

# Product Structure Synchronization for VPM V4 (PS9)

## ***Installation Guide***

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**Version 1.03 – Delivery 6 – R19**

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# ***Introduction***

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This document describes the installation procedure for the Product Structure Synchronization BPA.

## ***Related Documentation***

- CATIA V5 Program Directories
- CATIA V5 User Guide
- ENOVIA 3dcom V5 Program directories
- ENOVIA 3dcom V5 User Guide
- ENOVIA VPM Program Directories
- ENOVIA VPM User Guide

## ***Before Installing***

### **Notes**

If you want to install Product Structure Synchronization, you must install CATIA V5 and ENOVIA VPM V4 **first**.

If you want to use Product Structure Synchronization through ENOVIA 3d com, you must install ENOVIA 3d com.

When installing, make sure that you have administrator privileges.

Close all other applications on the computer before proceeding with the installation.

## ***Prerequisites for Product Structure Synchronization Installation***

### **CATIA**

CATIA V5 installation is the main prerequisite for Product Structure Synchronization installation.

The Product Structure Synchronization BPA is based on CATIA V5's assembly design features, and on ENOVIA VPM

It requires the installation of the following CATIA V5 products:

#### **- CATIA Assembly Design 2 (ASD)**

#### **Information**

The required CATIA V5 version is V5R19.  
The required 3DCom V5 version is V5R19  
The required ENOVIA VPM V4 version is the VPM 1.6 PTF 10 and above.

The certified operating systems are

On client side:

Windows XP Professional 32 and 64 bits with the corresponding requirements listed in the CATIA V5R19 Program Directories

Solaris 10 V5.8 with the corresponding requirements listed in the CATIA V5R19 and ENOVIAvpmV4 V1.6 PTF6 Program Directories

HP-UX 11i with the corresponding requirements listed in the CATIA V5R19 and ENOVIAvpmV4 V1.6 PTF 10 Program Directories

IBM AIX 5.3 with the corresponding requirements listed in the CATIA V5R19 Program Directories

DB2 with level as specified in the ENOVIAvpmV4 V1.6 PTF 10 Program Directories

On server side:

Solaris 10 V5.8 with the corresponding requirements listed in the CATIA V5R19 Program Directories

HP-UX 11i with the corresponding requirements listed in the CATIA V5R19 Program Directories

IBM AIX 5.3 AIX V 5. 3 TL04-SP1

with the corresponding requirements listed in the CATIA V5R19 Program Directories

DB2 with level as specified in the ENOVIAvpmV4 V1.6 PTF 10 Program Directories

Hardwares on server and client side are identical for DS standard products, as specified in the ENOVIA vpmV4 V1.6 PTF 10 Program Directories and CATIA V5 R19, 3DCom V5R19

# ***Installing Product Structure Synchronization***

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## ***Product Structure Synchronization deliverables package content***

The Product Structure Synchronization package includes:

- CATIA V5 packages for each Operating System:
  - PS9\_R19SPX\_AIX\_CLI\_D6.zip
  - PS9\_R19SPX\_SUN\_CLI\_D6.zip
  - PS9\_R19SPX\_HPUX\_CLI\_D6.zip
  - PS9\_R19SPX\_WIN\_CLI\_D6.zip
  - PS9\_R19SPX\_WIN64\_CLI\_D6.zip
- ENOVIA VPM packages for each UNIX Operating System:
  - PS9\_R19SPX\_SUN\_SRV\_D6.zip
  - PS9\_R19SPX\_AIX\_SRV\_D6.zip
  - PS9\_R19SPX\_HPUX\_SRV\_D6.zip
- A documentation package containing a user guide detailing the functional aspect of the BPA and an installation guide explaining how to install and uninstall the Product Structure Synchronization BPA.

The PS9\_R19SPX\_\$OS\_CLI\_D6.zip contains the executable to be installed on the CATIA V5 client.

The PS9\_R19SPX\_\$OS\_SRV\_D6.zip contains the executable to be installed on the VPM server.

The PS9\_R19SPX\_\$OS\_SRV\_D6.zip also contains a UserExit\_Customer and a UserExit\_Sample directory. In UserExit\_Sample directory the lib "libLV0XUSR" is already build. In UserExit\_Customer the lib "libLV0XUSR" is not build but the makefile and .h and .cpp files to build it are delivered.

The PS9\_R19SPX\_DOC\_D6.zip contains documentations.

