

PLM Technical Support Series

CATIA V5 Licensing Cookbook Setting up Nodelock and Concurrent Licensing

By:

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IBM *Product Lifecycle Management Worldwide Technical Support*

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CATIA V5 Licensing Cookbook

Setting up Nodelock and Concurrent Licensing

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This technical document provides the reader tips & tools for the use of CATIA & LUM to aid in the setup of nodelock licensing and or concurrent licensing for V5. This document will aid both the systems administrator and users in understanding enrolling licenses. This is valid for all Version 5 CATIA levels unless specified.

Introduction

Welcome to the CATIA V5 Licensing Cookbook. Setting up Nodelock licensing and or Concurrent licensing can be a difficult task. The trouble often begins with getting a valid targetid right through to the starting of the application with a valid license. This document has been created to help eliminate many of these difficult tasks encountered. The cookbook contains many of the essential details needed when considering the licensing of PLM products and their use in your environment. Details are provided for various LUM and CATIA tools that are often used as well as file locations, license enrolling, allocation and much more. The concepts presented in this document have been used by many CATIA system administrators and CATIA users and proved to be useful tools that the periodically review.

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I. Pre-requisites

- You need an IBM Customer Number under which IBM PLM Products purchased
- You need a computer that has a Network Interface Card (NIC) installed

II. The Target ID

- The **Target ID** is the unique identifier of each workstation where you intend to install CATIA licenses
- For **NODELOCKED (Standalone)** licenses, this is the identification of the workstation where CATIA is to be installed
- For **CONCURRENT (Network)** licenses, this is the identification of the network license server
- The **Target ID** must be supplied when CATIA licenses are ordered

III. Obtaining the Target ID

- Obtaining the **target ID** of the machine on which you will be installing licenses
- If you already have CATIA V5 installed, run the **Nodelock Key Management Tool** from the **Start à Programs à Catia à Tools** Windows menu

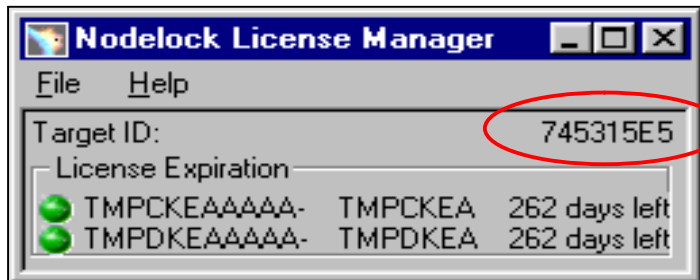


Figure 1 – Nodelock License Manager

IV. Obtaining the Target ID via LUM

- If you don't have CATIA installed yet, you can obtain the **Target ID** via the LUM **i4target** tool
- The **i4target** tool will be installed when you install LUM
- The latest LUM code for all platforms can be downloaded from:
<http://www-4.ibm.com/software/is/lum/download.html>
- Note: For Windows, the **i4target** executable can be downloaded at the above site under the tools directory for the Windows platform
- LUM code is also provided on a separate CD, packaged with V5 CATIA code

V. Locating LUM Code on Your System

The **i4target** tool is located in the directory where LUM executables get installed

VI. Location of LUM Tools

Windows NT/2000/XP

- \Ifor\Win\Bin

AIX

- /var/ifor or /usr/opt/ifor/ls/os/aix/bin

HP, IRIX, SOLARIS

- /var/lum
- or
- /opt/lum/ls/os/hpux/bin (HP)
- /opt/lum/ls/os/svr4.sgi/bin (IRIX)
- /opt/lum/ls/os/solaris/bin (SOLARIS)

Run the following command to display the **Target ID**:

```
i4target -O
```

- On Windows you may be able to just double-click on **i4target.exe**, and a message box displaying the **win32mac** Target ID of the machine will be displayed
- The Target ID is a number represented in hexadecimal notation

The following is an example of the i4target -O output showing a valid win32mac TargetID:

LUM Target ID

745315e5 win32mac MAC-HW Address

VII. Target ID Problems (Windows only)

- For Windows, the hardware-based (win32mac) Target ID is retrieved from the device driver that controls the network adapter (not from the operating system)
- The entry **I4DRIVER** is stored in the Windows Registry, in the path **HKEY_LOCAL_MACHINE\SOFTWARE\IBM\License Use Runtime**, to record the name of the network device driver used to retrieve the Target ID
- For this mechanism to work, a device driver that complies with Network Driver Interface Specification (**NDIS**) **4** must be installed on the workstation where licenses will be installed
- If you are not sure if your driver complies with NDIS 4, contact the supplier of the driver to confirm NDIS 4 compliance

VIII. Nodelocked vs. Concurrent

- CATIA licenses can be ordered in two different forms (types):
Nodelocked (Standalone) or *Concurrent (Network)*
- A *Nodelocked* license is stored on a specified workstation, and the use of the CATIA product that the license is for is restricted to that workstation (CATIA will run on only that workstation)
- A *Concurrent* license is a license stored on a License Use Management (LUM) Server, that can be used by any client workstation

IX. Nodelocked Guidelines

- A **Nodelocked** license restricts the use of a CATIA product to the workstation specified in the license
- Passwords (Nodelock Keys) for CATIA products are stored in a **nodelock** file
- CATIA, rather than License Use Management (LUM), manages use of **nodelocked** licenses
- When you start CATIA, it checks the **nodelock** file to ensure that you have a valid license

X. Concurrent Guidelines

- Many LUM clients can share the licenses for CATIA
- LUM must be installed and configured on the server and each client, and each client workstation must be connected to a server
- When a user at a client starts CATIA, LUM at the license server determines whether a license is available
- When CATIA is running, the licenses that have been reserved for that session of CATIA remain unavailable to other users
- When CATIA stops running, the licenses are returned to the server, where they become available to other users
- **Concurrent** licenses allow as many users to run CATIA simultaneously as there are valid licenses for CATIA available from the network license servers in your licensing environment

XI. Order Licenses

- Call the IBM Registration Center to order licenses
Ø (800) 446-8989 (USA)
or
Your Local Key Center
- You will need to provide the following:
 - IBM Customer Number
 - Target ID
 - CATIA Product Number(s)

- Software Serial Number(s) (for configurations)
- Platform (operating system)
- License Type – Nodelocked or Concurrent or HAL Cluster

XII. Verify License Information

Check the email that you receive from the License Key Center to verify that the following information for your licenses is correct (as shown on the next page):

