>Command Syntax for Linux</b>	<code>dsu --apply-downgrades</code> <b>or</b> <code>dsu -d</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --apply-downgrades</code> <b>or</b> <code>dsu /d</code>
<b>Getting the equivalent version updates</b>	
<b>Description</b>	To get the list of applicable components of the same versions for updating. Example, if the installed version of the component is same as the available version of the component in the catalog. Hence to force install the below option is used.
<b>Command Syntax for Linux</b>	<code>dsu --apply-equivalents</code> <b>or</b> <code>dsu -e</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --apply-equivalents</code> <b>or</b> <code>dsu /e</code>
<b>Applying the updates specified in the file list</b>	
<b>Description</b>	To apply the updates specified in the file list, if applicable and available in catalog.
<b>Command Syntax for Linux</b>	<code>dsu --update-list=&lt;FILENAME1, FILENAME2, . . .&gt;</code> <b>or</b> <code>dsu -l</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --update-list=&lt;FILENAME1, FILENAME2, . . .&gt;</code> <b>or</b> <code>dsu /l</code>
<b>Path of the file providing the inventory</b>	

<b>DSU Commands for Linux and Microsoft Windows Operating Systems</b>	
<b>Description</b>	To provide the path of the inventory file.
<b>Command Syntax for Linux</b>	<code>dsu --input-inventory-file=&lt;FILE&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --input-inventory-file=&lt;FILE&gt;</code> <b>or</b> <code>dsu /input-inventory-file=&lt;FILE&gt;</code>
<b>Destination path to save the inventory file</b>	
<b>Description</b>	To provide the destination file path to save the inventory file in XML format.
<b>Command Syntax for Linux</b>	<code>dsu --output-inventory-xml=&lt;FILE&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --output-inventory-xml=&lt;FILE&gt;</code> <b>or</b> <code>dsu /output-inventory-xml=&lt;FILE&gt;</code>
<b>Displays a preview of the applicable updates</b>	
<b>Description</b>	Displays a preview of the updated system inventory post commit.
<b>Command Syntax for Linux</b>	<code>dsu --preview</code>  <code>or dsu -p</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --preview</code> <b>or</b> <code>dsu /p</code>
<b>Configuration file for DSU</b>	
<b>Description</b>	Configuration the file path for DSU.
<b>Command Syntax for Linux</b>	<code>dsu --config=&lt;FILE&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --config=&lt;FILE&gt;</code> <b>or</b> <code>dsu /config=&lt;FILE&gt;</code>
<b>Packages the updates into a bootable ISO or a directory</b>	
<b>Description</b>	<p><code>--destination-type=&lt;ISO   CBD&gt;</code></p> <p>When the type is <code>--destination-type=ISO</code></p> <p>DSU runs in the interactive mode and the selected updates are delivered as a bootable ISO, upon boot the components are updated.</p> <p>When ISO if used along with <code>--non-interactive</code></p> <p>Bootable ISO is created, upon boot, runs DSU in non-interactive mode. The repository location should be configured using <code>--config=&lt;FILE&gt;</code></p> <p>When the type is <code>--destination-type=CBD</code>(where CBD is: Custom Bootable DSU) — DSU runs in the interactive mode, provides the selected updates along with deployment script.</p>
<b>Command Syntax for Linux</b>	<code>dsu --destination-type=&lt;TYPE&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --destination-type=&lt;TYPE&gt;</code>
<b>Path of the inventory collector binary file</b>	

<b>DSU Commands for Linux and Microsoft Windows Operating Systems</b>	
<b>Description</b>	To provide the path, of the inventory collector binary or executable file in the target machine.
<b>Command Syntax for Linux</b>	<code>dsu --ic-location=&lt;FILE&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --ic-location=&lt;FILE&gt;</code>
<b>Source Location</b>	
<b>Description</b>	Enables the user to specify the local or network directory location of the source or repository.
<b>Command Syntax for Linux</b>	<code>dsu --source-location=&lt;Directory PATH&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu /source-location=&lt;Directory PATH&gt;</code>
<b>Path where the package is created</b>	
<b>Description</b>	To provide the path of the package created using the <code>--destination-type</code> and to be saved.  <div style="border-left: 1px solid black; padding-left: 10px; margin-left: 20px;"> <p><b>NOTE:</b> When using <code>--destination-type=ISO</code>, the ISO filename provided in <code>--destination-location</code> should adhere to ISO9660 file system standards. For more details see main page of <a href="#">genisoimage</a>.</p> </div>
<b>Command Syntax for Linux</b>	<code>dsu --destination-location=&lt;DIR&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --destination-location=&lt;DIR&gt;</code>
<b>Bootable ISO log</b>	
<b>Description</b>	This option enables one to specify the location at which the log shall be written while applying the updates using the bootable ISO created using DSU.
<b>Command Syntax for Linux</b>	<code>dsu --bootable-log-location=&lt;Log file location&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --bootable-log-location=&lt;Log file location&gt;</code>
<b>Configures the type of repository</b>	
<b>Description</b>	To configure the source type of repository. The supported type is <code>&lt;REPOSITORY&gt;</code> and <code>&lt;OSNATIVE&gt;</code> for Linux operating system and for Microsoft Windows operating system. By default the source location will be to <code>downloads.dell.com</code> .
<b>Command Syntax for Linux</b>	<code>dsu --source-type=&lt;TYPE&gt;</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu /source-type=&lt;TYPE&gt; or --source-type=&lt;TYPE&gt;</code>
<b>Path to save the log file</b>	
<b>Description</b>	To provide the file path to save the dsu log file.
<b>Command Syntax for Linux</b>	<code>dsu --output-log-file=/root/dsu.log</code>