## ***Installing of the deliverables***

### ***How to install the CATIA V5 Package***

#### **On Windows**

1. Create a directory MyPSSInstallDirectory in the file system
2. Unzip the PS9\_R19SPX\_WIN\_CLI\_D6.zip, and put the intel\_a directory in the MyPSSInstallDirectory. For windows 64 bit unzip the PS9\_R19SPX\_WIN64\_CLI\_D6.zip, and put the win64\_b directory in the MyPSSInstallDirectory
3. Select Start + Programs + CATIA + Tools + Environment Editor. The Environment Editor appears.
4. Select Environment+New, the following panel appear:



**New Environment**

Name : Env001

Install Path : D:\CV5\Rx\Bx


Mode : User Product Line : CATIA ☐ Server

☐ Overwrite existing environment ☒ Add Desktop Icon ☒ Add Shortcut in the Start Menu

OK Cancel

Reminder: To install the PS9 Product for all users, you must be administrator on the windows host and set the mode to Global.

5. Name as you want your PS9 Environment.
6. Set the mode to Global and add the MyPSSInstallDirectory to the Install Path of the environment.  
The "New Environment" Panel should now look like this:



**New Environment**

Name : PS9.V5RxSPy

Install Path : D:\CV5\RxSPy;MyPSSInstallDirectory

Mode : User Product Line : CATIA ☐ Server

☐ Overwrite existing environment ☒ Add Desktop Icon ☐ Add Shortcut in the Start Menu

OK Cancel

After creating this environment, launch the specific BPA PS9 catia desktop Icon and open or create a CATProduct:



You should have the Workpackage Management toolbar:

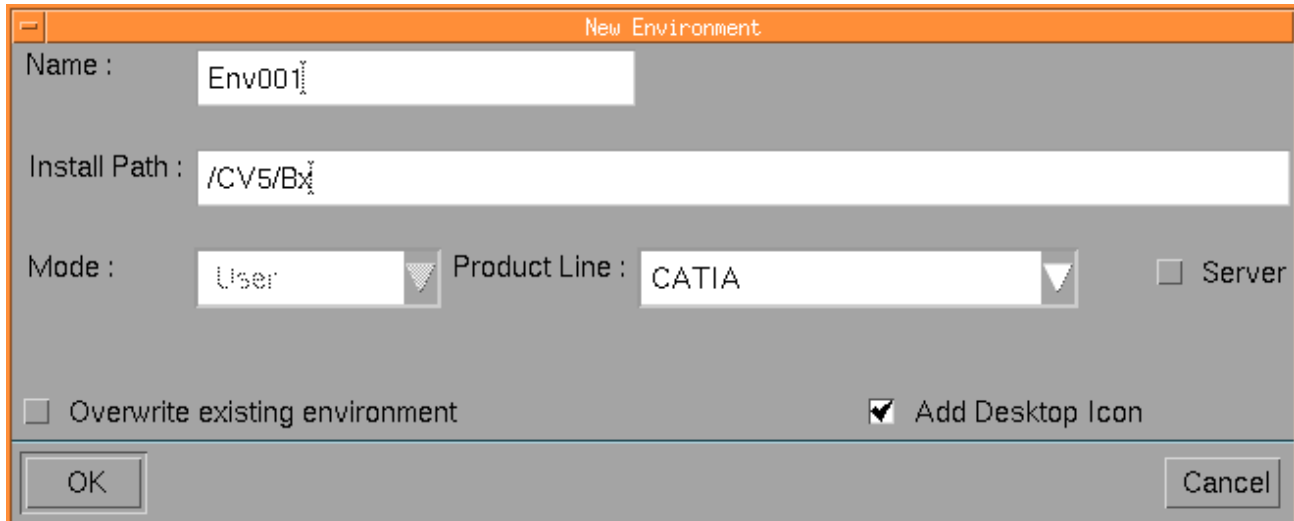
## On Unix

"OS" are:

- aix\_a
- hpux\_b
- solaris\_a.

1. Create a directory MyPSSInstallDirectory in the file system
2. Unzip the PS9\_R19SPX\_AIX\_CLI\_D6.zip, PS9\_R19SPX\_SUN\_CLI\_D6.zip and PS9\_R19SPX\_HPUX\_CLI\_D6.zip, and put the OS directories in the MyPSSInstallDirectory
3. Run the catstart command as follows:  
`MyCV5InstallDirectory/OS/code/command/catstart -run CATIAENV`  
(you may have to modify this path according to your CATIA V5 installation path)
4. The Environment Editor appears.

