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1. Ivanti License Management Guide

This document introduces Ivanti Licensing Management that allows administrators to understand, configure and manage licenses for Ivanti Connect Secure, Neurons for Secure Access and Neurons for Zero Trust access.

2. Licensing Modes

Ivanti delivers the following distinct licensing modes:

- Named Users
- Concurrent Users

Named users; NSA Named User Licensing Mode

Named Users is referred to as the Unified Access License (UAL) and allows customer to utilize both Zero Trust Access as well VPN access through Connect Secure as it is used to. The UAL License offers a complete set of capabilities in a single license instead of classical separate licensing. The virtual appliances are included. The licenses are managed from the Ivanti Neurons for Secure Access controller which is offered as a SAAS Service.

Unified Access License (UAL): The Unified Access License offers benefits such as no need for core or MBR licenses, global license sharing, and built-in disaster recovery. It operates on a Named User basis, allowing connection from up to five devices with no limit on the number of gateways. It is a subscription model that includes software support and offers a good alternative to suites, providing dynamic elasticity, and aligning with SaaS transformation goals for VPN deployments.

Includes

- VPN
- ZTA
- NSA
- Virtual Appliances
- Connect from up to 5 Devices

Not needed in this model:

- License Server
- ICE licenses
- MBR license

Concurrent users; Gateway Licensing Mode

A license model that allows concurrent use per unique device of the Ivanti Connect Secure (ICS) VPN solution. The amount of concurrent devices is configured by the admin, either directly on the gateway or through a Virtual License Server.

For this set-up, separate platform/core licenses are required to be installed. This license model can be run in both On-Prem Deployments and Cloud Deployments.

Choosing the Licensing Mode

You can use either Gateway licenses or NSA Named User licenses. You can switch between these two licensing modes any time. Gateway Licensing mode is same as the existing 9.x Gateway licensing.

NSA Named user licensing is introduced in 21.x release as part of the larger suite user licensing effort. The named user SKUs enable a certain number of named users on NSA defined by the SKU.

With named user model, when an end-user logs in, a single named user license is consumed. Afterwards, even if the same end-user logs in from multiple devices, only a single license is consumed. Details of named users can be seen on the NSA under subscriptions. For example, If an enterprise customer has 1000 employees with 1000 named user licenses. Each employee/user can choose to log in from multiple devices. However, only a single license will be consumed for that user. For more information, see NSA documentation.

To choose the licensing mode:

1. In the admin console of the license server, choose **System > Configuration > Licensing > Licensing Summary**.

The License Summary page shows the two options, **Gateway Licensing Mode** and **NSA Named User Licensing Mode**. By default, **Gateway Licensing Mode** is selected.

2. Choose the required mode and click **Switch**. A log message is displayed upon the successful switch.

[Configuration](#) > [Licensing](#) > Licensing

Licensing



Configuration
Licensing

Licensing	Security	Certificates	DMI Agent	NCP	Client Types
PSAM	Telemetry	Advanced Client Configuration		Advanced Networking	
License Summary	Configure Server	Download Licenses			

☒ Gateway Licensing mode
 ☐ nSA Named User Licensing mode
 [Switch](#)

License Type	Gateway Licensing Mode	NSA Named User Licensing Mode
Platform/Core License	Install license locally or lease license from license server.	Register the ICS Gateway with NSA and if the ICS Gateway is using NSA Named User Licensing Mode then the Platform/Core license is not required.
Concurrent User License	Install license locally or lease license from license server.	Register ICS Gateway with NSA.
Feature licenses (Adv HTML5 etc)	Install license locally or lease license from license server.	Install license locally on ISA-V.

3. Best Practices

It is still recommended to archive configuration and deploy a fresh VM and restore config. A fresh VM will have its own Machine ID, so any existing license is not valid.

4. ICS Gateway Licensing

Ivanti Connect Secure software and Ivanti Policy Secure software include an Ivanti Licensing and Software Download Center @ <https://my.pulsesecure.net>, that lets you configure the Ivanti Connect Secure device as a license server to allow administrators to view all configured systems and move those licenses as needed. Other devices on the network lease licenses from the central license server.

Alternatively, you can install and manage licenses directly on each device and eliminate the license server entirely. Your company's needs and requirements dictate which configuration is best for you.

Obtaining, Entering, and Upgrading Your License Keys

To take full advantage of your device, you must access the Ivanti Secure Licensing and Software Download Center at <https://my.pulsesecure.net>, provide your licensing hardware ID and authorization code(s) to obtain your license keys, and sign in to the admin console to enter the license keys you receive from Ivanti.

A licensing hardware ID is a unique 16-character code Ivanti uses to identify your particular device when generating license keys. You can find the system's licensing hardware ID above the menu options in the serial console and at the bottom of the admin console.

An authorization code is a pass key required to generate and activate license keys you or your company have purchased for your device. You receive your authorization code(s) after you purchase your device and associated product and feature licenses. Figure underneath shows the license key generation and activation flow.

Licensing Capacity

The ISA Series is purpose-built for next-generation secure access. With multiple deployment options for physical, virtual or cloud deployments, the ISA series can grow organically and dynamically with an organization's secure access needs. For more details see, [ISA datasheet](#).

License Types

- [Subscription Licenses](#)
- [Feature License \(Example: Advanced HTML5\)](#)
- [Capacity-Derived Licenses and Client Platform Compatibility](#)
- [Cluster Licenses](#)

Subscription Licenses

Subscription licenses and renewal licenses (identified by a -R appended to the license name) have a start and end date embedded within them. Customers initially purchase a subscription license that is valid until a specified date. When the license expiration date nears, customers can renew their licenses.

When the license is installed, the start and end date are interpreted relative to the local time and time zone on the machine. The start date begins at 12:00 am and the end date ends at midnight of the end date (12:00 am of the following day). If the start date is in the future, the subscription or renewal license is not activated till the start date. A renewal license is automatically activated only if there is a corresponding expired subscription license.

A subscription license can only be renewed by a corresponding renewal license and a renewal can be activated only by the expiration of a corresponding subscription or renewal license.

Feature License (Example: Advanced HTML5)

Feature license controls the availability of feature. If this license is installed, a particular functionality becomes available for the customer. User count on feature license enables a feature for a fixed number of users. Feature licenses can be either subscription-based or perceptual.