- Target type (Platform)
- Target ID
- License type (Nodelock or Concurrent)

XIII. License Information

```

-----
Product name . . . . . : MD2-Catia Mechanical Design C2
Product number . . . . . : 5691MD2
Target type. . . . . : win32mac Target id. . . . . : 745315e5
Password type. . . . . : LICENSE
No. of connections . . . . : 1 License type . . . . : NODELOCKED
Passwords are valid From : 2002-03-04 To . . . . . : 2003-03-04

Generated by userid. . . . : KEYREGS1 Generated by sys : BLD-MENU
Generation reference No. : 2002-03-05-11.46.57.624231

Vendor name. . . . . : Dassault Systemes
Vendor id. . . . . : 5242378dbf8d.02.c0.09.c8.93.00.00.00
Vendor Password. . . . . : dgq5mxkpvqhbi
Product Password . . . . . : kukeitb8ipbgvnnwc32g9apdhu7s5hauzackdimangaa
Product Version . . . . . : 5.1
    
```

XIV. Create License Certificate Files

- A License Certificate file can be created by cutting and pasting the license certificate lines from the email that you receive from the License Key Center into a file.
- Create a separate License Certificate file for each license you have to install.
- The lines you need to cut and paste from your email into a file are shown on below.

XV. License Certificate File

Cut and Paste the following lines into a file:

```
[LicenseCertificate] ← 1st line  
.br/>VendorName=Dassault Systemes  
VendorPassword=dgq5mxkpvqhbi  
VendorID=5242378dbf8d.02.c0.09.c8.93.00.00.00  
ProductName=MD2-Catia Mechanical Design C2  
ProductVersion=TMPMCFA  
ProductPassword=kukeitb8ipbgnvnnwc32g9apdhu7s5hauzackdimangaa  
ProductAnnotation=TMPMCFAAAAA-  
.br/>TargetTypeName=MS Win-32 MAC  
TargetID=745315e5  
.br/>SerialNumber=TMPMCFAAAAA  
.br/>InstallProgram= ← Last line
```

- You can name each License Certificate file almost anything you want (i.e. MD2.lic).
- The normal naming convention for License Certificate files is to use a .lic extension.
- The previous example above showed the partial contents of a License Certificate file to clearly display the first and last lines of the file.

The next page shows the complete contents of a License Certificate file.

```
[LicenseCertificate]
Checksum=2CA72409B863E93B74449C72A0AD6F19
TimeStamp=1015354197
PasswordVersion=7
VendorName=Dassault Systemes
VendorPassword=dgq5mxkpvqhbi
VendorID=5242378dbf8d.02.c0.09.c8.93.00.00.00
ProductName=MD2-Catia Mechanical Design C2
ProductID=2119
ProductVersion=TMPMCFA
ProductPassword=kukeitb8ipbgvnnwc32g9apdhu7s5hauzackdimangaa
ProductAnnotation=TMPMCFAAAAA-
LicenseStyle=nodelocked
LicenseStartDate=03/04/2002
LicenseDuration=366
LicenseEndDate=03/04/2003
LicenseCount=1
MultiUseRules=
RegistrationLevel=3
TryAndBuy=No
SoftStop=No
TargetType=26
TargetTypeName=MS Win-32 MAC
TargetID=745315e5
ExtendedTargetType=
ExtendedTargetID=
DerivedLicenseStyle=
DerivedLicenseStartDate=
DerivedLicenseEndDate=
DerivedLicenseAggregateDuration=
SerialNumber=TMPMCFAAAAA
Upgrade=No
CapacityType=
Bundle=No
Registration=No
Uniqueness=No
Capturable=No
InstallProgram=
```

XVI. Installing Licenses

Nodelock licenses are installed by importing License Certificates via the Nodelock Key Management Tool

Concurrent licenses are installed by either:

Importing License Certificates via the LUM Basic License Tool Graphical User Interface (GUI)

or

Using the i4blt command

XVII. Installing a Nodelock License by Importing a License Certificate File

To install a **NODELOCK** license run:

- On **Windows**:
Start → Programs → Catia → Tools → **Nodelock Key Management**

- On **UNIX**, Enter the following command:

```
./catstart -run CATNodeLockMgt
```

This command is located in the directory:

```
/usr/DassaultSystemes/Bxx/OS_a/code/command
```

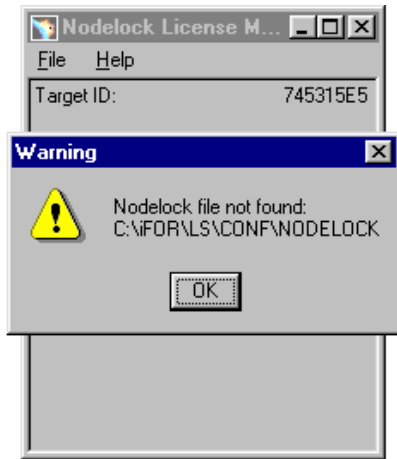
where Bxx is the CATIA release (i.e. "B08") and

OS_a is the operating system:

- aix_a
- hpux_a
- irix_a
- solaris_a

XVIII. Nodelock License Manager Warning

If you haven't installed any nodelock licenses previously, you may get the following Warning when you first bring up the Nodelock Key Management Tool:



Select OK to Close the Warning.

Figure 2 – Nodelock License Manager Warning.

Select Import from the FILE menu in the Nodelock License Manager window

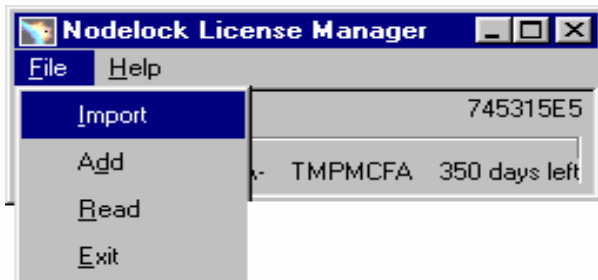


Figure 3 – Nodelock License Manager – Import

Select the location of the License Certificate file that you created and then press Open

