

Introduction

This section includes the following topics:

- [About License Management Service](#)
- [About License Analytics Service](#)
- [High level working](#)

About License Management Service

License Management Service is a single centralized console for viewing and managing InfoScale Classic licenses. License Management Service can be installed as a standalone product or along with InfoScale Operations Manager. License Management Service can also be installed within AWS and Azure cloud.

Key features of License Management Service are:

- **Consolidate view:** The console provides a comprehensive view of the available license entitlement units, the total number, used number, unutilized quantity, over-utilized quantity and more. Thereby enables you to better manage existing license entitlements, plan for upgrades, renewals, and new purchases. Easily identify entitlements that are nearing the end of support and schedule updates when it is convenient for your business. Ensure that your company is in full compliance with all its software obligations and prevents unexpected license costs.
- **Core Plus calculation:** A primary function of License Management Service includes the provision of Core Plus calculation. Core Plus uses the core count of the server CPU, and the processor coefficient performance rating, to calculate Core Plus License requirements. The Core Plus table determines the core units required for attached hosts. This enables you to easily identify licensing requirements for your environment. The Core Plus table is maintained by Arctera on the Services and Operations Readiness Tools ([SORT](#)) website and updated when new processors are released. This Core Plus table is called the License Meter file on the License Management Service console.
- **Licensing reports:** Provides a variety of reports to understand the status of all your InfoScale licenses to help you better manage your business. It generates a detailed report on your environment, including the versions of InfoScale licenses and the CPU specifications of the underlying hardware on which they are deployed. Status of entitlements as well as a comparison of entitlements versus usage of hosts.

About License Analytics Service

License Analytics Service (LAS) is a Software-as-a-Service (SaaS) portal that plays an integral part in helping you manage your InfoScale product usage and license entitlements using License Management Service (LMS).

LAS provides the following functionality:

- License entitlement file download: The license entitlement file is a Arctera-owned license information file that includes the various license types and applicable entitlements. The entitlement file is hosted in LAS and you can log on to the portal to download the file. Once you have the file, you will then have to import that file in to your LMS deployment.
- License meter file download: The license meter file includes the Core Plus licensing requirements that are calculated based on the physical core count of the server CPU and the processor coefficient performance rating. The license meter file is hosted in LAS and you can log on to the LAS portal to download the file. Once you have the file, you will then have to import that file in to your LMS deployment.
- Usage report upload: Your LMS deployment is able to scan your InfoScale environment and generate a consolidated report of all the product usage and licensing details. Once this report is generated from LMS, you can log on to the LAS portal and upload the report into LAS to share it with Arctera.
- Registration key generation: The `.a1f` registration file is required for registering your LMS deployment. The registration file includes a host lock string that contains the LMS host information to ensure that the registration key can only be used to activate the product on an LMS host that matches the host information encoded in the registration key. Log on to the LAS portal to download the registration key for your LMS deployment. Once you have the registration file, you will then have to import that file in to your LMS deployment.

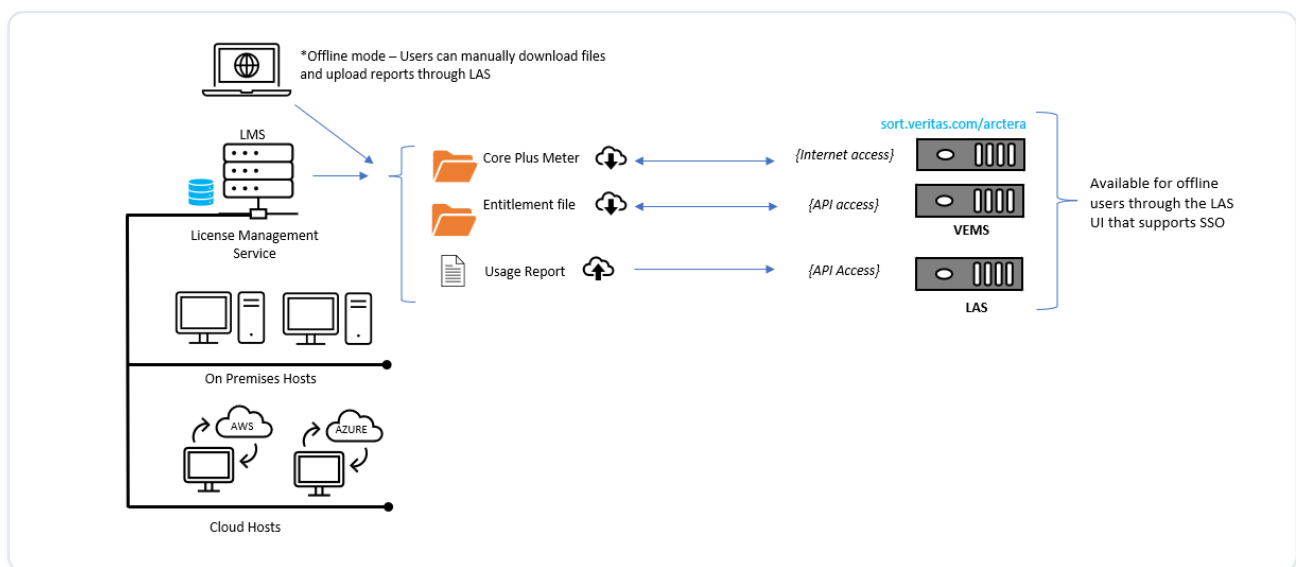
High level working

The primary function or feature of License Management Service is to simplify and automate license management, forecasting, and usage. License Management Service acquires entitlement data from Entitlement Management Server or License Analytics Service (LAS) and acquires Core Plus metrics from Arctera Services and Operations Readiness Tools (SORT) website or LAS. Hosts are mapped to matching entitlements, based on the calculations of number of cores and the product bundle.

Based on the calculations, a report consisting of high-level entitlement and license usage data is created, called the Usage summary report. This is a telemetry type of report without any host specific or confidential information. The report can be viewed on the License Management Service console and then for ease of future planning based on historical usage analysis it is recommended to share the report with Arctera. Report can be shared using the License Management Service console or by uploading on the Arctera License Analytics Service console.

As a user, in addition to the above you have access to a variety of reports within License Management Service. The below diagram depicts the high level workings of License Management Service.

Figure: License Management Service working



Pre-installation

This section includes the following topics:

- [Downloading License Management Service packages](#)
- [Operating system requirements](#)
- [Network and firewall requirements](#)

Downloading License Management Service packages

You can download the License Management Service packages from the following URL:

<https://www.veritas.com/support/>

The names of the .zip file and the installer file for each platform are as follows:

- Linux:
 - Download file name: `Veritas_License_Management_Service_9.0.0_Linux_Full.tar.gz`
 - Installer file name: `Veritas_License_Management_Service_9.0.0_Linux_Full.bin`
- Windows:
 - Download file name: `Veritas_License_Management_Service_9.0.0_Win_Full.zip`
 - Installer file name: `Veritas_License_Management_Service_9.0.0_Win_Full.exe`

To download the License Management Service packages

1. Open the <https://www.veritas.com/support/> URL.
2. Click Downloads.
3. Select InfoScale & Storage Foundation from the Product filter in the left pane.
4. Select InfoScale Operations Manager from the Sub product filter.
5. Select the version and click Explore.
6. Review the download instructions.
7. Go to the **Base and upgrade installers** section, select the files, and click Download.

You must sign in to download the packages.

See [About installing License Management Service](#).

See [Installing License Management Service on Linux \(on-premises and cloud\)](#).

See [Installing License Management Service on Windows \(on-premises and cloud\)](#).

Operating system requirements

For information on supported operating systems, supported browsers, and supported hardware and software, refer to the Software Compatibility List (SCL):

https://www.veritas.com/support/en_US/doc/lms_scl_90

Network and firewall requirements

License Management Service uses the default ports as shown in [Table: Default ports](#) to transfer information.

Table: Default ports

Port	Protocol	Initiator	Purpose	Effect if blocked
5634	TCP	Management Server	Management Server configuration	Management Server cannot be configured.
5636	TCP	Management Server	Management Server database configuration	Management Server cannot be configured.
5634	TCP	Management Server	Management Server communications with the managed hosts	Managed host cannot be added to the Management Server domain.
5634	TCP	Managed hosts	Managed host to send heartbeats; also used to upload the data from the managed host to Management Server	Managed host cannot be added to the Management Server domain.
22	-	-	SSH communication	-

||| **Note:** It is recommended that you keep port 5634 open between managed hosts for scalability and performance optimization. ||

| 135 | - | - | WMI communication | - |

| 14161 | TCP | Web browser | Run the License Management Service console. | Users cannot access the License Management Service console. |

| 14165 | TCP | Web browser | Run the License Management Service console when installed on the same host as InfoScale Operations Manager. | Users cannot access the License Management Service console when License Management Service is installed along with InfoScale Operations Manager. |

| 443 | HTTPS | Management Server | Management Server connectivity with SORT | Management Server cannot download patches from SORT. |

Installing and configuring

This section includes the following topics:

- [About installing License Management Service](#)
- [Verifying License Management Service installation on Linux](#)
- [Verify License Management Service installation on Windows](#)
- [About configuring License Management Service on Linux and Windows](#)
- [Installing License Management Service along with Arctera InfoScale Operations Manager 9.0.0](#)
- [Installing License Management Service along with Operations Manager in a high availability environment](#)

About installing License Management Service

You can install License Management Service on any of the following hosts:

- A Linux host
- A Windows host

License Management Service can be installed as a standalone product or on a host that already has InfoScale Operations Manager.

Note the following:

- Turn off the Windows firewall, or open ports 5634 and 14161 for TCP/IP communication if installing as a standalone product. Open 5634 and 14165 if installing along with InfoScale Operations Manager.
- Minimum system requirements is 6 CPU cores and 4 GB RAM.
- Ensure that the host name on a Windows host does not exceed 15 characters length.
- You must have root or admin privileges for installing and configuring the product.

After you install License Management Service, verify the installation, and then proceed with the configuration task.

See [Installing License Management Service on Linux \(on-premises and cloud\)](#).

See [Installing License Management Service on Windows \(on-premises and cloud\)](#).

See [Verifying License Management Service installation on Linux](#).

See [Verify License Management Service installation on Windows](#).

See [About configuring License Management Service on Linux and Windows](#).

Installing License Management Service on Linux (on-premises and cloud)

You can install License Management Service on a Linux host using the following file:

- `VRTSlms_full.bin`

The .bin file installs the VRTSlms and the VRTSsfmh packages on the target host.

Note: By default, the VRTSlms and VRTSsfmh rpms are installed in the system. You cannot specify a different location to install the rpms.

License Management Service can be installed on AWS and Azure cloud and the installation procedure is the same as follows.

For AWS and Azure cloud installation on RHEL, the following packages must be installed before proceeding with the installation.

- `yum install libnsl.so.*`
- `yum install libtool-ltdl`

After the installation is complete and before you proceed with the configuration process, you can verify that the packages are installed and the processes are started. See [Verifying License Management Service installation on Linux](#).

To install License Management Service on Linux

1. Ensure that the host where you plan to install License Management Service meets or exceeds the system and operating system requirements.

See [Operating system requirements](#).

1. Download and unzip the installation file.

See [Downloading License Management Service packages](#).

1. Open an operating system console.
2. On the host where you plan to install License Management Service, log on as root.

3. Change the directory to the location where you unzipped the `.bin` file.
4. At the command prompt, enter the following directory: `./VRTSlms_full.bin`
5. The permission denied error is displayed. To change the permission for the `.bin` file, run the command: `chmod +x VRTSlms_full.bin`.
6. To accept the End User License Agreement and proceed with installation, type `y`.

The installation is complete when you see messages similar to the following:

Installation is complete. You need to configure License Management Service. Open your browser and type the following URL to configure: `https://myhost.example.com:5634/` or, run `"/opt/VRTSsfmh/bin/perl /opt/VRTSlms/bin/cli_lms_config.pl"` command in your terminal.

1. Configure License Management Service. See [Configuring License Management Service on Linux and Windows hosts using CLI](#).

Installing License Management Service on Windows (on-premises and cloud)

You can install License Management Service on a Windows host using the following file:

- `Veritas_License_Management_Server_9.0.0_Win_Full.exe`

Note: By default, the VRTSlms and VRTSsfmh packages are installed in the system drive. You cannot specify a different location to install the package.

After the installation is complete and before you proceed with the configuration process, can you verify that License Management Service is installed and the required services are started.

See [Verify License Management Service installation on Windows](#).

License Management Service can be installed on AWS and Azure cloud and the installation procedure is the same as follows.

To install License Management Service on Windows

1. Ensure that the host where you plan to install License Management Service meets or exceeds system and operating system requirements.

See [Operating system requirements](#).

1. On the host where you plan to install License Management Service, log on as a user with administrator privileges.

2. Download and unzip the installation file.

See [Downloading License Management Service packages](#).

1. Turn off the Windows firewall, or open ports 5634 and 14161 for TCP/IP communication if installing as a standalone product. Open 5634 and 14165 if installing on InfoScale Operations Manager.
2. Ensure that there is no restart pending from Windows Update. If there is, restart the host before launching the installer.
3. Ensure that the value for the environment variable `PATHEXT` on the target host includes the extensions `.exe`, `.bat`, and `.vbs`.
4. To launch the installer, run the `VRTS1ms_Full.exe` file.

Click **Next**.

1. Accept the End User License Agreement to proceed with the installation.
2. Click **Next** and follow through the installation process.
3. After the installation is complete, select **Launch product configuration** to configure License Management Service.

You can choose to configure License Management Service later using the `https://hostname :5634/` URL.

Where, *hostname* is the fully qualified name of the host.

1. Click **Configure**.
2. Configure License Management Service .

See [Configure License Management Service on Linux and Windows using the web browser](#).

Verifying License Management Service installation on Linux

Verify the License Management Service installation on a Linux host by ensuring that the packages are installed and the required processes are started.

To verify License Management Service installation on Linux

1. On the host where you installed License Management Service, check whether the `VRTS1ms` package is installed. Run the following command:

```
rpm -q VRTS1ms
```

1. Check whether the `VRTSsfmh` package is installed. Run the following command:

```
rpm -q VRTSsfmh
```

1. Check whether the `xprtld` process is started. Run the following command:

```
ps -ef | grep xprtld
```

Verify License Management Service installation on Windows

Verify the License Management Service installation on a Windows host by ensuring that the License Management Service for Windows program is installed, and the License Management Service is started.

To verify License Management Service installation on Windows

1. On the host where you installed License Management Service, on the Windows Control Panel, click Add or Remove Programs.
2. Check whether License Management Service for Windows appears in the list of installed programs.

About configuring License Management Service on Linux and Windows

License Management Service can be installed on a Linux and a Windows host and as a standalone product or along with InfoScale Operations Manager.

After installing, you have to configure before you can use it. To configure, you can use the command line interface (CLI) or the web browser for both Linux and Windows host. However, if License Management Service is installed along with InfoScale Operations Manager, then only the CLI option is available for configuring on Linux as well as Windows host.

Configure License Management Service on Linux and Windows using the web browser

After successful installation of License Management Service, a message is displayed with a command or an URL that you can use to proceed with the configuration. On Windows, if you chose to launch the configuration, the web browser is automatically launched with the URL.

If InfoScale Operations Manager is already installed on the Windows or Linux host on which you are configuring License Management Service, then the web browser option is not available. Instead the command prompt is launched and configuration command gets executed.

You may configure the networking on License Management Server in either the IPv4 mode, or in the mixed mode (IPv4 and IPv6). For License Management Server that runs in the mixed mode, use only the IPv4 address during the installation and the configuration process and not the IPv6 address.

For License Management Server configuration with IPv6 address, the localhost, 127.0.0.1, ::1 should be bound to a network interface that is up and running. For example, lo0 on Linux.

To configure License Management Service on Linux and Windows using the web browser

1. On a host that has a network connection, launch the following URL:

```
https://*hostname* :5634/
```

Where, *hostname* is the fully-qualified host name. For a IPv4 configuration, you can alternatively specify the IP address instead of the host name.

1. Ensure to turn off the Windows firewall, or open ports 5634 and 14161 for TCP/IP communication.
2. Ensure that there is no restart pending from Windows Update. If there is, restart the host before launching the installer.
3. Accept the End User License Agreement to proceed with the configuration.
4. Click **Next** and follow through the installation process.
5. After the installation is complete, select **Launch product configuration** check box to configure License Management Service. You can choose to configure License Management Service later using the https://hostname:5634/ URL. Where, the *hostname* is the fully-qualified name of the host.
6. In the Sign in dialog, enter the root or the administrator username and password of the host.
7. In the Server and Database Setting panel, check and modify the **Server Name** if required. Ensure that the host name is fully-qualified name.
8. Check and modify the **Server Address** if required.
9. In the Database location field, you can accept the default location or specify your own location. To modify the default location, clear the **Use Default** checkbox and specify another location.

On Windows, if you modify the default, you must have Full control permission on the drive that you specify.

The default database directory is `/var/opt/VRTS1ms/db` on Linux and `C:\ProgramData\Veritas\VRTS1ms\db` on Windows.

1. Click **Configure**.
2. At the end of the License Management Service configuration, messages similar to the following are displayed:

Configuration successful.

Click the Launch Web Console button to login.

1. Click **Launch Web Console** to log on to License Management Service on the configured host.

Configuring License Management Service on Linux and Windows hosts using CLI

You can configure License Management Service using the command line interface (CLI) on a Linux and Windows host.

If InfoScale Operations Manager is already installed on the Windows or Linux host on which you are configuring License Management Service, then only the CLI option is available. The web browser option is not available.

To configure License Management Service using CLI on Linux and Windows hosts

1. After installing License Management Service, from the command prompt, run the following command to start the configuration:

Linux: `"/opt/VRTSsfmh/bin/perl/opt/VRTS1ms/bin/cli_lms_config.pl"`

Windows: `C:\Program Files\Veritas\VRTSsfmh\bin\perl.exe"`

`"C:\Program Files\Veritas\VRTS1ms\bin\cli_lms_config.pl"`

1. Enter the host name (fully-qualified name).
2. By default, the IP address, and the Database location for the host is displayed. You can either accept the default values or enter the values manually.
3. Enter **Y** to start the configuration using the default values.