5. Select Environment+New, the following panel appear:

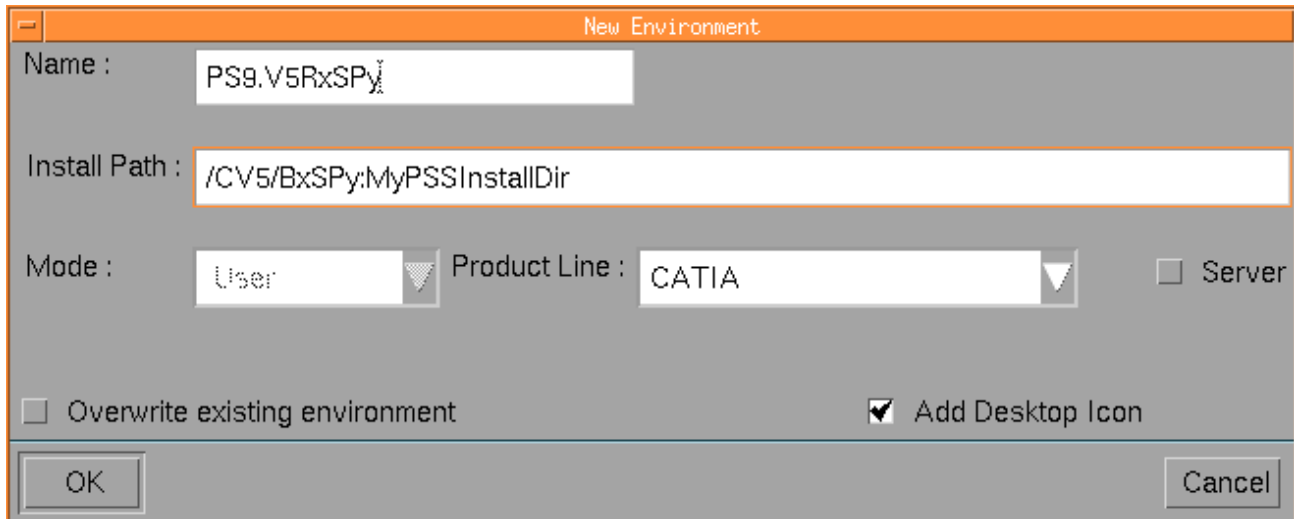


The "New Environment" dialog box is shown with the following fields and options:

- Name :** Env001
- Install Path :** /CV5/Bx
- Mode :** User (dropdown menu)
- Product Line :** CATIA (dropdown menu)
- ☐ Server
- ☐ Overwrite existing environment
- ☒ Add Desktop Icon
- OK** and **Cancel** buttons at the bottom.

Reminder: To install the PS9 Product for all users, you must have a privilege administrator host and set the mode to Global.

6. Name as you want your PS9 Environment.
7. Set the mode to Global and add the MyPSSInstallDirectory to the Install Path of the environment.  
The "New Environment" Panel should now look like this:



The "New Environment" dialog box is shown with the following updated fields and options:

- Name :** PS9.V5RxSPy
- Install Path :** /CV5/BxSPy:MyPSSInstallDir
- Mode :** User (dropdown menu)
- Product Line :** CATIA (dropdown menu)
- ☐ Server
- ☐ Overwrite existing environment
- ☒ Add Desktop Icon
- OK** and **Cancel** buttons at the bottom.

After creating this environment, launch CATIA V5 using the specific BPA PS9 CATIA environment and open or create a CATProduct.



You should have the Workpackage Management toolbar:



## How to install the VPM Package

### For UserExit\_Customer

- 1- Create a directory (*PS9\_VPM\_Inst\_Dir*)
- 2- Unzip the PS9\_R19SPX\_SUN\_SRV\_D6.zip, PS9\_R19SPX\_AIX\_SRV\_D6.zip and PS9\_R19SPX\_HPUX\_SRV\_D6.zip, and put the files in the *PS9\_VPM\_Inst\_Dir*
- 3- In the standard CATDMUsMethod.cpp (or your own versions of these files if your current VPM installation already implements some user exit in CATDMUsMethod), add the following include

```
#include "ISPPS9DMUsMethod.h"
```

And add the following line at the end of the ExecuteCommand method:

```
ISPPS9DMUsMethod::ExecuteCommand (ioLng, ioMsg);
```

and make sure that the following lines, which are provided in the standard file, are deleted so that the return message will not be deleted:

```
delete [] ioMsg;
ioMsg = new char[4];
int tmpler = ier.ler;
memcpy(&ioMsg[0], &tmpler, 4);
```

- 4- Build the user exit library in it specific directory (*User\_Exit\_Dir*):  
Set the VPM environment.

export the enviromnent variable *ROOT\_CODE=PS9\_VPM\_Inst\_Dir*

In the makeLV0XUSR.sh file, add:

Add the PS9 include path:

```
optI="$optI -I$ROOT_CODE/include"
```

In the linking section, depending on the OS, add the PS9 library path:

For AIX:

```
SH_LIBPATH="$SH_LIBPATH -L$ROOT_CODE/lib/$OS"
SH_LIB="$SH_LIB -lISPPS9VPM"
```

For HP-UX:

```
OBJECTS="$OBJECTS $ROOT_CODE/lib/$OS/libISPPS9VPM.sl"
```

For SunOS:

```
OBJECTS="$OBJECTS $ROOT_CODE/lib/$OS/libISPPS9VPM.so"
```

Run *./makeLV0XUSR.sh .*

- 5- For VPM to take into account this library, follow the instructions displayed at the end of makeLV0XUSR.sh.  
In order to be sure you are using the right library each time you work with VPM, you should add these lines to your YOUR.env file:

OS	Declarations
HP-UX	STEPLIB=PS9_VPM_Inst_Dir/lib/\$OS: User_Exit_Dir :\$STEPLIB export STEPLIB SHLIB_PATH=PS9_VPM_Inst_Dir/lib/\$OS: User_Exit_Dir :\$SHLIB_PATH export SHLIB_PATH
SunOS or IRIX	STEPLIB=PS9_VPM_Inst_Dir/lib/\$OS: User_Exit_Dir :\$STEPLIB export STEPLIB LD_LIBRARY_PATH=PS9_VPM_Inst_Dir/lib/\$OS: User_Exit_Dir :\$LD_LIBRARY_PATH export LD_LIBRARY_PATH
AIX	STEPLIB=PS9_VPM_Inst_Dir/lib/\$OS: User_Exit_Dir :\$STEPLIB export STEPLIB LIBPATH=PS9_VPM_Inst_Dir/lib/\$OS: User_Exit_Dir :\$LIBPATH export LIBPATH

- As default copy the generated lib in your \$CAT\_CUST/code/steplib/\$OS
- 6- In your VPM customized CustovpmToV5.sh file, replace the V5\_Starter line by:
- ```
V5dir=$DIRENV
export V5dir
V5env=your PS9 CATIA V5 environment name (Example: PS9.V5R19).
export V5env
V5_Starter="$V5_Starter" -d $V5dir -env $V5env"
```
- where DIRENV is the global Environment Storage Directory as set in the Environment Editor.

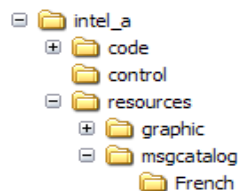
### For UserExit\_Sample

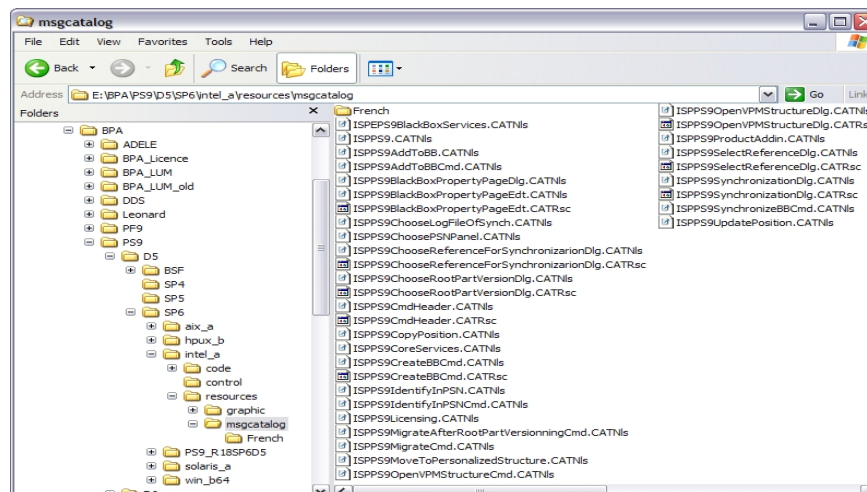
In PS9\_R19SPX\_OS\_SRV\_D6.zip package you have to directories: UserExit\_Customer and UserExit\_Sample. In the UserExit\_Sample directory gives you UserExit lib already build. The step to install VPM are the same but you don't need to launch the makefile to build the lib.

## How to install French or other language CATNIs

### On Windows and UNIX:

- a. In the runtime view create a directory with the language name (write it in English)  
→ \$OS\resources\msgcatalog





b. Put French or other language CATNIs in this directory.

## Uninstalling of the deliverables

### How to uninstall the CATIA V5 Package

#### On Windows:

Start CATIA Tools > Environment Editor V5R19  
Open Environment Editor and choose the CATenv to be deleted

Remove the MyPS9InstallDirectory

#### On UNIX:

Use the **delcatenv** command: this command deletes environments  
Report to CATIAV5R19 documentation Infrastructure Installation Guide section "To delete an environment using the delcatenv command.

Or in interactive mode :

Run the catstart command as follows:

```
/usr/DassaultSystemes/B19/OS/code/command/catstart -run CATIAENV
```

(you may have to modify this path according to your CATIA V5 installation path)

The Environment Editor appears. Select the BPA env to be deleted.

Remove the MyPSSInstallDirectory.

### How to uninstall the VPM Package

#### On UNIX VPM Server:

Delete the specific PS9 libraries libLV0XUSR and libISPPS9VPM.

