CATIA Teamcenter Interface

CMI Release 10.17

Installation & Administration Guide

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Manual History

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4.1	March 1998	9.7	April 2010
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4.3	May 1999	9.9	April 2011
7.0	September 1999	10.0	October 2011
7.1	April 2000	10.1	April 2012
7.2	July 2000	10.2	October 2012
7.3	September 2000	10.3	April 2013
7.4	December 2000	10.4	October 2013
8.0	August 2001	10.5	April 2014
8.1	December 2001	10.6	October 2014
8.2	July 2002	10.7	April 2015
8.3	January 2003	10.8	October 2015
8.4	July 2003	10.9	April 2016
8.5	March 2004	10.10	April 2017
8.6	October 2004	10.11	April 2018
8.7	April 2005	10.12	May 2019
8.8	September 2005	10.13	April 2020
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9.0	October 2006	10.15	April 2022
9.1	March 2007	10.16	June 2023
9.2	October 2007	10.17	May 2024
9.3	March 2008		

This edition obsoletes all previous editions.

Trademarks

CATIA is a registered trademark of Dassault Systèmes.

Teamcenter Enterprise is a registered trademark of Siemens PLM Corporation.

Names of other products mentioned in this manual are used only for identification purpose and may be trademarks of their companies.

Preface

About this Guide

This guide provides installation and configuration information for the CATIA Teamcenter Interface (CMI). Before using this guide, be sure you understand:

the UNIX-based operating system

the administration of the CATIA system

the administration of Teamcenter Enterprise system

The advanced topics such as customizing tasks have been described in the *CATIA Teamcenter Interface Customizing Guide.*

Related Documents

The following manuals contain information about installation, usage and customizing of the *CATIA Teamcenter Interface*:

Manual Title	Version
CATIA Teamcenter Interface Installation & Administration Guide	10.17
CATIA Teamcenter Interface User Manual	10.17
CATIA Teamcenter Interface Customizing Guide	10.17

Your Comments are Welcome

Please feel free to tell us your opinion; we are always interested in improving our publications. Mail your comments to:

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CHAPTER 1

Overview

The installation of the CATIA Teamcenter Interface (CMI) consists of three parts. The first step is to modify and extend your Teamcenter Enterprise installation. The second step is to install the CMI listener, a program responsible for the communication between CATIA and Teamcenter Enterprise. Finally, during the third step the CMI Catia modules have to be installed for completing the Teamcenter Enterprise CATIA integration.

System and Software Requirements

Server / OMF client[1] Installation of Teamcenter Enterprise 2007[2], 8.1[3] or 9.0 on the following operation systems:

Supported platforms for Teamcenter Enterprise 2007[2] Server:	AIX	5.3 TL5
	SUN Solaris	10
	Windows	7
	LINUX	SuSE Enterprise 9.0

Supported platforms for Teamcenter Enterprise 8.1[3]	AIX	6.1
	SUN Solaris	10
	Windows	7 (32/64 Bit)
	LINUX	SuSE Enterprise 10/11

Supported platforms for Teamcenter Enterprise 9.0	AIX	7.1
	SUN Solaris	10
	Windows	7 (32/64 Bit)
	LINUX	SuSE Enterprise 10/11 RHEL 5.4 / 6.0 (LSB 4.0 compatible)

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[1] There are no OMF clients available for LINUX (any TC Release). For Teamcenter 9.0 an OMF client for Unix plattforms (AIX, SOLARIS) is part of MP01.
[2] TC 2007 requires patch set MP07 or higher
[3] TC 8.1 requires patch set MP01 or higher

CATIA V4 version 4.2.4 on the following operation systems[4]:

| CATIA V4 client: | AIX | 5.3 TL5 |
| | SUN Solaris | 8 |

CATIA V4 version 4.2.5 on the following operation systems[4]:

| CATIA V4 client: | AIX | 5.3 TL5 |
| | SUN Solaris | 10 |

CATIA V5 version R21 on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

CATIA V5 version R22 (V5-6R2012) on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

CATIA V5 version R23 (V5-6R2013) on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

CATIA V5 version R24 (V5-6R2014) on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

CATIA V5-6R2014 SP2 has been retracted by Dassault Systèmes and is not supported. Please use SP3 instead.

CATIA V5 version V5-6R2015 (R25) on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

CATIA V5 version V5-6R2016 (R26) on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

CATIA V5 version V5-6R2017 (R27) on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

CATIA V5 version V5-6R2018 (R28) on the following operation systems:

| CATIA V5 client: | Windows | 10/11 (64 Bit) |

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[4] CATIA V4 requires an OMF client, which is not delivered for UNIX with TC 9.0. An OMF client is part of MP01 though.

CATIA V5 version V5-6R2019 (R29) on the following operation systems:

CATIA V5 client: Windows   10/11 (64 Bit)

CATIA V5 version V5-6R2020 (R30) on the following operation systems:

CATIA V5 client: Windows   10/11 (64 Bit)

CATIA V5 version V5-6R2021 (R31) on the following operation systems:

CATIA V5 client: Windows   10/11 (64 Bit)

CATIA V5 version V5-6R2022 (R32) on the following operation systems:

CATIA V5 client: Windows   10/11 (64 Bit)

CATIA V5 version V5-6R2023 (R33) on the following operation systems:

CATIA V5 client: Windows   10/11 (64 Bit)

CATIA V5 version V5-6R2024 (R34) on the following operation systems:

CATIA V5 client: Windows   10/11 (64 Bit)

Required Catia Modules

CATIA V4

Each CATIA client needs to have the following modules in order to use CMI :

DRP CATIA.Mech.Drawing Production Configuration

COM CATIA.Object Manager Product

WF3 CATIA.3D Wireframe Product
DRA CATIA.Drafting Product

or

DR2 CATIA.2D Wireframe and

DRO CATIA.TEXT and DIMENS Product

Please check your CATIA license configuration to find out if these products are already part of your CATIA installation. All products you need belong to the CATIA V4 Mechanical Design Solutions.

