



# INSTALLATION MANUAL

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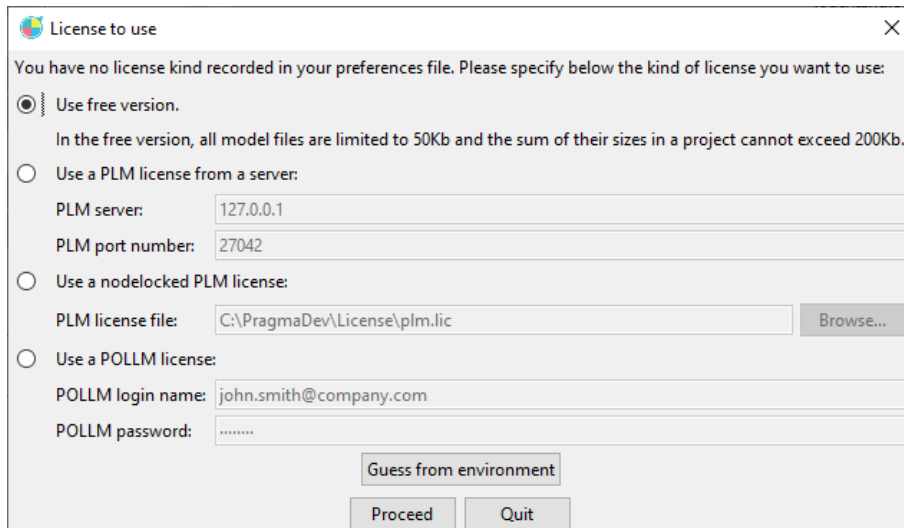
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# 1 Introduction

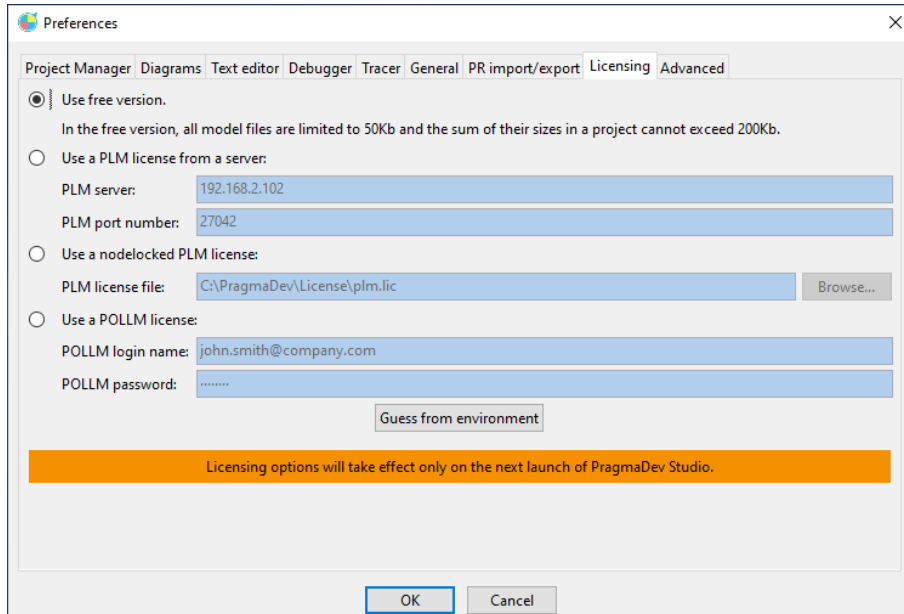
## 1.1 Description

PragmaDev Studio comes with a free mode and 2 different license managers: PragmaDev License Manager (PLM), and PragmaDev On Line License Manager (POLLM). PLM can handle floating license from a license server or node locked licenses from a file.

The type of license can be selected the first time you start PragmaDev Studio:



Or it can be changed later via the menu “Studio / Preferences...” in the tab “Licensing”:



The following paragraphs describe PLM and POLLM license managers different architectures so that you can choose which one is the best for you. Then the installation process for each platform is described in Windows installation chapter, in Unix installation chapter, and in Mac installation chapter. So pick the paragraphs depending on your target platform and the license management you are willing to use.

## 1.2 PragmaDev On Line License Management

As its name states POLLM is an on-line license management. The license is bought on line through PragmaDev web site and when the tool is launched the license is checked out on line. The license server is actually PragmaDev web site. This very flexible licensing allows to use the license anywhere on any computer but requires an internet connection.

In order to use such a license a member profile must be created on PragmaDev web site as presented below:

Products Applications Technology Support Company News

Home > Members > View Logout

### MEMBER PROFILE

Company: My July 26 Company  
 Address: 26 July Street  
 Zip: 26026  
 City: Paris  
 Country: France  
 VAT:

First name: John  
 Last name: John  
 E-mail: john26@mail.com  
 Phone:

Tool	Subscription	Purchased	Available
Studio	Active	1	1
Process	Not active	0	0
Specifier	Not active	0	0
Developer	Not active	0	0
Tester	Not active	0	0

[Modify profile](#)

### PURCHASES

Invoice	Tool	Amount	Licenses	Purchase date	Starts	Expires
258	Studio	348	1	2019-07-26	2019-07-26	2019-08-25
259	Studio	348	1	2019-08-25	2019-08-26	2019-09-25

- [Activity logs](#)
- [Force release](#)
- [Purchase on line](#)

Select if you want to buy at once or subscribe to a monthly payment:

Products Applications Technology Support Company News

Home > Members > Purchase Logout

### ONE TIME PURCHASE

Tool: Studio  
 Number of licenses: 1  
 Starting date: 03 / 09 / 2019  
 Number of months: 3  
 Price per months: 290  
 Total excl. of VAT: 870  
 Apply VAT (\*):  Yes  No

(\*): VAT is due by all individuals whatever country you live in, it is also due by French corporations, but it is not due by foreign corporations.

### HISTORY

Invoice	Tool	Amount	Licenses	Purchase date	Starts	Expires
258	Studio	348	1	2019-07-26	2019-07-26	2019-08-25
259	Studio	348	1	2019-08-25	2019-08-26	2019-09-25

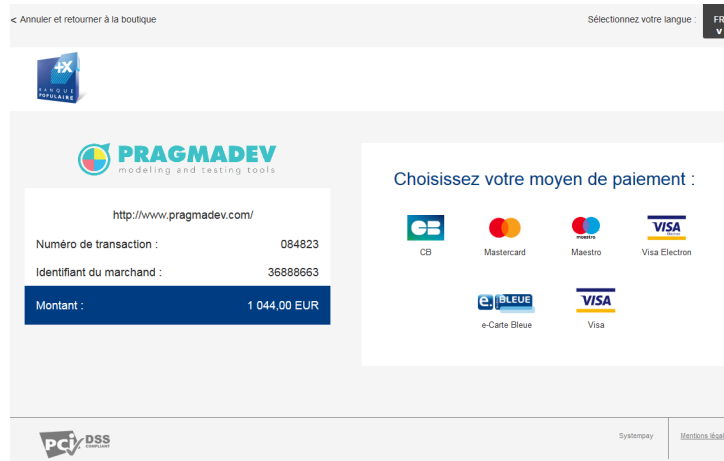
### SUBSCRIBE

Subscription can be stopped any time. Please note any started period is fully due.

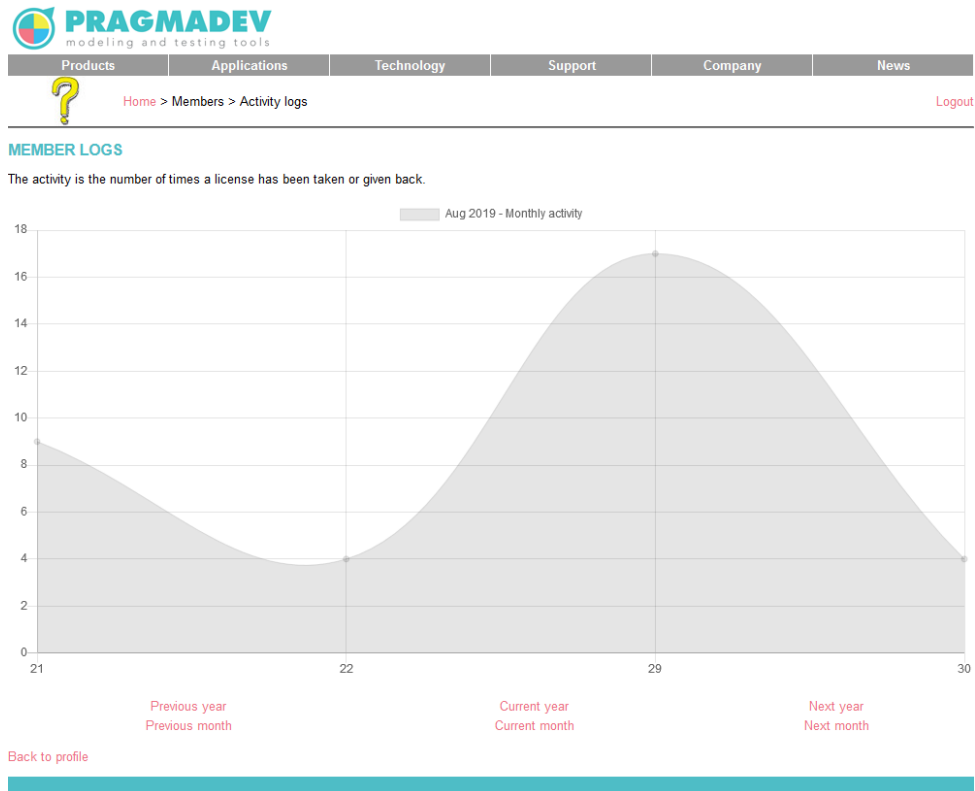
Tool: Studio  
 Number of licenses: 1  
 Starting date: Today  
 Price per license: 290  
 Total per month excl. of VAT: 290  
 Apply VAT (\*):  Yes  No

(\*): VAT is due by all individuals whatever country you live in, it is also due by French corporations, but it is not due by foreign corporations.