## Register a License

### LUM Implementation: Env Setup

- LUM Server: The server should have LUM 4.6.8 or above installed.
- Request a license with following information:
  - 👤 Product Name: This is the BPA trigram.
  - 👤 License Type: nodelock or concurrent
  - 👤 Number of License: 1 for nodelock , >0 for Concurrent
  - 👤 LUM targetID: Provide the target id (run i4target)
    - 👤 On Client side for Nodelock
    - 👤 On Server side for Concurrent
- On receiving the license,
  - 👤 For Nodelock type of license
    - 👤 Modify/ Create nodelock file by inserting necessary information (VendorID, ProductPassword ) - See Appendix A
  - 👤 For Concurrent type of license
    - 👤 Enroll the license on the LUM server - See Appendix B

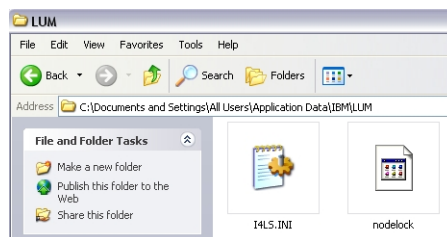
### Appendix A - Creating a Nodelock file

- Because we are not integrated into the NodelockKeyManagement
- You should input yourself the parameters of your License into the nodelock file (create it if doesn't exist)
  - 👤 This file is located in :
    - 👤 For windows: C:\Documents and Settings\All Users\Application Data\IBM\LUM\nodelock
    - 👤 For AIX : /var/ibm/nodelock
    - 👤 For HP and Solaris : /var/lum/nodelock
  - 👤 You should extract from the .lic file the following informations :
    - VendorID (looks like an UUID)
    - ProductPassword (a crypted key)
    - ProductAnnotation (should be unset)
    - ProductVersion (should be set to 1)
  - 👤 And insert them in nodelock file by respecting the order

*# comment : put your BPA trigram and its range date  
vendorID ProductPassword ProductAnnotation ProductVersion*

#### Example :

*# PS9 from 15-Jul-08 to 14-Jul-09  
c6c8ef44bcb7.4a.74.95.13.1f.00.00.00 r8ezikjzgsvk9fzf7fe3p2gn3eaa "" "1"*

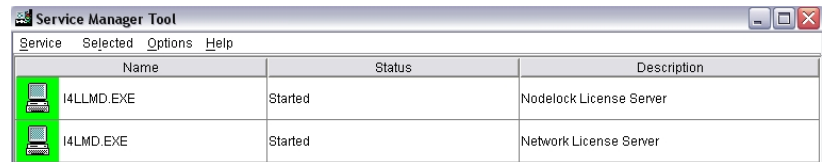


## Appendix B - Enrolling a Concurrent license on the Network license server

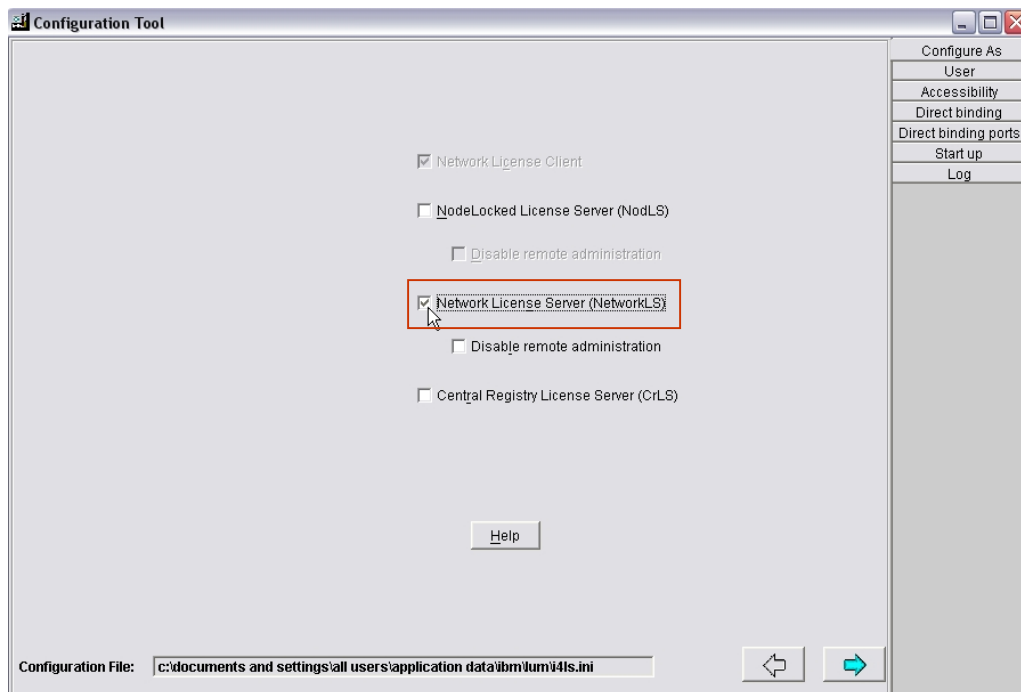
### Setting up the Network License server

