

TruView Enterprise for Windows 2020.0.0

Installation Guide

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Minimum Requirements

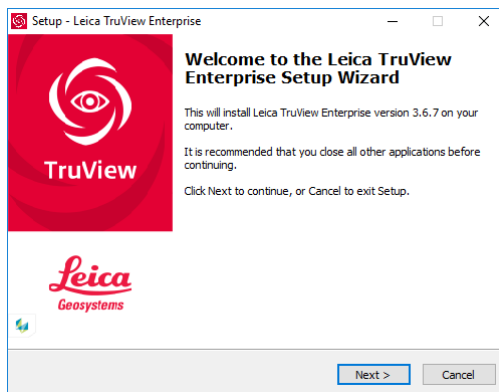
- 64-bit version of Microsoft Windows 7 or later; Microsoft Windows Server 2012 or later
- CPU: 64-bit Quad Core 2 GHz
- Memory: 8 GB
- Hard Drive: 20 GB for TruView Enterprise application and database. Additional space required to store TruView data files.
- Network: Ethernet 100 Mbit/s

Prerequisites

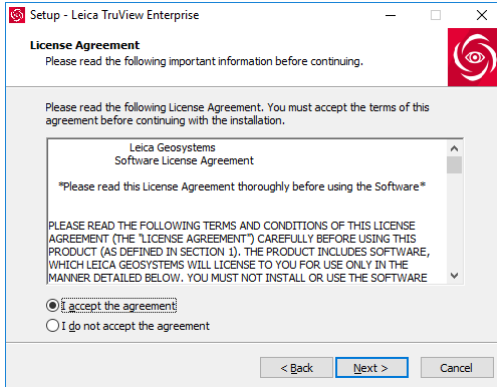
1. Download and install “Visual C++ Redistributable for Visual Studio 2015, 64-bit”. Select “vc_redist.x64.exe”.
<https://www.microsoft.com/en-us/download/details.aspx?id=48145>
2. Download and install Leica License Management software (CLM):
<https://scanswfs.leica-geosystems.com/dl/MvPW3TZsX6>
3. A valid TruView Enterprise EID activated using the CLM for Floating Licenses program.

Installation

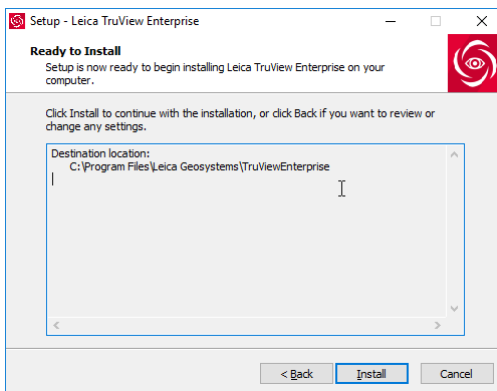
1. Download the TruView Enterprise for Windows setup program from myWorld.
2. Double-click the **TruViewEnt360.exe** file. If you receive a User Account Control notice, click **Yes**.
3. You will see the Welcome dialog. Click **Next**.



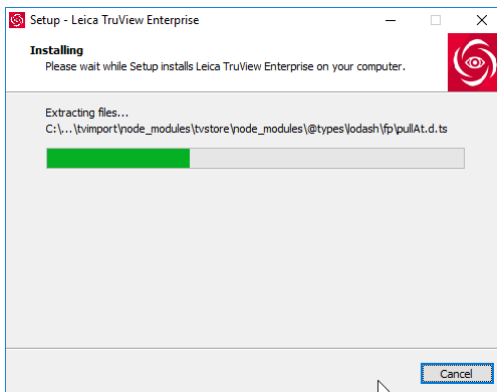
4. Choose “**I accept the agreement**” and click **Next**.



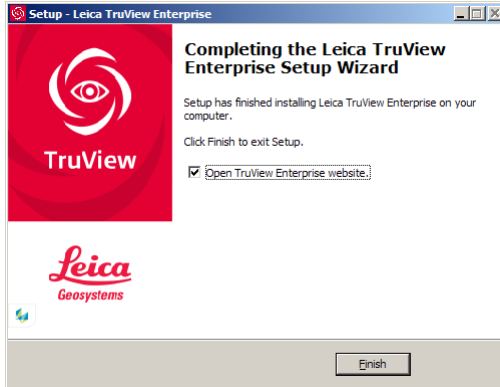
5. Click **Install**.



6. It will take a few moments to install TruView Enterprise for Windows on your system.

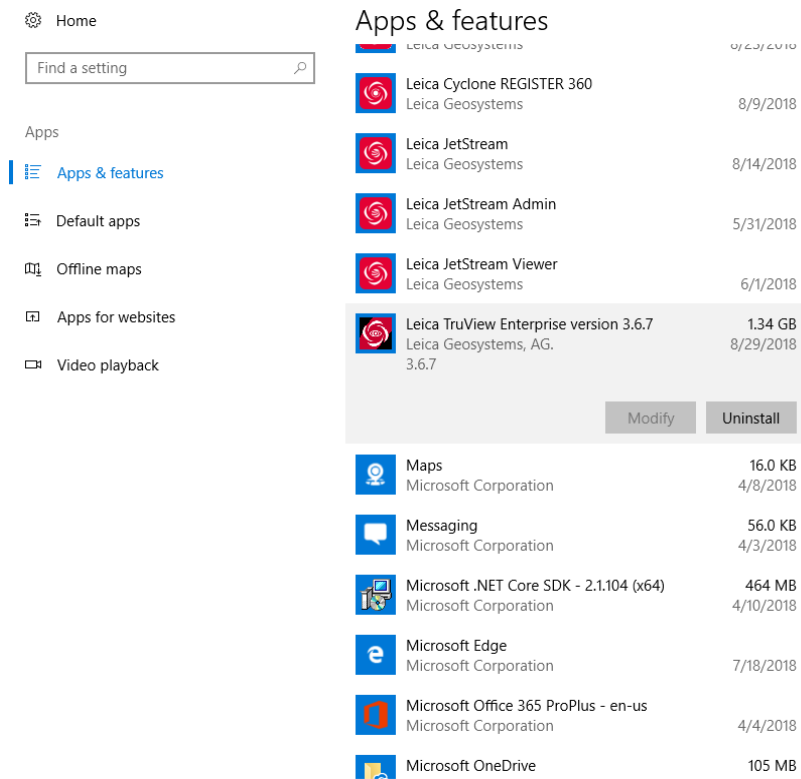


7. Click **Finish**. If you select “Open TruView Enterprise website” option, the installer will open the TruView Enterprise website in your default browser.