And pay on line with your credit card:



An example activity log is presented below:

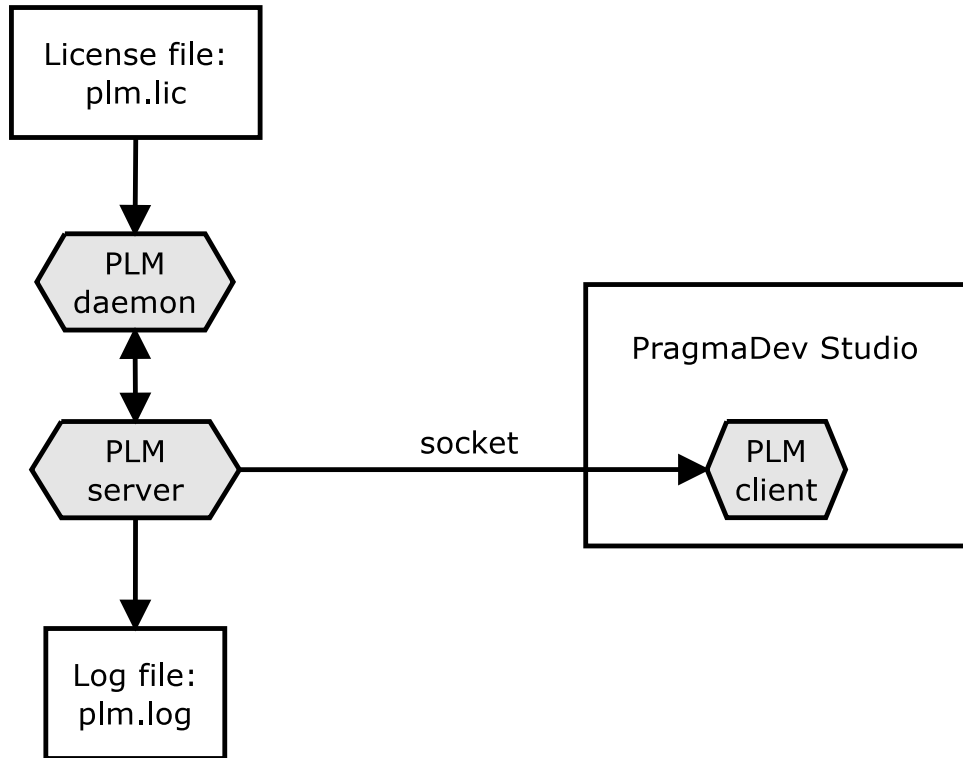


The login and password of the member are to be set in the tool preferences to access the license.

### 1.3 PragmaDev License Manager

PragmaDev License Manager (PLM) is based on a client-server architecture. The client is embedded in PragmaDev Process while the server must be started separately before the client. The license server reads the license file and starts the vendor daemons. The

vendor daemons will verify the keys in the license file are valid. If all is correct the license server will create a pool of available licenses. PragmaDev Process embeds a PLM client that connects to the PLM server. The PLM server will grant or not a license to the client.



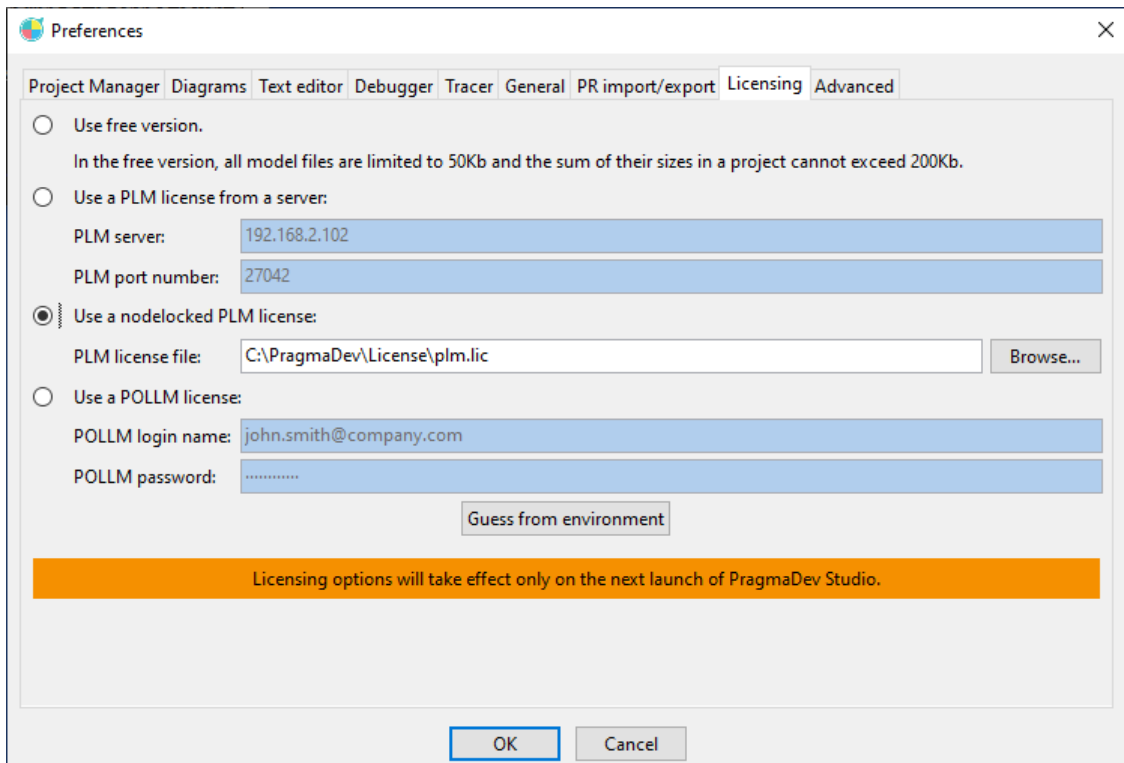
The PLM server, PLM daemon, PLM license file, and PLM log file must be in the same directory. The names of the files are:

PLM element	File name
PLM server	sPlmServer
PLM daemon	pragmadev
PLM license file	plm.lic
PLM log file	plm.log

The PLM server and the PLM client can be executed on the same computer. Communications between the different modules is done through sockets. The socket port number to use is defined by the environment variable PLM\_PORT\_NUMBER.

## 1.4 PLM file

PragmaDev License Manager can also be used node locked. That means the license file is dedicated to a single computer. In that case there is no server to start. Just point to the PLM license file in the preferences and that's it.

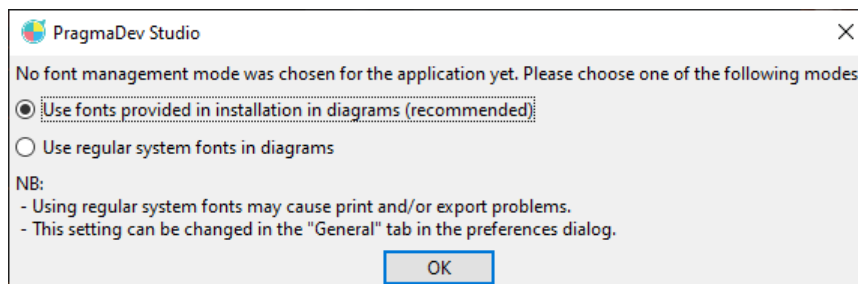


## 1.5 Model checker

PragmaDev Process comes with ENSTA Bretagne OBP (Observer Based Prover) checking tool to verify properties on the BPMN model. This tool does not require any license but is java based, so an up-to-date Java installation is required in order to use the property checking features.