<b>DSU Commands for Linux and Microsoft Windows Operating Systems</b>	
<b>Command Syntax for Microsoft Windows</b>	<code>dsu /output-log-file=C:\dsu.log</code> or <code>dsu --output-log-file=C:\dsu.log</code>
<b>List Critical updates</b>	
<b>Description</b>	To report components with critical is displayed.
<b>Command Syntax for Linux</b>	<code>dsu --list-critical-updates</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu /list-critical-updates</code> or <code>--list-critical-updates</code>
<b>Configures the logger</b>	
<b>Description</b>	<p>To configure the dsu logger.</p> <p>0 to disable / OFF</p> <p>1 to enable (there are 4 levels)</p> <p>1=FATAL messages will be logged</p> <p>2= FATAL+ERROR messages will be logged</p> <p>3=FATAL+ERROR+ WARNING messages will be logged</p> <p>4=FATAL+ERROR+WARNING+User Information messages will be logged</p>
<b>Command Syntax for Linux</b>	<code>dsu --log-level=0</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu /log-level=1</code> or <code>dsu --log-level=1</code>
<b>Enabling updates of the remote systems</b>	
<b>Description</b>	<p>To enable the compatibility of the remote system with the host system.</p> <p><b>NOTE:</b> Remote option mentioned in the command line prompt will take precedence over the config file options.</p> <p><b>NOTE:</b> For the usage of remote option actual root account only can be used. Sudo users cannot be used. The remote system must have default PermitRootLogin pre-enabled in /etc/ssh/sshd_config.</p>
<b>Command Syntax for Linux</b>	<code>dsu --remote</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu /remote</code> or <code>--remote</code>
<b>To provide the credentials of the remote system</b>	
<b>Description</b>	To enable the remote system with the credentials provided along with the hostname. Multiple remote destinations can be configured using the input config file.
<b>Command Syntax for Linux</b>	<code>dsu --remote=&lt;credentials@hostname&gt;</code>

DSU Commands for Linux and Microsoft Windows Operating Systems	
Command Syntax for Microsoft Windows	dsu /remote=<Domain\credentials@hostname> <b>or</b> --remote=<Domain\credentials@hostname>
	<p><b>NOTE:</b> When domain is used, only single-label DNS names are supported that do not contain a suffix such as .com, .corp, .net, .org or company name. For example, "host" is a single-label DNS name.</p>
<b>To push updates to the remote system</b>	
Description	To push the required updates to the remote system.
Command Syntax for Linux	dsu --push-remote-updates
Command Syntax for Microsoft Windows	dsu /push-remote-updates <b>or</b> --push-remote-updates
<b>DSU installer file location</b>	
Description	To install or update the DSU on remote systems which is required for remote updating.
	<p><b>NOTE:</b> If this option is not provided, then the DSU installer file present in the catalog will be used.</p> <p><b>NOTE:</b> The DSU version should be same version as the local system.</p>
Command Syntax for Linux	--dsu-lin64-installer-location
Command Syntax for Microsoft Windows	--dsu-win64-installer-location
<b>To restart the system automatically</b>	
Description	To restart the system for updates to take effect.
Command Syntax for Linux	dsu --reboot
Command Syntax for Microsoft Windows	dsu /reboot
<b>To ignore the optional dependency</b>	
Description	To ignore the optional dependency while performing updates of the system.
Command Syntax for Linux	dsu --ignore-optional-dependencies
Command Syntax for Microsoft Windows	--ignore-optional-dependencies
<b>Providing the updates for remote system using iDRAC</b>	
Description	To provide the remote system type. The value supported is iDRAC. This option performs the iDRAC Update (Out-of band) without any operating system.
Command Syntax for Linux	dsu --rsystemtype=<value>
Command Syntax for Microsoft Windows	dsu --rsystemtype=<value>
<b>To use operating system to iDRAC pass through interface</b>	

DSU Commands for Linux and Microsoft Windows Operating Systems	
<b>Description</b>	To push the updates via operating system iDRAC Passthrough using the USB-NIC interface. <ul style="list-style-type: none"> <li>· OAuth: Supports operating system to iDRAC passthrough connection without iDRAC credentials.</li> <li>· BasicAuth: Supports operating system to iDRAC passthrough connection with iDRAC credentials.</li> </ul>
<b>Command Syntax for Linux</b>	<code>dsu --use-idrac-passthrough</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --use-idrac-passthrough</code>
To import the Dell public key	
<b>Description</b>	This option is available for Linux operating system to install the public key from the DSU installer location. <p><b>NOTE:</b> This option should be used along with the other update features.</p>
<b>Command Syntax for Linux</b>	<code>dsu --import-public-key</code>
To ignore the signature verification	
<b>Description</b>	This option is to ignore the signature verification of files. <p><b>NOTE:</b> This option should be used along with the other update features.</p>
<b>Command Syntax for Linux</b>	<code>dsu --ignore-signature</code>
<b>Command Syntax for Microsoft Windows</b>	<code>dsu --ignore-signature</code>

## DSU Outputs and Options

Following are the DSU outputs and options:

[ ] represents components which are not selected

[\*] represents components which are selected

[-] represents component already at repository version (cannot be selected)

Choose: q to Quit without update

Choose: c to Commit and apply updates

Choose: <number> to Select/Deselect updates

Choose: a to Select All

Choose: n to Select None

## Using DSU ISO

**NOTE:** The bootable ISO can be created with an alternative sample script which is a simple method and has multiple options for customization such as creating ISO for some specific set of platforms. For more information, see [Sample scripts using DSU](#).

This is one of the Bootable ISO generation methods. It can be created through either of the two following methods:

- **Interactive**- DUPs are downloaded and packaged in the iso.  
`dsu -destination-type=ISO -destination-location="/root/bootabledsu.iso"`
- **Non-interactive**- Requires a repository location to fetch DUPs.  
`dsu -n -destination-type=ISO -destination-location="/root/bootabledsu.iso" -config="/root/dsuconfig.xml"`

The config.xml template is as following:

```
<DSUConfig><Repository Type="YUM"><RepoLocation IP="192.168.10.11" Directory="16.08.00"
UseLatestDSU="False"/></Repository></DSUConfig>
```

You can also perform the same operation on Microsoft Windows operating systems using the following commands:

- **Interactive**- `dsu --destination-type=ISO --destination-location= C:\output.iso`
- **Non-interactive**- `dsu --non-interactive --destination-type=ISO --destination-location= C:\output.iso --config=C:\config.xml`