Uninstallation

1. Open the **Add or Remove Programs** dialog.



2. Select **Leica TruView Enterprise** entry in the list of programs.
3. Click **Uninstall**.

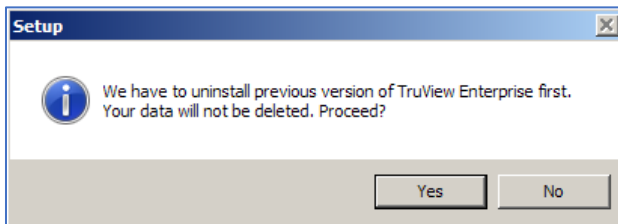
Notes

Uninstalling TruView Enterprise for Windows doesn't delete your TruView data.

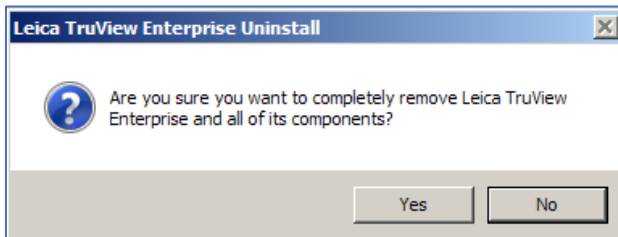
Upgrade

Follow these instructions to upgrade to a new version of TruView Enterprise for Windows.

1. Download a new version of TruView Enterprise for Windows.
2. Verify that there is no task in the import queue.
3. Double-click the **TruViewEnt360.exe** file. If you receive a User Account Control notice, click **Yes**.
4. The installer will ask for your permission to uninstall your existing version of TruView Enterprise. Click **Yes**.



5. Choose **Yes** when prompted to confirm uninstallation.



6. Once uninstallation is complete, proceed to install the new version as described in the Installation section above.

Location of TruView Enterprise Application and Log Files

By default, TruView Enterprise for Windows installs its files in these sub-directories under the directory “C:\Program Files\Leica Geosystems\TruViewEnterprise”.

\app\	This subdirectory contains TruView Enterprise application files
\mongodb\	Executable for the MongoDB database software.
\node\	Executable for the Node software.
\redis\	Executable for the Redis software
\tools\	Various helper utilities for the operation of TruView Enterprise for Windows.

TruView Enterprise application logs can be found in these two files:

```
C:\ProgramData\Leica Geosystems\Logs\tvserver.log  
C:\ProgramData\Leica Geosystems\Logs\node-clm_log.txt
```

When contacting HDS support concerning TruView Enterprise for Windows, include all log files with your email.

Location of TruView Data

When you import TruView data into TruView Enterprise for Windows, your TruView data is stored in the default directory “C:\ProgramData\Leica Geosystems\TruView”. To backup your TruView data, simply copy or archive the TruView data directory and all its contents to a safe location.

TruView Enterprise stores temporary files in “C:\Windows\Temp” and “C:\Program Files\Leica Geosystems\TruViewEnterprise\app\tvserver\data\uploads” directories. You may need to periodically delete files in the temporary directory.

Changing TruView Data Location

Follow these instructions to change where TruView Enterprise for Windows stores data.

1. Open “C:\Program Files\Leica Geosystems\TruViewEnterprise\app\tvserver\config.json” in a text editor.
2. Modify the entry “location” in each file to point to the drive/directory where you want to store TruView data. Note that you must escape backslash characters (e.g. d:\\truview\\data).
3. Restart Leica TruView Server service.

Using Network Drive to Store Data

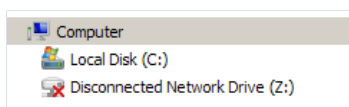
Additional steps are required for TruView Enterprise for Windows to store TruView data on your network drive.

The following instructions explain how to configure TruView Enterprise for Windows to store TruView data in a network drive located at [\\servername\sharedfolder\data](#).

1. Create three subdirectories in [\\servername\sharedfolder\data](#)
 - locations
 - scans
 - uploads
2. Create a text file containing this single line. Save it as **mapdrive.bat** in directory “C:\Windows\System32\GroupPolicy\Machine\Scripts\Startup”. Note that you must have administrator privileges to save a file in the above directory.

```
net use z: \\servername\sharedfolder /user:domain\username password
```

3. Open the **Local Group Policy Editor** dialog.
4. Select Computer Configuration\Windows Settings\Scripts (Startup/Shutdown)\Startup.
5. Click **Add** on the Startup Properties.
6. Click **Browse** and select **mapdrive.bat** on the file dialog.
7. Restart your computer.
8. After restart, you will see a disconnected network drive icon. You will not be able to open or disconnect this special network drive. This is fine.



9. Change the “location” entry in “C:\Program Files\Leica Geosystems\TruViewEnterprise\app\tvserver\config.json” to “z:\\data”.
10. Restart TruView Server service.

Windows Services

During installation, TruView Enterprise for Windows creates the following services. All three services must be running for TruView Enterprise for Windows to function properly.

- MongoDB
- Redis
- Leica TruView Server

You can start/stop/restart a service using the Services dialog.