After successful configuration, the License Management Service URL is displayed.

1. Copy and paste the URL in the browser and sign in to the License Management Service GUI.

Note: If you enter N, CLI quits the configuration and displays two options. Choose any one of the options that you want to do.

Installing License Management Service along with Arctera InfoScale Operations Manager 9.0.0

Use the following as a guideline if you want to install LMS along with the Arctera InfoScale Operations Manager (IOM) version 9.0.0.

Prerequisites:

Install Operations Manager patch 9.0.0.210 or later on the IOM server.

To install and configure License Management Service in an Operations Manager environment

1. Install the License Management Service on the VIOM server.
2. Configure License Management Service.

During License Management Service configuration you are prompted for a host name and an IP address on which to install License Management Service. Ensure that you provide the same host name and IP where VIOM is installed.

Note: License Management Service does not prompt for the database path. License Management Service automatically gets the database path from VIOM.

Considerations when configuring License Management Service on VIOM server:

If License Management Service is configured on the VIOM server then the following License Management Service operations are restricted:

- Any host-related operations such as adding a host or removing a host is restricted on License Management Service.
- All software upgrade operations are restricted.

Note: If you want to uninstall only License Management Service, then ensure that you remove the VRTSImspackage only. Do not remove the VRTSsfmhp package.

Installing License Management Service along with Operations Manager in a high availability environment

You can configure the high availability (HA) feature in InfoScale Operations Manager to improve the availability of the Management Server. In the same HA environment, you can install License Management Service on the same two nodes.

The InfoScale Operations Manager installation with HA feature typically consists of:

- InfoScale Operations Manager
- Two nodes (Node1 and Node2) in the same datacenter.
- Storage Foundation Enterprise version for cluster and storage software or Storage Foundation 8.0 or later versions.

Prerequisites:

- Install Operations Manager Patch 9.0.0.210 or later on both the nodes.
- HA configuration must be complete. Refer to the InfoScale Operations Manager documentation for details.

In the event of a failure or a planned maintenance, InfoScale Operations Manager in HA can fail over from Node1 to Node2. Both the nodes are in the same datacenter and are part of the same cluster. When License Management Service is installed and configured on both the nodes, the License Management Service console is also accessible from the active node, with minimum downtime.

To configure License Management Service along with Management Server in a HA environment:

1. Configure License Management Service on the active node (Node1) using one of the following:
 - Virtual host name (VHN) and Virtual IP (VIP)
 - Local host name and local IP
2. Fail over to the other node (Node2). Ensure that it is the active node.
3. Configure License Management Service on the other node (Node2) which is now active.

If VHP and VIP are used on Node1, then ensure the same is used on Node2. In case of local host name and local IP the values on both nodes are different.

1. Product registration, entitlement, and license meter file updates should be completed separately on each node.

2. Local user and local user group configurations must be completed on both the nodes separately.

Configuration of user and user groups that is done on Node 1 is not accessible on Node 2.

Restricted operations:

Any host-related operations such as adding, removing is restricted on both the nodes. Similarly all software upgrade operations are also restricted.

Uninstalling:

Uninstalling License Management Service operation must be done on both the nodes. The process is the same as uninstallation of standalone License Management Service. To uninstall, the node can be active or passive.

Getting started

This section includes the following topics:

- [About LAS access](#)
- [Registering the License Management Service product key](#)
- [About License Management Service console](#)
- [About the Setup panel](#)
- [About the License Management Service dashboard](#)
- [Updating the License meter file](#)
- [Updating the Entitlements file](#)
- [About managing hosts](#)
- [Adding Kubernetes clusters](#)
- [Adding Lightweight Directory Access Protocol or Active Directory-based authentication in License Management Service](#)
- [Adding a user group](#)
- [Adding local users](#)
- [Configuring SMTP settings for email notifications](#)
- [Changing the password](#)
- [About using reports](#)
- [Managing faults](#)
- [Viewing the activity monitor](#)

About LAS access

LAS is currently not accessible to all users. If you need access, please reach out to your Arctera support representative. Arctera support will help you create an account with the required privileges and then share the login credentials.

Downloading the Entitlements file from LAS

Perform the following steps to download the Entitlement file from the License Analytics Service (LAS) console.

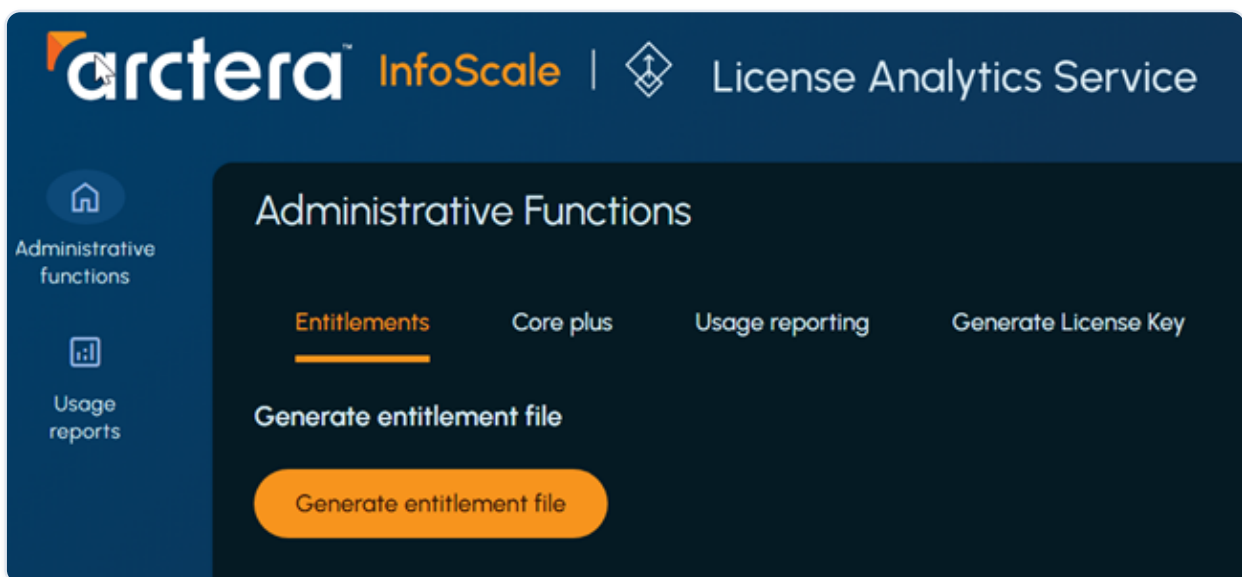
Note: These manual steps for downloading and then applying the Entitlement file to LMS are needed only if your LMS setup does not have access to the public internet.

To download the entitlement file:

1. Sign in to the Support portal. Go to **Products > InfoScale and Storage Foundation and under Recommended Links click License Analytics Service - LAS.**
2. Use the LAS user login credentials to sign in to the LAS portal.
3. Review the End User License Agreement (EULA) and click **Accept** to proceed.

Note: The EULA notification appears only on the first login.

4. Click the **Entitlements ** tab and then click**Generate entitlement file**.



5. Save the generated file to a local directory. You can then copy and apply this file to your LMS deployment.

Downloading the License Meter file from LAS

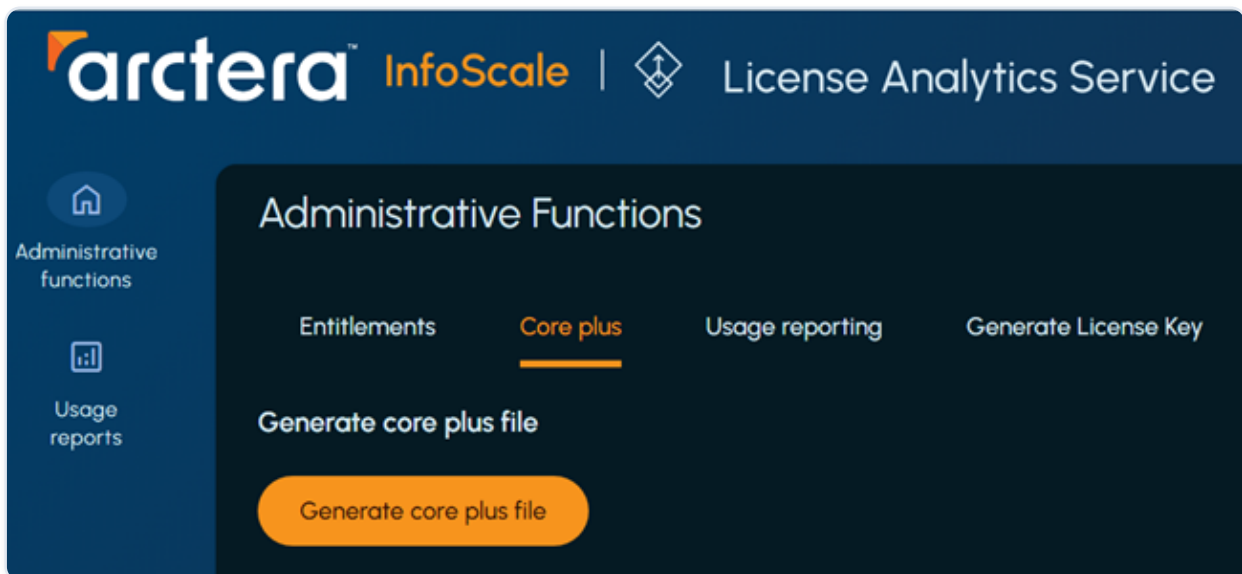
Perform the following steps to download the License Meter file from the License Analytics Service (LAS) console.

Note: These manual steps for downloading and then applying the License Meter file to LMS are needed only if your LMS setup does not have access to the public internet.

1. Sign in to the Support portal. Go to Products > InfoScale and Storage Foundation and under Recommended Links click License Analytics Service - LAS.
2. Use the LAS user login credentials to sign in to the LAS portal.
3. Review the End User License Agreement (EULA) and click Accept to proceed.

Note: The EULA notification appears only on the first login.

4. Click the Core plus tab and then click Generate core plus file.



5. Save the generated file to a local directory. You can then copy and apply this file to your LMS deployment.

Usage reports for customers

The License Management Service (LMS) offers two methods for collecting usage reports for the License Analytics Service (LAS):

- Online Method: Usage reports are automatically synced from LMS to LAS.
- Offline Method: Users manually upload the usage reports generated by LMS to the LAS console.

To access all the customer usage reports submitted through both the online and offline modes, log in to the LAS portal. Click Usage reports in the left navigation panel.

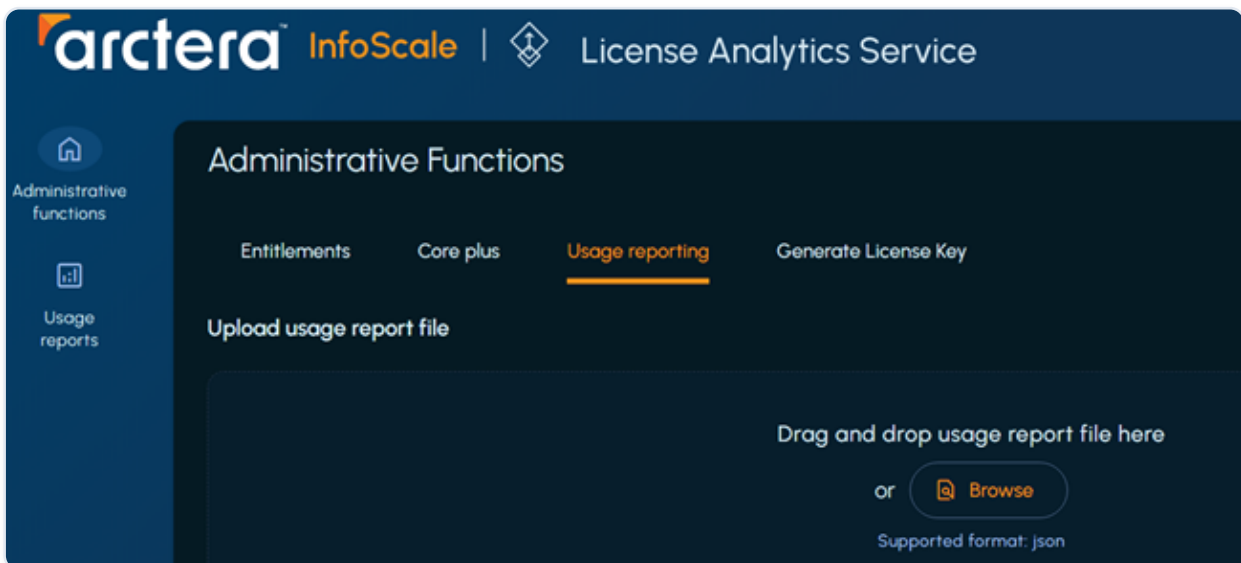
Uploading Usage report to LAS

Perform the following steps to upload the Usage report generated from LMS to the License Analytics Service (LAS) console.

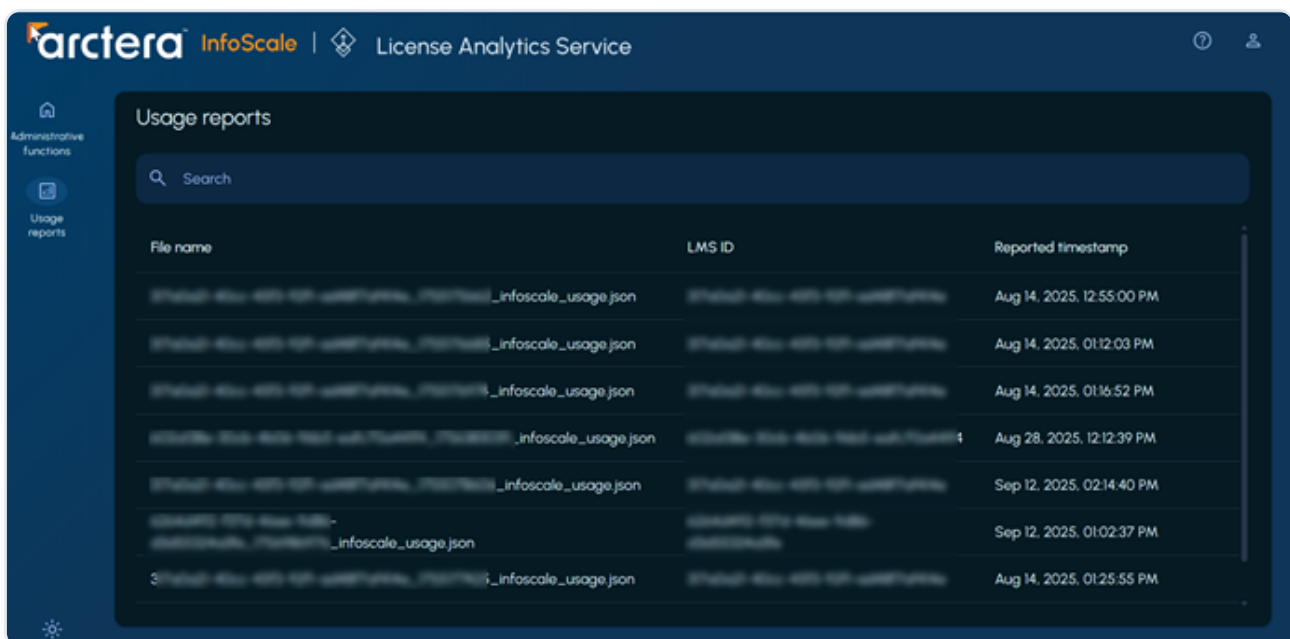
1. Sign in to the Support portal. Go to Products > InfoScale and Storage Foundation and under Recommended Links click License Analytics Service - LAS.
2. Use the LAS user login credentials to sign in to the LAS portal.
3. Review the End User License Agreement (EULA) and click Accept to proceed.

Note: The EULA notification appears only on the first login.

4. Click the Usage reporting tab and then click Browse and select the report file that you generated from LMS.



On successful upload, the reports file is shared with Arctera as follows:



To download a customer usage report from the LAS portal, click the Export icon at the end of the report row. The report is downloaded in JSON format.

Generating the registration key

Perform the following steps to generate the registration key (.a1f file) for the LMS server from the License Analytics Service (LAS) console.

To generate the registration key:

1. Sign in to the Support portal. Go to **Products>InfoScale and Storage Foundation and under Recommended Links click License Analytics Service - LAS**.
2. Use the LAS user login credentials to sign in to the LAS portal.
3. Review the End User License Agreement (EULA) and click **Accept** to proceed.

Note: The EULA notification appears only on the first login.

4. Click the **Generate registration key** tab.
5. Enter the host lock string for the LMS server and click **Generate registration key**.

You can copy the host lock string from the **Settings>Product registration** page of LMS.

The generated registration key (.a1f file) is displayed in the UI.

1. Click **Download** to save the registration key to a local directory. You can then copy and apply this registration key to your LMS deployment.

Registering the License Management Service product key

After completing the download packages, installation, verification, and configuration operations, you can use any supported web browser to log on to the License Management Service console.

For the first login session, you need to procure the registration key from the License Analytics Service (LAS) console and then register the product. Note that for first-time login, only one authentication domain is displayed in the drop-down list. Only users with root or admin privileges can perform the license registration operation.

Note: Ensure that you take a backup of the registration key, a.alffile that is generated during the registration process.

To log on to the License Management Service console

1. Open a web browser on a host that has the network connection.
2. In the address field of the browser, type the following URL and press Enter.

https://hostname:14161/#/login where, host name is the fully-qualified host name which should not exceed 15 characters length.

For a IPv4 configuration, you can specify the IP address instead of the host name.