## DSU Return Codes

The return codes help you determine and analyze the results after the execution of DSU, see the codes described in the following table:

**Table 2. DSU Return Codes**

DSU Return Codes		
Number	Return Codes	Description of Return Codes
0	Success	Any successful operation performed by DSU.
1	Failure	Any failure in operation performed by DSU.
2	Insufficient Privileges	DSU not executed using ROOT privilege..
3	Invalid Log File	Failure in opening a log file or invalid log location.
4	Invalid Log Level	Invalid log level set by user.
6	Invalid Command Line Option	Invalid combination of DSU options used. For example, -destination type and -non-interactive cannot be used simultaneously.
7	Unknown Option	Incorrect option provided.
8	Reboot Required	Reboot is required for the update to be completed successfully.
13	Invalid Source Config (Configuration)	Values provided for source location or source type is invalid.
14	Invalid Inventory	Errors related to Inventory such as filename not present in the location or failed parsing inventory.
15	Invalid Category	Category value (for example: BI) may not exist, DSU returns Invalid Category
17	Invalid Config (Configuration) File	Configuration file location is invalid or failure in parsing it.
19	Invalid IC Location	Invalid Location of inventory collector.
21	Invalid Destination	Destination directory location is invalid.

<b>DSU Return Codes</b>		
22	Invalid Destination Type	Destination type is not ISO or CBD.
24	Update Failure	Failure in applying updates.
25	Update Partial Failure	Out-of-date updates are selected.
26	Update Partial Failure And Reboot Required	Out-of-date updates are selected. For successful updates, reboot is required.
34	No Applicable Updates Found	There are no updates found which can be applied.
35	Remote Partial Failure	Some remote systems has failure some maybe successful.
36	Remote Failure	All the remote systems has failure.
37	IC Signature Download Failure	Unable to get the signature file for IC.
40	Public Key Not Found	The signature verification failed due to public keys are not imported on system.

## Sample options usage

The following are some of the sample options with DSU:

### Sample Config file with Authentication Sequence and Remote System options

To point to a repository hosted at [https://<ip\\_address>/<directory>](https://<ip_address>/<directory>) (for example, <https://192.168.10.11/16.08.00>), the config XML file is:

```
<DSUConfig>
<Repository Type="REPOSITORY">
  <RepoLocation IP="192.168.10.11" Directory="16.08.00" UseLatestDSU="True"/>
</Repository>

<AuthenticationSequence>

  <Authentication Type="PLAIN" ExecPort="22" Username="name" Password="password1" OrderID="4"
  ExecProto="SSH"/>
  <Authentication Type="PLAIN" ExecPort="22" Username="name" Password="password2" OrderID="1"
  ExecProto="SSH"/>
  <Authentication Type="PLAIN" ExecPort="22" Username="name" Password="password3"
  ExecProto="SSH"/>
</AuthenticationSequence>

<RemoteSystem>
  <System Address="192.200.14.145">
    <AuthenticationSequence>
      <Authentication Type="PLAIN" Username="name" Password="password1" OrderID="1"
      ExecProto="SSH"/>
    </AuthenticationSequence>
    <ApplySequence>
      <UseiDRACPassThrough>
        <Authentication ExecProto="REDFISH" Password="calvin" Type="PLAIN" Username="root"/>
      </UseiDRACPassThrough>
      <Sequence Type="ApplyFirst">
        <Category OrderID="1" Value="BI"/>
        <Category OrderID="2" Value="NI"/>
        <Category OrderID="3" Value="DI"/>
      </Sequence>
      <Sequence Type="ApplyLast">
        <Category OrderID="3" Value="SA"/>
        <Category OrderID="0" Value="DD"/>
      </Sequence>
    </ApplySequence>
  </System>

<System Address="192.150.12.132" RSystemType="iDRAC">
  <AuthenticationSequence>
    <Authentication Type="PLAIN" Username="name" Password="password2" OrderID="2"
    ExecProto="SSH"/>
  </AuthenticationSequence>
</System>
<System Address="192.160.10.101 RSystemType="iDRAC">
  <AuthenticationSequence>
    <Authentication Password="password" Type="PLAIN" Username="username"/>
  </AuthenticationSequence>
</System>
```

```

</AuthenticationSequence>
</System>
</RemoteSystem>

</DSUConfig>

```

**Table 3. Config file options usage**

Element	Options Usage	Description
<b>Repository</b>	Type="OSNATIVE   REPOSITORY"	<p>When type is OSNATIVE, the command specific to the OS will be used to install updates. Updates are fetched from IP + '/' + Directory.</p> <p>When type is REPOSITORY, the updates will be downloaded from location provided in the IP + '/' + Directory.</p>
<b>Repository -&gt; RepoLocation</b>	IP="<ipaddress>" Directory="<directoryaddresses>"	The attributes provides the location of repository for the update of IP and Directory as: [IP + '/' + Directory]. If the Type is OSNATIVE, location provided in the [IP + '/' + Directory] is expected to carry updates in rpm format. If the Type is REPOSITORY, location provided by the [IP + '/' + Directory] should contain catalog file in .gz format and same will be used to fetch updates.
	UseLatestDSU="True   False"	<p>The UseLatestDSU refers to the latest DSU version to be installed at the target system.</p> <p><b>Usecase 1: Bootable ISO</b></p> <p>a. TRUE: When Type is OSNATIVE, DSU'S version is compared from the location provided in the IP + '/' + Directory to the version carried by DSU bootable plug-in.</p> <p>b. False: The DSU version carried inside dell boot plugin will be used.</p> <p><b>UseCase2: While using remote option.</b></p> <p>a. TRUE: Latest DSU will be made available at target system (Install/update)</p> <p>b. False: DSU version available at target system will be used to apply updates.</p> <p>This options is ignored in case Type is REPOSITORY.</p> <p><b>NOTE:</b> Dell recommends the value of the attribute as True, when using the remote option.</p> <p><b>NOTE:</b> Dell recommends the value of the attribute as True, in the config file to avoid failures at the remote system.</p>
<b>ApplySequence -&gt; Sequence</b>	Type= "ApplyFirst   ApplyLast"	This option allows user to provide the sequencing. ApplyFirst allows the user to apply the list of