Notes

You must always start MongoDB and Redis services first because Leica TruView Server service has runtime dependencies on MongoDB and Redis services.

Port Redirection

TruView Enterprise for Windows uses port 9000 by default. You need to specify the port number in your URL (e.g. <http://1.2.3.4:9000>.) However, you can configure a port redirection from 80 (which is the default HTTP port) to 9000. With port redirection, you will be able to access your TruView Enterprise for Windows website without specifying the port number.

To redirect 80 to 9000, run this command in an Administrator Command Prompt window:

```
netsh interface portproxy add v4tov4 listenport=80 listenaddress=0.0.0.0  
connectport=9000 connectaddress=1.2.3.4
```

Replace “1.2.3.4” with the correct IP address of your system.

To remove the port redirection setting:

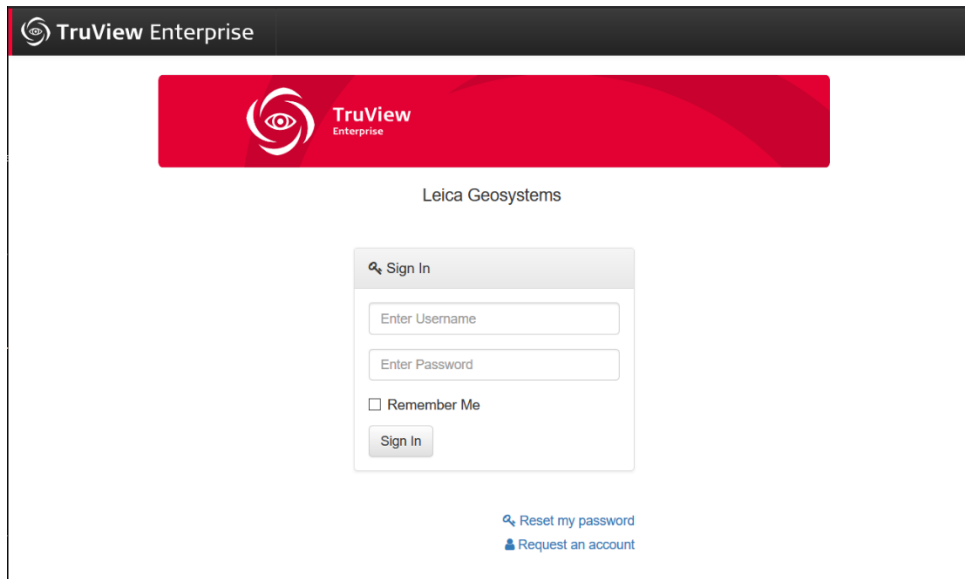
```
netsh interface portproxy delete v4tov4 listenport=80 listenaddress=0.0.0.0
```

Accessing Your TruView Enterprise for Windows Website

After installation is complete, you can access your TruView Enterprise site via a web browser at:

<http://localhost:9000>

Your browser will display the login page.



Default Login Credentials

The default administration credentials are:

Username: admin

Password: admin

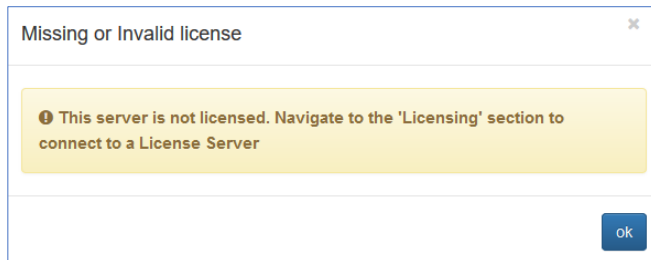
Upon first login, you will be required to change the admin's password.

Setting License Server Hostname

Notes

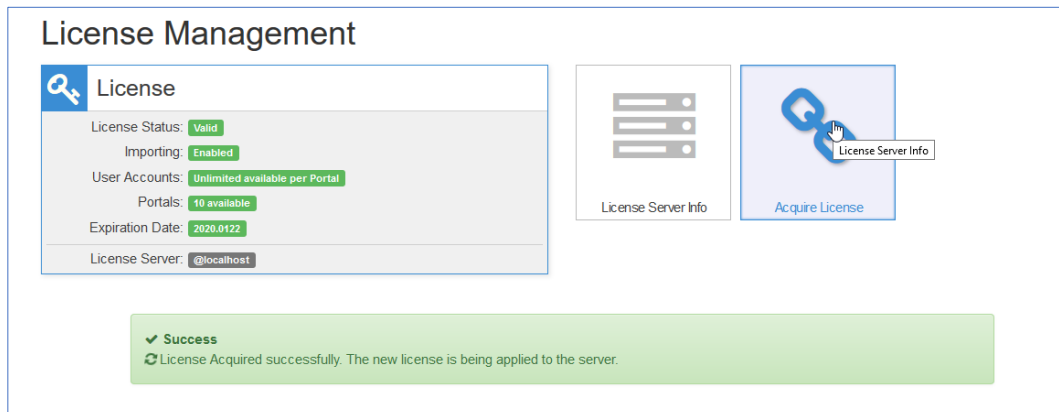
You must activate a valid TruView Enterprise EID on your Leica CLM server before you can set a license server hostname.

Upon logging into TruView Enterprise, you will see the following message if the system couldn't acquire a license from a Leica CLM server.



Follow these steps to configure a license server hostname:

1. Select Administration on the top nav bar.
2. Select Licensing.
3. Select License Server Info.
4. Enter the hostname or IP address of your Leica CLM server. Make sure you have a leading @ character (eg. @clmserver). Click OK.
5. Select Acquire License.
6. If you have a valid TruView Enterprise license, you should see the following screen after a few moments. Contact Leica support if you see an error at this step.