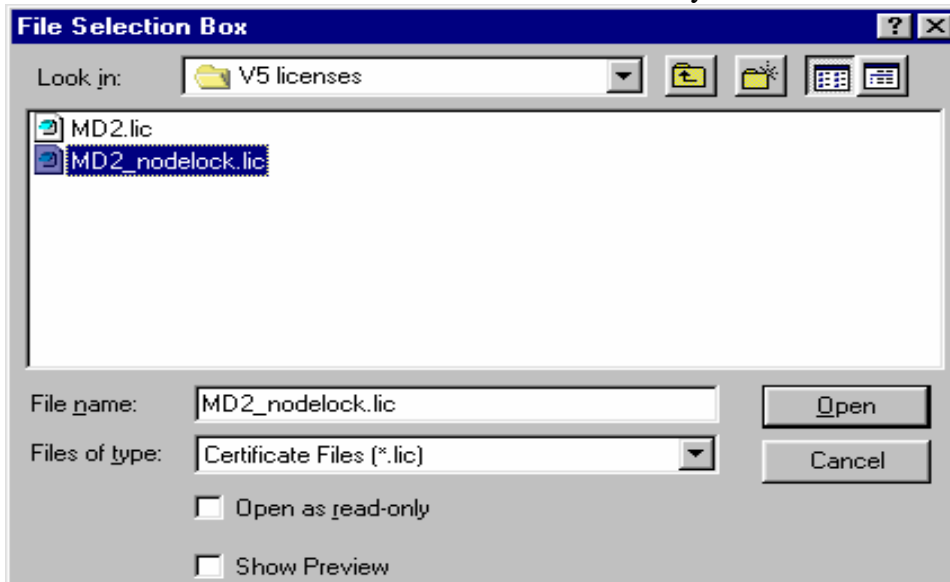


Figure 4 – File Selection Box

XIX. Editing the Nodelock File

- If you need to manually edit the nodelock file, refer to the table on the next chart for the location of the nodelock file on each platform

- The contents of a nodelock file look like this:

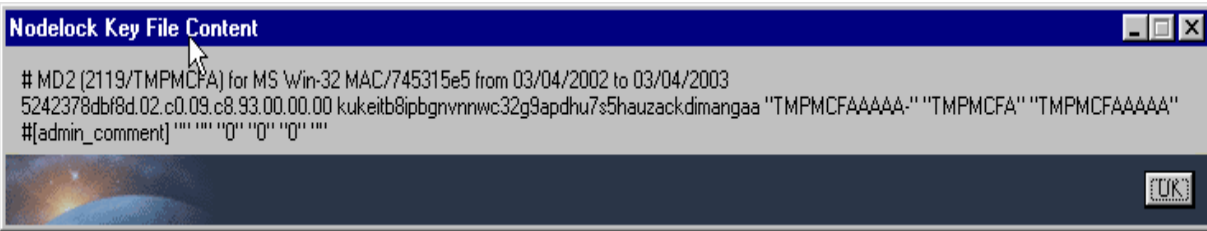


Figure 5 – Nodelock Key File Contents

- The format of the nodelock file is:
 # Comment (included for product information only)
 VendorID ProductPassword “ProductAnnotation” “Version” [“SerialNumber”]

XX. Location of the Nodelock File

Platform	Location
Windows NT	\ifor\Ls\Conf
Windows 2000 and XP	\Documents and Settings\All Users\ Application Data\IBM\LUM *
AIX	/var/ifor
HP, IRIX, SOLARIS	/var/lum or /opt/lum/lis/conf

Figure 6 – Location of the Nodelock File

Note that if LUM is installed on Windows 2000, the location of the nodelock file will be \ifor\Ls\Conf

XXI. Installing a Concurrent License by Importing a License Certificate File

- To install a CONCURRENT license on a LUM License Server, use the Basic License Tool provided with LUM (LUM must already be installed and the machine configured as a License Server)
- A License Certificate can be imported by using either the Basic License Tool Graphical User Interface (GUI) or the i4blt command

XXII. Enrolling a License using the Basic License Tool GUI

Using the GUI, select Enroll à Single product from the Products menu:

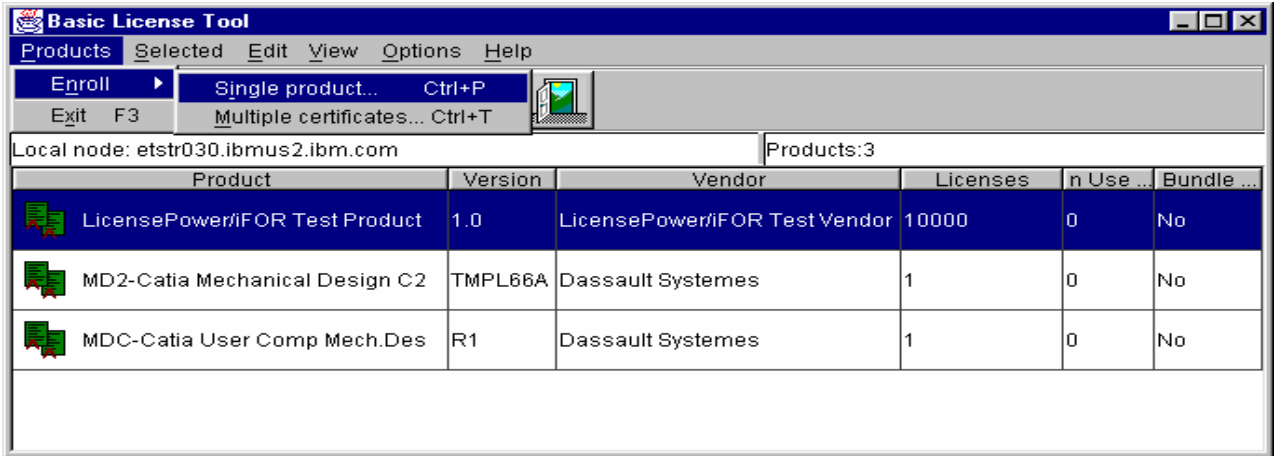


Figure 7 – Enrolling with the Basic License Tool

Select the Import button at the bottom of the Enroll Product Window.

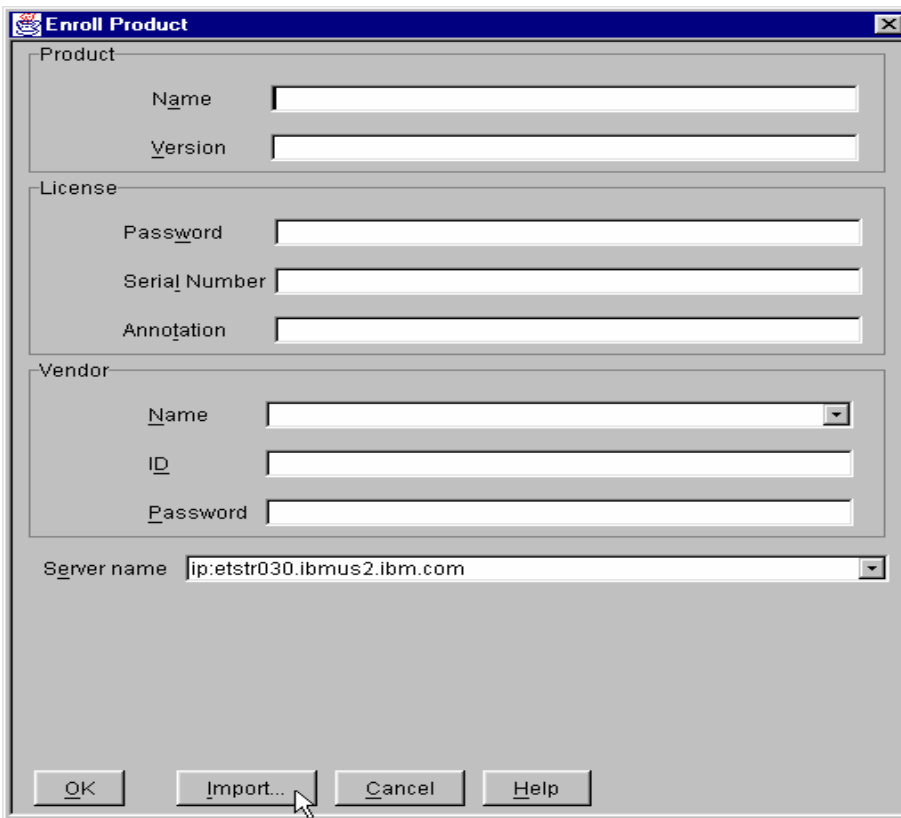


Figure 8 – Enroll Product window

Select the location of the License Certificate file that you created and press Open.

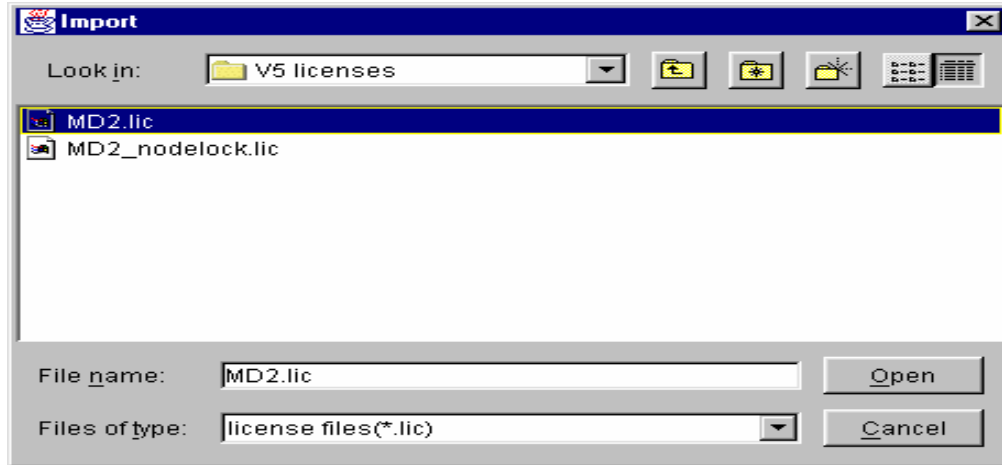


Figure 9 – Import Panel

Press OK in the Enroll Product Window

XXIII. Importing a License Certificate File For a Concurrent License Using the i4blt Command

- If you don't have the LUM GUI, you can use the i4blt command to import a License Certificate.
- To import a License Certificate using the LUM i4blt command, enter:
 \emptyset i4blt -a -f filename
 where filename is the name (including path) of the License Certificate file you created.

XXIV. Installing Licenses Using the i4blt command

- To install licenses without creating License Certificates, use the i4blt commands provided in the email that you received from the License Key Center
- From the command line (on any platform), cut and paste the i4blt commands listed after the line:
 - Install commands for server xxxxxxxx
 where xxxxxxxx is the TargetID of your server

XXV. Command to Install Licenses

Following is an example of an i4blt command as provided by the License Key Center:

(This command should be entered all on 1 line, with a space in place of each +)
 i4blt -a -v "Dassault Systemes' 5242378dbf8d.02.c0.09.c8.93.00.00.00 +
 dgq5mxkpvqhbi" -p "MD2-Catia Mechanical Design C2' TMPKCFA +
 zvexusn7favx3gumftmccdk7i3gzrg29krttcaadg6fsgcsa TMPKCFAAAAA-" -S +
 TMPKCFAAAAA

The syntax for the i4blt command is:

```
i4blt -a -v "'VendorName' VendorID VendorPassword" -p "'ProductName'
ProductVersion ProductPassword ProductAnnotation" -S SerialNumber
```

Note that each i4blt command should be all on 1 line (the above 2 lines should be all on 1 line, with a space between the 'Product Name' and ProductVersion)

XXVI. Select Licenses in the CATIA License Manager via Settings Management

You can reserve the licenses you want to start CATIA with before you actually start CATIA. Select the Settings Management menu under Start/Programs/Catia/Tools.



Figure 10 - Settings Management

- Select the Licensing tab in the Options window
- Select the licenses that you want to start CATIA with (they must be intensified) and then select OK

