



Managing Licenses

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Managing Licenses

Overview

Unity Connection supports **Cisco Smart Software Licensing** which is simple and enhanced way for using various licensed features. Using Cisco Smart Software Licensing, you can manage all the licenses associated with an organization through **Cisco Smart Software Manager (CSSM)** or **Cisco Smart Software Manager satellite**. Cisco Smart Software Licensing establishes a pool of licenses or entitlements that can be used across your organization in a flexible and automated manner. This model of licensing provides the visibility of your licenses ownership and consumption. Unity Connection must be registered with the CSSM to use various licensed feature.

Cisco Smart Software Manager enables you to manage all of your Cisco Smart Software Licenses from one centralized website. You can use Cisco Smart Software Manager to:

- Manage and track licenses
- Move licenses across virtual account
- Remove registered product instance

For more information about Cisco Smart Software Manager, see <https://software.cisco.com/>

Cisco Smart Software Manager satellite is a component of Cisco Smart Software Licensing that manages product registrations and monitoring of smart license usage for Cisco products. If you do not want to manage Cisco products directly using Cisco Smart Software Manager, either for policy or network availability reasons, you can choose to install the Cisco Smart Software Manager satellite on-premises. Products register and report license consumption to the Cisco Smart Software Manager satellite as it does on Cisco Smart Software Manager.

For more information about the Cisco Smart Software Manager satellite, see <http://www.cisco.com/web/ordering/smart-software-manager/smart-software-manager-satellite.html>.



Note Cisco Smart Software Licensing is only the way to manage the licenses in Unity Connection.

For more information on Cisco Smart Software Licensing, see the "Smart Software Licensing Overview" available at, <http://www.cisco.com/web/ordering/smart-software-licensing/index.html>

Deployment Options

To view and manage the licenses, Unity Connection must communicate with the Cisco Smart Software Manager (CSSM) or Cisco Smart Software Manager satellite.

Following are the options to deploy the Cisco Smart Software Licensing in Unity Connection, listed in an order from easiest to use to most secure:

- **Direct Cloud Access:** In this option, Unity Connection can directly communicate with CSSM and transfer the usage information over internet. No additional components are required.



Note In this option, Unity Connection must resolve the CSSM server directly through DNS.

- **Direct Cloud Access through an HTTPs Proxy:** In this option, Unity Connection directly transfers the usage information to CSSM over internet through proxy server. Administrator also provides an option to authenticate the proxy server for secure communication with CSSM. You can enter username and password for authentication of proxy server.
- **Mediated Access through an On-Premises Collector – Connected:** In this option, Unity Connection communicates with on-prem version of CSSM called Cisco Smart Software Manager satellite. Periodically satellite communicates with CSSM using Cisco network and exchange of license information will be performed to keep the databases in synch.
- **Mediated Access through an On-Premises Collector – Disconnected:** This option also uses the satellite that is not connected with Cisco network. For synchronization between satellite and CSSM, you will manually exchange the license information files to keep the database in synch.



Note License hierarchy is supported only with Cisco Smart Software Manager satellite version 6.0.0 and later.

To select the deployment options, see "[Configuring Transport Settings \(optional\)](#)" section.

Smart Account and Virtual Account

Smart Account is a simple and organized way to manage the product licenses and entitlements. Using this account, you can register, view, and manage your Cisco Software Licenses across your organization.

As per the organization requirements, you can create the sub accounts within your Smart Account. The sub accounts are known as Virtual Accounts that are collections of licenses and product instances. To manage the licenses, you can create multiple virtual accounts based on the different organization categories such as departments or locations. Virtual Accounts are maintained by Smart Account administrators. Licenses can be transferred within virtual accounts as per the requirement.

While moving product instance from one virtual account to another, the licenses associated with the previous virtual account are not transferred.

For more information on how to create and manage the Smart Account and Virtual Account, see "Cisco Smart Accounts" at <http://www.cisco.com/web/ordering/smart-software-manager/smart-accounts.html>

Prerequisites for Configuring Cisco Smart Software Licensing

To configure the Cisco Smart Software Licensing in Unity Connection, ensure the following requirements:

- Understand the Unified Communications (UC) licensing structure. For details, see <http://www.cisco.com/c/en/us/products/unified-communications/unified-communications-licensing/index.html>.
- A Smart Account and Virtual Account must be created for Unity Connection. For more information, see "[Smart Account and Virtual Account](#)" section.



