Installing and Configuring Avaya WebLM Server

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Chapter 1: WebLM overview

Use WebLM to manage licenses of one or more Avaya software products for your organization. WebLM is Web-based and facilitates easy tracking of licenses. To track and manage licenses in an organization, WebLM requires a license file from the Avaya Product Licensing and Delivery System (PLDS).

WebLM supports two configurations models:

1. WebLM standard model: In the WebLM standard model, a single WebLM server is used to support one or more licensed products. The WebLM standard model is supported for Standard license file (SLF) and Enterprise license file (ELF) types.
2. WebLM enterprise model: In a WebLM enterprise model, there are multiple WebLM servers. One WebLM server acts as a 'master WebLM' and hosts the license file from PLDS. The other WebLM servers act as the 'local WebLMs' and host allocation license files from the master WebLM server. You need an ELF to setup the WebLM enterprise model. PLDS generates license files that are either SLFs or ELFs.

For example, you can purchase two products and choose the enterprise model of licensing for one product and the standard model of licensing for the other product. PLDS generates a separate license file for each product. The license file is either an SLF or ELF based on how the product is configured in PLDS. Ensure that you verify the installation options supported by the product before installing the WebLM server. If you want to configure standard licensing, you can use either an ELF or SLF. In order to configure enterprise licensing you must have an ELF. After you install the license file on the WebLM server, any product with an ELF can have multiple instances of the WebLM server, and any product with an SLF can have only one instance of the WebLM server. For more information on the WebLM configuration models, see WebLM configuration models section in the guide.

A license file is an Extensible Markup Language (XML) file. The license file contains information regarding the product, major release, and license features and capacities. After the purchase of a licensed Avaya software product, a license file for the product must be activated in PLDS and installed on WebLM server. For information on generating license file through PLDS, see Getting Started with Avaya PLDS at https://plds.avaya.com.

License activations in PLDS require the host ID of the WebLM server for inclusion in the license file. The host ID of the WebLM server can be obtained from viewing the Server Properties page of the WebLM server Web page.

You have the following options for the WebLM server that will host the product license file:

- Use Existing WebLM server: If you already have a WebLM server that you are using for licensing other Avaya products. Refer to the product specific documentation or contact Avaya support, to ensure compatibility of the licensed product with the existing WebLM server version.
- Install WebLM server on a separate server from the product: If you choose to install the WebLM on a separate server, follow the instructions provided in Installing WebLM

on a separate server from the product section in the guide. Refer to the product specific documentation or contact Avaya support, to ensure compatibility of the licensed product with the existing WebLM server version.

- Install WebLM server co-resident with the product: Some WebLM licensed products include WebLM server software with the product installation software. In this case, the WebLM server installation is a part of the product installation and the WebLM server version will be compatible with the product.
- Install Avaya System Manager on a separate server from the product: Avaya System Manager includes WebLM server software. If you choose to install System Manager, WebLM is also installed with it. Refer to the product specific documentation or contact Avaya support, to ensure compatibility of the licensed product with the existing WebLM server version.

Note:

In order to acquire licenses from WebLM server, the product software must be configured with the URL of the WebLM server.

For information on how to configure the WebLM URL with the product, see the Installation guide of the purchased Avaya software product.

Chapter 2: WebLM configuration models

All Avaya software products with WebLM capabilities are known as licensed applications. When you install licensed applications in an organization, the applications require a feature license to provide normal operations. The WebLM server is responsible for providing feature licenses to the licensed applications in response to feature license requests from the applications. Therefore, all licensed applications installed in the organization must have network connectivity to at least one WebLM Server, which has feature licenses of the product.

To suit the particular needs and infrastructure of organizations, WebLM can be configured in the following models:

- WebLM standard model
- WebLM enterprise model

Note:

For information on selecting the appropriate configuration model for your organization, see Recommendations to select a WebLM configuration model on page 97.

WebLM standard model

In a WebLM standard model, a WebLM Server is used to support one or more licensed application instances. In this model, an administrator can perform the following tasks through the WebLM Server:

- Install a license file on the WebLM Server.
- Manage WebLM users.
- Track feature licenses acquired by licensed applications.
- Generate a usage report for the feature licenses.

Working of a WebLM standard model

In the WebLM standard model, the license file of the software product is installed on the WebLM Server. The licensed applications can acquire the feature licenses from the WebLM Server.

In a WebLM standard model, the following three major processes occur:

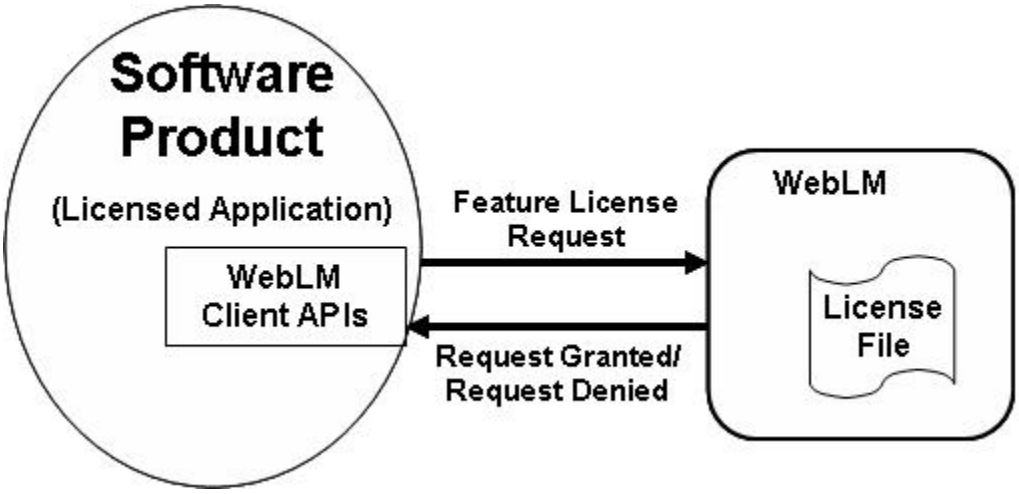
- Acquiring feature licenses.
- Renewing of acquired feature licenses.
- Freeing of acquired feature licenses.

Acquiring feature licenses

When a licensed application needs to perform a licensed service, the application requests the WebLM Server for a feature license. Depending on the availability of feature licenses, the WebLM Server grants, partially grants, or denies the request of the licensed application. This process of acquiring feature licenses from the WebLM Server is known as the Pull mechanism.

The acquired feature license is available with the licensed application only for a fixed period of time, counted license timeout period.

The following figure shows the Pull mechanism of the WebLM standard model.



Renewing of acquired feature licenses

If a licensed application requires the acquired feature licenses for a longer duration than the timeout period, the application can renew the acquired feature licenses. The application must send across a renewal request to the WebLM Server within the counted license timeout period. When a WebLM Server receives a renewal request, the server allows the licensed application to continue using the acquired feature license. However, the renewed feature license is available only for the counted license timeout period. Therefore, a licensed application must

continue to renew the acquired licenses until the service is completed. When the service is completed, the licensed application must free the acquired feature license.

In the standard model, if the WebLM Server is unavailable, the licensed applications cannot renew their acquired feature licenses. The acquired feature licenses automatically expire on WebLM and are returned to the pool of available feature licenses. Once the WebLM Server is available again, the licensed application can acquire feature licenses.

Freeing of acquired feature licenses

To avoid licensed applications from holding feature licenses those are no longer needed, the WebLM Server automatically frees the feature licenses acquired by an application. The acquired feature licenses are freed after a fixed period of time, counted license timeout period. For example, if the counted license timeout period is set to 10 minutes, the WebLM Server frees the acquired feature licenses after 10 minutes. If the service is completed before 10 minutes, the licensed applications can free the acquired feature licenses. Once freed, other licensed applications can get the feature license from the WebLM Server. To avoid WebLM from freeing feature licenses, licensed applications can renew their acquired feature licenses.

WebLM enterprise model

In a WebLM enterprise model, multiple instances of the WebLM Server exists. A license file from RFA, enterprise license file (ELF), is installed on one of these WebLM Servers, making the server the master WebLM Server of the enterprise. The remaining WebLM Servers can be configured to receive feature license allocations from the master WebLM Server. The servers that receive allocations from the master WebLM Server are referred to as local WebLM Servers. A WebLM Server can function as a master WebLM Server for one software product and as a local WebLM Server for another software product.

To understand the concept of master WebLM Server and local WebLM Server, let us consider a university that has two WebLM Servers. One WebLM Server is installed in California and the other is installed in New York.

Note:

All examples in this guide are based on a case study. For more information on the case study, see Using the examples in the guide on page 93.

The WebLM Server in New York can function as the following servers:

- Master WebLM Server for the Encyclopedia Britannica 2005 Ultimate Reference Guide product
- Local WebLM Server for the Britannica Deluxe Edition 2005 product

Similarly, the WebLM Server in California can function as the following servers:

- Master WebLM Server for the Britannica Deluxe Edition 2005 product
- Local WebLM Server for the Encyclopedia Britannica 2005 Ultimate Reference Guide product

An organization with WebLM enterprise model contains one or more local WebLM Servers connected to a master WebLM Server. Each local WebLM Server can support one or more licensed applications.

Master WebLM server

A master WebLM Server is a WebLM Server that manages the local WebLM Servers of a software product. A master WebLM Server is responsible for providing feature licenses to the local WebLM Servers that are provisioned on it.

When a WebLM Server is configured as a master WebLM Server, an administrator can use the server to perform the following tasks:

- Install a license file
- Administer local WebLM Servers
- Allocate feature licenses to local WebLM Servers
- Track the allocated feature licenses
- Periodically generate usage report for the feature licenses allocated to local WebLM Servers or for floating licenses available with the master WebLM Server
- Periodically allocate feature licenses to local WebLM servers
- Manage floating feature licenses
- Manage WebLM users
- Free allocated feature licenses from the local WebLM servers
- Uninstall the license file

Local WebLM server

A local WebLM Server is a WebLM Server to which the master WebLM Server allocates feature licenses of a software product. The licensed applications can then acquire feature licenses from the local WebLM Server. When a WebLM Server is configured as a local WebLM Server, an administrator can use the server to perform the following tasks:

- Track feature licenses acquired by licensed applications
- Generate a usage report for the feature licenses
- Manage local WebLM Server users

Working of the WebLM enterprise model

In the WebLM enterprise model, the ELF from PLDS, of the software product is installed on the master WebLM Server.

Note:

For more information on enterprise license file, see Enterprise license file on page 18.

In this model, the following major processes occur:

- Administering local WebLM Servers
- Allocating feature licenses to local WebLM Servers
- Acquiring feature licenses
- Renewing of acquired feature licenses
- Freeing of acquired feature licenses
- Reallocating feature licenses to local WebLM Servers
- Renewing feature licenses allocated to a local WebLM Server
- Generating usage reports

Administering local WebLM Servers

Using the master WebLM Server, an administrator can manage local WebLM Servers for a software product. The administrator can add local WebLM Servers from which the licensed applications installed across the organization can acquire feature licenses.

Similarly, the administrator can modify the settings of the local WebLM Server such as the periodic license allocation schedule, from the master WebLM Server. If a local WebLM Server is no more required the administrator can delete the server from the master WebLM Server. When an administrator deletes a local WebLM Server feature licenses allocated to the local WebLM Server are automatically freed.

Allocating feature licenses to local WebLM Servers

Using the master WebLM Server, an administrator can allocate feature licenses to the local WebLM Servers, depending on the requirements of the servers.

The administrator can retain few feature licenses with the master WebLM server for the following purposes:

- Unavailability of a local WebLM Server
- Sudden increase in the requirement of feature licenses in a local WebLM Server

- Spare licensed feature capacity for future growth
- Service licensed applications those are installed on the same system of the master WebLM Server

The feature licenses those are not allocated to any local WebLM Server are known as floating licenses. The administrator can allocate the floating licenses to the local WebLM Servers, whenever required. Similarly, if a local WebLM Server is unavailable, licensed applications can also acquire the floating licenses from the master WebLM Server.

When feature licenses are allocated to a local WebLM Server, the master WebLM Server creates a license file known as allocation license file (ALF). The ALF contains information regarding the feature licenses allocated to the local WebLM Server. The master WebLM Server sends and installs the ALF on the local WebLM Server. This process of allocating feature licenses to the local WebLM Server is known as the Push mechanism.

Note:

The ALF is different from the licenses file of the software product. For more information on the types of WebLM license files see, Types of WebLM license files on page 17.

Acquiring feature licenses

When an administrator allocates feature licenses to a local WebLM Server in the master WebLM Server, the system creates a license file, ALF. The system sends the license file to the local WebLM Server and also installs the license file on the server.

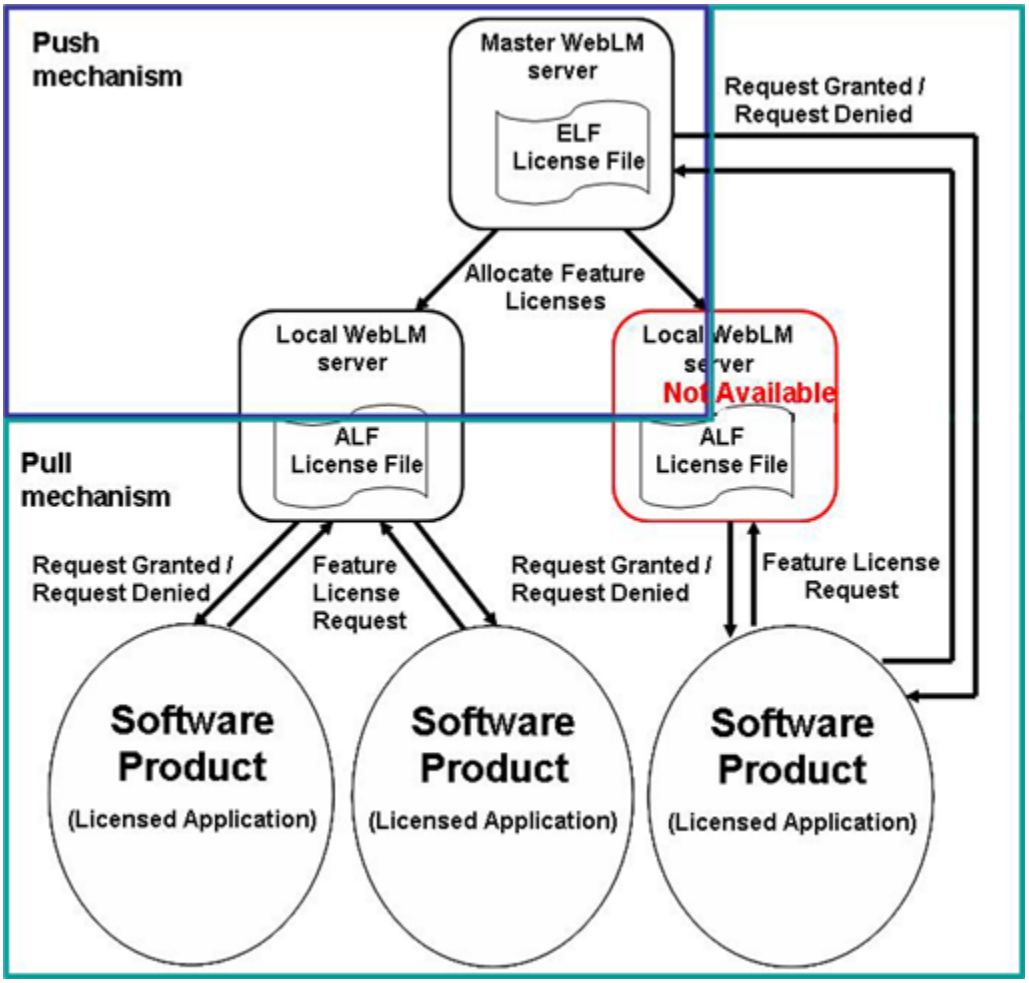
Important:

If the local WebLM Server does not contain an ALF, the licensed applications cannot acquire feature licenses from the server.