Capacity-Derived Licenses and Client Platform Compatibility

Capacity derived licenses can be leased only to the same platform family. Non-platform or non-family-specific licenses can be leased to any platform.

Cluster Licenses

The license server can lease licenses to both standalone clients and clustered clients. Note the following for leasing licenses to clustered clients:

- Only one cluster member, identified by the Ivanti Connect Secure or Ivanti Policy Secure software, makes lease requests on behalf of all cluster members. This member can query, renew, and increment licenses for other cluster members when the members are connected to the cluster.
- In order to lease from platform or platform-family specific perpetual licenses or to surrender installed licenses, each cluster member participating in license leasing must have the LICENSE-MBR license installed. Otherwise, the LICENSE-MBR license is not required.

When setting up the cluster license information, it is not necessary to enter the cluster configuration at the license server. This information is retrieved dynamically as each client reports its own cluster affiliation to the server and is displayed in the license server admin console.

The initial communication between the clusters to the license server retrieves the reserved counts for all cluster members registered with the license server. Incremental requests are the sum of all members in the cluster that are not at their maximum configured capacity.

License Type	Gateway Licensing Mode	NSA Named User Licensing Mode
Platform/Core License	Install license locally or lease license for license server.	Register the ICS Gateway with NSA and if the ICS Gateway is using NSA Named User Licensing Mode then the Platform/Core license is not required.
Concurrent User License	Install license locally or lease license for license server.	Register ICS Gateway with NSA.
Feature licenses (Adv HTML5 etc)	Install license locally or lease license for license server.	Install license locally on ISA-V.

For additional details, see "[Licensing on License Server Cluster \(A/P\)](#)".

Using Licenses without a License Server

An admin obtains an authentication code for his entitlement externally via e-mail. The admin must enter the authentication code in the license server download page to validate and fetch license keys. If validation is successful, the admin receives the license keys in return.

- User count license properties:
 - Reserved user count (RUC)—The number of user count licenses reserved for this client. A license leased to this client cannot be less than the RUC number.
 - Maximum user count (MUC)—The maximum number of user count licenses this client is allowed to request. This number must be greater than or equal to the RUC. Requests for licenses greater than the RUC are granted only if the license server has additional licenses available at the time of the request.
 - Incremental lease quantum (ILQ)—Clients can request an increase or decrease to its user count lease only in multiples of this number. The ILQ must be at least 25 unless the difference between the MUC and the RUC is less than 25. The ILQ must also be at least 10% of the difference between the MUC and the RUC. This restriction eases excessive protocol traffic.
 - Expiration date—The date when the client configuration expires. When the client configuration expires, the server no longer accepts lease requests from the client. You can use this, for example, to define a two-year service to a customer.

As you allocate licenses, the license server does not allow the sum total of the reserved user count to exceed the total license count installed on the license server.

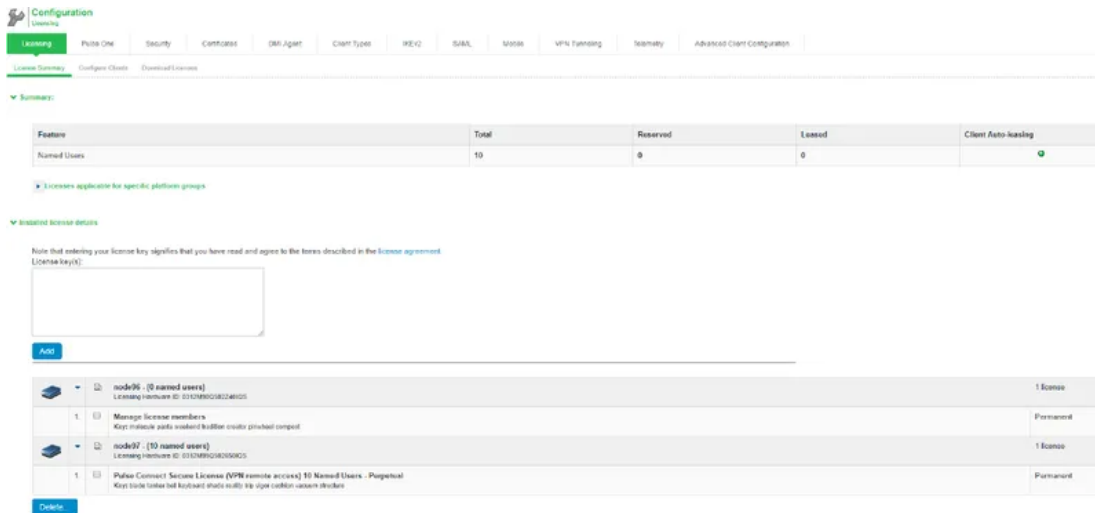
The following outlines the steps to configure a device as a license server. These steps assume that you have already performed the license key generation and activation steps.

After you download or receive your license keys by using email:

1. In the admin console of the license server, choose **System > Configuration > Licensing > Licensing Summary**.
2. Click on the license agreement link. Read the license agreement and, if you agree to the terms, continue to the next step.
3. Enter your license key(s) and click **Add**.
4. Click the **Configure Clients** tab.
5. Select the **Enable Licensing server** check box.
6. (optional) Click **Advanced Settings** and enter the following values:
 - Incremental Lease Duration
 - Lease Renewal Interval

Click **Save Changes**.

8. An example of the summary section after you configure your clients is shown in the following figure.
The following figure depicts a Configured License Server with No Clients.



In the admin console of the license server, choose **System > Configuration > Licensing > Configure Clients**.

9. Click **New Client**.

10. Enter the **Client ID**. The ID is defined on the client device under **System > Configuration > Licensing > Configure Server**.

11. Enter the client password and confirm it. The password is defined on the client device under **System > Configuration > Licensing > Configure Server**.

12. (optional) Enter the client configuration expiration date.

13. Select the client's platform from the list. The list includes the latest ICS hardware devices like PSA 7000 / ISA 8000.

14. Select the product type to be configured to (ICS or IPS).

15. For each feature you want to lease to this client, enter:

- **Reserved Count**— the number of licenses to reserve for this client. The reserve count must be less than the available amount displayed.
- **Incremental Count**— the incremental number of licenses to grant when the client requests more licenses. If the number of licenses on the client plus this incremental value is greater than the maximum count, no additional licenses are granted.
- **Maximum Count**— the maximum number of licenses a client can receive for this feature. This value must be equal to or greater than the reserved count.