Enabling API Access and SDK

In TruView Enterprise for Windows v3.8 and later, enabling API Access through “tvq.json” is no longer supported. API Access and SDK feature are automatically enabled if your TruView Enterprise license has an SDK option. You can verify if your license has an SDK option by checking the product description in the CLM software. See below for an example of a license that has an SDK option.

The screenshot shows the Client License Manager (CLM) interface. The title bar reads "Client License Manager for Floating Licenses". The main window has a red header with "Installed licenses". On the left, there is a sidebar with navigation links: "View installed licenses", "Activate new licenses", "Offline license transfer", "View licenses in use", "Manage license server", "Verify licenses", "Verify internet connection", "Options", "About", and "Close". Below the sidebar, it shows "Recent license verification: 3/30/2020 2:45 PM". The main area is divided into two panes. The left pane shows a tree view of "Entitlements" with several items, including "5309897". The right pane shows a table of details for the selected license:

Name	Value
Product family	TLS
Product name	5309897
Product description	TruView Enterprise with SDK Option (1yr)
License version	0.1
Entitlement ID	00106-13533-00028-84460-BBEB7
Expiration date	6/17/2020
No. licenses hybrid/overdraft	1 / 0
Date issued	6/5/2019
Start date	6/4/2019
License type	Subscription
State	Fully trusted
Fulfillment type	Publisher activation
SW version/Build date	1.6, 11-apr-2018
Version limit	

At the bottom of the window, there is an "Output" pane showing logs: "[3/30/2020 14:44:59] Uninitialize", "[3/30/2020 14:44:59] Initialize locally", "[3/30/2020 14:44:59] Client: v11.16.4.0, Server: v11.16.4.0", "[3/30/2020 14:45:03] Query installed licenses", "Query entitlements", and "[3/30/2020 14:45:18] Licenses have been verified." There are also buttons for "Return licenses (rehost)", "Check for updates", and "Save as".

Setting up HTTPS Connection for TruView Enterprise for Windows

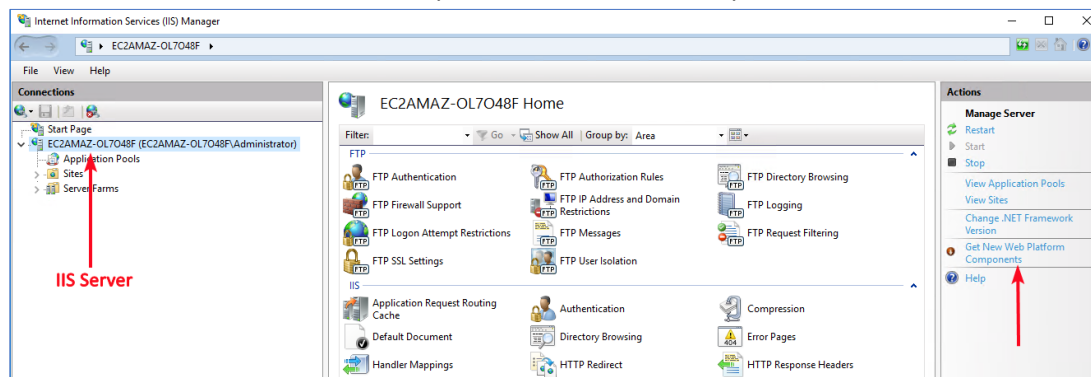
The following components need to be installed and configured to enable SSL/TLS (HTTPS) access for TruView Enterprise.

1. URL Rewrite and Application Request Routing Components
2. Configuring Reverse Proxy
3. SSL/TLS Certificate Installation
4. Configuring HTTPS Binding
5. HTTP to HTTPS Redirection (optional)

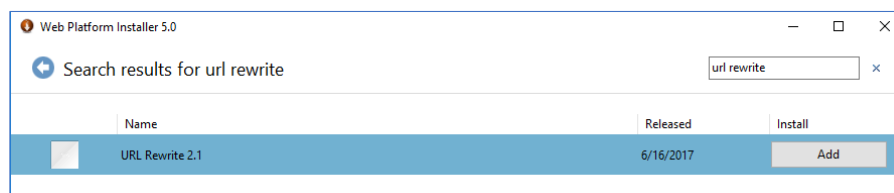
The following procedures configure HTTPS using Certify the Web/Let's Encrypt project Windows Server 2016/IIS 10.

URL Rewrite and Application Request Routing Components

1. Open Internet Information Services (IIS) Manager.
2. Select your IIS server on the Connections pane.
3. Select "Get New Web Platform Components" on the Actions pane.

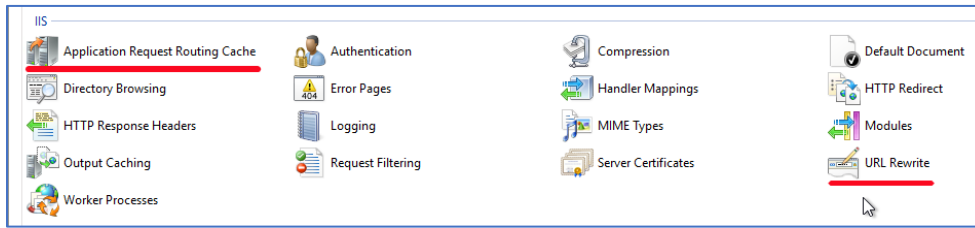


4. Click the "Install this extension" button.
5. Run the downloaded MSI installer. Once installation is completed, run the Web Platform Installer software.
6. In the Web Platform Installer window, type "url rewrite" into the search box and press Enter. You will see an item "URL Rewrite 2.1". Click Add.