Note If you upgrade the Unity Connection from any earlier releases to 14, all the licenses(legacy and PLM based) used in Unity Connection must be migrated to the CSSM for using Cisco Smart Software Licensing. For more information, see "[Migrating Licenses](#)" section.

Configuring Cisco Smart Software Licensing in Unity Connection

By default, the Cisco Smart Software Licensing is enabled for Cisco Unity Connection. To use Cisco Smart Software Licensing, Unity Connection must register with CSSM or satellite. After fresh install, Unity Connection remains in Evaluation Mode until it is registered with CSSM or satellite. The Evaluation Period of 90 days are provided once in the entire life cycle of the product. As soon as Unity Connection consumes licenses, the Evaluation Period starts.

In Evaluation Mode, you cannot enable the encryption on Unity Connection. It means you are not allowed to use the security modules in Unity Connection. To enable the encryption in Unity Connection, you must register the product with CSSM or satellite using token that allows Export-Controlled Functionality. To enable the Export Controlled Functionality for the product, see "[Token Creation](#)" section.

After successfully registering the product with CSSM or satellite, run "utils cuc encryption enable" CLI command to enable the encryption on Unity Connection.

For more information on the CLI command, see the Command Line Interface Reference Guide for Cisco Unified Solutions for the latest release, available at <http://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html>

For more information on the encryption in Cisco Unity Connection, see "[Cisco Unity Connection- Restricted and Unrestricted Version](#)" chapter of the Security Guide for Cisco Unity Connection Release 14 available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/security/guide/b_14cucsecx.html.



Note If data plane encryption (e.g. SRTP) has been turned on after registration to CSSM or satellite and the product is subsequently deregistered from CSSM or satellite, data plane encryption will continue to be enabled. An alarm will be sent warning the administrator to disable data plane encryption when unregistered from CSSM or satellite. Data plane encryption will be disabled after a reboot of the product. Note that this encryption behavior, immediately after deregistration, may change in future versions of the product.

Configuring Transport Settings (optional)

To deploy the Cisco Smart Licensing in Unity Connection, you can configure the applicable transport settings. To configure the transport settings in Unity Connection, do the following procedure:

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- Step 1** In Cisco Unity Connection Administration, expand System Settings and select Licenses.
- Step 2** On the Licenses page, select **View/Edit** link under Transport Settings field. A dialog box appears, on which select the applicable deployment option for the Smart Licensing. (For more information, see Help > This Page)
- Step 3** Select Save.
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Note By default, the Direct option is selected.

Token Creation

You must create a token to register the product with CSSM or satellite.

To create the token, do the following procedure:

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- Step 1** Log in to your Smart Account in Cisco Smart Software Manager at software.cisco.com or Cisco Smart Software Manager satellite.
- Step 2** Select the virtual account that contains the licenses for the product.
- Step 3** In the General tab of virtual account, select New Token.
- Step 4** In the Create Registration Token dialog box, enter the Description and Expire After information and select Create Token.
- Step 5** To allow the Export Controlled Functionality for Unity Connection, check the **Allow export-controlled functionality on the products registered with this token** check box. By checking the check box, you can enable the encryption for the product registered with this Registration Token.
- Note** The Smart Account that are entitled to use Export Controlled Functionality can only check the **Allow export-controlled functionality on the products registered with this token** check box.
- Step 6** Once the token is created, copy the token to register the product.
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For more information, see software.cisco.com

Registering the Unity Connection

To register the Unity Connection with CSSM or satellite, do the following procedure:

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- Step 1** Log in to the Cisco Unity Connection Administration.
- Step 2** Expand System Settings and select Licenses.
- Step 3** On the Licenses page, select **Register** button. A dialog box appears, enter the registration token copied from the CSSM or satellite.
- Step 4** Select **Register**.
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Managing Cisco Smart Software Licensing

After successful registration of the Unity connection with CSSM or satellite, you can see the usage details on the Licenses page of the Cisco Unity Connection Administration. You can also manage the licenses by performing the various actions on Cisco Unity Connection Administration.