Once ALF is installed on a local WebLM Server, the licensed applications connected to the server can acquire feature licenses. The process of acquiring feature licenses from the local WebLM Server is also known as the Pull mechanism.

The acquired feature licenses are available with the licensed applications only for a fixed period of time, counted license timeout period.

The following figure shows the Push and Pull mechanism of the WebLM enterprise model.



If a local WebLM Server is unavailable, licensed applications can also acquire the floating licenses from the master WebLM Server.

Renewing of acquired feature licenses

If a licensed application requires the acquired feature licenses for a longer duration than the timeout period, the application can renew the acquired feature licenses. The application must send across a renewal request to the local WebLM Server within the counted license timeout period. When a local WebLM Server receives a renewal request, the server allows the licensed application to continue using the acquired feature license. However, the renewed feature license is available only for the fixed period of time. Therefore, a licensed application must continue to renew the acquired feature licenses until the service is completed. When the service is completed, the licensed application must free the acquired feature license.

In the enterprise model, if the local WebLM Server is unavailable, the licensed applications will not be able to renew their acquired feature licenses. The acquired feature licenses automatically expire on WebLM and are returned to the pool of available feature licenses. Once the local WebLM Server is available again, the licensed application can acquire feature licenses. Until the local WebLM Server is available again, the licensed applications can acquire the floating licenses from the master WebLM Server.

Freeing of acquired feature licenses

To avoid licensed applications from holding feature licenses those are no longer needed, a WebLM Server automatically frees the feature licenses acquired by an application. The acquired feature licenses are freed after a fixed period of time, counted license timeout period. For example, if the counted license timeout period is set to 10 minutes, the WebLM Server frees the acquired feature licenses after 10 minutes. If the service is completed before 10 minutes, the licensed applications can free the acquired feature licenses. Once freed, other licensed applications can acquire the feature license from the WebLM Server. To avoid WebLM from freeing feature licenses, licensed applications can renew their acquired feature licenses.

Reallocating feature licenses to local WebLM Servers

An administrator can reallocate feature licenses to a local WebLM Server or all local WebLM Servers of a software product. During the reallocation of feature licenses, the administrator can allocate less feature licenses or more feature licenses to a local WebLM Server. Administrators can reduce the feature licenses at the time of reallocation; however, the reallocated feature licenses must be sufficient to satisfy the current usage of the local WebLM Server. To help administrators in deciding on the number of feature licenses to be allocated to each local WebLM Server, WebLM facilitates usage report generation.

Renewing feature licenses allocated to a local WebLM Server

The allocation license files (ALFs) are valid only for 30 days. Therefore, the master WebLM Server periodically resents the ALFs to the local WebLM Servers. During the periodic allocation of feature licenses, previously allocated feature licenses are resent to the local WebLM Servers. The WebLM Server executes this periodic allocation process once in a week for all the configured local WebLM Servers.

In the enterprise model, if the master WebLM Server is unavailable, periodic allocation of feature licenses to the local WebLM Servers is not possible. As the ALFs are valid only for 30 days, the licensed applications can acquire feature licenses from the local WebLM Servers only till the ALFs are valid.

If the master WebLM Server is not available within 30 days, the ALFs automatically expire on the local WebLM Servers after 30 days. The licensed application can no more acquire feature licenses from the local WebLM Servers. Once the master WebLM Server is available again, the administrator can reallocate feature licenses to the local WebLM Servers. The licensed applications can then acquire feature licenses from the local WebLM Servers.

Generating usage reports

The usage reports of feature licenses allocated to each local WebLM Server or the usage report of floating licenses available with the master WebLM Server is generated in two ways:

- Periodic usage report generation—The master WebLM Server periodically requests the local WebLM Servers for a usage report. In response to the request, each local WebLM Server sends a usage report to the master WebLM Server.
- Manual generation of usage reports—In addition to the periodic usage reports, an administrator can generate a usage report for licenses allocated to a local WebLM server, when ever required.

A usage report contains the following information:

- The number of feature licenses currently allocated to each local WebLM Server or the number of floating licenses available with the master WebLM Server.
- The number of feature licenses or floating licenses currently used by the licensed applications of each WebLM Server.
- The peak usage of allocated feature licenses or floating licenses in the last 7 days.
- The peak usage of allocated feature licenses or floating licenses in the last 30 days.

An administrator can view this report and decide on the number of feature licenses that must be allocated to each local WebLM Server. For example, if the usage report shows 100% usage of feature licenses for a local WebLM Server, it indicates a high demand for feature licenses. Therefore, the administrator might decide to allocate more feature licenses to the server. If the usage report shows very less usage of feature licenses such as 10% for a local WebLM Server, it indicates a low demand for feature licenses. Therefore, the administrator might allocate less feature licenses to the server.

Types of WebLM license files

To support the requirements of the WebLM configuration models, WebLM provides the following types of license files:

- Standard license file (SLF)
- Enterprise license file (ELF)
- Allocation license file (ALF)

Note:

Irrespective of the type of a license file, the name of the license file must be of ASCII characters.

Standard license file

Standard license file (SLF) is used in the WebLM standard model. If an organization plans for a WebLM standard model configuration, the organization must obtain an SLF from the PLDS team. The SLF is installed on the WebLM Server of the WebLM standard model. For more information on the WebLM standard mode, see WebLM standard model on page 9.

Enterprise license file

Enterprise license file (ELF) is used in the WebLM enterprise model. If an organization plans for a WebLM enterprise model configuration, the organization must request for an ELF from the PLDS team. The ELF is installed on any one of the WebLM Servers of the organization. The WebLM Server where the ELF is installed acts as the master WebLM Server for the product in the WebLM enterprise model. For more information on the WebLM enterprise model, see WebLM enterprise model on page 11.

Allocation license file

Allocation license file (ALF) is used in the WebLM enterprise model. A master WebLM Server generates an ALF for a local WebLM Server. This file contains information regarding the feature licenses allocated to a local WebLM Server. An ALF is installed on a local WebLM Server of the WebLM enterprise model. For more information on local WebLM Server, see Local WebLM server on page 12.

Differences between the WebLM license file types

Other than the differences in the WebLM configuration models and the WebLM Server types on which the various WebLM license file types are installed, the file types also differ in their contents.

Usually a WebLM license file contains information regarding the following elements:

- The license file
- The organization
- The product
- The licensed feature of the product

The license file

The file contains the following information regarding itself:

- **<License>**: This tag contains information regarding the license file. The tag contains the license file information in the following fields:
  - **genDate**: This field represents the date when the license file was generated. This field is nonexistent in SLFs. However, in a SLF, the Notes tag contains the license file generation date.
  - **genTime**: This field represents the time when the license file was generated. This field is nonexistent in SLFs. However, in a SLF, the Notes tag contains the license file generation time.
  - **type**: This field represents the type of the license file. The values that the field can contain are: enterprise and allocation. This field is nonexistent in SLFs.
  - **version**: This field represents the version of the license file.
- **<Notes>**: This tag contains some general notes such as the tool used to generate the license file, SID, and so on.

  Note:
  For information on SID, see sid on page 24.

- **<ValidationMessage>**: This is an optional element. If a license file is generated after feature validation, and if there are one or more feature validation errors, then the license validation errors appear in the license file within the tag.
- **<Signature>**: This tag contains the signature of the license file, which authenticates the file. The signature is used to avoid tampering of the license file. While generating a license file, the system automatically generates the signature from the contents of the file. Therefore, any changes made to the contents of the license file results in an invalid signature. WebLM Servers do not support license files with invalid signatures.

The organization

The file contains the following information regarding the enterprise:

- **<HostID>**: This tag contains the host ID of the computer in the enterprise where the WebLM Server is installed. You can install the license file only on the computer that has the same host ID as this ID.
- **<Enterprise>**: This tag contains a field, id.

  id: This field represents the unique identifier of the enterprise.

The product

The file contains the following information regarding the product:

- **<Product>**: This tag contains information regarding the product. The tag contains information regarding the product in the following fields and sub tags:
  - **allocationLicenseDuration**: The field represents the period of time until which the ALFs of the product is valid. The **allocationLicenseDuration** field only exist in ELFs.
  - **countedLicenseTimeout**: The field represents how long after initial acquisition a feature license is reserved on the licensed application before it is returned to the pool of available feature licenses. To use the feature licenses for a longer duration the application must renew its acquired feature licenses.
- **<Name>**: This tag contains the name of the product.
- **<DisplayName>**: This tag contains the display name of the product, which the system displays in the WebLM server Web page.
- **<Version>**: This tag contains the version of the product.

The licensed features of the product

The file contains the following information regarding the feature:

- **<Feature>**: This tag contains information regarding the licensed feature of the product. The tag contains information regarding the licensed feature in the following fields and sub tags:

  type: The field represents the type of the feature. WebLM categorizes features in the following feature types:

  - **Type I**: This type of features are only uncounted. The value of the features is either on or off or 0 or 1. For features of this type, use the following convention to name the features: FEAT_<midfix>_<server name> for example, FEAT_S_DICTIONARY.

    Note:

    The **type** field is not displayed for uncounted type of licensed features.

  - **Type II**: This type of features can be counted or uncounted. If the feature is counted, the value is numeric. If the feature is uncounted, the value can be numeric, alphabets, or alphanumeric. You can use the following characters in the value of a uncounted feature: a-z, A-Z, 1-9, and special characters like !,@,$,%,_(Underscore). However, you cannot use Space (blank space, tab space, vertical tab, and new line character) # (Hash) in the feature value. For feature of this type, use the following

convention to name the features: VALUE_<product tag>_<feature name> for example, VALUE_S_CONCURRENTUSERS.

Note:

By default, a licensed feature is uncounted. If a licensed feature is uncounted, the **type** field is not displayed for the licensed feature.

- **Type III**: This type of features is always counted. If the feature is counted, the value is numeric. For feature of this type, use the following convention to name the features: REGISTRATION <product id> <release number> for example, REGISTRATION SIP_Soft 3.

- **<Name>**: This tag contains the name of the feature. This name must follow the naming convention of the feature type.
- **<DisplayName>**: This tag contains the display name of the feature, which the system displays in the WebLM server Web page. The display name can be of any length and can contain any character.
- **<Value>**: This tag contains the value of the feature. For counted features the value is the number of feature licenses of a counted feature.
- **<ExpirationDate>**: This tag contains the expiration date of the licensed feature. If a licensed feature expires, the license file becomes invalid and WebLM does not allow installation of the file.

The following figure shows the contents of an ELF for the Encyclopedia Britannica 2005 Ultimate Reference Suite product.

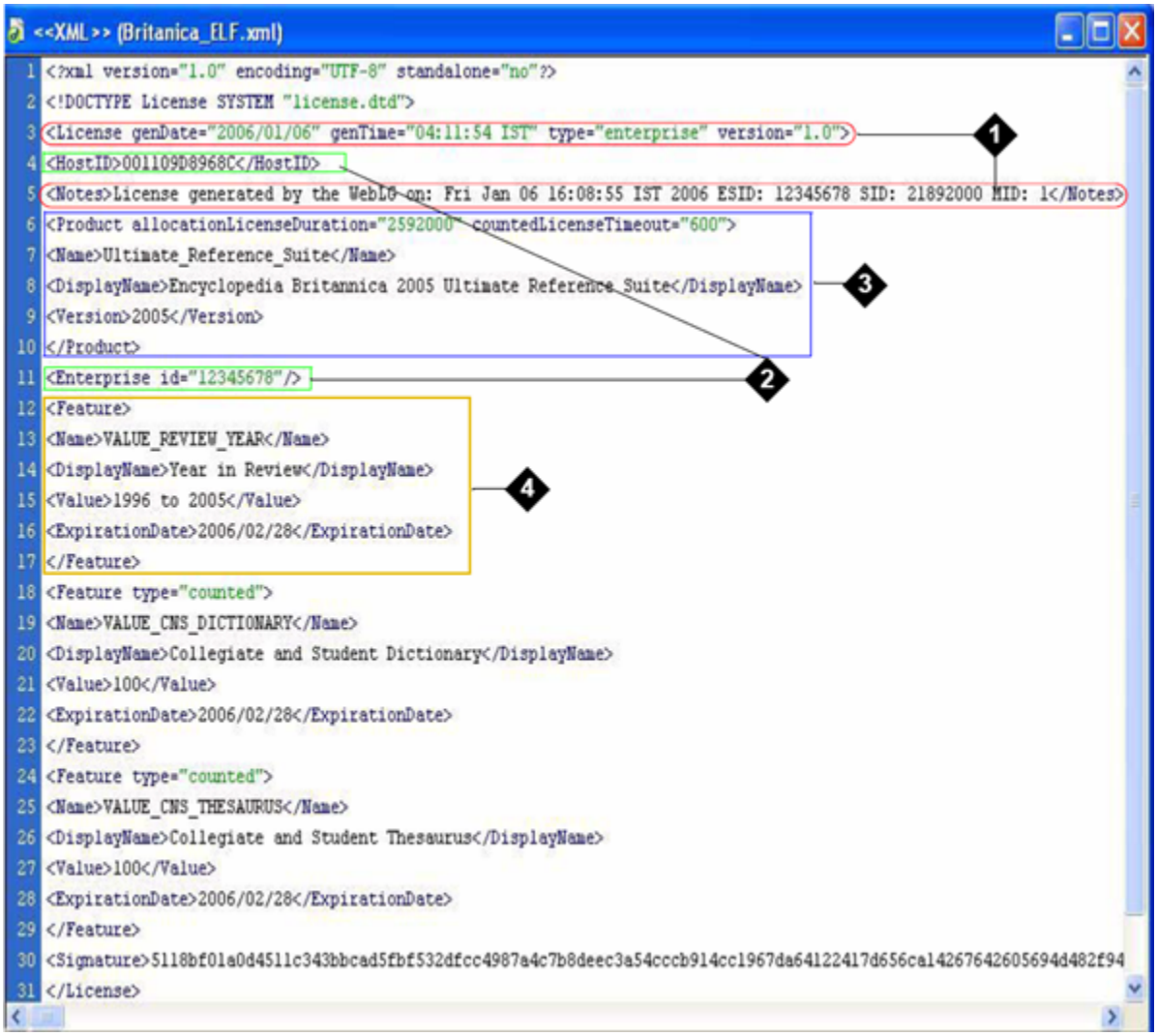


Figure notes:

1. License file information
2. Organization information
3. Product information
4. Licensed feature information

WebLM license file formats

The different types of WebLM license files can be generated in two formats, Legacy License File (LLF) and License Archive (LAR).

Note:

The LAR license type is supported only in WebLM version 4.3 and later.

LLF

LLF is the old format of license files. In the LLF format, a license file can contain the following objects:

- A license definition of a software product that contains information regarding the feature licenses of the product.
- Payloads that contain the security certificates required for accessing a software product.

A license file generated in the LLF format can contain license definition in any one of the following license file types:

- SLF
- ELF
- ALF

For more information, see figure which shows a license file in the LLF format.

LAR

LAR is the latest format of license files. In the LAR format, a license file can contain the following objects:

- One or more license definitions of one or more products. In the LAR format, a single license file can contain license definitions of multiple software products installed in an organization.

  Note:

  In the LAR license file format only one license definition can exist for each software product installed in an organization.

- Payloads that contain the security certificates required for accessing a software product.