Start > All Programs > License Use Runtime > Configuration tool

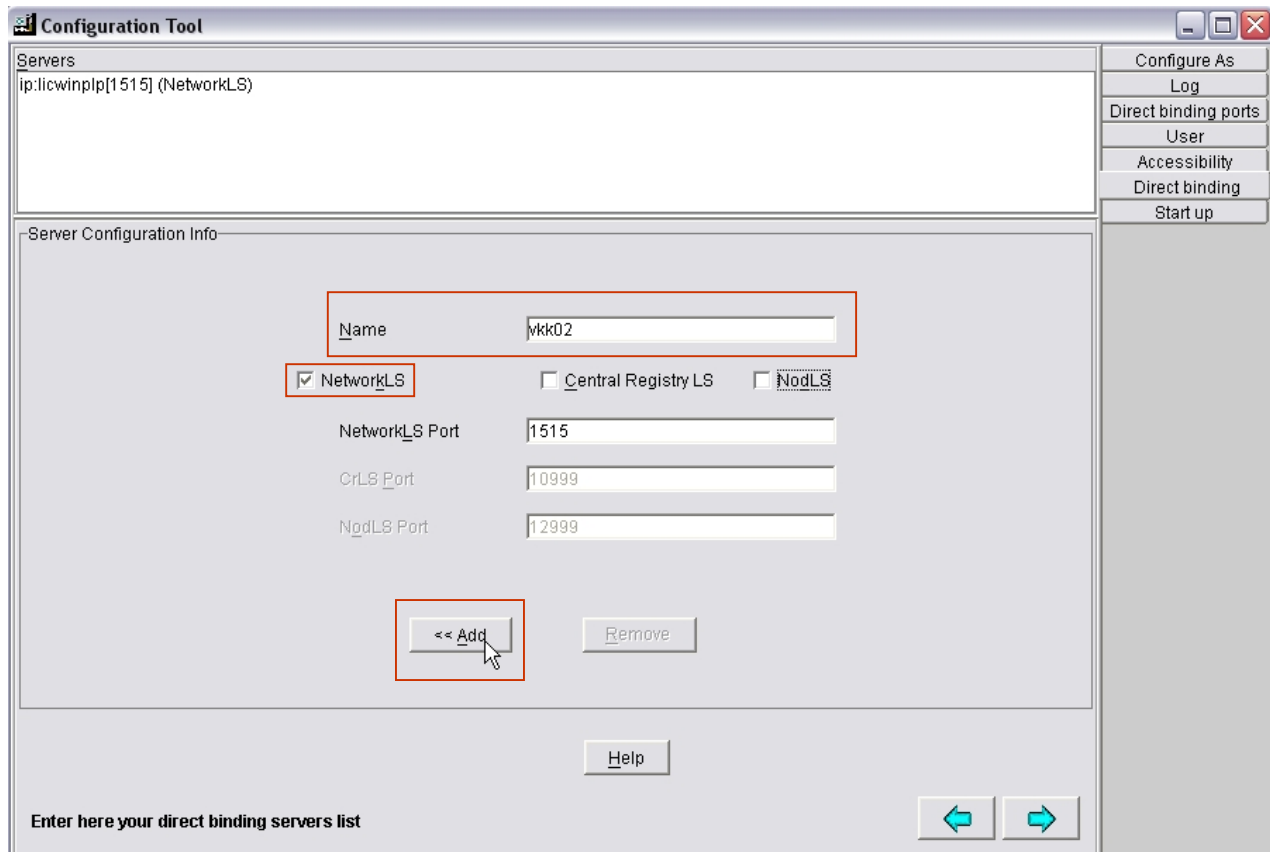
a. Stop the service if needed using the Service Manager Tool.