To perform the actions, go to Cisco Unity Connection Administration > System Settings > Licenses. On the Licenses page, select any one of the following from the Action menu:

- **Renew Authorization Now:** Using this option, you can manually renew the license authorization for all the licenses. However, the licenses are automatically authorized in every 6 hours.
- **Renew Registration Now:** After registering with CSSM or satellite, it provides a registration certificate to identify the product. This certificate is valid for one year. Using this option, you can manually renew the registration of the product. However, the registration of the product is automatically renewed in every six months.
- **Deregister:** Using this option, you can deregister the product from CSSM or satellite. All license entitlements used for the product are released back to its virtual account.
- **Reregister:** Using this option, you can reregister the product with CSSM or satellite.

Smart Software Licensing Status

Whenever Unity Connection communicates with the Cisco Smart Software Manager, there is a transition in the Unity Connection licensing status. The Smart Software Licensing Status provides an overview of license usage on the product.

The licensing status of the Unity Connection can be categorized as follows:

- **Registration Status**
- **Authorization Status**

Registration Status

The different registration status in a Unity Connection server are:

- **Unregistered:** The registration status of Unity Connection remains Unregistered until it successfully registers with CSSM or satellite.
- **Registered:** Unity Connection is successfully registered with CSSM or satellite.
- **Registration Expired:** The registration status of Unity Connection changes to the Registration Expired if registration of the product is not renewed within one year. After registration expired, the product goes back to the Evaluation Mode and you can use licenses for the remaining days of the Evaluation Period. When Evaluation Period of the product is expired and the product is still not registered with CSSM or satellite, you can not create or modify the users in Unity Connection.

Authorization Status

The different authorization status in a Unity Connection server are:

- **Evaluation Mode:** The authorization status of fresh installed Unity Connection is Evaluation Mode until it registers with CSSM or satellite. In this mode, Unity Connection can use licensed features except SpeechView and SpeechViewPro. The Evaluation Period of 90 days are provided once in the entire life cycle of the product. The Evaluation Period of Unity Connection begins as soon as it starts consuming

licenses. After successful registration with CSSM, the Evaluation timer stops. You can further use the remaining Evaluation Period when Unity Connection will go in Unregister or Registration Expired state.

- **Evaluation Period Expired:** if Unity Connection uses licenses for 90 days without registering with CSSM or satellite, the status of Unity Connection changes to Evaluation Period Expired. In this mode, user creation or modification are not allowed.
- **No Licenses in Use:** If Unity Connection does not use any licenses, the status changes to No License in Use.
- **Authorized:** In this state, all the licenses used by Unity Connection are authorized.
- **Out of Compliance:** Unity Connection authorization status changes to Out of Compliance either license usage exceeds the licenses available in the virtual account of the product or it uses the feature licenses that are not available in the virtual account.
- **Authorization Expired:** Unity Connection Authorization status changes to Authorization Expired if Unity Connection does not communicate with CSSM or satellite within the authorization time period of 90 days.

License Reservation in Unity Connection

Cisco Unity Connection provide the following license reservation features:

1. Unity Connection Release 12.5 and later, provides **Specific License Reservation** feature that allows the administrator to specify and reserve user licenses from the smart account and virtual account against a product instance. The product instance can use the reserved licenses without communicating usage information to CSSM.



Note In Specific License Reservation, reserved licenses of a virtual account are moved with the product instance.

2. Unity Connection Release 14SU1 and later, provides **Permanent License Reservation** feature that allows the administrator to reserve an entitled permanent license tag from the smart account and virtual account against a product instance. Administrators need to provision the User Licenses as needed by the Product instance in the Smart Account and Virtual Account. Once the registration has been successfully completed, the product will continue to remain in “authorized” state.