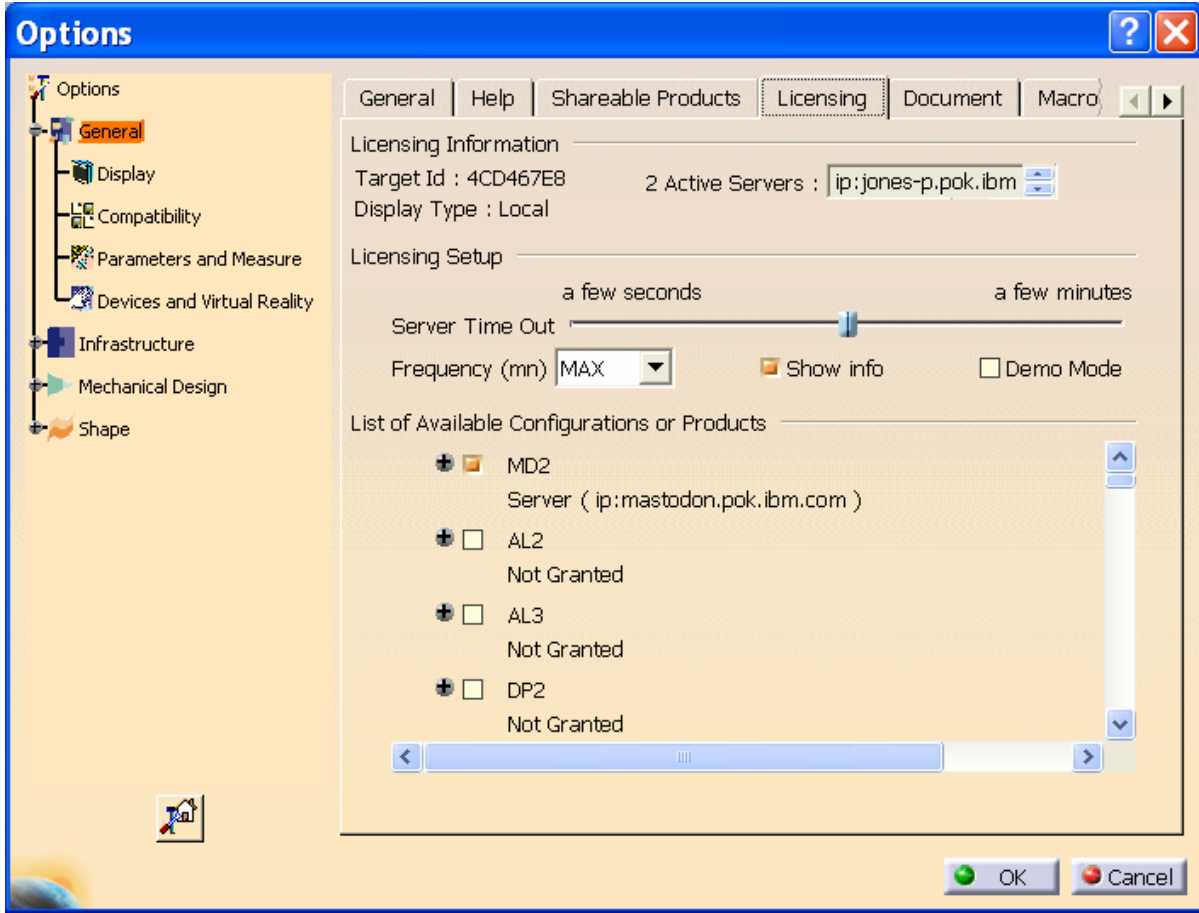


Figure 11 – Licensing Tab

You Are Now Ready to: Start CATIA



Figure 12 – CATIA Starting

XXVII. Additional Products and Shareable License Availability

- There are many products that can be used with configurations.
- Selecting them in the Tools/Options/Licensing tab than starting CATIA. The user will hold this license until he logs out of CATIA.

This is referred to as “static license allocation”

- Only selectable licenses are available.
- Licenses that are not available are under intensified.
- The server is identified where the licenses reside. If there are more servers they will be listed.

Note: You must take at least one configuration license statically in order to start CATIA.

XXVIII. Shareable (Dynamic) License Allocation

- In many instances Static License allocation is not practical. Sharing a license is more practical.
- The IG1 – CATIA – IGES INTERFACE 1 Product is a SHAREABLE product.
- This means you can DYNAMICALLY allocate this product.
- This is done by selecting to the product in the Shareable Products Tab after CATIA has been started with a configuration.
- The square turns ORANGE then selecting OK pulls the license
- If the license were not available a message would be provided indicating so.

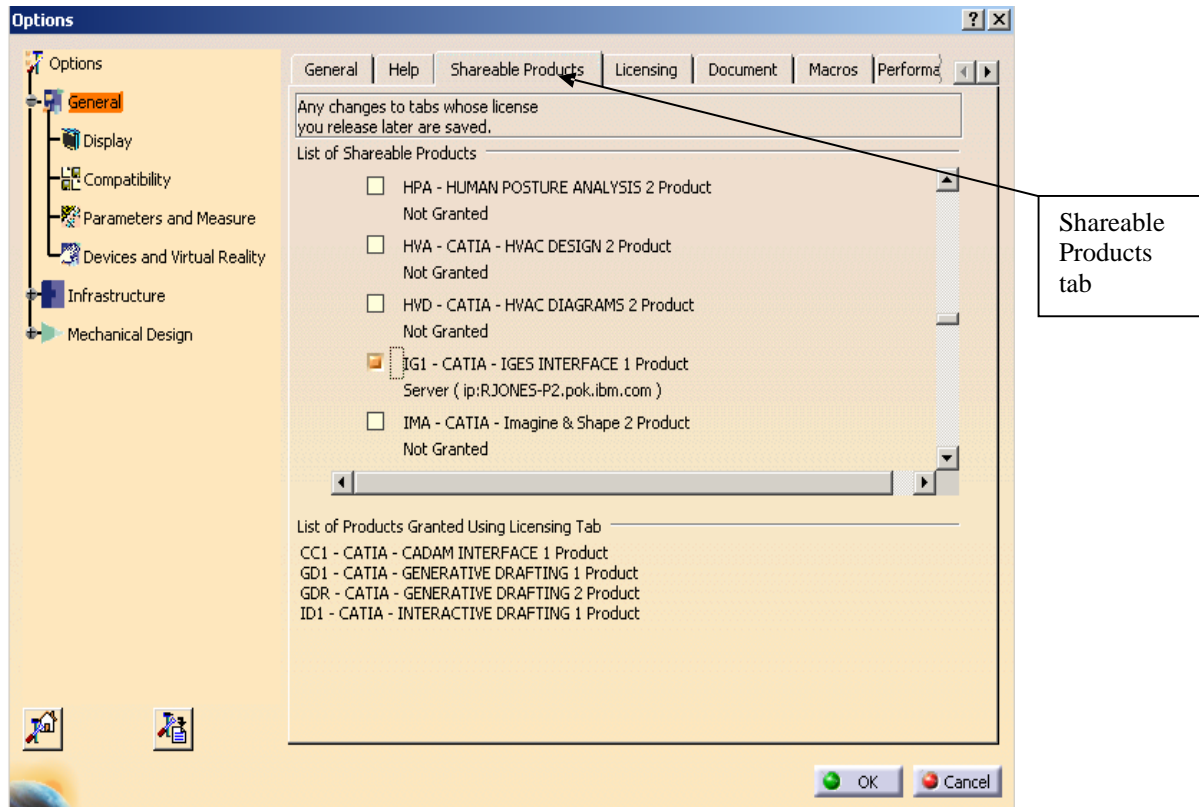


Figure 13 – Shareable Products Tab

When the user is done with the license (in this case IG1) it is simple to return back to the pool for availability
 By selecting: Tools/Options/Shareable Products Tab
 Finding: The product/selecting (square is not ORANGE)
 selecting: OK
 The license is returned for availability by others.