1. In the **Username and Password** fields, enter credentials for a valid user.
2. Select the **Domain** and click **Sign in**.
3. Click **How to get the registration key?** on the Register your product panel.
4. Copy the host lock string for the LMS server by clicking **Copy to clipboard**.

The host lock string is copied, however it is not displayed on the console for security reasons.

1. To obtain the registration key, do the following:
 - Sign in to the License Analytics Service and go to **Administrative functions**.
 - On the Generate registration key tab enter the host lock string that you copied earlier and click **Generate registration key**.
 - Download the displayed registration key, a **.a1f** file. You will use this registration key to register the product.

See [Generating the registration key](#).

1. Click the back arrow to close the **Getting registration key panel** and return to the **Register your product** panel.
2. In the Register your product panel, drag and drop the registration key or click **Browse** to locate and upload the **.a1f** registration key file.
3. Optionally, enter the site name.
4. Click **Register**.

The Setup menu opens.

More Information

[Re-registering the product key](#)

[Viewing the product registration details](#)

[Login to the License Management Service console](#)

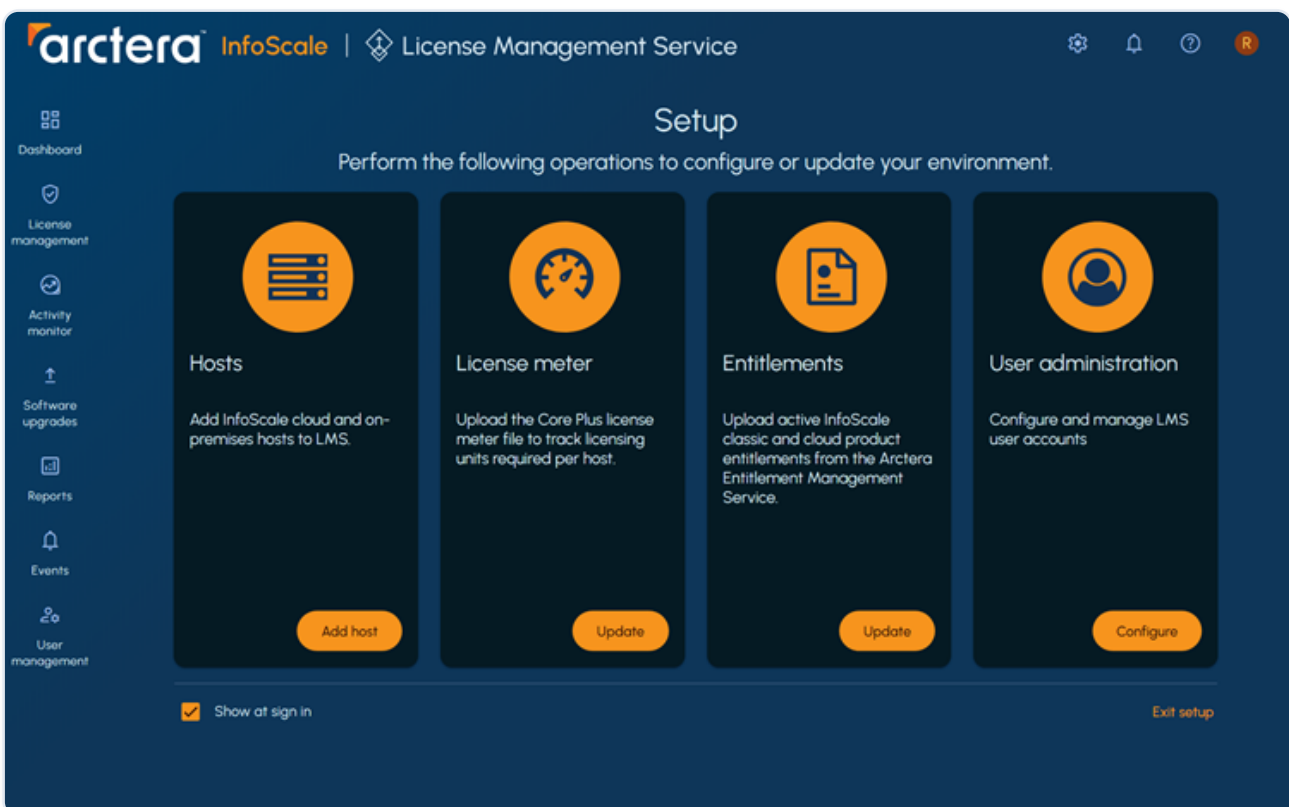
About License Management Service console

The License Management Service console is divided into two sections. The left section consists of different features of this service. On the right you can perform various operations or view relevant data which belongs to the selected feature. Notifications, various settings options, online Help, and user details are available on the top right corner.

The Setup panel is launched when you first open the License Management Service console. This panel is a shortcut to perform various operations which are a part of getting started with License Management Service.

About the Setup panel

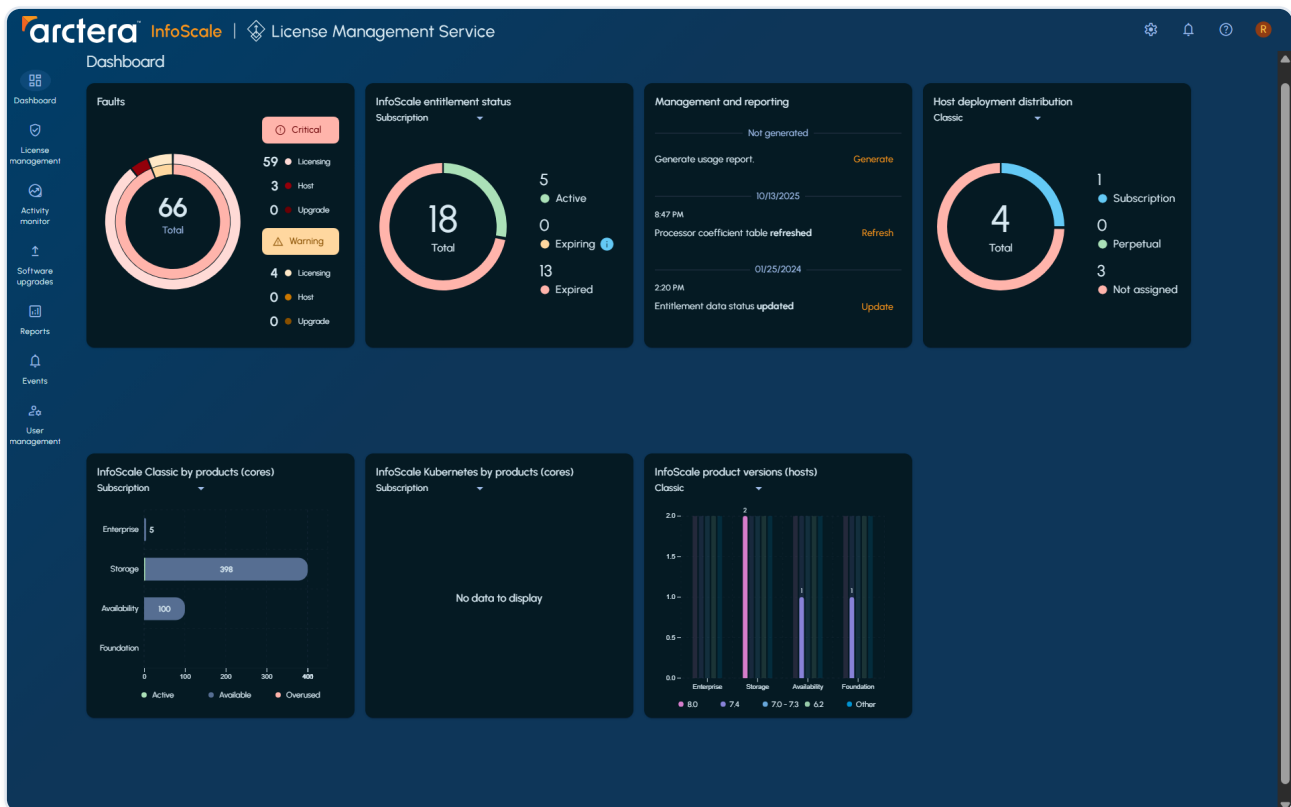
Figure: Setup panel



Exit the Setup panel to view the Dashboard. The dashboard provides a quick visual summary of license usage, the faults that are triggered on the hosts, host deployments, and more.

About the License Management Service dashboard

Figure: License Management Service dashboard



The following tasks can be completed using the top right corner menus:

- **Settings:** A number of operations such as product registration, SMTP server configuration, and color theme selection (dark mode, light mode, system mode) can be done from here.
- **Event notifications:** View and fix the faults that are generated.
- **Help:** Setup menu, product documentation, and product installation information is available here.
- **User profile:** Logged in user details, option to change password, and log out operations are available here.

The product features on the left hand are as follows:

- **Dashboard:** This menu provides graphical and statistical insights on entitlements status across InfoScale products, data on the used entitlements and available entitlements, InfoScale product deployments, faults in the systems and much more.

About the License Management Service dashboard

- **License management:** This menu enables you to manage the InfoScale product licenses, view license usage and entitlements, manage hosts and entitlements, and update license meter and entitlement files.

The following options are displayed when you expand License management:

- Usage
- Entitlements
- License meter file update
- Entitlements file update

About license usage

- Activity monitor: This menu consists of tasks and audit logs. The ongoing status of all tasks that are performed on the hosts or the containers, for example, adding, removing, and refreshing are shown in the System taskstab. The Audit logs tab gathers information about all the tasks that are performed on the License Management Service console.

Viewing the activity monitor

- Software upgrades: This menu lets you upload and install the baseline release, maintenance release, and patch release packages for managed host.

About software upgrades

- Reports: This menu lets you generate a variety of reports such as license unit requirements, entitlements usage, host deployment distribution etc.

About using reports

- Events: This menu shows the generated faults and provides a summary of number of faults that are of type critical, warning, and informational .
- User management: This menu lets you manage local users, groups, and domains.

More Information

Updating the License meter file

Updating the Entitlements file

About the Setup panel

The Setup panel is launched when you first open the License Management Service console. This panel is a shortcut to perform the below listed operations which are a part of getting started with License Management Service. For subsequent logins, the panel is always displayed unless you clear the Show at sign-in check box.

OPERATION	FUNCTIONALITY
Hosts	Use this option to add InfoScale Classic hosts to License Management Service. You can add hosts manually, using the <code>.csv</code> file, or using the <code>gendeploy.pl</code> script.
	See About managing hosts .
License meter	Use this option to upload the Core Plus license meter file to track licensing units required per host.
	See Updating the License meter file .
Entitlements	Use this option to upload active InfoScale classic product entitlements from the Entitlement Management Server.
	See Updating the Entitlements file .
User administration	Use this option to configure and manage License Management Service user accounts.
	See Adding Lightweight Directory Access Protocol or Active Directory-based authentication in License Management Service .
	See Adding a user group .
	See Adding local users .

To use the Setup panel

1. The panel is launched when you first open the web console after the initial configuration is completed.

Clear the **Show at sign** check box if you do not want to view the panel and instead go to **theDashboard** directly.

1. Click on the following to perform the relevant operations:
 - **Add host** to add hosts.

- **Update** to upload the Core Plus license meter file.
- **Update** to upload active InfoScale product entitlements.
- **Configure** to configure and manage user accounts

2. Click **Exit setup** to exit the panel and go to the **Dashboard**.

About the License Management Service dashboard

The dashboard provides a quick visual summary of license usage and the faults that are triggered on the hosts. The following interactive graphs are displayed on the dashboard. Click on a legend or hover on the graph data to view additional details.

Table

GRAPH TITLE	ACTIONS
InfoScale entitlement status	Shows active, expiring, and expired entitlements across all the InfoScale products.
	Select between Subscription and Perpetual to view additional details.
	Click View all entitlements to navigate to the Entitlements tab.
	See Assigning entitlements to hosts .
Management and reporting	Shows the last update date of entitlement data and the date on which the processor coefficient table is updated on SORT. The date on which the usage report was sent to Arctera is displayed in this section.
	You can also update the entitlement data, refresh the processor coefficient table and generate the usage report from this section.
	See Updating the Entitlements file .
	See Updating the License meter file .
	See Sending the Usage report to Arctera .

GRAPH TITLE	ACTIONS
Faults	Shows the various types of faults that are generated and the source of the fault.
	Click View all faults to navigate to the Faults tab.
	Faults of the type Information are not a part of the total count.
	See Managing faults .
Host deployment distribution	Shows the host deployment distribution such as number of Perpetual, Subscription, and Not Assigned hosts within Classic and Kubernetes deployments.
	Click View report to navigate to the Host deployment details report.
	See About using reports .
InfoScale Classic by products	Shows the product wise entitlement details for InfoScale products such as active, available, and overused entitlement quantities.
	Select between Subscription, Perpetual, and Not assigned to view additional details.
	Click View report to navigate to the License reconciliation report.
	See About using reports .
InfoScale Kubernetes by products	Shows the product wise entitlement details for InfoScale Kubernetes. Information such as active, available, and overused entitlement quantities for InfoScale Enterprise and InfoScale Storage.
	Select between Subscription and Not assigned to view additional details.

GRAPH TITLE	ACTIONS
	See About using reports .
InfoScale product versions	Shows the installed product versions for InfoScale for Classic and Kubernetes. Select between Classic and Kubernetes to view additional details.
	For InfoScale Classic, installed product version for Enterprise, Storage, Availability, and Foundation is shown. Whereas for Kubernetes, Enterprise, Storage, Availability, and Kubernetes installation details are shown.
	Ensure that the minimum version requirement of managed host package as mentioned in Arctera License Management Service Software Compatibility List is met. Else there can be issues while discovering the host version details and the chart may show incorrect data.
	https://www.veritas.com/support/en_US/doc/lms_scl_90
	Click the displayed details to navigate to the License management > Usage > Hosts tab.
	See About managing hosts .

Updating the License meter file

A primary function of License Management Service includes the provision of Core Plus calculation. The Core Plus calculation method uses the physical core count of the server CPU and the processor coefficient performance rating, to calculate Core Plus Licenses requirements. The Core Plus coefficient file determines the core units that are required for the attached hosts. This method enables you to easily identify the required entitlements in your environment.

Arctera maintains the Core Plus coefficient file on the Services and Operations Readiness Tools (SORT) website and updates it every 6 months or whenever any new processors are released. This Core Plus coefficient file is called the License Meter file on the License Management Service

console. The location of this file is https://sort.veritas.com/public/infoscale/license/InfoScale_CorePlus_Coefficients.json The location of the file on the host on which License Management Service is installed, is as follows:

```
/var/opt/VRTSlms/conf
```

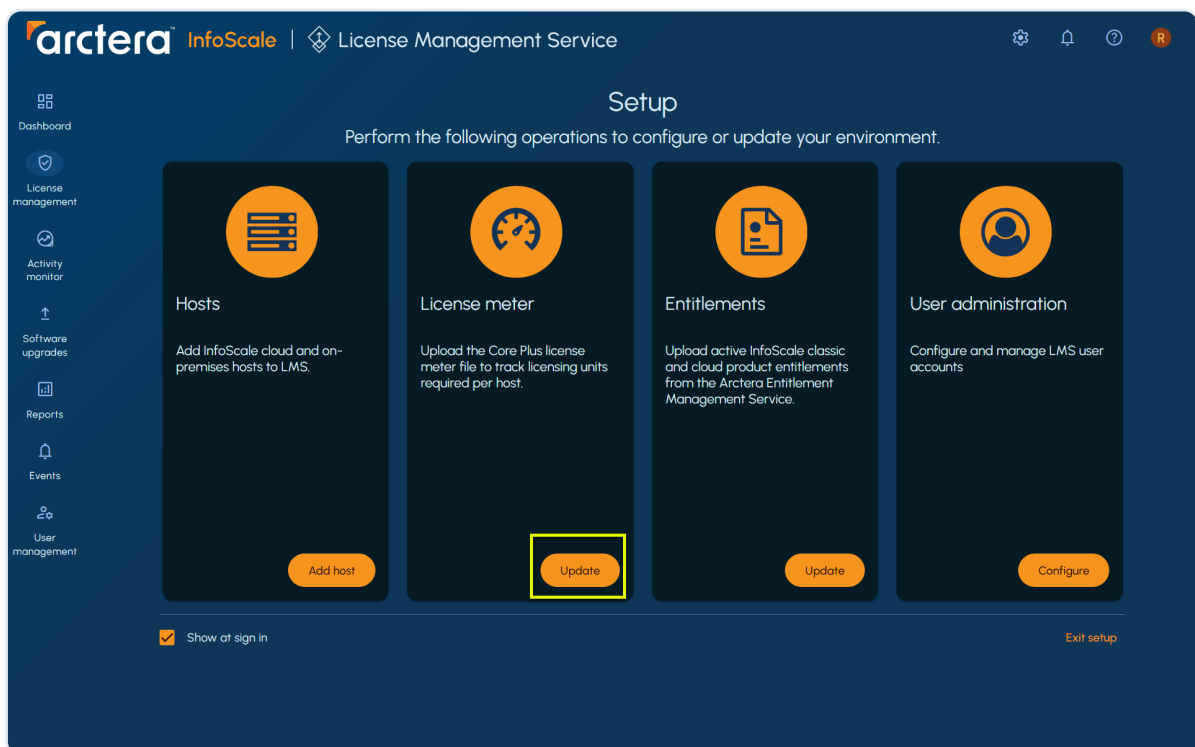
```
C:\ProgramData\Veritas\VRTSlms\conf
```

Using the License Management Service console, you can upload the file on the host on which License Management Service is installed. Online and Offline are two options for uploading the file.