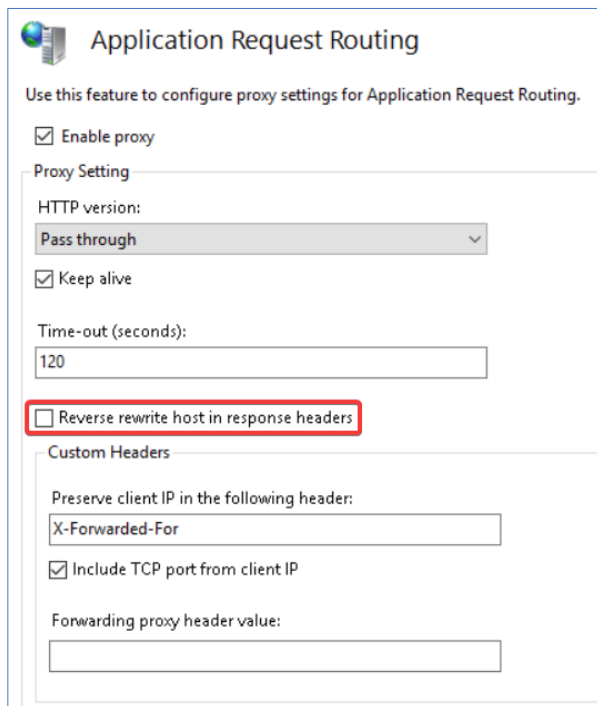


7. Type "application request routing" into the search box and press Enter. You will see an entry named "Application Request Routing 3.0". Click Add.
8. Click Install.
9. Select "I Accept" when prompted.
10. Click Finish and Exit to close the Web Platform Installer program.
11. Close and start the "Internet Information Services (IIS) Manager" program again.

12. There will be two new icons “Application Request Routing Cache” and “URL Rewrite” in the IIS section.



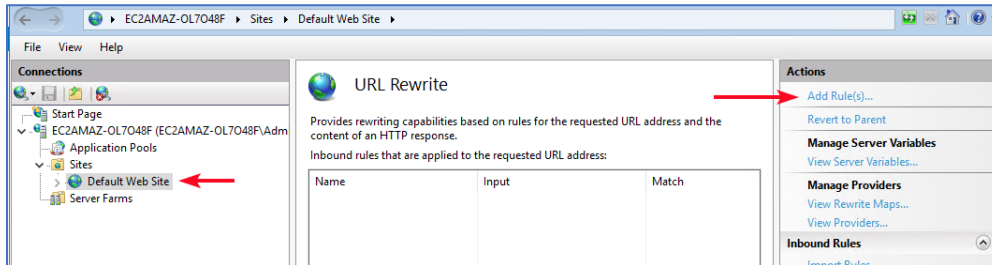
- 13. Select “Application Request Routing Cache”.
- 14. Select “Open Feature” on the Actions pane.
- 15. Select “Server Proxy Settings” on the Actions pane.
- 16. Check “Enable proxy” option.
- 17. Uncheck “Reverse rewrite host in response headers” option.



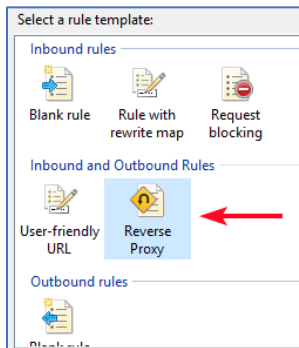
18. Click Apply on the Actions pane.

Configuring Reverse Proxy

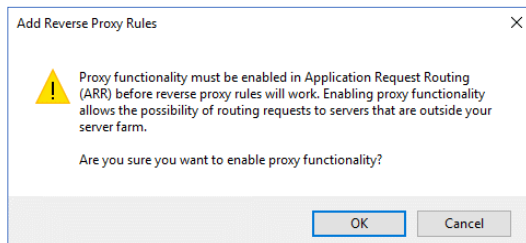
1. Select your TruView Enterprise site on the Connections pane. This may be “Default Web Site” if you only have one website hosted on this server.
2. Double click “URL Rewrite”.
3. Select “Add Rule(s)...” on the Actions pane.



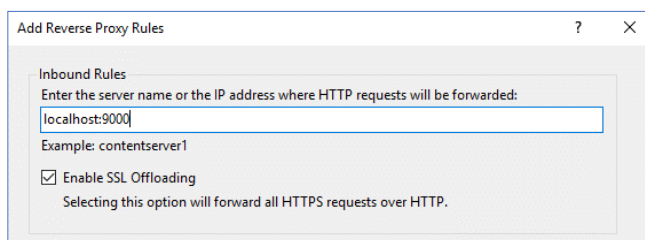
4. Select “Reverse Proxy” in the Inbound and Outbound Rules




5. You may be prompted to enable proxy functionality. Select OK.



6. On the Add Reverse Proxy Rules window, enter “localhost:9000” in the Inbound Rules pane. Select “Enable SSL Offloading”. Click OK.



7. You will see a new Inbound rule in the table.

Name	Input	Match	Pattern	Action Type	Action URL	Stop Processing	Entry Type
 ReverseProxyInboundRule1	URL path after '/'	Matches	(*)	Rewrite	http://localhost:9000/{R:1}	True	Local

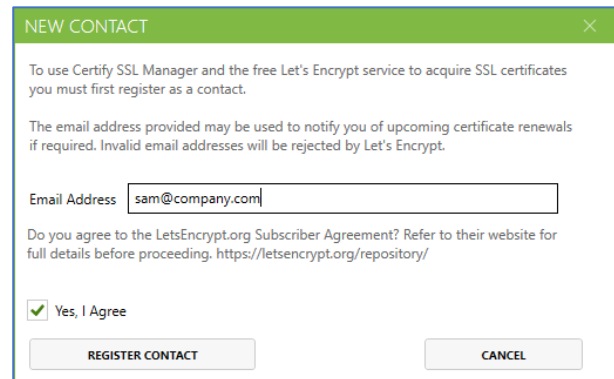
SSL/TLS Certificate Installation

1. Download and install “Certify the Web” software from <https://certifytheweb.com/home/download>

2. Run the “Certify the Web” software.



3. You will be prompted to register a new contact. Enter your valid email address. Check “Yes, I Agree” and click REGISTER CONTACT.