Note This feature is limited to FedRAMP customers. Permanent License Tag can be ordered through Cisco Commerce Workspace and will be provisioned in the Smart Account and Virtual Account after Cisco approval. For ordering, see *Cisco Collaboration Flex Plan 3.0 for FedRAMP Ordering Guide* available at <https://www.cisco.com/c/en/us/products/collateral/unified-communications/cisco-collaboration-flex-plan/guide-c07-744596.html>. After acquiring permanent licenses, customers should operate within the defined limits of license counts which they have purchased.

Configuring Specific License Reservation in Unity Connection

In Specific License Reservation, Unity Connection requires a manual exchange of information with CSSM for product configuration and authorization. To configure Specific License Reservation and perform its various functions, execute the CLI commands in the given below sequence:

- **license smart reservation enable:** This command is used to enable the license reservation feature.

- **license smart reservation request:** This command is used to generate reservation request code for Unity Connection.
- **license smart reservation install "<authorization code>" or license smart reservation install-file:** This command is used to install the license reservation authorization-code generated on the CSSM.

You can also perform additional operations by executing the given below CLI commands:

- **license smart reservation return:** This command is used to generate a return code. The return code must be entered into the CSSM to return the licenses to the virtual account.
- **license smart reservation cancel:** This command is used to cancel the reservation process before the authorization code obtained from CSSM against the product request code is installed.
- **license smart reservation return - authorization "<authorization code>":** This command is used to generate a return code using the authorization code specified on the command line. The return code must be entered into the CSSM to return the licenses to the virtual account.



Note In case of a cluster, you can execute the CLI commands only on publisher server.

Configuring Permanent License Reservation in Unity Connection

In Permanent License Reservation, Unity Connection requires a manual exchange of information with CSSM for product configuration and authorization. To configure Permanent License Reservation and perform its various functions, execute the CLI commands in the section [Configuring Specific License Reservation in Unity Connection, on page 6](#). These CLI commands are used for reserving Permanent License Tag.

Below mentioned CLI is specific to Permanent License Reservation:

- **license smart reservation set license_count:** This CLI command is used to specify or update the license count for the system to operate within, when set for Permanent License Reservation. License count set doesn't affect compliance status and is for administrator reference only. License count set can be referred on the License Management screen. Customers will operate within the defined limits of license counts which they have purchased.

If this CLI is not executed below warning message will be displayed on License Management screen.

"Administrator has not specified the license this system would operate within. Please run the CLI command "license smart reservation set license_count" and complete the Permanent License Reservation process."



Note If the customer purchases more licenses in future, administrator can update the purchased license count by running the CLI again.

For more information on above CLI commands, see *Command Line Interface Reference Guide for Cisco Unified Communications Solutions Release 14* available at <https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-command-reference-list.html>.

License Reservation Status

When Unity Connection manually exchanges information once with the CSSM, there is a transition in the Unity Connection license reservation status.

The licensing status for Specific License Reservation and Permanent License Reservation of the Unity Connection can be categorized as follows:

Registration Status

The different registration status for Specific License Reservation and Permanent License Reservation in a Unity Connection server are:

- **Unregistered:** The registration status of Unity Connection remains Unregistered until the product reservation request code has been generated.
- **Reservation In Progress:** When Unity Connection generates the reservation request code, the licensing status changes to Reservation in Progress.
- *(Applicable to Specific License Reservation only)* **Registered - Specific License Reservation:** When Unity Connection provides reservation request code to CSSM, CSSM generates an authorization code for the product. After successfully installing the authorization code on the product, the licensing status changes to Registered - Specific License Reservation.
- *(Applicable to Permanent License Reservation only)* **Registered - Universal License Reservation:** When Unity Connection provides reservation request code to CSSM, CSSM generates an authorization code for the product. After successfully installing the authorization code on the product, the licensing status changes to Registered - Universal License Reservation.