Available counts are updated as you configure the client. For example, see the following figure.

16. Click **Save Changes**.

The License clients table displays the client information you entered. If the client is a member of a cluster, the cluster name is also displayed after the client contacts the server.

The following figure depicts the Available Counts are Updated as Clients are Configured.

Configure a new client

Enter or modify client settings on this page. Use the license allocation section to allocate more licenses to this client. The license allocation section will be modified based upon the platform selected for this client.

▼ License client settings

Lease Client Id:		Identifier unique to this client
Password:		Password unique to this client
Confirm Password:		
Expiration date:	/ /	Date until which the licenses in this configuration are valid. This field is optional
Platform:	VA-SPE	Platform type of this client
Product:	ICS	

▼ License allocation

Feature Name	Reserved Count	Incremental Count	Maximum Count	Leased Count
Concurrent Users	Available: 50800 0	0	0	0

Configuring a Device as a License Client

Clients are configured to communicate with a particular license server. The client then requests the licenses (over HTTPS) that are allocated to it. An optional LICENSE-MBR license must be installed when clients need to access capacity from non-subscription licenses or if an administrator wants to surrender a client's licenses to the license server. If you are not using a license server, all your devices are still configured as license clients. However, the steps to set up communication with the license server are not needed.

You can configure an ICS/IPS VM as a license client. As a prerequisite, you need ICS 9.1R13.1 License Server and above releases. You can also use 22.x and above releases for leasing licenses to clients.

Prerequisite

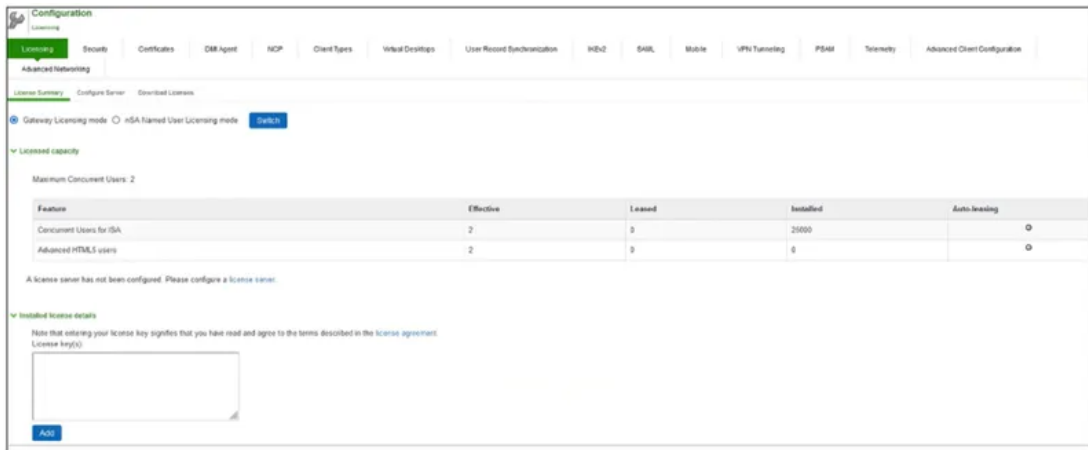
Install ICS-SVC or IPS-SVC and the ISA-CORE license to lease licenses to 22.x clients.

Following are sample SKUs:

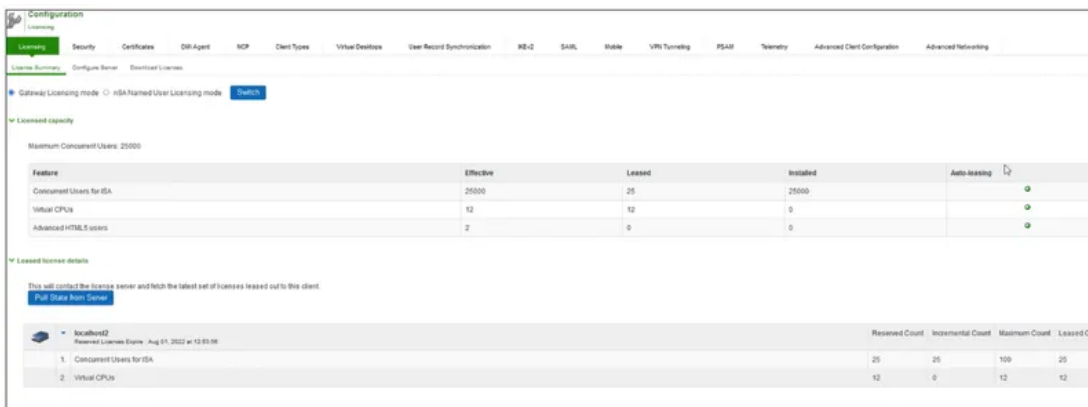
- ICS-SVC-GLD-1000U-1YR-Ivanti Connect Secure License (VPN remote Access)1000 Concurrent Sessions
- IPS-SVC-GLD-1000U-1YR-Ivanti Policy Secure License 1000 Concurrent Sessions
- ISA-CORE-100C-1YR - Enables leasing of 100 core license on Ivanti (ISA or ISA-V) licensing Server

Install License on License Server

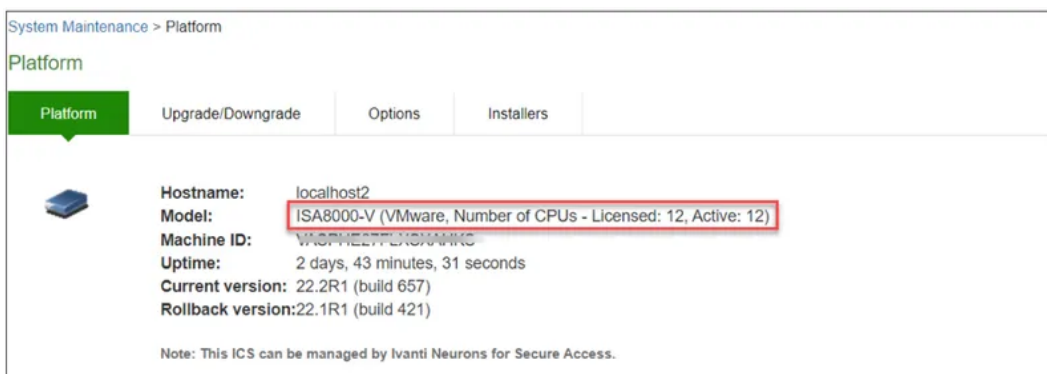
1. In the admin console of the license server, choose **System > Configuration > Licensing > Licensing Summary**.
2. Click on the license agreement link. Read the license agreement and, if you agree to the terms, continue to the next step.
3. Enter your license key(s) and click **Add**.
4. Click the **Configure Clients** tab.
5. The following figure depicts the Configured License Server with no core licenses installed.



The following figure depicts the License Summary Page - Core Leased Information for ISA-8000V.



After successful leasing of cores, Platform Model is updated. The following figure depicts the Platform page on License Client after leasing Cores for ISA8000-V.



To configure an ICS/IPS VM as a License Client on License Server:

1. In the admin console of the license server, choose **System > Configuration > Licensing > Configure Clients**.
2. Click **New Client**.
3. Enter the **Client ID**. The ID is defined on the client Gateway under **System > Configuration > Licensing > Configure Server**.

Configure Clients >
Configure a new client

Enter or modify client settings on this page. Use the license allocation section to allocate more licenses to this client. The license allocation section will be modified based upon the platform selected for this client.

License client settings

Lease Client ID:
 Password:
 Confirm Password:
 Expiration date: / / Date until which the licenses in this configuration are valid. This field is optional.
 Platform: Platform type of this client.
 Product:
 Virtual Platform: Available count: 5000

License allocation

Feature Name	Reserved Count	Incremental Count	Maximum Count	Leased Count
Concurrent Users for ISA	Available: 999999 			
Concurrent Users for ISA				

Save Changes Cancel

Enter the client password and confirm it. The password is defined on the client Gateway under **System > Configuration > Licensing > Configure Server**.

5. (optional) Enter the client configuration **Expiration date**.
6. Select the client's platform as **ISA Virtual Platform**.
7. Select the product type to be configured to **Connect Secure**.
8. Select the Virtual Platform from the drop-down list, example: **ISA-V**. Virtual Platform can be one of ISA4000-V, ISA6000-V, and ISA8000-V based on requirement.
9. For each feature you want to lease to this client, enter:
 - Reserved Count—the number of licenses to reserve for this client. The reserve count must be less than the available amount displayed.
 - Incremental Count—the incremental number of licenses to grant when the client requests more licenses. If the number of licenses on the client plus this incremental value is greater than the maximum count, no additional licenses are granted.
 - Maximum Count—the maximum number of licenses a client can receive for this feature. This value must be equal to or greater than the reserved count.
 - Available counts are updated as you configure the client.
10. Click **Save Changes**. The License clients table displays the client information you entered.

Backing Up and Restoring License Server

License server can be deployed only in an Active-Passive mode, but cloud environments do not support Active-Passive cluster. Hence, license server has to be deployed in a Standalone mode.

Assumption:

Primary Virtual License Server (VLS) is deployed with the following:

- Licenses are installed using valid authorization codes.
- License clients are configured with the host name of the license server, and leasing is working.

An administrator should have the disaster recovery plan and must follow the below steps:

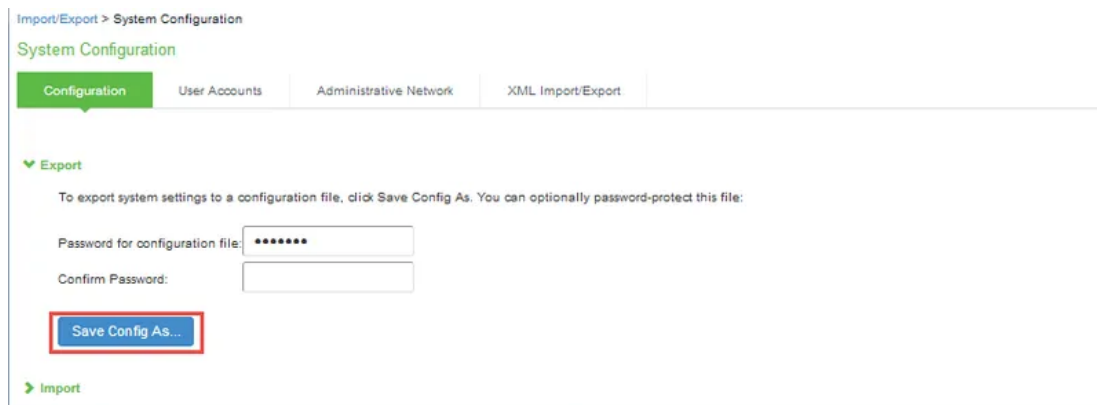
1. Export binary system and user configurations from the primary VLS.
2. Deploy a fresh secondary VLS.

3. Import the system configuration (except network settings and licenses) and user configuration (without downloading the licenses) to secondary VLS.
4. When the primary VLS goes down, immediately replace it with the secondary VLS.

Backing Up Configurations

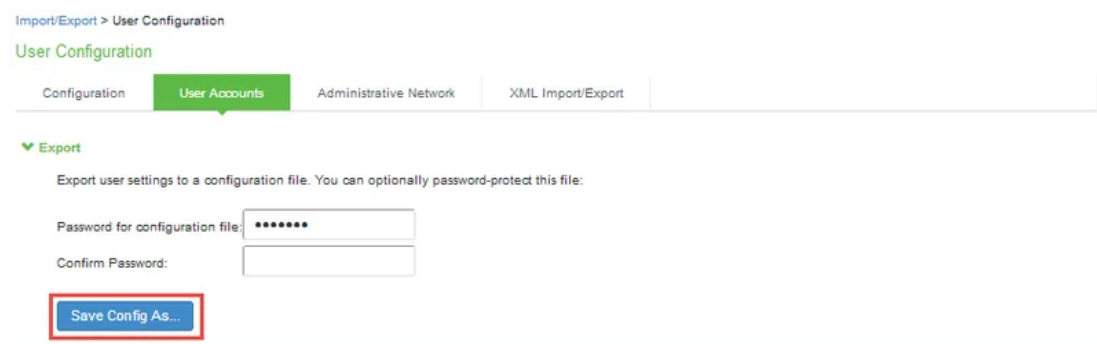
To back up the binary system configurations:

1. In the primary VLS, navigate to **Maintenance > Import/Export > Import/Export Configuration**.
2. In the Export section, click **Save Config As** to export binary system configuration to a file.
3. You can optionally password-protect this file.