Note: You do not have to stop & restart CATIA to allocate or return the license.

XXIX. Concurrent Offline Licensing

- Is currently for CATIA only on Windows.
- It is not available in a High Availability Licensing Cluster (HAL)
- Concurrent offline allows a user to extract a license from a license server (setup for concurrent offline licensing) and allows the license to be used on a machine such as a laptop which has been disconnected from the network. The license is useable for a specified number of days but cannot exceed 30 days. When extracted from the server it works just like a nodelock license. The license is “Extracted” by the CATIA Nodelock License Manager Tool and returned with the “Restitute” option.

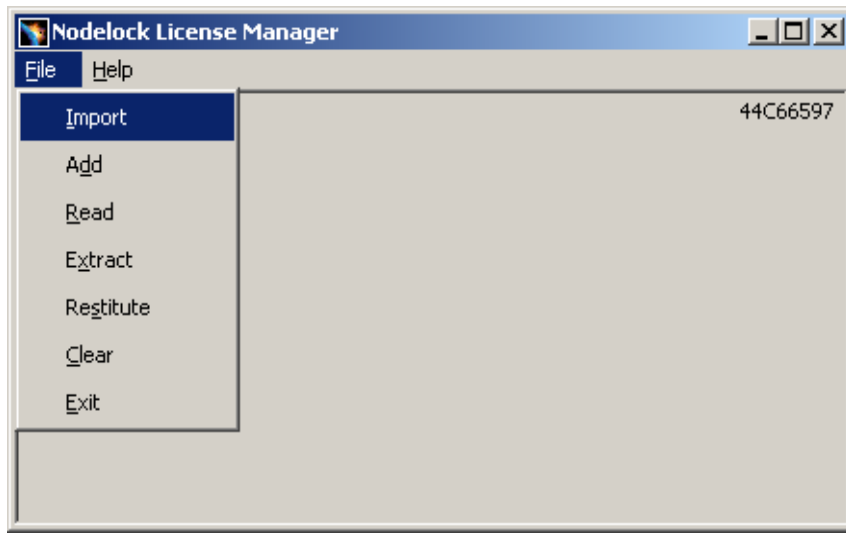


Figure 14 – Nodelock License Manager showing Extract and Restitute

The license is “Extracted” by the CATIA Nodelock License Manager Tool and returned with the “Restitute” option.

XXX. Offline Concurrent License Server Requirements

- You must have a license server running LUM 4.6.7 or higher and CATIA V5R12 minimum to be able to use Concurrent Offline Licensing.
- Stop your license server and run the `i4_offline_mig.exe` to convert the licenses to concurrent offline license.

It is not available with the LUM 4.6.8 code.

The executable is available from PLM website:

<http://www-306.ibm.com/software/applications/plm/support/prodannounce.html>

After restarting the license server and selecting a product then “Open as details” you will see that the tab for Concurrent has changed to Concurrent-Offline.

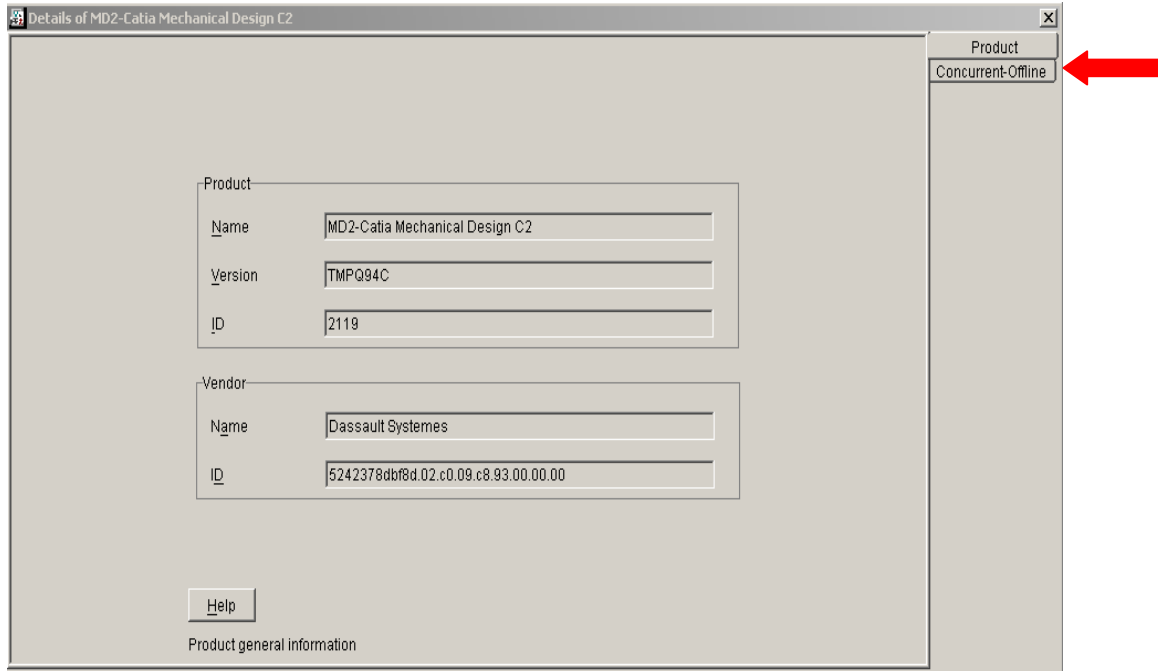


Figure 15 – Concurrent-Offline Tab

You will need to set Authorizations.