Authorization Status

The different authorization status for Specific License Reservation and Permanent License Reservation in a Unity Connection server are:

- **Evaluation Mode:** Unity Connection remains in Evaluation Mode until the product is not registered with CSSM. In this mode, Unity Connection can use licenses for 90 days.
- **Evaluation Period Expired:** When Unity Connection uses licenses for 90 days without registering with CSSM, the status of Unity Connection changes to Evaluation Period Expired.
- **No License in Use:** When Unity Connection does not use any licenses, the status changes to No License in Use.
- **Authorized - Reserved:** When all the reserved licenses used by Unity Connection are authorized, the status changes to Authorized - Reserved.
- *(Not applicable to Permanent License Reservation)* **Not Authorized - Reserved:** When Unity Connection license usage exceeds the licenses reserved in the virtual account of the product or it uses the feature licenses that are not reserved in the virtual account, the status changes to Not Authorized - Reserved.

Enforcement Policy on Unity Connection

When Unity Connection goes in either of the below state, it will go in enforcement mode. In this mode, user creation or modification in the user account, Speech Connect Port creation or modification and other licensing

related updates are not allowed in Unity Connection in enforcement mode. However, existing users can send or receive the voice mails.

- Evaluation Period Expired
- Registration Expired
- Authorization Expired
- Out of Compliance with 90 days of overage period expired.

For more information on the above states, see "[Smart Software Licensing Status](#)" section .



Note In case of Specific License Reservation, when Unity Connection goes in either of the below state, it will go in enforcement mode.

- Evaluation Period Expired
- Not Authorized - Reserved state with 90 days of overage period expired

For more information on the above states, see" [License Reservation Status, on page 8](#)

In Evaluation Period Expired and Registration Expired states, Unity Connection generates an alarm to disable the encryption on the product. It is recommended that either you execute the "utils cuc encryption disable" CLI command to disable the encryption or register the product with CSSM or satellite to further use the security modules of the Unity Connection.

For more information on the CLI command, see the Command Line Interface Reference Guide for Cisco Unified Solutions for the latest release, available at <http://www.cisco.com/c/en/us/support/unified-communications/unity-connection/products-maintenance-guides-list.html>

For more information on the generated alarm, see Alarm Message Definitions for Cisco Unity Connection available at, <https://www.cisco.com/c/en/us/support/unified-communications/unity-connection/products-system-message-guides-list.html>.

Licenses in Unity Connection Cluster

In a Unity Connection cluster, both publisher and subscriber server use licenses but only publisher server is allowed to communicate with CSSM or satellite. Whenever the publisher server communicates with CSSM or satellite, the licensing status and usage information are updated on both publisher as well as subscriber server. In case, when publisher server stops functioning (for example, when it is shut down for maintenance), the subscriber server can use licenses but the licensing status remains unchanged. If the publisher server fails to resume its functioning within 90 days, the user account provisioning is not allowed on subscriber server.

In case of a cluster, only publisher server is allowed to perform the following operations:

- Registration
- Renew Authorization
- Renew Registration
- Deregister
- Reregister

After successful registration of the publisher server with CSSM or satellite, subscriber server only shows the licensing status and usage details of the product.

Migrating Licenses

Whenever you upgrade Cisco Unity Connection from any earlier releases to 14 and later, all licenses (legacy and PLM-based) must be migrated to Cisco Smart Software Licensing. Customers with an active Cisco Software Support Service contract, can convert PLM-based (pre-12.0 versions) licenses to Cisco Smart Software Licenses through the Cisco Smart Software Manager portal at <https://software.cisco.com/#SmartLicensing-LicenseConversion> via License Registration Portal (LRP) at <https://slexui.cloudapps.cisco.com/SWIFT/LicensingUI/Home>. Customers can migrate fulfilled, partially fulfilled, and unfulfilled PAK's or device-based licenses to Cisco Smart Software licenses. For legacy (pre-9.0 versions) licenses, customers must send a license migration request to Cisco Licensing Support available at <https://slexui.cloudapps.cisco.com/SWIFT/LicensingUI/html/contact.html>. For customers with no service contract in place, upgrade SKU's must be ordered which will fulfill the new Cisco Smart Software licenses to their organization's Cisco Smart Account and respective virtual account. Refer the Cisco Collaboration Ordering Guide at <http://www.cisco.com/c/en/us/partners/tools/collaboration-ordering-guides.html>.

For more information on Cisco Smart Software Licensing, please visit <http://www.cisco.com/c/en/us/buy/smart-accounts/software-licensing.html>.