To back up the user configurations:

1. In the primary VLS, navigate to **Maintenance > Import/Export > Import/Export Users**.
2. In the Export section, click **Save Config As** to export users' configuration to a file.
3. You can optionally password-protect this file.



Restoring Configurations

The following procedure assumes that you have already performed the license key generation and activation steps.

After you download or receive your license keys by using email:

1. In the admin console, choose **System > Configuration > Licensing > Licensing Summary**.
2. Click on the license agreement link. Under Installed License Details, read the license agreement and, if you agree to the terms, continue to the next step.
3. Enter your license key(s) and click **Add**.

4. Click **Save Changes**.

To configure this device as a license client:

1. In the admin console, choose **System > Configuration > Licensing > Configure Server**.
2. Enter the name of the license server. You can specify the IP address or hostname.
3. Enter a unique ID for this client. This ID is used to communicate and verify this client with the license server.
4. IDs can contain alphanumeric characters. There is no restriction on the number of characters.
You will need to enter this ID on the license server when adding clients.
Enter and confirm a password for this client. You will need to enter this password on the license server when adding clients.
5. Select the network to communicate with the license server from the **Preferred Network** menu.
6. If the preferred network is configured correctly and enabled, it is used. Otherwise, the internal network is used.
7. Select the **Verify SSL Certificate** check box if you want the client to verify the server's SSL certificate when establishing communication with it.
If this client is part of a cluster, you can change configuration information for this node or any node within the same cluster by selecting the node name from the pull-down menu. You can also select Enter cluster to update general cluster configuration information.

Automatic Downloading, Surrendering and Recalling Licenses

Administrators are given the option to automatically download license keys from the Licensing and Software Download Center at <https://my.pulsesecure.net>. This feature is applicable for all license keys (subscription-based, capacity-based, and so forth.) Communication is done via https.

The automated download process uses the following schedule for contacting the Licensing and Software Download Center:

- Once every 3 months if there are no expiring licenses.
- Once a month if a license is expiring within the next 3 months
- Once a week if a license is expiring within the next 2 weeks
- Once a day if a license grace period is expiring within the next week

Downloading Licenses

To configure the device for automated query and downloading of license keys from the Licensing and Software Download Center at <https://my.pulsesecure.net>:

1. In the admin console, choose **System > Configuration > Licensing > Download Licenses**.
2. Select the preferred network to communicate with the Licensing and Software Download Center at <https://my.pulsesecure.net>.
3. Select **Enabled** if you want to automate the downloading of license keys.
4. Under On Demand License Downloads, enter the authentication code in the text box to contact Ivanti to download and install licenses on the machine.
5. Click **Save Changes**.

You can, at any time, click Download and Install to immediately query the Licensing and Software Download Center at <https://my.pulsesecure.net> and download the updated license keys.

Surrendering and Recalling Licenses

Surrendering and recalling licenses can be done only at the license client. You can surrender only perpetual licenses.

To surrender user count licenses:

1. In the admin console, choose **System > Configuration > Licensing > License Summary**.
2. Under Installed License Details, select the check box next to the license you want to surrender and click **Surrender**.

The **Installed License Details** table displays the license as being surrendered along with the date it was surrendered. When the client has successfully communicated the surrender status to the server, the **License Summary** page on the license server displays the surrendered license and the client that surrendered the license. The next two figures show the license details page on a license client and license server.

Configuration
License Summary

License Summary | Configure Summary | Download License

Maximum Concurrent Users: 250

Feature	Effective	Expired	Installed	Auto Renewing
Concurrent Users	250	0	250	☒
Pulse Java Remote Desktop Appliance	2	0	0	☐
Concurrent Meeting Users	3	0	0	☐

Installed License Details

License Key	License Name	License Type	License Status
1	Pulse Connect Secure License (VPN remote access) 2000 Concurrent Sessions - Perpetual	Perpetual	Surrendered/Inactive
2	Pulse Connect Secure License (VPN remote access) 250 Concurrent Sessions - Perpetual	Perpetual	Permanent
3	Alcatel-Lucent 7850 SR16 appliance to participate in licensed licensing	Permanent	Permanent

Surrendered License Details

This is a list of licenses that have been surrendered by this server's clients.

License Key	Surrendered by	Date
1	psu05	Expires on: Jan 25, 2019 at 01:23:00

To recall user count licenses:

1. In the admin console, choose **System > Configuration > Licensing > License Summary**.
2. Under Installed License Details, select the check box next to the license you want to recall and click **Recall**.

Configuring an ICS Virtual Appliance as a Virtual License Server

ICS License Server software is supported on ICS hardware devices only, and has VMWare-based Virtual License Server (VLS) and Cloud based License Server capabilities. The VLS facilitates a license server to run on a virtual machine and provide the same functionality as the hardware-based license server. A VLS leases licenses only to Ivanti hardware and ISA-Vs.

The VLS sends heartbeats every 8 hours to the Pulse Cloud Licensing Service. If it is not able to connect to Pulse Cloud Licensing Service for 24 days, then licensing functionality is disabled. ICS will log this information under Event Logs.

The Configure Clients page appears only after installing or downloading license server license for VLS.

Booting an ICS Virtual Machine in VLS Mode

To boot a virtual machine in the VLS mode:

1. Select the Boot option.
2. During boot of a virtual machine, the following new console query is added to boot machine as a license server:

Do you agree to the terms of the license agreement (y/n/r)?.

Entering 'y' indicates that you have read and agreed to the terms described in the license agreement.

Do you want to enable Virtual License Server (y/n)?

Enter 'y' to boot as License Server.

Upon entering y, the virtual machine boots as a license server.

4. The virtual machine boots in VLS mode. After virtual machine comes up, only license server related UI items are exposed.

Obtaining License Keys

A VLS admin obtains an authentication code for his entitlement externally via e-mail. The admin must enter the authentication code in the license server download page to validate and fetch license keys. If validation is successful, the admin receives the license keys in return.