## 1.6 Fonts

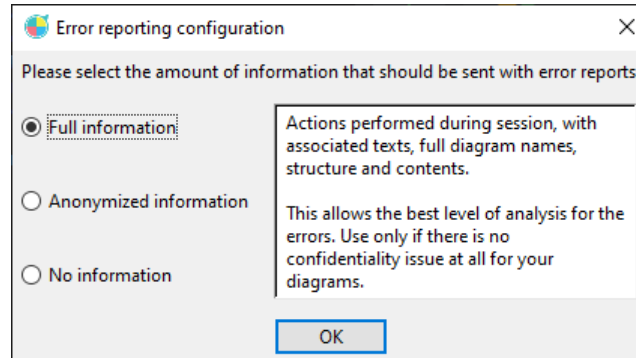
Once the license type has been selected, on the first launch of PragmaDev Studio, a window will pop up regarding the fonts to be used by the tool. We recommend to use the fonts coming with the installation as it guarantees a better consistency.





## 1.7 Error reporting

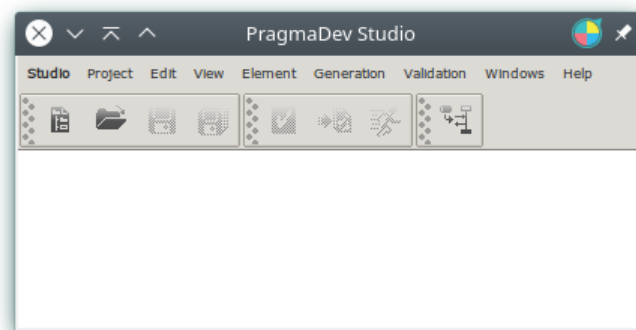
Once the fonts are selected, a last window will ask what type of information you are willing to send to PragmaDev in case the tool encounters an exception.



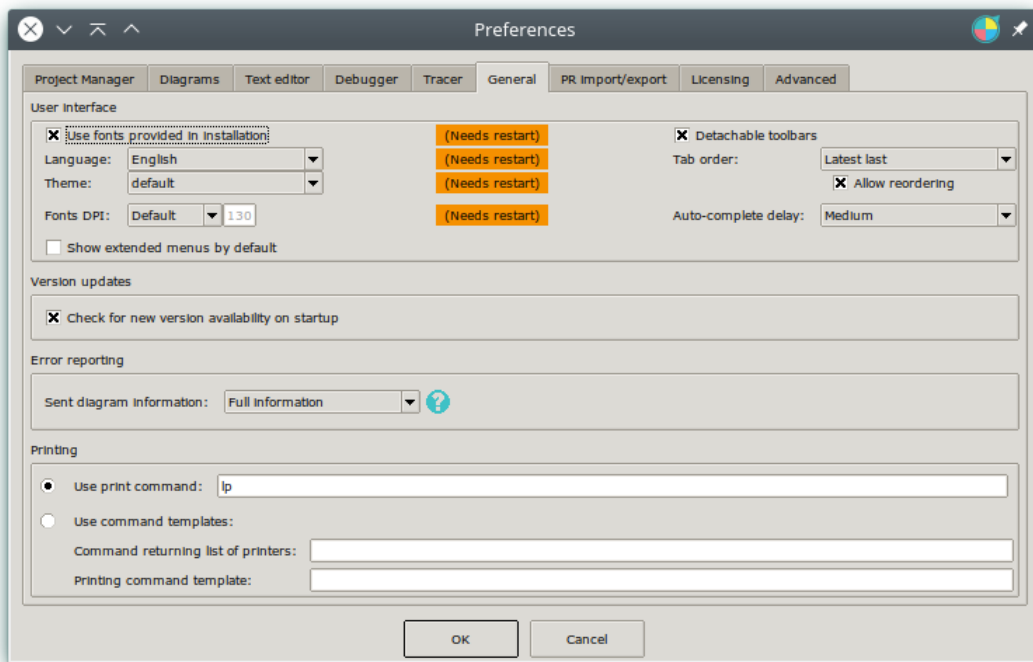
The more information we receive, the better it is. But for confidentiality reasons we understand all kind information can not be reported to us. Whatever the initial choice, it can be modified later on in the Preferences, in the General tab. Also a confirmation window will appear each time some information is about to be sent.

## 1.8 Initial text size issue

It happens that at the first run of PragmaDev Studio, the displayed text is very small. This happens mainly on Linux where the screen resolution is sometimes not figured out correctly, causing the application to look something like this:



To fix this issue, open the application preferences by selecting the item "Preferences..." in the "Studio" menu. In the "General" tab, there's an option called "Font DPI" which should be at the value "Default"; change it to "Forced" and enter a value in the field near it:



If you don't know which value you should use for your font resolution, the value that has been automatically figured out is in the field; the smaller the "Font DPI" is, the bigger your text will be. A usual value is 96. Validate the preferences dialog, then close PragmaDev Studio and launch it again to get the updated font size. You may have to adjust the "Font DPI" value until the text in PragmaDev Studio looks right compared to other applications.

## 1.9 Tutorial

PragmaDev Studio comes with a tutorial we recommend to go through.

## 2 Windows installation

### 2.1 PragmaDev Studio

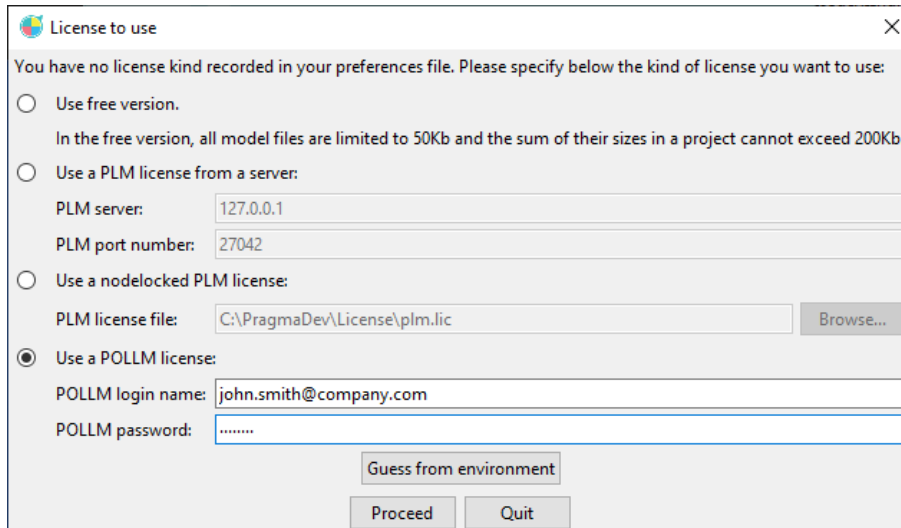
The installation is made by running `studio_install.exe`. This setup starts an installation wizard to follow step by step. It is required to have administrator privileges in order to run the installation on Windows.

The installation program creates the `RTDS_HOME` environment variable to point to the installation directory and `%RTDS_HOME%\bin` is added to the path.

### 2.2 PragmaDev On Line License Management

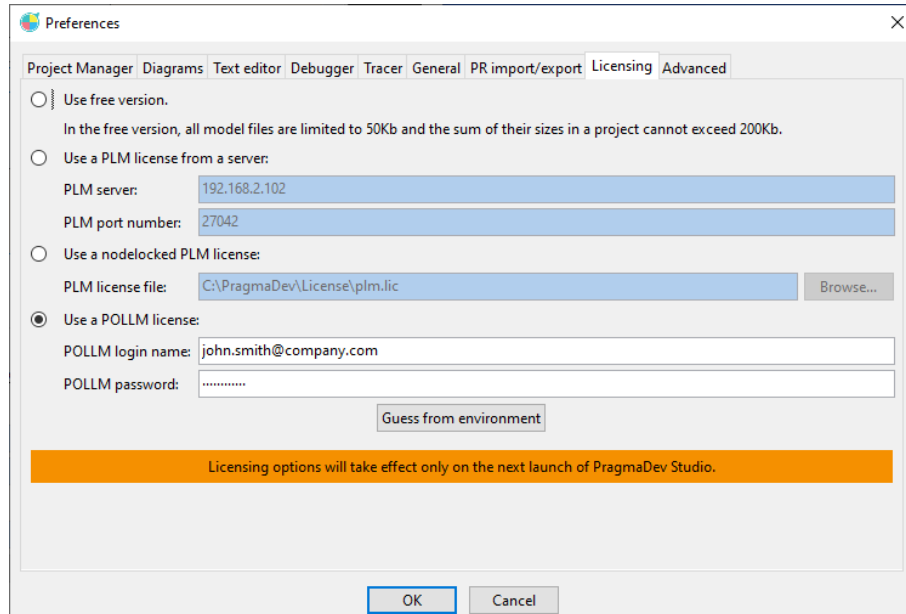
One of the license manager is based on an on-line license management. The license is bought on line through PragmaDev web site and when the tool is launched the license is checked out on line. This very flexible licensing allows to use the license anywhere on any computer.

On the client side, when PragmaDev Studio is launched, a pop-up window will ask for the type of license to use:



Use the login and password used in the members area of PragmaDev web site and that's it.

This can be changed later via the menu "Studio / Preferences..." in the tab "Licensing":



## 2.3 PLM

### 2.3.1 PLM server

All the necessary files are located in `%RTDS_HOME%\share\plm\plm_server\bin\win32` directory.