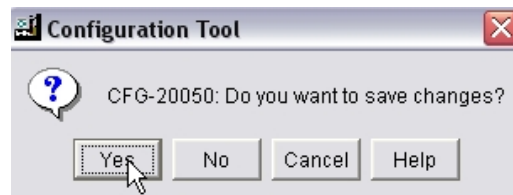
b. Ensure that the option for Nodelocked License Server is selected



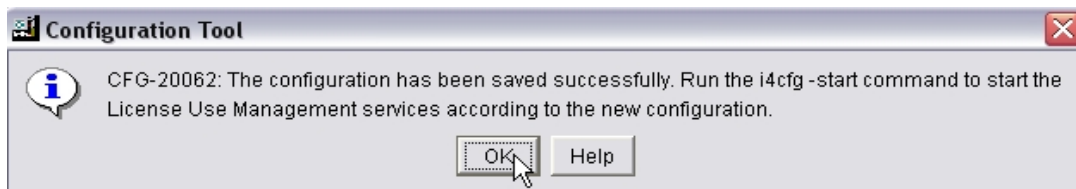
- Switch to the Direct Biding tab.
- In the Name field enter the machine name
- Check the box for NetworkLS and click on Add button



f. Close the Configuration Tool window and validate accepting the changes



g. Pass the message to restart the service (if previously it was stopped)

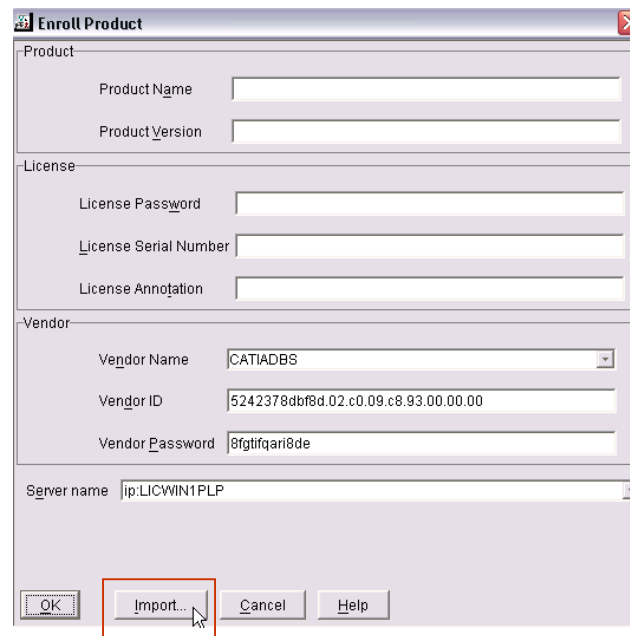
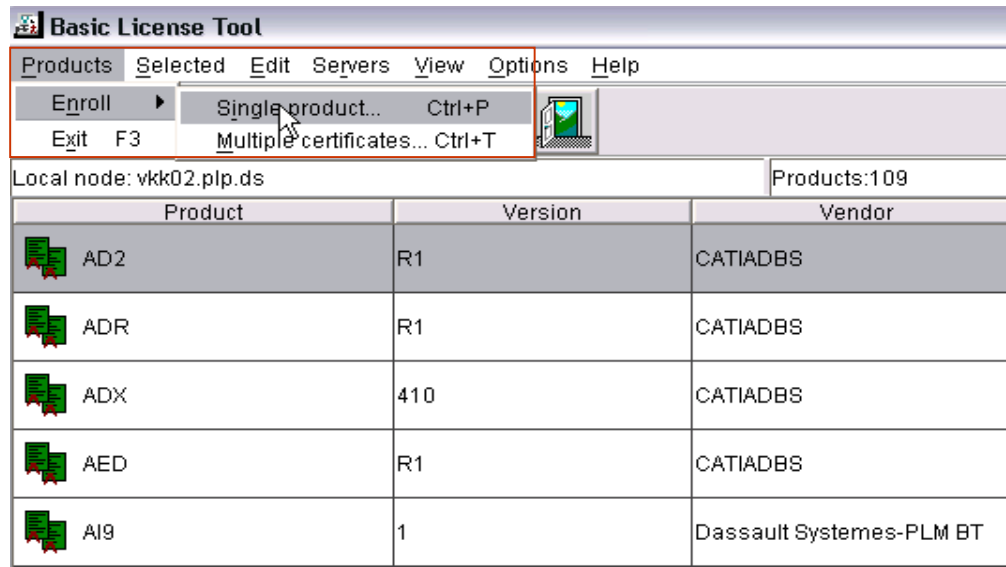


| Service Manager Tool          |         |                         |  |
|-------------------------------|---------|-------------------------|--|
| Service Selected Options Help |         |                         |  |
| Name                          | Status  | Description             |  |
| i4LLMD.EXE                    | Started | Nodelock License Server |  |
| i4LMD.EXE                     | Started | Network License Server  |  |