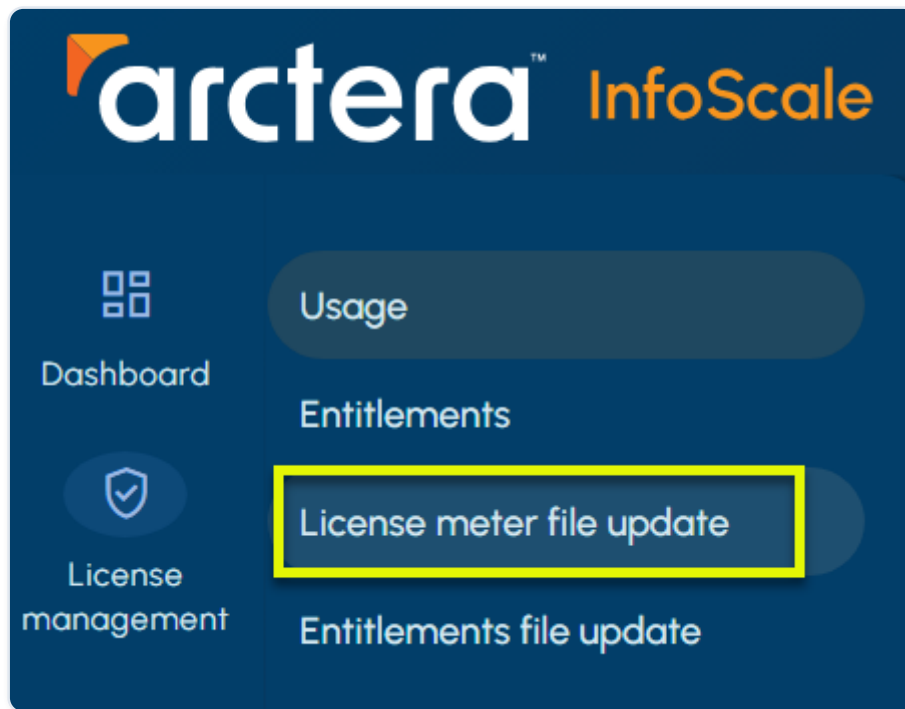
In the Online option, you can also schedule an auto update if required. Choose the Online option only if the host has access to the public internet.

To update the License meter file

1. On the License Management Service console, do one of the following:
 - In the Setup panel, click **Update** in the License meter card.



- In the left navigation click **License management**, and then click** License meter file update**.



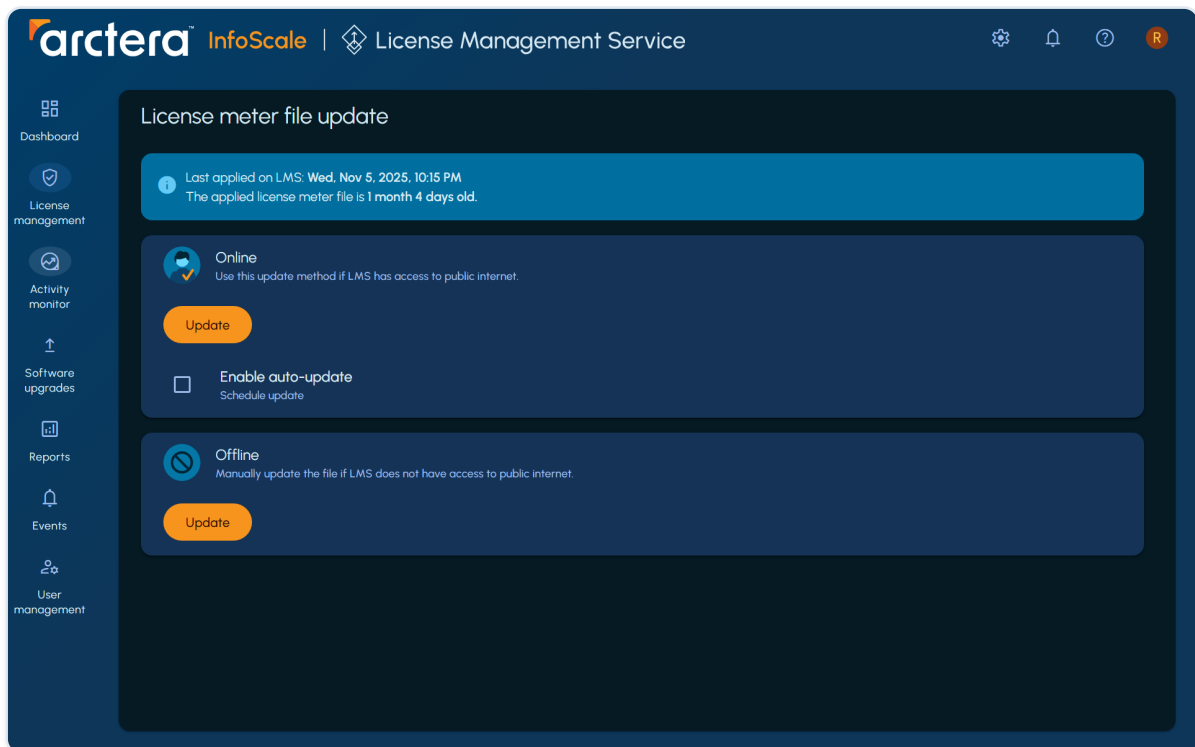
2. Review the dates on which the Processor coefficient table was updated on SORT and the date on which the Licensing table was last applied on the License Management Service from SORT here:

https://sort.veritas.com/license_calc

 The image is a screenshot of the Veritas SORT website's 'License Calculators' section. The 'InfoScale Core Plus for Cloud' tab is active. The page text explains that Core Plus is the latest pricing model released on April 5th, 2021, and allows licensing based on server processor cores and performance. It describes a calculator that determines the total number of Core Processor Units required. There are two input fields: '* Processor Make/model:' and '* Total Number of Cores:'. Below the first field, a link to the 'Processor coefficient table' is highlighted with a green box, with the text 'Updated Mar 18, 2024' below it. At the bottom, there is a formula to determine the total core count: 'Total Number of Cores = # of server(s) X # of processor per server X Cores/processor', with an example: 'For 4 servers with 2 Xeon 8 core processors, 4 X 2 X 8 = 64 cores'.

1. Do one of the following:

- In the Online section, click **Update**. Optionally select** Enable auto-update **and** click Setup schedule** to set the schedule. Skip to step 7.
- In the Offline section, click **Update**.



2. In the Offline panel, follow the steps that are mentioned on the panel to access the `InfoScale_CorePlus_Coefficients.json` file from Arctera License Analytics (LAS) console.
3. Save the file in a local folder with extension `.json`.
4. Click **Browse** to upload the file.
5. Click **Update>Close**.

Click **Activity monitor** to view the progress of the task.

More Information

[Scheduling auto update for License meter file](#)

Updating the Entitlements file

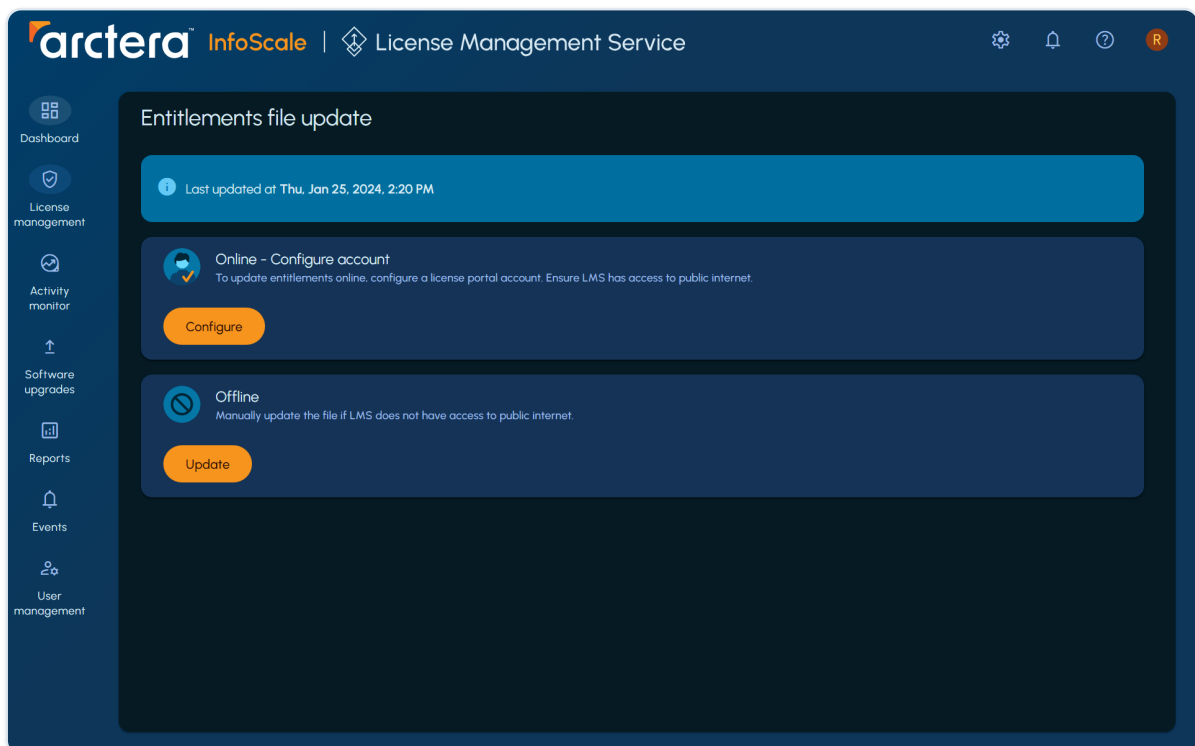
Using the License Management Service console, you can update the entitlements file. The Entitlements file is available on the Entitlement Management Server portal. It contains information about the entitled core units for the different InfoScale product combinations that you are entitled to use. Using the License Management Service console, you can upload the file on the host on which License Management Service is installed. Online and Offline are two options for uploading the file. Choose the Online option only if the host has access to the public internet. The file is securely

retrieved from Entitlement Management Server through an API and placed in the LMS database. Choose the Offline option if the host does not have access to the public internet.

To download the entitlements file, you must have access credentials to Entitlement Management Server portal account.

To update the Entitlements file

1. On the License Management Service console, do one of the following:
 - In the Setup panel, click **Update** in the Entitlements card.
 - In the left navigation click **License management**, and then click** Entitlements file update**.
2. Review the Entitlement data status date which is the date when the file was made available on the Entitlement Management Server.
3. Do one of the following:
 - Click **Configure** in Online - Configure account section if the host has access to public internet. Skip to step 4.
 - Click **Update** in Offline section if the host does not have access to public internet. Skip to step 5.



4. In the Configure license portal account panel enter the username and password to access Arctera License Portal. Click **Configure**.

5. In the Update entitlements offline panel follow the steps that are mentioned to download the `.json` file from the Arctera License Analytics Service (LAS) console. Browse to upload the file. Click **Update**.
6. Click **Close**.

Click **Activity monitor** to track the process of the task.

See [About assigning entitlements](#).

See [Assigning entitlements to hosts](#).

More Information

[Scheduling auto update for entitlements file](#)

About managing hosts

If License Management Service is installed as a standalone product, then you need to add the hosts that have InfoScale products to License Management Service. However if License Management Service is installed on the same host that has InfoScale Operations Manager, then the host data is refreshed automatically on License Management Service console. The Add host operation on License Management Service is disabled and can be performed only using the InfoScale Operations Manager console.

Prerequisites for adding the hosts to License Management Service are as follows:

- License Management Service and the host should be able to communicate over the network.
- Host should be up and running.
- XPRTLD should be running on the host.
- An InfoScale product should be installed on the host.
- Supported managed host version should be installed on the host.
- AWS host on Windows 2022 must have VRTSsfmh package version 8.0.2.400 or later to be discovered as a cloud host.

If the VRTSsfmh package that is installed on the AWS host is lower than 8.0.2.400, then it is discovered as an on-premises host.

For more information on supported InfoScale product versions and managed host version, refer to the [Arctera License Management Service Software Compatibility List](#):

https://www.veritas.com/support/en_US/doc/lms_scl_90

Using the License Management Service console, you can perform the following operations.

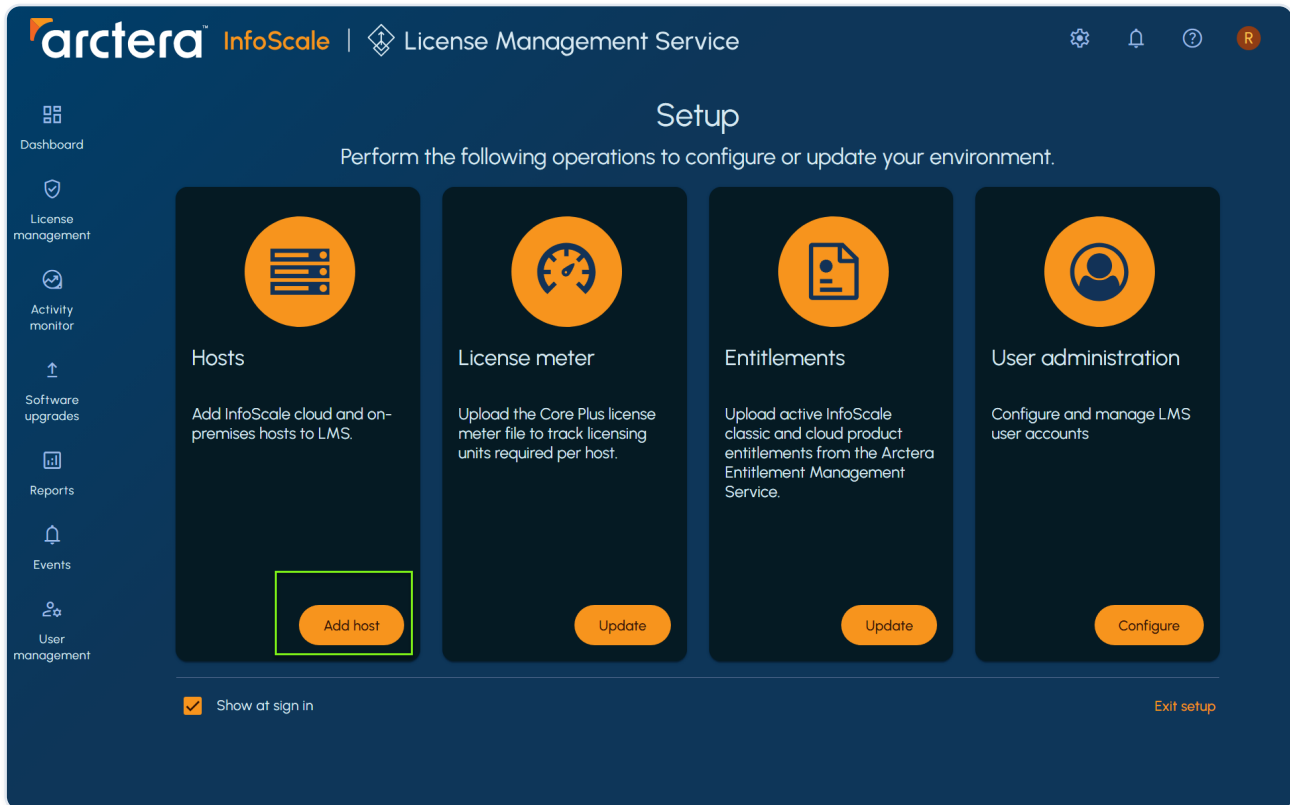
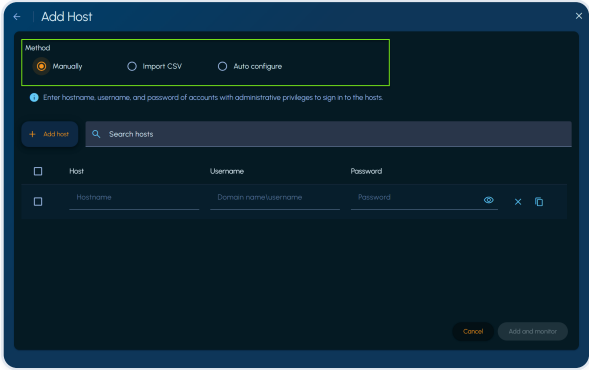


Table: Host operations

TASK	DESCRIPTION
Add host	 You can add hosts using the following methods\: - Adding hosts manually using credentials See Adding hosts manually to License Management Service .

TASK	DESCRIPTION
	- Adding multiple hosts using the .csv file See Adding hosts to License Management Service using the CSV file .
	- Adding hosts using the gendeploy script See Adding hosts to License Management Service using the Auto Configure (gendeploy.pl) script .
Refresh	You can refresh one or more hosts at a time.
	See Refreshing the details of a host .
Remove	You can remove one or more hosts from License Management Service.
	See Removing a host from License Management Service .

Adding Kubernetes clusters

If License Management Service is installed as a standalone product, then you need to push the Kubernetes cluster data to License Management Service to manage the InfoScale product licenses. However if License Management Service is installed on the same host that has InfoScale Operations Manager, then the Kubernetes node data is pushed automatically on License Management Service console.

To add Kubernetes clusters

1. Login to Kubernetes master node.
2. On the Kubernetes cluster master node, edit `<path>license_cr.yaml` file to add the IP address of the host on which License Management Service is installed against 'licenseServer' value.

Example:

```
\#(optional)licenseServer IP address

licenseServer:<IP of LMS host>
```

1. Run the following command to apply the changes to the clusters.

```
kubectl apply -f <path>license_cr.yaml
```

1. Run the following command to review the status message.

```
kubectl describe license <path>/license_cr.yaml
```

The status message should be Active which indicates that the task is successfully completed and Kubernetes node data is visible on License Management Service console.

See [Assigning entitlements to Kubernetes nodes](#).

See [Reassigning entitlements to Kubernetes nodes](#).

See [Unassigning Kubernetes node from an entitlement ID](#).

Adding Lightweight Directory Access Protocol or Active Directory-based authentication in License Management Service

You can add Lightweight Directory Access Protocol (LDAP) or Active Directory (AD)-based authentication. By default, the LDAP or AD-based authentication domain that you add is in the enabled state.