The `PLM_PORT_NUMBER` environment variable should be defined as a system variable so that it is always defined. Its value should be set to a valid socket port number on the computer. We recommend a default value of 27042.

The license file you will receive from PragmaDev should be named `plm.lic` and put in the same directory.

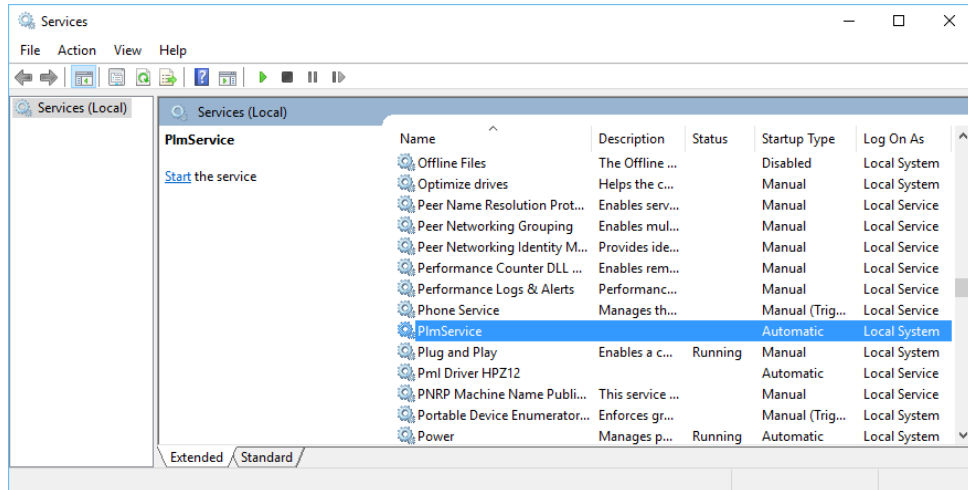
Once you have received the license file, PLM server should be installed as a Windows service so that it is started automatically when the computer boots and even if no user is logged in. The utility `PlmService` will install a service that will start the executables defined in `PlmService.ini`. Make sure the path to `sPlmServer.exe` is correct within that file.

Start a Command Prompt as administrator and go to the `%RTDS_HOME%\share\plm\plm_server\bin\win32` directory.

To install the service, run: `PlmService -i`

To remove the service, run: `PlmService -u`

Once the service is installed, it will appear in the list of Windows services that can be accessed with the Services utility through the Control Panel, and the Administrative Tools folder:

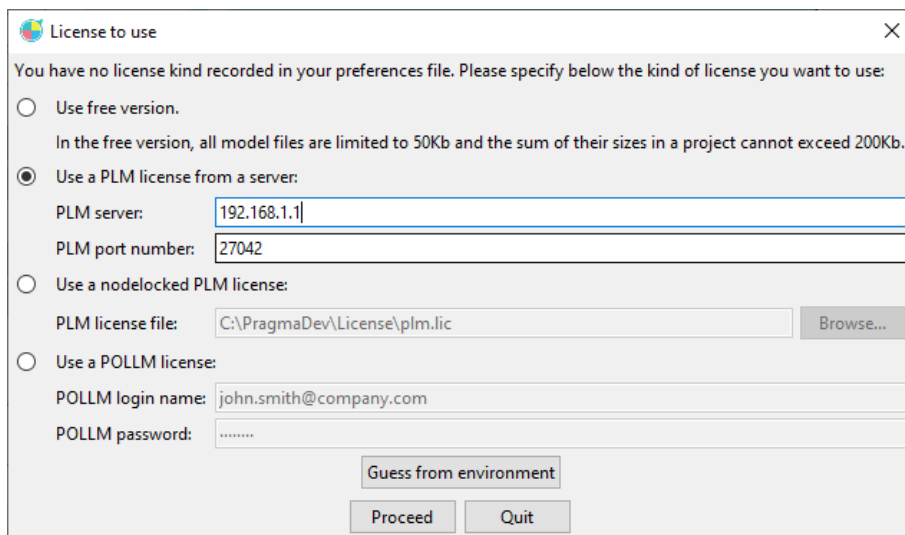


The service should be set to start automatically. As installing the service does not actually start it the first time, it is necessary to start it manually in order to check everything is fine: double click on the service and click on the start button.

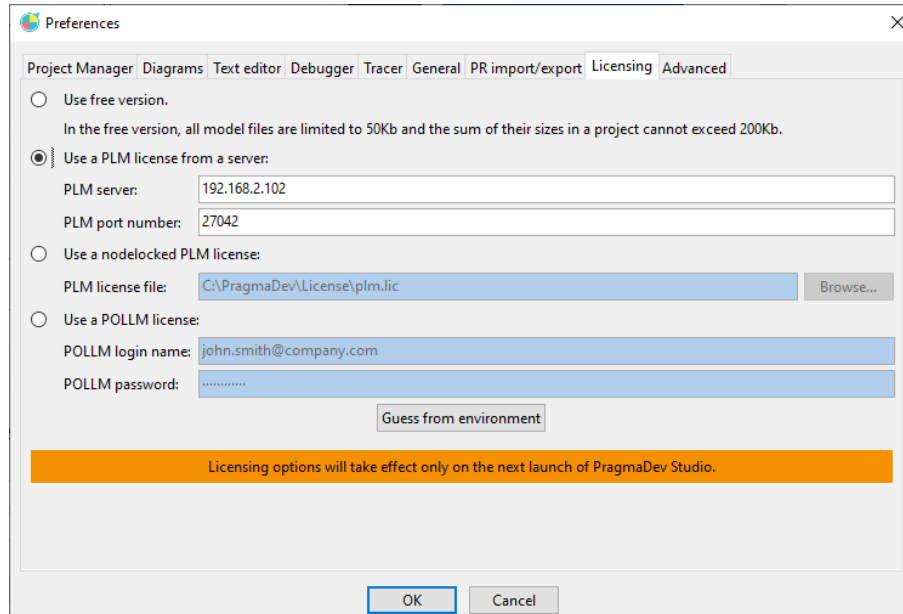
Note it is also possible to manually start the server, to do so just type: sPlmServer in the Command Prompt. In this case all the log information will also be printed in the Command Prompt.

### 2.3.2 PLM client

The PLM client can be configured the first time PragmaDev Studio is started:



This can be changed later via the menu “Studio / Preferences...” in the tab “Licensing”:



The “PLM server” is the server hostname or IP address and the “PLM port number” is the port number defined on the server (the `PLM_PORT_NUMBER` environment variable). The PLM client can be configured also by defining following environment variables:

- `PLM_SERVER` set to the server hostname or IP address,
- `PLM_PORT_NUMBER` set to the port number defined on the server.

If both environment variables are defined, their values will be picked up automatically when starting PragmaDev Studio the first time, or at any time via the “Guess from environment” button. Note that because name resolution is not always successful, if the hostname does not work use the IP address of the server. For example, if the license server and the client are the same computer, use `127.0.0.1` instead of `localhost`.

### 2.3.3 PLM management

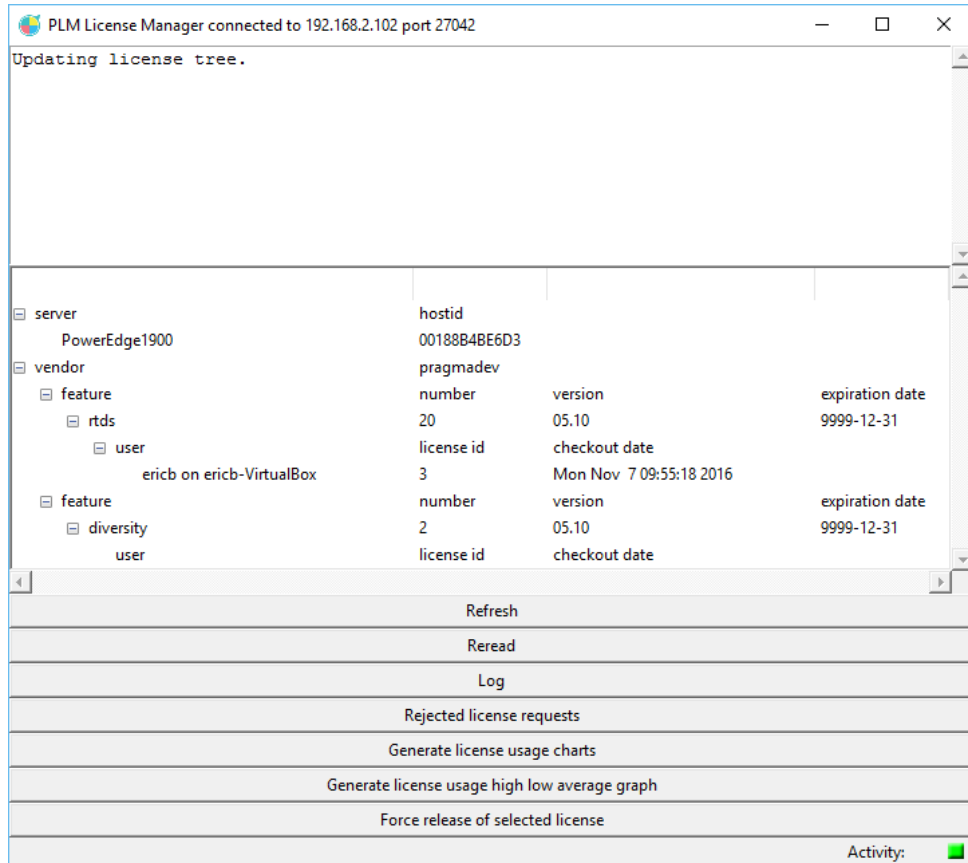
PLM includes a management tool to analyze license usage. It can be run on any computer on the network via the menu “Studio / Manage PLM licenses...” provided that a PLM licence was already configured (see “PLM client”).