Element	Options Usage	Description
		categories mentioned to be updated first and ApplyLast allows the user to apply the updates last.
<b>ApplySequence -&gt; Sequence -&gt; Category</b>	Value OrderID	<p>There are two attributes which has to be mentioned for this feature:</p> <ul style="list-style-type: none"> <li>Value - Category value is to be provided. To get the category value use the option <code>--get-categories</code></li> <li>OrderID - OrderID is positive integer value which will be used to apply the updates in an ascending order.</li> </ul> <p>Default order for updating is:</p> <ul style="list-style-type: none"> <li>iDRAC / LC</li> <li>Applications like: Diagnostics – DI, iSM</li> <li>Device Driver (Storage, COMMs, Chipset, Video)</li> <li>Device Firmware (Storage, COMMs, PSU, CPLD)</li> <li>BIOS</li> </ul>
<b>AuthenticationSequence -&gt; Authentication</b>	<pre>Authentication Type="PLAIN"  ExecPort="22"  Username="name" Password="password1"  OrderID="4"  ExecProto="SSH"  "WMI"   "REDFISH"</pre>	<p>The Authentication has various attributes which can be used to config the remote systems.</p> <p>The default value is <b>Plain</b> which requires the user to provide the user name and the password for the connection.</p> <p>The <b>ExecPort</b> is used to provide the port number in accordance to the execution protocol provided.</p> <p>Username and password are required for authentication.</p> <p>The <b>OrderID</b> provides the order in which the authentications provided will be checked for the remote connections.</p> <p>The <b>ExecProto</b> provides the protocol method over which the connection will be established.</p> <ul style="list-style-type: none"> <li>SSH is the connection protocol used for Linux operating systems.</li> <li>WMI is the connection protocol used for Microsoft Windows operating systems.</li> <li>Redfish - is connection method used for iDRAC.</li> </ul> <p>This attribute is optional.</p>
<b>RemoteSystem -&gt; System</b>	<pre>System Address type AddressType="IPV4"  RSystemType=iDRAC</pre>	<p>To provide the IP address of system, DSU automatically detects the type of address if the input is not provided by the user.</p> <p>To provide the system type to connect to remote system.</p>

## Sample config file with only Apply Sequence option

```
<DSUConfig>
<Repository Type="CATALOG">
  <RepoLocation IP="192.168.10.11" Directory="16.08.00" UseLatestDSU="False"/>
</Repository>
<ApplySequence>
  <Sequence Type="ApplyFirst">
    <Category Value="NI" OrderID = "1"/>
    <Category Value="BI" OrderID = "2"/>
  </Sequence>
  <Sequence Type="ApplyLast">
    <Category Value="SV" OrderID = "0"/>
  </Sequence>
</ApplySequence>
</DSUConfig>
```

## Command to perform firmware updates via iDRAC (Remote System)

### Inventory:

```
dsu --source-type=REPOSITORY -i --remote="idracuser:idracpassword@iDRAC IP" --rsystemtype=iDRAC
```

### Preview:

```
dsu --source-type=REPOSITORY --preview --remote="idracuser:idracpassword@iDRAC IP" --rsystemtype=iDRAC
```

### Update:

```
dsu --source-type=REPOSITORY -u --remote="idracuser:idracpassword@iDRAC IP" --rsystemtype=iDRAC --reboot
```

## Sample config file for performing firmware updates via iDRAC (Multiple Remote system)

```
<DSUConfig>
<RemoteSystem>
  <System Address="192.168.1.10" RSystemType="iDRAC">
    <AuthenticationSequence>
      <Authentication Password="idracpassword" Type="PLAIN" Username="username"
ExecPort="443"/>
    </AuthenticationSequence>
  </System>
</RemoteSystem>
</DSUConfig>
```

## Command to perform firmware update via operating system to iDRAC using Passthrough interface.

```
Host System: dsu --use-idrac-passthrough --source-type=REPOSITORY -u
```

```
Remote System: dsu --use-idrac-passthrough --source-type=REPOSITORY -u --remote="OS
Username:OSPassowrd@OSIP
```

## Sample Config File to perform firmware update via operating system to iDRAC Passthrough using OAuth Authentication

```
<DSUConfig>
  <RemoteSystem>
    <System Address="100.100.200.131" >
      <AuthenticationSequence>
        <Authentication ExecProto="WMI" Password="ospassword" Type="PLAIN"
          Username="username" Domain="domainname"/>
      </AuthenticationSequence>
      <UseiDRACPassThrough>
        <Authentication ExecProto="REDFISH" Type="PLAIN" />
      </UseiDRACPassThrough>
    </System>
  </RemoteSystem>
</DSUConfig>
```

## Sample Config file to perform firmware update via operating system to iDRAC passthrough using Basic Authentication

```
<DSUConfig>
  <RemoteSystem>
    <System Address="192.168.10.1" >
      <AuthenticationSequence>
        <Authentication ExecProto="WMI" Password="ospassword" Type="PLAIN"
Username="username"
          Domain="domain"/>
      </AuthenticationSequence>
      <UseiDRACPassThrough>
        <Authentication ExecProto="REDFISH" Password="idracpassword " Type="PLAIN"
          Username="idracusername"/>
      </UseiDRACPassThrough>
    </System>
  </RemoteSystem>
</DSUConfig>
```

## Command to import the public keys for Signature Validation on Linux operating system

```
On Host System: dsu -u --import-public-key
```

```
On Remote System: dsu -u --remote=username:password@SystemOSIP --import-public-key
```

## Command to ignore the signature Validation on Linux and Microsoft Windows operating systems

```
Host system: dsu -u --ignore-signature
```

```
Remote system: dsu -u --remote=username:password@SystemOSIP --ignore-signature
```

## Command to use the installer option

```
dsu --dsu-lin64-installer-location="<location>"
```

```
dsu --remote --config=/home/dsu/config.xml --dsu-lin64-installer-location=/home/dsu/Systems-  
Management_Application_FT56W_LN64_1.7.0_A00.BIN
```

```
--dsu-win64-installer-location=C:\dsu\ Systems-Management_Application_FT56W_WN64_1.7.0_A00.EXE
```

```
--dsu-lin64-installer-location=/home/dsu/ Systems-  
Management_Application_FT56W_LN64_1.7.0_A00.BIN
```

To pick the location provided and install at remote system if DSU is not installed. Alternatively if `useLatestdsu` attribute is true then following DUP will be used to replace the DSU at remote system.