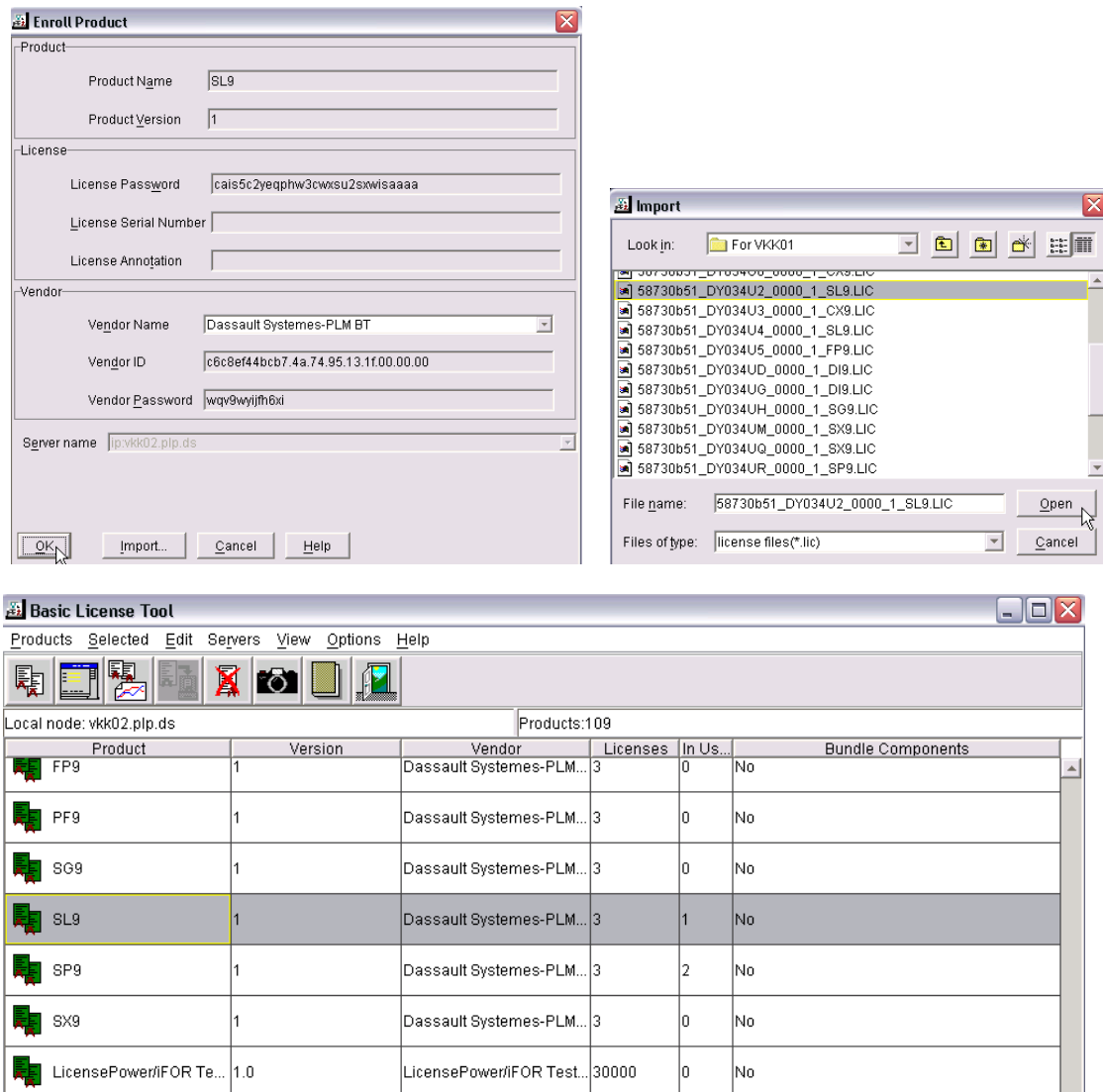
## Enrolling the Concurrent License (1/2)

Start > All Programs> License Use Runtime > Basic License Tool

- h. Select Product / Enroll/ ....
- i. Choose Single or Multiple depending on whether you want to be enrolling a single or multiple licenses at a time.
- j. Click on Import button



- k. Locate the Concurrent file received in the file browser and select OK in both the panels to have the License successfully enrolled





# API USE

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## API list

### ISPIPS9BlackBox interface

- \* Checks if this product is a BlackBox.
- \* Gets the version of this BlackBox.
- \* Sets the version of this BlackBox.
- \* Gets the type of this BlackBox.
- \* Sets the type of this BlackBox.
- \* Retrieves the note associated to this BlackBox.
- \* Sets the note associated to this BlackBox.
- \* Retrieves the PSN filename associated to this BlackBox.
- \* Sets the PSN filename associated to this BlackBox.
- \* Sets the flatten flag associated to this BlackBox.
- \* Gets the flatten flag associated to this BlackBox.
- \* Retrieves the Root PSN printable id associated to this BlackBox.
- \* Sets the Root PSN printable id associated to this BlackBox.

### ISPIPS9BlackBoxServices interface

- \* Copy/past an entity to a Black Box
- \* Copy Matrix position from an instance to other
- \* Update Positions in PSN from Black Box Positions
- \* Highlight components i PSN product and graph.
- \* Update PSN File.
- \* Check if BlackBox synchronized