



Process Expert

Licensing Guide

Original instructions

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As part of a group of responsible, inclusive companies, we are updating our communications that contain non-inclusive terminology. Until we complete this process, however, our content may still contain standardized industry terms that may be deemed inappropriate by our customers.

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Safety Information

Important Information


Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.




The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.




This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.


DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.


WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.


CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

About the Book

Document Scope

This document describes how to use Schneider Electric licensing software in the EcoStruxure Process Expert infrastructure.

It also contains general information about AVEVA Plant SCADA Enterprise licensing and available licenses.

NOTE: Read and understand this manual before installing and using the software.

Validity Note

This document has been updated for the release of EcoStruxure Process Expert 2023.

The characteristics that are described in the present document, as well as those described in the documents included in the Related Documents section below, can be found online. To access the information online, go to the Schneider Electric home page www.se.com/ww/en/download/.

The characteristics that are described in the present document should be the same as those characteristics that appear online. In line with our policy of constant improvement, we may revise content over time to improve clarity and accuracy. If you see a difference between the document and online information, use the online information as your reference.

Related Documents

Title of documentation	Reference number
EcoStruxure™ Process Expert, Security Deployment Guide	EIO0000004234 (ENG)
Schneider Electric, Floating License Manager, User Manual	EIO0000001078 (ENG) EIO0000001082 (SPA) EIO0000001081 (ITA) EIO0000001079 (FRE) EIO0000001080 (GER) EIO0000001083 (CHS)
EcoStruxure™ Process Expert, Installation and Configuration Guide	EIO0000001255 (ENG)
EcoStruxure™ Process Expert, User Guide	EIO0000001114 (ENG)

mySchneider Support Portal

Visit <https://www.se.com/myschneider> for support, software updates, and latest information on EcoStruxure Process Expert.

Product Related Information

⚠ WARNING

LOSS OF CONTROL

- Perform a Failure Mode and Effects Analysis (FMEA), or equivalent risk analysis, of your application, and apply preventive and detective controls before implementation.
- Provide a fallback state for undesired control events or sequences.
- Provide separate or redundant control paths wherever required.
- Supply appropriate parameters, particularly for limits.
- Review the implications of transmission delays and take actions to mitigate them.
- Review the implications of communication link interruptions and take actions to mitigate them.
- Provide independent paths for control functions (for example, emergency stop, over-limit conditions, and error conditions) according to your risk assessment, and applicable codes and regulations.
- Apply local accident prevention and safety regulations and guidelines.¹
- Test each implementation of a system for proper operation before placing it into service.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

¹ For additional information, refer to NEMA ICS 1.1 (latest edition), *Safety Guidelines for the Application, Installation, and Maintenance of Solid State Control* and to NEMA ICS 7.1 (latest edition), *Safety Standards for Construction and Guide for Selection, Installation and Operation of Adjustable-Speed Drive Systems* or their equivalent governing your particular location.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Only use software approved by Schneider Electric for use with this equipment.
- Update your application program every time you change the physical hardware configuration.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

The examples in this manual are given for information only.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

Adapt examples that are given in this manual to the specific functions and requirements of your industrial application before you implement them.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Terminology Derived from Standards

The technical terms, terminology, symbols and the corresponding descriptions in this manual, or that appear in or on the products themselves, are generally derived from the terms or definitions of international standards.

In the area of functional safety systems, drives and general automation, this may include, but is not limited to, terms such as *safety*, *safety function*, *safe state*, *fault*, *fault reset*, *malfunction*, *failure*, *error*, *error message*, *dangerous*, etc.

Among others, these standards include:

Standard	Description
IEC 61131-2:2007	Programmable controllers, part 2: Equipment requirements and tests.
ISO 13849-1:2015	Safety of machinery: Safety related parts of control systems. General principles for design.
EN 61496-1:2013	Safety of machinery: Electro-sensitive protective equipment. Part 1: General requirements and tests.
ISO 12100:2010	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 60204-1:2006	Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 14119:2013	Safety of machinery - Interlocking devices associated with guards - Principles for design and selection
ISO 13850:2015	Safety of machinery - Emergency stop - Principles for design
IEC 62061:2015	Safety of machinery - Functional safety of safety-related electrical, electronic, and electronic programmable control systems
IEC 61508-1:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: General requirements.
IEC 61508-2:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Requirements for electrical/electronic/programmable electronic safety-related systems.
IEC 61508-3:2010	Functional safety of electrical/electronic/programmable electronic safety-related systems: Software requirements.
IEC 61784-3:2016	Industrial communication networks - Profiles - Part 3: Functional safety fieldbuses - General rules and profile definitions.
2006/42/EC	Machinery Directive
2014/30/EU	Electromagnetic Compatibility Directive
2014/35/EU	Low Voltage Directive

In addition, terms used in the present document may tangentially be used as they are derived from other standards such as:

Standard	Description
IEC 60034 series	Rotating electrical machines
IEC 61800 series	Adjustable speed electrical power drive systems
IEC 61158 series	Digital data communications for measurement and control – Fieldbus for use in industrial control systems

Finally, the term zone of operation may be used in conjunction with the description of specific hazards, and is defined as it is for a hazard zone or danger zone in the Machinery Directive (2006/42/EC) and ISO 12100:2010.

NOTE: The aforementioned standards may or may not apply to the specific products cited in the present documentation. For more information concerning the individual standards applicable to the products described herein, see the characteristics tables for those product references.

Using Licenses with EcoStruxure Process Expert

Licensing Mechanisms

Overview

Activating EcoStruxure Process Expert licenses by using Schneider Electric licensing software is required to use the software.

To use Supervision components, such as AVEVA Plant SCADA operation servers, you also need to activate the necessary AVEVA licenses by using AVEVA Enterprise licensing software.

When you upgrade EcoStruxure Process Expert (herein, the software), you may need to [update, page 24](#) your licenses.

EcoStruxure Process Expert licenses are generally backward compatible; you can use them with earlier supporting versions of the software. Some restrictions may apply. Refer to the platform *Release Notes* for details.

Familiarize yourself with the EcoStruxure Process Expert infrastructure (see *EcoStruxure™ Process Expert, Installation and Configuration Guide*). This helps you identify the licensing deployment strategy that is adapted to your needs.

Licensing Software

- For EcoStruxure Process Expert licenses, the mechanism involves using the following two software applications:
 - The Schneider Electric Floating License Manager (FLM): Allows you to activate the licenses on a computer. This computer has the role of *Enterprise license server*.
 - The Schneider Electric License Manager (LM): Indicates to the EcoStruxure Process Expert system server and the Control Participant on which computer the FLM that hosts the required licenses is installed.
- For AVEVA licenses, the mechanism involves using the AVEVA Enterprise License Manager and License Server.

For details, refer to the *AVEVA Enterprise Licensing Guide*.

Both software are installed when you install EcoStruxure Process Expert.

30-Day Trial Period

You can use the software for 30 days for evaluation purposes without activating a software license. The trial period starts the first time you start the system server. During this period, the full functionality is available except for the following:

- The instance count (see *EcoStruxure™ Process Expert, User Guide*) is limited to 200.
- Usage rights correspond to those of a Mini license, [page 13](#).

Before the trial period expires, you need to order one or more [licenses, page 13](#) and [activate, page 24](#) them to continue using the software features that you need.

After you have activated an EcoStruxure Process Expert license, you must restart the system server.

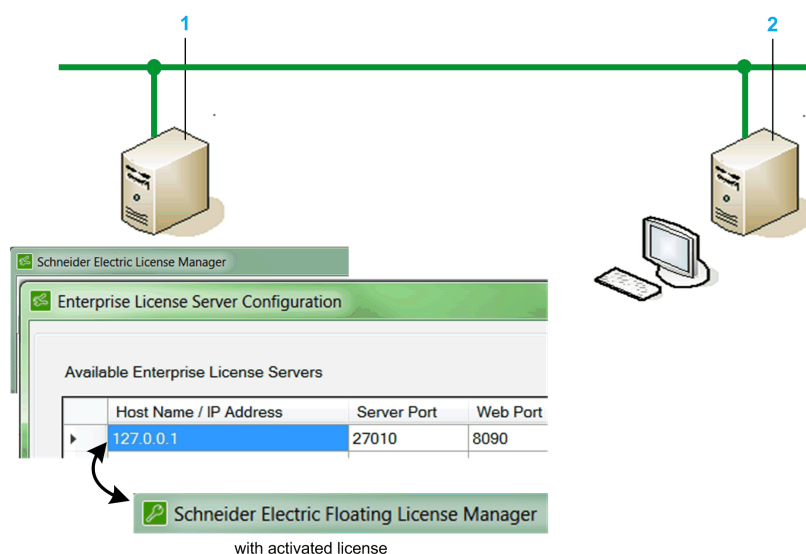
In case a license for Control Expert XL is already activated on the computer, the Participant services that are provided by Control Expert embedded in EcoStruxure Process Expert during the trial period are impacted as described in the following table:

License type and status	Impact on Participant services
Trial license, which is still valid	Services are available only for the remaining license validity period.
Trial license, which is expired	<p>No Participant services are available during the trial period.</p> <p>A solution consists in installing the FLM or Control Expert on a computer on which no Control Expert trial license has been activated.</p> <p>NOTE: Removing Control Expert does not reset the trial license.</p>
Commercial license, which is still valid	Participant services are available without trial period.

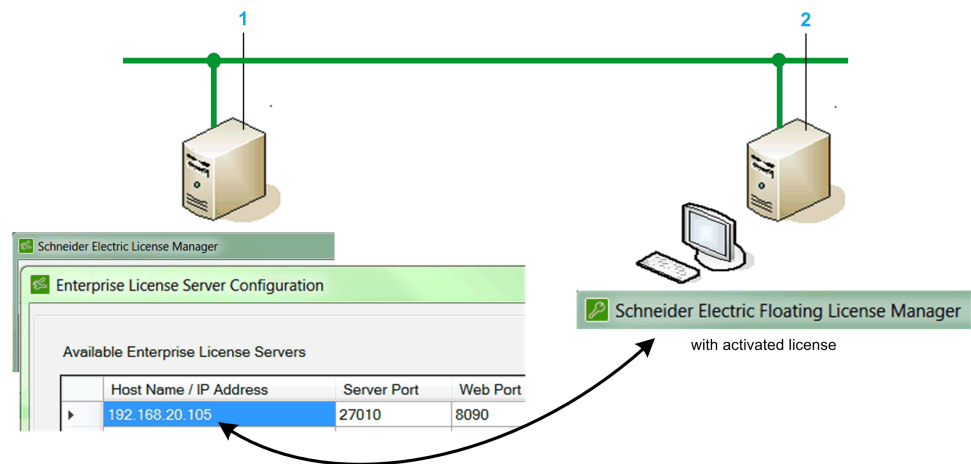
NOTE: If the trial period has expired from EcoStruxure Process Expert, a trial period is no longer available when you upgrade the software with the same license.

Licensing Configuration Examples

The following example shows the default configuration where the Schneider Electric LM and FLM are installed on the same computer. The LM provides license rights to the system server by connecting to the local FLM on which a license is activated.



The following example shows a custom configuration where the FLM is installed on another computer. The LM provides license rights to the system server by connecting to the remote FLM on which the necessary license is activated. The FLM is identified by the IP address of the computer on which it is installed.



Item	Description
1	Computer running the EcoStruxure Process Expert system server and Control Expert, which require a license for themselves and for connecting clients.
2	Computer connected to the same network as the system server. Clients and/or other software may be installed.

Prerequisites

The following are required to proceed with the activation of EcoStruxure Process Expert licenses:

- The FLM is installed on the computer on which you want to activate your licenses (the Enterprise license server).
- The Activation IDs that you have received by e-mail.
- The Enterprise license server or at least one other computer has Internet access.

NOTE: You can activate licenses on more than one computer, page 17.

Guidelines

For a high level of availability and flexibility, do the following:

- Do not activate your licenses on the same computer. If a single Enterprise license server goes out of service or becomes unreachable, your licenses become unavailable.
For example, you can group licenses for engineering and Supervision and activate them on separate license server computers.
- Verify that the network connections between EcoStruxure Process Expert components, Supervision components, and the license server computers are working properly.
- Configure only one Enterprise license server, page 16 in the LM of the system server computer.
- If you use redundant operation servers, verify that you have the necessary licenses to allow a seamless switchover.

NOTE: When you run more than one EcoStruxure Process Expert infrastructure (for example, two system servers with one or more clients connecting to each server), activate licenses for each infrastructure on separate Enterprise license servers.

This also applies to application size licenses.

License Acquisition Mechanisms

The various components of an EcoStruxure Process Expert infrastructure verify the availability of licenses in the following way:

- The system server: Accesses licenses that are activated on the Enterprise license server whose IP address is configured in the local LM. If you have configured several Enterprise license servers, page 17, they are scanned in the order they appear in the **Enterprise License Server Configuration** window of the local LM until a valid license is found.

The system server verifies license availability for software components at startup and then every 15 minutes.

- Engineering and operation clients: Access licenses directly through their connection to the system server.

Licenses are allocated to clients that require them on a first come, first served basis.

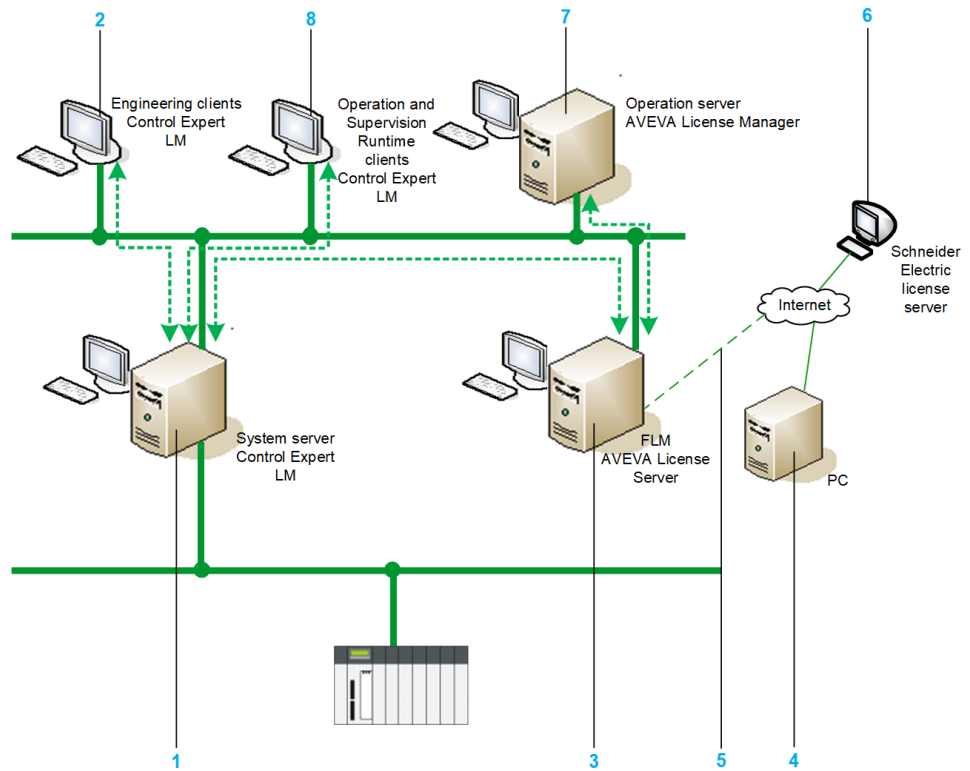
- Control Expert: Accesses licenses that are activated on the Enterprise license server whose IP address is configured in the local LM.

NOTE: If a license request cannot be fulfilled or a license that is being used becomes unavailable, the software displays notifications, page 26.

For AVEVA Plant SCADA Supervision components:

- Runtime servers (I/O, alarm, trend, and report servers): Acquire licenses that are activated on the AVEVA License Server, which has been configured for the product by using the Configurator. For details, refer to the *AVEVA Enterprise Licensing Guide*.
- Supervision clients: Poll runtime servers and use the license of the first server that responds with a valid license.

The following figure illustrates the license acquisition mechanisms used by EcoStruxure Process Expert and AVEVA Plant SCADA components.



Item	Description
1	EcoStruxure Process Expert system server and Control Expert: Acquire license rights from the Schneider Electric Enterprise license server through the network connection. The IP address of the Enterprise license server is configured in the local LM.
2	EcoStruxure Process Expert engineering clients acquire license rights through their network connection with the system server. Control Expert uses the local LM to connect to the FLM.
3	Schneider Electric Enterprise license server and AVEVA Enterprise license server: Host licenses by using the FLM and the AVEVA License Server respectively. To use the activation method by Web for EcoStruxure Process Expert licenses, the computer needs to be connected temporarily to the Internet for the FLM to establish a connection with the Schneider Electric license server to register the licenses. In the absence of Internet connection, the activation by Web portal allows using any other computer (for example, 4) that is connected to Internet to register the licenses with the Schneider Electric license server.
4	Computer connected to the Internet. The connection can be temporary.
5	Internet connection.
6	Schneider Electric license server.
7	Operation server: In this example, the AVEVA License Manager is configured to use the AVEVA Enterprise license server computer to acquire license rights. To use the online activation of AVEVA licenses, the computer needs to be connected temporarily to the Internet for the AVEVA License Manager to establish a connection with the AVEVA Enterprise Activation Server. An offline activation method is also available.
8	EcoStruxure Process Expert operation clients acquire license rights through their network connection with the system server. Supervision runtime clients acquire license rights through their network connection with the operation server. Control Expert uses the local LM to connect to the FLM.

Types of Licenses

The tables outline the various types of licenses that are available and the rights that they entitle to.

- Enduser licenses

License type	Usage rights	Description
System server license	1	Includes rights for ⁽⁴⁾ : <ul style="list-style-type: none"> • 1 system server • 1 engineering client • 5 EcoStruxure Control Expert⁽²⁾ • Operation clients (required to use runtime navigation services (RTNS)) • 4 EcoStruxure OPC UA Server Expert⁽³⁾
Operation server license	1	Includes rights for ⁽¹⁾ : <ul style="list-style-type: none"> • 1 operation server
Engineering client license	1	Additional engineering client license. Includes rights for: <ul style="list-style-type: none"> • 1 engineering client • 5 EcoStruxure Control Expert⁽²⁾
AVEVA Plant SCADA Supervision client licenses	1	Required to use runtime navigation services. Different types are available ⁽¹⁾ : <ul style="list-style-type: none"> • 1 Supervision control client • 1 Supervision view-only client • Licenses for redundant operation server configurations: <ul style="list-style-type: none"> ◦ 1 redundant Supervision control client ◦ 1 redundant Supervision view-only client
Mini license	1	All-in-one license for 1 computer, which includes rights for ⁽¹⁾ : <ul style="list-style-type: none"> • 1 system server • 1 engineering client • Operation clients (required to use runtime navigation services (RTNS)) • 5 EcoStruxure Control Expert⁽²⁾ • 4 EcoStruxure OPC UA Server Expert⁽³⁾ • 1 operation server • Application size rights for 200 or 500 instances

License type	Usage rights	Description
Application size license	For 1 system server	1 license is required per system server in addition to any engineering license. Several sizes are available based on instance count (see <i>EcoStruxure™ Process Expert, User Guide</i>) per system server.
<p>(1) Rights for Supervision components are valid for AVEVA Plant SCADA 2023 and provided in the form of AVEVA licenses, which must be activated by using the AVEVA License Server.</p> <p>The following licenses are available for use with earlier, supported versions of the Supervision software. They must be ordered separately and activated by using the Schneider Electric Floating License Manager:</p> <ul style="list-style-type: none"> • Operation server license • Supervision client license (control and view-only types) • Redundant operation configuration license (control and view-only types) <p>Rights for SCADA OPC DA server and OFS DA server are included with the operation server license. Contact your local Schneider Electric representative to request or renew your license, if necessary.</p> <p>(2) One license allows using several instances on the same computer.</p> <p>(3) The rights can only be used together with the system server license. To activate these rights separately, you need to order individual EcoStruxure OPC UA Server Expert licenses.</p> <p>(4) The license supports a distributed architecture. The system server and client stations (engineering and operation) each use one EcoStruxure Control Expert license for Participant services. To use the Operation Client Viewer (RTNS) on more operation stations concurrently, you need to order additional individual EcoStruxure Control Expert licenses.</p>		

- Development and educational licenses

License type	Usage rights	Description
Development		
System integrator license	1	<p>1-year license.</p> <p>Includes rights for⁽¹⁾⁽⁴⁾:</p> <ul style="list-style-type: none"> 1 system server 1 engineering client 5 EcoStruxure Control Expert⁽²⁾ 4 EcoStruxure OPC UA Server Expert⁽³⁾ Operation clients (required to use runtime navigation services (RTNS)) Unlimited application size rights 1 operation server 7 Supervision control and 7 view-only clients <p>The license supports a distributed infrastructure.</p> <p>NOTE: Development License is indicated in the UI when this license type is activated.</p>
Educational		
Education license	1	<p>Includes rights for⁽¹⁾⁽⁴⁾:</p> <ul style="list-style-type: none"> 1 system server Multiple engineering clients 5 EcoStruxure Control Expert⁽²⁾ Operation clients (required to use runtime navigation services (RTNS)) 4 EcoStruxure OPC UA Server Expert⁽³⁾ Several operation servers Several Supervision control and view-only clients Application size license for 3,000 instances <p>Supervision components are limited to 8 hours of continuous use (resettable).</p> <p>NOTE: Reserved for use by educational entities.</p>
<p>(1) Rights for Supervision components are valid for AVEVA Plant SCADA 2023 and provided in the form of AVEVA licenses, which must be activated by using the AVEVA License Server.</p> <p>The following licenses are available for use with earlier, supported versions of the Supervision software. They must be ordered separately and activated by using the Schneider Electric Floating License Manager:</p> <ul style="list-style-type: none"> Operation server license Supervision client license (control and view-only types) Redundant operation configuration license (control and view-only types) <p>Rights for SCADA OPC DA server and OFS DA server are included with the operation server license. Contact your local Schneider Electric representative to request or renew your license, if necessary.</p> <p>(2) One license allows using several instances on the same computer.</p> <p>(3) The rights can only be used together with the system server license. To activate these rights separately, you need to order individual EcoStruxure OPC UA Server Expert licenses.</p> <p>(4) The license supports a distributed architecture. The system server and client stations (engineering and operation) each use one EcoStruxure Control Expert license for Participant services. To use the Operation Client Viewer (RTNS) on more operation stations concurrently, you need to order additional individual EcoStruxure Control Expert licenses.</p>		

NOTE: You can activate licenses that have more than one usage right on several Enterprise license servers.

Configuring the Enterprise License Server

Default Enterprise License Server Configuration

When you install the Schneider Electric FLM and the LM on the same computer, by default, the FLM configures IP address 127.0.0.1 in the LM so that the Enterprise license server is the local computer.

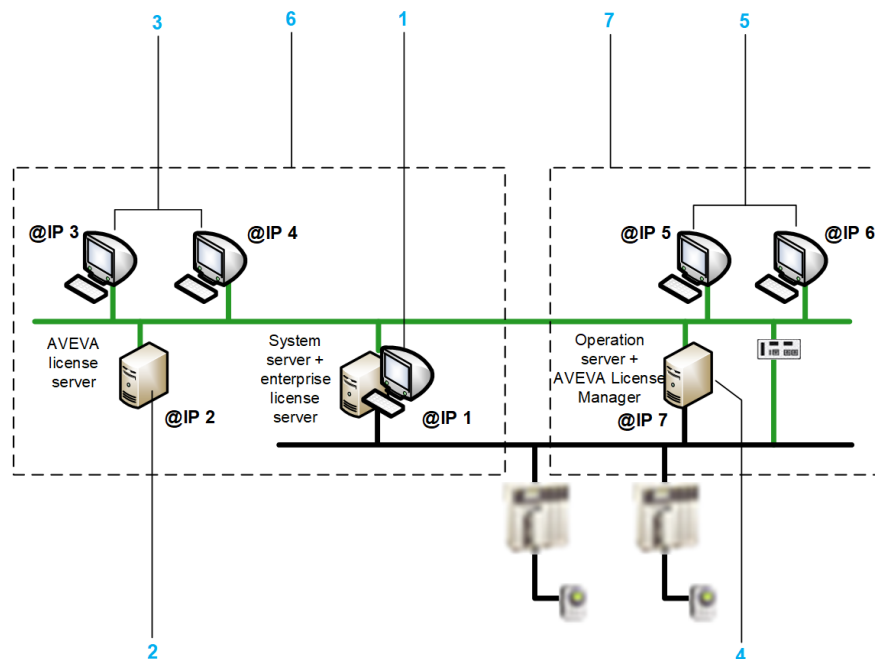
To use this default configuration when you install the system server, install the FLM on the computer.

NOTE: If the LM is already installed on the computer and you have configured one or more IP addresses of Enterprise license servers other than 127.0.0.1, when the FLM is installed or updated on this computer, IP address 127.0.0.1 (localhost) is added in first position in the LM. The IP addresses that were already configured are shifted to position 2 and lower in the same order. If IP address 127.0.0.1 was already configured in the LM, no change is made.

Enterprise License Server in an EcoStruxure Process Expert Infrastructure

To determine how many Enterprise license servers are needed, and which computers should have this role, it is necessary that you familiarize yourself with the software and hardware architecture. For more information, refer to the topic describing the EcoStruxure Process Expert infrastructure (see *EcoStruxure™ Process Expert, Installation and Configuration Guide*).

The following figure shows a distributed architecture where EcoStruxure Process Expert, Supervision software, Schneider Electric and AVEVA licensing software are installed on separate computers connected to an Ethernet network. Because in this architecture both engineering and runtime activities are performed, two license server computers are used to host licenses.



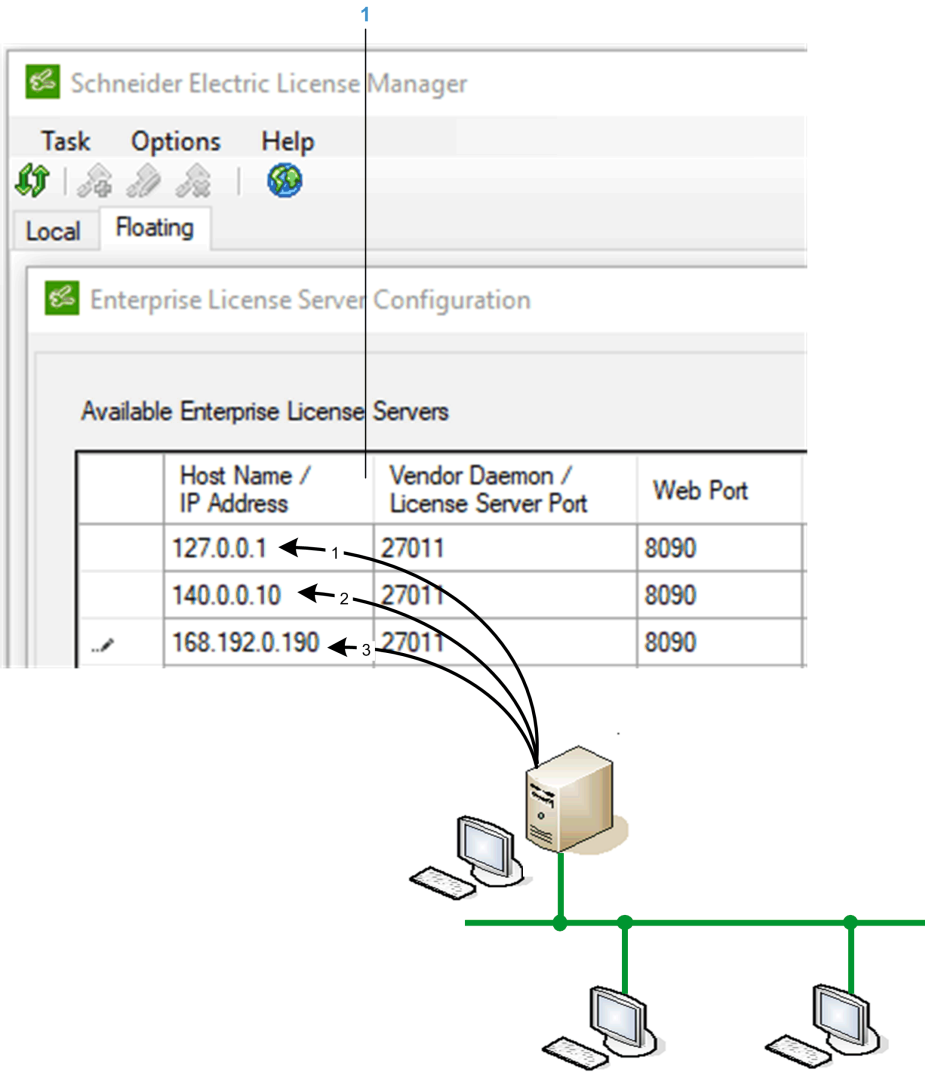
Item	Computer role	Installed software	LM configuration	Comment
1	System server Enterprise license server with licenses for: <ul style="list-style-type: none"> System server Engineering clients Operation clients 	<ul style="list-style-type: none"> System server LM and FLM 	127.0.0.1 (default) for system server and engineering/operation clients	–
2	AVEVA license server with a license for the operation server	AVEVA License Server	N/A	–
3	Engineering stations	<ul style="list-style-type: none"> Engineering client Control Expert LM 	IP1 for Control Expert	The LM is required by Control Expert only
4	Operation server	<ul style="list-style-type: none"> Operation server AVEVA License Manager 	Computer name of the AVEVA license server	–
5	Operator stations	<ul style="list-style-type: none"> Supervision client Operation client Control Expert LM 	IP1 for Control Expert	–
6	Control room 1			
7	Control room 2			

Considerations When Using Several Enterprise License Server

It is possible to configure the Schneider Electric LM of the computer on which the system server is installed with several Enterprise license servers.

In such case, during startup, the system server connects to the license servers that appear in the **Host Name / IP Address** column in the order they are listed (from top to bottom) until it detects the necessary licenses, page 13 on an FLM.

However, if any of the configured Enterprise license server is not reachable, independently of its position in the list, the system server start-up time is increased by several minutes.



Item	Description
1	You can change the order of the Enterprise license servers that appear in the LM by using the sort button. It appears when you click the column header. This changes the connection sequence.

Configuring An Enterprise License Server

- To configure a computer to be the Enterprise license server for EcoStruxure Process Expert:
- Install the FLM on the computer that is to become the Enterprise license server and activate your licenses.
 - In the LM of the system server computer, configure the IP address and the vendor daemon/license server port of the Enterprise license server.
- The table describes the procedure to configure an Enterprise license server in the LM that is installed on the system server computer.

Step	Action
1	On the system server computer, open the License Manager by clicking, from the Windows Start menu Schneider Electric License Manager > License Manager .
2	Click the Floating tab.

Step	Action
3	Click Configure . Result: The Enterprise License Server Configuration window opens.
4	In the Enterprise License Server Configuration window, enter parameter values in their respective fields: <ul style="list-style-type: none"> • Host Name/IP Address: 127.0.0.1 (if the FLM is installed on the same computer) or IP address of another computer acting as Enterprise license server (computer on which you have installed the FLM and activated licenses). • Vendor Daemon / License Server Port: 27011⁽¹⁾ (default value, corresponds to the license server port of the FLM) • Web Port: 8090
5	To configure additional Enterprise license servers, enter their IP address in the other rows. Enter the appropriate port parameter values for each one.
6	Click OK .
7	Close the License Manager.
8	Verify that the computer can communicate with the Enterprise license servers that you have configured.
(1) Enter a value that matches either the vendor daemon port (default value 27010) or the license server port of the FLM, page 19, especially if you have installed it separately on a computer or by using the installation package of a different software. This setting is independent of the IP address that you are using.	

Verifying the Vendor Daemon/License Server Port and Web Port Setting of the FLM

The table describes how to verify which vendor daemon, license server, and Web ports are used by the Floating License Manager.

Step	Action
1	Open the Floating License Manager by clicking, from the Windows start menu Schneider Electric Floating License Manager > Floating License Manager .
2	In the toolbar, click the Open FLEXnet License Administrator icon. Result: The FlexNet Publisher page opens in the default web browser.
3	Click Administration and sign in by using your Windows account credentials. If you are logged on to a domain, use the format <i>Domain\Username</i> in the User Name field; otherwise, <i>Domain</i> is the computer name for a local account. Result: <ul style="list-style-type: none"> • The license server port that is used by the FLM appears under License Server Manager Port in Use in the System Information tab. • The vendor daemon port that is used by the FLM appears under Port in the Vendor Daemon Configuration tab. • The Web port that is used by the FLM appears under Web Server Configuration, HTTP Port in the Server Configuration tab.
4	Sign out and close the FlexNet Publisher page.

License Deployment Examples

Overview

With the use of examples, this topic describes some common license deployment strategies and outlines the EcoStruxure Process Expert license requirements depending on the number of users working simultaneously.

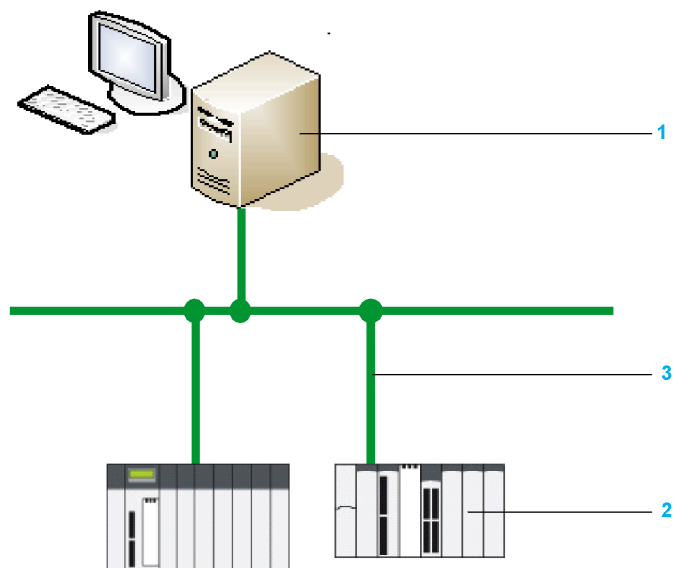
It also describes the configuration of the Schneider Electric Enterprise license server (on which the FLM is installed) and LM.

Use these examples as a guideline to define the license deployment strategy that is adapted to your needs and the resulting license requirements.

All-In-One Architecture

The all-in-one architecture is a common small engineering configuration for a single user.

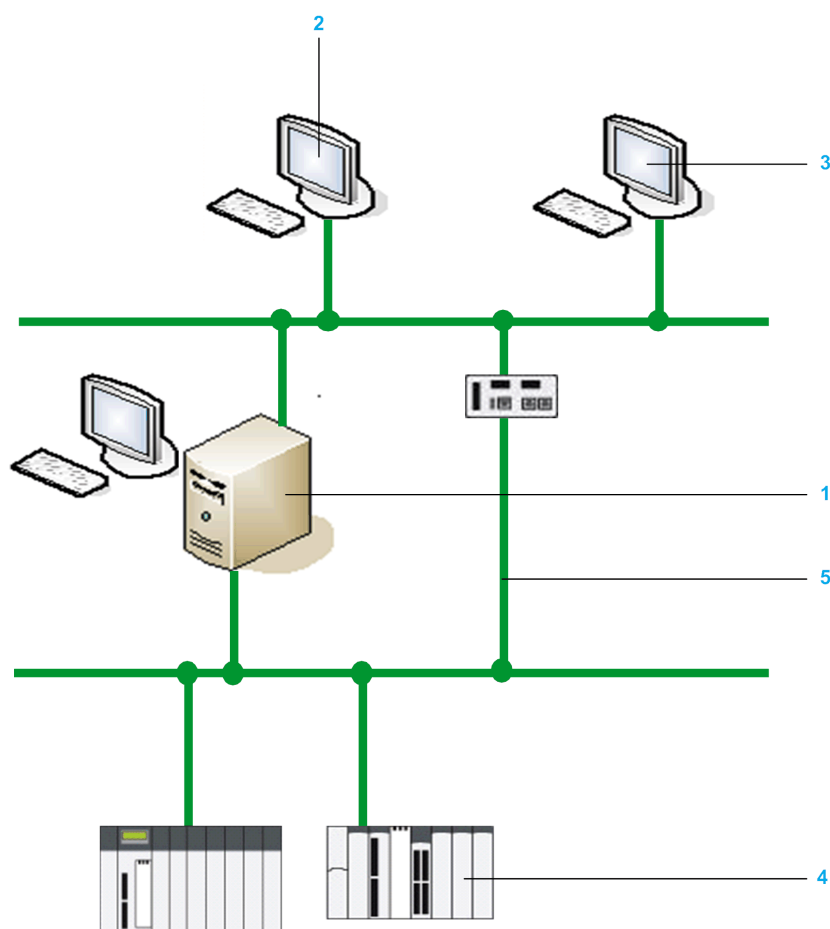
The following figure shows an architecture where the EcoStruxure Process Expert and Supervision software components are installed on one computer.



Item	Computer role	Installed software	Activated licenses	Comment
1	System server and engineering station Operation server and operator station Schneider Electric Enterprise license server AVEVA license server	System server 1 engineering and 1 operation client Control Expert Operation server and 1 Supervision control client Schneider Electric LM and FLM AVEVA License Server and License Manager	Either of: <ul style="list-style-type: none"> 1 system integrator license (1 usage right) 1 Mini license 1 system server, 1 operation server, 1 Supervision control client licenses 	Default LM and AVEVA License Manager settings
2	Controllers			
3	Control network			

Engineering Architecture

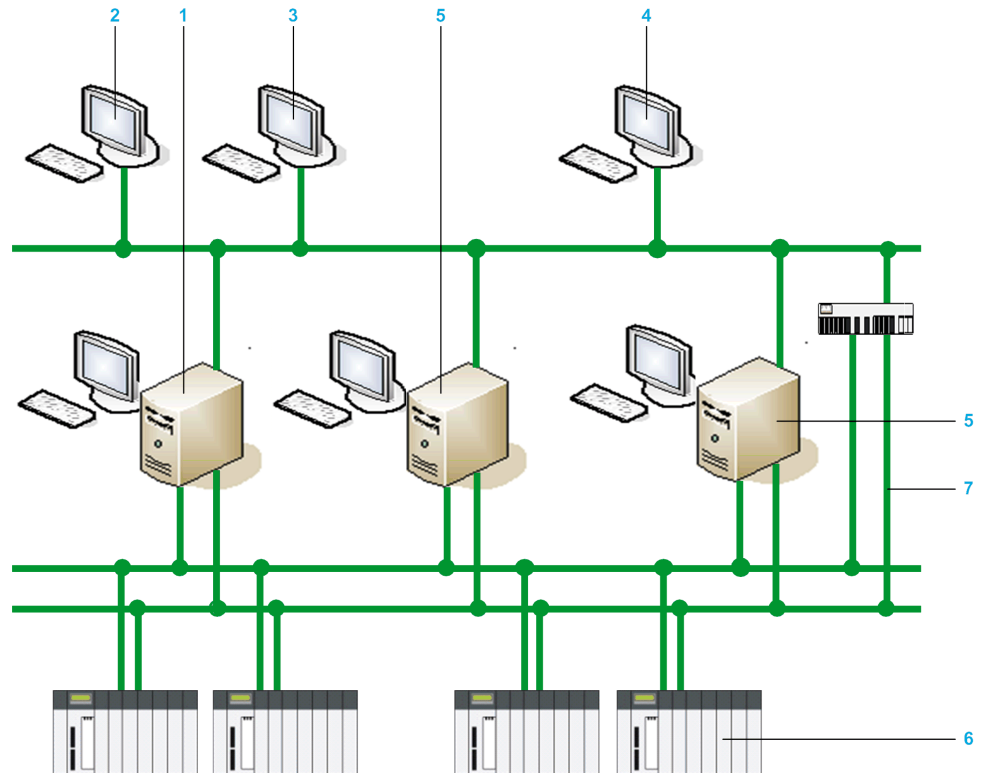
This architecture is a common medium-size configuration that is used by system integrators with up to three users working simultaneously. While two users do engineering work exclusively, the third user does engineering work and is able to use Supervision services for testing purposes.



Item	Computer role	Installed software	Activated licenses	Comment
1	System server and engineering station Operation server and operator station Schneider Electric Enterprise license server AVEVA license server	System server 1 engineering and 1 operation client Control Expert Operation server and 1 Supervision control client Schneider Electric LM and FLM AVEVA License Server and License Manager	1 system integrator license (3 usage rights are used)	Default LM and AVEVA License Manager settings. Alternatively, you can activate: <ul style="list-style-type: none">1 system integrator license (1 usage right)Individual licenses for 2 additional engineering clients. This scenario gives you the flexibility to activate the additional engineering client licenses on another computer configured as additional Enterprise license server.
2	Engineering station	1 engineering client Control Expert	None	Engineering and operation clients access usage rights directly through their connection to the system server. NOTE: The LM is installed by the installer of Control Expert and gets license rights from the FLM installed on the Enterprise license server.
3	Engineering station and operator station	1 engineering and 1 operation client Control Expert 1 Supervision control client	None	
4	Controllers			
5	Control network			

On-Site Architecture

This architecture models small to medium-size configurations, which are deployed on site with one engineering user, and up to four operators working simultaneously.



Item	Computer role	Installed software	Activated licenses	Comment
1	System server Schneider Electric Enterprise license server	System server Control Expert Schneider Electric LM and FLM	<ul style="list-style-type: none"> 1 system server license 2 individual additional engineering client licenses 	Default LM settings
2	Engineering station.	1 engineering client Control Expert Schneider Electric LM	None	<p>The engineering client accesses usage rights directly through its connection to the system server.</p> <p>NOTE: The LM is installed by the installer of Control Expert and gets license rights from the FLM installed on the Schneider Electric Enterprise license server.</p>
3	Engineering and operator station.	1 engineering client Control Expert 1 operation client. 1 Supervision control client Schneider Electric LM	None	<p>The engineering and operation clients access usage rights directly through their connection to the system server; the Supervision client through its connection to the operation server.</p> <p>NOTE: The LM is installed by the installer of Control Expert and gets license rights from the FLM installed on the Schneider Electric Enterprise license server.</p>

Item	Computer role	Installed software	Activated licenses	Comment
4	3 computers acting as operator stations	1 operation client, 1 Supervision client, and Control Expert on each computer Schneider Electric LM	None	Operation clients access usage rights directly through their connection to the system server; Supervision clients through their connection to the operation server. NOTE: The LM is installed by the installer of Control Expert and gets license rights from the FLM installed on the Schneider Electric Enterprise license server.
5	Operation server AVEVA license server	Operation server and its Supervision control client AVEVA License Server and License Manager	<ul style="list-style-type: none"> • 1 operation server license • 4 Supervision client licenses 	Default AVEVA License Manager settings. NOTE: If the operation servers are redundant servers, you need to activate 1 redundant operation client license per individual operation client license. In this example, 4 redundant licenses.
6	Controllers			
7	Control network			

Activating, Updating, Returning, and Reinstalling Licenses

Activating a License

To activate an EcoStruxure Process Expert license, you need to enter its Activation ID, which you have received by e-mail in the Floating License Manager (FLM).

The **Usage Rights** that you need to configure for each license depend on the type of license, page 13, which you activate.

The following methods are available to activate a license:

- By Web: Default method when the local computer has an Internet connection.
- By Web portal: Alternate method when no Internet connection is available.

For a detailed description of each method, refer to *Activation Methods* in the *Schneider Electric Floating License Manager, User Manual*.

Updating Licenses

If you have already activated an EcoStruxure Process Expert license for the software and you want to upgrade to a subsequent supporting version, you may need a license update. License updates are also available for application size licenses.

License updates need to be purchased or may be requested free-of-charge if you have a valid Gold or Gold Plus support agreement.

Send a license update request with the list of activation IDs that you want to update by email to orders.software@schneider-electric.com. Once your request is processed, you receive an email reply containing new activation IDs.

If you need to purchase license updates, the Activation ID of your installed software components is also required.

NOTE: When you update licenses of version 2021 or an earlier supporting version that contain rights for Supervision components, you receive in a separate email an equivalent AVEVA entitlement file (.xml).

Activating License Updates

The table outlines the procedure to activate an EcoStruxure Process Expert license update by using its Activation ID.

Step	Action
1	Open the FLM on which the license for which you have purchased or requested an update is activated.
2	Select the license. NOTE: If you have purchased or requested an update for several licenses that are activated on the same FLM, you can select them all.
3	Click Update and follow the instructions on screen. For more information, refer to the topic describing update methods in the <i>Schneider Electric Floating License Manager, User Manual</i> .

NOTE: To activate AVEVA Plant SCADA licenses (entitlement files), use the AVEVA Enterprise License Manager. For details, refer to the *AVEVA Enterprise Licensing Guide*.

Returning a License

An EcoStruxure Process Expert license can be activated only on one computer (Enterprise license server) at a time.

If you want to use your license on a different computer, first return the already activated license by using the FLM, and activate it again on the other computer.

The number of returns for rehost of a license is limited depending on the usage rights of the license.

License usage rights/category	Allowed number of returns per year
1/single	7
3/group	9
10/team	20

For a description of the return procedure of an EcoStruxure Process Expert license, refer to *Return Methods* in the *Schneider Electric Floating License Manager, User Manual*.

NOTE: EcoStruxure Process Expert does not track the number of returns that you have performed. You need to manage this data yourself to know the number of returns that remain for a license.

Reinstalling a License

Reinstalling an EcoStruxure Process Expert license consists in installing an already activated license once more on the same computer.

This is necessary if the license is not visible in the FLM anymore, for example, because you have reinstalled the operating system.

To start the re-installation procedure, enter the license Activation ID and select **Reinstall**. You do not need to return the license first.

The number of re-installations of a license is limited depending on the usage rights of the license.

License usage rights/category	Allowed number of re-installations per year
1/single	3
3/group	4
10/team	5

Licensing Conflicts

Overview

EcoStruxure Process Expert detects licensing conflicts and displays diagnostic messages to inform you. The different scenarios that can occur are described in this chapter, grouped by type of conflict. For each scenario, one or more corrective actions are proposed.

License Availability

License for the System Server Is Not Available at Startup

If...	Then...
you start the system server and it detects that the license for the system server is not available.	the system server displays a notification in the console and stops immediately.

Solutions

- Verify your license:
 - Has it been activated properly?
 - Has it expired? Verify whether you need the software for a longer time and contact your local Schneider Electric Software Registration Center to renew your license, if necessary.
 - Has it become untrusted, page 31?
 - Do you need to update a license, page 24 that was activated for the system server of an earlier version?

For further information on licenses, see *Schneider Electric Floating License Manager, User Manual*.

- Verify the network connection to the Enterprise license server.
 - Verify that the vendor daemon port setting for IP addresses configured in the LM is identical to the vendor daemon port used by the corresponding FLM, page 18.
 - Verify if the configured web port is already used on one of the computers. You can change the port setting, page 19. The allowed range is 1 to 65535.
- You may need to restart the FLEXnet License Administrator (lmadminschneider service, page 28).
- Verify the status of the vendor daemon, page 28 in the FLEXnet License Administrator.
- If you have upgraded the software, verify that you have restarted the computer if you were prompted to do so during installation.

License for a Client Is Not Available at Startup

If...	Then...
you start an engineering/operation client and it detects that there is no license available.	the client displays a message informing you about the unavailability of the license and closes when you acknowledge the message.

Solutions

- Verify that the system server is running properly.
- Has the license expired? Verify whether you need the software for a longer time and contact your local Schneider Electric Software Registration Center to renew your license, if necessary.
- Verify if the available licenses for clients are already in use. As soon as a corresponding license becomes available on any Enterprise license server that is configured in the LM of the system server, you can start the client.

License for System Server or Client Becomes Unavailable

If...	Then...
a system server and/or client license becomes unavailable while the system server and client is running.	<p>the software displays a notification on the respective EcoStruxure Process Expert component (system server and/or clients connected to the system server) notifying you that the component will shut down in 11 hours 50 minutes. Additional messages notifying you about the upcoming shutdown are displayed every 3 hours. The last two messages appear:</p> <ul style="list-style-type: none"> • 1 hour 20 minutes before shutdown. • 35 minutes before shutdown. <p>After the first notification for a system server license, you cannot open additional clients anymore.</p> <p>The functionality of the engineering and operation clients is not available after the server is shut down and unsaved changes are lost. Refer to <i>Client-Server Connection</i> in <i>EcoStruxure™ Process Expert, User Guide</i> for a description of the client behavior.</p>

Solutions

- Verify that the system server is running properly.
- Verify if the available licenses for clients are already in use. As soon as a corresponding license becomes available on any Enterprise license server that is configured in the LM of the system server, you can start the client.
- Has the license become untrusted, page 31?
- Did you return the license?
- Verify the network connection to the Enterprise license server.

NOTE: The system server verifies license availability before a notification about component shutdown is displayed and before the actual shutdown of a component. These license verifications are performed in addition to the license verifications at a 15 minutes interval, page 11.

Restarting the FLEXnet License Administrator

During a restart of the FLEXnet License Administrator, the floating licenses activated on this Enterprise license server, which is exclusively dedicated to managing floating licenses for Schneider Electric software products, are temporarily unavailable. An Enterprise license server can also host licenses that are required by software controlling production systems to function. When its license becomes unavailable, the software stops functioning.

WARNING

UNINTENDED EQUIPMENT OPERATION

Perform a restart of the FLEXnet License Administrator only when the floating licenses that it hosts are not required by EcoStruxure Process Expert or other software controlling production systems, or only after a controlled shutdown of your production system.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

To restart the FLEXnet License Administrator, proceed as follows.

Step	Action
1	Open the FLM.
2	In the menu bar, click Task > Restart FLEXnet License Administrator .
3	Confirm the command. This requires elevated privileges.

Starting the Vendor Daemon in the FLEXnet License Administrator

To start the vendor daemon, proceed as follows.

Step	Action
1	Open the FLM on which the system server license is activated.
2	In the toolbar, click the Open FLEXnet license Administrator icon. Result: The FlexNet Publisher page opens in the default web browser.
3	Click Administration and sign in by using your Windows account credentials. If you are logged on to a domain, use the format <i>Domain\Username</i> in the User Name field; otherwise, <i>Domain</i> is the computer name for a local account.
4	Select the Vendor Daemon Configuration tab.
5	In the Vendor Daemons page, if the status of the schneide entry is Down , click Administer .
6	Click Start under Vendor Daemon Actions . Result: The status of the schneide entry changes to Starting Up .
7	Select the Vendor Daemon Configuration tab again. Result: In the Vendor Daemons page, the status of the schneide entry is Up .
8	Sign out and close the FlexNet Publisher page.

NOTE: For more information, refer to the help of the **FlexNet Publisher** page.

License Limits

Time Limit of a License Is About to Expire

If...	Then...
a license that is restricted to 1 year is about to expire.	a daily notification message is displayed 21 days before the expiration date.

Solution

Verify whether you need the software for a longer time and contact your local Schneider Electric Software Registration Center to renew your license, if necessary.

Limit of Application Size License Is Reached

If...	Then...
the software detects that it has reached the limit of the application size.	<p>you receive a notification message and cannot create additional instances in the application.</p> <p>Open the About dialog box of clients or the system server for information on the present number and maximum number of instances per system.</p>

Solution

Refer to the topic describing the instance count (see *EcoStruxure™ Process Expert, User Guide*) and verify whether you need to upgrade to another application license to increase the limit.

Limit of Application Size Is Exceeded

If...	Then...
you start the software with an application license size that is smaller than the instance count of the systems that exist in the software.	<p>the software displays a notification to inform you of the detected error. You can use engineering clients to access the Systems Explorer but you cannot open the application, the projects, nor the topology of any of the systems.</p> <p>Operation clients are not affected.</p> <p>Refer to <i>Counting Instances</i> in <i>EcoStruxure™ Process Expert, User Guide</i> for information on the instance count.</p>

Solution

- Delete one or more systems.
- Upgrade to another application size license to increase the allowed instance count.

Network Connection

Connection to the Enterprise License Server Is Interrupted

If...	Then...
the software detects that the connection to the Enterprise license server is interrupted.	<p>the software displays a notification on the clients connected to the system server notifying you that the system server will shut down in 11 hours 50 minutes. Additional messages notifying you about the upcoming shutdown are displayed every 3 hours. The last two messages appear:</p> <ul style="list-style-type: none"> • 1 hour 20 minutes before shutdown. • 35 minutes before shutdown. <p>After the first notification, you cannot open additional clients anymore.</p> <p>The functionality of the engineering and operation clients is not available after the server is shut down and unsaved changes are lost. Refer to <i>Client-Server Connection</i> in <i>EcoStruxure™ Process Expert, User Guide</i> for a description of the client behavior.</p> <p>NOTE: If the Enterprise license server and the system server are two distinct computers, the communication interruption also affects the system server and it will display similar notifications to notify you of its upcoming shutdown.</p>

Solutions

- Verify that a communication interruption on the enterprise network is not causing the firewall of the operating system of computers to block ports that are used for communication with the Enterprise license server.
- Verify the network connection to the Enterprise license server and start the system server, if it has shut down, after you re-establish the connection to the Enterprise license server.
- You may need to restart the FLEXnet License Administrator, page 28.

NOTE: If you re-establish the connection to the Enterprise license server before the system server shuts down, the system server continues running. It also displays a message to report that it has found a license and has canceled the shutdown.

License Repairs, Returns, and Changes

Number of Allowed Returns Is Reached

If you need to return a license and you have reached the number of allowed returns, page 25 for that license, contact your local Schneider Electric Software Registration Center.

Not Possible to Repair a License

You need to repair licenses that you had activated on the computer if they become untrusted.

This can happen if:

- The hardware configuration of your computer has changed significantly.
- You restored a backup that included licenses.

In some cases, if the Schneider Electric license server cannot identify the computer anymore, the repair procedure may not complete.

The number of repairs that you can perform per license is limited depending on the usage rights of the license.

License usage rights/category	Allowed number of repairs per year
1/single	3
3/group	4
10/team	5

If you need to repair a license and you have reached the number of allowed repairs or if the repair process does not complete successfully, contact your local Schneider Electric Software Registration Center.

Downgrading to a Smaller Application Size License

If...	Then...
while the system server is running, you downgrade your application size license, and the instance count of the systems that exist in the software exceeds the new application size license.	<p>the software displays a notification on the engineering and operation clients connected to the system server notifying you that the system server will shut down in 1 hour 20 minutes.</p> <p>Two additional messages are displayed informing you about the upcoming shutdown:</p> <ul style="list-style-type: none"> • 20 minutes before shutdown. • 1 minute before shutdown. <p>The functionality of the engineering and operation clients is not available after the server is shut down and unsaved changes are lost. Refer to <i>Client-Server Connection</i> in <i>EcoStruxure™ Process Expert, User Guide</i> for a description of the client behavior.</p>

Solutions

- Upgrade to another application size license to increase the allowed instance count.
- Delete instances and/or systems.

NOTE: Refer to *Counting Instances* in *EcoStruxure™ Process Expert, User Guide* for information on the instance count of systems on the system server.

A

activate:

To activate means to use a trusted storage license on a local computer or an Enterprise license server. During activation the e-mail address of the license user is transmitted to the Software Registration Center.

Activation ID:

An Activation ID is an identifier for a license of an ordered software product and needs to be entered during the activation of the license.

An Activation ID is necessary to order updates (later version, more capabilities, more seats).

The Activation ID can be found in the Entitlement Certificate of the software product to be activated.

activation service:

The activation service is a software component running on the Schneider Electric License Server which is used to activate, update, return and repair licenses.

active license:

A license is active during the period until expiration.

An active license can be

- a trial license.
- an activated trusted storage license (node-locked or floating license).
- a dongle license (node-locked or floating license).
- a corporate license.

E

Enterprise license server:

The Enterprise license server contains the floating licenses in your local network.

expiration date:

A software product is only running until the expiration date is reached.

expired license:

A license is expired if the expiration date is reached or the trial period of the software product has been exceeded.

expiring license:

An expiring license can only be used for a defined period of time. The time period starts at first activation of any seat of the license. It is not possible to update an expiring license.

F

floating license:

A floating license is activated on an Enterprise license server and:

- It can be used from different local computers connected to the same local network as the Enterprise license server. Using a floating license on a local computer the license is checked out from the Enterprise license server and is not available for any other computer from this moment. After usage the floating license is checked in again and is available for other computers again.
- It can be a trusted storage license which has been activated by the Schneider Electric Floating License Manager or a dongle license activated by plugging in the dongle containing the license file and the correct Dongle ID.

L

license:

A license is one line item of an entitlement which is identified by an Activation ID.

One license can have one or multiple seats.

N

node-locked license:

A node-locked license

- can be used on a local computer only.
- can be a trusted storage license which has been activated by Schneider Electric License Manager or a dongle license activated by plugging in the dongle containing the license file and the correct Dongle ID.

O

operator:

The *operator* is a person responsible for using:

- the run-time process,
- the control system in order to control the process.

P

part number:

A part number is a character string that characterizes a type of software product.

Individual part numbers are used to identify different types of licenses for the same software product, e.g. to distinguish between node-locked and floating licenses.

A separate part number can be used to identify the media (box, CD case(s) and CD/DVD) for a software product.

R

repair:

You can repair a license which has become untrusted for further usage. A license can become untrusted, e.g. due to replacement of hardware components of a computer or Enterprise license server.

S

Schneider Electric Floating License Manager:

With the Schneider Electric Floating License Manager you manage (activate, update, return, repair) floating licenses stored on an Enterprise license server.

Schneider Electric License Manager:

With the Schneider Electric License Manager:

- You manage (activate, update, return, repair) node-locked licenses on your local computer.
- You open the web portal of the FLEXnet License Administrator to:
 - Display the available floating licenses which can be detached from the Enterprise license server to a computer in your local network.
 - Display the currently used floating licenses and show details of the hosts (local computers) currently using the floating licenses.

Software Licensing Web Portal:

The Software Licensing Web Portal is the entry point for you to access the Schneider Electric web sites which are dedicated to license management.

You can use the Software Licensing Web Portal

- to create a Web User Account.
- to manage licenses (view licenses, activate license) without contact to Software Registration Center.

U

untrusted license:

A license can become damaged, e.g. due to replacement of hardware components of the computer or Enterprise license server. You can repair an untrusted license for further usage.

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Schneider Electric
35 rue Joseph Monier
92500 Rueil Malmaison
France

+ 33 (0) 1 41 29 70 00

www.se.com

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