If HTTPS or Legacy networking is deployed in the system, you can migrate the licenses of each node gradually. It will not affect the system functionality.



Note After upgrading the Unity Connection from any earlier releases to 14, you must register the product with Cisco Smart Software Manager or Cisco Smart Software Manager satellite.

Enabling Encryption in Cisco Unity Connection

The Category C customers of Unity Connection can enable the encryption on the restricted version of Cisco Unity Connection with both type of licensing – Cisco Smart Software Licensing and Specific License Reservation. To enable the encryption for export restricted virtual account, you must have **CUC Export Restricted Authorization Key (PID: CUC-SL-EXRTKY-K9=)** license in the virtual account. In addition, you must perform below configuration to enable the encryption for Category C customers.

Enabling Encryption with Cisco Smart Software Licensing

Do the following procedure to enable the encryption with Cisco Smart Licensing

- Register the Unity Connection with CSSM using token created from Category C customer's virtual account.



Note Unity Connection does not support Cisco Smart Software satellite as deployment option for export restricted virtual account.

- Execute Export request CLI **license smart export request local CUC_Export_Restricted_Authorization_Key** on the registered Unity Connection server to install Export Restricted Authorization Key.

- Execute **utils cuc encryption enable** CLI to enable the encryption on the product and restart the required services mentioned in the CLI output.

You can also perform additional operations by executing the given below CLI commands:

- **license smart export return local CUC_Export_Restricted_Authorization_Key** to return an export restricted feature licenses.
- **license smart export cancel** to cancel the automatic retry of previously failed export request or return from CSSM

For more information on CLI commands, see the applicable version of *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* available at <https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-maintenance-guides-list.html>

Enabling Encryption with Specific License Reservation

To enable the encryption with Specific License Reservation, you must reserve the **CUC Export Restricted Authorization Key** license in virtual account of Category C customer on CSSM.

For more information on Export Control Functionality, see "Cisco Unity Connection- Restricted and Unrestricted Version" chapter of *Security Guide for Cisco Unity Connection Release 14* available at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/14/security/guide/b_14cucsecx.html.

License Parameters for Unity Connection Features

Below table describes the License Parameters of Unity Connection feature applicable for Cisco Smart Software Licensing and Specific License Reservation.

Table 1: License Parameters for Unity Connection Features

License Parameter	Feature	Description
CUC_BasicMessaging	Total number of voicemail users.	Specifies the maximum number of voice mail users configured in Unity Connection.
CUC_EnhancedMessaging	Total number of enhanced messaging users.	Specifies the maximum number of Unity Connection SRSV users configured on Unity Connection. The Unity Connection SRSV users are reflected under this tag only when the branch is active. This tag also provides the licenses of Basic Messaging.
CUC_SpeechView (Not applicable for Specific License Reservation)	Total number of speech view standard users.	Specifies the maximum number of Speech view Standard users configured in Unity Connection.
CUC_SpeechViewPro (Not applicable for Specific License Reservation)	Total number of speech view professional users.	Specifies the maximum number of Speech view Professional users configured in Unity Connection.

License Parameter	Feature	Description
CUC_SpeechConnectPort	Total number of speech connect ports.	Specifies the maximum number of simultaneous voice recognition sessions and Text to Speech (TTS) sessions allowed in Unity Connection.
CUC_SpeechConnectGuestUser ¹	Total number of Contacts.	Specifies the maximum number of local contacts, along with VPIM contacts created from Non Unity Connection Server.

¹ To avail this functionality, customers are currently not required to acquire the Speech Connect Guest User licenses.

Cisco Smart Software Licensing supports license hierarchy, in which higher level licenses are utilized to fulfill the request for lower level licenses to avoid a shortage of the licenses.



Note Reserving entitlement tags of higher release on 12.x is not allowed. You can only borrow higher level licenses on 12.x at CSSM as per license hierarchy.

Following are the licenses included in license hierarchy in an order from higher level to lower level

- Unity Connection Enhanced Messaging User Licenses (12.x)
- Unity Connection Basic Messaging User Licenses (12.x)