## Command to use reboot options

```
dsu --reboot
```

Restarts the system for updates to take effect.

While reboot option is used on host the DSU needs to be triggered manually after restart to check the status of updates.

```
dsu --config="<configFile Path>" --remote --category=BI -e --reboot
```

The command restarts the remote systems specified in the config file if the update requires a restart of the system and will relaunch DSU to check the status of the same.

## Command to use push remote updates

```
dsu --push-remote-updates --remote --config="<filepath>" --category=BI
```

To push all the required updates to the remote system from the system where DSU is running, runs the update and provides the status back.

## Use with custom offline repository created with Dell Repository Manager

DSU can update a system based on a custom-built Server Update Utility (SUU) offline repository exported from Dell Repository Manager (DRM):

- Build a bundle of desired DUPs using DRM in a custom repository or choose a Dell-defined system bundle from the **Dell Online Catalog** tab.
- Select the checkbox of each desired bundle then click the **Create Deployment Tools** button.
- Choose **Create Server Update Utility (SUU)** and then **SUU to Directory**.
- Choose **Generate 64-bit SUU**.
- Browse for a directory to begin the export then click **Finish**.

Once the export task for the SUU image has completed then issue the following:

**Linux Operating System:**

```
dsu --source-type=REPOSITORY --source-location="<path_to_suu> repository" --ic-  
location="<path_to_suu>/bin/Linux/invcol
```

**Microsoft Windows Operating System:**

```
dsu --source-type=REPOSITORY --source-location="<path_to_suu> Repository" --ic-  
location="<path_to_suu>\bin\Windows\invcol.exe
```

## Command to update from the provided repository

```
dsu --source-type=REPOSITORY --source-location="downloads.dell.com/catalog"
```

```
dsu --source-type=OSNATIVE
```

In case of OSNATIVE the default repository will take the respective operating system flavor.

## Command to create bootable DSU ISO

**Linux Operating System:**

```
dsu --destination-type=ISO --destination-location="/home/demo.iso" -n --source-type=REPOSITORY --  
source-location="192.168.10.11/16.08.00" --config="/usr/libexec/dell_dup/dsuconfig.xml"
```

**Windows Operating System:**

```
dsu --destination-type=ISO --destination-location="C:\demo.iso" -n --source-type=REPOSITORY --  
source-location="192.168.10.11/16.08.00" --config="C:\dsuconfig.xml"
```

## Command to create bootable non-interactive DSU ISO

**Linux Operating System:**

```
dsu --non-interactive --destination-type=ISO --destination-location=/root/home/output.iso --  
config=/root/home/config.xml --source-type=REPOSITORY --source-location="downloads.dell.com/  
catalog"
```

**Microsoft Windows Operating System:**

```
dsu --non-interactive --destination-type=ISO --destination-location= C:\output.iso --config=C:  
\config.xml
```

## Command to create bootable interactive DSU ISO

**Linux Operating System:**

```
dsu --destination-type=ISO --destination-location=/root/home/output.iso
```

**Microsoft Windows Operating System:**

```
dsu --destination-type=ISO --destination-location= C:\output.iso
```

## Command to package the selected updates to a folder using existing bootable ISO

**Linux Operating System:**

```
dsu --destination-type=CBD --destination-location=/root/home/outdirectory --bootable-log-  
location=/var/log/bootmsg.log
```

**Microsoft Windows Operating System:**

```
dsu --destination-type=CBD --destination-location= C:\outdirectory --bootable-log-  
location=/var/log/bootmsg.log
```

## Sample scripts using DSU

### Creating Bootable ISO using helper script

You can create a bootable ISO (Linux-based). The script is available in the location: <https://linux.dell.com/repo/hardware/scripts/>. The following sample script creates a bootable ISO.

```
dsucreateiso [options]
```

**Table 4. Options used in creating bootable ISO**

Options Creating Bootable ISO	
<b>Workspace directory command</b>	
<b>Description</b>	To provide the working space be used by the script. By default a unique temporary directory is created in /tmp/tmp/XXX which is cleared after execution.
<b>Command for Workspace</b>	<code>dsucreateiso -w WORKSPACE</code> <b>or</b> <code>dsucreateiso --workspace=WORKSPACE</code>
<b>Destination path to save the ISO file</b>	
<b>Description</b>	Provides the complete path for the output ISO file created by the script. By default the file is created in the current directory with the file name: <code>dsu_bootableimage_%Y%m%d_%H%M%S.iso</code> .
<b>Command for output</b>	<code>dsucreateiso -o OUTPUT</code> <b>or</b> <code>dsucreateiso --output=OUTPUT</code>
<b>Listing of available platforms</b>	
<b>Description</b>	Displays list of Linux platforms available in the given catalog file.
<b>Command for listing platforms</b>	<code>dsucreateiso -p</code> <b>or</b> <code>dsucreateiso --available-platforms</code>
<b>Listing of Platforms to create ISO</b>	
<b>Description</b>	Provides list of platforms for which ISO is to be created. If given platform is not present in catalog file will error out. Multiple platforms can be provided either with pipe or comma separated.
<b>Command for listing platforms</b>	<code>dsucreateiso -i INPUTPLATFORMLIST</code> <b>or</b> <code>dsucreateiso --input-platformlist=INPUTPLATFORMLIST</code>
<b>Display the location of Catalog file</b>	
<b>Description</b>	Provides either local/network location of repository or catalog. By default network would be enabled to download catalog and DUPs file.
<b>Command for source location</b>	<code>dsucreateiso -s SOURCELOCATION</code> <b>or</b> <code>dsucreateiso --source-location=SOURCELOCATION</code>
<b>Location to create log file</b>	