Another way is to run

```
%RTDS_HOME%\share\plm\plm_manager\bin\win32\PLM_Manager.exe
```

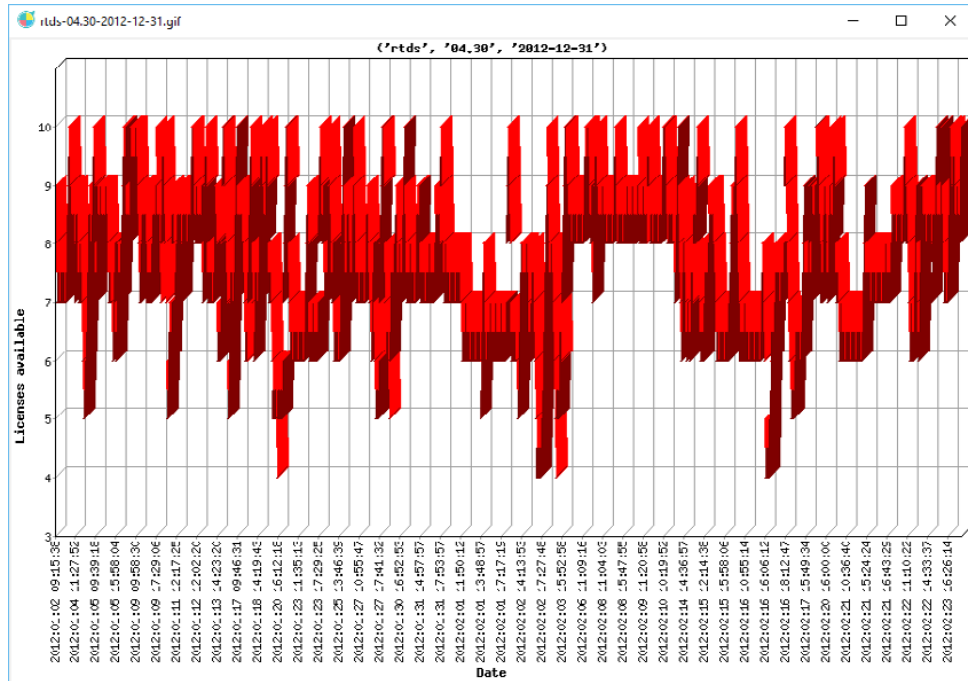
provided that both `PLM_SERVER` and `PLM_PORT_NUMBER` environment variables have been defined.

The following window will open and connect to the license server:

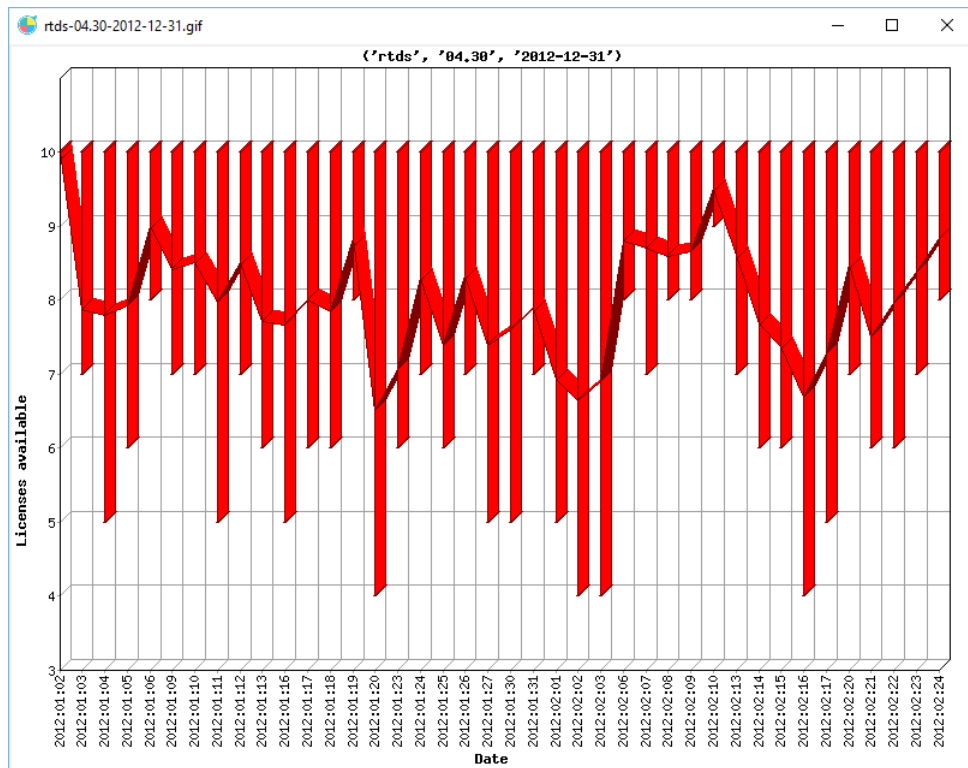


The following features are available:

- Refresh  
This will ask the license server some updated information. This is usually not needed since the PLM Manager is refreshed automatically each time the a license is taken or given back.
- Reread  
When updating the license file on the server, Reread will read again the license file. When reading a new license file, licenses are not lost if available in the new license file.
- Log  
Retrieves the whole log file from the server and displays it on the top of the window.
- Rejected license requests  
Retrieves the whole log file - so it might take some time- and displays all license requests that I have rejected.
- Generates license usage charts  
Retrieves the whole log file - so it might take some time- and generates a basic license usage chart for each feature based on the log file such as the following:



- Generate license usage high low average graph  
Retrieves the whole log file - so it might take some time- and generates a license usage chart for each feature based on the log file with the highs and lows for each day such as the following:



- Force release of selected license  
As PLM does not implement any heartbeat mechanism to test the connection to



each client, it might happen a license stays locked because the client did not release it. For that matter it is possible to force the release of a license in the license manager interface. Select a license to release and click on the “Force release of selected license” button.

## 3 Unix installation

### 3.1 PragmaDev Studio

The installation is made by running the shell script `install.sh` located in the top directory. Once the questions asked by the script are answered, the installation will just copy the required files at the specified location. Make sure you have the proper permissions to write to the installation directory.

The installation script installs PragmaDev Studio for the current platform. If you need to install for another platform (e.g., shared installation on a Unix server for Windows clients), you can give the target platform name as a parameter to the script. The possible platform names are `linux64`, `windows` and `macosx64`.

Then, as indicated by `install.sh`, each PragmaDev Studio client account should then be configured by "sourcing" the configuration script in their shell startup script. For sh-compatible shells, this is done by including the line:

```
. <installation_dir>/pragmastudio-config.sh
```

in your `.profile`; if you use a csh-compatible script, this is done by including the line:

```
source <installation_dir>/pragmastudio-config.csh
```

in your `.cshrc`.

### 3.2 PragmaDev Studio fonts

This part of the installation is optional but recommended to ensure a WYSIWYG behavior of PragmaDev Studio when printing and exporting diagrams to images. To do so, PragmaDev Studio should preferably use the same font on the display and when printing and exporting.

PragmaDev Studio will try to install its fonts itself in the local fonts directory (`~/ . fonts`). You may have to quit the application and run it again for the fonts to be seen the first time you run it. If it still does not work, you can run the following command to add the correct font directory to the font search path:

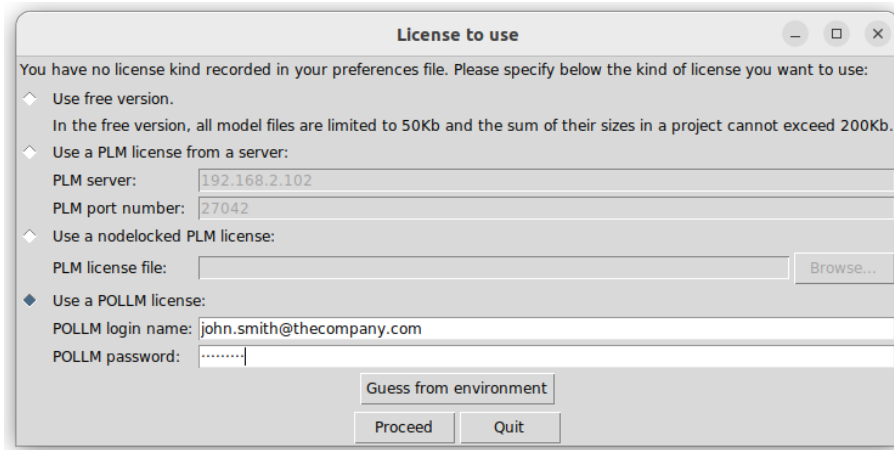
```
xset +fp $RTDS_HOME/share/print/fonts
```

This command must be run after running the application configuration script and after the X server is launched. The command is usually put in the `.xsession` script (if using `xdm`) or the `.xinitrc` script (if not). This is however highly dependent on the X server and the window manager. Please refer to the platform documentation for more information.