CATIA V5

Each CATIA client needs to have one of the following license configurations in order to use CMI :

⇨   Mechanical Design 2

⇨   HD2

⇨   or All in one marketing license (AL2)
A DMN license is needed for the optional Released Cache support, to set the path to the Released Cache.

Please check your CATIA license configuration to find out if these products are already part of your CATIA installation.

You should perform a full installation of Catia V5, regardless of the licensed modules.

Shipment

The software will be delivered on a CD-ROM in ISO-9660 format containing the following parts (depending on desired operating system architecture):

CATIA V4 extension	<catedm>
CATIA V5 extension	<cmicatV5>
Team Center servers	<gmi> and <cmi>
CATIA Team Center connection	<cmilis>
Customizing examples	<custom>
Documents	<doc>

3rd Party Software

The following is a list of 3rd Party and Open Source Software that is used by the CMI software. This is purely for your information.

Software	License
Unzip 5.5	*ftp://ftp.info-zip.org/pub/infozip/license.html*
Zip 2.3	*ftp://ftp.info-zip.org/pub/infozip/license.html*
NSIS	*http://nsis.sourceforge.net/License*
Xpdf (CATIA V4 only)	GPL v2
Libtiff (CATIA V4 only)	http://fedoraproject.org/wiki/Licensing:Libtiff

Loading the Software from CD-ROM

The CMI product family software is distributed on a ISO-9660 formatted CD-ROM ("High Sierra", hsfs, cdfs). Magnetic tape distribution is optionally available. The following steps describe how to mount the software CD-ROM.

Log in as root user to a host with a CD-ROM drive. If your host does not have a CD-ROM drive, log into another host that is NFS-accessible to the installation host.

(If necessary) Create a mount-point directory for the CD-ROM:

```
# mkdir /cdrom
```

Place the CMI CD-ROM in the drive. On Solaris and SGI hosts, the volume manager mounts the CD-ROM automatically, so you can skip the next step.

Mount the CD-ROM:
Note: CD-ROM device names vary from host to host. Thus, you may need to adjust the mount command listed below.

Architecture	Mnemonic	Mount Command
Solaris	solaris2	not necessary
AIX 4	aix	`mount -o ro -v cdrfs /dev/cd0 /cdrom`

If the CD-ROM drive is not on the installation host, use NFS facilities to export the CD-ROM drive's mount point from its host, and mount it on the installation host. For example:

On the host with the CD-ROM drive:

```
# exportfs -i -o ro /cdrom
```

On the installation host:

```
# mount drive-host:/cdrom /cdrom
```

Windows: WinZip™ version 8.0 or above or a similar tool to extract compressed and tared files is required. Older WinZip™ versions do not extract tar files correctly.

Solaris/AIX: GNU tar is recommended. The tar contained in Solaris and AIX may truncate filenames.

CHAPTER 2

Adapting Teamcenter Enterprise

Your existing Teamcenter Enterprise environment should be extended to install the CATIA Teamcenter Interface. The new server should be integrated into the existing environment (default **$MTI_ROOT).** Any existing CMI installation should have been adapted.

Server Installation

The CATIA Teamcenter Interface contains two Teamcenter Enterprise custom services, GMI (Generic Teamcenter Interface) and CMI (CATIA Teamcenter Interface). The third service **CCS is not needed** for a standard installation.

The CMI service bases on GMI service methods to perform some general tasks, such as creating own windows, launch CATIA etc. Therefore the GMI service should be installed first. The installation is processed in the same way as with other Teamcenter Enterprise services (by help of the cfgedit2 utility). For more information please refer to the „*Installation Guide for UNIX and Windows NT"* of Teamcenter Enterprise. Following the installation of this two services will be described.

CMI Installation

The following steps describe how to install the CMI servers.

Mount CD-ROM. See chapter "*Loading the Software from CD-ROM*" on page 1.

Log in as the Teamcenter administrator (i.e. **pdmadmin**):

```
# su – pdmadmin
```

Change to your installation directory:

```
# cd $MTI_ROOT/install
```

Choose your desired operating system mnemonic (Please refer to the mnemonics in chapter "*Loading the Software from CD-ROM*" on page 1).

The mnemonic "nt_os" will be chosen as an example for the following steps.

Copy the server information files from the CD-ROM GMI and CMI directories to your installation location:

"tocgmi.dat"

"toccmi.dat"

"cfggmi.dat"

"cfgcmi.dat"

First of all the Teamcenter Enterprise License Manager has to run. Then source pdmsetup in $MTI_ROOT\config and start cfgedit or cfgedit2 in $MTI_ROOT\install
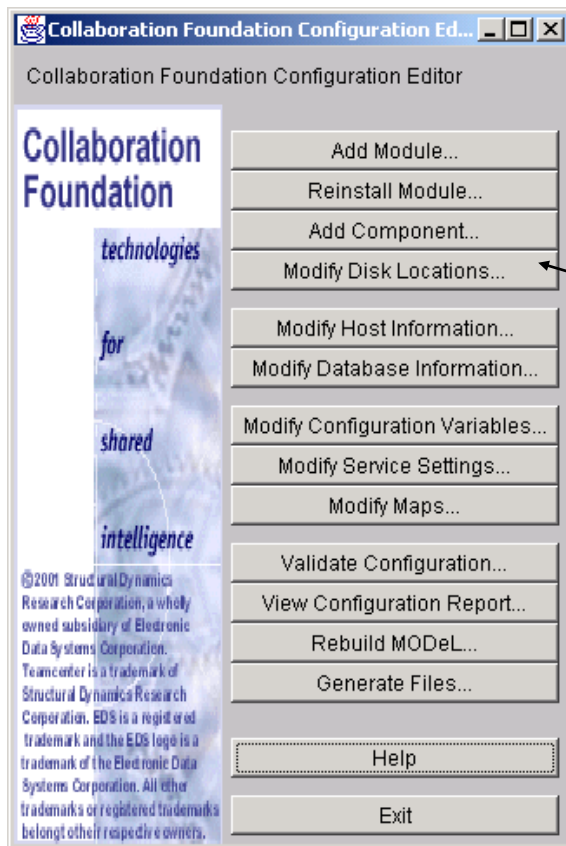
Click Modify Disk Location
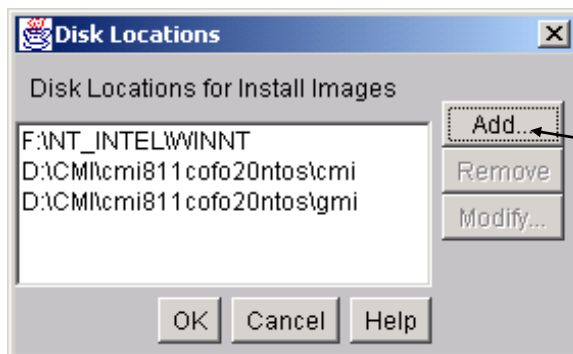
Click Add....
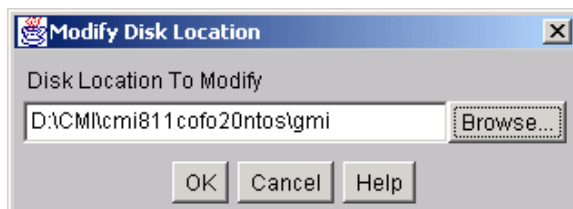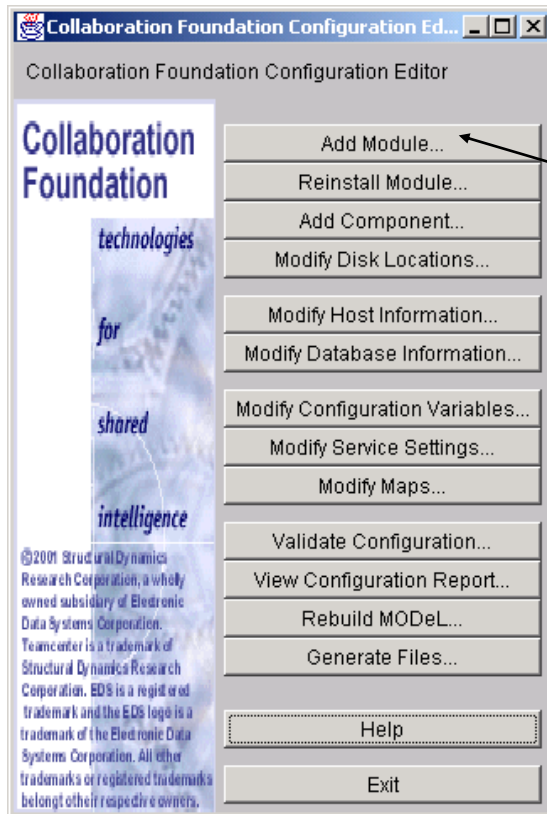
Click Add Module….
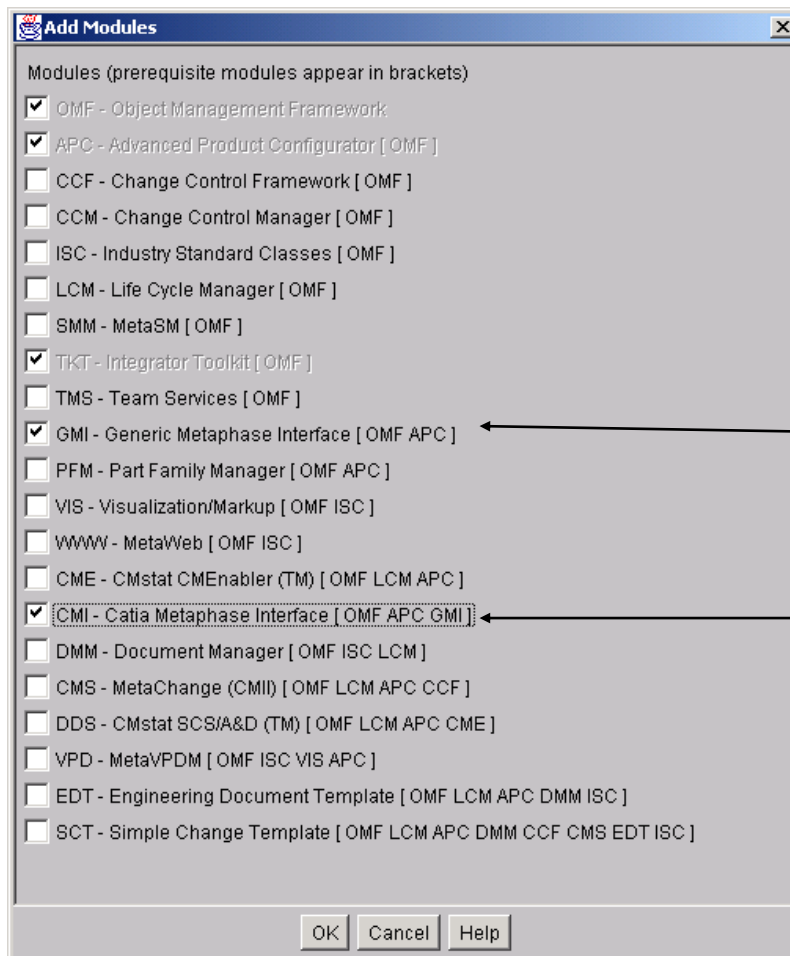
Select GMI

Select CMI

Confirm with OK

Modifications in configuration file

The following steps will be done by the installation script. The parameters of the GMI and CMI servers should be modified manually.

The CMI and GMI servers are registered in the file `$PDM_CONFIG (config.cfg)`, which indicates the computer where they have been installed.

Please select the "Modify Service Settings" on the dialog window.

Select Modify Service Setting..

Select Work_Group

Click Class Service Settings...
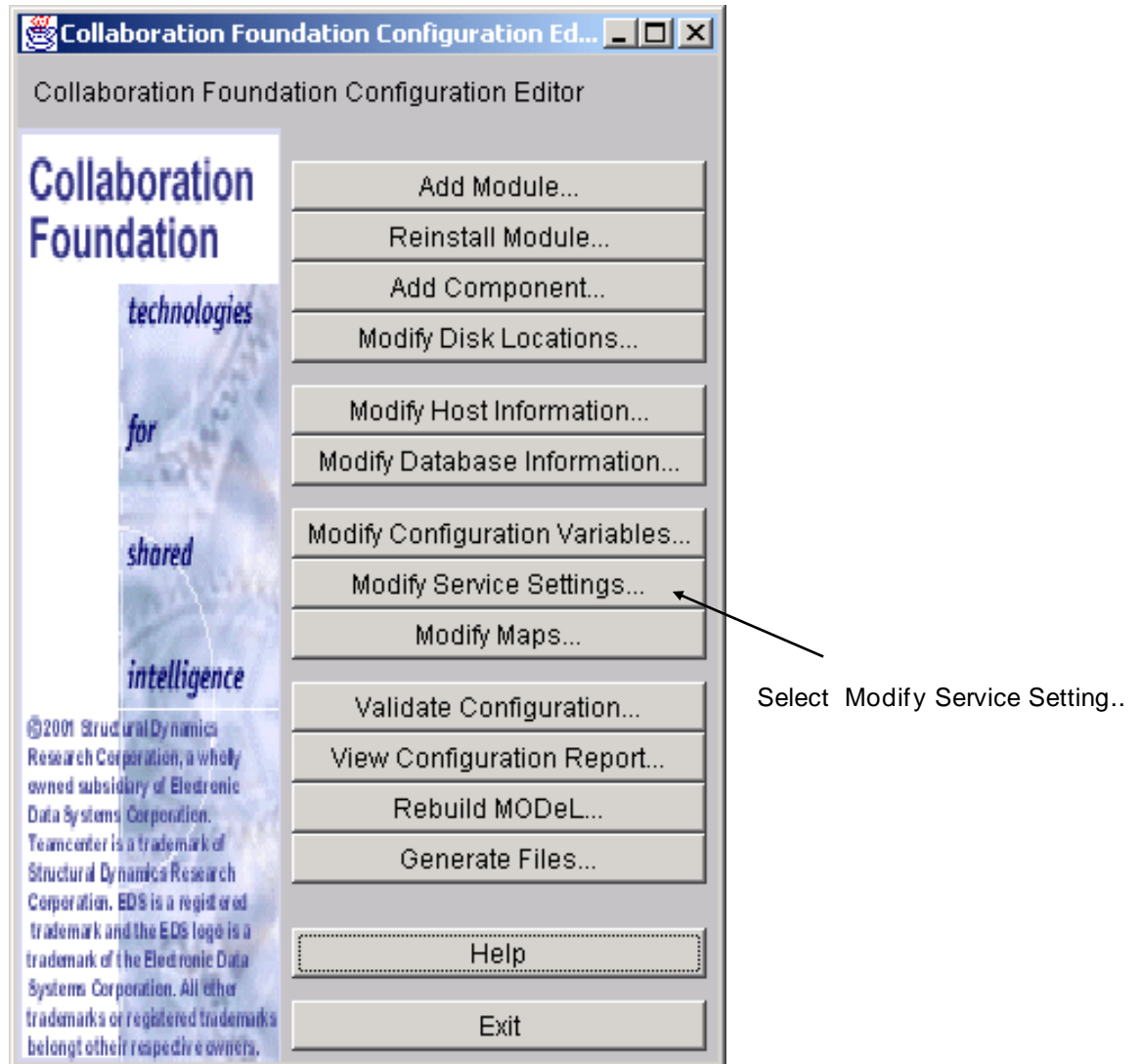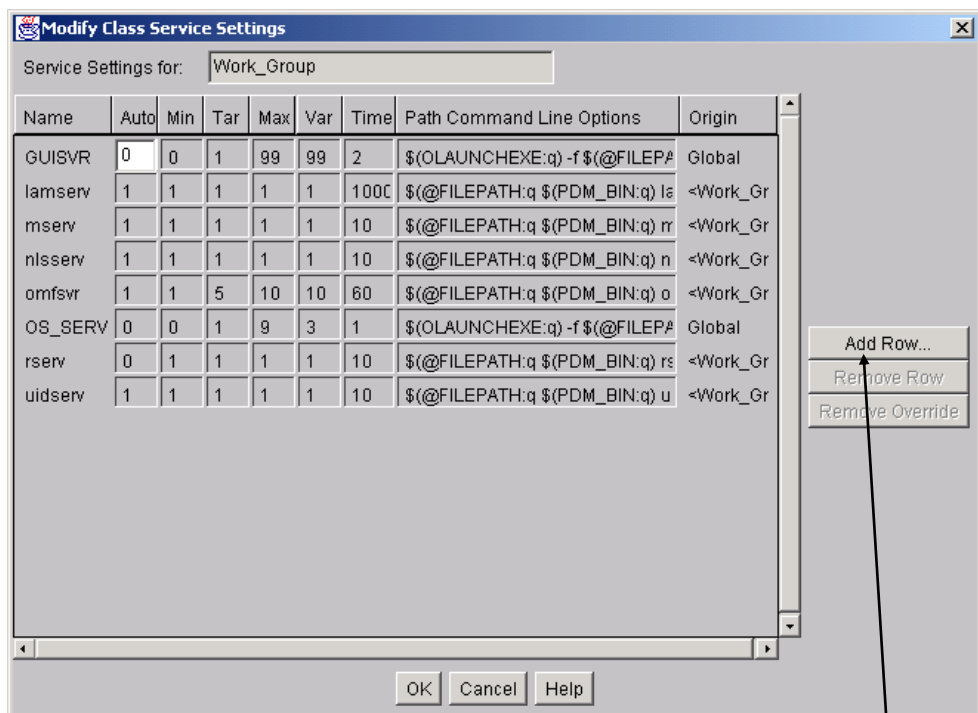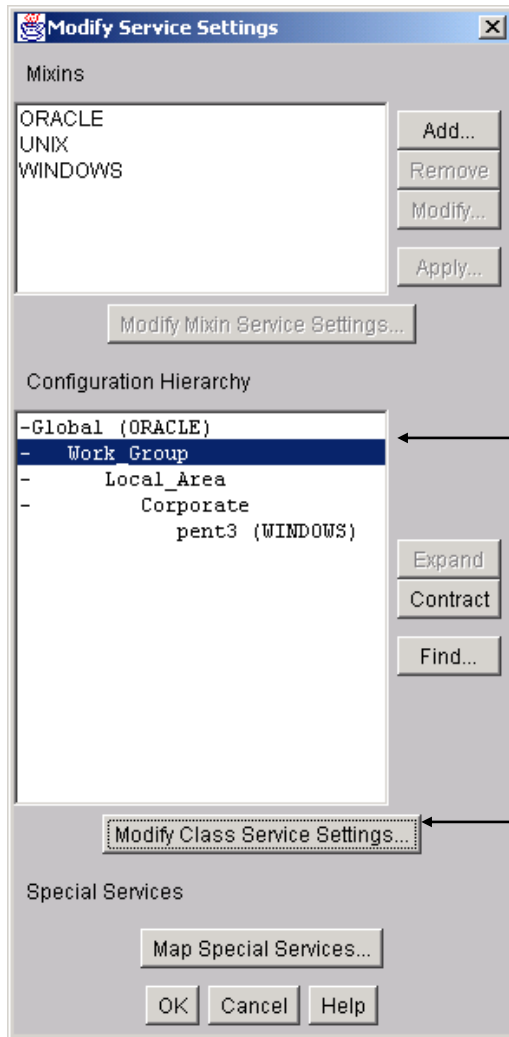
Click Add Row...
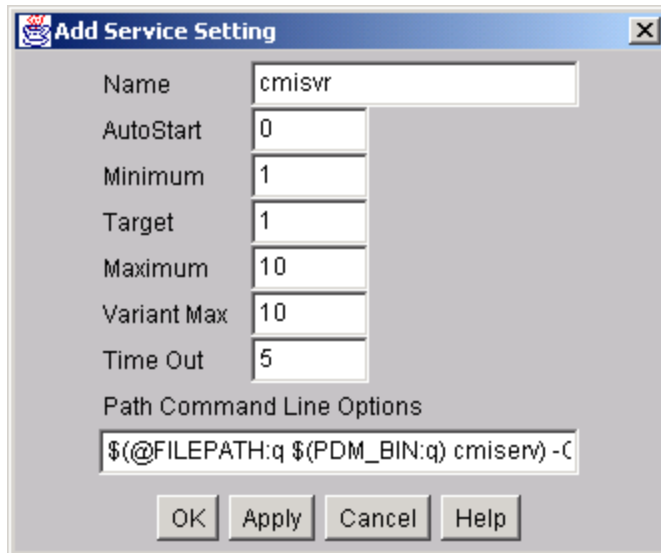
Confirm with "APPLY" and set the same options for gmisvr.

The following configuration will be added automatically by the installation script:

```
insert service.cfg host = {hosts_gmi}
  gmisvr "0 1 1 10 10 5 $(@FILEPATH:q $(PDM_BIN:q) gmiserv) -C 250"
  ;
insert service.cfg host = {hosts_cmi}
  cmisvr "0 1 1 10 10 5 $(@FILEPATH:q $(PDM_BIN:q) cmiserv) -C 250"
  ;
```


Confirm with OK.
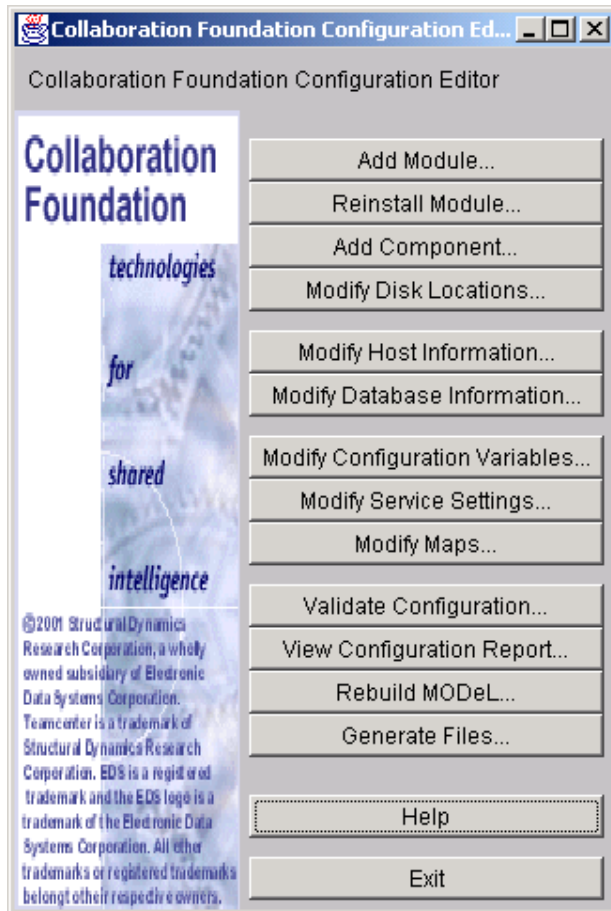
Click Modify Configuration Variables
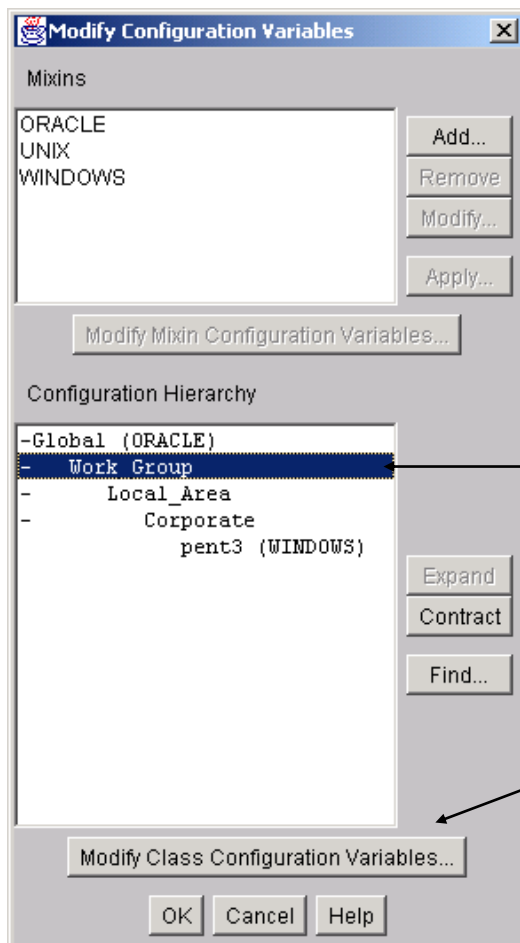
Select Work_Group

Click Modify Class Configuration Variables
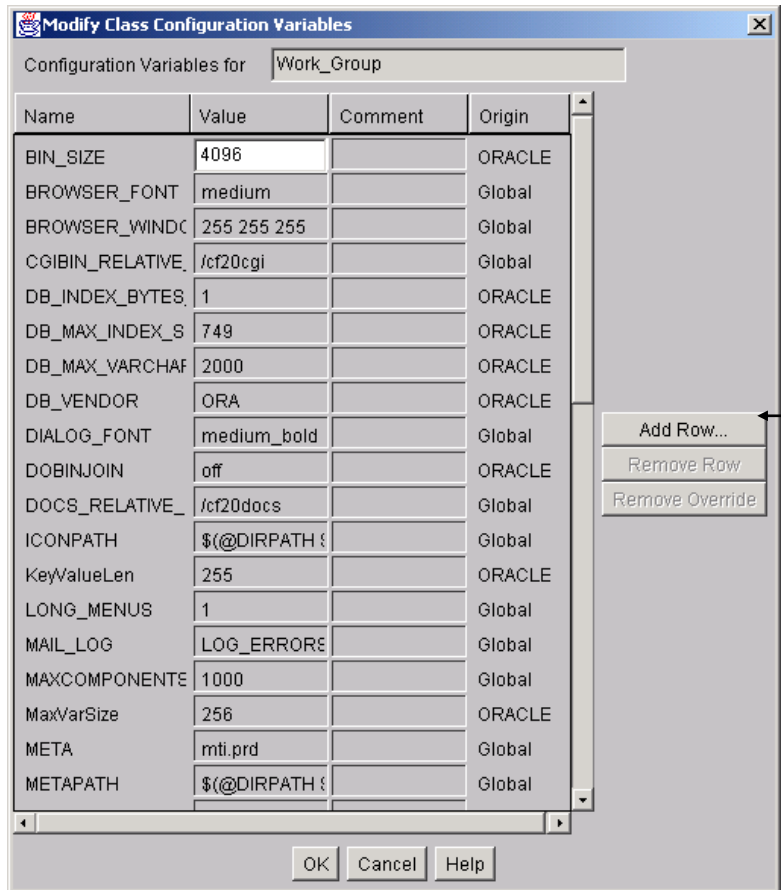
Click Add Row...
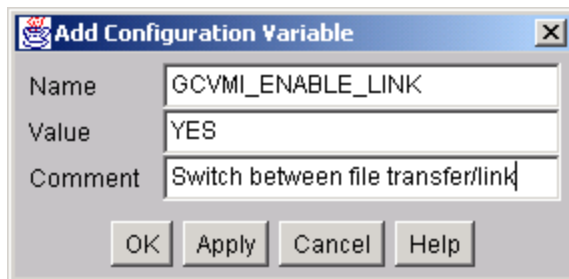
To enable symbolic links within GMI/CMI, set the flag **GCVMI_ENABLE_LINK** to **"YES"**. This will improve the system performance, because Catia-model-files are no longer copied into the exchange-map, but referenced by links.

Confirm with "APPLY" and set the following options.

To enable the evaluation of neighbour-models, bounding boxes must be generated (Catia Installation) and you have to set the following config-variables:
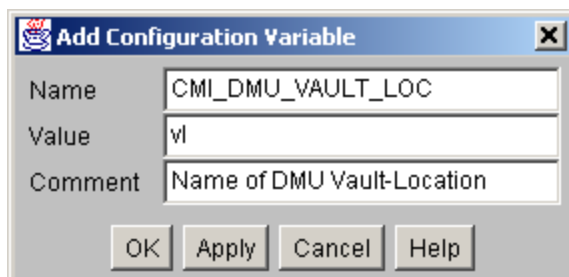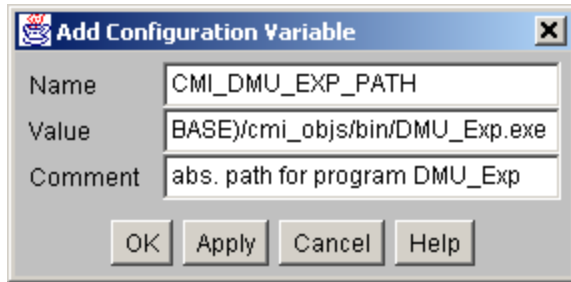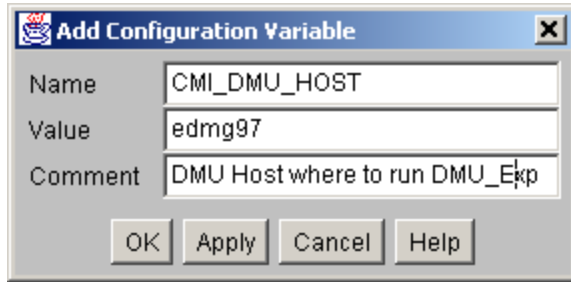
If you want, that the DMU_Exp-Utility runs with the Startup-Preferences of the super user, you have to set the Config-variable CMI_DMU_STARTUP_PREF to "ON".

In cases of trouble during the work with CMI you can get a trace from the GMI-/CMI-Servers. Just change the flag **GCVMI_SERVER_DEBUG** to **"ON"** to show information in the standard-output from each function/method called.

☞ **Setting "GCVMI_SERVER_DEBUG" to "ON" reduces the overall system performance. Therefore it should only be set for test/ debugging purposes. Set "GCVMI_SERVER_DEBUG" to "OFF" for productive usage of CMI.**

To be able to view all available information in CMI Workbench items:

```
#set displayed lines in icon/ tree view to four

set ICONVW_ID_LINES "4";

set TREEVW_ID_LINES "4";


#Maximum Quantity for CMI-Assembly
set GCVMI_MAX_QUANTITY "10";
```

Vault location for Template CATParts/CATDrawings

For the functionality *Create->CATPart (CATDrawing)* in Teamcenter, you need to define a vault location where CMI will look for template (empty) geometry files.

```
set CMI_TEMPLATE_VAULTLOCS "{myTemplateVaultlocation}";
```

You need to also place an empty CATPart and CATDrawing file in this directory.

Multiple vault locations can be defined, eg for different CATIA Releases:

```
set CMI_TEMPLATE_VAULTLOCS "{myTemplVaultloc1}{myTemplVaultloc2}";
```

If you want to use the 4D-Navigator Integration you have to insert and set another variable:

```
set CMI_CATN4D_STARTUP "<path to 4Dnavigator>";
```

`CMI_CATN4D_STARTUP` is the path to the 4D-Navigator startup command.

You can set the request time to CATIA with :

`set XT0_NET_TIME "30";`

☞ **In Teamcenter 2007 and 2005SR1 MP3 there is a change in the scope of the configuration context and various other preferences, which are now applied locally to the browser by default. In order to ensure correct operation of CMI and similar solutions, please apply the following setting:**

set APPLY_SES_PREF_TO_WINDOW "1";

This will revert the behavior to that of previous Teamenter versions (preferences are applied globally)

For more information about CMI configuration variable settings please refer to the customization manual.