A license file generated in the LAR format can contain license definitions in any one of the following license file types:

- One or more ELFs
- One or more SLFs
- One or more ELFs and SLFs
- One or more ALFs

The LAR license file format contains all information that exist in a SLF or ELF in the LLF format. In addition to this information, the LAR license file contains a new tag LAR. The LAR tag contains the following information:

- **platformType**: This field represents the name of the software product suite that collectively represents the software products listed in the license file. For example, the

Britannica software product suite represents the Encyclopedia Deluxe Edition 2005 and the Encyclopedia Britannica 2005 Ultimate software products.

- **sid**: This field represents the number that uniquely identifies the software product suite and the organization that has purchased the suite. For each software product or software product suite purchased by an organization the RFA provides a unique SID. When you install a license file of a software product, the system compares the SID of the file with the existing license files. If the SID of an existing file matches the SID of the new file, the system replaces the old file with the new file. This replacement of license files is known as over installation.
- **version**: This field represents the version of the LAR license file.

The following figure shows the license file of the Encyclopedia Britannica product suite in the LAR format. The file contains the SLF of the Encyclopedia Deluxe Edition 2005 product and the ELF of the Encyclopedia Britannica 2005 Ultimate product.

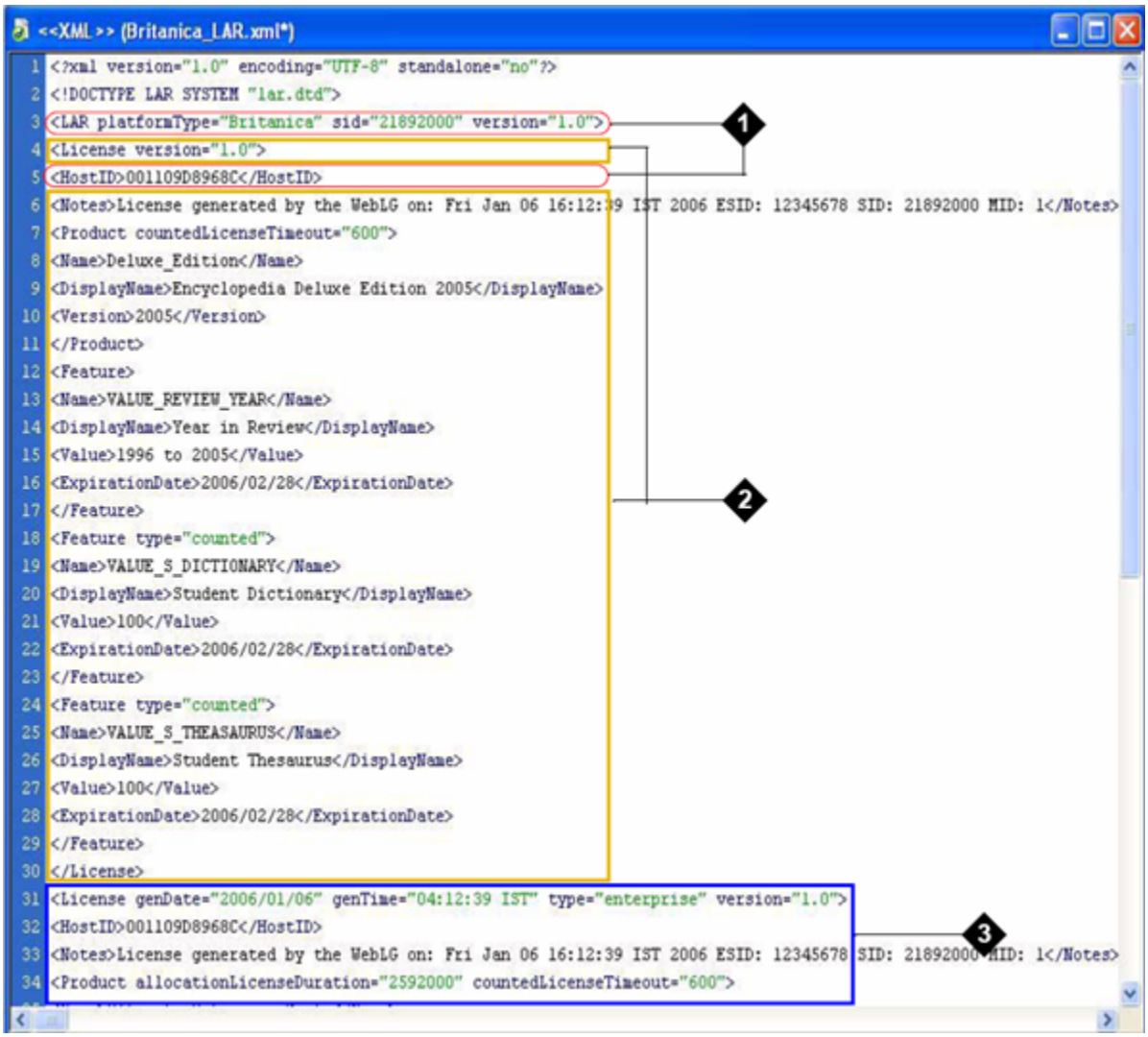


Figure notes:

1. LAR license file information for the Britannica software product suite
2. SLF of Encyclopedia Deluxe Edition 2005 software product
3. ELF of Encyclopedia Britannica 2005 Ultimate software product

Differences between the LLF and LAR license formats

While the WebLM license file formats, LLF and LAR, have contents in common, they have some differences. The following table lists the differences between the LLF and LAR license file formats.

Characteristics	LLF	LAR
Number of license definitions and software product.	One license definition that represents one software product.	• Multiple license definitions that represent multiple software products. • Can contain one license definition of each software product in the software product suite.
Location of the **SID** or **sid** field.	Contains a field **SID** in the **Notes** tag, which represents the unique number that identifies the software product and the organization that purchased the product.	• Contains a field **sid** in the **LAR** tag, which represents the unique number that identifies the software product suite and the organization that purchased the suite. • Also contains a **SID** field in the **Notes** tag of each software product in the suite. SID represents the unique number that identifies the software product and the organization.
Location of the **Signature** tag.	As a sub tag of the <License> tag, just before the </License> tag.	As a sub tag of the <LAR> tag, just before the </LAR> tag.

Comparing characteristics of WebLM configuration models

While the WebLM configuration models have processes in common such as acquiring of feature licenses and renewing of feature licenses, they differ in their implementation, architecture, and configuration.

The following table compares the characteristics of the two WebLM configuration models:

- WebLM standard model
- WebLM enterprise model

Characteristic	WebLM standard model	WebLM enterprise model
Number of WebLM servers	One WebLM server	One master WebLM server and one or more local WebLM servers
Installing the software product license file	SLF from PLDS installed on the WebLM server.	• ELF from PLDS installed on the master WebLM server. • The master WebLM server creates a new license file, ALF. This file is installed on the local WebLM server.
Type of WebLM license file used	SLF and ELF (without local WebLM servers)	ELF and ALF

Chapter 3: Installing WebLM on a separate server from the product

WebLM on a separate server installation checklist

#	Task	✔
1	Verify hardware requirements.	
2	Verify software requirements.	
3	Install WebLM using one of the following ways: • Installation using InstallShield. • Installation using manual instructions.	

Related topics:

[Installation using InstallShield on a Windows operating system](#) on page 28
[Installation using InstallShield on a Linux operating system](#) on page 32
[Installation using manual instructions on a Windows operating system](#) on page 37
[Installation using manual instructions on a Linux operating system](#) on page 39

Hardware requirements

Hardware	WebLM Release 4.5.x	WebLM Release 4.6
CPU	Pentium II or equivalent, 750 MHz speed recommended	Pentium II or equivalent, 750 MHz speed recommended
Memory	Minimum 48 MB RAM	Minimum 256 MB RAM
Disk	Minimum 0.5 GB Hard disk	Minimum 1 GB Hard disk

Software requirements

OS	WebLM Release 4.5.x	WebLM Release 4.6
Windows	Windows server 2003 32-bit x86	Windows server 2003 32-bit x86
Linux	RHEL 4 Update 4, 5	RHEL 5

Installation using InstallShield on a Windows operating system

To install the WebLM server, it is necessary to perform the Pre-Installation steps.

Note:

If Apache Tomcat is already installed using a non-core services tomcat assembly on the system on which WebLM needs to be installed, the user must follow the manual installation instructions for WebLM installation, refer to Installation using manual instructions on a Windows operating system on page 37. The WebLM installer does not support this.

If Tomcat is not already installed, the InstallShield wizard can be used for WebLM installation.

Pre-installation steps for the Windows operating system

1. Verify that an entry for the local host IP address exists in the hosts file of your system. For a Windows system, the hosts file is usually located under the `C:\WINNT\system32\drivers\etc` folder. The entry in the file must be: `<Localhost_IP_address> localhost`
2. If Tomcat is already installed using a core services tomcat assembly and if the Tomcat service is running, ensure to stop Tomcat before running the WebLM installer.

   Note:

   All the applications deployed in the Tomcat container stop responding on stopping of the Tomcat service.

Modes of installation using InstallShield Wizard

You can use the WebLM installer in any one of the following modes to install and configure a WebLM server:

- Graphical User Interface (GUI) mode
- Silent mode

Installing WebLM for Windows in the GUI mode

You can obtain the WebLM installer from the Avaya Support Web site, http://www.avaya.com/support or from the Product Licensing and Delivery System (PLDS) Web site https://plds.avaya.com.

1. Copy the `WebLM_Install_Product.exe` file to a local folder on Windows machine. Double click the file to start the installer.

   Note:
   Do not close the installer console until installation is complete.

   The system displays the **Welcome to the InstallShield Wizard for WebLM** dialog box.

2. Click **Next**.
   The system displays the **Change Directory Name** dialog box.

   Note:
   WebLM is installed in the `%CSBASE%` folder. The default value of `%CSBASE%` is `C:\opt\coreservices`.

3. In the **Change Directory Name** dialog box, click **Browse** to change the product directory or click **Next**.

   Depending on the button you select in the **Change Directory Name** dialog box, the system displays the **Open** dialog box or the **Port Number** dialog box. If you select **Browse**, perform the following steps to change the installation directory:

   a. In the **Open** dialog box, select the required directory where you want WebLM product files to be installed. Click **Open**.

   b. In the **Change Directory Name** dialog box, click **Next**.

   The system displays the **Port Number** dialog box.

4. The default HTTPS port is `8443`. If you have configured HTTPS on a different port, enter the port number.

Note:

For WebLM releases prior to 4.6 the default HTTPS port is 8443 and for WebLM 4.6 release the default HTTPS port is 52233. Avaya recommends you to change the HTTPS port to 52233.

5. Click **Next**.
   The system displays the **Summary** dialog box.
6. Click **Install**.
   The system displays the **Installation Progress** dialog box. Wait till the installation completes.
7. Click **Finish** to complete the installation program.
   WebLM installation is complete. The system displays the **Welcome** dialog box for WebLM Configurator.

Next steps

Use the WebLM Configurator only if there is a need to change the default values of the WebLM server properties.

Setting the WebLM server properties for Windows using WebLM Configurator

You can configure WebLM immediately after installing WebLM or at a later time. To configure WebLM later, execute the WebLM Configurator, `config.exe` file that exists in the `%CSBASE%\WebLM\product` subfolder of the WebLM installation folder.

1. If you are configuring WebLM immediately after the installation, click **Finish** in the Completed dialog box of the WebLM Installer.
   The system displays the **Welcome** dialog box for WebLM Configurator.
2. Click **Next**.
   The system displays the **WebLM Configuration Properties** dialog box.
3. Change the default values as required.
   a. In the **Log File Location** field, enter the path of the folder within which you want to save the WebLM log file.
   b. In the **Log File Maximum Backup Index** field, enter the number of WebLM log files that can be created. You can enter any number within the range of 1 through 5.
   c. In the **Log File Maximum File Size (in MB)** field, enter the maximum file size of the WebLM log file. You can enter any number within the range of 1 through 10.
   d. In the **License Allocation Backup File Size (in MB)** field, enter the maximum file size of the License allocation backup file. You can enter any number within the range of 1 through 10.
4. Click **Next**.
   The system displays the **Configuration Summary** dialog box.

5. Click **Configure**.
   The system displays the **Configuration Completed** dialog box when configuration is complete.
6. Click **Finish** to complete the configuration program and exit the WebLM Configurator.

   The installation and configuration of the WebLM server on a Windows operating system is now complete. To access WebLM, see Accessing WebLM on page 43.

Installing WebLM for Windows in silent mode

You can obtain the WebLM installer from the Avaya Support Web site, http://www.avaya.com/support or from the Product Licensing and Delivery System (PLDS) Web site https://plds.avaya.com.

1. Copy the `WebLM_Install_Product.exe` to a local folder on the Windows machine.

   Follow steps 2, 3, and 4 only if there is a need to change the default values of WebLM server properties, else go to step 5.
2. Verify that the coreservices installation base directory exists. The *`%CSBASE%`* environment variable points to the coreservices installation base directory. The default value of *`%CSBASE%`* is `C:\opt\coreservices`, which is set by the installer. If the coreservices installation base directory does not exist, create the directory in the path specified in the environment variable.

   Note:
   The coreservices installation base directory must exist if you have already installed any Core Services product on your computer.
3. In the coreservices installation base directory, that is, *`%CSBASE%`*, create a file `current.conf`.

   Note:
   If the `current.conf` file already exists in the coreservices installation base directory, continue to the next step.
4. In the `current.conf` file, define and set the following four variables:
   - BACKUPFILESIZE = 10
   - MAXBACKUPINDEX = 1
   - MAXFILESIZE = 10
   - WebLMLogLocation = `C:\\opt\\coreservices\\tomcat-5.5.9\\webapps\\WebLM\\data\\log`

Note:

The values of the variables mentioned here are the default values. Change the values as required.

5. Open the command prompt and change to the directory where you have copied the WebLM installer, that is, `WebLM_Install_Product.exe`.
6. Run the WebLM installer by executing the `WebLM_Install_Product.exe -silent` command.
7. Change the port from 8443 to 52233. For detail information, see Enabling HTTPS on page 41.

   Note:

   For WebLM 4.6 release the default HTTPS port is 52233 and you no need to change the port.

8. Once the installation is complete, to access WebLM, see Accessing WebLM on page 43.

Installation using InstallShield on a Linux operating system

To install the WebLM server, it is necessary to perform the Pre-Installation steps.

Note:

If Tomcat is already installed using a non-core services tomcat assembly on the system on which WebLM needs to be installed, the user must follow the manual installation instructions for WebLM installation, refer to Installation using manual instructions on a Linux operating system on page 39. The WebLM installer does not support this.

If Tomcat is not already installed, the InstallShield wizard can be used for WebLM installation.

Pre-installation steps for the Linux operating system

1. Verify that the following utilities or packages are installed over the base OS for the InstallShield assemblies to be functional:

   - bc
   - X Window System

   Use the `which bc` command to verify if bc is installed.

```
[root@alchemy bin]# which bc
/usr/bin/bc
[root@alchemy bin]#
```

Use the `which X` command to verify if X Window System is installed.

```
[root@alchemy bin]# which X
/usr/X11R6/bin/X
[root@alchemy bin]#
```

If these utilities or packages are not already installed, install them before installing WebLM using the InstallShield wizard.

Note:

X Window System is not required if you plan to execute the installer in silent mode.

2. Verify that an entry for the local host IP address exists in the hosts file of your system. For a Linux system, the hosts file is usually located under the `/etc` folder. The entry in the file must be: `<Localhost_IP_address> <Machine_Name> localhost.localdomain localhost`
3. If Tomcat is already installed using a core services tomcat assembly and if the Tomcat service is running, ensure to stop Tomcat before running the WebLM installer.

Note:

All the applications deployed in the Tomcat container stop responding on stopping the Tomcat service.