### 3.3 PragmaDev On Line License Management

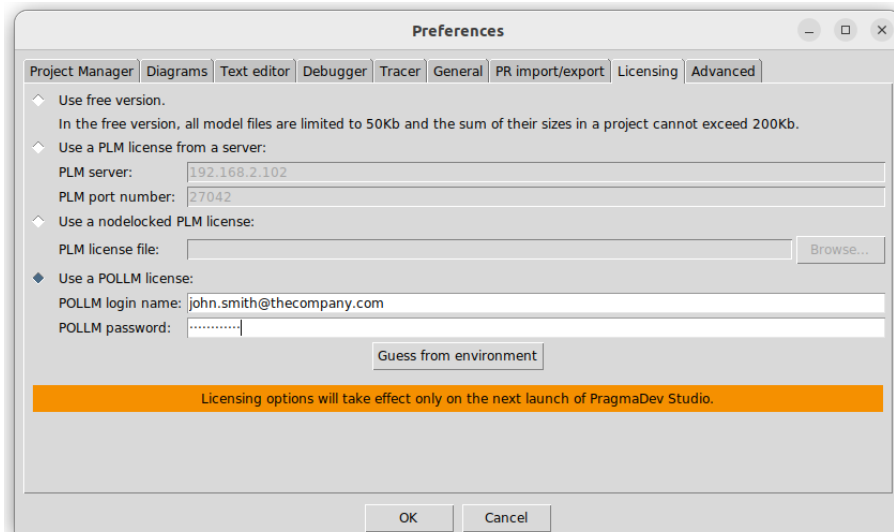
One of the license manager is based on an on-line license management. The license is bought on line through PragmaDev web site and when the tool is launched the license is checked out on line. This very flexible licensing allows to use the license anywhere on any computer.

On the client side, when PragmaDev Studio is launched, a pop-up window will ask for the type of license to use:



Use the login and password used in the members area of PragmaDev web site and that's it.

This can be changed later via the menu “Studio / Preferences...” in the tab “Licensing”:



## 3.4 PLM

### 3.4.1 PLM server

All the necessary files are located in `$RTDS_HOME/share/plm/plm_server/bin/<platform>` directory.

The `PLM_PORT_NUMBER` environment variable should be defined as a system variable so that it is always defined. Its value should be set to a valid socket port number on the computer. We recommend a default value of 27042.

The license file you will receive from PragmaDev must be put in the directory where all the files are and named `plm.lic`. The PLM server requires a `/tmp` folder to exist.

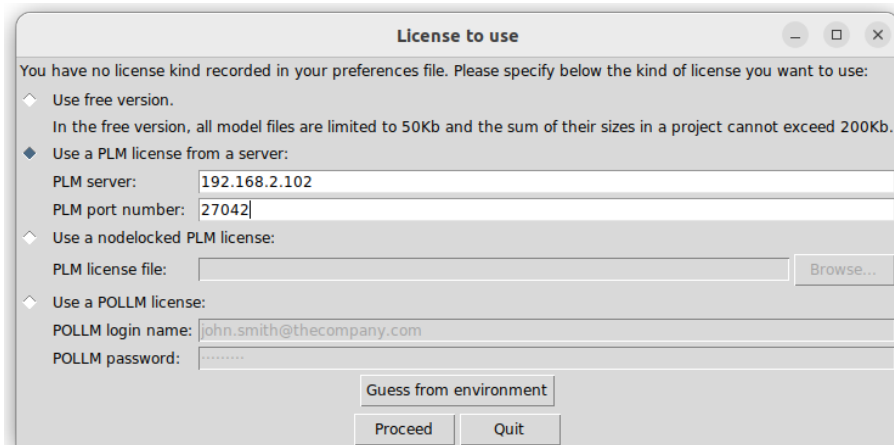
Once you have received the license file, PLM server should be installed as a Unix daemon to be started automatically when the computer boots. A sample script called `plmd` is provided to be put in `/etc/init.d`. We suggest to set up a symbolic link from `rc5.d/S09plmd` to that script so that it is started n°9 at startup level 5. In the example script, all the necessary files have been copied to:

```
/opt/pragmadev/plm/bin
```

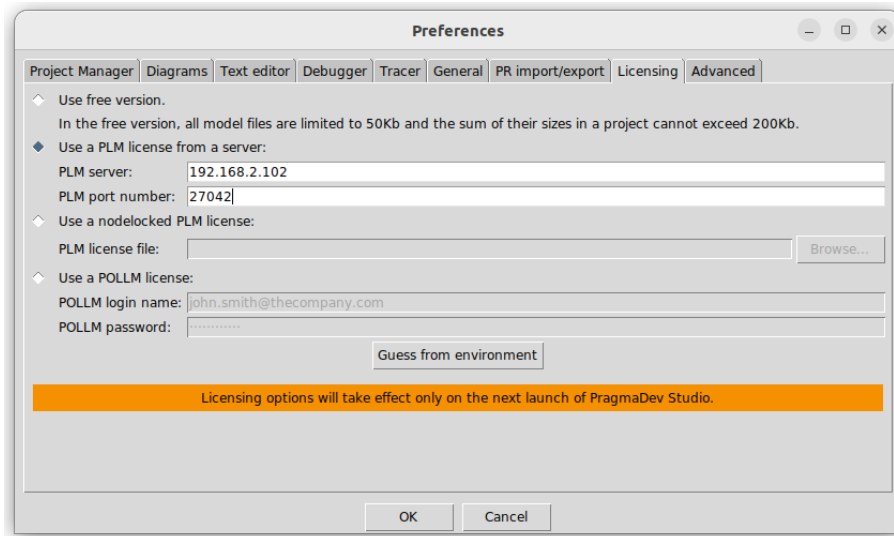
If a PLM server is started while another one is running, the new server will start and the old one will eventually die by itself.

### 3.4.2 PLM client

The PLM client can be configured the first time PragmaDev Studio is started:



This can be changed later via the menu “Studio / Preferences...” in the tab “Licensing”:



The “PLM server” is the server hostname or IP address and the “PLM port number” is the port number defined on the server (the `PLM_PORT_NUMBER` environment variable). The PLM client can be configured also by defining following environment variables:

- `PLM_SERVER` set to the server hostname or IP address,
- `PLM_PORT_NUMBER` set to the port number defined on the server.

If both environment variables are defined, their values will be picked up automatically when starting PragmaDev Studio the first time, or at any time via the “Guess from environment” button.

### 3.4.3 PLM management

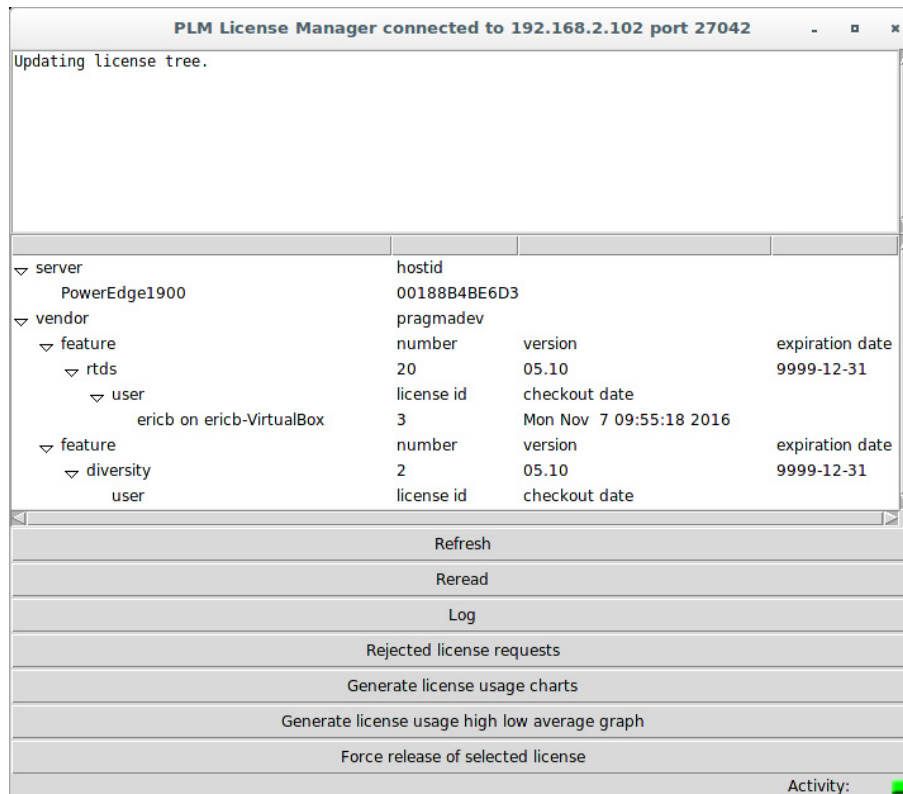
PLM includes a management tool to analyze license usage. It can be run on any computer on the network via the menu “Studio / Manage PLM licenses...” provided that a PLM license was already configured (see "PLM client" on the preceding page).