To add LDAP or AD-based authentication

1. On the License Management Service console, do one of the following:
 - In the Setup wizard panel, in User administration click **Configure > Domains**.
 - In the left pane click **User management** , and then click **Domains**.
2. Click **Add domains**.
3. In the Add domain wizard panel, enter the details, and click **Next**.

See [Add domain panel options](#).

1. In the Add domain wizard panel, specify the domain name and the search base, and click **Add**.

See [Add domain panel options to specify the domain name](#).

Add domain panel options

Use this panel to add LDAP or AD-based authentication.

Table: Add LDAP/AD panel options

FIELD	DESCRIPTION
Server name (Mandatory)	Enter the fully-qualified host name or IP address of the LDAP server.
	If a secure session is configured with the LDAP server using SSL certificates, you must enter the fully-qualified host name that matches with the fully-qualified host name in the LDAP server certificate.
Port (Mandatory)	Displays the number of the port on which the LDAP server is configured to run.
	By default, this field displays the port number as 389. You can edit this port number, if required.
Server sign in requirements	Select the check box to verify whether the server requires you to log on or use the SSL certificate.
Bind username/DN	Enter the complete Distinguished Name (DN) of the user that is used to bind to the LDAP server.
	If the LDAP server being used is Active Directory (AD), you can provide the DN in any of the following formats:
	- username@domainname.com
	- domainname\username
	For example, You can provide the DN as Administrator@enterprise.com or ENTERPRISE\Administrator .
	For RFC 2307 compliant LDAP servers, specify a complete bind DN.

FIELD	DESCRIPTION
	For example, cn=Manager,dc=vss,dc=arctera,dc=com
	The LDAP or the AD administrator can provide you with the bind username that you can use.
Password	Enter the password that is assigned to the bind username that you use.
Use Secure Sockets Layer	Select the check box to use the Secure Sockets Layer (SSL) certificates to establish a secure channel between the authentication broker and the LDAP server.
Certificate location (Mandatory)	Enter the location of the trusted root CA
	certificate of the vendor that issued the LDAP
	server certificate.
Username (Mandatory)	Enter the username based on which the system detects the LDAP/AD server-related settings.
	Note: Ensure that the username does not contain any special characters.
	The system determines the default search-base based on the username that you specify in this field.
Group information	Select the check box if the username entered in the Username field does not belong to any group on the Global domain (LDAP/AD) server.

Server details Query details

More Information

Adding Lightweight Directory Access Protocol or Active Directory-based authentication in License Management Service

Add domain panel options to specify the domain name

Use this panel to specify the domain name and the search base to configure LDAP/AD based authentication.

Table: Add LDAP/AD panel options

FIELD	DESCRIPTION
Domain name	Enter a unique name to identify the LDAP-based authentication that you configure. You can enter up to 32 characters.
Default	Select this option if you want to use the default search base that the system has detected using the information that you have specified on the Add domain wizard panel.
Custom	Select this option to specify the search base other than the default search base.
	For example, you can customize the search base as follows to authenticate the user (sampleuser) who belongs to the organization (ou=HR), which is an organization unit under ou=user
	The organization structure is as follows:
	ou=HR,ou=People,dc=arctera,dc=com
	\\-sampleuser
	ou=Engg,ou=People,dc=arctera,dc=com
	\\-Eng1
	The default search base is ou=HR,ou=People,dc=arctera,dc=com

FIELD	DESCRIPTION
	To authenticate users under ou=HR and ou=Engg, set the custom search base to a level up:
	ou=People,dc=arctera,dc=com

Search base

More Information

[Adding Lightweight Directory Access Protocol or Active Directory-based authentication in License Management Service](#)

Adding a user group

Using the License Management Service console, you can add user groups.

You can add two types of user groups:

- **Local group:** Groups that are created using this option are system level groups that is configured for License Management Service and are not visible outside License Management Service environment.
- **Global group:** This option lets you add groups from global LDAP/AD domains, but you cannot create a new group on the domain.

You can give permissions such as Guest, Operator, and Administrator to both the types of groups. These permissions are required to perform operations on the License Management Service console.

About user group permissions

To add a user group

1. On the License Management Service console, do one of the following:
 - In the Setup wizard panel, click **Configure** in User administration.
 - In the left navigation pane click **User management** , and then click **User groups**.
2. Under User management click **Add user group**.

3. In the Add user group panel, do the following:
 - Select **Create local group** and do one of the following:
 - Select **New user group** and enter a group name.
 - Select **Existing user group** and enter the group name.
 - Select **Add Global group** , select a domain name from the drop-down list of active domains, and enter a group name that already exists in the domain.
4. Select a role for the user group in the drop-down list. Options are Guest, Administrator, and Operator.
5. Click **Add**.
6. In the Edit users panel, enter the username of the user that you want to be a part of the group. Click **Add to list**.
7. Click **Save**.

About user group permissions

When you create user groups, local or global, you need to assign a permission to the group. The options are: Guest, Operator, and Administrator. The below list explains the operations which are not permitted for user groups having a Guest and Operator role. Which means if you want a user to be able to perform a specific operation such as suppressing a fault then ensure that the user belongs to the group that has an Operator or Administrator role.

- All license-related operations such as updating the license meter file, updating the entitlement file, assigning or reassigning entitlements are not allowed for user groups having Guest role.
- All manage hosts and Kubernetes worker node operations are not allowed for user groups having a Guest role.
- Managing faults (suppress or un-suppress) is not allowed for user groups having a Guest role.
- Downloading audit logs and reports is not allowed for user groups having a Guest role.
- Product key registration, SMTP settings, user access management, email reports is not allowed for user groups having Operator and Guest role.

Users with Administrator role are allowed to perform all operations on the console.

Adding local users

Using the License Management Service console, you can add or create local users. A local user is local to the LDAP/AD domain that is configured for License Management Service and is not visible outside License Management Service environment.

To add a local user

1. On the License Management Service console, do one of the following:
 - In the Setup wizard panel, click **Configure** in User administration.
 - In the left navigation pane click **User management** , and then click **Local users**.
2. Under User management click **Add user**.
3. In the Add user panel, do one of the following:
 - Select **Create new user** and do the following:
 - Enter a username that adheres to the following criteria:
 - Minimum characters: 3

Maximum characters: 128

Starts and ends with a lower or uppercase character.

Followed by any number of the following: Hyphen('-'), underscore ('_'), numbers, lowercase letters, uppercase letters, period ('.').

- Enter a password that adheres to the following criteria:
 - Minimum length: 8 characters

Numbers: 1

Lowercase characters: 1

Uppercase characters: 1

Special characters: 1

Note: These limitations may vary on OS level. For example: Windows 2022 has minimum 12 character requirement.

- In the Confirm password field, re-enter the password.
- Select **Add Existing** and enter the username.

1. Click **Add**.

Configuring SMTP settings for email notifications

Configure the SMTP settings to add a sender account and send different types of license usage reports by email. After the initial configuration is complete, send a test email to verify the SMTP settings.

Enter the following details to configure the SMTP settings:

Table

FIELD	DESCRIPTION
SMTP	Valid formats for SMTP server include: Fully
	Qualified Domain Name (FQDN), IP address,
	or, if the network handles DNS resolution for
	host names, a shortened host name.
	Examples: Host123 or Host123.example.com
Sender email address	The email address that is entered in the
	Sender email address appears as the sender of
	all the emails that are sent out.
SMTP port	Enter the SMTP mail server port number.

To configure the SMTP settings for email notifications

1. On the License Management Service console, click **Settings ** on the top-right corner. ClickSMTP****.
2. Under Configure SMTP server, do the following:

- Enter the SMTP mail server IP address or host name in SMTP.
- Enter a valid email address in Sender email address.
- Enter the SMTP mail server port number in SMTP port.

3. Click **Save**.
4. Click **Send test email** to verify that SMTP server is configured successfully.
5. In the **Send test email** panel, enter valid email address of the receiver and a test message.
6. Click **Send**.

Changing the password

Using the License Management Service console, you can change the existing password. The minimum password requirements are:

- Length: 8 characters
- Numbers: 1
- Lowercase characters: 1
- Uppercase characters: 1
- Special characters: 1

To change the password

1. On the License Management Service console, click on the user profile icon and click **Change password**.
2. Enter the old password.
3. Enter a new password that adheres to the mentioned criteria.
4. Confirm the password, and click **Save**.

About using reports

In the License Management Service web console, you can generate the following reports:

Table

REPORT NAME	DESCRIPTION
Host license usage	Provides information on host and license unit requirements.
Manage Kubernetes hosts license usage	Provides information on container hosts and license unit requirements.
Entitlements	Includes all active, about to expire, and expired entitlements.
License reconciliation	Includes a comparison of entitlements versus usage of attached hosts.
Host deployment details	Provides details about host deployment distribution based on platform and entitlement type.
Usage report and summary	Provides details about reconciliation and license usage summary in three tabs: Primary usage , Not assigned , Unmanaged .
	See Sending the Usage report to Arctera .

After generating a report, you can perform the following tasks:

- Save the report as a comma-separated (CSV) file.
- Email the report in HTML format or as a CSV file. Ensure that the SMTP configuration is complete.
- Refresh the report data without having to regenerate the report.
- Filter the report on customized parameters.
- Add or remove columns in the report using Toggle Selection List.

To generate a report

1. On the License Management Service console, click **Reports** in the left pane.
2. Click **Generate** to build the report.

To save a report

1. On the License Management Service console, click **Reports** in the left pane.
2. Click **Generate** in the report box.
3. Click **Download as CSV**. The report is saved to a local folder.

To email a report

1. On the License Management Service console, click **Reports** in the left pane.
2. Click **Generate** in the report box.
3. Click **Mail**.
4. Select the output format, HTML or CSV.
5. Enter the receivers email ID, click **Mail**.

You can enter only one email ID at a time.

Sending the Usage report to Arctera

Using the License Management Service console you can share the Usage report with Arctera. When you generate the report on the Reports home page, information is displayed in three tabs: Primary usage, Not assigned, Unmanaged. Data displayed in these tabs can be shared with Arctera as a single report.

To send the Usage report to Arctera

1. On the License Management Service console, click **Reports** in the left pane.
2. Click **Generate** in the Usage report and summary box.
3. Review the information in the three tabs.
4. Click **Send report to Arctera**.
5. Review the date and time when the report was last sent to Arctera.
6. Choose between online and offline sharing options based on internet connectivity from the host to public internet.
 - If the host has access to public internet, select **Send Now ** in the Online section. ClickClose****.
 - If the host does not have access to public internet, select **Download ** in theOffline**** section. The file is downloaded. Go to step 7
7. From the host that has internet access, log in to Arctera License Analytics Service (LAS) console to share the file with Arctera.

Managing faults

Using the License Management Service console, you can view the faults that are generated on the hosts. Faults are categorized in three types, Information, Error, and Warning.

Faults of the type Warning can be acknowledged and hidden for the next 24 hours. The total number of faults that are shown on the Dashboard do not have the Information type faults.

In the list of faults table, you can perform the following tasks:

- Search the list based on condition type, faulted or source object, or fault type.
- Refresh the faults data.
- Add or remove columns in the report using Toggle Selection List.

To manage faults

1. To view all faults, do one of the following:

- On the License Management Service console, click the notifications bell icon on the top-right corner. Click **All events** at the bottom of the list.
- On the Dashboard, click the Faults card.

You are redirected to the Events tab.

1. Perform the search operation on the table if required.
2. Hover on a row to view additional details about the fault.
3. Click **Check** to hide the fault of the type Warning for the next 24 hours.
4. For multiple faults of the type Warning, select the check box for each fault and click **Acknowledge warnings** above the table.

Viewing the activity monitor

Activity Monitor has two tabs, Tasks and Audit logs.

The ongoing status of all tasks that are performed on the hosts or the containers, for example, adding, removing, refreshing etc. are shown on the System tasks tab. Some operations take longer to complete. To view the status of such operations, use the System tasks tab.

You can perform the following operations in the task list.

- Search for the status of a particular task.

- Refresh the list.
- Filter the list on required parameters.
- Use the Toggle Selection List to add or remove columns in the displayed table as per convenience.

The Audit logs tab gathers information about all the tasks that are performed on the License Management Service console. Tasks such as logging on, generating reports, adding users etc. Every single task or activity that is done on the License Management Service console is recorded in the logs. In addition to searching, refreshing, filtering, and using the Toggle Selection List, you can also export the log file. The log file is saved in a comma-separated (CSV) file format on the local folder.

To view the tasks or audit logs:

1. On the License Management Service console, click **Activity Monitor** in the left pane.
2. Click **System tasks** to view the task details.
3. Click Audit logs to view the activity logs.
4. Click **Download as CSV** to download the activity logs data in a CSV file format on the local folder.

Registering

This section includes the following topics:

- [Login to the License Management Service console](#)
- [Viewing the product registration details](#)
- [Re-registering the product key](#)
- [Viewing the License Management Service installation details](#)

Login to the License Management Service console

The product registration must be done when you log in to License Management Service for the first time. For subsequent logins, only user credentials are required. If more than one active domains are added using the License Management Service console, then those are displayed in the drop-down list.

To login to License Management Service console

1. Open a web browser on a host that has the network connection.
2. In the address field of the browser, type the following URL and press **Enter**.

`https://hostname:14161/#/login` where, host name is the fully-qualified host name.

For a IPv4 configuration, you can specify the IP address instead of the host name.

1. In the **Username ** and Password**** fields, enter credentials for a valid user.
2. Select the **Domain ** from the list and click Sign in****.

You are directed to the Setup page. During the previous log in session, if the **Setup** check box was cleared, then you are directed to the Dashboard.

More Information

[Registering the License Management Service product key](#)

[Viewing the product registration details](#)

Viewing the product registration details

Log in to the License Management Service console, to view the registration key details on the Product registration page.

To view the product registration details

1. On the License Management Service console, click **Settings > Product registration**.
2. Review the following:
 - Current status
 - Registration key details
 - Site name which specifies the site details of the host on which License Management Service is installed.

More Information

[Registering the License Management Service product key](#)

Re-registering the product key

During the registration process the registration key is locked with the host name on which License Management Service is installed and configured. Later if the registration key is corrupted or deleted, then you need to regenerate and re-register the key. For re-registration, you can use the backup copy of the `.alf` file that was generated while registering for the first time. You can also generate a new registration file on the License Analytics Service (LAS) portal if required.

During the period between the corruption or deletion of the registration key and the re-registration process, you can continue to perform operations, however an alert message is displayed on the UI at every page load.

To re-register the product registration key

1. Log on to the License Management Service console from the host on which the registration key details need to be refreshed.
2. Click **Settings>Product registration**.
3. Click **Copy to clipboard** to copy the host lock string.
4. Sign in to License Analytics Service (LAS) and do the following:
 - Go to **Administrative tasks**.

- On the Generate registration key tab, copy the host lock string and click **Generate registration key**.
 - Click **Download** to save the registration key.
5. On the License Management Service Product registration panel, drag and drop the registration key file or click **Browse** to locate and upload the registration key file.
 6. Click **Apply**.

More Information

[Viewing the product registration details](#)

[Registering the License Management Service product key](#)

Viewing the License Management Service installation details

Using the License Management Service console, you can view the following details about the product:

- Version number.
- Build number.
- Patch version that is installed.
- Whether License Management Service is installed along with InfoScale Operations Manager or not.

To view the License Management Service installation details

1. On the License Management Service console, click **Help** or the Question mark icon.
2. Click **About**.

Managing license usage

This section includes the following topics:

- [About license usage](#)
- [Scheduling auto update for License meter file](#)
- [About assigning entitlements](#)
- [Scheduling auto update for entitlements file](#)
- [Assigning entitlements to hosts](#)
- [Reassigning entitlements to hosts](#)
- [Unassigning host from an entitlement ID](#)
- [Unmanaging a host](#)
- [Managing hosts](#)
- [Assigning entitlements to Kubernetes nodes](#)
- [Reassigning entitlements to Kubernetes nodes](#)
- [Unassigning Kubernetes node from an entitlement ID](#)
- [Viewing the License cores usage data](#)

About license usage

Using the License Management Service console, you can manage the licenses for InfoScale products. The default license for the InfoScale family is a subscription or a term-based license that allows you to license the product during a specified period of time. During the term of the subscription, you have the right to use the product, install product updates provided as part of maintenance and security updates and receive technical support however, you do not own the license. You have all the entitlements of ownership and hence on the License Management Service console the terms Entitlements and Entitlement ID are used.

For more information on Licenses, refer to the [Arctera InfoScale and InfoScale for Kubernetes Licensing Guide](#).

Before you get started with assigning entitlements IDs to hosts, you need to update the License meter file and the Entitlements file to view your license data on the License Management Service console.

See [About assigning entitlements](#).

[More Information](#)

[Updating the License meter file](#)

[Updating the Entitlements file](#)

[Scheduling auto update for License meter file](#)

Scheduling auto update for License meter file

The License meter file is updated on Arctera Services and Operations Readiness Tools (SORT) website when new processors are released or every 6 months. Updating the file regularly is recommended to ensure that the information about the host CPUs, such as the core-coefficient value, is updated. Using the License Management Service console, you can schedule an auto update for every month, every quarter or 3 months or once every 6 months. You can set a date and a start time to ease the process. Ensure that the host has access to public internet.

To schedule auto update for License meter file

1. On the License Management Service console, do one of the following:
 - In the Setup panel, click **Update** in the License Meter card.
 - In the left navigation pane click **License management** , and then click **License meter file update**.
2. Select **Enable auto-update ** and click**Setup schedule**.
3. In the Set up schedule panel, do the following:
 - Select a start date using the calendar.
 - Select a start time using the clock.
 - Select the frequency at which you want to update the file.
4. Click **Save**.

About assigning entitlements

Using the License Management Service console you can assign entitlements to hosts and Kubernetes worker nodes that have the Arctera InfoScale product suite installed. You can select a

single on-premises or cloud host or a Kubernetes node to assign entitlements or you can choose multiple by using filters and proceed with the task.