Modes of installation using InstallShield Wizard

You can use the WebLM installer in any one of the following modes to install and configure a WebLM server:

- Graphical User Interface (GUI) mode
- Silent mode

Installing WebLM for Linux in the GUI mode

You can obtain the WebLM installer from the Avaya Support Web site, http://www.avaya.com/support or from the Product Licensing and Delivery System (PLDS) Web site https://plds.avaya.com.

1. Copy the `WebLM_Install_Product.bin` file to a local folder on Linux machine.
2. Execute the `su -` command to su to root.
3. Change to the directory location where the WebLM installer is located. Assign executable permissions to the installer. For example, `chmod 755 WebLM_Install_Product.bin`.
4. Using the `./WebLM_Install_Product.bin` command, execute the WebLM installer as root.
   The system displays the **Welcome to the InstallShield Wizard for WebLM** dialog box.
5. Click **Next**.
   The system displays the **Change Directory Name** dialog box.

   Note:
   WebLM is installed in the `$CSBASE` folder. The default value of $CSBASE is `/opt/coreservices`.

6. In the **Change Directory Name** dialog box, click **Browse** to change the product directory or click **Next**.

   Depending on the button you select in the **Change Directory Name** dialog box, the system displays the **Open** dialog box or the **Port Number** dialog box. If you select **Browse**, perform the following steps to change the installation directory:

   a. In the **Open** dialog box, select the required directory where you want WebLM product files to be installed. Click **Open**.
   b. In the **Change Directory Name** dialog box, click **Next**.

   The system displays the **Port Number** dialog box.
7. The default HTTPS port is `8443`. If you have configured HTTPS on a different port, enter the port number.

   Note:
   For WebLM releases prior to 4.6 the default HTTPS port is 8443 and for WebLM 4.6 release the default HTTPS port is 52233. Avaya recommends you to change the HTTPS port to 52233.

8. Click **Next**.
   The system displays the **Summary** dialog box.
9. Click **Install**.
   The system displays the **Installation Progress** dialog box. Wait till the installation completes.
10. Click **Finish** to complete the installation program.
    WebLM installation is complete. The system displays the **Welcome** dialog box for WebLM Configurator.

Important:
Ensure to log out and log back in before starting Tomcat.

Next steps

Use the WebLM Configurator only if there is a need to change the default values of the WebLM server properties.

Setting the WebLM server properties for Linux using WebLM Configurator

You can configure WebLM immediately after installing WebLM or at a later time. To configure WebLM later, execute the WebLM Configurator, `config.bin` file that exists in the `$CSBASE/WebLM/product` subdirectory of the WebLM installation directory.

1. To configure WebLM, perform the following steps:
   - If you are configuring WebLM immediately after the installation, click **Finish** in the Completed dialog box of the WebLM Installer.
   - If you are configuring WebLM after the WebLM installation at a later time, change to the directory location `$CSBASE/WebLM/product` and execute the `./config.bin` command.

   The system displays the **Welcome** dialog box for WebLM Configurator.
2. Click **Next**.
   The system displays the **WebLM Configuration Properties** dialog box.
3. Change the default values as required.
   a. In the **Log File Location** field, enter the path of the folder within which you want to save the WebLM log file.
   b. In the **Log File Maximum Backup Index** field, enter the number of WebLM log files that can be created. You can enter any number within the range of 1 through 5.
   c. In the **Log File Maximum File Size (in MB)** field, enter the maximum file size of the WebLM log file. You can enter any number within the range of 1 through 10.
   d. In the **License Allocation Backup File Size (in MB)** field, enter the maximum file size of the License allocation backup file. You can enter any number within the range of 1 through 10.
4. Click **Next**.
   The system displays the **Configuration Summary** dialog box.
5. Click **Configure**.
   The system displays the **Configuration Completed** dialog box when configuration is complete.
6. Click **Finish** to complete the configuration program and exit the WebLM Configurator.

The installation and configuration of the WebLM server on a Linux operating system is now complete. To access WebLM, see Accessing WebLM on page 43.

Installing WebLM for Linux in silent mode

You can obtain the WebLM installer from the Avaya Support Web site, http://www.avaya.com/support or from the Product Licensing and Delivery System (PLDS) Web site https://plds.avaya.com.

1. Copy the `WebLM_Install_Product.bin` to a local folder on the Linux machine.
2. Execute the `su -` command to su to root.
3. Change to the directory location where the installer is located. Assign executable permissions to the installer. For example, `chmod 755 WebLM_Install_Product.bin`.

   Follow steps 4, 5, 6, and 7 only if there is a need to change the default values of WebLM server properties, else go to step 8.
4. Verify that the coreservices installation base directory exists. The *`$CSBASE`* environment variable points to the coreservices installation base directory. The default value of *`$CSBASE`* is `/opt/coreservices`, which is set by the installer. If the coreservices installation base directory does not exist, use the `mkdir $CSBASE` command to create the directory.

   Note:
   The coreservices installation base directory must exist if you have already installed any Core Services product on your computer.
5. In the coreservices installation base directory, that is, *`$CSBASE`*, create a file `current.conf`.

   Note:
   If the `current.conf` file already exists in the coreservices installation base directory, continue to the next step.
6. In the `current.conf` file, define and set the following four variables:
   - BACKUPFILESIZE = 10
   - MAXBACKUPINDEX = 1
   - MAXFILESIZE = 10
   - WebLMLogLocation = `/opt/coreservices/tomcat-5.5.9/webapps/WebLM/data/log`

Note:

The values of the variables mentioned here are the default values. Change the values as required.

7. Change to the directory where you have copied the WebLM installer, `WebLM_Install_Product.bin`.
8. Run the WebLM installer by executing the `./WebLM_Install_Product.bin -silent` command.
9. Change the port from 8443 to 52233. For detail information, see Enabling HTTPS on page 41.

   Note:

   For WebLM 4.6 release the default HTTPS port is 52233 and you no need to change the port.

10. Once the installation is complete, to access WebLM, see Accessing WebLM on page 43.

Installation using manual instructions on a Windows operating system

This section describes the pre-installlation and installation steps to install WebLM server on the Windows operating system.

Pre-installation steps for the Windows operating system

1. Install JRE 1.5.0_07 on the machine where WebLM is deployed. Ensure that you install the correct version as per the operating system (on which WebLM is running).
2. Install Tomcat 5.5.9 on the machine where WebLM is running. Ensure that you install the correct version as per the operating system (on which WebLM is running).
3. Set the following system environment variables on your system:
   - JAVA_HOME: Ensure that this variable points to the JRE 1.5.0_07 install location.
   - PATH: Ensure that this variable points to the `%JAVA_HOME%\bin` folder.
   - CATALINA_HOME: Ensure that this variable points to the Tomcat 5.5.9 install location.

If the Environment Variables do not exist on your system, see Creating and setting environment variables for Windows operating system on page 38.

4. Ensure that Tomcat is stopped.

   Note:
   If there are other applications deployed in the same Tomcat container, these applications stop responding on stopping Tomcat.

5. Ensure that the machine on which WebLM is deployed has an entry for the local host IP address in the `hosts` file. For example, in Windows, the file is usually located under `C:\WINNT\system32\drivers\etc` folder by the name `hosts`. The entry in this file must be: *`<Localhost_IP_address> localhost`*
6. Ensure that the user name that is used to install Tomcat has read-write permissions for the `C:\temp` folder.

Creating and setting environment variables for Windows operating system

1. In the Desktop, right-click My Computer, then click **Properties**.
   The system displays the **System Properties** dialog box.
2. In the **System Properties** dialog box, click the **Advanced** tab.
3. In the **Advanced** tab page, click **Environment Variables**.
   The system displays the **Environment Variables** dialog box.
4. In the **Environment Variable** dialog box, click **New** below **System variables**.
   The system displays the **New System Variable** dialog box.
5. Specify the required variable name in the **Variable name** field.
6. Specify the required directory path in the **Variable value** field.
7. Click **OK**.
   The system displays the new system variable in the **System Variables** list.
8. Click **OK** and close the **System Properties** dialog box.

Installing WebLM for Windows operating system manually

1. Get the valid version of WebLM server (WebLM.war) from the Avaya Support Web site, http://www.avaya.com/support or from the PLDS Web site https://plds.avaya.com.
2. Copy the `WebLM.war` file to the `webapps` folder of Tomcat. The webapps folder is located under `%CATALINA_HOME%`. `%CATALINA_HOME%` refers to Tomcat's installed folder (which usually ends with `..\Apache Software Foundation \Tomcat 5.5` path).
3. Make an empty directory `WebLM` in `webapps` folder.
4. Open `WebLM.war` using WinZip and extract the contents of `WebLM.war` to the newly created `WebLM` folder.
5. Enable HTTPS. This requires editing the `%CATALINA_HOME%\conf \server.xml` file. To enable HTTPS see Enabling HTTPS on page 41.
6. Update WebLM server properties. WebLM server has default values set in the configuration file. If there is a need, update these properties before starting the Tomcat server. To update the properties see WebLM configuration on page 42. To access WebLM see Accessing WebLM on page 43.

Installation using manual instructions on a Linux operating system

This section describes the pre-installlation and installation steps to install WebLM server on the Linux operating system.

Pre-installation steps for the Linux operating system

1. Install JRE 1.5.0_07 on the machine where WebLM is deployed. Ensure that you install the correct version as per the operating system (on which WebLM is running).
2. Install Tomcat 5.5.9 on the machine where WebLM is running. Ensure that you install the correct version as per the operating system (on which WebLM is running).
3. Set the following system environment variables on your system in `/etc/profile`:

- JAVA_HOME: Ensure that this variable points to the JRE 1.5.0_07 install location.
- PATH: Ensure that this variable points to the `$JAVA_HOME/bin` folder.
- CATALINA_HOME: Ensure that this variable points to the Tomcat 5.5.9 install location.

If the Environment Variables do not exist on your system in `/etc/profile`, see Creating and setting environment variables for the Linux operating systems on page 40.

4. Ensure that Tomcat is stopped.

   Note:
   If there are other applications deployed in the same Tomcat container, these applications stop responding on stopping Tomcat.

5. Ensure that the machine on which WebLM is deployed has an entry for the local host IP address in the hosts file. For example, in Linux, the file is usually located under `/etc` folder by the name hosts. The entry in this file must be: *`<Localhost_IP_address> <Machine_Name> localhost.localdomain localhost`*
6. Ensure that the user name that is used to install Tomcat has read-write permissions for the `/var/tmp` folder.

Creating and setting environment variables for the Linux operating systems

If the environment variables do not exist in `/etc/profile`, do the following to create and set the variables:

1. Enter the commands in `/etc/profile` in the following format: `export <variable name>=<value to be set>`.
   - <variable name> — Name of the variable to be created.
   - <value to be set> — Value to be set to the variable.

   For example, `export JAVA_HOME=/usr/java/jre1.5.0_07`, `export PATH=$JAVA_HOME/bin:$PATH`, and `export CATALINA_HOME=/usr/bin/jakarta-tomcat-5.5.9`.
2. After setting the environment variables, execute `/etc/profile` using the command `. /etc/profile`

   Note:
   Verify that the correct `java` binary is available in your current path. You can use the `which` command to verify if java is in your search path and the java pertains to Sun's JVM and not to gcc. Following is the syntax of the `which` command:

```
# which java
<installed path of the JDK>/bin/java
```

Installing WebLM for the Linux operating system manually

1. Get the valid version of WebLM server (WebLM.war) from the Avaya Support Web site, http://www.avaya.com/support or from the PLDS Web site https://plds.avaya.com.
2. Copy the `WebLM.war` file to the `webapps` folder of Tomcat. The webapps folder is located under `$CATALINA_HOME`. `$CATALINA_HOME` refers to Tomcat's installed folder (which usually ends with `../jakarta-tomcat-5.5.9` path).
3. Make an empty directory `WebLM` in `webapps` folder.
4. Unzip the contents of `WebLM.war` into `WebLM` folder using the `unzip WebLM.war -d WebLM` command.
5. Enable HTTPS. This requires editing the `$CATALINA_HOME/conf/server.xml` file. To enable HTTPS see Enabling HTTPS on page 41.
6. Update WebLM server properties. WebLM server has default values set in the configuration file. If there is a need, update these properties before starting the Tomcat. To update the properties see WebLM configuration on page 42. To access WebLM see Accessing WebLM on page 43.

Enabling HTTPS

1. Locate the `server.xml` file located under the `<tomcat installation directory>/conf` folder.
2. Open this file using any editor. For example, Notepad, Textpad, vi – based on OS used.
3. Search for the text `port="8443"`.
4. Uncomment the entire `<Connector>` tag, that is, remove tag `<!--` before the start of `<Connector>` tag and also remove tag `-->` after the end of `<Connector>` tag.
5. Change the value for attribute port from `8443` to `52233`.
6. At the end of `<Connector>` tag, you see sslProtocol set to `TLS`. Add the following three attributes to enable HTTPS:

- keystoreFile=./webapps/WebLM/WEB-INF/weblmserver.p12
- keystoreType=PKCS12
- keystorePass=password

Thus, the <Connector> tag must be as, … clientAuth="false" sslProtocol="TLS" keystoreFile="./webapps/WebLM/WEB-INF/weblmserver.p12" keystoreType="PKCS12" keystorePass="password" />.

7. For the connectors on port 8080 and 8009, update the value of attribute redirectPort from 8443 to 52233.

WebLM configuration

WebLM server configuration is defined in the file weblmserver.properties, which is located in the <tomcat installation directory> /webapps/WebLM/data folder. If there are changes made to this file, you need to restart WebLM for the changes to be effective.

Some important properties defined in this file are defined in the following table:

Property Name	Description
WebLM.LicenseAllocation.Backup.FileSize	This property specifies the size of the license allocation backup file size in MB. Ensure to allocate an integer to this property (for example, 1, 10 and so on). A decimal value (for example, 1.5) is invalid. The default value is 10 MB.
log4j.appender.RFLogger.File	This property specifies the location to save the weblmserver.log file. Ensure to enter the path followed by file name, that is, weblmserver.log. The default value is weblmserver.log (it is located in $CATALINA_HOME/webapps/WebLM/data/log). For example, on Linux,/usr/bin/weblmserver.log (assuming /usr/bin exists). On Windows, C:\\folder\\weblmserver.log (assuming C:\\folder exists).
log4j.appender.RFLogger.MaxFileSize	This property sets the size of the log file in which WebLM server logs the messages. Ensure to allocate an integer to this property (for example, 1, 10 and so on). A decimal value (for example, 1.5) is invalid. The default value is 10MB.

Property Name	Description
log4j.appender.RFLogger.MaxBackupIndex	This property specifies the number of log files to be backed up once it reaches the max size as specified in property, log4j.appender.RFLogger.MaxFileSize. The default value is 1.
WebLM.log4j.properties.use.classpath	This property allows WebLM to decide where to pick up the WebLM's log4j properties from. If this property is set to Y, WebLM looks for `log4j.properties` file in `classpath` and reads `log4j properties` from that file. If this property is set to N, WebLM looks for `log4j properties` in its own `weblmserver.properties` file.

Accessing WebLM

After installing and configuring WebLM you can access the WebLM server.

1. Start the Tomcat service.
   For Windows operating system, double click the `tomcat5.exe` file present in the `%CATALINA_HOME%\bin` folder to start Tomcat. For Linux operating system, use the following command to start Tomcat: `service tomcat5 start`.
2. In the Web browser, enter the URL of the WebLM server in the following format: `https://<IP_Address>:<HTTPS_port>/WebLM/index.jsp` or enter the FQDN of the WebLM server in the URL in the following format: `https://<FQDN>:<HTTPS_port>/WebLM/index.jsp`.
   The system displays the **certificate** dialog box. The dialog box informs you that the application is running over HTTPS (secured HTTP). Click **Yes** to accept the certificate. From this point, all the communication between the browser and the server is over HTTPS.
3. On the index page, enter the username as `admin`.
4. Enter the password as `weblmadmin`. Since this is your first log in, you are prompted to change the password. The system displays the Change Password page.
5. After changing the password, the system prompts you to log in again, with the new password. Log in to WebLM server with the new password and start using the server.