Another way is to run

```
$RTDS_HOME/share/plm/plm_manager/bin/linux64/PLM_Manager
```

provided that both `PLM_SERVER` and `PLM_PORT_NUMBER` environment variables have been defined.

The following window will open and connect to the license server:



The following features are available:

- Refresh
 

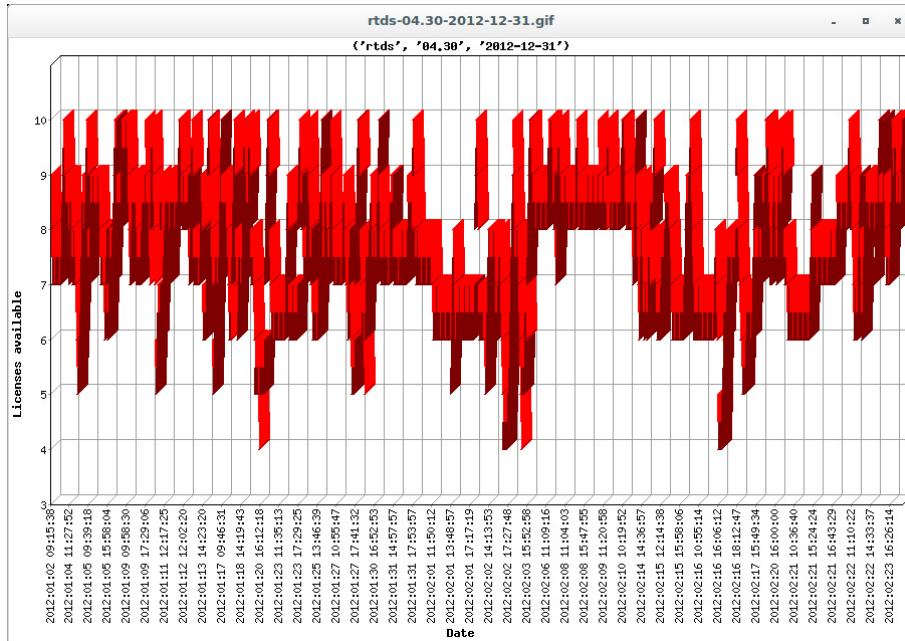
This will ask the license server some updated information. This is usually not needed since the PLM Manager is refreshed automatically each time the a license is taken or given back.
- Reread
 

When updating the license file on the server, Reread will read again the license file. When reading a new license file, licenses are not lost if available in the new license file.
- Log
 

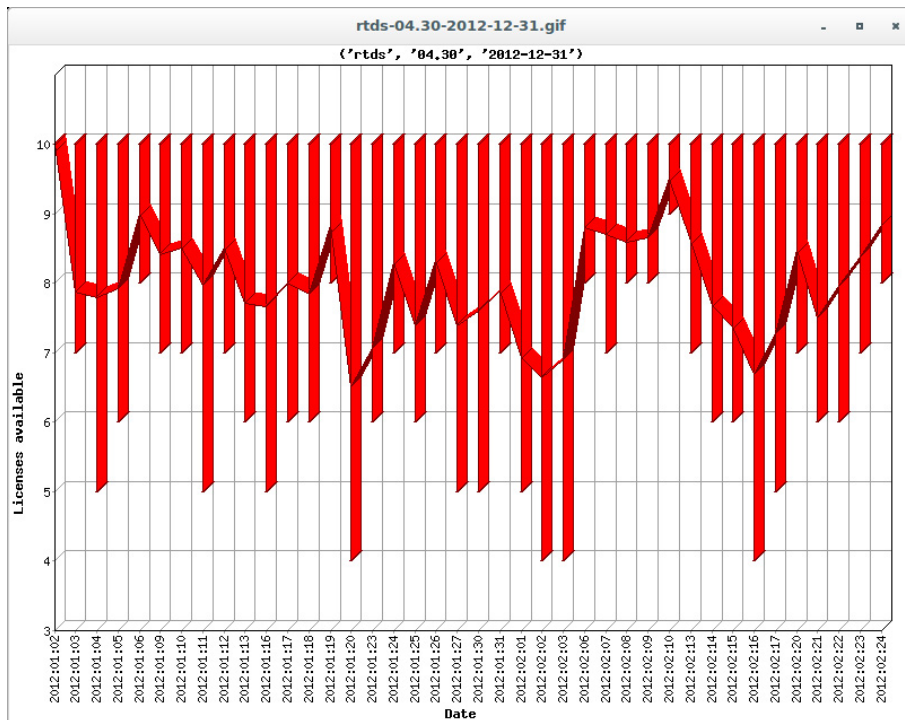
Retrieves the whole log file from the server and displays it on the top of the window.
- Rejected license requests
 

Retrieves the whole log file - so it might take some time - and displays all license requests that I have rejected.
- Generates license usage charts
 

Retrieves the whole log file - so it might take some time - and generates a basic license usage chart for each feature based on the log file such as the following:



- Generate license usage high low average graph  
Retrieves the whole log file - so it might take some time- and generates a license usage chart for each feature based on the log file with the highs and lows for each day such as the following:



- Force release of selected license  
As PLM does not implement any heartbeat mechanism to test the connection to each client, it might happen a license stays locked because the client did not release it. For that matter it is possible to force the release of a license in the license

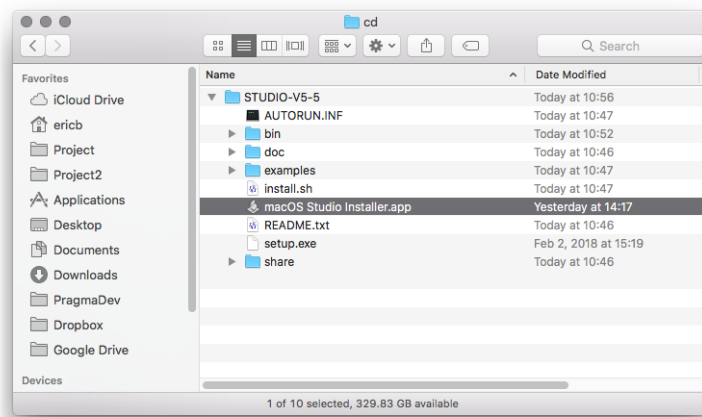
manager interface. Select a license to release and click on the “Force release of selected license” button.



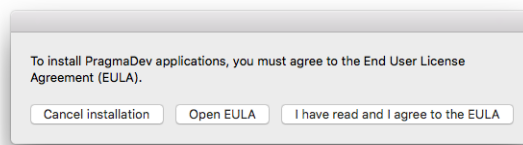
# 4 Mac installation

## 4.1 PragmaDev Studio

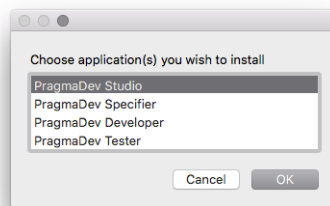
Download PragmaDev Studio and unzip it:



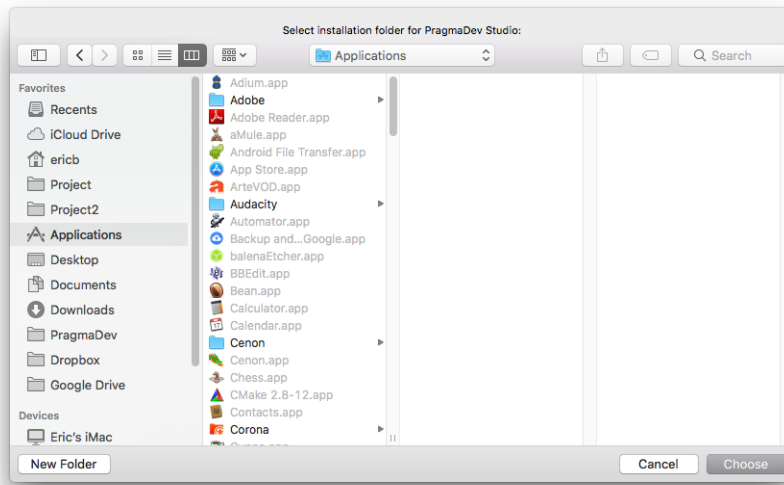
Launch the macOS Studio Installer application. You might get a warning that the installer is an application downloaded from the internet and that it wants to control the Finder. Acknowledge both to make sure the installer runs correctly. The End User License Agreement window will then pop up.