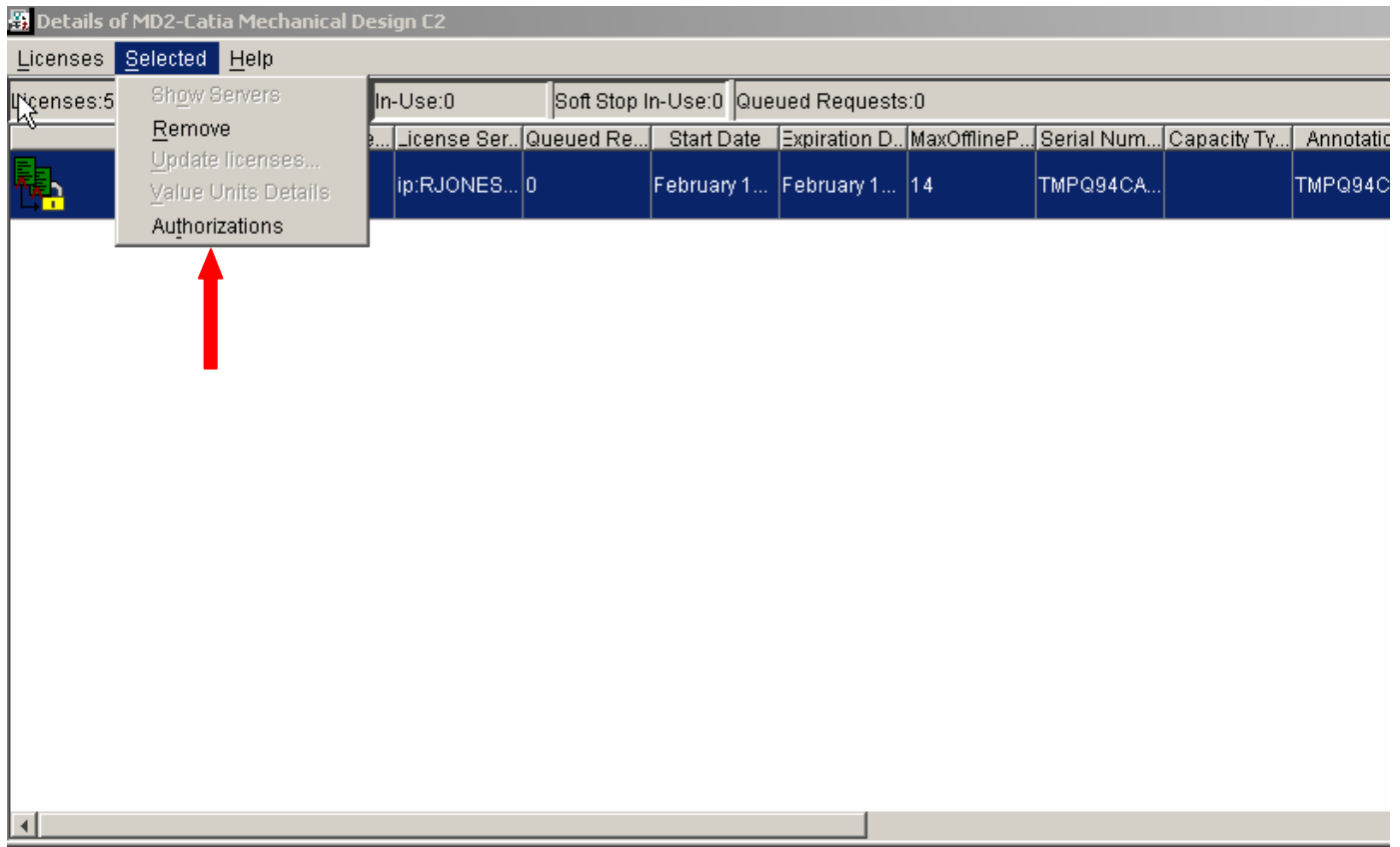


Figure 16 – Authorizations

XXXI. Adding Authorizations

Add Authorization

User: Tom

Group: PT

Offline Target ID: 44c66597

Offline Password: tomcat

Mode: Allowed Not allowed Concurrent allowed

Buttons: OK, Cancel, Help

Authorizations

Default Authorization:

- All allowed
- All not allowed
- All concurrent allowed

Change Password

Password: _____

Buttons: Add, Modify, Delete

Authorizations: 2

User	Group	Offline Target ID	Offline Password	Mode
Tom	PT	44c66597	tomcat	Allowed
Raj	dev	3cf873b2	dev23x	Allowed

Buttons: Close, Help

Figure 17 and 18 – Add Authorizations

XXXII. Setting the Offline Period

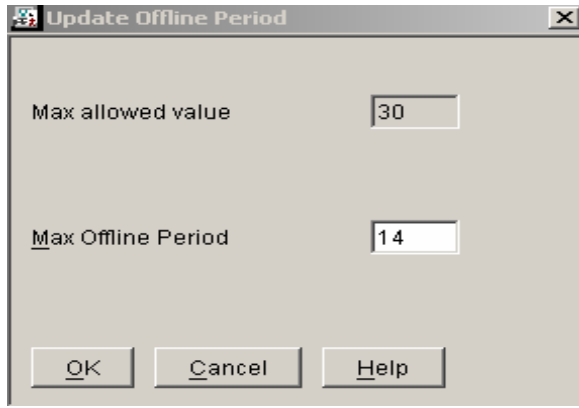
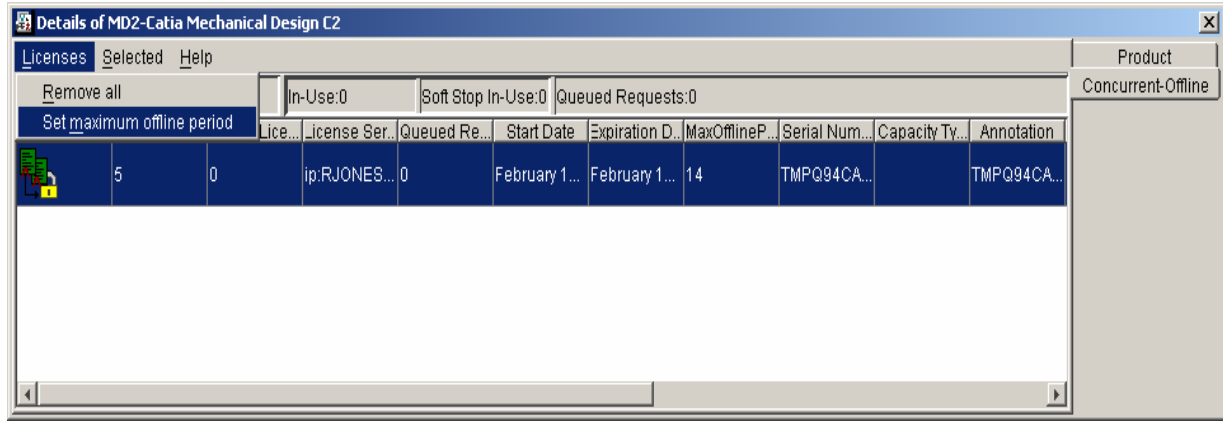


Figure 19 and 20 – Setting Offline Period

See LUM’s “Using License Use Management Runtime” Documentation available from the LUM website for more details.