Obtaining the license file

Obtain a license file from PLDS to install on the WebLM Server for each licensed Avaya product that you plan to manage from the WebLM server. For additional information on using PLDS, see *Getting Started with Avaya PLDS - Avaya Partners and Customers* at https://plds.avaya.com.

Caution:

Do not change your license file after you receive it from Avaya. WebLM does not accept a modified license file.

You need the host ID of the WebLM Server in order to activate the license file in PLDS.

1. Type the following path on your browser: http://<WebLM server IP>:8080/WebLM
2. Login to the WebLM Server using your login credentials.
3. In the home page of the WebLM Server, on the left pane, click the **Server Properties** link.
4. Note the **Primary Host ID**.

Chapter 4: Getting Started with WebLM

Installing a license file

Use this functionality to install a license file on the WebLM server. If you are re installing a license file on a WebLM server on which RFA generated license file is installed, you need to remove the RFA generated license file from the WebLM server before installing the new license file. Use the Uninstall functionality to remove the license from the WebLM server.

Prerequisites

You must have a license file obtained from the Avaya PLDS Web site.

1. Click **Install License** in the left navigation pane.
2. On the Install License page, enter the license file path. You can also click **Browse** to select the license file.
3. Click **Install** to install the license file.

WebLM displays a message on the successful installation of the license file.

Related topics:

Install License field descriptions on page 47

Viewing license capacity of features for a product

Use this functionality to view the license capacity of features for a product for which you have installed a standard license file.

Prerequisites

You must have installed the standard license file on the WebLM server for the licensed product.

Click the product name under the **Licensed Products** in the left navigation pane.

The content pane displays the capacity of licensed features for the product.

Related topics:

View License Capacity field descriptions on page 47

Viewing peak usage for a licensed product

Prerequisites

You must have installed the standard license file on the WebLM server for the licensed product.

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. On the content pane, click **View Peak Usage**.

Related topics:

View Peak Usage field descriptions on page 48

Removing a license file

Use this functionality, to remove the license file, installed on the WebLM server.

Prerequisites

1. Log in to the Avaya WebLM web interface as an administrator.
2. On the WebLM Home page, click **Uninstall License** in the left navigation pane.
3. On the Uninstall License page, select the license file that you want to delete.
4. Click **Uninstall** to remove the license file from the WebLM server.

Related topics:

Uninstall License field descriptions on page 49

Viewing server properties

Click **Server Properties** in the left navigation pane.

Host ID is the MAC address of the computer on which WebLM is installed.

Note:

The host ID specified to the RFA team is embedded in the license file. The license file can be installed only if the host ID of the target computer matches the host ID in the license file. Therefore, while requesting a license file, you must specify the correct host ID of the computer where the WebLM server is installed.

Install License field descriptions

Use this page to install the license file of a product on the WebLM server.

Field/Button	Description
Enter License Path	The path where you have saved the license file.
Browse	Opens the dialog box that allows you to select the license file.
Install	Installs the product license file.

Related topics:

Installing a license file on page 45

View License Capacity field descriptions

Use this page to view the total number of feature licenses of a feature that the organization has purchased and the current allocation of these purchased licenses.

Field	Description
Feature (Keyword)	The display name of the licensed features of the product and the keywords of each feature. These keywords are used to represent the licensed feature in the license file.

Field	Description
Expiration Date	The date when the license for the feature would expire.
Licensed	The number of feature licenses purchased by the organization for each licensed feature. The system gathers the number of feature licenses information from the license file.
Acquired	The Number of feature licenses that are currently in use by the licensed application. The features that are of type Uncounted, the column displays *Not counted*.

The Acquired Licenses table displays information about the licenses acquired by the licensed application. You can view this table only if the licensed product has acquired feature licenses.

Field	Description
Feature	The feature keyword for each licensed feature that is currently acquired by a licensed application.
Acquired by	The name of the licensed application that has acquired the license.
Count	The number of feature licenses that are currently acquired by the licensed application.

Related topics:

Viewing license capacity of features for a product on page 45

View Peak Usage field descriptions

Use this page to view the usage information of feature licenses of a licensed application for different time intervals.

Field	Description
Feature (License Keyword)	The display name of the licensed features of the product and the keywords of each feature. These keywords are used to represent the licensed feature in the license file.
Currently Allocated	The number of feature licenses purchased by the organization.
Usage: qty/%	The number of feature licenses for each licensed feature that a licensed application is currently using. The column also displays the percentage of usage. For example, if 50 is the available feature licenses and 5 feature licenses have been used by the applications, this column will display 5/10%.
Peak Usage (last 7 days): qty/%	The highest number of feature licenses for each licensed feature that has been used in the last seven days. For example, if the peak usage for a feature license in the past seven days is 25

Field	Description
	and the number of available licenses during these seven days was 50, then the column displays 25/50%.
Peak Usage (last 30 days): qty/%	The highest number of feature licenses for each licensed feature that has been used in the past 30 days. For example, if the peak usage for a feature license in the past 30 days is 50 and the number of available licenses during these 30 days was 50, then the column displays 50/100%
Time of Query	The date and time when the last usage query for WebLM was executed
Status	The success or failure of the last usage query executed for WebLM server.

Related topics:

Viewing peak usage for a licensed product on page 46

Uninstall License field descriptions

Use this page to uninstall a license file from the WebLM server for a licensed product.

Field/Button	Description
Installed License File	The name of the license files that are currently installed on the WebLM server.
Product(s)	The products for which licenses are installed on the WebLM server.
SID	The System ID of the license file.
Select Checkbox	Allows you to select the license files that you want to remove from the WebLM server.
Unistall	Removes the selected license files from the WebLM server.

Related topics:

Removing a license file on page 46

Server Properties field descriptions

Use this page to view the MAC Address of the server. The Server Host ID section displays the MAC Address of the server. The server can have more than one MAC Address assigned to it. The first MAC Address is the primary MAC Address and subsequent MAC Addresses are

designated as secondary and so on. The primary MAC Address is recommended for use in the license file.

Note:

In case of a Solaris server where the MAC Address is not available (e.g. in a zoned environment), WebLM retrieves the hostid (8 – digit hexadecimal address) of the server and adds leading zeros before using the resulting 12 – digit ID.

Related topics:

Viewing server properties

Viewing the license capacity of features for a product

Use this functionality to view the total license capacity of features of a product and also the number of licenses of a feature that are currently available for allocations.

Click the enterprise product name under the **Licensed Products** in the left navigation pane.

Viewing the connectivity status of local WebLM servers

Use this functionality to view the date and time when the local WebLM server was last contacted and also whether the connection with the local WebLM server is a success or failure.

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. On the product page, click the **View by Local WebLM** link located at the top of the page.

Configuring enterprise licensing

Prerequisites

You must have installed the enterprise license file on the master WebLM server for the product. To verify the type of license file for a product, click the product name in the left navigation pane.

The content pane displays the license file type installed for the product at the top of the page along with the product name and the SID value.

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Configure Enterprise** in the left navigation pane.
3. On the Configure Enterprise page enter appropriate information in the fields.

   To view the detailed descriptions of the fields, click the Enterprise Configuration field descriptions link in the Related topics section at the end of this topic .

   The fields marked with red asterisk are mandatory fields. You must enter valid information in these fields to successfully set up and configure the master WebLM server.
4. In the Master WebLM Configuration section, enter the name, description, and IP Address of the master WebLM server.
5. In the Default Periodic Operation Settings section, enter the retry count and retry interval in minutes for the periodic operations.
6. In the SMTP Server Settings section, enter the SMTP server name and the User ID of the administrator login and the administrator password for the SMTP server.
7. In the Email Notification Settings for the Periodic Operation section, set the e-mail notification and enter the e-mail address.

   You have to click **Add To List** every time you enter an e-mail address in the **Email Address** field, to add the e-mail address in the list of recipients to whom WebLM server will send e-mail notifications.
8. In the Default Periodic License Allocation Schedule section, select the day and time for periodic license allocations.

   This is the default setting for periodic allocations for all local WebLM servers in the enterprise.
9. In the Default Periodic Usage Query Schedule section, select the day and time of query for periodic usage.
10. Click **Submit**.
    The system validates the information. If the information is valid, the system displays the host ID of the computer where the server is installed in the **MAC ID** field.

Validating connectivity to local WebLM servers for a product

1. Log in to the Avaya WebLM web interface as an administrator.
2. On the WebLM Home page, click the enterprise product name under the **Licensed Products** in the left navigation pane.
3. Click **Local WebLM Configuration** in the left navigation pane.
4. On the Local WebLM Configuration: View Local WebLMs page, select the local WebLM servers that you want to validate for connectivity.
5. click **Validate Connectivity** to query the selected local WebLM servers.

The **status** column on the Local WebLM Configuration: View Local WebLMs page of the selected WebLM servers displays whether the connection request made to the local WebLM server is successful or not.

Related topics:

View Local WebLMs field descriptions

Adding a local WebLM server

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Configure Local WebLMs** > **Add Local WebLM** in the left navigation pane.
3. On the Configure Local WebLMs: Add Local WebLM page, enter the appropriate information.

   To view the detailed descriptions of the fields, click the Add Local WebLM field descriptions link in the Related topics section at the end of this topic .

   The fields marked with red asterisk are mandatory fields. You must enter valid information in these fields to successfully set up and configure the local WebLM server.
4. In the Local WebLM Configuration section, enter the name, description, IP Address, port of the local WebLM server and select a protocol for local WebLM server to communication with other WebLM servers.
5. In the Periodic License Allocation Schedule section, select the day and time for periodic license allocations.

6. In the Periodic Usage Query Schedule section, select the day and time of query for periodic usage .
7. Click **Configure and Validate**.
   The system validates the information. If the information is valid, the system displays the host ID of the computer where the server is installed in the **MAC ID** field.

Modifying a local WebLM server configuration

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Configure Local WebLMs** > **Add Local WebLM** in the left navigation pane.
3. On the Configure Local WebLMs: Modify Local WebLM page, select the local WebLM server that you want to configure.
4. Click **Modify**.
5. Modify the information.

   Note:
   You can modify information in the following fields: Name, Description, Protocol, Port, Day and Time of Periodic License Allocation Schedule, Day and Time of Periodic Usage Query Schedule.

6. Click **Modify** to save the changes.

Removing a local WebLM server

1. Click the enterprise product name under the **Licensed Products** in the left navigation pane.
2. Click **Configure Local WebLMs** > **Delete Local WebLM** in the left navigation pane.
3. On the Configure Local WebLMs: Delete Local WebLM page, select the local WebLM server that you want to delete.
4. Click **Delete**.

Note:

The system displays a warning message before removing the local WebLM server from the master WebLM server.

5. Click **Ok**.

Viewing usage by WebLM servers

Use this functionality to query the selected WebLM servers by features for the total licenses allocated and the peak usage of these allocated license in the last 7 and 30 days.

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Usages** > **Usage by WebLM** in the left navigation pane.
3. On the Usage Summary page click **Usage by Local WebLM**.
4. On the Usage by WebLM page, select the master or local WebLM server from the **Select WebLM:** field.
5. Click **Query System**.

Viewing allocations by features

Use this functionality to view the details of the license allocations for the features on the product's local WebLM servers.

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Allocations** in the left navigation pane.
   The content page on the right displays the details of the allocations.

Viewing enterprise usage of a license feature

Use this functionality to view the usage report of the selected licensed feature across all the WebLM servers of a product.

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Usages** in the left navigation pane.
3. On the Usage Summary page, click **Enterprise Usage** link at the top of the page.
4. On the Usages: Enterprise Usage page, select the licensed feature from the **Select Feature (License Keyword)** field.

   The page displays the usage of the licensed feature for the master WebLM server and the local WebLM servers of a product.

Changing allocations of licensed features for a local WebLM server

Use this functionality to change the license allocations of a feature residing on a product's local WebLM sever.

1. Log in to the master WebLM server.
2. Click the product name under the **Licensed Products** in the left navigation pane.
3. Click **Allocations** in the left navigation pane.
4. On the Allocations by Features page, click **Change Allocations**.
5. In the **New Allocation** column on the Change Allocations page, enter the number of licenses that you want to allocate for the feature residing on a local WebLM server.
6. Click **Submit Allocations**.

Viewing periodic status of master and local WebLM servers

1. Log in to the Avaya WebLM web interface as an administrator.
2. On the WebLM Home page, click the enterprise product name under the **Licensed Products** in the left navigation pane.
3. Click **Periodic Status** in the left navigation pane.

Related topics:

Periodic Status field descriptions on page 71

Querying usage of feature licenses for master and local WebLM servers

1. Click the enterprise product name under the **Licensed Products** in the left navigation pane.
2. Click **Usages** > **Query Usage** in the left navigation pane.
3. On the Usages: Query Usage page, select the master or local WebLM server for which you want to view the usage details by feature licenses.
4. Click **Query Usage**.

   If you select all the WebLM severs and click **Query usage**, then the page displays whether the query request succeeded.

The Usages: Usage by WebLM page displays the details of the selected WebLM servers.

Related topics:

Query Usage field descriptions on page 67

Viewing allocations by local WebLM

Use this functionality to view the allocations of features on a selected local WebLM server.

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Allocations** in the left navigation pane.
3. On the Allocations by Features page, click **View by Local WebLM**.
4. From the **Select Local WebLM** field on the Allocations by Local WebLM , select the local WebLM.

The page displays the allocations details of the features on the selected local WebLM server.

Viewing usage summary

1. Click the product name under the **Licensed Products** in the left navigation pane.
2. Click **Usages** in the left navigation pane.
3. On the Usage Summary page, select one or multiple WebLM servers.
4. Click **Query Usage**.

   If you select one WebLM server from the list, the Usage by Local WebLM page displays the query results providing usage details of the licensed features for the WebLM server. If you select multiple WebLM servers, click the individual WebLM servers displayed in the **Local WebLM Name** column on the Usage Summary page to view the usage details by licensed features for the licenses installed on the corresponding WebLM servers.

View by Feature field descriptions

Use this page to view the license capacity of features for the product.

Name	Description
Feature (License Keyword)	The display name and keyword for the licensed features of the product.
License Capacity	The total number of feature licenses purchased by the organization for each feature.
Currently Available	The number of floating licenses of each feature that is currently available with the master WebLM server. **Note:** In the case of uncounted features, this column displays “Not counted”
View by Local WebLM	When you click this link a page opens displaying displaying the details of the connectivity status of the product's local WebLM servers.

Configure Local WebLMs: View Local WebLMs field descriptions

Use this page to validate the local WebLM server connection. To validate the connection, the master WebLM server tries to connect to the specified local WebLM server.

Note:
To validate the connectivity of a local WebLM server, the local WebLM server must be already added for the product.

Name	Description
Local WebLM Name	The name of the local WebLM server.
IP Address	IP address of the local WebLM server.
Last Contacted	Date and time when the local WebLM server was last contacted.
Status	Lists the success or failure of the last connection request to each local WebLM server.

Button	Description
Validate Connectivity	Validates the connectivity of the selected WebLM server.
Check All	Selects all the local WebLM server.
Clear All	Clears the selections if you have selected one or multiple local WebLM servers.