While assigning entitlements to hosts or nodes, you need to ensure that certain parameters are taken into consideration. Refer to the table to understand the various combinations that are permitted while assigning entitlements.

Table: Entitlement and product combinations

ENTITLEMENT PRODUCT BUNDLE	HOST PRODUCT BUNDLE
InfoScale Enterprise	InfoScale Enterprise
	InfoScale Availability*
	InfoScale Storage*
InfoScale Availability	InfoScale Availability
InfoScale Storage	InfoScale Storage
InfoScale Foundation	InfoScale Foundation
InfoScale Enterprise	InfoScale Enterprise
Alta Enterprise	InfoScale Availability*
	InfoScale Storage*
InfoScale Availability	InfoScale Availability
Alta Application Resiliency	
InfoScale Storage	InfoScale Storage
Alta Storage	
InfoScale Enterprise for Kubernetes	InfoScale Enterprise for Kubernetes
InfoScale Enterprise for Kubernetes Cloud	
InfoScale Storage for Kubernetes	InfoScale Storage for Kubernetes

ENTITLEMENT PRODUCT BUNDLE	HOST PRODUCT BUNDLE
InfoScale Storage for Kubernetes Cloud	

A lower-level product bundle can be assigned to a higher-level product bundle, but this is not recommended.

Depending on the purchase date the entitlement product bundle names can vary.

In addition to the above product and entitlement product bundle mapping, you need to also consider the following criteria:

- All selected hosts must have similar entitlement status such as unassigned or partially expired.
- When mapping host to entitlements there may be two types of licenses for each, perpetual and subscription.
- Hosts assigned to an entitlement can be easily moved to another entitlement.

Best practice is to match the entitlement product bundle with a similar bundle that is installed on the host (on-premises or cloud).

See [Reassigning entitlements to hosts](#).

See [Reassigning entitlements to Kubernetes nodes](#).

More Information

[Assigning entitlements to hosts](#)

Scheduling auto update for entitlements file

Using the License Management Service console you can schedule an auto update for the entitlements file.

To schedule auto update for entitlements file

1. On the License Management Service console, do one of the following:
 - In the Setup panel, click **Update** in the Entitlements card.
 - In the left navigation pane click **License management** , and then click **Entitlements file update**.
2. Select **Enable auto update** ** check box and then click **Setup schedule****.

3. In the Setup schedule panel, do the following:
 - Select a start date using the calendar.
 - Select a start time using the clock.
 - Select the frequency at which you want to update the file.
4. Click **Save**.

Assigning entitlements to hosts

During the initial configurations, after you add hosts and update the License meter and the Entitlements file, there might be some hosts to which entitlements need to be assigned. Or at a later stage when you add new hosts, you need to assign entitlements to them. Sometimes hosts can have entitlements from multiple entitlements IDs. In this case if one or more IDs expire, then the entitlement status of the host is shown as Partially expired. And if any one entitlement from multiple assigned entitlements is unassigned then the status is shown as Partially assigned. In these scenarios you need to assign the entitlements again.

You can select multiple hosts to assign the entitlements. Ensure that you have selected hosts that have similar entitlement status such as unassigned. Hosts should also have a similar product bundle and the platform type. Cross bundle, status, or platform selection is not allowed. [About assigning entitlements](#)

Ensure that when a new host is added, the entitlements are assigned to the host. After 60 days of InfoScale product installation, if the entitlements are not assigned then the host details show that it is unassigned and overused.

There are three methods to assign entitlements to hosts. Choose whichever method is convenient for you.

- Method 1: From the License management menu, select the host and assign the entitlement. [To assign entitlements to hosts from the License management menu:](#)
- Method 2: From the Entitlements tab in Entitlements menu, select the entitlement and assign it to a host. [To assign entitlements to hosts from the Entitlements tab](#)
- Method 3: From the License cores usage tab in Entitlements menu. Select the InfoScale product and then assign the entitlement to the host. [To assign entitlements to hosts from the License cores usage tab](#)

To assign entitlements to hosts from the License management menu:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage ** and then click theHosts**** tab.
3. Do one of the following:
 - Select the check box next to the host name to which you want to assign entitlements, and click **Assign entitlement** in the table heading row.
 - Locate the host to which you want to assign entitlements and click the **Assign entitlement** icon at the end of the row.
 - Select multiple check boxes next to the host name, and click **Assign entitlement** in the table heading row.
 - Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Assign entitlement** in the same table heading row.
4. In the Assign entitlements for selected hosts panel, do the following:
 - Select from Subscription and Perpetual license type.
 - Review the required cores and assigned cores values.
 - Use the search, refresh, and toggle selection menu to locate the appropriate entitlement IDs if required.
 - Select appropriate entitlement IDs to fulfill the requirements.
5. Click **Assign**.

To assign entitlements to hosts from the Entitlements tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. On the **Entitlements ** tab, locate the entitlement that you want to assign and clickAssign host**** at the end of the row.
3. In the Assign host panel, do the following:
 - Review the available cores and assigned cores values.
 - Use the search, refresh, and toggle selection menu to locate the appropriate host if required.
 - Select the hosts.
4. Click **Assign host**.

To assign entitlements to hosts from the License cores usage tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. Click the License cores usage tab.
3. Click the required InfoScale product.
4. Click the required entitlement in the list and click **Assign host**.
5. Select the hosts from the list, and click **Assign host**.

Reassigning entitlements to hosts

Using the License Management Service you can reassign the entitlements that are assigned to a host. Reassigning entitlements can be required for multiple reasons such as, you have purchased new licenses and want to assign them to hosts that have older entitlements. Or when the host no longer has the InfoScale product installed on it, or is obsolete you can reassign the entitlements to another host. To view the currently assigned entitlement for a host, click on the number in the Entitlements assigned column in the host row on the Host tab.

If required, use the filter, refresh, and toggle selection menu to locate the appropriate hosts.

There are three methods to reassign entitlements to hosts. Choose whichever method is convenient for you.

- Method 1: From the License management menu, on the Hosts tab, select the host and reassign the entitlement. [To reassign entitlement IDs from the License management menu:](#)
- Method 2: From the Entitlements tab in the Entitlements menu, select the entitlement and reassign the hosts that are attached to it. [To reassign entitlement IDs from the Entitlements menu:](#)
- Method 3: From the License cores usage tab in Entitlements menu. Select the InfoScale product and then reassign the entitlement to the host. [To reassign entitlements to hosts from the License cores usage tab](#)

In certain situations, a host might have partially expired or partially assigned entitlements. This takes place when the host was assigned to multiple entitlements and one or more entitlements have expired or are unassigned. Based on the scenario, the right-click operation on the host has the following options:

- For partially expired:

- Reassign all entitlement
- Reassign expired entitlement. This option reassigns only expired entitlements.
- For partially assigned:
 - Reassign all entitlement
 - Assign entitlement. This option assigns only unassigned cores.

To reassign entitlement IDs from the License management menu:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage ** and then click theHosts**** tab.
3. Locate the host for which you want to reassign entitlement and click **Reassign entitlement** at the end of the row.

Based on the entitlement status, select the appropriate operation.

1. In the Reassign entitlements for host panel, review the requirements, select the required entitlement ID, and click **Reassign**.

To reassign entitlement IDs from the Entitlements menu:

1. On the License Management Service console, expand **Entitlements** in the left pane.
2. In the Entitlements tab, click on the entitlement ID to open the Assigned host table.

These are the hosts that are assigned to the selected entitlement ID.

1. In the Assigned host table, do one of the following:
 - Select the check box next to the host name to which you want to reassign entitlements, and click **Reassign host** in the table heading row.
 - Locate the host and click **Reassign host**.
 - Select multiple check boxes next to the host name, and click **Reassign host** in the table heading row.
 - Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Reassign host** in the same table heading row.
 - Click **Reassign entitlements for all hosts** to perform the operation on all the hosts that are listed in the table.

2. In the Reassign host panel, select the required entitlement ID and click **Reassign**.

To reassign entitlements to hosts from the License cores usage tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. Click on License cores usage tab.
3. Click on the required InfoScale product.
4. Click on the required entitlement in the list to view the list of hosts that are assigned to the selected entitlement.
5. Do one of the following:
 - Select the check box next to the host name to which you want to reassign entitlements, and click **Reassign host** in the table heading row.
 - Locate the host and click **Reassign host**.
 - Select multiple check boxes next to the host name, and click **Reassign host** in the table heading row.
 - Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Reassign host** in the same table heading row.
 - Click **Reassign entitlements for all hosts** to perform the operation on all the hosts that are listed in the table.
6. In the Reassign host panel, select the required entitlement ID and click **Reassign**.

Unassigning host from an entitlement ID

There can be multiple reasons to unassign the entitlement ID from a host, such as the host does not have InfoScale products anymore or is removed from the environment or is obsolete.

Sometimes hosts can have entitlements from multiple entitlements IDs. In this case if one or more IDs expire, then the entitlement status of the host is shown as Partially expired. In this case, if required you can unassign all entitlement IDs from the host.

If required, use filter, refresh, and toggle selection menu to locate the appropriate hosts.

There are three methods to unassign entitlements from hosts. Choose whichever method is convenient for you.

- Method 1: From the License management menu, select the host and unassign the entitlement.
[To unassign a host from an entitlement ID from the License management menu:](#)
- Method 2: From the Entitlements menu, select the entitlement and unassign the hosts that are attached to it. [To unassign a host from an entitlement ID from the Entitlements menu](#)
- Method 3: From the License cores usage tab in License management menu. Select the InfoScale product and then unassign the entitlement from the host. [To unassign entitlements from hosts from the License cores usage tab](#)

To unassign a host from an entitlement ID from the License management menu:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage**.
3. In the Hosts tab, do one of the following:
 - Select the check box next to the host name, and click **Unassign entitlement** in the table heading row.
 - Locate the host for which you want to unassign the entitlement and click **Unassign entitlement** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Unassign entitlement** in the table heading row.
 - Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Unassign entitlement**.

4. In the **Unassign entitlement ** panel, review the selection and click**Unassign**.

To unassign a host from an entitlement ID from the Entitlements menu

1. On the License Management Service console, expand **Entitlements** in the left pane.
2. In the Entitlements tab, click on the entitlement ID to open the Assigned host table.

These are the hosts that are assigned to the selected entitlement ID.

1. In the Assigned host table, do one of the following:
 - Select the check box next to the host name from which you want to unassign entitlements, and click **Unassign host** in the table heading row.
 - Locate the host and click **Unassign host** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Unassign host** in the table heading row.

- Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Unassign host** in the same table heading row.

2. In the **Unassign host ** panel, review the selection and click Unassign****.

To unassign entitlements from hosts from the License cores usage tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. Click on License cores usage tab.
3. Click on the required InfoScale product.
4. Click on the required entitlement in the list to view the list of hosts that are assigned to the selected entitlement.
5. Do one of the following:
 - Select the check box next to the host name from which you want to unassign entitlements, and click **Unassign host** in the table heading row.
 - Locate the host and click **Unassign host** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Unassign host** in the table heading row.
 - Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Unassign host** in the same table heading row.
6. In the **Unassign host ** panel, review the selection and click Unassign****.

Unmanaging a host

Using the License Management Service console, you can unmanage a host if required. Hosts are typically unmanaged for the following reasons:

- Server Tier
- Support exception
- ELA
- Decommissioned
- Not defined

If a host has entitlements even if it is partial, you cannot unmanage the host. The unmanaged hosts are displayed in the table. In the Entitlement status column, you can view the reason for which the host is unmanaged.

To unmanage a host:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage**.
3. On the Hosts tab, do one of the following:
 - Select the check box next to the host name to which you want to unmanage, and click **Unmanage host** in the table heading row.
 - Locate the host you want to unmanage and click **Unmanage host** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Unmanage host** in the table heading row.
 - Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Unmanage host**.

This is useful when you want to unmanage a large number of hosts. Use the filter to select hosts that belong to the same product bundle and platform type.

1. Select a reason from the drop-down list and click **Unmanage**.

See [Managing hosts](#).

Managing hosts

A host can be in Unmanaged state for various reasons. Once the conditions for unmanaged state are resolved, using the License Management Service console, you can manage the host again.

To manage a host:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage**.
3. On the Hosts tab do one of the following:
 - Select the check box next to the host name which you want to manage, and click **Manage host** in the table heading row.
 - Locate the host that you want to manage and click **Manage host** at the end of the row.

- Select multiple check boxes next to the host name, and click **Manage host** in the table heading row.
- Use the filter to identify all the hosts whose status is unmanaged. Select the check box next to Host in the table heading row to select all the hosts that are displayed on the selected page of the table, and click **Manage host**.

This is useful when you want to manage a large number of hosts.

1. Click **Manage**.

See [Unmanaging a host](#).

Assigning entitlements to Kubernetes nodes

When the Kubernetes node data is visible on License Management Service, you can proceed with assigning the entitlements. The process and the logic of assigning entitlements to the nodes is the same as that of the hosts.

Hence when a Kubernetes node has entitlements from multiple entitlements IDs, and one or more IDs expire, then the entitlement status is shown as Partially expired. If any one entitlement from multiple assigned entitlements is unassigned then the status is shown as Partially assigned. You need to assign the entitlements again.

You can select multiple Kubernetes nodes to assign the entitlements. Ensure that you have selected nodes that have similar entitlement status such as unassigned or partially expired and should also have a similar product bundle. Cross bundle or status selection is not allowed. [About assigning entitlements](#)

Ensure that when a new Kubernetes cluster is added, the entitlements are also assigned. After 60 days of adding the cluster, if the entitlements are not assigned then the Kubernetes node details show that it is unassigned and overused.

There are three methods to assign entitlements. Choose whichever method is convenient for you.

- Method 1: From the License management menu, on the Kubernetes tab, select the node and assign the entitlement. [To assign entitlements to Kubernetes nodes from the License management menu](#):
- Method 2: From the Entitlements tab in Entitlements menu, select the entitlement and assign it to a node. [To assign entitlements to Kubernetes nodes from the Entitlements tab](#)

- Method 3: From the License cores usage tab in Entitlements menu. Select the InfoScale product and then assign the entitlement to the node. [To assign entitlements to Kubernetes nodes from the License cores usage tab](#)

To assign entitlements to Kubernetes nodes from the License management menu:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage** , and then click the Kubernetes tab.
3. Do one of the following:
 - Select the check box next to the host name to which you want to assign entitlements, and click **Assign entitlement** in the table heading row.
 - Locate the host to which you want to assign the entitlement and click **Assign entitlement** icon at the end of the row.
 - Select multiple check boxes next to the host name, and click **Assign entitlement** in the table heading row.
 - Select the check box next to Host name in the table heading row to select all the Kubernetes nodes that are displayed on the selected page of the table, and click **Assign entitlement** in the same table heading row.
4. In the Assign entitlements for selected hosts panel, do the following:
 - Review the entitlement type which is always Subscription in this case.
 - Review the required cores and assigned cores values.
 - Use the filter, refresh, and toggle selection menu to locate the appropriate entitlement IDs if required.
 - Select appropriate entitlement IDs to fulfill the requirements.
5. Click **Assign**.

To assign entitlements to Kubernetes nodes from the Entitlements tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. On the Entitlements tab, locate the entitlement that you want to assign to the node, and click **Assign kubernetes**.
3. In the Assign kubernetes panel, do the following:
 - Review the available cores and assigned cores values.

- Use the filter, refresh, and toggle selection menu to locate the appropriate host name if required.
- Select the nodes.

4. Click **Assign kubernetes**.

To assign entitlements to Kubernetes nodes from the License cores usage tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. Click on License cores usage tab.
3. Click on the required InfoScale for Kubernetes product.
4. Click on the required entitlement in the list and click **Assign kubernetes**.
5. Select the node from the list, and click **Assign kubernetes**

Reassigning entitlements to Kubernetes nodes

Using the License Management Service you can reassign the entitlements that are assigned to Kubernetes nodes. Reassigning entitlements can be required for multiple reasons such as, you have purchased new licenses and want to assign them to the nodes that have older entitlements. Or when the cluster no longer has the InfoScale product installed on it, or is obsolete you can reassign the entitlements to other nodes in another cluster. To view the currently assigned entitlement, click on the number in the Entitlements assigned column in the host name row on the Kubernetes tab.

Use the filter, refresh, and toggle selection menu to locate the appropriate host name if required.

There are three methods to reassign entitlements. Choose whichever method is convenient for you.

- Method 1: From the License management menu, in the Kubernetes tab, select the node and reassign the entitlement. [To reassign entitlement IDs from the License management menu:](#)
- Method 2: From the Entitlements tab in Entitlements menu, select the entitlement and reassign the Kubernetes nodes that are attached to it. [To reassign entitlement IDs from the Entitlements tab](#)
- Method 3: From the License cores usage tab in Entitlements menu. Select the InfoScale product and then reassign the entitlement to the node. [To reassign entitlements to Kubernetes nodes from the License cores usage tab](#)

In certain situations, the Kubernetes nodes might have partially assigned entitlements. This takes place when the node was assigned to multiple entitlements and one or more entitlements have expired. In this scenario, the right-click operation on the node is Reassign all entitlement from the Kubernetes tab in the License management menu only.

To reassign entitlement IDs from the License management menu:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage** , and then click the Kubernetes tab.
3. Locate the host and click **Reassign entitlement** at the end of the row.

Click **Reassign all entitlement** if the Kubernetes node has partially assigned entitlements.

1. In the Reassign entitlements for kubernetes panel, review the requirements, select the required entitlement ID, and click **Reassign**.

To reassign entitlement IDs from the Entitlements tab

1. On the License Management Service console, expand **Entitlements** in the left pane.
2. In the Entitlements tab, click on the entitlement ID to open the Assigned kubernetes table.

These are the Kubernetes nodes that are assigned to the selected entitlement ID.