To obtain license keys:

1. Go to **System > Configuration > Download Licenses**.
2. Under **On demand license downloads**, enter the authentication code in the text box.
3. Click **Download and Install**.

Configuration > Licensing > Download License

Download License

 **Configuration**
Licensing

Licensing

Pulse One

Security

Certificates

DMI Agent

Client Types

License Summary

Configure Clients

Download Licenses

▼ **License downloads settings**

Use this section to modify network settings for license server.

Preferred Network: internal

Note: Please ensure that Preferred Network has IPv4 settings configured and enabled for license downloads to succeed.

Save Changes

▼ **On demand license downloads**

Enter Authentication Code in the below text box.

This will contact Pulse Secure to download and install licenses on this machine.

This auth code will be used to register this machine with Pulse Secure for uploading licensing analytics.

Download and Install

4. Now, go to the **License Summary** tab to view a list of licenses installed.

1	☐ Pulse Connect Secure License (VPN remote access) 1000 Named Users - Subscription 1 Year Pulse Connect Secure License (VPN remote access) 1000 Named Users - Subscription 1 Year	Subscription Expires: 363 days 19 hours
2	☐ Ivanti Connect Secure License (VPN remote access) 1000 Concurrent Sessions - 1 Year Subscription with Partner Gold support Key: Microsoft word docx file containing ivanti connect secure license key	Subscription Expires: 363 days 19 hours
3	☐ Ivanti Policy Secure License 1000 Concurrent Sessions - 1 Year Subscription with Partner Gold support Key: Microsoft word docx file containing ivanti policy secure license key	Subscription Expires: 363 days 19 hours
4	☐ Enables leasing of 100 core licenses on Ivanti (ISA or ISAV) licensing server - Subscription 1 Year Key: Microsoft word docx file containing ivanti isa/isav license key	Subscription Expires: 363 days 19 hours
5	☐ Pulse Policy Secure License 1000 Named Users - Subscription 1 Year Key: Microsoft word docx file containing pulse policy secure license key	Subscription Expires: 363 days 19 hours
6	☐ Enables leasing of 100 core licenses on Pulse Secure (PSA or VA) licensing server - Subscription 1 Year Key: Microsoft word docx file containing pulse psa/va license key	Subscription Expires: 363 days 19 hours
7	☐ Enables Managed Service Provider features on Pulse Secure (PSA or VA) licensing server - Subscription 1 Year Key: Microsoft word docx file containing pulse msp license key	Subscription Expires: 315 days 19 hours

5. To delete one or more licenses, select the corresponding check box(es) and click **Delete**.

Activating and Deactivating Emergency Mode

The emergency mode feature allows you to temporarily enable a system for a large number of users.

In emergency mode, you must first install an In Case of Emergency (ICE) license using the standard system license installation procedure. Then, when the emergency occurs, you can easily activate emergency mode through the system's web console. When your emergency has passed, you should then deactivate the emergency mode.

5. NSA Named User Licensing

The NSA Named User Licensing mode is introduced in 21.x release as part of the larger suite user licensing effort.

Supports different platforms and SKUs: The software supports the following platforms: ISA4000-V, ISA6000-V, and ISA8000-V, with different vCPUs, memory, and license capacity. The software also supports ICS SKUs and NSA Named User SKUs, which enable a certain number of named users on NSA.

Unified Access License (UAL): The Unified Access License offers benefits such as no need for core or MBR licenses, global license sharing, and built-in disaster recovery. It operates on a Named User basis, allowing connection from up to five devices with no limit on the number of gateways. It is a subscription model that includes software support and offers a good alternative to suites, providing dynamic elasticity, and aligning with SaaS transformation goals for VPN deployments.

Includes

- VPN
- ZTA
- NSA
- Virtual Appliances
- Connect from up to 5 Devices

Not needed in this model

- License Server
- ICE licenses
- MBR license

New User Login Case

When a new user tries to log in to a VPN gateway, then:

1. Gateway queries NSA to check if this user has a valid license.
2. If this user already has an assigned license in NSA then it responds back to gateway to allow the user to log in.
3. If this user new to NSA as well, then NSA checks if there are free licenses and assigns a free license to this user and responds back to gateway to allow user to log in.
4. If this user new to NSA as well and NSA has no free licenses, then user is not allowed to log in.

Existing User Login Case

1. If this user has already signed-in this gateway, then user is allowed as gateway caches the user from previous login.
2. Gateway reconciles with NSA to get all the valid users.

The benefits of Named User Licenses include:

- Promotes seamless ZTNA migration/adoption.
- Investment protection.
- No sizing challenges with respect to users.
- Reduces the number of appliances to manage (removes License server cluster).

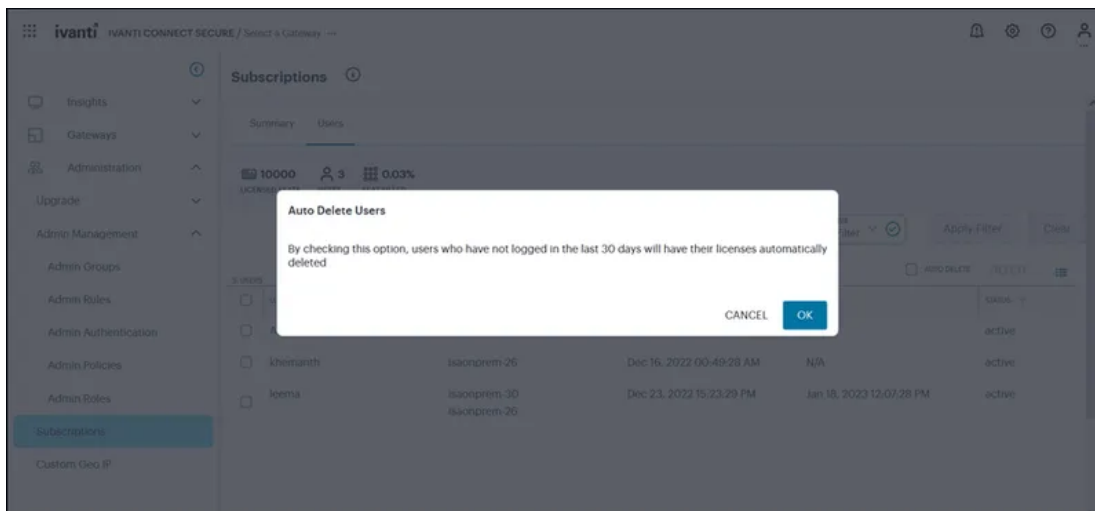
- Improves operational efficiency with a single SKU vs many SKUs in a PO.
- A good alternative to Suites.
- Dynamic elasticity.
- Aligns with SaaS transformation goals for VPN deployments.