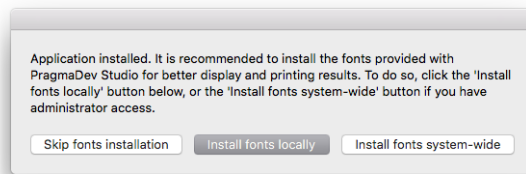
Select the application(s) you wish to install:



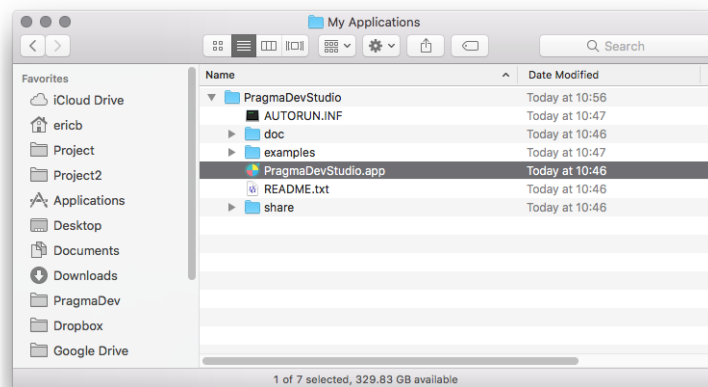
Select a destination folder. The default is to install in /Applications, but you can choose whatever installation folder you wish:



The diagrams in PragmaDev Studio are displayed better with the fonts provided with the application, so we advise you to install these fonts. They can be installed only for your user or system-wide, if you have the permissions:



If you have a license server running, you can now start PragmaDev Studio.

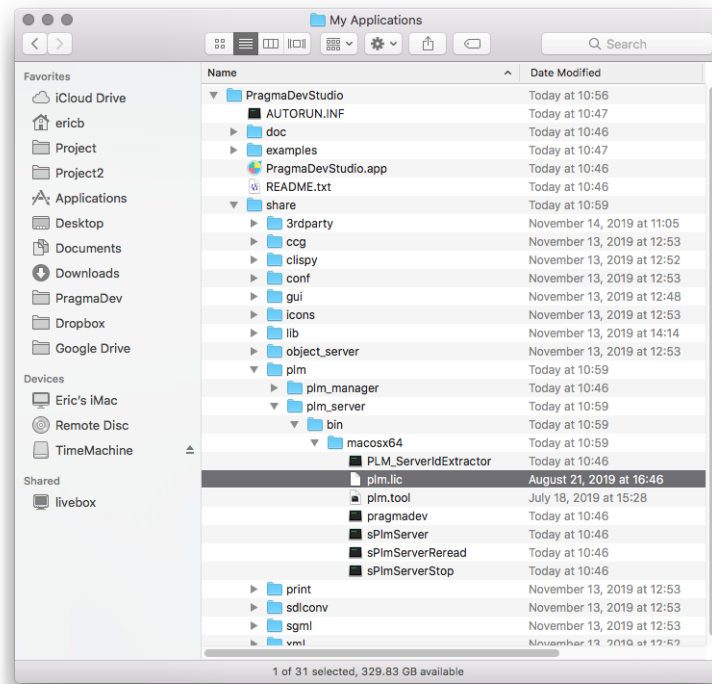


## 4.2 PLM

### 4.2.1 PLM Server

#### 4.2.1.1 Manual startup

What follows describes how to start the PLM server manually. The license file must be named `plm.lic` and must be saved in the PLM directory (`<installation folder>/share/plm/plm_server/bin/macosx64/`).



Open a bash shell and type the following commands:

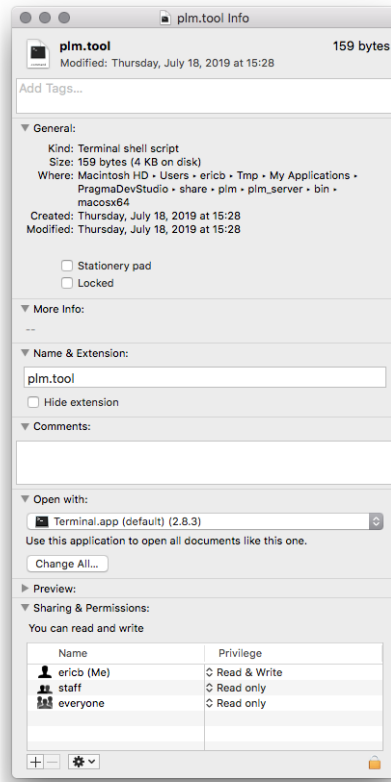
```
cd <installation folder>/share/plm_server/bin/macosx
export PLM_SERVER=127.0.0.1
export PLM_PORT_NUMBER=27042
./sPlmServer
```

```

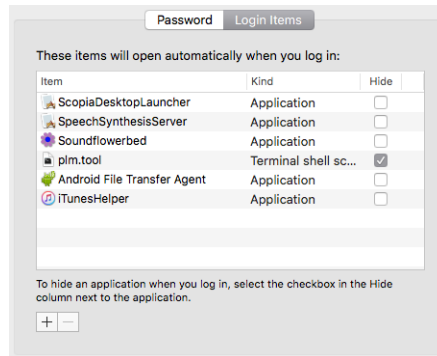
macosx64 — sPlmServer — 120x54
[imac-wifi:~] ericb$ cd /Applications/PragmaDevStudio/share/plm/plm_server/bin/macosx64
[imac-wifi:macosx64] ericb$ export PLM_SERVER=127.0.0.1
[imac-wifi:macosx64] ericb$ export PLM_PORT_NUMBER=27042
[imac-wifi:macosx64] ericb$ ./sPlmServer
2019:11:29 11:03:39 Action:Info PragmaDev License Server V1.3 starting...
2019:11:29 11:03:39 Action:Info License file successfully loaded
2019:11:29 11:03:39 Action:Info License file successfully parsed
2019:11:29 11:03:39 Action:Info Hostname is : imac-wifi.home
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid of the computer can be: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid of the computer can be: 8418D1EC2741
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid of the computer can be: 0618D1EC2741
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid of the computer can be: 3EE45928B50F
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid of the computer can be: 320010C9E000
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid of the computer can be: 320010C9E001
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid of the computer can be: 320010C9E000
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid in the license file is: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid in the license file is: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid in the license file is: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid in the license file is: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid in the license file is: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid in the license file is: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid in the license file is: 685B35C61859
2019:11:29 11:03:39 Action:Info PLM on imac-wifi.home: hostid recognized
2019:11:29 11:03:39 Action:Info Starting daemon: pragmadev
2019:11:29 11:03:39 Action:Verification Feature:studio Version:05.50 Number:1 Expires:2019-12-31 Status:Checked
2019:11:29 11:03:39 Action:Info Socket shutdown status: -1.
    
```

### 4.2.1.2 Automatic startup

Make sure the utility `plm.tool` (in `<installation folder>/share/plm/plm_server/bin/macosx64`) will be executed with the terminal application:

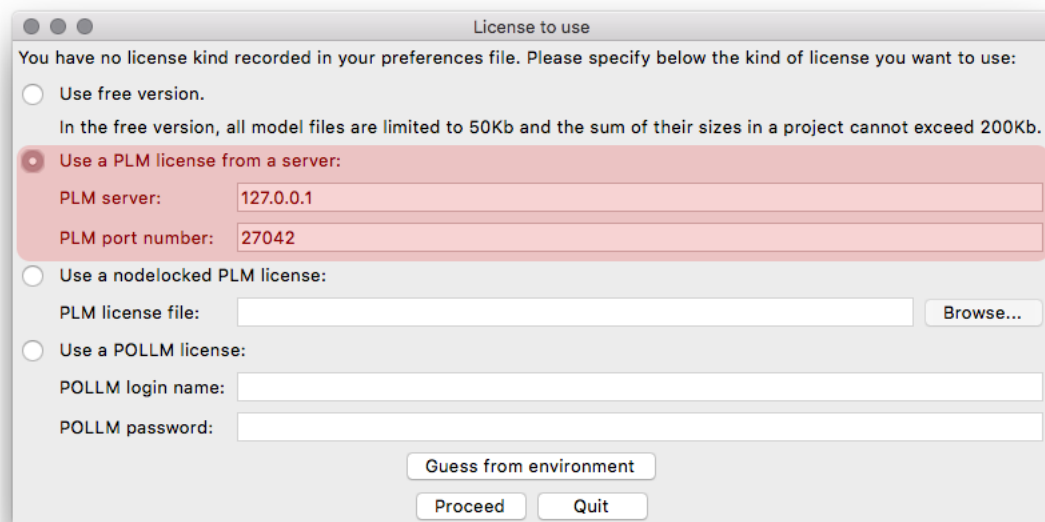


Open the System Preferences application, then go to Users & Groups and select the Login Items tab. There, add `plm.tool` to make sure it starts when logging in:



### 4.2.2 PLM Client

The PLM client can be configured the first time PragmaDev Studio is started:



This can be changed later via the menu “Studio / Preferences...” in the “Licensing” tab:

