

Managing Dell EMC PowerEdge Server Software Licenses by using Digital Licensing

This Dell EMC technical white paper provides an overview of Dell enterprise software that utilizes digital licensing.

Dell Engineering
July 2017

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Revisions

Version	Date	Description
1.0	July/11/2017	Initial release

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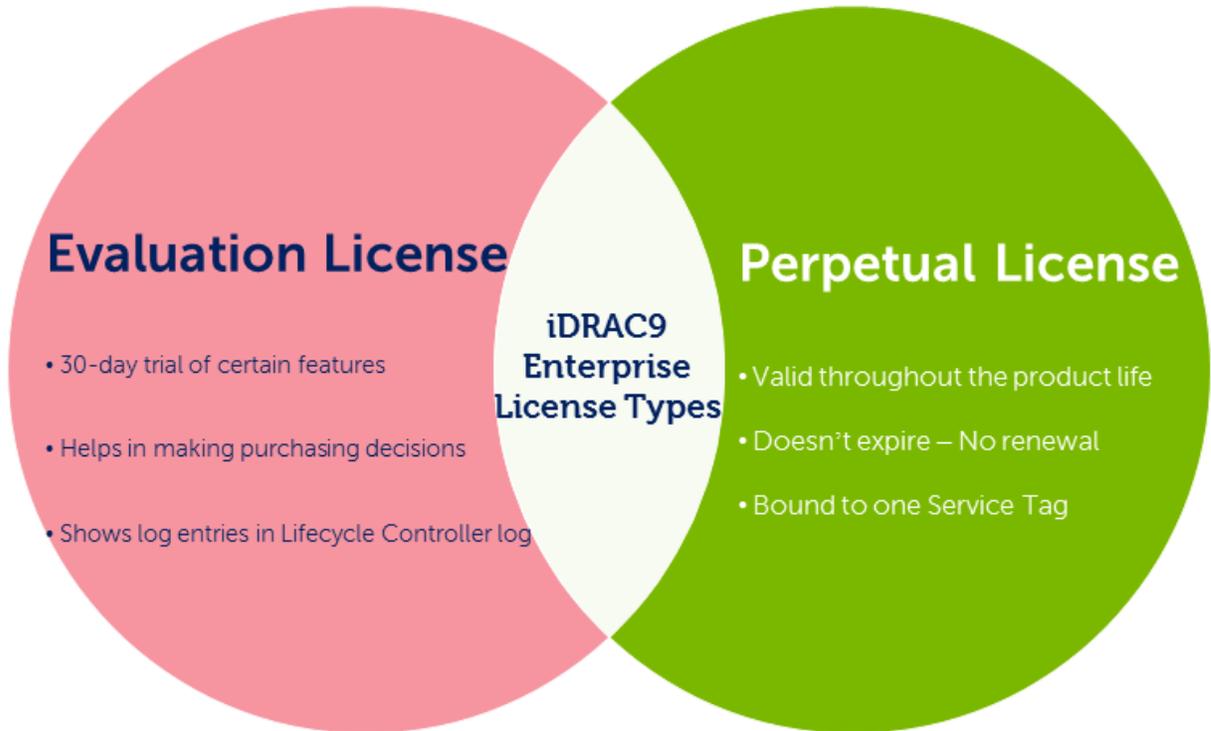
Executive summary

This technical white paper provides an overview of Dell enterprise software that utilizes digital licensing. Several key enterprise products have taken advantage of the ease of use and simplicity to upgrade that digital licensing provides. Products such as the Dell integrated Remote Access Controller 8 (iDRAC8), iDRAC7, OpenManage Essentials Server Configuration Management, and the Enterprise versions of Chassis Management Controller (CMC) for VRTX. Dell License Management portal controls all these licenses. This technical white paper uses the iDRAC licenses as an example.

1 Purchasing PowerEdge servers with installed licenses

For the 12th and 13th generation of PowerEdge servers, you can purchase license upgrades from Dell EMC, and the licenses are applied directly in the factory. There is no license to download and install when purchased at the point of sale. To ensure that a key is never lost, Dell EMC also stores a copy of the key and makes it available in an online License Management portal (www.dell.com/support/licensing). The only other thing you must do after deploying your new server into production is to set up your account and authorize users who can access the digital license on the License Management Portal of Dell EMC, in case your license gets lost at some point in the future. The online portal is the best way to review all your iDRAC license keys.

2 Comparing an Enterprise Perpetual license against Evaluation License



Customers can install an Evaluation license to test out a new feature class before purchasing it. An Evaluation license is good for 30 days. A status icon in the iDRAC GUI will change from green to yellow when the license has 5 days remaining. There will also be log entries in the Lifecycle Controller log. To purchase a Perpetual license or obtain Evaluation licenses, customers may contact their Dell EMC service provider. The server Service Tag is required for a Perpetual license and Dell EMC generates a license that may be downloaded and imported into the iDRAC.

3 Installing an Evaluation License by using the iDRAC GUI, RACADM, or WS-Man

Base and Point of Sale (POS) upgrade licenses are installed in the factory by Dell EMC prior to platform shipment. The base functionality for the particular server model is enabled at POS and does not require an additional file.

After Point of Sale (APOS) licenses must be installed electronically by using iDRAC 7 iDRAC8 interfaces such as the web interface, RACADM, or WS-Man.

To install the Point Of Sale licenses:

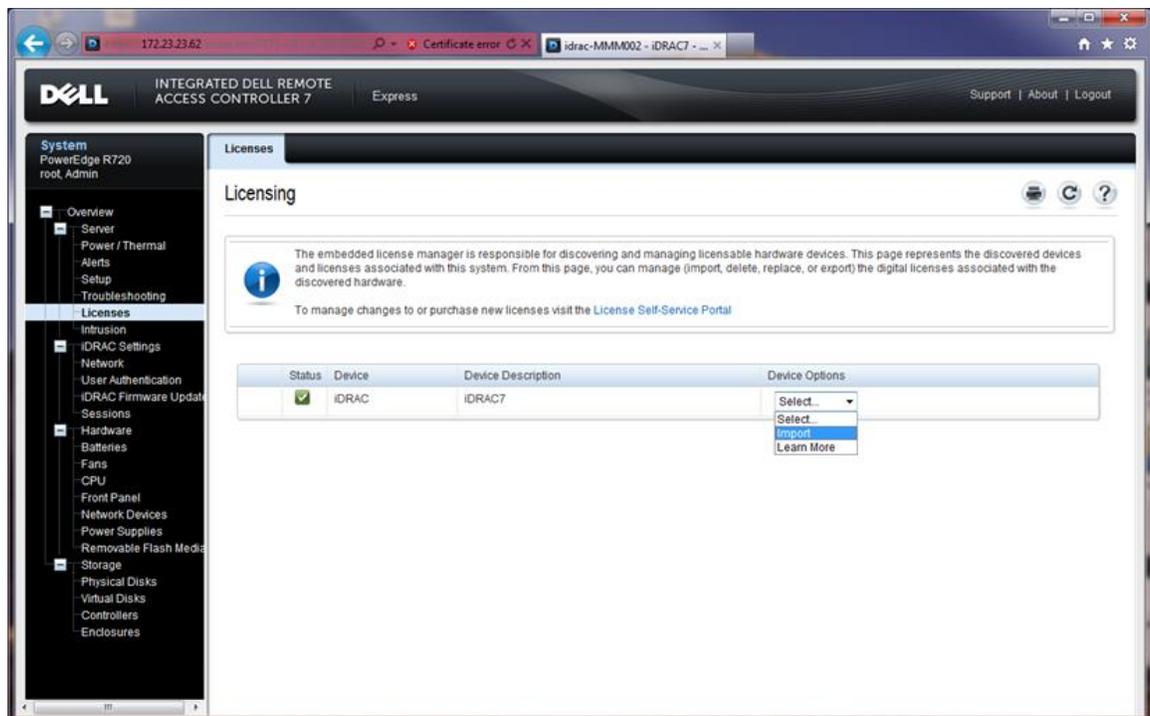
1. Log in to the **License Management** portal.
2. Locate the upgraded license and select the license file from email or downloaded file from your local system.
3. After the license file is available, import the license file to your server from a network share or external storage device by using iDRAC 7, RACADM, or WS-Man.

3.1 iDRAC GUI

To install a license using the iDRAC GUI for either iDRAC7 or iDRAC8:

1. Navigate to the **Licenses** tab, and then select **Import** from the **Device Options**.
2. Browse to the license file, and click **Apply**.

The license file can be located on the local file system of your management station, or on a share that is accessible.



3.2 RACADM

To install a license by using RACADM:

The basic command for RACADM is `racadm license import`. This has many possibilities based on whether you are using local, remote, or firmware RACADM and where the license file is located.

```
[SH7757 ~]$ racadm license help import
```

License import -- Import licenses to various devices on the server.

Usage

```
racadm license import -u <username> -p <password> -f <license file name> l <NFS  
or CIFS share> -c <FQDD>
```

Valid Options

-c	FQDD name of the device to where the license file has to be imported.
-l	Network share location (see the Usage Examples section for NFS or CIFS) from where the license file must be imported.
-f	License file name
-u	Username of the remote share from where the file will be imported
-p	Password for the remote share from where the file will be imported
-o	Option to override the EULA warning and import the license

Usage Examples

- Import a license from a CIFS to a device. In this case, Embedded iDRAC.

```
racadm license import -u admin -p passwd -f License.xml -l  
//192.168.2.140/licshare -c idrac.embedded.1
```
- Import a license from NFS to a device. In this case, Embedded iDRAC.

```
racadm license import -f Licen.xml -l 192.168.2.14:/share -c  
idrac.embedded.1
```
- Import a license by overriding the EULA warning:

```
racadm license import -u admin -p passwd -f License.xml -l  
//192.168.2.140/licshare -c idrac.embedded.1 -o
```
- Import a license from the local filesystem by using local RACADM:

```
racadm license import -f License.xml -c idrac.embedded.1
```
- Import a license from the local filesystem using remote RACADM:

```
racadm license import -f C:\Mylicdir\License.xml -c idrac.embedded.1
```

3.3 WS-Man

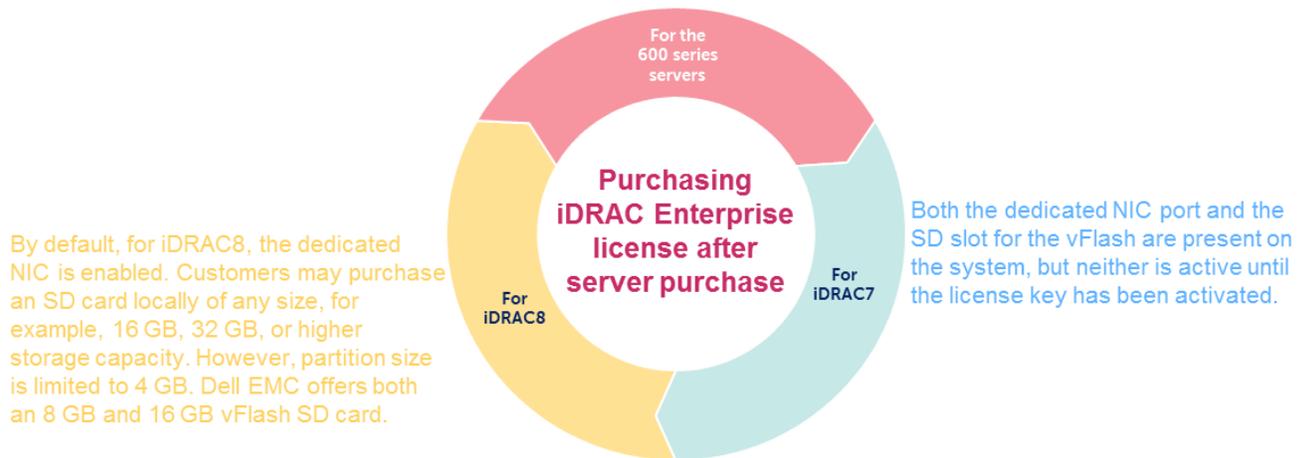
To install a license by using WS-Man:

```
winrm i ImportLicenseFromNetworkShare
"cimv2/root/dcim/DCIM_LicenseManagementService?SystemCreationClassName=DCIM_SPCo
mputerSystem+CreationClassName=DCIM_LicenseManagementService+SystemName=systemmc
+Name=DCIM:LicenseManagementService:1" -u:%s -p:%s -r:https://%s/wsman -
SkipCNcheck -SkipCAcheck -encoding:utf-8 -a:basic -
file:d:\xml_files\license_management_import_license_From_Cifs_Network_Share_idra
c.xml
```

4 Purchasing iDRAC Enterprise license after server purchase

Moving iDRAC licensing to digital form has eliminated the necessity to purchase and install hardware in your server to upgrade the iDRAC functionality. What used to require server downtime and physical hardware to be shipped, can now be done with no impact to the production workload that is running on your PowerEdge server (zero downtime). The digital license can be purchased by using online sales portal of Dell EMC, or through a Dell Sales representative.

Customers have a choice of ordering either just the software license, or you can order the license with the vFlash SD card on the same order, but not bundled under the same SKU.



4.1 Receiving a notification that a license is available to download

After purchasing a license, a customer will receive an email indicating that a license is ready to download. The email contains information the customer needs to retrieve their license such as:

- order number
- order date
- entitlement ID
- item description
- URL to access the Dell Digital Locker

The email contains the electronic download instructions and a link to the online portal. An example screen shot is here.



Dell Digital Locker Order

Thank you for your purchase

We are happy to inform you that your product is available in your Dell Digital Locker (DDL).

Below you will find details on your purchase as well as helpful information on how to utilize the DDL to access and manage your Dell Licenses.

We appreciate your partnership and look forward to helping you with future technology needs.

Use the information below to access your Dell product.

How to access your Dell Digital Locker:

1. Go to your [Dell Digital Locker](#). Click on the My Account sign-in button.
2. Sign in to your Dell My Account using your email address that was used at the time of purchase or that was used to assign you to your software licenses. For questions about creating or updating a My Account login, please see the [My Account FAQs](#).
3. If you are having trouble finding your order or logging in to the Locker, contact your sales team or complete the missing license [form](#)

Order information:

Date: 18-Apr-2017
Dell Order Number: 209043511
Purchase Order:

Item Description	Primary ID	Quantity
iDRAC9 Enterprise	DE00000193472759	1

Need help?

If you need assistance with a missing license in your account, reach out to [Dell Customer Support](#). For general licensing help regarding 'how-to', visit the FAQs [page](#). If you have a technical question, you can contact [Dell Technical Support](#).

Important Information to know:

Once you download the software, you may not return it. Read the [Return Policy](#). We recommend that you copy software purchased from Dell to an external hard drive or DVD and regularly back up your system.
Your order is subject to Dell's Terms and Conditions of Sale. Please note that Dell cannot be responsible for pricing or other errors and reserves the right to cancel any orders arising from such errors. Your order is subject to [Dell's Terms and Conditions of Sale](#), which include a binding arbitration provision. The amount of tax and shipping added to your order depends on where you have asked for the product to be shipped as well as on which products and/or services you've chosen to purchase.

4.2 Using License Management Portal of Dell EMC

Customers can use the external self-help License Management portal to view their digital licenses, obtain a replacement license, or in some cases reassign licenses to different hardware. For more information about using the Dell Digital Locker, click <https://www.dell.com/support/software/us/en/19/Default/QuickStartGuide>.

5 Backing up and restoring iDRAC license keys

Dell EMC iDRAC license keys can be individually backed up and restored using the Lifecycle Controller, iDRAC GUI, RACADM, or WS-Man interfaces, or Dell EMC License Manager can back up and restore licenses on a one-to-many basis. For more information about using DLM to backup and restore licenses, see [Using the Dell EMC OpenManage License Manager](#) in this technical white paper.

Enterprise-level backup and restore is part of the Lifecycle Controller. The backup and restore process backs up and restores all types of licenses.

5.1 Backing up a license File

To initiate a license key backup:

1. Restart your system.
2. Press F10 during POST to enter the Unified Server Configurator.
3. Select **Platform Restore**, and then select **Export Server Profile**.
Ensure that a vFlash SD card must be present or these options will be greyed out.

Note: This procedure is a full system backup. There is no support for incremental backups from USC.

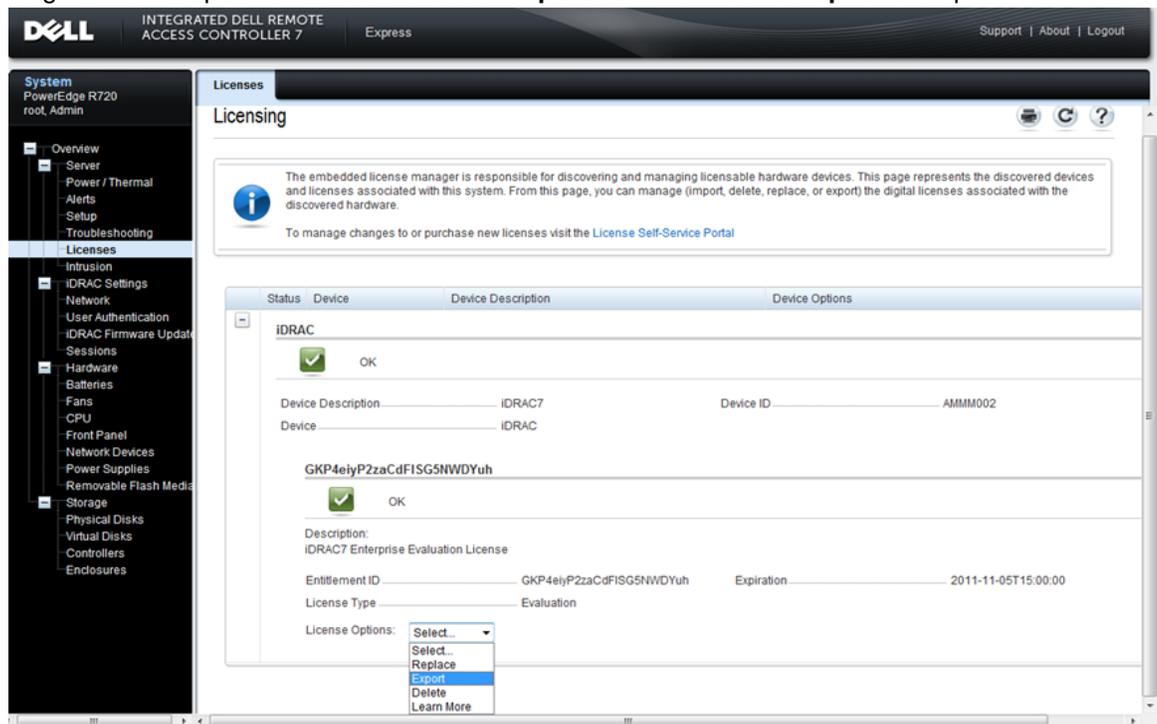
6 Exporting a license file

Using a system backup, a license key can be exported to the local file system or to a share from the iDRAC GUI, RACADM or WS-Man.

6.1 iDRAC GUI

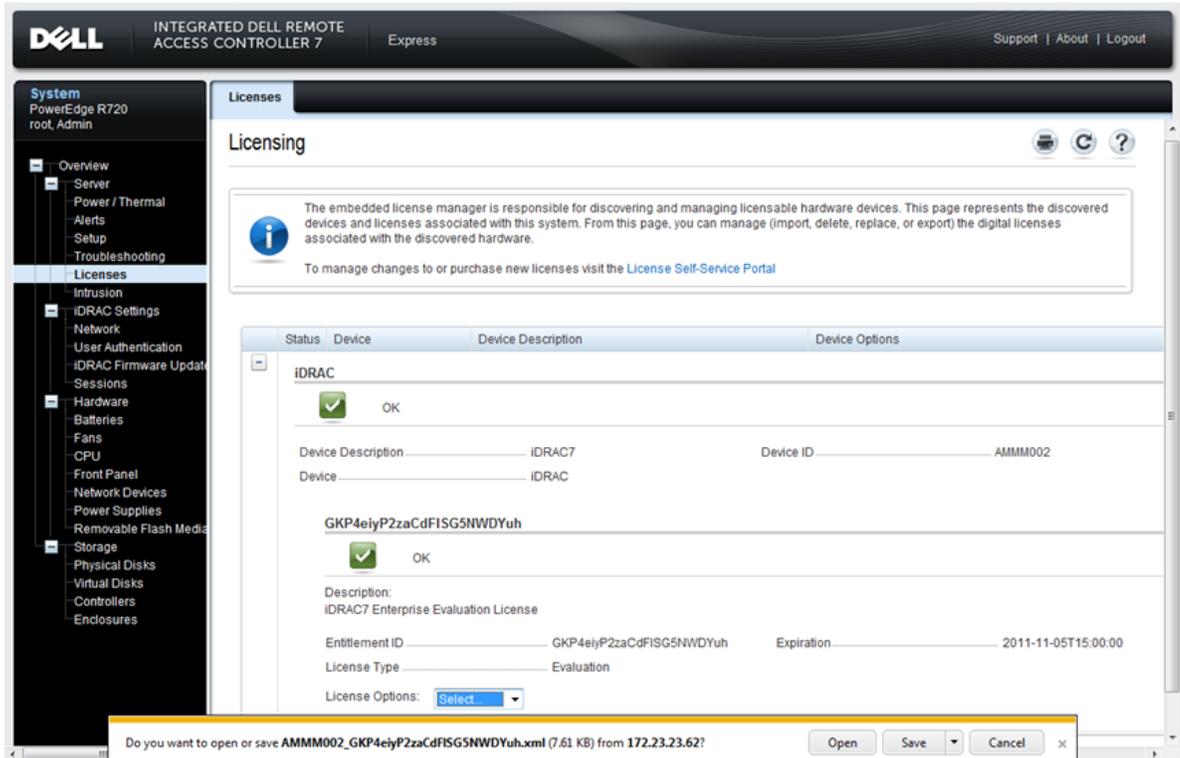
To export a license by using the iDRAC GUI:

1. In the left pane, click **Licenses**.
2. In the working pane, select **Export** from the **License Options** drop-down menu, or, click the plus (+) sign to view a specific license and select **Export** from the **License Options** drop-down menu.



A message is displayed asking you want to open, save, or cancel.

3. Click **Save** if you want the file to go to the default downloads folder or click **Save**, if you want to select the exact location you prefer.



6.2 RACADM

To export a license by using RACADM:

```
[SH7757 ~]$ racadm license help export
```

License export - Exports licenses from various devices on the server.

Usage Examples

```
racadm license export -u <username> -p <password> -f <license file name> -l <NFS/CIFS share> -t <transaction ID>
```

```
racadm license export -u <username> -p <password> -f <license file name> -l <NFS/CIFS share> -e <entitlement ID>
```

```
racadm license export -u <username> -p <password> -f <license file name> -l <NFS/CIFS share> -c <FQDD>
```

```
racadm license export -u <username> -p <password> -f <license file name> -l <NFS/CIFS share> -c <FQDD> -e <entitlement ID> -t <transaction ID>
```

Valid Options

-c	FQDD name of the device from where the license file has to be exported.
-e	Entitlement ID of the license to be exported.
-t	Transaction ID of the license to be exported. Note: To locate the transaction ID, Type RACADM on the License page. The ID is displayed. It can also be located by expanding the plus sign (+) next to the license in the GUI.
-l	Network share location (see "Usage Examples" for NFS or CIFS) or local file system to which the license file must be exported.
-f	Destination license file name. If a filename is not entered, the license file is assigned <service tag>_<entitlement ID>.xml
-u	Username of the system where the file will be exported.
-p	Password of the user on the system where the file will be exported.

Usage Examples

- Export license to a NFS using transaction ID. In this case, transaction 27 :

```
racadm license export -f License.xml -l 192.168.2.140:/licshare -t 27
```
- Export license to a CIFS specifying the entitlement ID. In this case, abcdxyz :

```
racadm license export -u admin -p passwd -f License.xml  
  
-l //192.168.2.140/licshare -e abcdxyz
```
- Export license to a CIFS specifying the FQDD. While using the -c option and exporting license(s) from a device, more than one license file may be exported. Therefore, if a file name is given, an index will be appended to the end of the file name such as LicenseFile0.xml, and LicenseFile1.xml. In this case, the device is Embedded iDRAC:

```
- racadm license export -u root -p calvin -f LicenseFile.xml  
-l //192.168.2.140/licshare -c idrac.embedded.1
```

6.3 WS-Man

To export a license by using WS-Man:

```
winrm i ExportLicense  
"cimv2/root/dcim/DCIM_LicenseManagementService?SystemCreationClassName=DCIM_SPCo  
mputerSystem+CreationClassName=DCIM_LicenseManagementService+SystemName=systemmc  
+Name=DCIM:LicenseManagementService:1" -u:root -p:calvin -  
r:https://172.27.99.61/wsman -SkipCNcheck -SkipCAcheck -encoding:utf-8 -a:basic  
-file:c:\xml_files\license_management_export_license_idrac.xml  
# ExportLicenseToNetworkShare Method (NFS / Linux Share)  
winrm i ExportLicenseToNetworkShare  
"cimv2/root/dcim/DCIM_LicenseManagementService?SystemCreationClassName=DCIM_SPCo  
mputerSystem+CreationClassName=DCIM_LicenseManagementService+SystemName=systemmc
```

```
+Name=DCIM:LicenseManagementService:1" -u:root -p:calvin -
r:https://172.27.99.61/wsman -SkipCNcheck -SkipCAcheck -encoding:utf-8 -a:basic
-
file:c:\xml_files\license_management_export_license_to_network_share_idrac_nfs.x
ml
# ExportLicenseToNetworkShare Method (CIFS / Windows Share)
winrm i ExportLicenseToNetworkShare
"cimv2/root/dcim/DCIM_LicenseManagementService?SystemCreationClassName=DCIM_SPCo
mputerSystem+CreationClassName=DCIM_LicenseManagementService+SystemName=systemmc
+Name=DCIM:LicenseManagementService:1" -u:root -p:calvin -
r:https://172.27.99.61/wsman -SkipCNcheck -SkipCAcheck -encoding:utf-8 -a:basic
-
file:c:\xml_files\license_management_export_license_to_network_share_idrac_cifs.
xml
# DeleteLicense Method (IDRAC.Embedded.1)
winrm i DeleteLicense
"cimv2/root/dcim/DCIM_LicenseManagementService?SystemCreationClassName=DCIM_SPCo
mputerSystem+CreationClassName=DCIM_LicenseManagementService+SystemName=systemmc
+Name=DCIM:LicenseManagementService:1" -u:root -p:calvin -
r:https://172.27.99.61/wsman -SkipCNcheck -SkipCAcheck -encoding:utf-8 -a:basic
-file:c:\xml_files\license_management_delete_license_idrac.xml
```

7 Restoring a license

To restore a one-one license, the license key that was exported can be imported from the iDRAC GUI, RACADM or WS-Man.

7.1 Validating End User License Agreement (EULA) compliance

To validate license compliance and verify licenses that are installed for all your iDRAC, Dell EMC provides several tools:

- For the one-one small business customers:
 - iDRAC GUI
 - RACADM command line
 - WS-Man

Use one of the above interfaces to view the installed license(s).

- For the one-to-many larger business customers:
 - Dell License Manager (DLM)
 - Dell OpenManage Essentials (OME) or DLM

To check your system's compliance by using DLM, see [Viewing license status and compliance information](#).

To prevent systems from being out of compliance, Dell EMC recommends binding the Service Tag to the entitlement. See [Binding or deploying from Dell Online](#).

8 Using the Dell EMC OpenManage License Manager

Dell EMC License Manager is a one-many license deployment and reporting tool for iDRAC and other licenses. DLM can deploy and back up licenses, and report about licensing status, including the currently enabled iDRAC feature level. The new features in DLM are managing licenses for volume binding and distribution by connecting to Dell Online and normalizing a unique password for the 'root' user on the multiple iDRAC9 servers.

8.1 Obtaining and installing DLM

To download the latest version of DLM, go to: <http://www.dell.com/learnmore/iDRAClicenses>.

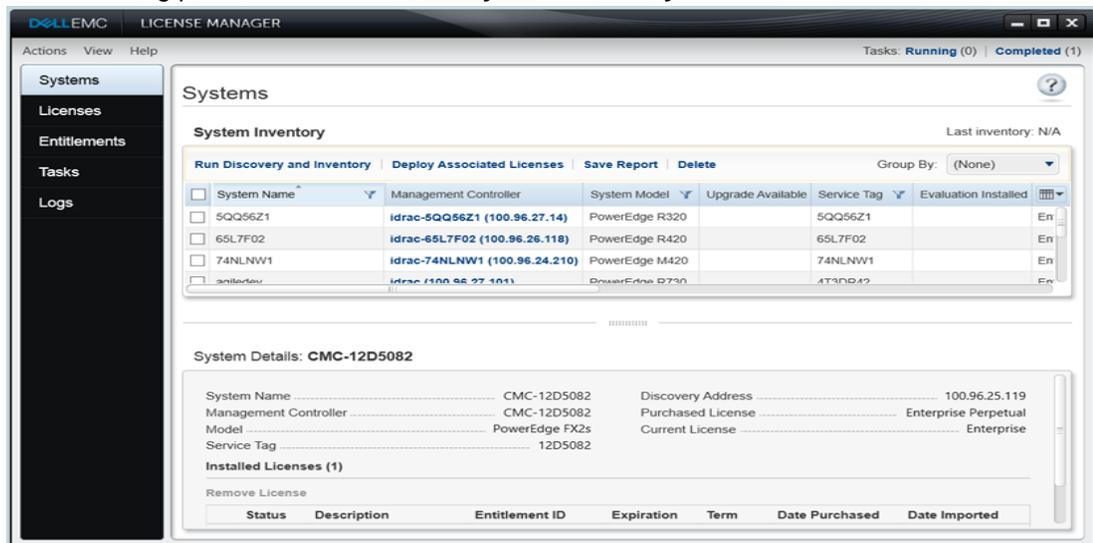
DLM is compatible with Microsoft Windows 10, Windows 8, Windows 7, Windows Vista, Windows Server 2016, Windows Server 2012 R2, Windows Server 2012, and Windows Server 2008 R2. The .NET 4.5 Client Profile and Windows Remote Management (WinRM) 2.0 or later are required.

To install DLM, start the downloaded installer and complete the on-screen instruction.

8.2 Inventorying licensable systems

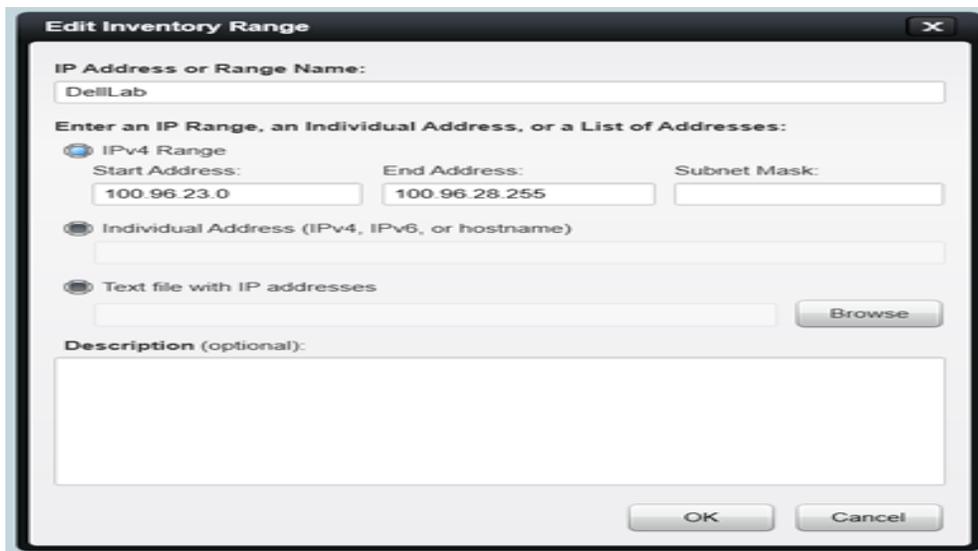
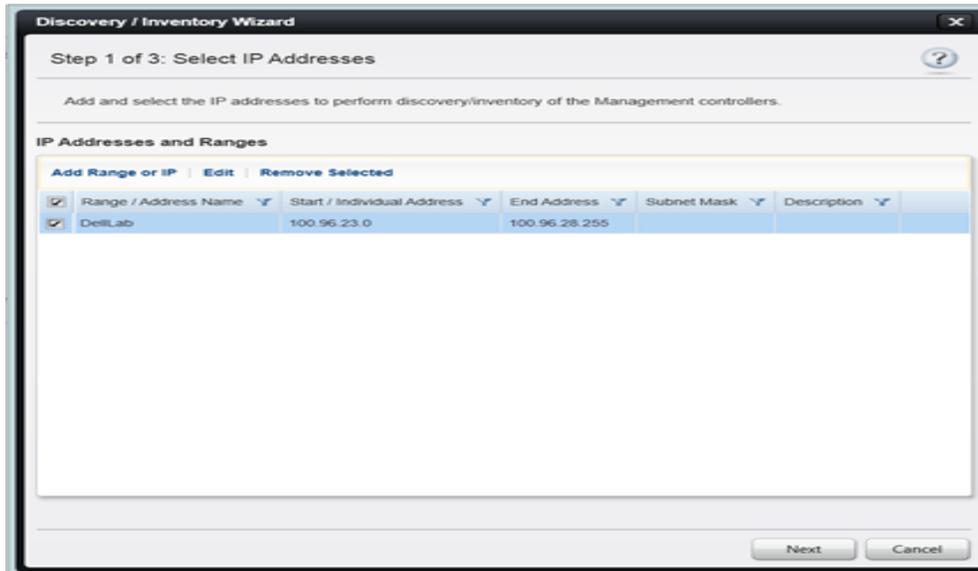
To use DLM, you must discover and inventory your licensable 14th, 13th, or 12th generation iDRACs. To discover your systems' iDRACs:

1. Start **License Manager**.
2. In the left pane, click **Systems**.
3. In the working pane, click **Run Discovery and Inventory**.



4. In the **Discovery / Inventory** dialog box, click **Add Range or IP** and type the IP address or range name along with the iDRAC IP address range or individual iDRAC address.

5. Type IPs of all iDRAC IPs, and click **Next**.



6. Type your iDRAC credentials, verify your communication settings, and then click **Next**.

The screenshot shows the 'Discover / Inventory Wizard' window at 'Step 2 of 3: IP Scan Settings'. The window title is 'Discover / Inventory Wizard' and it has a close button in the top right corner. Below the title bar, there is a help icon and a text box that says 'Enter your iDRAC credentials and confirm Discovery/ Inventory communication settings. Passwords will not be stored after the discovery/inventory operation is complete.' The settings are organized into three sections: 'Credentials', 'Ping Settings (ICMP)', and 'WS-Man Settings'. Under 'Credentials', there are two input fields: 'iDRAC Username:' with the value 'root' and 'iDRAC Password:' with a masked password '*****'. Under 'Ping Settings (ICMP)', there is a checked checkbox 'Require successful ping before attempting inventory', and two input fields: 'Retries:' with the value '3' and 'Timeout:' with the value '5'. Under 'WS-Man Settings', there are three input fields: 'Retries:' with '1', 'Timeout:' with '30', and 'Port:' with '443'. To the right of these fields are three unchecked checkboxes: 'Validate Certificate Name', 'Validate Certificate Authority', and 'Validate Certificate Revocation List'. At the bottom right, there are three buttons: 'Back', 'Next', and 'Cancel'.

7. Confirm your settings and click **Run Discovery / Inventory**.

The screenshot shows the 'Discover / Inventory Wizard' window at 'Step 3 of 3: Confirm Settings'. The window title is 'Discover / Inventory Wizard' and it has a close button in the top right corner. Below the title bar, there is a help icon and a text box that says 'Confirm your discovery/inventory settings.' The settings are organized into five sections: 'Discovery / Inventory IP Ranges' with the value 'DellLab: 10.36.0.1 - 10.36.0.254', 'Discovery / Inventory Individual IPs' with the value 'None selected.', 'iDRAC Credentials' with the value 'Username: root', 'Ping Settings' with the values 'Require successful ping before attempting inventory: On', 'Ping retries: 3', and 'Ping timeout: 5 seconds', and 'WS-Man Settings' with the values 'WS-Man retries: 1', 'WS-Man timeout: 30 seconds', 'WS-Man Port: 443', 'Validate certificate name: Off', 'Validate certificate authority: Off', and 'Validate certificate revocation list: Off'. At the bottom left, there is a checked checkbox 'Show task pane after launch'. At the bottom right, there are three buttons: 'Back', 'Run Discovery / Inventory', and 'Cancel'.

The status of Discovery/Inventory progress is displayed on the **Tasks** page. You may view the inventoried systems or iDRACs on the **Systems** page when complete.

Note: The factory-installed licenses are not retrieved during the discovery and inventory of iDRAC 9 systems. Therefore, the iDRAC9 licenses are not listed on the **Licenses** page.

9 Managing licenses for volume binding

This feature enables the user to bulk-bind the unbound license entitlements to the discovered systems and then deploying the licenses on those systems by using their Dell Online account information in very quick and simple manner.

Managing the licenses for volume-binding is a two-step process.

1. Type the OTP that you can get from the Dell Online.
2. Click **Action**→**Bind Licenses** for binding and deploy the licenses on the servers. The user can also select to only bind the license and deploy them later.

9.1 Connecting to Dell Online

1. Click **Action**→**Connect to Dell Online**.

Connect to Dell Online

Enter Connection Credentials

In order to connect to Dell Online from License Manager, you will need an OTP token (one time pass). You can obtain one here: [Dell Online](#)

Then enter the OTP token below. This token is valid for only 30 minutes.

If you select to "Save Connection Credentials", License Manager can continue to use those connection credentials until they expire. When they do, you will be prompted for an OTP token again.

If you select to 'Automatically connect on start up', License Manager will not keep the connection credentials and you will be prompted for an OTP token when License Manager starts.

Credentials

OTP (One Time Password):

Options

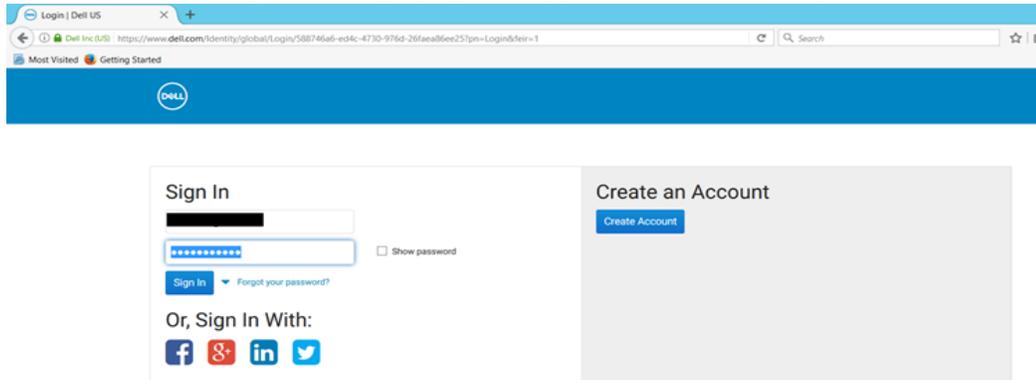
Save Connection Credentials

Automatically connect on start up

Enable Proxy Settings

Next Cancel

2. Click **Dell Online** to go to the login page and type the username and password to receive the OTP.



3. Click **Sign in**. An OTP is sent to the registered mobile phone.



4. Type the OTP. Click **Enable Proxy**, if required.

5. To save the credentials, click **Save Connection Credentials**. It is sufficient to type OTP only once.

Connect to Dell Online

Enter Connection Credentials

In order to connect to Dell Online from License Manager, you will need an OTP token (one time pass). You can obtain one here: [Dell Online](#)

Then enter the OTP token below. This token is valid for only 30 minutes.

If you select to "Save Connection Credentials", License Manager can continue to use those connection credentials until they expire. When they do, you will be prompted for an OTP token again.

If you select to 'Automatically connect on start up', License Manager will not keep the connection credentials and you will be prompted for an OTP token when License Manager starts.

Credentials

OTP (One Time Password):

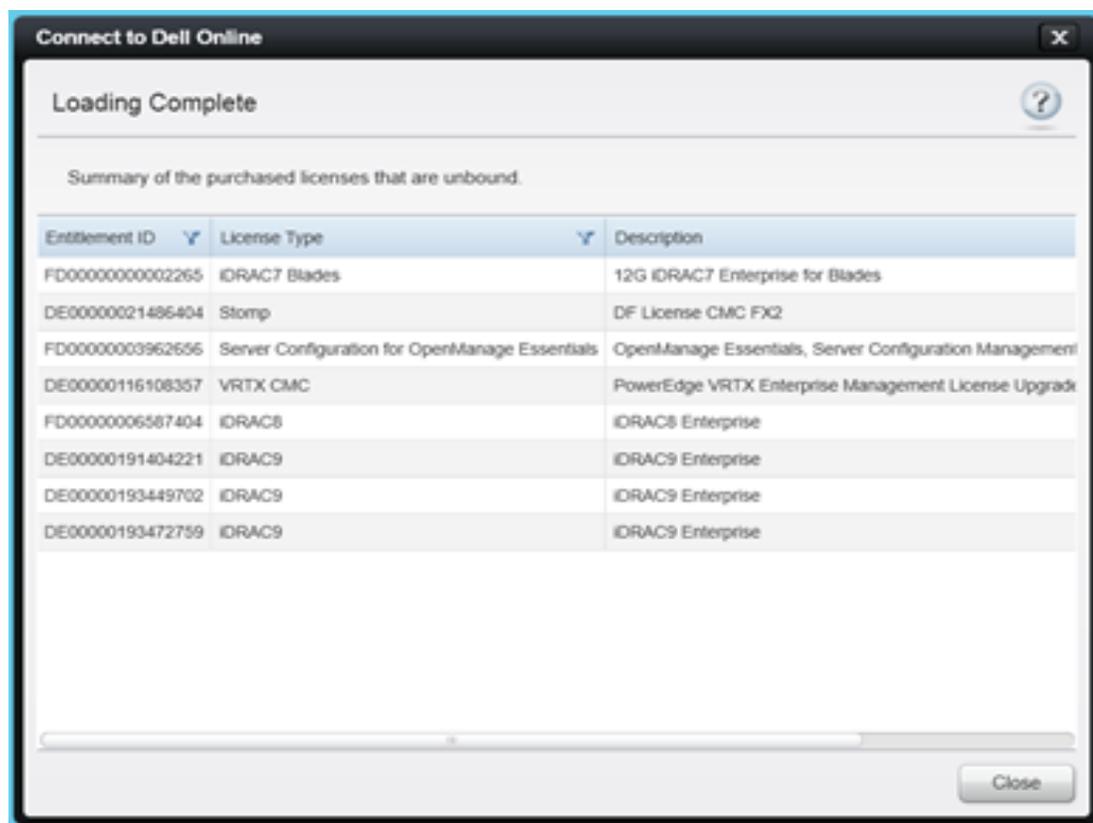
Options

Save Connection Credentials Proxy IP: Port:

Automatically connect on start up User Name:

Enable Proxy Settings Password:

6. To view the connection status, click **Next**.
Review the message on the wizard to know the status of connection result. If the connection is successful, click **Next** to see all the unbounded entitlements.

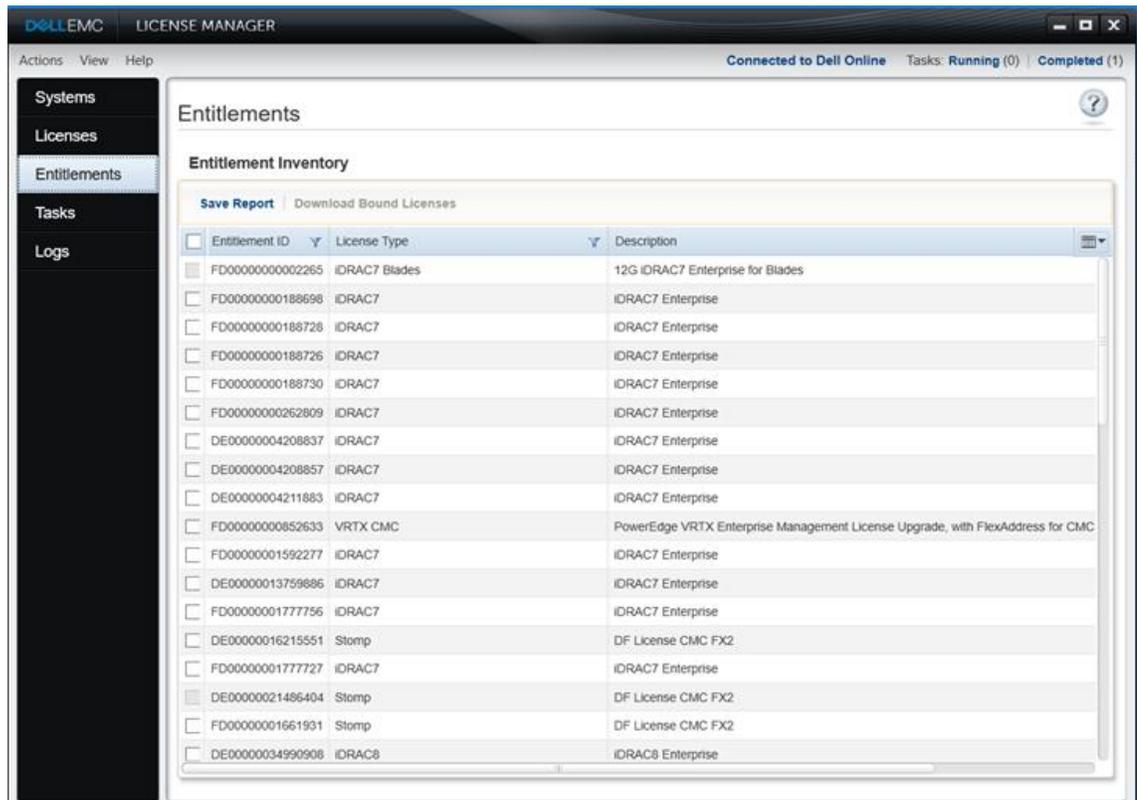


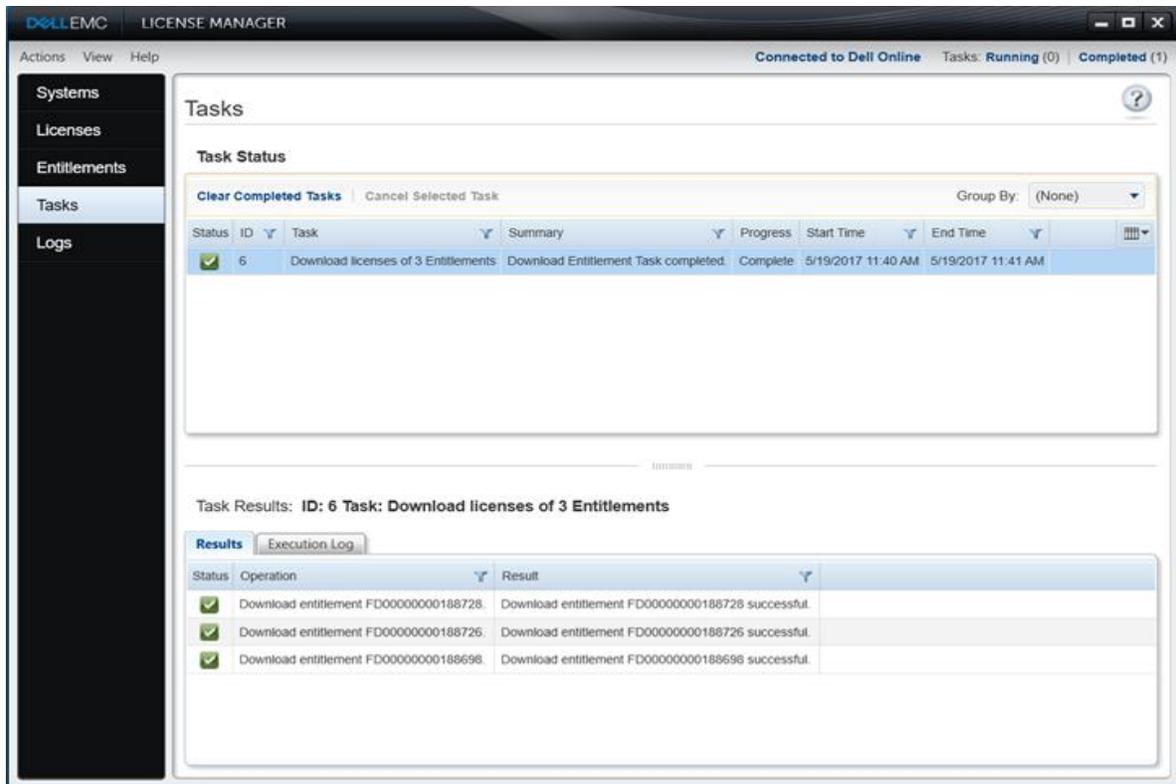
- If the Entitlements are already bound to a Service Tag, you can download that entitlement from the **Entitlement** page.

If an entitlement is not bound, click **Action** → **Bind Licenses** to bind the licenses to a Service Tag. Go to [Binding or deploying from Dell Online](#) to explore this feature.

You can download the licenses of bounded entitlement from **Entitlement** page and deploy them. Entitlement page contains all the entitlements which are associated with that Dell Account. For downloading the license, go to the **Entitlement** page and select those bounded entitlements that you want to download. Click **Download** and click **OK**.

Note: You cannot download the unbounded license from the **Entitlement** page.





The licenses are displayed under the **License** tab. See [Deploying licenses](#) to know more about deploying these licenses on the system.

9.2 Binding or deploying from Dell Online

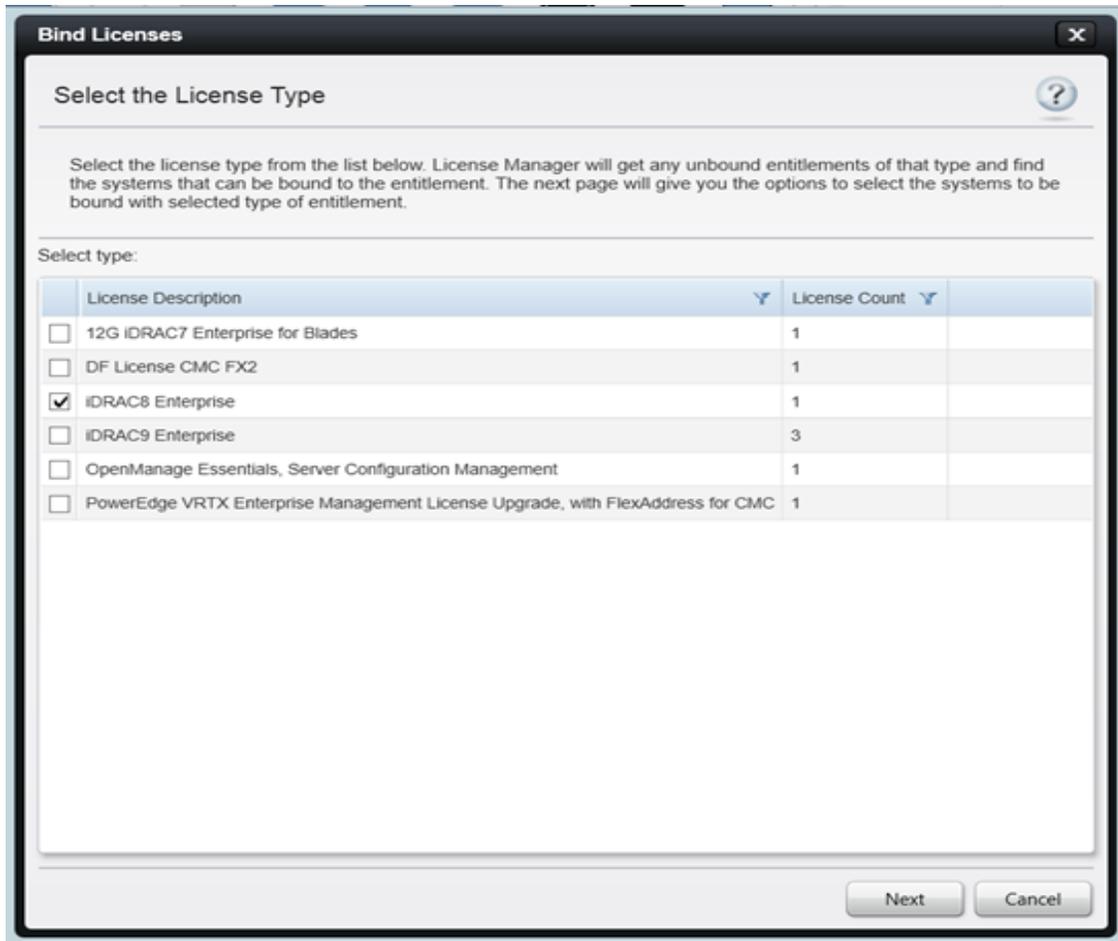
After connecting to Dell online, click **Action**→**Bind Licenses** page.

The **Bind Licenses** page displays the license type that is associated with your Dell Account and not bounded to any Service Tag.

1. Select the license type and click **Next**.

The list of systems on which you can deploy that licenses is displayed. All those systems where users can install the he license and system has either no licenses or lower licenses than selected Licenses will show up on the next page.

For example, if you select iDRAC8 Enterprise, next page will provide all the iDRAC8 devices (monolithic/modular) which do not have a license or Express license, or Evaluation licenses installed on their system pear.



2. If you do not want to deploy the licenses on the servers after binding, you must clear the **Deploy Licenses after binding** check box. These licenses appear in the Licenses section so that you can deploy them in future. For more information, see [Deploying licenses](#).
3. When prompted, type the iDRAC credentials.
4. On the **Summary** page, click Run to bind or deploy the licenses to the system.

Change Server Password [X]

Step 3 of 4: Enter New Password [?]

Enter the new password and confirm the new password for the "root" user. The unique password of all the added devices will be changed to the new password. License Manager will not store the passwords after the server password is changed.

Password

Enter New Password: [.....]

Confirm Password: [.....]

[Back] [Next] [Cancel]

Bind Licenses [X]

Summary of Binding Assignments for License Type: iDRAC8 Enterprise [?]

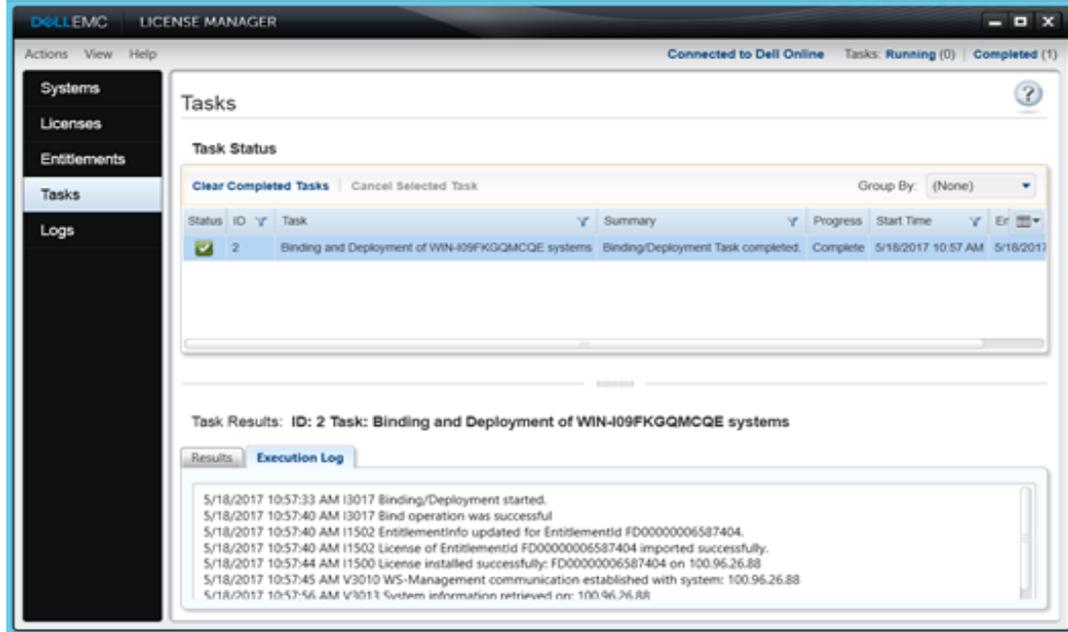
Statistics

Systems		Entitlements	
Total	4	Total	1
Assigned	1	Assigned	1
Not Assigned	3	Not Assigned	0

Entitlement ID	System Name	Service Tag	System Model
FD00000006587404	WIN-I09FKGQMCQE	CMXJ862	PowerEdge R430

[Save Report...] [Back] [Finish] [Cancel]

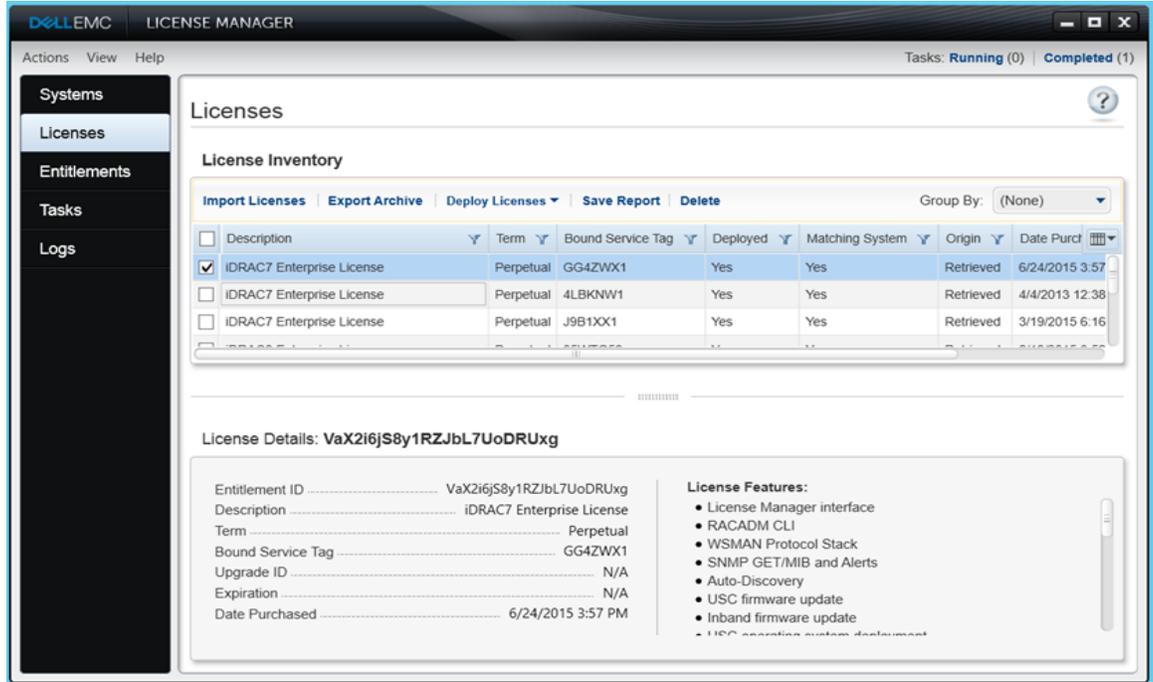
5. Go to **Tasks** page to track the progress of the binding or deployment. The user can track the progress in the task status section. If the task is completed you can view the system licenses.



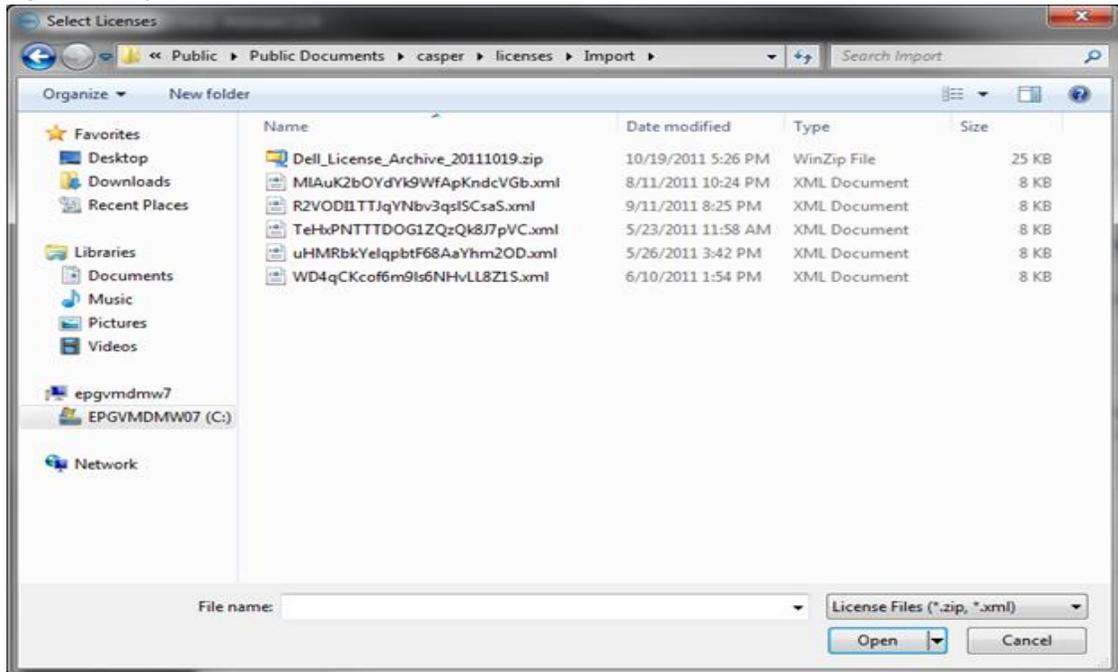
10 Importing licenses

After getting your licenses from the License Management Portal, you may import them into DLM for deployment. To import licenses:

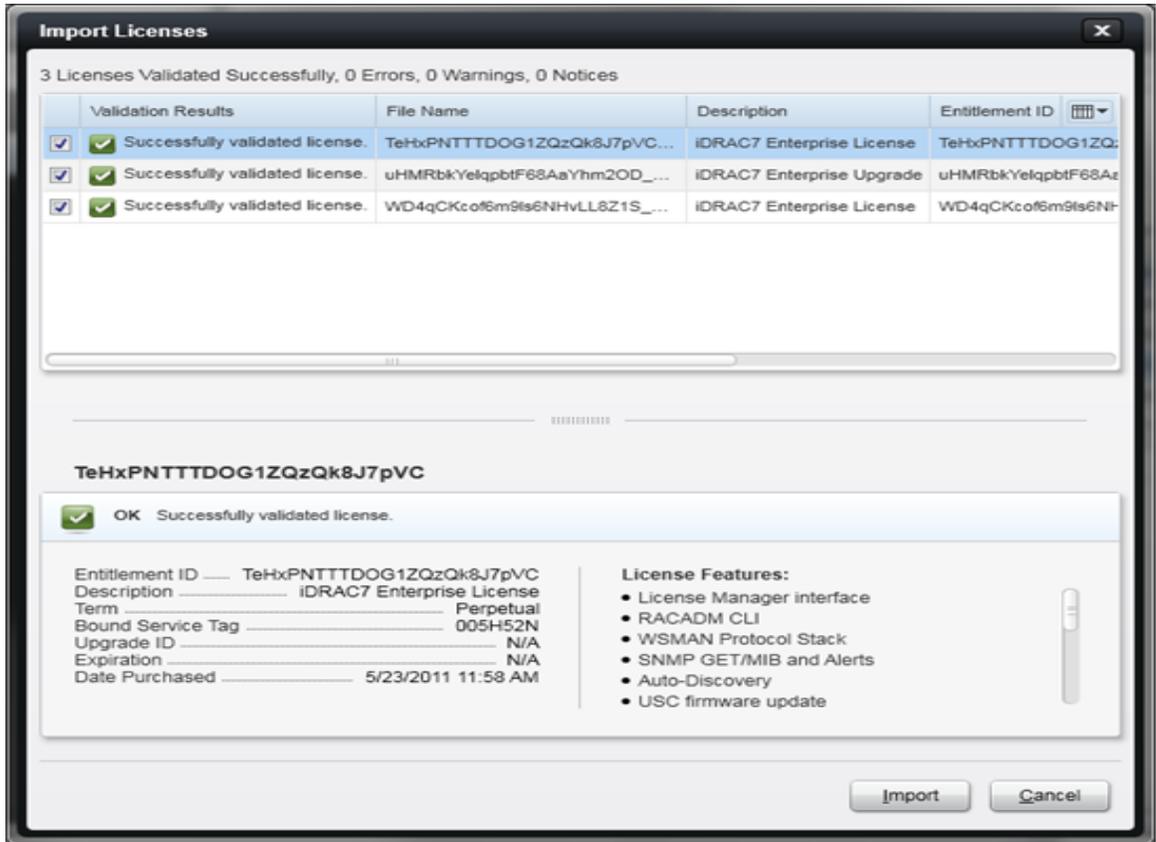
1. On the **Licenses** page, click **Import Licenses**.



2. Select the license archives (compressed file) or license files (XML) you want to import and click **Open**. Multiple files must be selected at a time.



3. Review the license validation results and click **Import**.



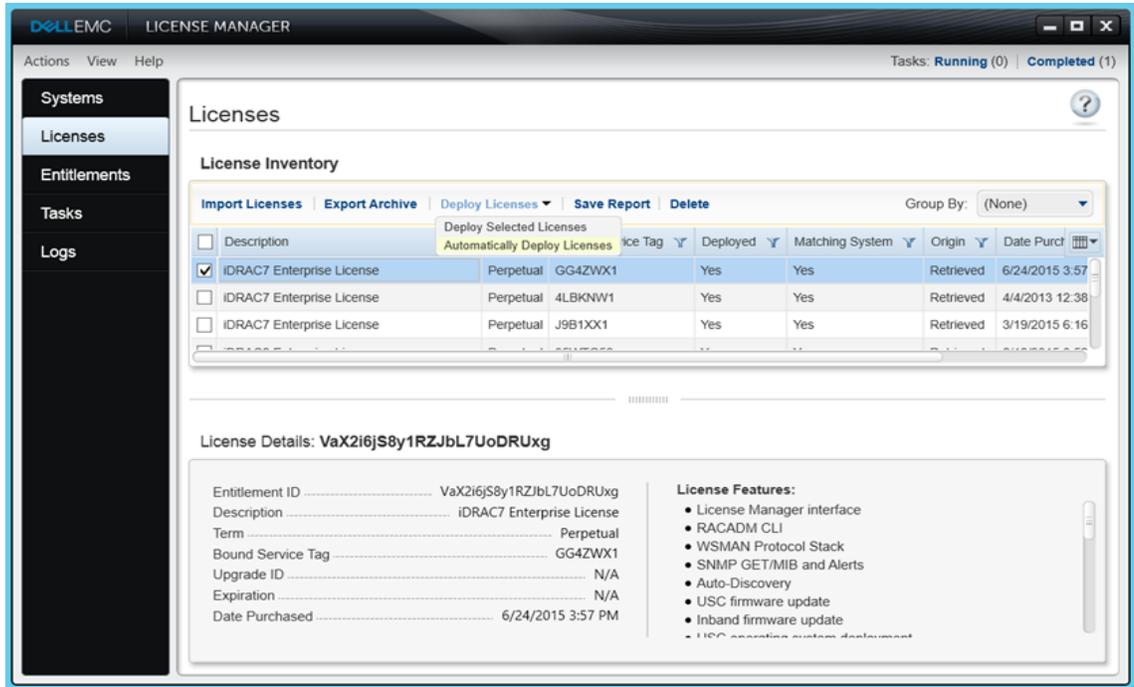
The imported licenses are displayed.

11 Deploying licenses

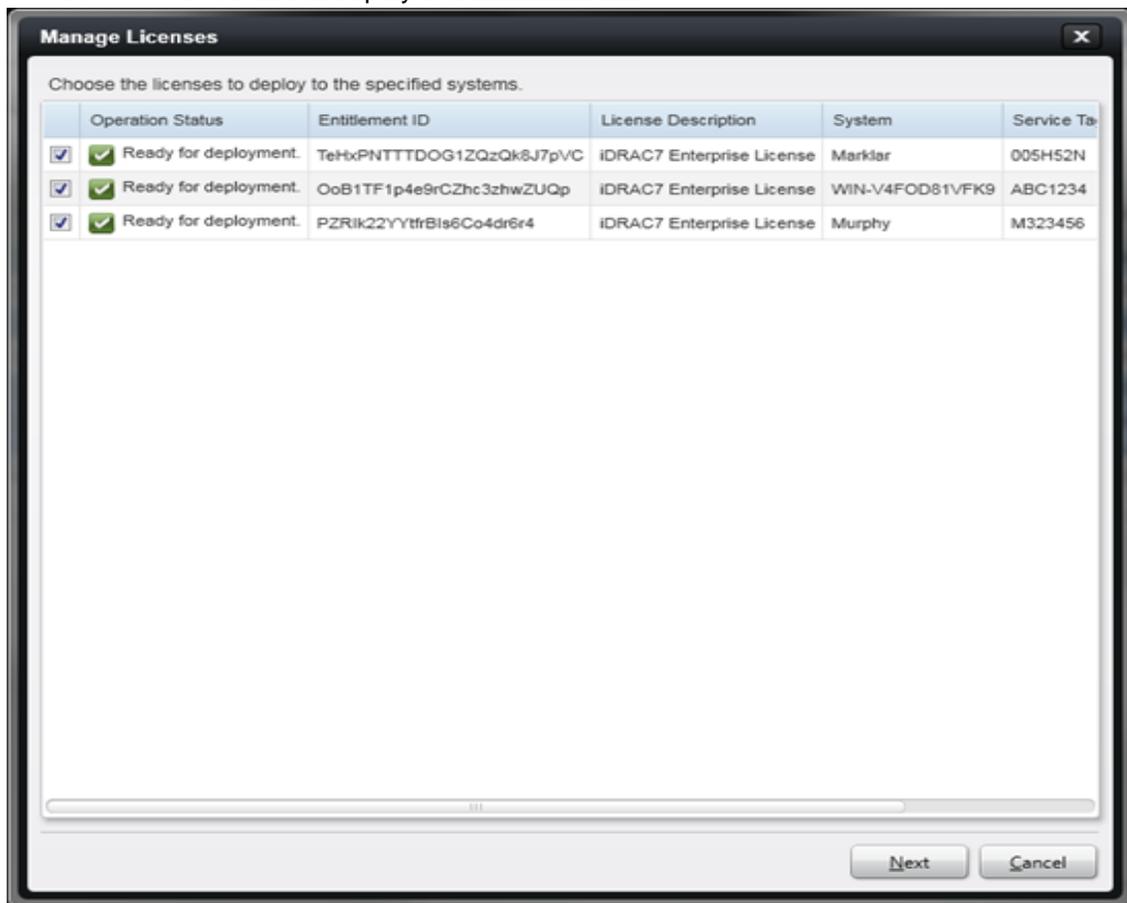
After an inventory of licensable systems is complete and licenses are imported, they can be deployed. To deploy licenses:

1. On the **Licenses** page, from the **Deploy Licenses** drop-down menu, select **Automatically Deploy Licenses**.

All the licenses (not already installed) are deployed to systems in the inventory based on their service tag. Alternatively, you can select individual licenses to deploy from the **License** page and select **Deploy Selected Licenses** or select systems from the **System** page and click **Deploy Associated Licenses**.



2. Confirm the licenses to deploy and click **Next**.



3. Type your credentials and verify your communication settings. Click **Next**.

Manage Licenses

Manage Licenses

Enter your iDRAC credentials and confirm communication settings. Passwords will not be stored after the license operations are complete.

Credentials

iDRAC Username:

iDRAC Password:

WS-Man Settings

Retries: Validate Certificate Name

Timeout: Validate Certificate Authority

Port: Validate Certificate Revocation List

Task Settings

Show task pane after launch

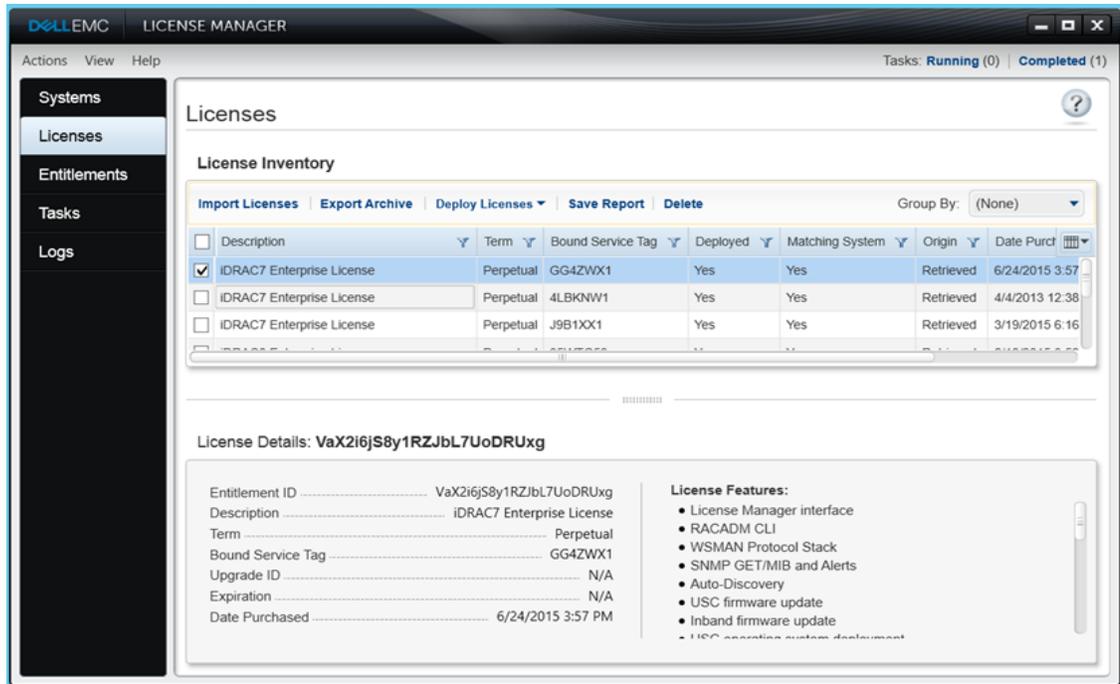
4. After deployment starts, you can monitor the progress on the **Tasks** page. Detailed logs of license operations are retained and displayed on the **Logs** page.

12 Backing up licenses

Dell EMC License Manager retains licenses imported from the file system and will automatically retrieve perpetual licenses during the Discovery or Inventory process.

Also, DLM has the ability to save a complete license archive to the file system. The archive is in compressed file format, containing XML license files named by Entitlement ID. The license archive may be directly imported into any instance of DLM for redeployment, or the individual licenses can be extracted and redeployed individually. To export an archive:

1. On the **Licenses** page, click **Export Archive**.



Licenses

License Inventory

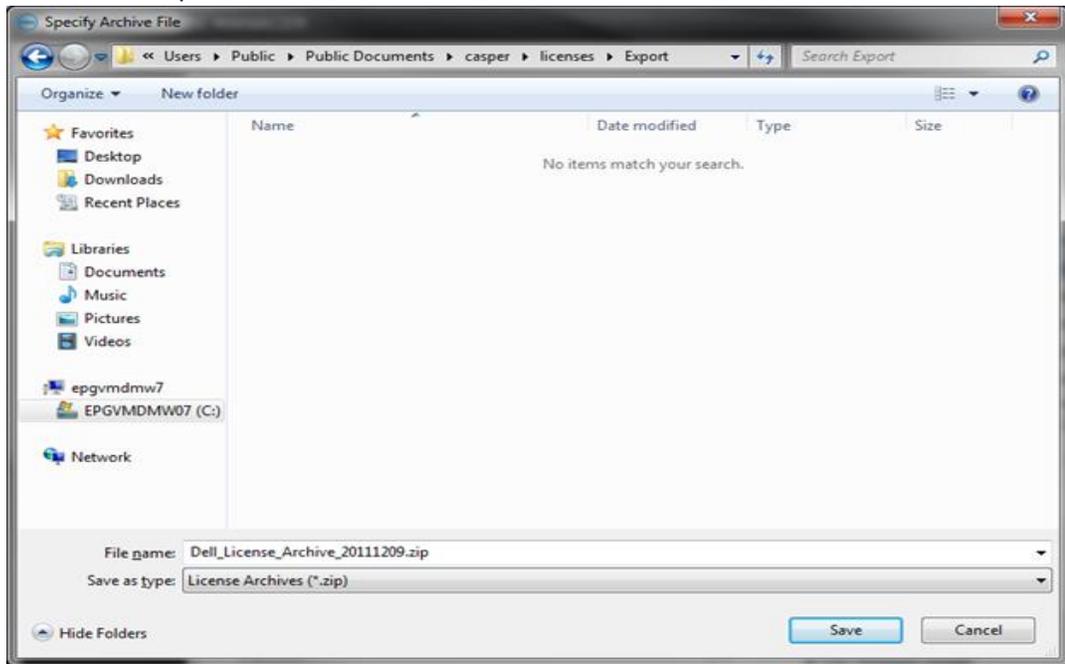
Import Licenses | **Export Archive** | Deploy Licenses | Save Report | Delete

Description	Term	Bound Service Tag	Deployed	Matching System	Origin	Date Purch
<input checked="" type="checkbox"/> iDRAC7 Enterprise License	Perpetual	GG4ZWX1	Yes	Yes	Retrieved	6/24/2015 3:57
<input type="checkbox"/> iDRAC7 Enterprise License	Perpetual	4LBKNW1	Yes	Yes	Retrieved	4/4/2013 12:38
<input type="checkbox"/> iDRAC7 Enterprise License	Perpetual	J9B1XX1	Yes	Yes	Retrieved	3/19/2015 6:16

License Details: VaX2i6jS8y1RZJbL7UoDRUxg

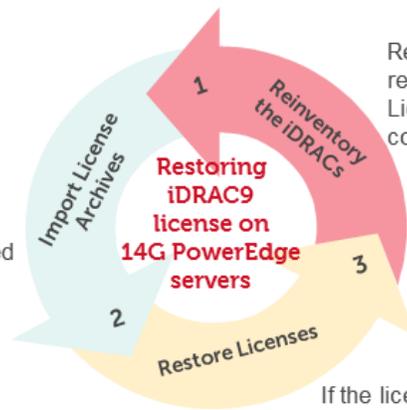
Entitlement ID	VaX2i6jS8y1RZJbL7UoDRUxg	License Features: <ul style="list-style-type: none">• License Manager interface• RACADM CLI• WSMAN Protocol Stack• SNMP GET/MIB and Alerts• Auto-Discovery• USC firmware update• Inband firmware update• USC operating system deployment
Description	iDRAC7 Enterprise License	
Term	Perpetual	
Bound Service Tag	GG4ZWX1	
Upgrade ID	N/A	
Expiration	N/A	
Date Purchased	6/24/2015 3:57 PM	

2. Confirm the export file location and name and click **Save**.



13 Restoring licenses

Restore the licenses by using the process for deploying licenses specified in Deploying Licenses.



Reinventory the iDRACs on which the licenses must be restored, as specified in the subsection Inventorying Licensable Systems. This will ensure DLM does not consider the licenses to be already deployed.

If the licenses to restore are not already present in DLM (visible in License view), import the license archives or license files as specified in Importing Licenses. Licenses from a backup archive are processed identically to those obtained from the licensing portal.

14 Viewing license status and compliance information

Dell EMC License Manager allows you to view a variety of information on licensable systems on the **Systems** page.

The screenshot shows the Dell EMC License Manager interface. The main area displays a table of system inventory with columns for System Name, Management Controller, System Model, Upgrade Available, Service Tag, Evaluation Installed, Current License, Purchased License, Entitlement ID, Additional Information, and Last Invent. Below the table, there is a section for System Details for 'ds6', including System Name, Management Controller, Model, Service Tag, Discovery Address, Purchased License, and Current License. A table of installed licenses is also shown below the system details.

System Name	Management Controller	System Model	Upgrade Available	Service Tag	Evaluation Installed	Current License	Purchased License	Entitlement ID	Additional Information	Last Invent
MohanT630	idrac (100.96.24.35)	PowerEdge T630		27DH432		Enterprise	Enterprise Perpetual	2 Licenses Installed		5/11/2017 12:2
OMSA13GDEV	idrac (100.96.23.10)	PowerEdge R730		FQ6R42		Enterprise	Enterprise Perpetual	2 Licenses Installed		5/11/2017 12:2
ubuntu	idrac (100.96.26.165)	PowerEdge R430		CF39562		Enterprise	Enterprise Perpetual	2 Licenses Installed		5/11/2017 12:3
WIN-02G0DDHDJTC	idrac (100.96.24.48)	PowerEdge M640		N/A	License is expired	Enterprise	None			5/11/2017 12:3
WIN-02G0DDHDJTC	idrac (100.96.27.118)	PowerEdge FC540		FCS42PT		Express	Enterprise Perpetual	5491FX_rajshikar_p		5/11/2017 12:3
WIN-19V6A7Q0332	idrac (100.96.26.167)	PowerEdge R730d		CNLM862		Enterprise	Enterprise Perpetual	2 Licenses Installed		5/11/2017 12:3
WIN-1C96A2F3860	idrac (100.96.26.174)	PowerEdge R430		CMDLH62		Enterprise	Enterprise Perpetual	2 Licenses Installed		5/11/2017 12:3
WIN-2CPSQK070TR	idrac (100.96.26.164)	PowerEdge R430		CP2LH62		Enterprise	Enterprise Perpetual	2 Licenses Installed		5/11/2017 12:3
WIN-A5208NR6GM	idrac (100.96.26.137)	PowerEdge R630		56DH432		Enterprise	Enterprise Perpetual	2 Licenses Installed		5/11/2017 12:3

System Details: ds6

System Name	ds6	Discovery Address	100.96.25.128
Management Controller	ds6	Purchased License	Enterprise Perpetual
Model	PowerEdge M630	Current License	Enterprise
Service Tag	CNKD562		

Installed Licenses (1)

Status	Description	Entitlement ID	Expiration	Term	Date Purchased	Date Imported
<input checked="" type="checkbox"/> OK	idrac8 Enterprise License	FD00000004544888	N/A	Perpetual	8/28/2015 6:18 PM	5/11/2017 12:29 PM

The information can be sorted, filtered, and grouped as required.

- To sort a column, click the column header.
- To apply a filter, pause the pointer over the column header, click the filter icon when it appears, and enter the filter criteria.
- To group based on a column, select the column name in the **Group By** box.
- The **Upgrade Available** column indicates that a license is ready for deployment. These licenses can be deployed using the steps in [Deploying licenses](#).
- The **Evaluation Installed** column indicates if an evaluation license is active or has expired. Systems with an evaluation license installed will require a perpetual license to retain the functionality being evaluated after the evaluation license expires.
- The **Current License** column indicates the currently active license level on the system. For example, you can use this grouping to locate which systems are at the Express-license level and could benefit from an upgrade.
- The **Purchased License** column specifies the highest perpetual license class bound to a system. Both installed licenses and licenses available for deployment are included in this calculation.

If DLM detects that a Perpetual license is installed on more than one system, a compliance warning is displayed in the **Additional Information** column on the **Systems** page. The systems can be sorted by

installed Entitlement ID in order to determine which systems may be out of compliance with a particular license.

Dell EMC License Manager allows you to view a variety of information on licensable systems on the **Systems** page.

The screenshot shows the Dell EMC License Manager interface. The main area displays a 'System Inventory' table with columns for System Name, Management Controller, System Model, Upgrade Available, Service Tag, Evaluation Installed, Current License, Purchased License, Entitlement ID, Additional Information, and Last Invent. Below the table, the 'System Details: ds6' section provides specific information for the selected system, including its name, management controller, model (PowerEdge M630), service tag (CNKD562), discovery address (100.96.25.128), and purchased license (Enterprise Perpetual). The 'Installed Licenses (1)' section shows a table with columns for Status, Description, Entitlement ID, Expiration, Term, Date Purchased, and Date Imported, listing one installed license: 'OK | iDRAC8 Enterprise License | FD00000004544888 | N/A | Perpetual | 8/28/2015 6:18 PM | 5/11/2017 12:29 PM'.

The information can be sorted, filtered, and grouped as required.

- To sort a column, click on the column header.
- To apply a filter, pause the pointer over the column header, click the filter icon when it appears, and enter the filter criteria.
- To group by a column, select the column name in the **Group By** box.
- The **Upgrade Available** column indicates that a license is ready for deployment. These licenses can be deployed using the steps in [Deploying licenses](#).
- The **Evaluation Installed** column indicates if an evaluation license is active or has expired. Systems with an evaluation license installed will require a Perpetual license to retain the functionality being evaluated after the Evaluation license expires.
- The **Current License** column indicates the currently active license level on the system. For example, you can use this grouping to locate which systems are at the Express license level and could benefit from an upgrade.

The **Purchased License** column specifies the highest perpetual license class bound to a system. Both installed licenses and licenses available for deployment are included in this calculation.

If DLM detects that a Perpetual license is installed on more than one system, a compliance warning is displayed in the **Additional Information** column on the **Systems** page. The systems can be sorted by installed Entitlement ID in order to determine which systems may be out of compliance with a particular license.

Frequently Asked Questions (FAQ)

<p>How do I transfer the iDRAC license to a new machine?</p>	<ol style="list-style-type: none"> 1. Log in to the License Management Portal. 2. Click the Manage Licenses tab. 3. In the Search box, type the Service Tag of the system the license is currently installed on. The license is displayed in the data grid. 4. Click Unassign to notify Dell EMC that the license will no longer be used on the old system. 5. Click the Activate License tab. The license that you just unassigned should be visible. 6. Click Assign. 7. Type the Service Tag of the new system where you want to install the license. 8. Click Download or Send Email to get the new license key. 9. On the old system, remove the old license key by using the iDRAC GUI or command line tools. 10. On the new system, install the newly downloaded license using the iDRAC GUI or command line (link to iDRAC usage section).
<p>Why is the license bound to a service tag?</p>	<p>Licenses are bound to a Service Tag to help identify which servers have what feature levels, which can aid in auditing and accounting.</p>
<p>What do I do if I have a motherboard failure?</p>	<p>If you have an iDRAC7 upgrade, your license key will need to be restored after a motherboard replacement.</p> <ol style="list-style-type: none"> 1. You will need to back up and then restore your license key after a motherboard is replaced. See Backing up and restoring iDRAC license keys 2. Your license file is unique to your Service Tag. The Dell EMC authorized Service Provider will set the new motherboard Service Tag to the original one to ensure full iDRAC functionality after the motherboard replacement.

	<p>3. See Using License Management Portal of Dell EMC if you do not have an upgraded license backup available in order to download it again or have it emailed to you.</p> <p>If you have an iDRAC8 upgrade, the iDRAC license is automatically backed up and stored, and will be automatically replaced after a motherboard exchange.</p>
I just logged in to the online portal and can't find my license key?	It may be that you have an iDRAC that does not have a physical license key and it is not necessary to download or import the key. In that case, you would not see a license in the license key portal.
I just purchased a used PowerEdge server. How do I access the online License Management portal and iDRAC license keys for my server?	See Using License Management Portal of Dell EMC
The person who purchased all our servers just left my company. How do I remove his/her online access to my company's iDRAC licenses?	See Removing User Access .
What does digital licensing mean to me when I order a new PowerEdge Server?	Starting with 12 th Generation of PowerEdge servers, both iDRAC7 and iDRAC8 have the capability to enable features simply by entering a digital license. This option is not available with previous versions of iDRAC, since upgrades required opening the server and installing a hardware component.
My customer purchased a PowerEdge Server Express option. How do I obtain an evaluation license to try the Enterprise features?	<ol style="list-style-type: none"> 1. Go to: http://www.dell.com/us/enterprise/p/servers?redirect=1 2. Type iDRAC in the search field at the top of the page. 3. Locate and select the license you prefer. A link to the license will be sent to you via email. The evaluation license is good for 30 days. An email will be sent containing your entitlement and a link to www.dell.com/support/retail/lkm 4. You will need your server service tag and Dell EMC generates a license that may be downloaded and imported into the iDRAC. This license is good for 30 days from the time it is imported into the iDRAC.

	5. Contact your Dell EMC sales representative to request an Evaluation license extension.
I lost my Enterprise license. How do I get it replaced?	If you have misplaced your original copy and need another license downloaded or emailed to you, see Using License Management Portal of Dell EMC .
How do I determine who has access to my company's licenses?	Use Online License Management Portal of Dell EMC to verify access. See Using License Management Portal of Dell EMC
How do I determine if a license was removed or installed on my iDRAC?	Import and delete actions are logged in the LC Log, which can be viewed in the iDRAC GUI or with the RACADM or WSMAN command-line tools.
I purchased my Dell server from a Value Added Reseller or other 3 rd party, who do I contact for support?	Please contact the VAR or other 3 rd party for support.
If I return a system to Dell that has a digital license key, what happens to the license?	<i>The Letter of destruction will be read and agreed to by the customer: "You are requesting the return of certain software licenses to Dell for a refund, pursuant to the terms and conditions of sale and the return policy between you and Dell. You agree that you are relinquishing all rights to use or upgrade the software whose licenses you are returning and you agree that you have removed or destroyed all copies of such software and/or the license keys, as applicable. You understand that you will not be entitled to any support for software whose licenses you have returned. You are responsible for any claims arising from or related to your unauthorized use of the returned licenses. If you are returning on behalf of an organization, you confirm that you have appropriate authority to agree to these terms on behalf of the organization."</i>
Does my PowerEdge server have an iDRAC license installed on it?	The initial offering of 12 th generation servers will be shipped with the "Express" or "Express for Blades" feature set enabled. Note that this feature set is enabled automatically, and no xml license file is actually present. You can see the word "Express" or "Express for Blades" at the top of the login screen and also at the top of the iDRAC GUI. If you see "Express" "Express" or "Express for Blades", then no Enterprise license has been installed. If you see "Enterprise", then you have either an Enterprise Evaluation or an Enterprise Perpetual License.

For more information, go to the GUI Licenses tab and click the plus (+) sign to view the license details. From racadm, type "racadm license view".

Using WS-Man, you would execute the enumerate command, for example, `winrm e "cimv2/root/dcim/DCIM_License" -u:root - p:calvin -r:https://xxx.xxx.xxx.xxx/wsman - SkipCNcheck -SkipCAcheck -encoding:utf-8 - a:basic.`

The screenshot shows the Dell iDRAC GUI Licenses page. The page header includes the Dell logo, 'INTEGRATED DELL REMOTE ACCESS CONTROLLER 7', 'Express', and 'Support | About | Logout'. The left navigation menu is titled 'System' and lists various system components, with 'Licenses' highlighted. The main content area is titled 'Licensing' and contains an information box stating: 'The embedded license manager is responsible for discovering and managing licensable hardware devices. This page represents the discovered devices and licenses associated with this system. From this page, you can manage (import, delete, replace, or export) the digital licenses associated with the discovered hardware. To manage changes to or purchase new licenses visit the License Self-Service Portal'. Below this is a table with columns: Status, Device, Device Description, and Device Options. The table contains two entries:

Status	Device	Device Description	Device Options
OK	iDRAC7	iDRAC7	AMMM002
OK	iDRAC7	iDRAC7 Enterprise Evaluation License	Entitlement ID: GKP4eiyP2zaCdFISG5NWDYuh, Expiration: 2011-11-05T15:00:00