Options Creating Bootable ISO	
<b>Description</b>	Provides location of where to create log file. Creates a Logfile at the given location with the file name as <b>dsucreateiso_%Y%m%d_%H%M%S.log</b> . By default the log is located at /var/log/dsucreateiso.log and will be appended with each execution.
<b>Command for Log file</b>	<code>dsucreateiso -l LOGLOCATION</code> <b>or</b> <code>dsucreateiso --log-location= LOGLOCATION</code>
Apply Action for the component	
<b>Description</b>	Specifies the option with which dsu will be executed in mounted environment. By default no DSU option of application status are used. The options are applyall upgrade downgrade equivalent.
<b>Command for apply action</b>	<code>dsucreateiso -a APPLYACTION</code> <b>or</b> <code>dsucreateiso --apply-action= APPLYACTION</code>
Location of the DELL Boot Plug-in	
<b>Description</b>	Provides the location of dellbootplugin in <b>tar.gz</b> format. Both network as well as local location can be provided. By default <b>dellbootplugin.tar.gz</b> will be downloaded from the posted location of dell.
<b>Command for DELL BootPlug-in</b>	<code>dsucreateiso -d DELLBOOTPLUGIN</code> <b>or</b> <code>dsucreateiso --dellbootplugin=DELLBOOTPLUGIN</code>
Location of the custom script file used for ISO creation	
<b>Description</b>	Provides the location of script file.
<b>Command for location of the custom script file</b>	<code>dsucreateiso -i INPUTSCRIPT</code> <b>or</b> <code>dsucreateiso --input-custom-script=INPUTSCRIPT</code>
Destination path for the custom script file used for ISO creation	
<b>Description</b>	Provides the location of script file where script file will be generated.
<b>Command for the destination path for the custom script</b>	<code>dsucreateiso -u OUTPUTSCRIPT</code> <b>or</b> <code>dsucreateiso --output-custom-script=OUTPUTSCRIPT</code>

Topics:

- [Sample usage with script](#)
- [Using kickstart files](#)

## Sample usage with script

The following are some of the sample options with bootable ISO script:

### Command to create ISO using custom catalog

```
dsucreateiso --source=/root/Catalog.xml --output=bootabledsu.iso
```

### Command to create ISO by the available repository

```
dsucreateiso --source=/root --output=bootabledsu.iso
```

## Command to customize the working directory

```
dsucreateiso --output=/root/bootabledsu.iso --workspace=/root/myworkspace
```

## Command to create ISO with offline network and local repository

```
dsucreateiso --dellbootplugin=/root/dellbootplugin.tar.gz --source=/root --output=bootabledsu.iso
```

## Command to create ISO for particular platform

```
dsucreateiso --input-platformlist=PER730|PER830
```

## Command to create ISO with the action for components

```
dsucreateiso --apply-action='upgrade|downgrade'
```

## Command to create ISO with the given custom-script

```
dsucreateiso --input-custom-script=/root/apply_bundles.sh
```

## Using kickstart files

Kickstart files can be used to create a Linux based Live-ISO image including DSU, using a bootable ISO creation utility, such as `livecd-creator` or any other bootable ISO creation utility that supports kickstart files.

Command syntax to create Live-ISO image using kickstart files: `livecd-creator --config=<kickstart_file_path> --fslabel=<filesystem_label>`

For more information, view <https://linux.dell.com/repo/hardware/sampleks/>

## Troubleshooting DSU

### The repository setup is fine, however OMSA (srvadmin) is failing to install.

Even though DSU does not block OMSA installation or upgrade on any server, OMSA is supported on certain Linux distributions and PowerEdge server models. For more details on supported OS and server, check the latest OMSA documentation. DSU supports upgrade of OMSA (srvadmin), where an OMSA version is already installed. A fresh installation of OMSA can be performed directly with YUM commands from the same DSU repository as mentioned in [Installing OpenManage Server Administrator](#) section.

#### YUM based systems:

In certain circumstances, YUM caches incorrect repository metadata. Run `yum clean all` to remove old metadata, and retry. Up2date can also cache incorrect metadata at times. To remove old metadata, run `rm -f /var/spool/up2date/*`. You should be able to safely remove all the files under `/var/spool/up2date/` at any time and up2date automatically downloads the required files.

If you still have problems, please report to the [linux-poweredge@dell.com](mailto:linux-poweredge@dell.com) mailing list. Ensure to include the following information:

- Subject line should mention the name of the repository that has a problem
- Linux Distribution, arch, version, and patchlevel: eg. RHEL 6 x86\_64 Update 9
- Dell system model and system id
- Error output from any commands

### The repository setup is fine, OMSA (srvadmin) is installed but won't start or you can't access it.

To access OMSA and the DSU repository, the srvadmin service has to be started. Before starting the service, ensure that the openipmi service is enabled using the following command:

```
# srvadmin-services.sh start
```

```
Starting ipmi driver: [FAILED]
```

```
# chkconfig openipmi on
```

For detailed information about OMSA trouble shooting, refer OpenManage Server Administration manuals.

### Repository conflicts for updates having different version.

DSU will point to incorrect updates, if multiple repositories are configured which contains different versions of similar packages.

It is advised to disable other repositories in such cases.

# The DSU commands are not working even after the successful installation of the software.

After successful installation of DSU, if the commands do not work, ensure to assess the following requirements:

- Check if the environment variables are set
- Check if you have administrator privileges if DSU is installed on the supported Windows operating system
- Check if you have root permission if DSU is installed on the supported linux operating system

## Failure message is observed while creating a bootable ISO through DSU.

```
[FAILED] Failed to start Startup script for DTK
```

Please check 'systemctl status start-script.service' for details"

The message displayed can be ignored as it will not have any impact while creating a bootable ISO.

# Frequently asked questions

This section lists some frequently asked questions about DSU.

## How can I select an update in the given list?

Type the number displayed against the update, to select the update. An asterisk (\*) is displayed corresponding to the update after it is selected.