In UAL for VPN deployments, every user gets a reserved license seat in NSA, managed by Neurons. User licenses are not directly installed on Gateways, removing the need for an additional License server or Platform/Core licenses for Virtual Appliances. It supports both PSA (9.X) and ISA (22.X) gateways. Connect Secure gateways check with Neurons for licenses before allowing a user to connect, with gateway-side caching for all subsequent logins.

To handle user logins at scale, license seat reservation is made asynchronous to allow a seamless user login experience. If a new user logs in and NSA has no free licenses, the login will be allowed but tracks the over usage. The NSA Named User model supports asynchronous license seat reservation.

UAL Licensing also offers the following features:

- Allows automatic deletion of users if they have not logged in last 30 days.
- Optimizes license usage.
- Normalize different user formats – Domain\Username, UPN, CN-User etc.



Named User Licensing Normalization

NSA named user licensing normalization feature allows a user to use different login formats - Domain\username, Common Name (CN), and User Principal Name (UPN) - from different devices, but consumes only one seat for the user. Single license is consumed instead of two through associating devices with users for Machine Cert Authentication and subsequent User Authentication. This feature is supported only for ICS 22.6R2 Gateway with ISAC 22.6R1 Client and later versions.

Device to User Normalization

When a device logs into an ICS Gateway, gateway checks if device entry exists in the local gateway cache.

- If device entry exists in gateway cache, device login is successful. Then request will not go through NSA, but will be handled in ICS Gateway.
- If device entry does not exist in gateway cache, gateway sends request to NSA to reserve a valid license.

- If this device login is for the first time, Device name and Device serial number are sent to NSA. This map is updated in NSA for reserving license for device first.
- If user login is from the registered device, NSA verifies Device serial number entry mapping and recognizes an existing map for that serial number with device.

- Device serial number map is done irrespective of any gateway that user tries to log in.
- User to device mapping from gateway is updated in NSA as part of normalization.

Differences Between Unified Access License and License Server

Unified Access License and License Server have several differences.

For example:

Unified Access License	License Server
Any number of virtual appliances can be deployed without the need for core licenses.	Additional core licenses are required per device.
MBR licenses are not required.	MBR licenses are required with License Server.
Licenses are shared globally across all devices.	Licenses must be allocated/leased per device.
UAL offers consolidated analytical data to reduce risks and implement actions based on risk scores.	License server does not offer consolidated analytical data.

6. ZTA Gateway Licensing

ZTA Licenses and subscriptions are added to the Controller by Ivanti. The Subscriptions page displays your licenses and subscriptions that are active on the Controller.

The Summary tab displays License/Subscription high-level details, including dates and usage metrics, for each subscription or license.

Subscriptions ⓘ

Summary Users

IN-ZTA-TRL-30D
Subscription ID: 7c84dfab-e65b-4951-9246-fdc6911c9067
Tenant ID: b95bf542e2cd40adbfe2a1f58bc82a06

Start date: Dec 01, 2022
End date: Dec 31, 2028
Subscription Status: over 4 years (72%) left
Registered seats: 106 / 5000 (2.12%) filled
USERS SEAT FILLED: 2.12%

Base Subscription features

CONTINUED ADAPTIVE RISK AND TRUST ASSESSMENT
Users security postures such as device compliance, location are being assessed continuously.

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The Named Users tab lists users and their devices registered on the Controller.

NSA named user licensing normalization feature allows a user to use different login formats - Domain\username, Common Name (CN), and User Principal Name (UPN) - from different devices but consumes only one seat for the user. Single license is consumed instead of two through associating devices with users for Machine Cert Authentication and subsequent User Authentication. This feature is supported only for ICS 22.6R2 Gateway with ISAC 22.6R1 Client and later versions.

Subscriptions ⓘ

Summary Users

5000
Licensed Seats
106
Users
2.12%
Seat Filled

USERNAME	NO OF DEVICES	LAST LOGIN	START DATE
	1	7 days	May 24, 2024
	1	2 days	Jun 10, 2023
	2	16 days	May 09, 2024
	1	1 day	Jul 16, 2024
	1	about 4 hours	Jul 11, 2024
	1	about 10 hours	Nov 21, 2023
	1	3 days	Aug 05, 2024
	1	about 19 hours	Jul 10, 2024

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7. Grace Period

Grace period allows gateways to maintain connectivity for end users even when the NSA is temporarily unavailable. A grace period of 5 days is provided, during which new user logins can continue without interruption.

How it Works

New User Logins: Only new user license seat reservation requests are sent to the NSA.

Existing Users: Existing user sessions are managed using the local gateway cache, ensuring that they remain unaffected by NSA availability.

ICS Gateway versions prior to 22.7R2.2

The grace period is triggered based on the notification channel status:

Notification channel is Green: When the channel is reachable, the user license seat reservation request is sent to the NSA.

Notification channel is Red: When the channel is not reachable, the grace period is triggered to enable new user logins. During this time, no requests are sent to the NSA.

ICS Gateway versions 22.7R2.2 onwards

The grace period will now also be triggered if the user license seat reservation API fails. This ensures seamless operation even during temporary service disruptions, providing more robust support for user logins during such periods.

Grace Period Duration

Platform	Pulse Cloud Licensing Service (PCLS)	Licensing Server (LS)	Neurons Secure Access licensing mode	Grace period duration
ISA-V / PSA-V with subscription licenses	Lost connectivity to PCLS	NA	NA	24 days
ISA-V / PSA-V / ISA / PSA	NA	Lost connectivity to LS	NA	10 days
ISA / ISA-V	NA	NA	Lost connectivity to Neurons Secure Access platform	* Existing Users continue to login. * New Users - 5 days grace period.