Enterprise Configuration field descriptions

Use this page to specify the master WebLM server settings and the default settings for the periodic operations of the server. The settings you specify in the Enterprise Configuration Web page are applicable to the entire enterprise. When a local WebLM server is not available, the licensed applications use the master WebLM server settings to acquire the licenses. The master WebLM server uses the settings of the periodic operations to perform the following operations to:

- Re-send the allocation license file (ALF) to the local WebLM server.
- Query the local WebLM servers and generate the usage report.
- Query itself and generate the usage report for licenses.

Master WebLM Configuration

Name	Description
Name	Name of the server.
Description	A brief description of the server.
IP Address	IP address of the server.
MAC ID	Host ID of the computer where the server is installed.

Default Periodic Operation Settings

Name	Description
Retry Count	This count is the number of times a master WebLM server should try to connect to a local WebLM server for a periodic operation after a connection failure. For example, let us consider that the count is set to 2 and the master WebLM server's attempt to connect to a local WebLM server is not successful. The master WebLM server will make two more attempts to connect to the local WebLM server.
Retry Interval	This interval is the duration, in minutes, within which the retry count specified in the Retry Count field must be carried out. For example, let us consider that the Retry Count is 2 and the Retry Interval is 10 minutes. On failure of a connection attempt, the master WebLM server will make two attempts within 10 minutes to connect to the local WebLM server.

SMTP Server Settings

Name	Description
Server Name	Name of the SMTP server.
Admin Account	User ID of the administrator login for the SMTP server.

Name	Description
Admin Password	Password of the administrator login for the SMTP server.

Email Notification Settings for Periodic Operation

Name	Description
Email notification	Following are the options: • On: Sends an e-mail notification to the administrator if the periodic operations fail. • Off: No e-mail notification is sent to the administrator if the periodic operation fail.
Email Address	The e-mail address to which the WebLM application sends the e-mail notification if the periodic operations failed to execute. **Note:** You must click **Add To List** to add the e-mail address in the list of recipients who will receive the e-mail notification of the periodic operation status.
Email Addresses	The list of e-mail addresses to which the WebLM application sends the e-mail notifications.
Add To List	Adds the e-mail address entered in the **Email Address** field to the **Email Addresses**.
Remove Selected	Removes the selected e-mail address from the **Email Addresses** field.

Default Periodic License Allocation Schedule

Name	Description
Day	The day of the week on which the master WebLM server must send the ALF's (Allocation license file) again to local WebLM server .
Time	The time of the day specified in the **Day** field when master WebLM must send the ALF's again to local WebLM server.

Default Periodic Usage Query Schedule

Name	Description
Day	The day of the week on which master WebLM must query local WebLM servers for usage reports.
Time	The time of the day specified in the **Day** field when the master WebLM server must query local WebLM servers for usage reports.

Button	Description
Submit	Saves the enterprise configuration.

Button	Description
Reset	Resets the values in the fields to the default values.

View Local WebLMs field descriptions

Use this page to view the date and time when the product's local WebLM servers was last contacted and whether the connection to local WebLM server was a success or failure. You can only view this page if you have added one or more local WebLM servers for the product.

Name	Description
Local WebLM Name	The name of the local WebLM server.
IP Address	IP address of the local WebLM server.
Last Contacted	Date and time when the local WebLM server was last contacted.
Status	Lists the success or failure of the last connection request to each local WebLM server.
View by Feature	When you click this link a page opens displaying the license capacities of the features of a product.

Add Local WebLM field descriptions

Use this page to add a local WebLM server.

Local WebLM Configuration

Name	Description
Name	Name of the server.
Description	A brief description of the server.
IP Address	A unique IP address of the server. If you enter an IP address of a server that was already configured for a local WebLM server, the system displays the following error message: `IP Address is being duplicated`
Protocol	Protocol scheme over which the master WebLM server listens to the local WebLM server.
Port	Port number on which the master WebLM server listens to the local WebLM server in the specified protocol scheme.

Name	Description
MAC ID	Host ID of the computer where the server is installed.

Periodic License Allocation Schedule

Name	Description
Day	The day of the week on which the master WebLM server must send the ALF's again to local WebLM server. By default, the settings specified in the Enterprise Configuration are automatically displayed in this section. If you change the default settings, the new settings override the settings of the Enterprise Configuration. However, the change in the schedule is applicable only for this local WebLM server.
Time	The time of the day specified in the **Day** field when the master WebLM server must send the ALF's again to the local WebLM server. By default, the settings specified in the Enterprise Configuration are automatically displayed in this section. If you change the default settings, the new settings override the settings of the Enterprise Configuration. However, the change in the schedule is applicable only for this local WebLM server.

Periodic Usage Query Schedule

Name	Description
Day	The day of the week on which the master WebLM server must query local WebLM servers for usage reports. By default, the settings specified in the Enterprise Configuration are automatically displayed in this section. If you change the default settings, the new settings override the settings of the Enterprise Configuration. However, the change in the schedule is applicable only for this local WebLM server.
Time	The time of the day specified in the **Day** field when the master WebLM server must query local WebLM servers for usage reports. By default, the settings specified in the Enterprise Configuration are automatically displayed in this section. If you change the default settings, the new settings override the settings of the Enterprise Configuration. However, the change in the schedule is applicable only for this local WebLM server.

Button	Description
Configure and Validate	Configures the local WebLM server and validates the creation of the local WebLM server.
Back	Navigates back to View Local WebLMs.

Related topics:

Adding a local WebLM server

Modify Local WebLM field descriptions

Use this page to modify the information of a selected local WebLM server.

Local WebLM Configuration

Name	Description
Name	Name of the server.
Description	A brief description of the server.
IP Address	IP address of the server. **Note:** You can not modify the information in this field.
Protocol	Protocol scheme over which the master WebLM server listens to the local WebLM server.
Port	Port number on which the master WebLM server listens to the local WebLM server in the specified protocol scheme.
MAC ID	Host ID of the computer where the server is installed. **Note:** You can not modify the information in this field.

Periodic License Allocation Schedule

Name	Description
Day	The day of the week on which the master WebLM server must send the ALF's again to local WebLM server.
Time	The time of the day specified in the **Day** field when the master WebLM server must send the ALF's again to the local WebLM server.

Periodic Usage Query Schedule

Name	Description
Day	The day of the week on which the master WebLM server must query the local WebLM servers for usage reports.
Time	The time of the day specified in the **Day** field when the master WebLM server must query the local WebLM servers for usage reports.

Button	Description
Modify	Saves the local WebLM server configuration changes.

Button	Description
Back	Discards the configuration changes and takes the user back to the Modify Local WebLM web page.

Related topics:

Modifying a local WebLM server configuration

Delete Local WebLM field descriptions

Use this page to delete a local WebLM server.

Name	Description
Local WebLM Name	The name of the local WebLM server.
IP Address	IP Address of the local WebLM server.
Select check box	Select the local WebLM servers that you want to delete.

Button	Description
Delete	Removes the selected local WebLM server.
Reset	Clears the selection of the local WebLM servers.

Related topics:

Removing a local WebLM server

Usage Summary field descriptions

Use this page to view the connectivity status of all the WebLM servers of the product. You can also select a WebLM server to view the usage report of the product's licensed features.

Name	Description
Local WebLM Name	This column displays the names of the master WebLM server and the local WebLM servers of the product. Names of the WebLM servers are hyperlinks . When you click a WebLM server name, the Usage by Local WebLM page is displayed which provides you the usage report of the product's licensed features for the WebLM server.
IP Address	The IP address of the master WebLM server and the local WebLM servers of the product.

Name	Description
Time of Query	The date and time when the last usage query was executed for the WebLM server. If the status of the last usage query was Failed, this column also displays the date and time of the usage query that was last successful.
Status	The success or failure of the last usage query executed for each WebLM server. This column of a WebLM server will be empty if the server has not been queried even once for feature license usage. The usage query can be a periodic usage query or a non periodic usage query.

Button	Description
Query Usage	Queries the selected WebLM servers of the product for their licensed feature usage report.
Usage by Local WebLM	Opens the Usage by Local WebLM page. Use this page to view the usage details of the licensed features for the WebLM server of a product.
Enterprise Usage	Opens the Usages : Enterprise Usage page. Use this page to view the usage details of the selected licensed features of a product.
Check All	Selects all the WebLM servers displayed in the **Local WebLM Name** column.
Clear All	Clear the selections for all the WebLM servers.

Usage by WebLM field descriptions

Use this page to query the feature license usage by Master and Local WebLM servers.

Name	Description
Select WebLM	The master and local WebLM servers for which you can view the usage.
Feature (License Keyword)	The name and keyword of the counted features of the product.
Currently Allocated	The number of feature licenses for each feature that are currently allocated to the selected WebLM server. For the master WebLM server of the product, this column lists the floating licenses available with the server.
Usage: qty/%	The number of feature licenses for each feature that are currently used by the licensed applications, from the allocated feature licenses. The column also displays the percentage of usage. For

Name	Description
	example, if 50 is the allocated feature licenses and 5 feature licenses have been used by the applications, this column will display 5/10%.
Peak Usage (last 7 days): qty/%	The highest number of feature licenses for each feature that are used by the applications in the past seven days. The column also displays the percentage of peak usage. For example, if the peak usage in the past seven days is 25 and 50 feature licenses were available during the peak usage calculation, the column displays 25/50%.
Peak Usage (last 30 days): qty/%	The highest number of feature licenses for each feature that are used by the applications in the past 30 days. The column also displays the percentage of peak usage. For example, if the peak usage in the past 30 days is 50 and the feature licenses those were available during the peak usage calculation was 50, the column displays 50/100%.
Time of Query	The date and time when the usage query for the selected WebLM server was executed.
Status	The success or failure of the last usage query process executed for each WebLM server. This column will be empty if the server has not been queried even once for feature license usage. The usage query can be a periodic usage query or a non periodic usage query.

Button	Description
Query System	Queries the selected WebLM server for feature license usage.

Related topics:

Viewing usage by WebLM

Enterprise Usage field descriptions

Use this page to view the feature license usage of all WebLM servers for the selected feature.

Name	Description
Select Feature (License Keyword)	The license features for which you can view the license usage.
License Capacity	The total number of feature licenses purchased by the organization for each feature.
Available	The number of floating licenses available with the master WebLM server.

Name	Description
WebLM Name	The names of the WebLM servers of the product.
Currently Allocated	The number of feature licenses that have been currently allocated to the WebLM servers for the selected feature.
Usage qty/%	The number of feature licenses that are currently used by the licensed applications, from the allocated feature licenses for the selected feature. The column also displays the percentage of usage. For example, if 50 is the allocated feature licenses and 5 feature licenses have been used by the applications, this column will display 5/10%.
Peak Usage (last 7 days): qty/%	The highest number of feature licenses that are used by the applications in the past seven days for the selected feature. The column also displays the percentage of peak usage. For example, if the peak usage in the past seven days is 25 and the feature licenses those were available during the peak usage calculation was 50, the column displays 25/50%.
Peak Usage (last 30 days): qty/%	The highest number of feature licenses that are used by the applications in the past 30 days for the selected feature. The column also displays the percentage of peak usage. For example, if the peak usage in the past 30 days is 50 and the feature licenses those were available during the peak usage calculation was 50, the column displays 50/100%.
Time of Query	The date and time when the usage query was executed for the selected feature.
Status	The success or failure of the last usage query process executed for each WebLM server.

Related topics:

Viewing enterprise usage of a license feature

Query Usage field descriptions

Use this page to query the master WebLM server, a local WebLM server, or all the WebLM servers of the product for their feature license usage report.

Name	Description
WebLM Name	The names of the master and the local WebLM servers of the product as links. You can view the feature license usage of a server by selecting the name of the required server in this column.

Name	Description
	Note: The table in the Usage by WebLM Web page will be empty if the specified WebLM server has not been queried even once for feature license usage.
IP Address	The IP address of the master WebLM server and the local WebLM servers of the product.
Time of Query	The date and time when the last usage query was executed for the WebLM server. If the status of the last usage query was Failed, this column also displays the date and time of the usage query that was last successful. **Note:** The Time of Query column of a WebLM server will be empty if the server has not been queried even once for feature license usage.
Status	The success or failure of the last usage query executed for each WebLM server. This column of a WebLM server will be empty if the server has not been queried even once for feature license usage. The usage query can be a periodic usage query or a non periodic usage query.
Select Check box	Check the WebLM Server for which you want to determine the usage query.

Button	Description
Check All	Selects all the WebLM servers.
Clear All	Clears the selections for all the WebLM servers.
Query Usage	Queries the selected WebLM servers of the product for their feature license usage report.

Related topics:

Querying usage of feature licenses for master and local WebLM servers on page 56

Allocations by Features field descriptions

Use this page to view the feature license allocation information for each counted type feature of the product.

Name	Description
Feature (License Keyword)	The name and license keyword of the counted features of the product.
Local WebLM Name	The name of the local WebLM servers of the product. By default, this column is empty. The system displays the names of the local WebLM servers only when you select the arrow beside the name of the required feature. If no local WebLM server exists for the product, this column will be empty for all the licensed features.
IP Address	The IP addresses of the local WebLM servers of the product. By default, this column is empty. The system displays the IP address of the local WebLM servers only when you select the arrow beside the name of the required feature. If no local WebLM server exists for the product, this column will be empty for all the licensed features.
License Capacity	The total number of feature licenses purchased by the organization for the respective feature.
Currently Allocated	The total number of feature licenses of the respective feature that have been allocated to the local WebLM servers of the product. If a licensed feature is not allocated to any local WebLM server, the system displays zero as the value of the column for the licensed feature.
Available	This column lists the number of floating licenses of the respective feature that is currently available with the master WebLM server.

Note:

To view information regarding the number of feature licenses of a feature that is allocated to each local WebLM server, click the arrow beside the name of the required feature. When you select the arrow beside a feature, the system displays new rows below the feature row. These new rows display the feature license allocation information for each local WebLM server to which the feature is allocated.

Name	Description
View by Local WebLM	Opens the Allocations by Local WebLM page displaying the capacities of licensed features on the selected product's local WebLM servers.
Change Allocations	Opens the Change Allocations page. Use this page to change the allocations of licensed features on a product's local WebLM server.

Allocations by Local WebLM field descriptions

Use this page to view the feature license allocation information by Local WebLM.

Name	Description
Select Local WebLM	The local WebLM servers for which you can view the feature license allocation information.
Last Allocation	The date and time when feature licenses were last allocated to the selected local WebLM server.
Status	The success or failure of the last license allocation process executed for the selected local WebLM server. The allocation process can be a periodic allocation process or a non-periodic allocation process. If the status of the last license allocation process was Failed and there was a previous license allocation process success for the server, the system displays the date and time of the license allocation process that was last successful below the Last Allocation field.
Feature (License Keyword)	The name and license keyword of the counted features that have been allocated to the selected local WebLM server.
License Capacity	The total number of feature licenses purchased by the organization for each feature.
Currently Allocated	The total number of feature licenses of each feature that have been allocated to the selected local WebLM server.
Available	The number of licenses currently available on the master WebLM server for allocation to local WebLM servers.

Button	Description
Change Allocations	Opens the Change Allocations page. Use this page to change the allocations of features on a product's local WebLM server.
View by Feature	Opens the Allocations by Features page displaying the capacities of licensed features on the product's local WebLM servers.

Change Allocations field descriptions

Use this page to change current feature license allocation information for each local WebLM server of a product.

Name	Description
Feature (License Keyword)	The name and license keyword of the counted features that have been allocated to the selected local WebLM server.
Local WebLM Name	The name of the local WebLM server.
IP Address	The IP addresses of the local WebLM servers of the product.
License Capacity	The total number of feature licenses purchased by the organization for each feature.
Currently Allocated	The total number of feature licenses of each feature that have been allocated to the selected local WebLM server.
Currently Used	The total number of feature licenses of each feature that are in use by the product.
Available	The number of floating licenses of each feature that is currently available with the local WebLM server.
New Allocation	The new number of licenses allocated to a local WebLM server.