## How can I cancel an update already selected in the given list?

It works like a toggle button. For example, if update number 7 is already selected (an asterisk (\*) is displayed corresponding to the update after it is selected), and now if you select 7 as an option, it gets cancelled.

## After I select the required updates, how to start the update process?

After you selected the required updates, type **c** option to start the update procedure.

## Can I select more than one update?

Yes, you can select more than one update at a time. You can provide update numbers one by one as an option to select multiple updates.

## Can I select all updates at the same time?

Yes, you can select all updates at a time. Select **a** option and press enter, all the updates get selected.

## Can I cancel all updates at the same time?

Yes, you can cancel all updates at a time. Select **q** option and press enter, all updates get deselected.

## Can I select multiple updates at the same time using a single option in the command?

No, you cannot select multiple updates. However you can select multiple updates by providing numbers one by one.

## DSU Inventory displays update for a component that is installed is newer than what is available.

DSU Linux Repository is refreshed on a monthly basis, at the next refresh of the DSU Linux Repository the newer version will be carried.

## I am using DSU on 10th generation of PowerEdge Systems. What are the possible outcomes that i may have to handle while using DSU with repository, catalog or RPM?

The following table describes the scenarios and the expected outcomes if you use DSU on 10th generation of PowerEdge systems.

**NOTE:** The Dell's PowerEdge 10G servers have reached end of support life. Version 16.12.01 is the last version of repository or catalog with support for 10th generation updates.

Possible outcomes for PowerEdge systems

**Table 5. Possible Outcomes for PowerEdge systems**

Scenarios	Outcomes
DSU on 10th generation of PowerEdge system pointing to the newest Linux Repository (on linux.dell.com) and the Repository no longer has 10G content.	<b>Platform not supported</b> message is displayed.
DSU 1.5 RPM (sourced from linux.dell.com) on a 10th generation of PowerEdge system pointing to the newest Linux Repository that no longer has 10G content.	<b>Platform not supported</b> message is displayed.
DSU 1.4 RPM on a 10th generation of PowerEdge system pointing to an older Linux Repository that still has 10G content.	All commands work as usual.
DSU 1.4 DUP (sourced from downloads.dell.com) pointing to catalog.xml file that no longer has 10G content.	There may be two possible outcomes: <ul style="list-style-type: none"> <li>· If the DUP doesn't support 10G platform, then DSU is not installed.</li> <li>· If DUP supports 10G platform, DSU is installed. When dsu command is invoked <b>Platform not supported</b> message is displayed.</li> </ul>
I am running DSU 1.4 DUP and pointing at a legacy catalog.xml that has 10G content.	There may be two possible outcome: <ul style="list-style-type: none"> <li>· If the DUP doesn't support 10G platform, then DSU is not installed.</li> <li>· If DUP supports 10G platform, DSU is installed. dsu command works as usual.</li> </ul>

**On Ubuntu operating system, I see a message “genisoimage: command not found. Please install genisoimage to create bootable iso”. What am I supposed to do?**

To troubleshoot the issue, execute the following command: `sudo apt-get install genisoimage`. By executing the command, you are installing the genisoimage to generate the ISO.

**On Linux operating system, I see a message “mkisofs: command not found. Please install mkisofs to create bootable iso”. What am I supposed to do?**

To troubleshoot the issue, execute the following command: `yum install mkisofs` on RHEL operating systems and `zypper install mkisofs` on SLES operating systems.

**On Microsoft Windows operating system, when I execute the command “dsu”, I see a message “dsu is not recognized as an internal or external command, operable program or batch file”. What am I supposed to do?**

To troubleshoot the issue, you must add the dsu install path to environmental variable by executing following command with administrator privileges: `setx PATH=%PATH%;C:\Dell\Dell System Update`.

**There are few components that are listed when I execute the command dsu -i or dsu /i. However, I am not able to view these components in the comparison report. Why do I see the difference?**

Though the components are listed after executing the command, there may be no updates available for certain components in the catalog. You may view the components in the comparison report if an update is available for that particular component in the catalog.

**I get a warning message saying “Inventory collector returned with partial failure”. How do I get more information about the potential issue?**

Check the IC log to get more information regarding the failure. You can find the log file in `C:\ProgramData\Dell\UpdatePackage\log` on Microsoft Windows operating systems and `/var/log/dell/` on Linux operating systems.

### **I see a message saying “Failed to parse config file” with exit code 17. What should I do to troubleshoot and resolve the issue?**

The config file may not be filled correctly. Refer the configuration schema information in the `dsuconfig.xml` section in [Using DSU bootable ISO](#) topic.

### **I see a message “unable to get the inventory collector path from catalog”. What should I do to troubleshoot and resolve the issue?**

For more information on the inventory collector path, check the catalog file.

Sample inventory collector data from catalog.xml:

- WIN64: <InventoryComponent schemaVersion="2.0" releaseID="WF06C" hashMD5="0dbe6b18f0ebf247ea317c51c7257ff4" path="FOLDER04054889M/1/invcol\_WF06C\_WIN64\_16.12.200.896\_A00.exe" dateTime="2016-11-25T16:25:47Z" releaseDate="November 25, 2016" vendorVersion="16.12.200.896" dellVersion="A00" osCode="WIN64" />
- LIN64: <InventoryComponent schemaVersion="2.0" releaseID="WF06C" hashMD5="2778b35ac99d4fb7a6c09aa04d095ca6" path="FOLDER04054886M/1/invcol\_WF06C\_LIN64\_16.12.200.896\_A00" dateTime="2016-11-25T16:25:47Z" releaseDate="November 25, 2016" vendorVersion="16.12.200.896" dellVersion="A00" osCode="LIN64" />

### **When we create a bootable ISO using the `./dsucreateiso` script, does it include files such as LC OS Driver Packs, DSET and other files?**

Yes, using the script the repository is being created with the Linux bundles. As in mounted environment, DSU is being executed which applies filters to remove the LC OS Driver Packs and the other files.

### **Which is the default directory to output the ISO?**

Executing directory with ISO name as `dsu_bootableimage_%Y%m%d_%H%M%S` is the default directory to output the ISO.

### **Where to look for the log files while using the `dsucreateiso` command?**

The log files are located in `/var/log/` with the log filename as `dsucreateiso.log`.

### **How can I generate a separate log file for each remote system on host system.**

Separate log file for individual connection can be provided using `LogFile` attribute in the config file as shown below.

```
<RemoteSystem>
  <System Address="100.100.138.12" LogFile="/home/dsu/system1.log"/>
  <System Address="100.100.138.13" LogFile="/home/dsu/system2.log"/>
</RemoteSystem>
```

### **DSU exits with an error message on Ubuntu while loading libraries.**

DSU exits with an error message: " dsu : error while loading shared libraries: libssh2.so.1: cannot open shared object file: No such file or directory.". Install the dependencies (libssh2.so.1) required for executing remote feature of DSU.

### **Are there any limitations on the number of servers that can be updated at one time with the Remote attribute?**

As long as the network has the bandwidth there are no limitations.

### **Redundant message displayed on Windows console while using remote option.**

To avoid redundant messages the command prompt needs to be restarted. For example: Number of systems complete: 5/5 100% **Number of systems complete: 4/5 80%**

### **The system IP address on the DSU's Log file displayed is not correct.**

On some cases the Virtual IP address is captured by DSU in place of OS IP, in such scenarios the IP address displayed will not be correct.

**On the remote systems running SUSE Linux 15 servers, the remote system is unable get connected after a restart.**

This is due to the firewall which could be enabled after a restart.

**Host System displays an error message as "unknown option provided in DSU" when the option `UseLatestDSU=FALSE` mentioned in config file.**

Set the value of attribute value as `TRUE`. If the lesser version of DSU installed on target system all the functionality or the options for remote feature is not enabled hence following message can be thrown in the case.

**While using `--push-remote-updates` option on systems running SUSE Linux operating systems , updates failure message is observed.**

Reason for failure message is the updates fails to download on the host system.

In such scenarios try using option `--source-type=REPOSITORY` along with `--source-location=<repo-location>`.

**Libpgme library not found, on Ubuntu operating systems to run any DSU command.**

Error occurs when libpgme library not found on the host system.

Solution: libpgme library is one of the dependency for DSU. Please install it on your host system

**Unable to connect error occurs while running the DSU with option `-use-idrac-passthrough`.**

In case of USB-NIC already **enabled** status the interface settings then there are no actions carried out by DSU hence failure is observed.

Solution: Change the state of USB-NIC in passthrough configuration to disable on iDRAC system and retry.

[iDRAC Settings->Connectivity->OS to iDRAC Pass-through->State]

For more information see, Integrated Dell Remote Access Controller User's Guide at [www.dell.com/iDRACmanuals](http://www.dell.com/iDRACmanuals).

**IDSDM firmware update fails for iDRAC remote system.**

This DUP is not supported via iDRAC.

Recommendation: Run the DUP directly on the operating system.

**DSU fails to connect to the system when the iDRAC is configured on a non-default HTTPS port.**

Single remote iDRAC with non-default port fails to get the inventory, preview or update command information.

Recommendation: It supports only by providing the non-default port details in a Config file.

Sample config file:

```
<DSUConfig xmlns="DSUConfiguration">
<RemoteSystem>
<System Address="100.98.68.93" RSystemType="iDRAC">
  <AuthenticationSequence>
    <Authentication Password="calvin" Type="PLAIN" Username="root" ExecPort="445"/>
  </AuthenticationSequence>
</System>>
</RemoteSystem>
</DSUConfig>
```

### **DSU fails to connect to the remote host system using ActiveDirectory credentials.**

If the ActiveDirectory credentials contains suffixes with dot, the DSU fails to connect. Only single-label DNS names are supported that do not contain a suffix such as .com, .corp, .net, .org or companyname.

If using a multi-domain user. For example: If the user has provided "subdomain.domain.com\username", Dell recommends to provide the username as subdomain\username.

### **DSU fails to connect to remote host system with local administrator user when the host was added to the ActiveDirectory.**

Recommended to use ActiveDirectory user instead of local Administrator user.

### **DSU fails to connect to the remote iDRAC using USB-NIC pass through option using ActiveDirectory credentials.**

For the remote system to connect through iDRAC USB-NIC pass through option, use only iDRAC user Administrator account.

### **Remote update fails from windows to windows when network is very slow**

Remote update fails from when network speed is slow, and displays an error message. Dell recommends to avoid this issue ensure the network connection is suitable to run the update and re-try the operations.

### **DSU update fails for few components when update is pushed via iDRAC or via operating system to iDRAC passthrough.**

When updates are pushed via iDRAC or OS to iDRAC passthrough, the update fails when the job is in-progress or scheduled or fails in case of restart is required.

Work around: Clear the iDRAC job queue to avoid this error.

### **Invalid System ID on RHEL 7.6 when executed on Re-branded systems.**

DSU fails and displays an error message as "Invalid System ID" on re-branded systems.

### **Update of SAS-RAID firmware and OS collector fails when multiple-updates scheduled via iDRAC or iDRAC Passthrough.**

In such scenarios update the failed components individually.

### **Segmentation error is observed when the option `rsystemtype` or when `--use-idrac-passthrough` is mentioned in config file.**

In some scenarios segmentation fault is observed for multiple remote connection through iDRAC.

Recommendation: If the issue persists, user has to re-try the command.

### **Firmware updates via iDRAC or iDRAC passthrough with a non-admin user displays an error as 0 Updates Succeeded.**

Reason for this error might be with insufficient privileges, refer DSU log file to confirm same. Perform the update using iDRAC user with Administrator privileges.

### **DSU functionality fails for the system when the iDRAC was configured with non-default HTTPS port using iDRAC USB-NIC passthrough**

Change the iDRAC HTTPS port to default (443) and retry the updates.

### **DSU installed system environmental variable "PATH" is not getting cleared during uninstallation**

When DSU is used in remote scenarios, DSU installed system environmental variable "PATH" is not getting cleared during uninstallation. If multiple remote sessions are used for the same machine the entry created by DSU will get accumulated due to this.

Workaround : Delete multiple entries of DSU path.