To get the license for use offline you must Extract the key from the server. This is done with the Nodelock License Manager in CATIA.

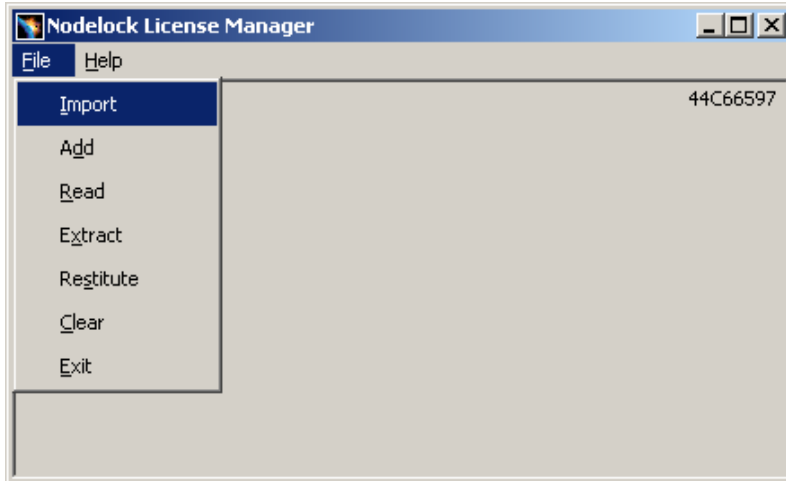


Figure 21 - Extract

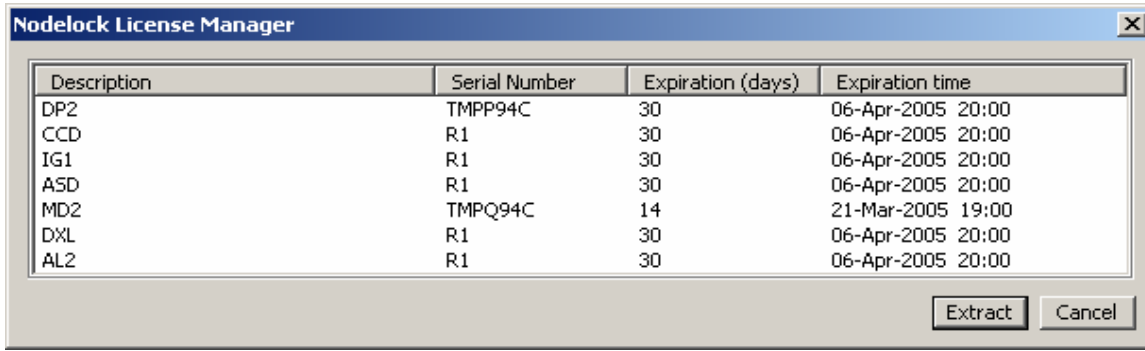


Figure 22 –List of Available Licenses

Selecting the license will highlight it than saying Extract it will bring up the Password entry window.

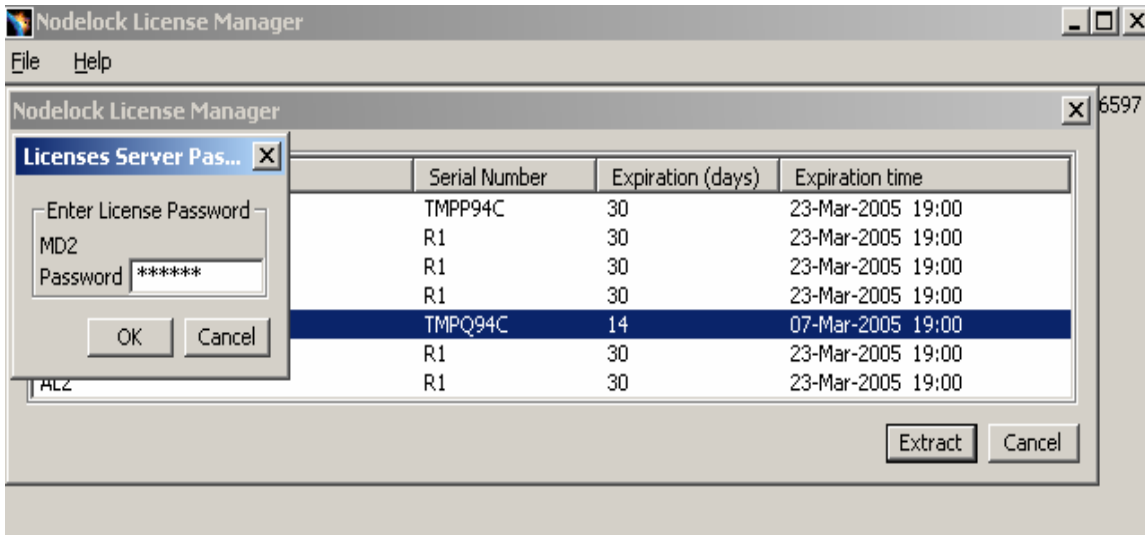


Figure 22 – License Selection and Password Entry Window

- After extracting the license from the server you can disconnect from the network. The license will be in the nodelock file and usable for the specified amount of days.
- In the Tools/Options/ Licensing tab the CATIA License Manager will show the license in blue and identify it as a local license.
- The license can be returned to the license server before the expiration date is reached with the File/Restitute command in the Nodelock License Manager.

The CATIA Help documentation goes into great detail on this subject as well as the License Use Runtime documentation.

XXXIII. Conclusion

The ability to set up a stable licensing environment is necessary and sometimes confusing. This Cookbook/ Reference document was written as a desktop assistant. It has been proven to be a useful tool with the implementation of license both nodelock and concurrent.

XXXIV. Author

Rick Jones... a member of the PLM Technical Support Team with over thirty years of experience in mechanical design and manufacturing. He is the Americas licensing team lead for PLM Products and member of the World Wide Installation team. He is the past team lead of and current representative for the Americas on the Worldwide Common Process Project. Jones is the PLM technical support representative on the LUM PDT and primary contact for the IBM/DS HEAT program. Jones is a frequent author and presenter at CATIA Operators Exchange. He was previously employed at Schrade Cutlery as a Tool and Die Maker. Jones attended Ulster Community College and served in the USAF in the communications field. Rick can be reached at mrrrj@us.ibm.com.

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