Button	Description
Submit Allocations	Allocates the number of feature licenses specified in the New Allocations field to the corresponding local WebLM servers.
Reset	Resets the values specified in the New Allocation fields to their default values.

Related topics:

Changing allocations of licensed features for a local WebLM server Use this functionality to change the license allocations of a feature residing on a product's local WebLM sever.

Periodic Status field descriptions

Use the Periodic Status option to view the status of the periodic operations such as periodic allocation of feature licenses to the local WebLM server and querying the local WebLM server for usage report.

Periodic Allocation

Name	Description
Local WebLM Name	The name of the local WebLM server of a product.
IP Address	The IP addresses of all the local WebLM servers of the product.

Name	Description
Last Allocation	The date and time when the last periodic license allocation process was executed for each local WebLM server. If the status of the last periodic license allocation process was Failed, this column also displays the date and time of the periodic license allocation process that was last successful.
Status	The success or failure of the last periodic license allocation process executed for each local WebLM server. The system displays the date and time of the last successful periodic license allocation process in the **Last Allocation** column.

Periodic Usage

Name	Description
WebLM Name	The name of the master WebLM server and local WebLM servers of a product.
IP Address	The IP addresses of master and local WebLM servers of a product.
Last Usage Query	The date and time when the last periodic usage query was executed for each WebLM server. If the status of the last periodic usage query was Failed, this column also displays the date and time of the periodic usage query that was last successful.
Status	The success or failure of the last periodic usage query executed for each WebLM server. This column of a WebLM server will be empty if the server has not been queried even once for feature license usage.

Related topics:

Viewing periodic status of master and local WebLM servers on page 56

Chapter 5: Troubleshooting

Cannot access the WebLM Server

Resolution

There can be many reasons for not being able to access a WebLM Server. One of the reasons is that the Tomcat service might not be running. You require the Tomcat service to be running for accessing a WebLM Server. Thereby, verify whether Tomcat is running or not.

Cannot access WebLM Server eventhough Tomcat is running

I have installed WebLM on my system and Tomcat is also running, however, I cannot access the WebLM Server.

Resolution

Verify whether the `WebLM` folder exists within the `webapps` folder of Tomcat installation directory. If the `WebLM` folder exist, check whether the folder is empty or not. If the `WebLM` folder is empty, the installation of the WebLM Server was not completed properly. Thereby, reinstall the WebLM Server.

Cannot start Tomcat

Resolution

The information in the `server.xml` file might not be proper. The https related information that you have added to the `server.xml` file must be proper for accessing a WebLM Server. Therefore, verify whether you have typed the information correctly. If you have copied the text, verify whether the quotation mark of the copied text and the quotation marks of the other text are same. Type the quotation marks if they are different. For more information on adding https related information to the `server.xml` file, see the release notes of your WebLM release.

Tip:

To avoid identifying problem later, after adding the https related information to the `server.xml`, open the file in the Browser. If the content of the file is displayed without any error, you have added the information properly.

Not able to see Manage Users option in the WebLM Server Web page

I am not able to see the Manage Users option in the WebLM Server Web page.

Resolution

You must have not logged in to WebLM Server using the default user admin. The user admin is the administrator of the WebLM Server. The Manage Users option is available only to the administrator. Therefore, to add, modify, or delete a user log in to WebLM Server as the admin user.

Allocation status is displayed as Failed

Resolution

1. The connection between the master WebLM Server and the local WebLM Server may not be proper. Validate the connection of the local WebLM Server in the Configure Local WebLMs Web page.
2. The allocation status will be Failed, if you try to allocate less number of feature licenses than the number of feature licenses that are currently in use. Thereby, check the number of feature licenses of the local WebLM Server that are currently in use.

Installation fails with error message: Invalid license file or license file may not be created for this server

I have a license file, when I try to install the file on the WebLM Server, the installation fails with the following error message: Invalid license file or license file may not be created for this server. However, the MAC address provided in the license file and the MAC address of my computer match.

Resolution

The error message Invalid license file or license file may not be created for this server occurs in the following two cases:

1. If the host ID of the license file and the host ID of your computer do not match.
2. If the digital signature of the license file is not valid.

   Note:
   Digital signature of a license file becomes invalid if the file is tampered with.

3.

Usage query status is displayed as Failed

The usage query status is displayed as Failed.

Resolution

The connection to the specified local WebLM Server may not be proper. Validate the connection of the local WebLM Server in the Configure Local WebLMs Web page.

Allocating unavailable features in the Change Allocations Web page

I have installed a license file. The View by Feature Web page displays 5 features for the product, however, the Change Allocations Web page displays only 3 features. How can I change the allocation of the remaining 2 features?

Resolution

You can allocate only counted features to the local WebLM Servers. Therefore, the Change Allocations Web page displays only the counted features of the software product.

Input boxes for the server are not displayed while allocating feature licenses

I have added a local WebLM Server for a product. However, when I try to allocate feature licenses to the server from the Change Allocations Web page, no input boxes are displayed for the server.

Resolution

When you add a local WebLM Server, the master WebLM Server must validate the connection with the local WebLM Server. If the master WebLM Server is not able to validate the connection with the local WebLM Server, you cannot allocate feature licenses to the local WebLM Server. Therefore, the system do not display input boxes in the Change Allocations Web page. To validate the local WebLM Server connection, perform the following steps:

1. Open the Configure Local WebLMs Web page.
2. In the table, select the check box of the required local WebLM Server.
3. Click **Validate Connectivity**. The system validates the local WebLM Server connection and displays the status of the connection in the Status column.

When adding a local WebLM Server, default periodic operations settings are not displayed

I have installed a license file. When I try to add a new local WebLM Server from the Add local WebLM Web page, the default settings of the periodic operations are not displayed. Different settings are displayed in the periodic operations sections.

Resolution

If you change the periodic operations settings in the Configure Enterprise, the new settings are used as the default settings for all the local WebLM Servers of the product.

The actual feature license usage on the local WebLM and the feature license usage by Local WebLM Web page is not matching

I queried a local WebLM Server for feature license usage. The actual usage on the local WebLM is 30, however, on the master WebLM Server the Usage by Local WebLM Web page displays the usage as 15.

Resolution

The Usage by Local WebLM Web page displays the usage as per the last usage query executed for the local WebLM Server. The additional 15 feature licenses might have been acquired from the local WebLM Server after the execution of the usage query. Therefore, the discrepancy in the feature license usage number. To get the latest usage information execute a new usage query for the local WebLM Server.

E-mail notification to report failure of periodic operations fails

I have configured e-mail notification for failure of periodic operations. However, I do not receive any e-mail notification when periodic operations fail.

Resolution

Verify whether you have specified all required details to enable E-mail notifications. You must specify the following details in the Configure Enterprise Web page to enable E-mail notifications:

a. In the E-mail Notification Settings for Periodic Operation section, select **On** for the E-mail notification field.
b. In the **E-mail Address** field, add at least one valid e-mail ID.
c. In the SMTP Server Settings section, type the mail server name in the **Server Name** field.
d. Type the user name to access the mail server in the **Admin Account** field.
e. Type the password to access the mail server in the **Admin Password** field.
f. Click **Submit**.

On the master WebLM Server, capacity of the licensed feature does not match with the allocated feature of usage

I have installed an ELF of a product on the master WebLM Server. The capacity of the licensed feature of the product is 50. However, when I execute a usage query for the master WebLM Server, the system displays 35 in the currently allocated column.

Resolution

When you execute a usage query for a master WebLM Server, only the floating licenses are considered as the currently allocated feature licenses. The total capacity of the licensed feature is not considered.

System displays warning message: ProductA will not be available if you continue to install the new license file

I have installed a license file for ProductA. When I try to install a license file for ProductB, the system displays a warning message. The message states that ProductA will not be available if I continue to install the new license file. I want ProductA to be available after the installation of the new license file.

Resolution

If the SID values in both the license files are same, the WebLM Server considers the new license file installation as an over-installation. Therefore, if you want to retain ProductA after the installation of ProductB license file, the SID values must be different in both the license files.

If Avaya supports a LAR license file with both ProductA and ProductB, obtain the LAR license file with the same SID as the existing ProductA license file. When you install the LAR license file the system performs an over-installation for ProductA. After the over-installation, the system retains ProductA with the new license capabilities as defined in the LAR license file.

Installation fails with error message: Missing product is in use

I try to install a license file for ProductA. The installation fails with the following error message: Missing product is in use. However, ProductA is not installed on the WebLM Server.

Resolution

If the SID values in both the license files are same, the WebLM Server considers the new license file installation as an over-installation. Therefore, if the product of the existing license file is in use the system displays an error message.

Installation fails with error message: FeatureA in use for old installed license

I try to install a license file for ProductA. The installation fails with the following error message: FeatureA in use for old installed license. FeatureA is not present in new license.

Resolution

If the new license file has fewer features than the existing license file, the removed features must have zero usage during the new file installation.

After the over-installation of license files, one of the product feature is not available

I have installed the license file for ProductA. The current license file has been installed as an over-installation that replaced the old license file. After the over-installation, one of the features

of ProductA is no more available. The system did not display any warning or error message during the installation.

Resolution

During an over-installation, if the new license file has fewer features than the old file, the system checks for the usage of the feature. If the current usage of the missing feature is zero, the system performs an over-installation of the new license file. The systems will not display any warning or error message.

Installation fails with error message: Error installing license. License file for product has expired.

I have a license file for ProductA. When I try to install the file on the WebLM Server, the installation fails with the following error message: 'Error installing license. License file for product has expired.'

Resolution

When the feature licenses listed in the license file expires, the system displays the error message. The license file contains information regarding the expiry date of the feature licenses. To check the expiry date of a feature license, open the license file of the product in an editor such as Notepad and verify the ExpirationDate tag of the feature license.

System displays error message: Errors were detected with the allocation values for one or more features...

I have an ELF installed for ProductA. I add a new local WebLM Server for the product. When I try to allocate feature licenses through the Change Allocations Web page, the system displays the following error message: 'Errors were detected with the allocation values for one or more features. Features in red indicate errors with the allocation values.'

Resolution

When you try to allocate more number of a feature license than that is available with the master WebLM Server, the system displays the error message.

Periodic Allocation operation is not executed for the local WebLM Server as scheduled

I have an ELF installed for ProductA. I add a new local WebLM Server for the product and configure it for periodic operations. I have also allocated feature licenses to the local WebLM Server. However, the Periodic Allocation operation is not executed for the local WebLM Server as scheduled.

Resolution

The Periodic Allocation operation will not be executed for a local WebLM Server if the following properties of the WebLM Server are set to false:

- WebLM.PeriodicManager.Enabled
- WebLM.PeriodicManager.LicAllocation.Enabled

To reset the WebLM Server properties, perform the following steps:

1. In your local computer, search and identify the `weblmserver.properties` file. This file generally exist in the `<Tomcat_Home>\webapps\WebLM\data` folder.
2. Open the `weblmserver.properties` file in an editor, such as Notepad.
3. In the `weblmserver.properties` file, type the value of the `WebLM.PeriodicManager.Enabled` and `WebLM.PeriodicManager.LicAllocation.Enabled` properties as `true`. After the changes the properties should look as the following:
    - WebLM.PeriodicManager.Enabled=true
    - WebLM.PeriodicManager.LicAllocation.Enabled=true

4. Save and close the `weblmserver.properties` file.
5. Stop Tomcat and start Tomcat again. The changes to the `weblmserver.properties` file will be effective only after the restart of Tomcat.

Periodic Usage Query operation is not executed for the local WebLM Server as scheduled

I have an ELF installed for ProductA. I add a new local WebLM Server for the product and configure it for periodic operations. I have also allocated feature licenses to the local WebLM Server. However, the Periodic Usage Query operation is not executed for the local WebLM Server as scheduled.

Resolution

The Periodic Usage Query operation will not be executed for a local WebLM server if the following properties of the WebLM server are set to false:

- WebLM.PeriodicManager.Enabled
- WebLM.PeriodicManager.UsageQuery.Enabled

To reset the WebLM server properties, perform the following steps:

1. In your local computer, search and identify the `weblmserver.properties` file. This file generally exist in the `<Tomcat_Home>\webapps\WebLM\data` folder.
2. Open the `weblmserver.properties` file in an editor, such as Notepad.
3. In the `weblmserver.properties` file, type the value of the `WebLM.PeriodicManager.Enabled` and `WebLM.PeriodicManager.UsageQuery.Enabled` properties as `true`. After the changes the properties should look as the following:
    - WebLM.PeriodicManager.Enabled=true
    - WebLM.PeriodicManager.UsageQuery.Enabled=true
4. Save and close the `weblmserver.properties` file.
5. Stop Tomcat and start Tomcat again. The changes to the `weblmserver.properties` file will be effective only after the restart of Tomcat.

While installing a new ELF for the product with the same set of feature licenses, the over-installation fails

I have installed an ELF for ProductA. The licensed applications have acquired some of the feature licenses. When I try to install a new ELF for the product with the same set of feature licenses, the over-installation fails. The new ELF is a valid license file and also the sids of the old ELF and the new ELF are same.

Resolution

The over-installation fails if the new ELF has a feature license capacity that is less than the number of feature licenses those are already acquired. The new ELF must have a feature license capacity that is greater than or equal to the acquired number of feature licenses.

When trying to install a LAR with ProductA and ProductB, the installation fails

I have an LLF installed for ProductA. When I try to install a LAR with ProductA and ProductB, the installation fails. The new LAR is a valid license file and also the file satisfies the current usage requirements of the feature licenses of ProductA.

Resolution

Even though the installation is a new installation for the feature licenses of ProductB, the system considers the installation as an over-installation for ProductA. Therefore, verify the following for the products:

a. Whether the SID values of the old ProductA LLF file and the new LAR file are same, or not.

b. Whether feature licenses of ProductB are already installed on the WebLM Server as part of another LAR or LLF, or not.

When trying to install a different LLF for the same product, the installation fails

I have an LLF installed for ProductA. When I try to install a different LLF for the same product, the installation fails.

Resolution

For over-installation of license files, the SID values of the new license file and the old license file must match. Thereby, verify whether the SID values of both the license files are same or not.

System displays error message: IP Address is being duplicated

I have an ELF installed. When I try to add a local WebLM Server, the system displays the following error message: ’IP Address is being duplicated’.

Resolution

WebLM does not support the existence of two local WebLM Servers with the same IP address. Thereby, verify whether a local WebLM Server with the same IP address as that of the new local WebLM Server already exist or not.

Periodic Allocation operation did not succeed and the master WebLM Server did not retry to execute the operation

I have installed an ELF. I add a local WebLM Server and configure the server for periodic operations. However, the Periodic Allocation operation did not succeed and the master WebLM Server did not retry to execute the operation.

Resolution

When a local WebLM Server is configured for periodic operation, the master WebLM Server tries to connect to the local WebLM Server at least once. Thereby, if the Periodic Allocation operation fails for the local WebLM Server, the master WebLM Server does not retry to execute the operation. To make the master WebLM Server to retry, you must set the Retry Count field in the Configure Enterprise Web page. For example, if you set the Retry Count field to 1 atleast, on failure of a periodic operation the master WebLM Server will retry atleast once.

Cannot modify the local WebLM Server IP address in the Modify Local WebLM Web page

I have added a local WebLM Server. However, the IP address of the computer on which the local WebLM Server is installed has changed. When I try to modify the IP address of the local WebLM Server in the Modify Local WebLM Web page, I am not able to make the changes.

Resolution

Once you add a local WebLM Server, you will not be able to modify the IP Address, Port, and MAC ID of the server. To change the IP address, you need to delete the existing local WebLM Server in the Delete Local WebLM Web page. After deleting the server, you can add a new local WebLM Server with the new IP address.

System displays error message: Please enter valid IP - localhost entries not allowed

I have an ELF installed for ProductA. However, when I try to add a local WebLM Server for the product in the Add Local WebLM Web page, the system displays the following error message: 'Please enter valid IP -localhost entries not allowed.'.

Resolution

The system displays the error message if the IP address starts with 127. Specify an IP address that does not start with 127 in the Add Local WebLM page to add a local WebLM Server.

In the Manage Users Web page, systems displays True for one user and False for the other user

I have administrative rights for a WebLM Server. I added two users from the Add User Web page. However, in the Reset Password column of the Manage Users Web page, the systems displays True for one user and False for the other user.

Resolution

You can reset the passwords of users whose IDs have not been used even once to log in to the WebLM Server. Thereby, if the Reset Password column displays True for a user, this indicates that the user ID has not been used even once to log in to the WebLM Server. If the Reset Password column displays False for a user, this indicates that the user ID has been used atleast once to log in to the WebLM Server.

System displays error message: Invalid response from license server

I have an ELF installed. When I try to acquire licenses of a feature using a WebLM Client tool, the system displays the following error message: ’Invalid response from license server.’.

Resolution

The system displays the error message if the environment variable WEBLM_SERVER_URL is not available or is assigned an invalid value. Thereby, verify whether the environment variable exist or not. If the environment variable exist verify the value set to the variable.

Chapter 6: Frequently asked questions

How to get the host ID of a computer?

Every Operating System (OS) identifies host ID by different names. Depending on the OS of your computer, the commands that you must use to get the host ID also differ. The following table lists the commands that you must use to get the host ID from different OSs.

OS	Command	Description
Windows	`ipconfig/all`	The system returns the 12 digit hexadecimal Physical Address as the host ID. Remove the hyphens (-) before using the ID.
Linux	`/sbin/ifconfig -a | grep HWaddr`	The system returns the 12 digit hexadecimal HWaddr. Remove the colons (:) before using the ID.

Can I have two license files of the same name?

If the license files are of the same product, the WebLM Server considers the installation of the second license file as an over-installation on the first license file. However, if the license files are of different products, the system displays the following error message when you install the second license file:

```
License installation failed. Error in saving the file.
```

Therefore, you cannot install the second license file.

How to uninstall a license file?

To uninstall a license file that is installed on a WebLM Server, perform the following steps:

Note:

For WebLM Server version 4.3 and below, the license file should be uninstalled manually.

1. Stop Tomcat.
2. Select and delete the required license file from within the licenses folder of WebLM. The licenses folder exist in the WebLM folder within the Tomcat root directory. For example, in windows the licenses folder exist at the following location: `<Tomcat_Home>\webapps\WebLM`
3. In the data folder of WebLM, select and delete the folder with the product name of the license file. The data folder exist in the WebLM folder within the Tomcat root

directory. For example, in windows the data folder exist at the following location: `<Tomcat_Home>\webapps\WebLM`

4. Restart Tomcat and log in to WebLM. Verify whether the system displays the product name of the license file below the Licensed Products option. If the system does not display the name, you have successfully uninstalled the license file.

Note:

For WebLM Server version 4.4 and later, the license file can be uninstalled using the GUI interface. For more information on the GUI mode of uninstallation of a license file, see

How to manage the default user, admin?

You can only change the password of the user admin, you cannot delete the user. To change the password log in to WebLM Server with the user id admin. You can change the password in the Change Password page.

How to identify the type of a license file, SLF, ELF, or ALF?

You can identify the license file type using any of the following ways:

- Through the license file: You can open the license file in an editor such as Notepad and check the value assigned to the **type** field of the **<License>** tag. If no **type** field exist in the file, you are viewing a standard license file (SLF).
- Through the WebLM Server Web page: In the View by Feature Web page of a software product, on the right side of the page, the WebLM Server displays a icon. Point to the icon, the WebLM Server displays the name of the license file type the icon represents. WebLM Server has unique icons that represent each license file type.
- Through the sub options of the product listed below the Licensed Products option: If there are multiple sub options listed for a product under the Licensed Products option, you are viewing a enterprise license file (ELF) of the product. For a SLF or an allocation license file (ALF), the WebLM Server displays only the product name as the sub option for Licensed Products.

How to identify when I had installed a license file?

In the **<product name>** product Web page or View by Features page of the product, the **License installed on** field represents the installation date and time of the license file.

How can I verify that I am using the right version of Tomcat and JDK for a release of WebLM?

You can identify the right version of Tomcat and JDK for a release of WebLM from the release notes of the release.

If you have multiple versions of Tomcat and JDK, perform the following steps to verify whether the WebLM Server is using the right version of Tomcat and JDK:

1. If the operating system is Windows-based, open the command prompt.
2. In the command prompt, type and execute the following commands:

```
echo %TOMCAT_HOME%
echo %CATALINA_HOME%
echo %JAVA_HOME%
```

These commands return the version of Tomcat and JDK that is currently used by WebLM.

Can I add two different local WebLM Servers with the same name?

Until the IP addresses of the local WebLM Servers are different, you can add local WebLM Servers with the same name.

Can I configure a master WebLM Server of a product as the local WebLM Server for the same product?

A WebLM Server cannot function as both master WebLM Server and local WebLM Server for the same product. However, you can configure a WebLM Server as a master WebLM Server for a product and as a local WebLM Server for another product.

How can I find the date and time of the last successful connection established, the last successful allocation executed, and the last successful usage query executed for a local WebLM Server?

The View by Local WebLM Web page displays the date and time of the last successful connection established with the local WebLM Server.

The Allocation by Local WebLM Web page displays the date and time of the last successful allocation executed for the local WebLM Server.

The Usage by Local WebLM Web page displays the date and time of the last successful usage query executed for the local WebLM Server.

Can I get the results of the usage queries that were executed previously?

In the Server Properties Web page, you can configure the number of usage query results that must be displayed in the various Usage Summary options. To configure the number of usage query results, perform the following steps:

1. Open the Server Properties Web page.
2. Set the number of usage queries in the **Count** field of the Usage History Count section.
3. Click Submit. The system displays the following message: `Usage History Count updated.`

Note:

This feature is available only with ELFs.

Can I configure periodic usage queries for a master WebLM Server?

You can configure periodic usage queries for a master WebLM Server in the Configure Enterprise Web page. To configure periodic usage queries, specify the usage query schedule in the Default Periodic Usage Query Schedule section.

How can I get the periodic allocation information of a master WebLM Server in the Periodic Allocation table?

Feature licenses are allocated only to local WebLM Servers. Thereby, the master WebLM Server will not be displayed in the Periodic Allocation table.

I have installed an ELF Sample.xml. Can I install a SLF Sample.xml on the WebLM Server?

If the SID of the standard license file (SLF) is different from the SID of the enterprise license file (ELF), the license files might either belong to different products or belong to a single product.

You can directly install the SLF on the WebLM Server, if the license files are of different products. However, if the SIDs of the SLF and ELF are of the same product, the WebLM Server does not allow the installation of the SLF. License files of the same product with different SIDs cannot be installed on a WebLM Server.

If the SIDs of the ELF and SLF match, the license files are of the same product or product family. Therefore, the WebLM Server considers the installation of the SLF as an over-installation. For an over-installation, you need to delete all local WebLM Servers from the master WebLM Server, before installing the SLF.

Note:

When you delete a local WebLM Server from a master WebLM Server, the feature licenses allocated to the local server are automatically freed. Therefore, be careful while deleting a local WebLM Server, verify whether any of the licensed applications have acquired feature licenses from the server.

I have a license file. How do I identify the computer on which the license file can be installed?

The **<HostID>** tag of the license file contains the host ID of the computer on which the license file can be installed. Compare the host ID of the license file with the host IDs of the computers of your organization.

Note:

Host ID is the MAC address of the Network Interface Card (NIC) card.

I have a license file. How can I identify whether the license file is in the Legacy License File (LLF) format or License Archive (LAR) format?

Open the license file and identify the root tag of the file. If the root tag is **<LAR>**, the license file is of the LAR format. If the root tag is not **<LAR>**, the license file is of the LLF format.

Appendix A: Using the examples in the guide

This guide provides examples that you can try. The examples are based on the following Case study. Sample license files for executing the examples are provided with the guide.

Case study

WebLM is currently supported only for Avaya software products. However, in the case study let us consider WebLM as a licensing solution for the software products of Britannica. Let us consider that Britannica decides to use WebLM as a licensing solution for their following software products:

Encyclopedia Britannica 2005 Ultimate Reference Suite

This software product contains the following:

- Three volumes of Encyclopedia Britannica Print set
- Two Merriam-Webster's Dictionary and Merriam-Webster's Thesaurus
- Atlas
- Timelines
- Videos
- Web Links
- Online magazines

The software product is shipped in the form of a CD or DVD.

Britannica Deluxe Edition 2005

This software product contains the following:

- Entire Encyclopedia Britannica
- One Merriam-Webster's Dictionary and Merriam-Webster's Thesaurus
- Atlas
- Timelines
- Videos
- Web Links
- Online magazines

The software product is shipped in the form of a CD or DVD.

Appendix B: WebLM configuration scenarios

The following are some of the possible WebLM configuration scenarios:

Note:

Modular Messaging (MM) is the product system that is used as an example to describe these configuration options.

WebLM configuration	Number of license files from PLDS[1]	Number of WebLM servers [1]	License move implications
WebLM per application instance—Each VMD has a dedicated WebLM server hosting a license file from PLDS.	14	14	Every license move requires a PLDS move transaction[2].
WebLM per site—Each site has a single WebLM server hosting a license file from PLDS.	3	3	• License moves within a site do not require PLDS move transaction. • License moves between sites require a PLDS move transaction.
WebLM enterprise licensing—A WebLM server at each site. One WebLM server is the Master WebLM that hosts the single license file from PLDS. Other WebLM servers are Local WebLMs that receive allocation license	1	3	• License moves within a site do not require a PLDS

[1] **Assume a customer has 3 sites and 14 MM5.2 VMDs.**

[2] PLDS move transaction means logging into Avaya PLDS site, moving licenses from one license host to another, delivering 2 license files from PLDS, logging on to the “move to” WebLM and installing the license file, and logging on to the “move from” WebLM and installing the license file.

WebLM configuration	Number of license files from PLDS[1]	Number of WebLM servers [1]	License move implications
files from the master WebLM.			or a WebLM move transaction[3]. • License moves between sites do not require a PLDS move transaction, but do require a WebLM move transaction.
Single WebLM—One WebLM server hosting single license file from PLDS supports all VMDs at all sites.	1	1	No license move transactions required.

[3] WebLM move transaction means logging into Master WebLM and moving licenses from one local WebLM to another (WebLM automatically pushes out updated allocation license files to the local WebLMs).

Appendix C: Recommendations to select a WebLM configuration model

Depending on the needs and infrastructure of an organization, the organization can configure WebLM in any one of the following models:

- WebLM standard model
- WebLM enterprise model

WebLM standard model

WebLM standard model is the oldest and simplest of the WebLM configuration models. However, this model does not support many new features of WebLM.

Standard licensing model offers a very easy and simple solution with limited functionality. If the Avaya product is a standalone product which is installed on a computer then standard model is the appropriate configuration model that serves the product needs. The steps to configure a standard model is also simple. You just need to install a standard license file (SLF) and have the licensed applications acquire feature licenses.

The standard model provides the following information regarding feature license usage:

- Usage at that moment
- Peak usage – last 7 days
- Peak usage – last 30 days

One of the biggest drawback of this model is that a single WebLM Server is the source of feature licenses. If for any reason, this server fails or goes unavailable, the licensed applications have no other means to acquire feature licenses or renew acquired feature licenses. Thus, this model does not offer any redundancy. Besides this drawback, if the licensed applications are placed globally, the standard configuration model will not be an opt solution for the organization. As all the licensed applications will need to contact a single WebLM Server, there can be a network issue. The other down side to this model is that no usage history is maintained by the WebLM Server of this model.

WebLM enterprise model

WebLM enterprise model is more recent than the standard model. Thus, this model has a lot to offer to the end user. From the advantages that this model offers, the most important

advantage is the flexibility to move feature licenses across various WebLM Servers, master and local. This way, even if a WebLM Server is unavailable or is out of feature licenses, the licensed applications can acquire feature licenses from the other servers.

If an organization has licensed applications spread across the globe, the enterprise model is the opt solution to the organization. With enterprise model, the organization can have feature licenses allocated to various local WebLM Servers, which in turn can serve licensed applications in a region. Besides this, with usage history available, the administrator has the flexibility to move feature licenses from one local WebLM Server to the other. The administrator can move feature licenses from local WebLM Servers that have low usage to the local WebLM Servers that have high usage.

The licensed application can also acquire feature licenses from the master WebLM Server. The unallocated feature licenses available with the master WebLM Server are known as floating licenses. To avoid feature licenses being stagnant in a single location and maximize feature license usage, the allocation license files to local WebLM Servers are valid only for 30 days. However, to ensure that local WebLM Servers never run out of feature licenses, the master WebLM Server periodically (every seven days) pushes ALFs to the local WebLM Servers. This periodic operation is executed after every seven days. If the periodic allocation process fails, the retry feature ensures that a decent number of attempts are made to execute the process. If the periodic allocation process is not successful even after the retry attempts, a failure e-mail is sent to the administrator.

In addition to the periodic allocation process, the enterprise model supports a periodic usage query process. This query process gets feature license usage information from each local WebLM Server configured on the master WebLM Server or the floating license usage information from the master WebLM Server. The periodic usage query feature ensures that master WebLM Server administrators periodically receive feature license usage information, even if they forget to execute a usage query. Similar to the periodic allocation process the periodic usage query is executed every seven days.

The usage information from the WebLM Servers across the organization helps administrators to determine whether the purchased feature licenses are sufficient for the organization or not. If the feature licenses are not sufficient for the organization, administrators can think of purchasing more feature licenses.

The WebLM team has created a checklist that lists all the features of WebLM with the summary of the features supported by each configuration model. Using this checklist you can decide on the WebLM configuration model that will appropriately suit your needs and infrastructure. The following table shows the WebLM configuration model check list.

Feature	WebLM Standard model	WebLM Enterprise model
License Installation using user interface (UI)	Yes	Yes
Change Password	Yes	Yes
Feature Overuse	Yes	Yes

Feature	WebLM Standard model	WebLM Enterprise model
Manage Users (add, modify and delete)	Yes	Yes
License acquisition using client APIs - Pull model	Yes	Yes
Acquired license details	Yes	Yes
Update history count	No	Yes
Peak Usage (last 7 days)	Yes	Yes
Peak Usage (last 7 days) with history (max - 5)	No	Yes
Peak Usage (last 30 days)	Yes	Yes
Peak Usage (last 30 days) with history (max - 5)	No	Yes
Usage query	Yes	Yes
Usage query with history (max - 5)	No	Yes
LAR license type support	Yes	Yes
Enterprise configuration	No	Yes
E-mail notification - in case of failure (periodic operations)	No	Yes
Local WebLM configuration - Add	No	Yes
Local WebLM configuration - Delete	No	Yes
Local WebLM configuration - Modify	No	Yes
Perform validate connectivity test	No	Yes
View usage at Enterprise level	No	Yes
Allocations (push ALF to Local WebLM) - Push mode	No	Yes
Periodic allocation (every 7th day)	No	Yes
Periodic usage query (every 7th day)	No	Yes

Feature	WebLM Standard model	WebLM Enterprise model
Redundancy	No	Yes
Floating license (available for acquisition)	No	Yes
Long term vision	No	Yes
HTTPS support	Yes	Yes
Client API Support (all APIs)	Yes	Yes

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