

PTC Enroll Client User Guide

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About this document

Intended audience

This guide is for system administrators or staff of postal operators who are responsible for installing PTC Enroll Client on their workstations/servers, and for using the application to request and install certificates, or submit certificate requests for other servers in their organization. Enrollment authorizes the devices and grants them secured access to the PTC APIs, web services, and web applications.

How to use this manual

This guide describes how to install and use the PTC Enroll Client application. For help on:

- the recommended hardware and software requirements for running PTC Enroll Client and the components of the PTC Enrollment suite, "[Hardware and software requirements](#)" on [page 8](#).
- enrolling your workstation/server, "[Enroll your workstation/server](#)" on [page 10](#).
- requesting a certificate for another server, "[Submit a certificate request for another server](#)" on [page 18](#).



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Introduction

The PTC Enrollment suite

The PTC Enrollment suite manages the process of client enrollment for any PTC website or PTC web API, from the moment a client submits a certificate request until its approval or rejection. It reuses the existing PTC Certificate Authority (CA) infrastructure and supports enrollment requests from workstations, servers, or mobile devices. The PTC Enrollment suite consists of the following applications:

- **PTC Enroll Client:** The application that clients install and run on their workstations/servers to submit certificate requests and install certificates on their workstations/servers, or request certificates for other servers.
- **PTC Enroll Mobile:** The application that clients install and run on their mobile devices to submit certificate requests and install certificates.
- **PTC Enrollment:** The web application that the Enrollment Manager of the organization uses to manage all enrollment requests coming from workstations or mobile devices in their organization. Using this application, the Enrollment Manager approves or rejects enrollment requests, or revokes existing enrollments. PTC Enrollment is also used by the PTC Administrator to manage the enrollment of Enrollment Managers and server enrollment requests from all organizations.

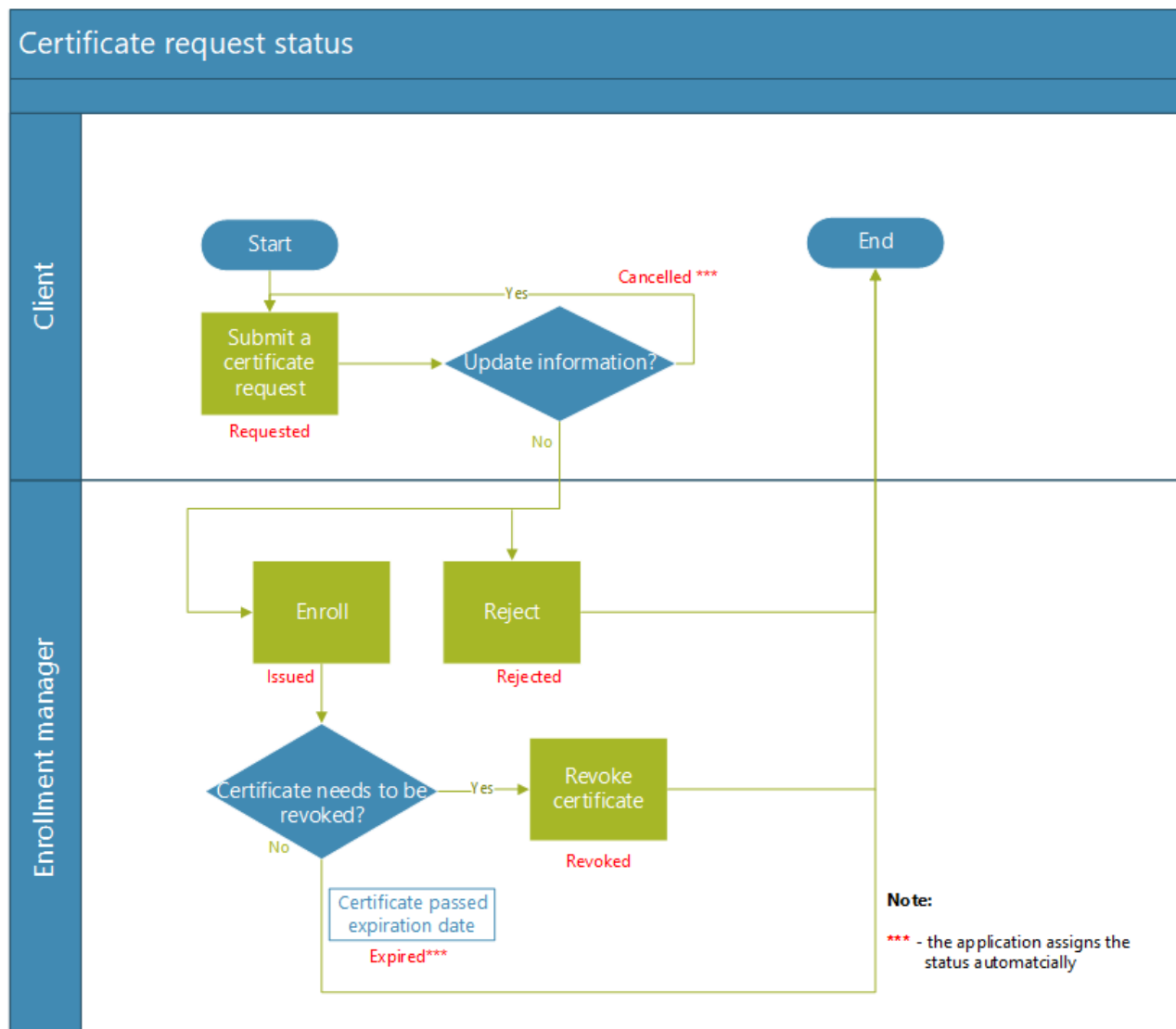
Users

Users of the PTC Enrollment suite consist of the following:

User type	Description
Client	Organization employee who submits a certificate request for enrolling their workstation/server, another server from their organization, or their mobile devices.
DO Enrollment Manager	Organization employee who manages all certificate enrollment requests coming from workstations or mobile device in their organization using PTC Enrollment. This person is associated only with a specific organization and cannot view another organization's enrollment information.
PTC Enrollment Manager	PTC employee who issues the user certificate for the DO Enrollment Manager, manages, approves, or rejects all server enrollment certificate requests from any organization, configures the PTC Enroll Client installation files, and has access to all functions of the PTC Enrollment suite. As server requests require a higher level of security validation, these server request enrollments remain under PTC responsibility.

Certificate request status

The following workflow describes how a certificate is processed.



There is no 'Cancel' option for a certificate request that has been submitted and whose status is 'Requested'. When the user wants to update some details in a submitted request, the user can send a new request. PTC Enrollment automatically cancels the previous request and assigns it with the status, 'Cancelled'.

Enrollment types

When you download your enrollment certificate, PTC Enroll Client saves your certificate in the certificate store which can be one of the following types:

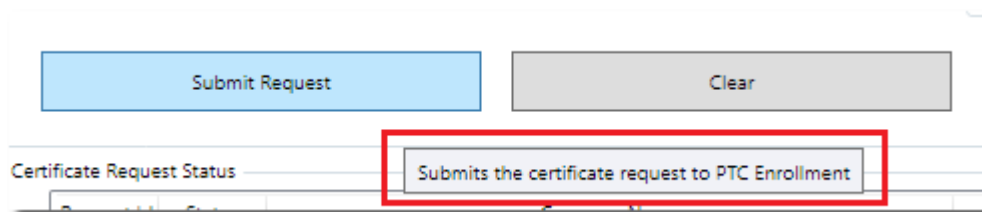
- **Machine:** When saved in this store, the certificate is available to all users logged in on the computer.
- **User:** When saved in this store, only you have access to the certificate. The certificate is not available to other users logged in on the computer.



Before the PTC Enroll Client installation package is sent to you, the PTC configures the correct enrollment type depending on your organization's needs.

Tooltips

PTC Enroll Client supports tooltips. In the PTC Enroll Client window, you can hover over any button to display a description of what the application does when the button is clicked. For example, hovering your mouse over the **Submit Request** button shows 'Submits the certificate request to PTC Enrollment'.



Hardware and software requirements

This chapter describes the components of the PTC Enrollment suite and the minimum hardware requirements and supported software environments to ensure that PTC Enroll Client functions properly.

PTC Enrollment suite components

The following table lists the components of PTC Enrollment.

Software components		Description
Applications	PTC Enroll Client	Windows application used to request and download certificates for user's own workstation/server and to request certificates for another server.
	PTC Enrollment	Web application used to manage all certificate requests from workstations, servers, or mobile devices.
	PTC Enroll Mobile	Mobile application used to request certificates and enroll mobile devices.

Client application requirements

The following are the minimum requirements for server/client installations.

Hardware	
Processor	1 GHz
RAM	512 MB
Disk space (minimum)	
32-bit	4.5 GB
64-bit	4.5 GB
Software	
Operating system	Windows Server 2012 R2 (x64)

	Windows Server 2016 (x64)
	Windows 10
.NET Framework	.NET Framework 4.7.1
Internet browser	Latest internet browser version
Others	PDF reader


Enroll your workstation/server

Enrolling your workstation/server to PTC Enroll is a three-part process:

1. Using the PTC Enroll Client application, submit a certificate request.
2. After the Enrollment Manager/PTC Administrator has approved the request, download the certificate for it to be installed automatically on your workstation/server.
3. Test your connection to see if your workstation/server is enrolled properly.

For workstation enrollment requests, approval is granted by:

- an Enrollment Manager, for workstation enrollment requests from within their own organization
- the PTC Administrator, for server enrollment requests from any organization

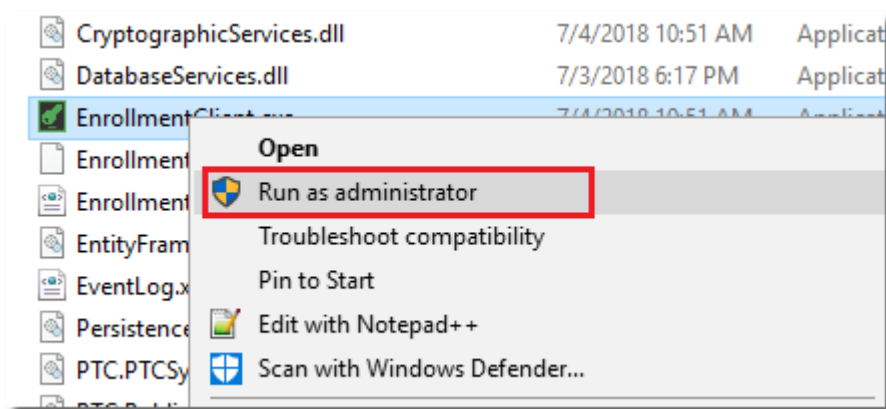
 The information in this chapter applies to both workstation and server enrollments, unless otherwise indicated.

Submit a certificate request

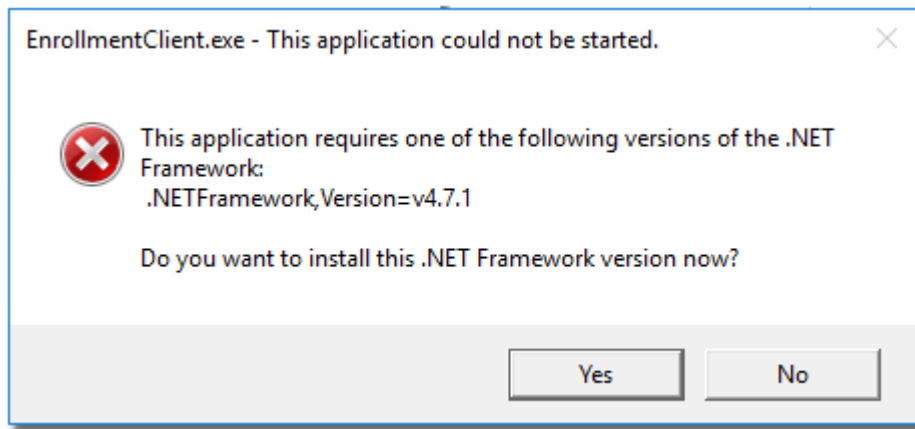
1. Copy the PTC Enroll Client installation package to a local directory.




2. Open the **EnrollmentClient** folder, right-click on the **EnrollmentClient.exe** file, then select **Run as administrator**.

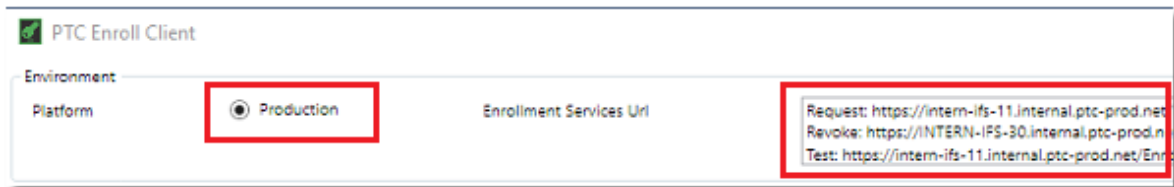


PTC Enroll prompts you to install .NET Framework 4.7.1 if it isn't already installed on your machine. Click **Yes**. The PTC Enroll Client application directs you to the download page for .NET Framework 4.7.1. Download and install .Net Framework 4.7.1.




 After installing .NET Framework 4.7.1, you must restart your machine when prompted.

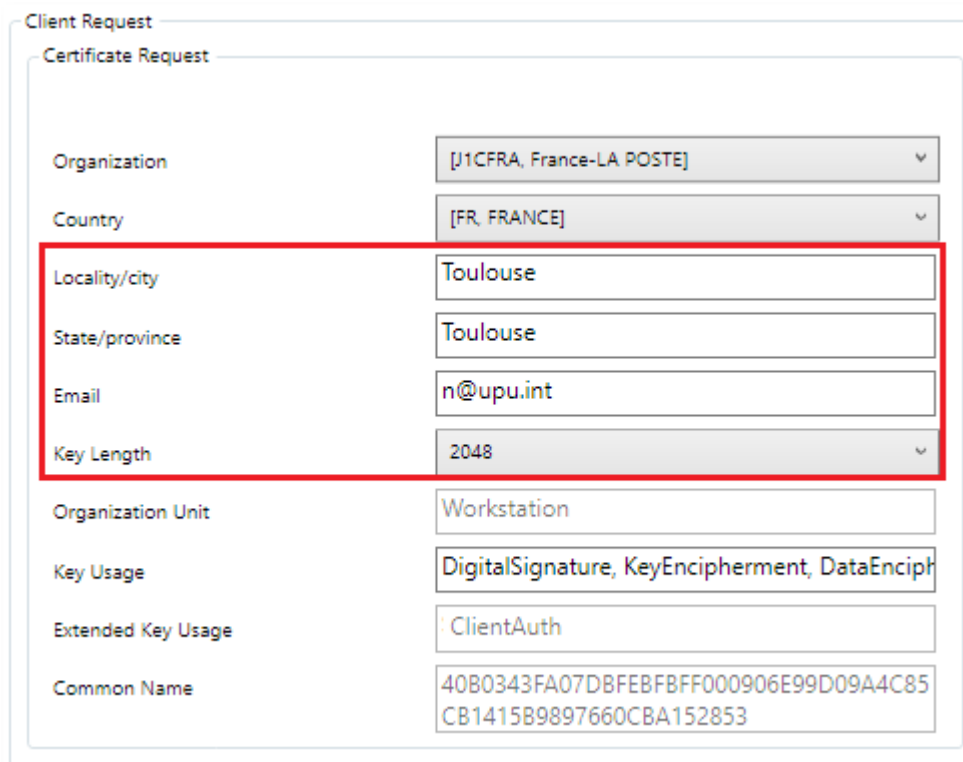
The PTC Enroll Client window opens. At the top of the window, PTC Enroll Client displays the environment that initializes the certificate request and the enrollment services URL that handles requests for new enrollments, revocations of existing enrollments, and testing enrollment connectivity.



3. In **Certificate Request**, specify values only for the fields listed below.

- Locality/City
- State/Province
- Email
- Key Length

 The **Key Length** is the number of bits used in the key encryption which determines the strength of the key and the difficulty with which it can be cracked. By default, PTC Enroll Client displays the industry recommendation of [2048](#).




Client Request

Certificate Request

Organization	[J1CFRA, France-LA POSTE]
Country	[FR, FRANCE]
Locality/city	Toulouse
State/province	Toulouse
Email	n@upu.int
Key Length	2048
Organization Unit	Workstation
Key Usage	DigitalSignature, KeyEncipherment, DataEnciph
Extended Key Usage	ClientAuth
Common Name	40B0343FA07DBFEBFBFF000906E99D09A4C85 CB1415B9897660CBA152853

PTC Enroll Client automatically retrieves read-only values for all other fields listed below.

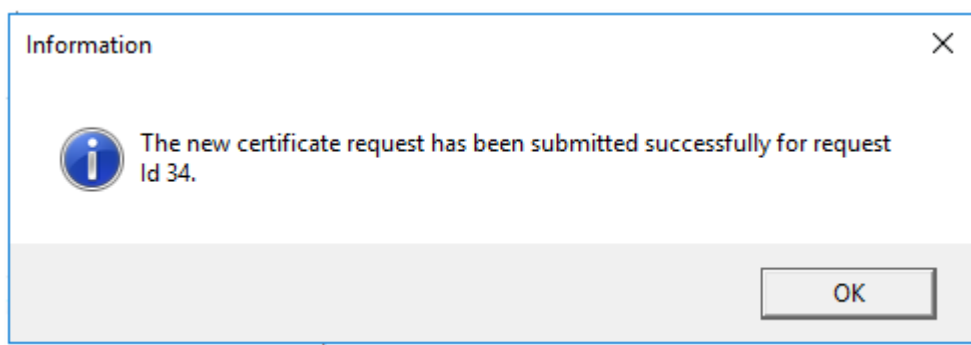
- **Organization:** Your organization code and name, for example, J1CFRA - FRANCE LA POSTE
 - **Country:** The two-letter code of the country where your organization is located
 - **Organization Unit:** Can either be [Workstation](#) or [Server](#), depending on the type of machine you are enrolling
 - **Key Usage:** [DigitalSignature](#), [KeyEncipherment](#) and [DataEncipherment](#) or the purposes of the key contained in the certificate
 - **Extended Key Usage:** [ClientAuth](#) or the extended usage of the key
 - **Common Name:** For workstations, this field displays the combination of MAC address, Processor ID and NIC ID.  For servers, this is an editable field and you must enter the public URL of the server, for example, [yoursite.com](#).
4. In **Client Details**, fill in your **Phone** and in the **Request Description** field, enter information to help the DO Enrollment Manager easily identify and grant approval to your enrollment request, for example, your IFS office code and the purpose of the request. Values displayed for all other fields in the screen are read-only.

Client Details	
Machine Fully Qualified Name	PC10117041.internal.ptc-prod.net
MAC Address	40B0343FA07D
NIC Address	{9D09A4C8-5CB1-415B-9897-660CBA152853}
Processor Id	BFEBFBFF000906E9
OS Version	Windows 10 Enterprise N
OS Type	64Bit
Requester	
IP Address	193.247.60.171
User Login	INTERNAL\villajosn
Enrollment Type	Machine
Phone	041765327700
Request Description	Enter description here...

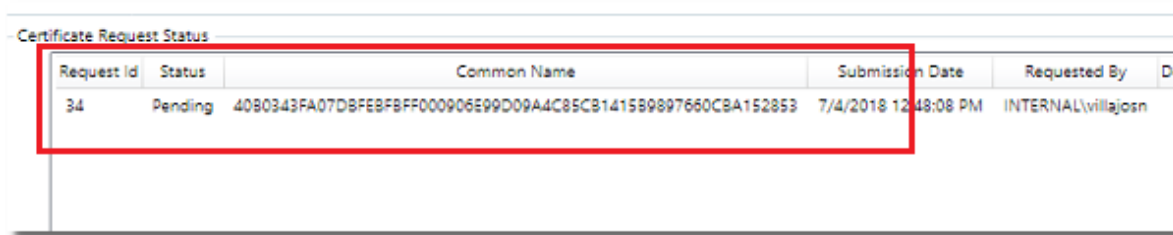
5. Click **Submit Request**.

Common Name	40B0343FA07DBFEBFBFF000906E99D09A4C85 CB1415B9897660CBA152853
<div><div>Submit Request</div><div>Clear</div></div>	

PTC Enroll Client displays a confirmation message that you have successfully submitted a new certificate request.



6. Click **OK**. Your request is now pending approval of the DO Enrollment Manager/PTC Administrator, depending on whether you submitted a workstation/server request. PTC Enroll Client displays this status in the **Certificate Request Status** section.



The screenshot shows a window titled "Certificate Request Status" with a table containing one row of data. A red rectangle highlights the first four columns of the table: Request Id, Status, Common Name, and Submission Date.

Request Id	Status	Common Name	Submission Date	Requested By	De
34	Pending	40B0343FA07D8FE8F8FF000906E99D09A4C85CB141589897660C8A152853	7/4/2018 12:48:08 PM	INTERNAL\willajohn	

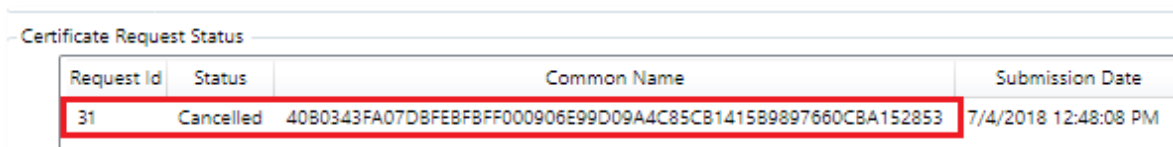
Approval turnaround time for certificate requests varies. For urgent workstation requests, contact the DO Enrollment Manager in your organization, indicating your **Request id** or any other helpful information for fast identification and approval.

Cancel the certificate request

If you want to update some details in the certificate request you have submitted, you can send a new certificate request. PTC Enrollment automatically cancels the previous request.

Procedure

1. Right-click on the **EnrollmentClient.exe** file then select **Run as administrator**. The PTC Enroll Client window opens.
2. Complete the required information, then click **Submit Request**. PTC Enroll Client displays a message that a new request has been submitted.
3. Click **OK**. The new request is displayed in the **Certificate Request Status** box with the status 'Pending'.
4. To check if the previous request has been cancelled, click **Get Certificate**. PTC Enroll Client updates the status of the request to 'Cancelled'.



The screenshot shows the same "Certificate Request Status" window, but the status of the request has changed to "Cancelled". A red rectangle highlights the first four columns of the table: Request Id, Status, Common Name, and Submission Date.

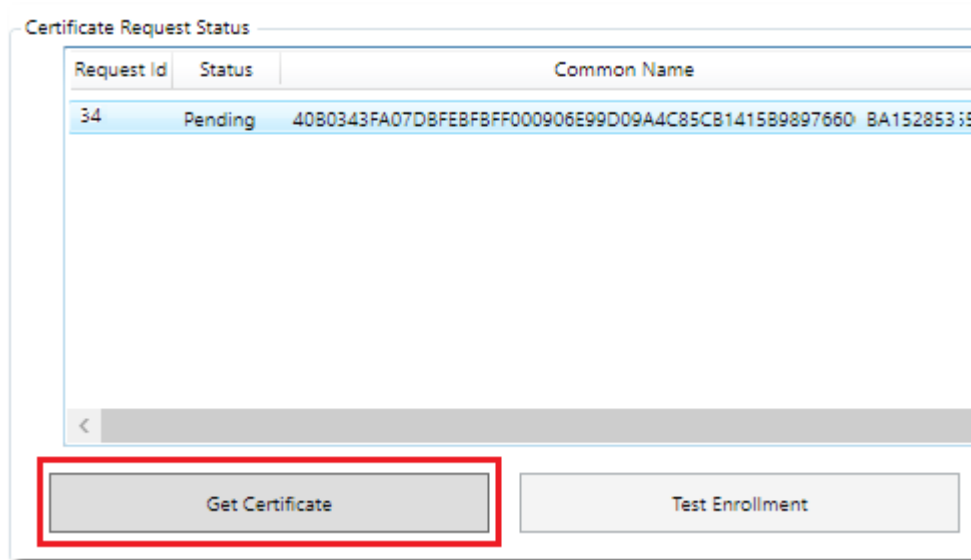
Request Id	Status	Common Name	Submission Date	Requested By	De
31	Cancelled	40B0343FA07D8FE8F8FF000906E99D09A4C85CB141589897660C8A152853	7/4/2018 12:48:08 PM		

Install the certificate

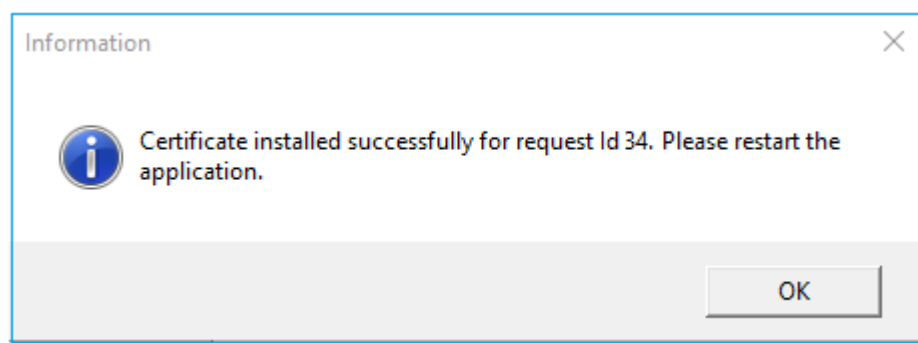
If you requested a certificate for your workstation/server and your DO Enrollment Manager/PTC Administrator has approved the request, run PTC Enroll Client and download the certificate to automatically install it on your workstation. If you also submitted certificate requests for other servers in your organization, PTC Enroll Client retrieves the latest status of all these requests.

Procedure

1. Right-click on the **EnrollmentClient.exe** file then select **Run as administrator**. The PTC Enroll Client window opens.
2. Click **Get Certificate**.



PTC Enroll Client displays a confirmation message that the certificate has been successfully installed and displays the status 'Installed' in the **Certificate Request Status** box.



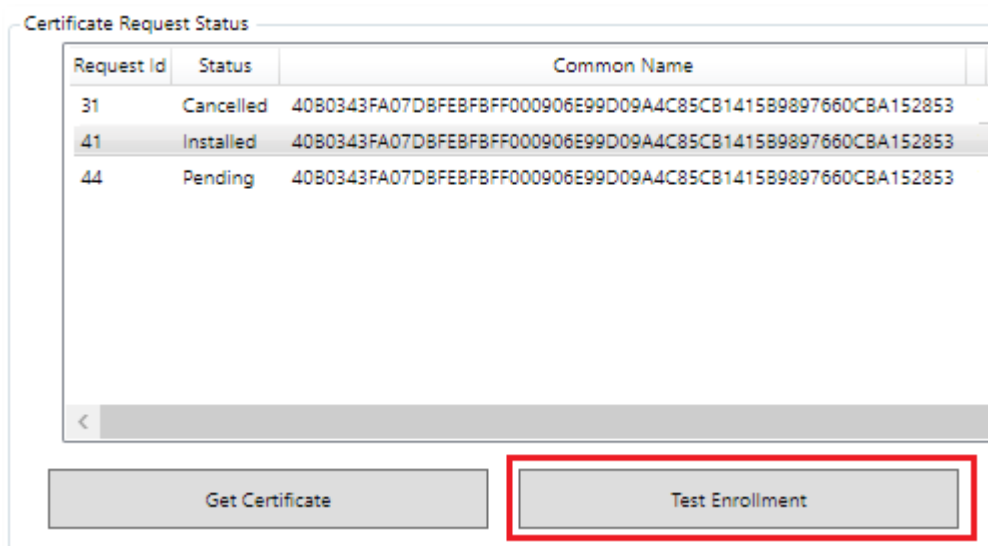
3. Click **OK** to close the dialog box.
4. Restart PTC Enroll Client.

Test your enrollment

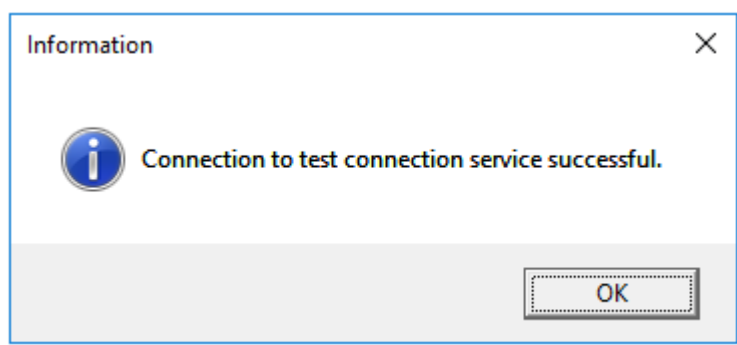
After installing the certificate on your workstation/server, check if your workstation is enrolled properly.

Procedure

1. Right-click on the `EnrollmentClient.exe` file then select **Run as administrator**. The PTC Enroll Client window opens.
2. Click **Test Enrollment**.



PTC Enroll Client tests your enrollment connection and displays a message that connecting to the service was successful.



3. Click **OK** to close the dialog box. Your workstation/server is ready to access and use the PTC APIs and web applications.

Get the certificate's subject name

Use this procedure only if you need details of your enrollment certificate for configuring connections to other PTC APIs and web applications. You can get the certificate subject name in the expected format from the PTC Enroll Client interface.

Procedure

1. Run the `EnrollmentClient.exe` file to open the PTC Enroll Client window.
2. In **Certificate Request Status**, select the relevant certificate.
3. Click the **Get Subject Name** button to copy the subject name to the clipboard. The PTC Enroll Client displays the subject name in the bottom part of the screen.

Certificate Request Status


Request Id	Status	Common Name	Submission Date	Requested By	Download Date	Downloaded By	Enrollment Type
22	Cancelled	PC10117031.internal.ptc-prod.net	7/19/2018 9:28:28 AM	INTERNAL\nguyent			Machine
39	Pending	PC10117031.internal.ptc-prod.net	7/26/2018 2:53:06 PM	INTERNAL\nguyent			Machine

Subject name for ID 39 is (E=email@email.com,C=FR,ST=st,L=loc,O=J1CFRA,OU=Server,CN=PC10117031.internal.ptc-prod.net)

4. Paste the subject name to a text file or some other file and save for later use.

Submit a certificate request for another server

This chapter describes how to submit a certificate request for another server in your organization. The PTC Administrator approves all server enrollment requests.

 Before deployment, your organization must specify if you require PTC Enroll Client to support enrollment for a user's own workstation/server only, or if it supports enrollment requests for other servers. The PTC provides the relevant installation package according to your needs.

Generate the certificate request file

Before you can submit a certificate request for another server, you must have the generated external certificate request file ready. The users of the server generate this file using their preferred tool, for example, an online certificate request generator.

To avoid errors when submitting the certificate request, check that the **Key Usage** and **Extended Key Usage** values in the generated file match the values listed below.


Key Usage

- DigitalSignature
- KeyEncipherment
- DataEncipherment

Extended Key Usage

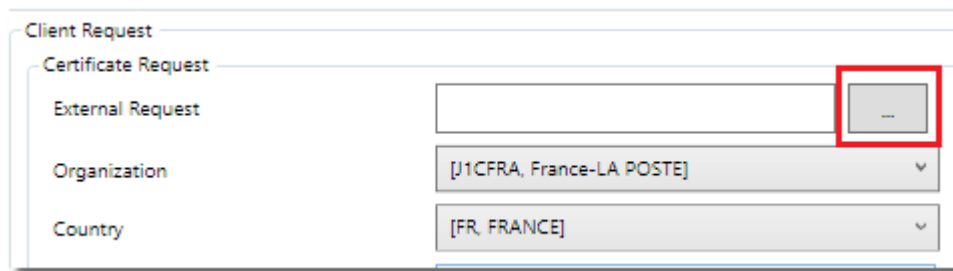
- ServerAuthentication

You attach the external certificate request file in the PTC Enroll Client window when making a certificate request. PTC Enroll Client application uses the information in this file to populate the required fields in the PTC Enroll Client window. The list of populated fields are described in the next section.

 You must have already copied the PTC Enroll Client installation files to your local directory before performing the procedure below.

Submit the certificate request

1. Open the **EnrollmentClient** folder, right-click on the **EnrollmentClient.exe** file, then select **Run as administrator**.
2. In **Certificate Request**, use the ellipsis button in the **External Request** field to retrieve the external certificate request file from the correct location.



Client Request

Certificate Request

External Request

Organization [J1CFRA, France-LA POSTE]

Country [FR, FRANCE]

PTC Enroll Client populates the fields in the **Certificate Request** section listed below based on the information from the external certificate request file. You cannot modify these values.

- **Organization:** Your organization code and name, for example, J1CFRA - FRANCE LA POSTE
- **Country:** The two-letter code of the country where your organization is located
- **Locality/City:** The locality/city where the server is located
- **State/Province:** The state/province where the server is located
- **Email:** The email address to contact
- **Key Length:** The industry standard key length recommendation, [2048](#)
- **Organization Unit:** [Server](#) indicates that the certificate is going to be received by a server
- **Key Usage:** [DigitalSignature](#), [KeyEncipherment](#), [DataEncipherment](#) are the purposes of the key contained in the certificate
- **Extended Key Usage:** [ServerAuthentication](#) is the extended usage of the key
- **Common Name:** Enter the public URL of the server being enrolled. This is the URL that the user must type to access the server

New Enrollment Request

Certificate Request

External Request	E:\PROJET\IFS\P_IFS420_Enrollment\P_Enrol	...
Organization	[J1CFRA, France-LA POSTE]	
Country	[FR, FRANCE]	
Locality/City	loc	
State/Province	state	
Email	BEA@email.com	
Key Length	2048	
Organization Unit	Server	
Key Usage	DataEncipherment;KeyEncipherment;DigitalSig	
Extended Key Usage	ServerAuth	
Common Name	myserver.com	

Submit Request Clear

3. In **Client Details**, fill in the following fields:

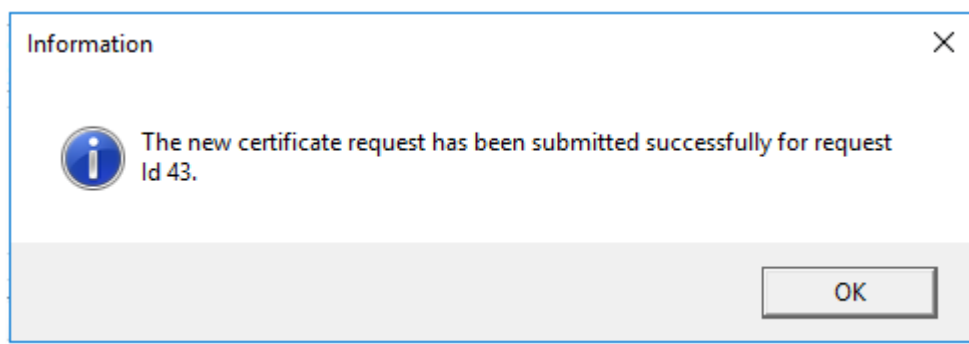
Field	Description
Machine Fully Qualified Name	The complete domain name of the external workstation/server for which you are generating a certificate request.
MAC Address	The Media Access Control (MAC) address is a 12-digit unique identifier assigned to a network card (Network Interface Controller or NIC) by its manufacturer. The MAC address is also known as the physical address of the device and can be changed.
NIC Address	The Network Interface Controller or Card is a computer hardware component that connects a computer to a computer network. Examples are: network adapter or LAN adapter. Each NIC has its own unique MAC address.
Processor Id	The unique identifier of the computer's processor.
OS Version	The operating system version of the work-

Field	Description
	station/server.
OS Type	The OS processor: 64-bit or 32-bit.
Phone	Your telephone number.
Request Description	A descriptive text about the enrollment request for the PTC Administrator to easily identify the request and grant it approval.



If you are not sure of the values to enter, check with your system administrator or IT staff.

- Click **Submit Request**. PTC Enroll Client displays a confirmation message that you have successfully submitted a request.



- Click **OK**. Your enrollment request for the other server is now pending approval by the PTC Administrator. PTC Enroll Client displays this status in the **Certificate Request Status** section.

Certificate Request Status							
Request Id	Status	Common Name	Submission Date	Requested By	Download Date	Downloaded By	Enrollment Type
43	Pending	01234567890123456789012345678901234567890123456789END	7/9/2018 12:58:16 PM	INTERNAL\willajohn			External

Download the certificate

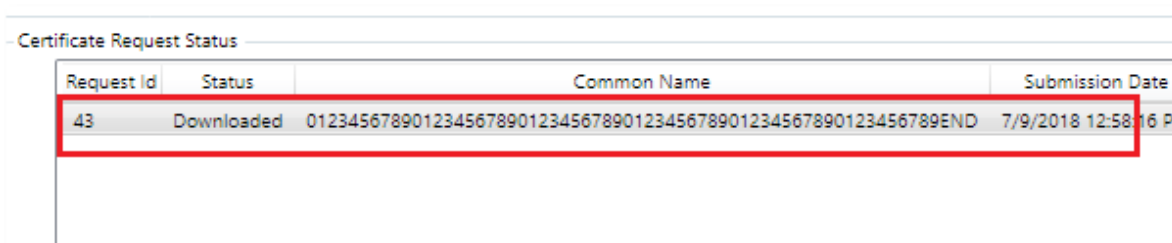
After the PTC Administrator has approved your certificate request for another server, you can download the certificate. External certificates are saved in the environment folder within the PTC Enrollment installation package: **EnrollmentClient > Config > Prod** to be collected, installed, and used on the other server.

Procedure

1. Right-click on the `EnrollmentClient.exe` file then select **Run as administrator**. The PTC Enroll Client window opens.
2. Click **Get Certificate**. PTC Enroll Client displays a message.



3. Click **OK**. PTC Enroll Client changes the certificate request status to 'Downloaded'.



Request Id	Status	Common Name	Submission Date
43	Downloaded	012345678901234567890123456789012345678901234567890123456789END	7/9/2018 12:58:16 P



If you have several certificate requests awaiting action from the PTC Enrollment Manager, clicking the **Get Certificate** button displays the latest status of all your requests, for example, if a pending request has been rejected, the status of that request is displayed as 'Rejected'.

4. Share the downloaded certificate with the user of the external machine so they can install it on their machine.

Before contacting PTC support

If you encounter an error while enrolling your server/another server, take a screenshot of the client application and attach it in the event log available in the installation files folder before contacting your organization or PTC support at <https://support.upu.int>.