NEW CONTACT

To use Certify SSL Manager and the free Let's Encrypt service to acquire SSL certificates you must first register as a contact.

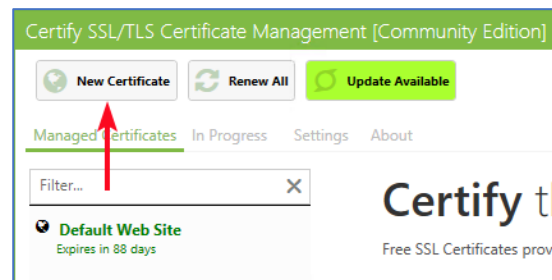
The email address provided may be used to notify you of upcoming certificate renewals if required. Invalid email addresses will be rejected by Let's Encrypt.

Email Address

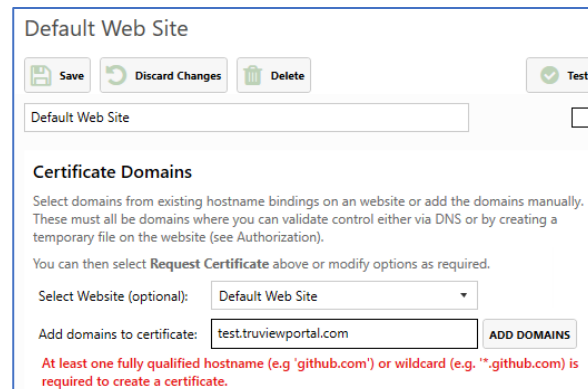
Do you agree to the LetsEncrypt.org Subscriber Agreement? Refer to their website for full details before proceeding. <https://letsencrypt.org/repository/>

Yes, I Agree

4. Click New Certificate



5. On Certificate Domains page, choose “Default Web Site” in the “Select Website (optional)” box. Enter your domain name for TruView Enterprise website in the “Add domains to certificate” box. Click ADD DOMAINS.



Default Web Site

Default Web Site

Certificate Domains

Select domains from existing hostname bindings on a website or add the domains manually. These must all be domains where you can validate control either via DNS or by creating a temporary file on the website (see Authorization).

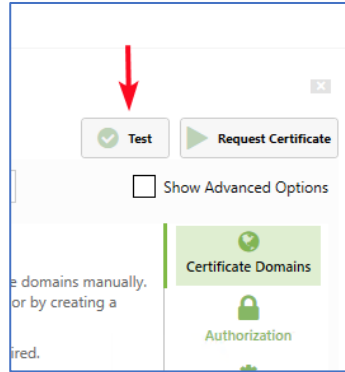
You can then select Request Certificate above or modify options as required.

Select Website (optional):

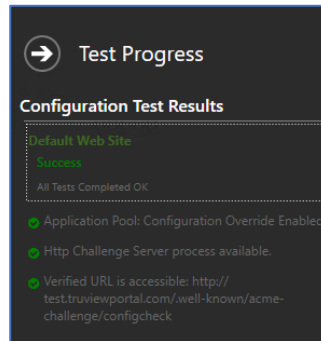
Add domains to certificate:

At least one fully qualified hostname (e.g 'github.com') or wildcard (e.g. *.github.com) is required to create a certificate.

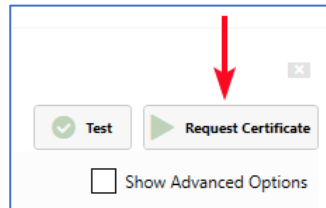
- 6. Your screen will appear like this. Click the Test button.



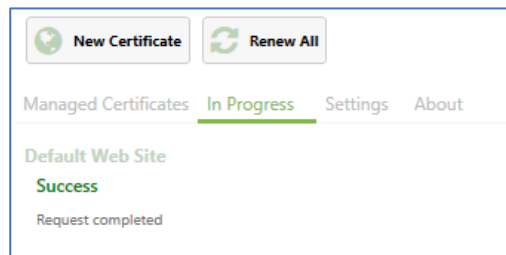
- 7. If the test is successful, you should see this message.



- 8. click the Request Certificate button.

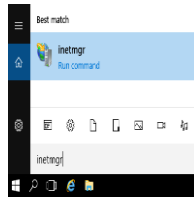


- 9. After a few moments, your screen should be like this. You can now close the “Certify the Web” software.

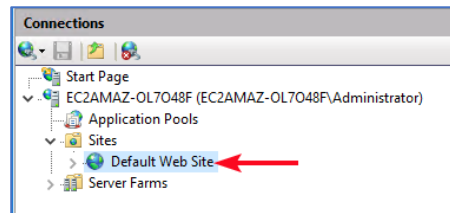


Configuring HTTPS Binding

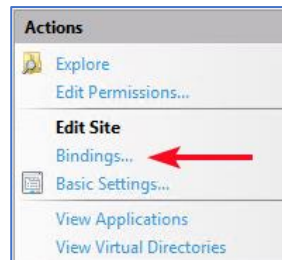
1. Open Internet Information Services (IIS) Manager by running “inetmgr”



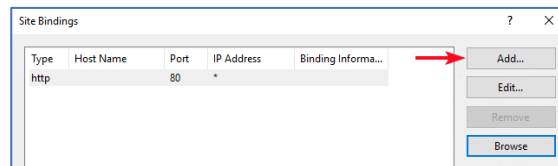
2. Select your TruView Enterprise site on the Connections pane. This may be “Default Web Site” if you only have one website hosted on this server.



3. Select “Bindings...” on the Actions pane.

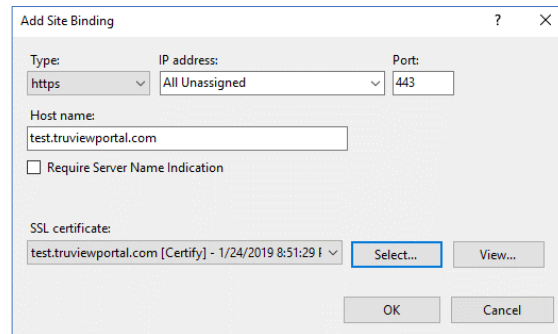


4. The Site Bindings dialog will be shown. Click the “Add...” button.



5. On the “Add Site Binding” window, select the following parameters then click OK.

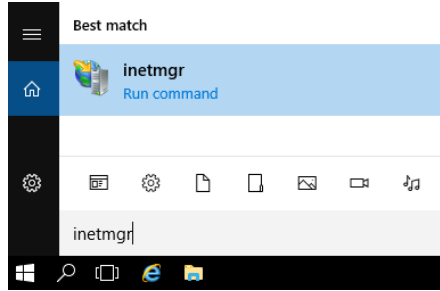
Type: https
 IP address: All Unassigned
 Port: 443
 Host name: your domain name (eg. test.truviewportal.com)
 Require Server Name Indication: unchecked
 SSL certificate: select an entry with your domain name and has “[Certify]” string.



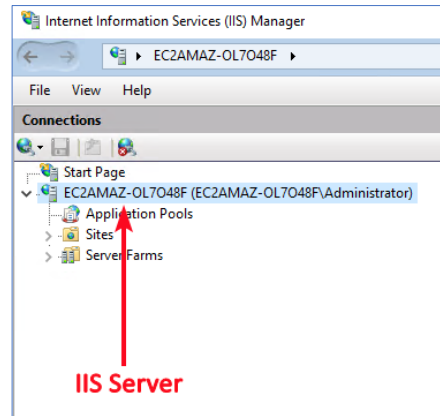
6. Now you should be able to open your TruView Enterprise website using “<https://>”.

HTTP to HTTPS Redirection (optional)

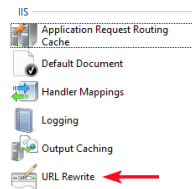
1. Open Internet Information Services (IIS) Manager by running "inetmgr"



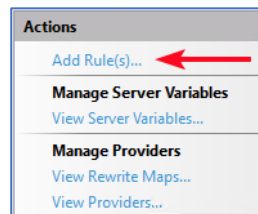
2. Select your IIS server on the Connections pane.



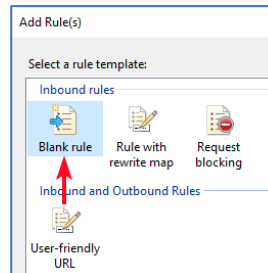
3. Select "URL Rewrite" in the IIS section



4. On the URL Rewrite page, select "Add Rule(s)..." on the Actions pane.

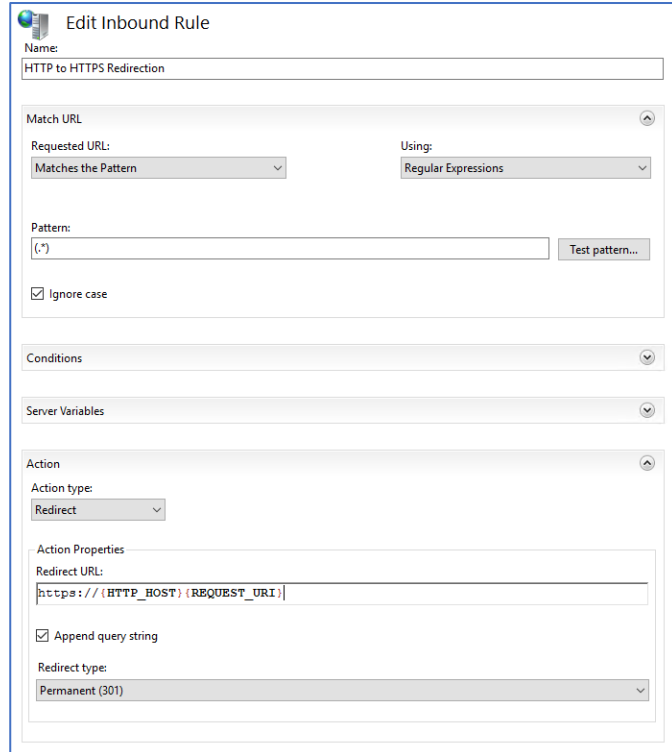


5. On the Add Rule(s) dialog, select "Blank rule" under Inbound rules. Click OK.

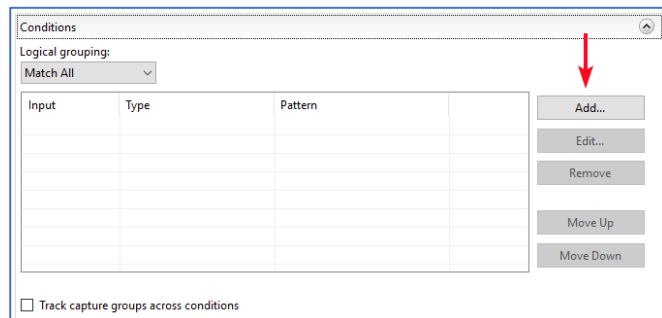


6. Enter the following parameters:

Name: HTTP to HTTPS Redirection
 Requested URL: Matches the Pattern
 Using: Regular Expressions
 Pattern: (.*)
 Ignore case: checked
 Action type: Redirect
 Redirect URL:
https://{HTTP_HOST}{REQUEST_URI}
 Append query string: checked
 Redirect type: Permanent (301)

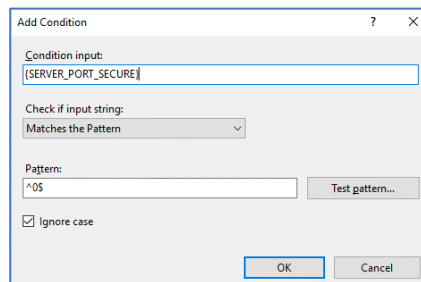


7. Expand the Conditions pane. Click Add.

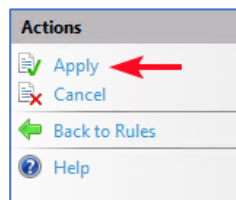


8. On Add Condition dialog, enter the following parameters. Click OK.

Condition input: {SERVER_PORT_SECURE}
 Check if input string: Matches the Pattern
 Pattern: ^0\$
 Ignore case: checked



9. Click Apple on the Actions pane.

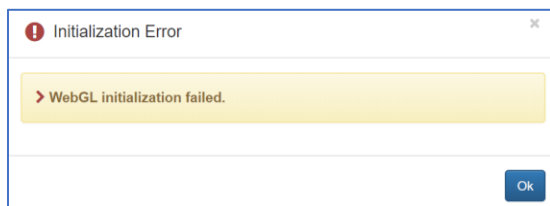


Frequently Asked Questions and Common Issues

- **How do I change the destination directory?**

TruView Enterprise application is currently required to be installed in the "Program Files" directory. This should pose no issues to customer as all application software should be installed to the "Program Files" directory. We may add the ability to optionally install it in a different location in the next version.

- **How do I resolve an “WebGL initialization failed” error?**



TruView Enterprise utilizes WebGL technology to display scans. This error message indicates that your browser doesn't support WebGL or it has been disabled by your IT policy.

We recommend that you use Google Chrome v70 or later.

If you use Chrome and get this error message, try the following solutions:

- Verify that the “Disable3DAPIs” registry entry is set to 0. See <https://www.chromium.org/administrators/policy-list-3#Disable3DAPIs> for details.
- Run Chrome with “--ignore-gpu-blacklist” option.
- If this is a laptop with dual graphics cards, configure your laptop to use a dedicated graphics card with Chrome.

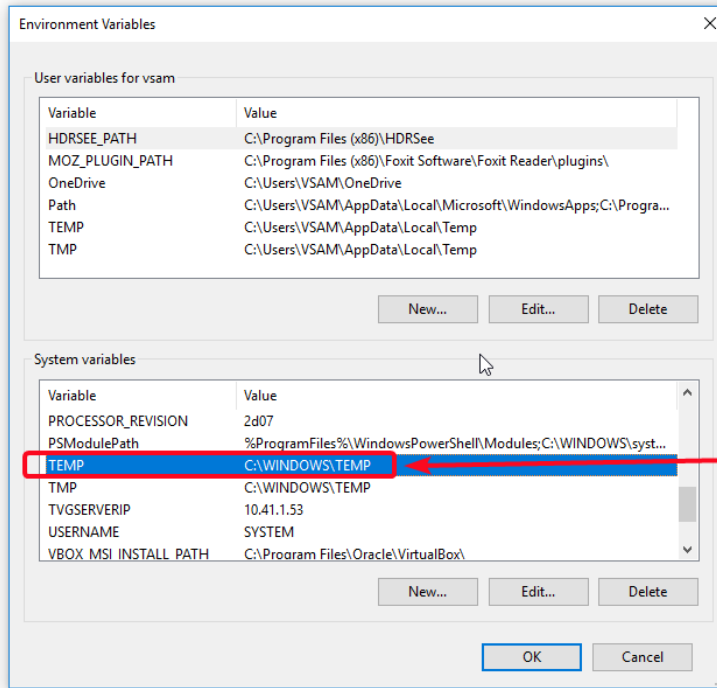
- **How do I change the sitemap image in an LGS file?**

Unlike a TVG file, an .LGS file is not a zip file. Once published, the LGS file is not meant to be edited. As such, it will not be possible to manually alter the data inside an LGS.

- **Can I change the location of temporary directory TruView Enterprise for Windows uses to store temporary files?**

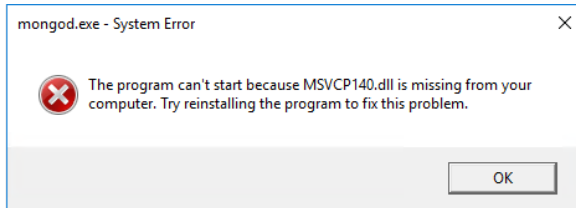
TruView Enterprise for Windows uses the system environment variable TEMP for the location of the temporary directory. This location is typically “c:\windows\temp”.

You can change the temporary directory location by modifying the system environment variable TEMP on the Environment Variables dialog. After you change it, restart Leica TruView Server service.



change this env variable

- **How do I resolve installation error “The program can’t start because MSVCP140.dll is missing from your computer...”?**



This error occurs because some system files required to run TruView Enterprise for Windows are missing. Follow these steps to fix the problem:

1. Uninstall TruView Enterprise for Windows.
 2. Download and install “Visual C++ Redistributable for Visual Studio 2015” package from Microsoft website at:
<https://www.microsoft.com/en-au/download/details.aspx?id=48145>
 3. Install TruView Enterprise for Windows again.
- **TruView Enterprise for Windows cannot acquire a license.**

The most likely cause of the problem is that the CLM software is missing or corrupt. To fix this issue, download and install Leica License Management software (CLM):

<https://scanswfs.leica-geosystems.com/dl/MvPW3TZsX6>

Also, verify that there is no “clm8.js” or “clm10.js” file in the following directory:

C:\Program Files\Leica Geosystems\TruViewEnterprise\app\tvserver\node_modules

Restart “Leica TruView Server” service after you install the CLM software or removal of clm8.js/clm10.js file.