1. In the Assigned kubernetes table, do one of the following:
 - Select the check box next to the host name to which you want to reassign entitlements, and click **Reassign kubernetes** in the table heading row.
 - Locate the host and click **Reassign kubernetes** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Reassign kubernetes** in the table heading row.
 - Select the check box next to Host name in the table heading row to select all the nodes that are displayed on the selected page of the table, and click **Reassign kubernetes** in the same table heading row.
 - Click **Reassign entitlements for all kubernetes** to perform the operation on all the Kubernetes nodes that are listed in the table.
2. In the Reassign kubernetes panel, select the required entitlement ID and click **Reassign**.

To reassign entitlements to Kubernetes nodes from the License cores usage tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. Click on License cores usage tab.
3. Click on the required InfoScale for Kubernetes product.
4. Click on the required entitlement in the list to view the list of nodes that are assigned to the selected entitlement.
5. Do one of the following:
 - Select the check box next to the host name to which you want to reassign entitlements, and click **Reassign kubernetes** in the table heading row.
 - Locate the host and click **Reassign kubernetes** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Reassign kubernetes** in the table heading row.
 - Select the check box next to Host name in the table heading row to select all the nodes that are displayed on the selected page of the table, and click **Reassign kubernetes** in the same table heading row.
 - Click **Reassign entitlements for all kubernetes** to perform the operation on all the nodes that are listed in the table.
6. In the Reassign kubernetes panel, select the required entitlement ID and click **Reassign**.

Unassigning Kubernetes node from an entitlement ID

There can be multiple reasons to unassign the entitlement ID from Kubernetes node, such as the Kubernetes cluster does not have InfoScale products anymore or is removed from the environment or is obsolete. Sometimes the Kubernetes node can have entitlements from different entitlements IDs. In this case if one or more IDs expire, then the entitlement status of node is shown as Partially assigned. In this case, if required you can unassign all entitlement IDs from node.

Use the filter, refresh, and toggle selection menu to locate the appropriate Kubernetes node if required.

There are three methods to unassign entitlements from a Kubernetes node. Choose whichever method is convenient for you.

- Method 1: From the License management menu, select the Kubernetes node and unassign the entitlement. [To unassign Kubernetes nodes from an entitlement ID from the License management menu:](#)

- Method 2: From the Entitlements menu, select the entitlement and unassign the nodes that are attached to it. [To unassign Kubernetes node from an entitlement ID from the Entitlements menu](#)
- Method 3: From the License cores usage tab in License management menu. Select the InfoScale product and then unassign the entitlement from the nodes. [To unassign entitlements from Kubernetes node from the License cores usage tab](#)

To unassign Kubernetes nodes from an entitlement ID from the License management menu:

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Usage**.
3. In the Kubernetes tab, do one of the following:
 - Select the check box next to the host name, and click **Unassign entitlement** in the table heading row.
 - Locate the host and click **Unassign entitlement** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Unassign entitlement** in the table heading row.
 - Select the check box next to Host name in the table heading row to select all the Kubernetes nodes that are displayed on the selected page of the table, and click **Unassign entitlement**.
4. In the **Unassign entitlement ** panel, review the selection and click Unassign****.

To unassign Kubernetes node from an entitlement ID from the Entitlements menu

1. On the License Management Service console, expand **Entitlements** in the left pane.
2. In the Entitlements tab, click on the entitlement ID to open the Assigned kubernetes table.

These are the Kubernetes nodes that are assigned to the selected entitlement ID.

1. In the Assigned kubernetes table, do one of the following:
 - Select the check box next to the host name from which you want to unassign entitlements, and click **Unassign kubernetes** in the table heading row.
 - Locate the host and click **Unassign kubernetes** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Unassign Kubernetes** in the table heading row.

- Select the check box next to Host name in the table heading row to select all the nodes that are displayed on the selected page of the table, and click **Unassign kubernetes** in the same table heading row.

2. In the **Unassign kubernetes **** panel, review the selection and click **Unassign****.

To unassign entitlements from Kubernetes node from the License cores usage tab

1. On the License Management Service console, expand **License management > Entitlements** in the left pane.
2. Click on License cores usage tab.
3. Click on the required InfoScale product.
4. Click on the required entitlement in the list to view the list of nodes that are assigned to the selected entitlement.
5. Do one of the following:
 - Select the check box next to the host name from which you want to unassign entitlements, and click **Unassign kubernetes** in the table heading row.
 - Locate the host and click **Unassign kubernetes** at the end of the row.
 - Select multiple check boxes next to the host name, and click **Unassign kubernetes** in the table heading row.
 - Select the check box next to Host name in the table heading row to select all the nodes that are displayed on the selected page of the table, and click **Unassign kubernetes** in the same table heading row.
6. In the **Unassign kubernetes **** panel, review the selection and click **Unassign****.

Viewing the License cores usage data

Using the License Management Service console you can view the Kubernetes data. Following information is displayed in the table

- Product name: the InfoScale product name. Click on the name to view additional details.
- License type: the license type, Perpetual or Subscription.
- Entitled cores: number of entitled cores.
- Used cores: number of used cores.
- Available cores: number of available cores.

- Overused cores: number of overused cores.

To view the License cores usage data

1. On the License Management Service console, expand **License management** in the left pane.
2. Click **Entitlements** > License cores usage tab.

Managing hosts

This section includes the following topics:

- [Adding hosts manually to License Management Service](#)
- [Adding hosts to License Management Service using the CSV file](#)
- [Adding hosts to License Management Service using the Auto Configure \(gendeploy.pl\) script](#)
- [Refreshing the details of a host](#)
- [Removing a host from License Management Service](#)

Adding hosts manually to License Management Service

If License Management Service is installed as a standalone product, then you need to add the hosts that have InfoScale products to License Management Service. However if License Management Service is installed on the same host that has InfoScale Operations Manager, then the host data is refreshed automatically on License Management Service console. The add host operation on License Management Service is disabled and can be performed only using the InfoScale Operations Manager console.

You can add one or more hosts to License Management Service by manually entering the credentials such as host name, username, and password for each host. The credentials must have administrative privileges to these hosts. If the user account is part of a domain, then specify the username as \<domain name\ username\>.

Ensure that the minimum version requirement of managed host package as mentioned in [Arctera License Management Service Software Compatibility List](#) is met. Else there can be issues while discovering the host and the operation may fail.

https://www.veritas.com/support/en_US/doc/lms_scl_90

Review the prerequisites for adding hosts. [About managing hosts](#)

You can also create duplicate entries while adding hosts or create duplicates of the already added hosts. If there is a minor change in the host name and the other parameters are the same, use this option to speed up the process.

After initiating the operation you are redirected to the Activity Monitor, where you can view the tasks for the add host operation along with the current status such as In Progress, Completed, or Queued.

To add hosts manually to License Management Service

1. On the License Management Service console, do one of the following:

- In the Setup wizard panel, click **Add host** in Hosts.

Under Add host, select **Manually**.

Click **+** **Add**.- In the left navigation pane click **License management**, and then click** Usage**.

On the **Hosts tab** click**My hosts**.

Click **Add host**, and then click** Manually**.

1. Enter the host name, username, and password of the host.
2. To create a duplicate host entry, click **Duplicate**. You can create multiple entries of the host.
3. Click **Remove** to remove any additional host entries that are created during the duplication process.
4. Click **Add**.

You are redirected to the **Activity monitor** where you can monitor the progress of the task.

More Information

[Adding hosts to License Management Service using the CSV file](#)

[Adding hosts to License Management Service using the Auto Configure \(gendeploy.pl\) script](#)

Adding hosts to License Management Service using the CSV file

If License Management Service is installed as a standalone product, then you need to add the hosts that have InfoScale products to License Management Service. However if License Management Service is installed on the same host that has InfoScale Operations Manager, then the host data is refreshed automatically on License Management Service console. The Add host operation on License Management Service is disabled and can be performed only using the InfoScale Operations Manager console.

You can add multiple hosts to License Management Service using the `.csv` file.

Using the Import CSV option, you can add multiple hosts by importing the information from a comma-separated (.csv) file from a specified location. The CSV file must include the ".csv" extension. The following is an example of a CSV file that includes usernames and passwords for each host:

```
Host, User, Password  
  
host1.abc.com, username1, password1  
  
host2.abc.com, username2, password2
```

The first line in the CSV file must appear as mentioned in the example. You can replace the subsequent lines with your host names, usernames, and passwords.

You are redirected to the Activity Monitor where you can view the tasks for the add host operation along with their current status such as In Progress, Completed, or Queued.

Ensure that the minimum version requirement of managed host package as mentioned in [Arctera License Management Service Software Compatibility List](#) is met. Else there can be issues in host discovery and the operation may fail.

https://www.veritas.com/support/en_US/doc/lms_scl_90

Review the prerequisites for adding hosts. [About managing hosts](#)

To add hosts to License Management Service using the CSV file

1. On the License Management Service console, do one of the following:
 - In the Setup wizard panel, click **Add host** in Hosts.
 - In the left navigation pane click **License management**, and then click** Usage**.

On the **Hosts tab** click**My hosts**.

1. Under Add host, select **Import CSV**.
2. Click **Download template** to download a sample CSV file.

Update the file with host names, usernames, and passwords.

1. Click **Browse** to select the updated CSV file.
2. Click **Import**.

You are redirected to the **Activity monitor** where you can monitor the progress of the task.

More Information

[Adding hosts manually to License Management Service](#)

[Adding hosts to License Management Service using the Auto Configure \(gendeploy.pl\) script](#)

Adding hosts to License Management Service using the Auto Configure (gendeploy.pl) script

If License Management Service is installed as a standalone product, then you need to add the hosts that have InfoScale products to License Management Service. However if License Management Service is installed on the same host that has InfoScale Operations Manager, then the host data is refreshed automatically on License Management Service console. The add host operation on License Management Service is disabled and can be performed only using the InfoScale Operations Manager console.

You can add a host to License Management Service with minimal user interaction using the gendeploy.pl script. The Auto Configure (gendeploy.pl) script is available for download. You need to copy the script that is created using gendeploy.pl to all the hosts that you want to add to License Management Service for management. After you copy the script, you have to run it on each host. A host on which you run the script must have the `VRTSsfmh` package installed on it. Adding many hosts to License Management Service at the same time using the Auto Configure (gendeploy.pl) script can affect the performance. It is recommended that you add no more than 50 hosts at a time.

Ensure that the minimum version requirement of managed host package as mentioned in [Arctera License Management Service Software Compatibility List](#) is met. Else there can be issues while discovering the host and the operation may fail.

https://www.veritas.com/support/en_US/doc/lms_scl_90

Review the prerequisites for adding hosts. [About managing hosts](#)

To add a host to License Management Service using the Auto Configure (gendeploy.pl) script

1. On the License Management Service console, do one of the following:
 - In the Setup wizard panel, click **Add host** in Hosts.
 - In the left navigation pane click **License management**, and then click** Usage**.

On the **Hosts tab** click**My hosts**.

Click **Add host**, and then click** Auto configure**.

1. Click **Download gendeploy script** to download the script. The file name of the script is the same as that of the host on which License Management Service is installed.
2. Copy the script that is generated by `gendeploy.pl` to the managed host.
3. On the host, change the directory to the location where you copied the script.
4. Do one of the following:

- On the Linux hosts, run the following command to make the script executable:

`chmod +x 'filename'` where, `filename` is the name of the script.

Run the script: `./filename`

- On the Windows hosts, run the following command:

`"C:\Program Files\Veritas\VRTSsfmh\bin\perl.exe" filename` where, `filename` is the name of the script.

1. Click **Activity monitor** in the left pane to view the progress of the task.

More Information

[Adding hosts manually to License Management Service](#)

[Adding hosts to License Management Service using the CSV file](#)

Refreshing the details of a host

You can use the License Management Service console to refresh the details of one or more hosts. Details such as the status (disconnected or connected), the discovery status (successful or failed), and the fault status (healthy or faulted) is refreshed during this action. The refresh operation is asynchronous. The wizard displays that the operation has triggered the refresh, but the operation is in progress in the background. You can view the status in the Activity monitor.

To refresh the host details:

1. On the License Management Service console, click **License management > Usage**.
2. On the **Hosts** ** tab clickMy hosts** and do one of the following:
 - Select the check box next to the host name that you want to refresh, and click **Refresh**.
 - To refresh all hosts, select the check box next to the Host column name and click **Refresh**.

3. Click **Activity monitor** in the left pane to view the progress of the task.

Removing a host from License Management Service

You can dissociate one or more hosts from License Management Service. The remove operation is asynchronous. The wizard displays that the operation has triggered removal, but the operation is in progress in the background. You can view the status in the Activity monitor.

Note: If License Management Service is installed on a host that already has InfoScale Operations Manager, then the remove host operation is disabled and can be performed only using the InfoScale Operations Manager console.

To remove a host from License Management Service:

1. On the License Management Service console, click **License management > Usage**.
2. On the **Hosts** ** tab click **My hosts**** and do one of the following:
 - Select the check box next to the host name that you want to refresh, and click **Remove**.
 - To remove all hosts, select the check box next to the Host column name and click **Remove**.
3. Click **Activity monitor** in the left pane to view the progress of the task.

Managing software upgrades

This section includes the following topics:

- [About software upgrades](#)
- [Uploading the baseline package](#)
- [Installing the baseline package](#)
- [Removing the baseline package](#)
- [Uploading the patches](#)
- [Installing the patches](#)
- [Removing patches](#)
- [Refreshing the patch repository](#)

About software upgrades

Using the software upgrades feature, you can upload and install the baseline release, maintenance release, and patch release packages. Managed host upgrades, that is the VRTsfmh package upgrades, can also be done using the License Management Service console. To upgrade managed hosts, patches of Arctera InfoScale Operations manager are used and these patches are listed on the LMS console patch repository.

Baseline packages tab

Using the Baseline packages tab, you can download the baseline release also known as the General Availability (GA) release and the maintenance release (MR) packages for managed hosts from Arctera [Download Center](#) and upload the same on License Management Service console. You can then install the package on the relevant hosts. The packages can be installed on the hosts whose status is healthy. Healthy status indicates that the XPRTLD service is running on the host and a connection is established between the host and License Management Service.

The following information about the package is displayed on this tab:

- Name of the package.
- Status of installations. You can see the number of hosts for which the selected package is applicable and the number of hosts on which it is installed. For example, 6/11 in the status indicates that the package is applicable for 11 hosts and is installed on only 6 hosts.

- Version of the package.
- Applicable on. This field always refers to MH, that is the managed host.
- Type of the package, GA, or MR.
- Whether the package is obsolete or not. Arctera recommends that you remove the obsolete packages from the list.

You can perform the following operations on this tab:

- Download the package from Arctera Download Center and upload to License Management Service console. [Uploading the baseline package](#)
- Install the package on the relevant hosts. [Installing the baseline package](#)
- Remove a package from the list. [Removing the baseline package](#)

Note: Baseline packages tab allows you to upgrade only Managed host.

Uploaded patches tab

Review the information about the latest available patches in the Patches repository tab. Then use the Uploaded patches tab download the patches from Arctera Download Center and upload the same on License Management Service console. You can then install the patch on the managed hosts or on the LMS server. The patch can be installed on the hosts whose status is healthy. Healthy status indicates that the XPRTLD service is running on the host and a connection is established on the host.

The following information about the patch is displayed on this tab:

- Name of the patch.
- Status of installation. Whether the patch is installed or not.
- Applicable on. This field always refers to MH, that is the managed host.
- Type, which is always the patch.
- Whether the patch is obsolete or not. Arctera recommends that you remove the obsolete patches from the list.
- Release date of the patch.

You can perform the following operations on this tab:

- Download the patch from Arctera Download Center and upload to License Management Service console. [Uploading the patches](#)
- Install the patch on relevant hosts. [Installing the patches](#)
- Remove a package from the list. [Removing patches](#)

Patches repository tab

The patch release packages for the Arctera InfoScale Operations Manager managed hosts and for LMS that are available on the Arctera Download Center are listed on the Patches repository tab.

Arctera recommends that you manually run the \+ Refresh repository operation on the License Management Service console to get a list of the latest available patches at least once a month. Based on this master list of available patches, you can then download the relevant patches and proceed with the installations. [Refreshing the patch repository](#)

Note: If License Management Service is installed on a host that already has InfoScale Operations Manager, then package and patch installation operations of the managed host are blocked on the License Management Service console. You must use InfoScale Operations Manager console to perform these operations.

Uploading the baseline package

Using the License Management Service console, you can upload the baseline release also known as the General Availability (GA) release and the maintenance release (MR) packages for Arctera InfoScale Operations Manager managed hosts. You need to download the package from [Download Center](#) and then proceed with the upload task.

Ensure the host has access to public internet and you have the Arctera account credentials.

To download the baseline package from Arctera Download center

1. Open any supported web browser and go to Arctera [Download center](#).
2. Sign in with your Arctera account credentials.
3. Download required packages by selecting the product name and the version.

The baseline and the maintenance release packages are always a .zip file.

To upload the baseline package

1. On the License Management Service console, click **Software upgrades ** in the left pane, and click**Baseline packages** tab.
2. Click **Upload baseline package ** or**+Upload**.
3. Click **Browse** to locate the downloaded package and upload the same.
4. Click **Activity monitor** in the left pane to view the progress of the task.

Review the details of the package in the table when the task is complete.

More Information

[Installing the baseline package](#)

Installing the baseline package

The baseline release, also known as the General Availability (GA) release, or the maintenance release (MR) packages for Arctera InfoScale Operations Manager managed hosts can be installed using the License Management Service console. You must first download the packages from the Arctera Download center and then install the same on a host using the License Management Service console.

Note: If License Management Service is installed on a host that already has InfoScale Operations Manager, then package installation operations of the managed host are blocked on the License Management Service console. You must use InfoScale Operations Manager console to perform the operation.

To install the baseline package

1. On the License Management Service console, click **Software upgrades ** in the left pane, and click**Baseline packages** tab.
2. Locate the package and click **Install** in the same row.
3. In the Install package panel, the list of eligible hosts is displayed on which the selected package can be installed.
4. Select the required hosts and click **Install**.
5. Click **Activity monitor** in the left pane to view the progress of the task.