Cluster Grace Period Duration

Platform	Cluster	Feature license	Grace period duration
ISA / PSA / ISA-V / PSA-V	When a node fails what is the grace period for Concurrent Users	When a node fails what is the grace period for Concurrent Users	10 days
ISA / ISA-V	NA	NA	10 days

- Ivanti recommends using standalone nodes or clusters of a maximum of two nodes behind a load balancer.
- Ivanti Security Appliance (ISA)/ISA-V **does not** support clusters containing more than two nodes for ICS.

Virtual License Server Grace Period Duration

ISA hardware or ISA-V running 22.1 and above can act as a licensing server; 22.x and later release supports leasing licenses through License Server. For a virtual license server deployment, a platform / core license is not required. Only a "license server" license is required. If the licensing server is deployed as part of a cluster, then only a single node requires the "license server" license.

Only a single node on the Licensing Server requires the concurrent users or feature licenses. If a node fails on the Licensing Server cluster, grace period is **20** days for which the other node can lease licenses both concurrent user and feature licenses.

Secure Access Platform Grace Period

Platform - Secure Access Platform	License expired / Grace period
ZTA subscription license	No grace period
ICS subscription license	31 days

8. Licensing on License Server Cluster (A/P)

A LICENSE-SVR license must be installed on at least one node in the cluster that will work in a cluster node fail-over scenario.

If any node in the cluster has a LICENSE-SVR license, the entire cluster shifts to LICENSE-SVR mode.

The active node should be able to lease all of the licenses installed on both nodes.

Let us say, if node-1 has LICENSE-SVR license and node-2 does not. If node-1 goes down, then node-2 gets to lease all the licenses, till the 20-day grace period. After 20-days, node-2 can lease only the licenses installed on it.

Cluster Splits								
Server License Installed on	Both Nodes				Only Node A			
	Within Grace Period		Beyond Grace Period		Within Grace Period		Beyond Grace Period	
Features	User Traffic	License Leasing	User Traffic	License Leasing	User Traffic	License Leasing	User Traffic	License Leasing
Behavior for Node A	No	Yes	No	Yes	No	Yes	No	Yes
Behavior for Node B	No	Yes	No	Yes	No	Yes	No	Yes

Key Points About Licenses in a Cluster

- Within a cluster, user licenses are shared among all nodes.
- Licenses are additive in cluster. The total user count would be sum of all nodes in the cluster.
- Install licenses equally on each node in the cluster.
- Careful consideration should be taken when removing a node from a cluster. Removing a node will impact the total number of users.

Reason for Installing Licenses Equally in a Cluster

The reason is to prevent loss of user count during node failure. A node can only borrow up to two times (2x) the total number of licenses installed on the device locally for a 10-day grace period. After 10-day period, the user count will revert to the total number of licenses installed locally.

If the licenses are evenly distributed in the cluster, the user count will remain the same regardless which node fails. If the licenses are unevenly distributed in the cluster, the user count will be different depending on which node fails (Refer to Scenario A and B for examples).

For example:

- Node_108 = 35 user license
- Node_109 = 100 user license

When clustered, the total number of users is 135 (35 + 100 = 135).

Scenario A:

If Node_109 goes down, the total number of licenses would be 70 users. ($35 \times 2 = 70$).

The maximum number of users will be 70 for the 10-day grace period. After the grace period expires, the user count will drop to 35 users.

Scenario B:

If Node_108 goes down, the total number of licenses would be 135 users ($100 + 35 = 135$).

The maximum number of users will be 135 user for the 10-day grace period. After the grace period expires, the user count will drop to 100 users.

Why is the calculation different?

In this scenario, the device can only borrow up to the total number of user licenses in the cluster. This means instead of ($100 \times 2 = 200$), it will only ($100 + 35 = 135$).

How license count is impacted when removing a node from a cluster?

If a node is removed from an existing cluster, this will decrease the total user count. For example:

- Node A = 100
- Node B = 100

The total user count would be 200 ($100 + 100$). If Node B is removed from the cluster, this will drop the total number to 100 as Node B is no longer part of the cluster.

9. Frequently Asked Questions

- [Can I set up a Disaster Recovery site and transfer current licenses on the DC Cluster site to a license server?](#)
- [Can we surrender the current perpetual licenses on the hardware cluster and transfer them to a new license server?](#)
- ["Exceeded maximum users for this realm. Please contact your system administrator"](#)

Can I set up a Disaster Recovery site and transfer current licenses on the DC Cluster site to a license server?

There is an Active/Passive cluster setup in the primary DC having perpetual ICS licenses hosted on ISA6000 hardware appliances. They are now setting up a Disaster Recovery (DR) site where they will be setting up another appliance and want the flexibility to re-allocate licenses when required using a license server. They also wish to transfer the current licenses on the DC cluster to a license server and purchase additional licenses. Is this possible?

A. With MBR license, hardware appliances with perpetual or subscription licenses could 'share' these 'up' to the license server which could then distribute them as normal – either back to the same appliance or share them to others; a DR appliance for example.

Can we surrender the current perpetual licenses on the hardware cluster and transfer them to a new license server?

A. Assuming the MBR exists for ISA platform, then yes; the licenses stay installed on the hardware cluster, but each day (configurable interval) the hardware appliance lend their licenses to the license-server, for it to lease out as normal, as if they were installed on the license server.

The hardware appliance can 'pull them back' if needed, and if the license-server goes offline the licenses will still be on the hardware cluster.

- The licenses surrendered by the license client to the license server is valid for a period of 10 days.
- Every lease interval (of 4 hours), the time gets updated to 10 days (from the last successful contact with the license server).
- In addition to on-demand recall,
 - In case, the license server becomes unreachable, the license client automatically takes back the surrendered license, if the license server is not reachable for > 10 days.
 - Similarly, the license server also removes the surrendered license from its license pool, if the license client did not contact for >10 days.
- To forcefully take back the licenses, the admin has to remove the license server config on the license client.

"Exceeded maximum users for this realm. Please contact your system administrator"

Imported config from the current cloud VM on a fresh hardware appliance (in remote DC, no console server yet....). No licenses are installed yet (so limited to 2). On both admin realms, getting the message: "Exceeded maximum users for this realm. Please contact your system administrator".

A. Workaround: The issue is due to limiting the users for a realm (User Realms > Users > Authentication Policy > Limits). So, use "Super Admin" session to install required licenses (EVAL will do).