Removing the baseline package

Using the License Management Service console you can remove the baseline release also known as the General Availability (GA) release or the maintenance release packages from the list if the package is already installed on relevant hosts and is no longer required.

To remove the baseline package

1. On the License Management Service console, click **Software upgrades ** in the left pane, and click**Baseline packages** tab.
2. Locate the package and click **Remove** in the same row.

If there are on-going package installation operations on any hosts, a message is displayed. You can continue to remove the package or cancel the operation.

1. Click **Activity monitor** in the left pane to view the progress of the task.

Uploading the patches

Using the License Management Service console, you can upload the patches for Arctera InfoScale Operations Manager managed hosts or for the LMS. You need to download the patch from [Download Center](#) and then proceed with the upload task.

Ensure that the host has access to public internet and you have the Arctera account credentials.

To download a patch from the Arctera Download center

1. Open any supported web browser and go to the Arctera [Download center](#).
2. Sign in with your Arctera account.
3. Download required patches by selecting the product name and the version.

Extension of a patch file is `.sfa`.

To upload a patch

1. On the License Management Service console, click **Software upgrades ** in the left pane, and click**Uploaded patches** tab.
2. Click **Upload patch ** or**+Upload**.
3. Click **Browse** to locate the downloaded patch and upload the same.
4. Click **Activity monitor** in the left pane to view the progress of the task.

Review the details of the patch in the table when the task is complete.

More Information

[Installing the patches](#)

Installing the patches

The patches for Arctera InfoScale Operations Manager managed hosts and LMS can be installed using the License Management Service console.

Note: If License Management Service is installed on a host that already has InfoScale Operations Manager, then patch installation operations of the managed host are blocked on the License Management Service console. You must use InfoScale Operations Manager console to perform the operation.

Note: If License Management Service and InfoScale Operations Manager are installed on separate servers and the same Managed Hosts are added to both the servers, then ensure that the version of Managed Hosts that are to be upgraded is compatible with both the License Management Service and InfoScale Operations Manager. Refer to the Software Compatibility List (SCL): https://www.veritas.com/support/en_US/doc/lms_scl_90

To install a patch

1. On the License Management Service console, click **Software upgrades ** in the left pane, and click**Uploaded patches** tab.
2. Locate the patch and click **Install** at the end of the same row.
3. In the Install patch panel, the list of hosts is displayed on which the selected patch can be installed.
4. Select the required hosts and click **Install**.
5. Click **Activity monitor** in the left pane to view the progress of the task.

Removing patches

Using the License Management Service console you can remove the patch from the list if the patch is already installed on a host and is no longer required.

To remove a patch

1. On the License Management Service console, click **Software upgrades ** in the left pane, and click**Uploaded patches** tab.
2. Locate the package and click **Remove** in the same row.

If there are on-going patch installation operations on any hosts, a message is displayed.

1. Click **Activity monitor** in the left pane to view the progress of the task.

Refreshing the patch repository

The patch release packages for Arctera InfoScale Operations Manager managed host and for LMS that are available on the Arctera [Download Center](#) are listed on the Patches repository tab.

The list of latest available patches that are applicable for the managed hosts and for LMS is displayed in the table. Arctera recommends that you manually run the refresh operation on the License Management Service console to get a list from the Arctera Download Center at least once a month.

To refresh the patches repository

1. On the License Management Service console, click **Software upgrades** in the left pane, and click Patches repository tab.
2. Click **Refresh repository**.
3. Click **Activity monitor** in the left pane to view the progress of the task.

Managing user administration

This section includes the following topics:

- [Enabling or disabling a domain](#)
- [Removing a domain](#)
- [Editing a user group](#)
- [Editing users from a user group](#)
- [Removing a user group](#)
- [Editing local users](#)
- [Editing user group for local user](#)
- [Removing a local user](#)

Enabling or disabling a domain

Using the License Management Service console, you can enable or disable a domain. When you disable a domain, it is not displayed on the License Management Service logon page and you cannot assign permissions to the user groups that belong to the domain.

To enable or disable a domain

1. On the License Management Service console, do one of the following:
 - In the Setup wizard panel, in User administration click **Configure > Domains**.
 - In the left navigation pane, click **User management**>** Domains**.
2. Find the domain you want to enable or disable and click **Enable **** or **Disable**** based on the state of the domain. When prompted, confirm your choice.

Removing a domain

You can remove a domain from License Management Service. The permissions that are assigned to user groups are deleted when you remove the domain.

Note: If License Management Service is installed on a host that already has InfoScale Operations Manager, then the remove domain operation is blocked on the License

Management Service console. You must use InfoScale Operations Manager console to perform the operation.

To remove a domain

1. On the License Management Service console, do one of the following:
 - In the Setup wizard panel, in User administration click **Configure > Domains**.
 - In the left navigation click **User management** , and then click **Domains**.
2. Find the registered domain you want to remove and click **Remove**.

Editing a user group

Using the License Management Service console, you can edit the permissions that are assigned to a user group. Permissions can be edited for a local as well as a global group. Available permissions are guest, operator, and administrator. These permissions are required to perform operations on the License Management Service console.

To edit a user group

1. On the License Management Service console, do one of the following:
 - In the Setup wizard, in User administration click **Configure** , and then click **User groups**.
 - In the left navigation pane click User management, and then click **User groups**.
2. Find the user group you want to edit and click **Edit group**.
3. In the Edit user group panel, select the role from the drop-down list and click **Save**.

Editing users from a user group

Using the License Management Service console, you can edit or remove the users that are assigned to a user group. If you have created a user group without adding any users, then use this option to add the users.

To edit a user from a user group

1. On the License Management Service console, do one of the following:
 - In the Setup wizard, in User administration click **Configure** , and then click **User groups**.
 - In the left navigation pane click User management, and then click **User groups**.

2. Find the user group you want to edit and click **Edit users**.
3. In the Edit users panel, do one of the following:
 - To add a new user, enter the username and click **Add to list**. You can add multiple IDs that are separated by a comma to add multiple users.
 - To remove a user, click **Remove** in the username row.
4. Click **Save**.

Removing a user group

Using the License Management Service console, you can remove user groups. A local user group can be removed from License Management Service only or from License Management Service and the host operating system. Whereas a global user group can be removed only from License Management Service.

To remove a user group

1. On the License Management Service console, do one of the following:
 - In the Setup wizard, in User administration click **Configure** , and then click **User groups**.
 - In the left navigation pane click User management, and then click **User groups**.
2. Find the user group you want to remove and click **Remove**.
3. Based on the type (local or global) of the selected user group, one or both the following options are displayed.
 - Remove from LMS application only
 - Remove from LMS and delete from host operating system.
4. Click **Remove**.

Editing local users

Using the License Management Service console, you can edit the password of a local user.

To edit a local user

1. On the License Management Service console, do one of the following:
 - In the Setup wizard, in User administration click **Configure** , and then click **Local users**.

- In the left navigation pane click User management, and then click **Local users**.
2. Find the user whose password you want to edit and click **Change password**.
 3. Enter a password that adheres to the following criteria:
 - Minimum length: 8 characters

Numbers: 1

Lowercase characters: 1

Uppercase characters: 1

Special characters: 1

Note: These limitations may vary on OS level. For example: Windows 2022 has minimum 12 character requirement.

1. In the Confirm password field, re-enter the password.
2. Click **Save**.

Editing user group for local user

A local user can be a part of one or more user groups. Using the License Management Service console, you can edit the local user groups that a local user is assigned to.

To edit a user group for a local user

1. On the License Management Service console, do one of the following:
 - In the Setup wizard, in User administration click **Configure** , and then click **Local users**.
 - In the left navigation pane click User management, and then click **Local users**.
2. Find the user whose user group you want to modify and click **Edit group**.
3. In the Edit group panel, select all the user groups that you want the user to be a part of. You can clear the check boxes of the groups from which you want to remove the user.
4. Click **Save**.

Removing a local user

Using the License Management Service console, you can remove local users. You can choose to remove a local user from License Management Service only or you can remove the user from License Management Service and the host operating system.

To remove a local user

1. On the License Management Service console, do one of the following:
 - In the Setup wizard, in User administration click **Configure** , and then click **Local users**.
 - In the left navigation pane click User management, and then click **Local users**.
2. Find the local user you want to delete and click **Remove**.
3. Select from the following:
 - Remove from LMS application only.
 - Remove from LMS and delete from host operating system.
4. Click **Remove**.

Managing backup, restore, and uninstall

This section includes the following topics:

- [About backing up and restoring the License Management Service data](#)
- [Backing up License Management Service data](#)
- [Restoring backed up License Management Service data](#)
- [Uninstalling License Management Service on Linux](#)
- [Uninstalling License Management Service on Windows](#)

About backing up and restoring the License Management Service data

It is recommended to take regular backup of the License Management Service data to prevent loss of data in the event of a failure. Data backup is a must before any major upgrade activity.

All hosts and Kubernetes information, all license and entitlements information, all reports, faults, and activity logs data is backed up. The registration key which is used for registration of License Management Service is also backed up if the file is saved on the same host. The entire data is stored in a `tar.gz` file in the location that you have specified while running the backup script.

It is recommended that the backup is taken on another host and not on which License Management Service is installed.

Note: During the backup process the License Management Service URL or the console is inaccessible.

Use the `lms_bkup.pl` script to back up and also to restore the data.

The procedure to take a backup and then restore the data is the same, except the `--backup` and `--restore` commands.

If License Management Service is installed along with InfoScale Operations Manager, then you need to take a backup of both and also restore both separately. For more information on back and

restore operations on InfoScale Operations Manager, refer to the InfoScale Operations Manager documentation on [SORT](#).

More Information

[Backing up License Management Service data](#)

[Restoring backed up License Management Service data](#)

Backing up License Management Service data

You can regularly back up the License Management Service data to prevent data loss in the event of a failure or before an upgrade activity using the `lms_bkup.pl` script.

To take a backup of License Management Service data on Linux

1. On the host where you plan to back up the data, log on as a user with root privileges.
2. Locate the `lms_bkup.pl` script at the following location:

```
installdir/VRTSlms/config/adm
```

1. Run the script at the command prompt:

```
/opt/VRTSsfmh/bin/perl
```

```
/opt/VRTSlms/config/adm/lms_bkup.pl --backup /dir
```

Where, `installdir` is the installation directory and `dir` is the location that you specify for creating the backup. Ensure that the specified location has adequate disk space to store the backup. You can specify any location except the following:

- `/var/opt/VRTSsfmh`
- `/var/opt/VRTSlms`
- `/opt/VRTSsfmh`
- `/opt/VRTSlms`

To take a backup of License Management Service data on Windows

1. On the host where you plan to back up the data, log on as a user with administrator privileges.
2. Locate the `lms_bkup.pl` script at the following location:

```
C:\Program files\Veritas\VRTSlms\config\adm
```

1. Run the script at the command prompt:

```
"C:\Program files\Veritas\VRTSsfmh\bin\perl.exe"
```

```
"C:\Program files\Veritas\VRTSlms\config\adm\lms_bkup.pl" --backup \dir
```

Where, `dir` is the location that you specify for creating the backup. Ensure that the specified location has adequate disk space to store the backup. You can specify any location except the following:

- %ALLUSERPROFILE%\Veritas\VRTSsfmh
- %APPDATA%\Symantec\VRTSsfmh

Restoring backed up License Management Service data

You can restore the License Management Service data that was backed up using the `lms_bkup.pl` script when required.

You can restore the data to the same host on which the data was backed up. If you restore the data on a different host, then you need to do the following task on the host before you perform the restore operation:

- Change the physical host name and the IP address to match the system on which the backup was taken.

To restore backed up License Management Service data on Linux

1. On the host where you plan to restore the data, log on as a user with root privileges.
2. Run the script at the command prompt:

```
/opt/VRTSsfmh/bin/perl
```

```
/opt/VRTSlms/config/adm/lms_bkup.pl --restore /dir
```

Where, `installdir` is the installation directory and `dir` is the location that you specify on which you want to restore the data.

To restore backed up License Management Service data on Windows

1. On the host where you plan to restore the data, log on as a user with administrator privileges.

2. Run the script at the command prompt:

```
"C:\Program files\Veritas\VRTSsfmh\bin\perl.exe"
```

```
"C:\Program files\Veritas\VRTS1ms\config\adm\lms_bkup.pl" --restore \dir
```

Where, `dir` is the location that you specify on which you want to restore the data.

Uninstalling License Management Service on Linux

You can uninstall License Management Service by removing the `VRTS1ms` package first followed by the `VRTSsfmh` package from the Linux host.

Note: If License Management Service is installed on a host that has InfoScale Operations Manager, then do not remove the `VRTSsfmh` package from the host.

To uninstall License Management Service on Linux

1. Open the operating system console.
2. On the host, log on as root.
3. To remove the `VRTS1ms` package, run the following command:

```
rpm -e VRTS1ms
```

1. To remove the `VRTSsfmh` package, run the following command:

```
rpm -e VRTSsfmh
```

Ignore this step if License Management Service is installed on a host that has InfoScale Operations Manager.

Uninstalling License Management Service on Windows

You can uninstall License Management Service from a Windows host.

To uninstall License Management Service on Windows

1. Log on to the target host as a user with administrator privileges.
2. In the Windows Control Panel, click **Program and Features**.
3. From the list of installed programs, select **License Management Service for Windows**.

4. Click **Uninstall/Change**.
5. Click **Yes** in the dialog box.
6. On the message window that indicates that the uninstall was successful, click **OK**.

Known issues

This section includes the following topics:

- LMS GUI becomes inaccessible when updating the license meter file (SDSCPE-23221)
- Critical faults are listed multiple times with no details about the source and faulted objects (SDSCPE-23095)
- LMS configuration fails if the node has no connectivity to the Internet (SDSCPE-23312)
- Two separate tasks are seen in the UI when you install an update (SDSCPE-23012)
- Bulk add host operation remains in queued state (SDSCPE-22715)
- LDAP configuration may fail on a fresh Windows License Management Service (LMS) installation (SDSCPE-20770)
- License Management Service patch details not visible in the LMS UI
- InfoScale Operations Manager services do not restart on SUSE host after reboot (15189)
- Incorrect error message displayed during password change task (16155)
- Login without any permissions fails with infinite spinner error (16167)

LMS GUI becomes inaccessible when updating the license meter file (SDSCPE-23221)

This issue is intermittent and occurs if SORT is inaccessible.

Workaround:

Log out of LMS and log in again.

Critical faults are listed multiple times with no details about the source and faulted objects (SDSCPE-23095)

Some critical faults are shown multiple times with no details about the source and faulted objects on the Events > System event page. The Faulted object and Source object columns are empty.

No functionality is affected and you can ignore these faults.

LMS configuration fails if the node has no connectivity to the Internet (SDSCPE-23312)

LMS configuration fails when InfoScale Operations Manager and LMS are installed on the same node in an air gapped environment with no network connectivity.

Workaround:

To resolve this issue, contact Arctera Technical Support.

Two separate tasks are seen in the UI when you install an update (SDSCPE-23012)

When installing a patch, the Activity Monitor > System tasks page displays two separate Install update tasks instead of showing sub-tasks for the patch installation operation. This creates a misleading impression that two independent patch installation tasks are running simultaneously.

No functionality is affected and you can ignore this issue.

Bulk add host operation remains in queued state (SDSCPE-22715)

While adding multiple hosts on Windows, few of the add host tasks might remain stuck in a queued state.

Workaround:

Add the hosts again. Note that the UI continues to display the previous add hosts tasks in a queued state even though the hosts are successfully added when you retry the operation.

LDAP configuration may fail on a fresh Windows License Management Service (LMS) installation (SDSCPE-20770)

LDAP configuration may fail on a fresh Windows LMS installation. You may see a server not reachable error.

Workaround:

Manually copy the `msvcr100.dll` file from `C:\Program Files\Veritas\VRTS\lms\pgsql\psql10DBC\` to `C:\Windows\System32` and then try the LDAP configuration again.

License Management Service patch details not visible in the LMS UI

This issue is seen in cases where you have deployed InfoScale Operations Manager (VIOM) and License Management Service (LMS) on the same server.

When you upload an LMS patch from the LMS UI, the LMS patch is not visible in the LMS UI under the Software Upgrade > Patches tab. This happens even if the actual patch upload task has completed and you see a successful upload confirmation message.

Workaround:

Run the following command on the VIOM/LMS server. This command triggers a rescan on the LMS server. Once the scan is completed, the LMS patches should be visible in the LMS UI.

On Linux

Run the following command from the terminal:

```
# /opt/VRTSsfmh/bin/perl /opt/VRTSsfmh/bin/mh_ctl.pl --rescan
```

On Windows:

Run the following command from the command prompt:

```
# "C:\Program Files\Veritas\VRTSsfmh\bin\perl.exe" "C:\Program Files\Veritas\VRTSsfmh\bin\mh_ctl.pl" --rescan
```

Arctera License Management Service Help - v9.0

InfoScale Operations Manager services do not restart on SUSE host after reboot (15189)

This issue is applicable when License Management Service is installed on a host having a SUSE Linux operating system. This is applicable when License Management Service is installed as a standalone product and also when installed along with InfoScale Operations Manager.

If you reboot the host or perform the backup restore operation, then some services, such as Web Server Authentication service, SNMP trap service, Database service do not start.

Workaround:

If License Management Service is installed as a standalone product then start the services using the following command:

```
# /opt/VRTSlms/bin/lmssc - start
```

If License Management Service is installed along with InfoScale Operations Manager, then start the services using the following command:

```
# /opt/VRTSsfmcs/bin/vomsc - start
```

Incorrect error message displayed during password change task (16155)

For LDAP and AD, change password utility shows error message as 'Incorrect password' instead of operation not supported.

Login without any permissions fails with infinite spinner error (16167)

When you log in without any permissions, then an error message is displayed. After confirming the error message, the page is not refreshed. The infinite spinner is loaded.

Workaround:

Refresh the page and log in with appropriate permissions.