Click Generate Files
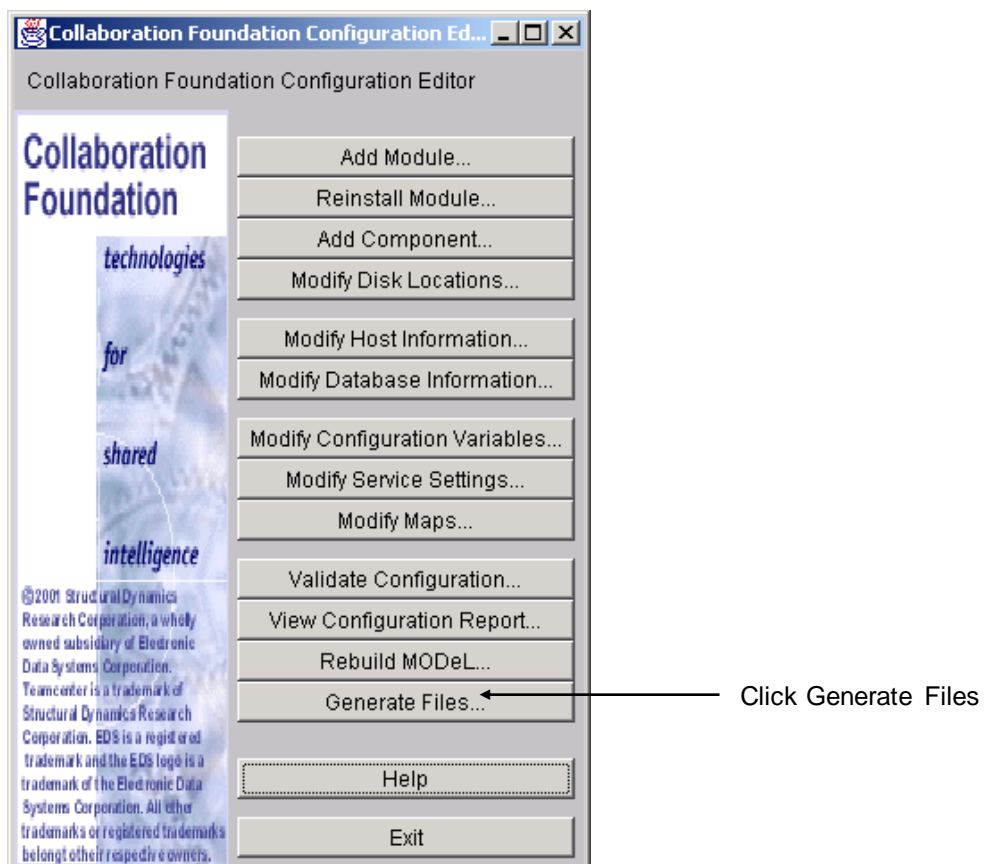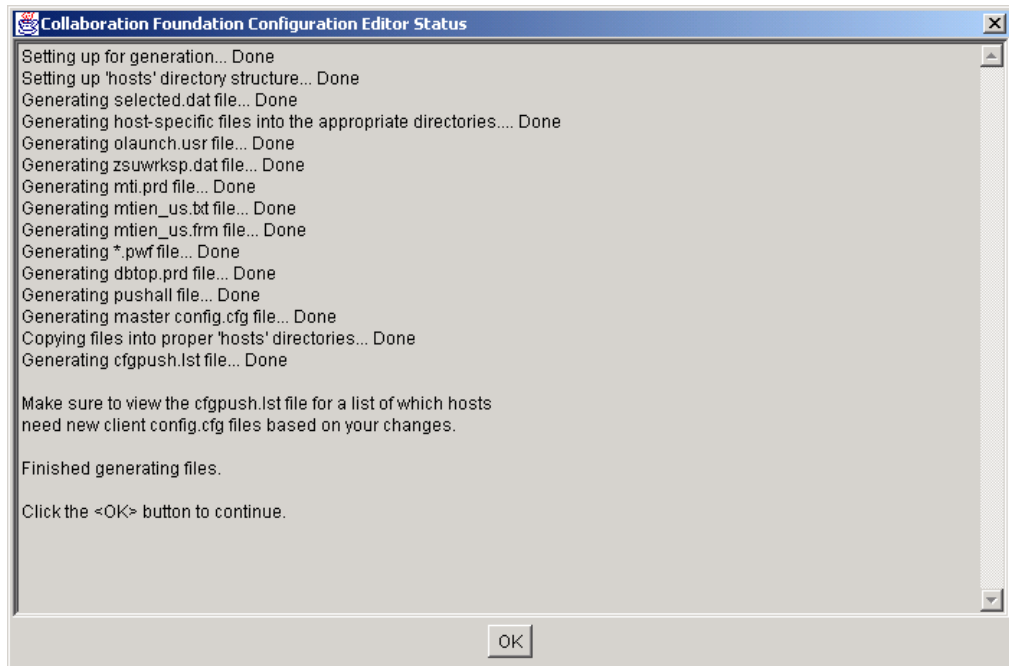
Confirm with OK.

Implementing of CATIA launching

It is possible to start CATIA just by double clicking on an appropriate icon within Teamcenter Enterprise :

Therefore you have to create a file (e.g. `Tool.dat`) and load it into your database.

```
// Sample Tool.dat

delete from x0CTTool;

class x0CTTool
{
   Application = 'CATIA V4';
   Class = 'x0CTTool';
   Command = 'catstart.sh';
   ToolName = 'CATIA V4';
}
```

```
objload -f Tool.dat -k ToolKeys.dat
```

If there are keys to generate:

```
objload -f ToolKeys.dat
```

The attribute Command refers to your CATIA start script.

Installation of Rules

The CMI software will be delivered with some rules. After successful installation you should update your database. The file `dbinit/cmiadmdb.dat` contains a basic set of rules that can be used as templates for customer specific adaptions.

CMI Settings within PDM configuration file

For an an overview of all possible configuration variable settings for CMI within the PDM_CONFIG file config.cfg, see *the CMI Customization Manual.*

Upgrade of CMI

Download new CMI from *http://www.cmi-support.com/*.

Extract eg. cmi950tc51ntos.tar.Z (CMI 9.5.0 for Windows) to C:\tmp

Start cfgedit2 in $MTI_ROOT\install
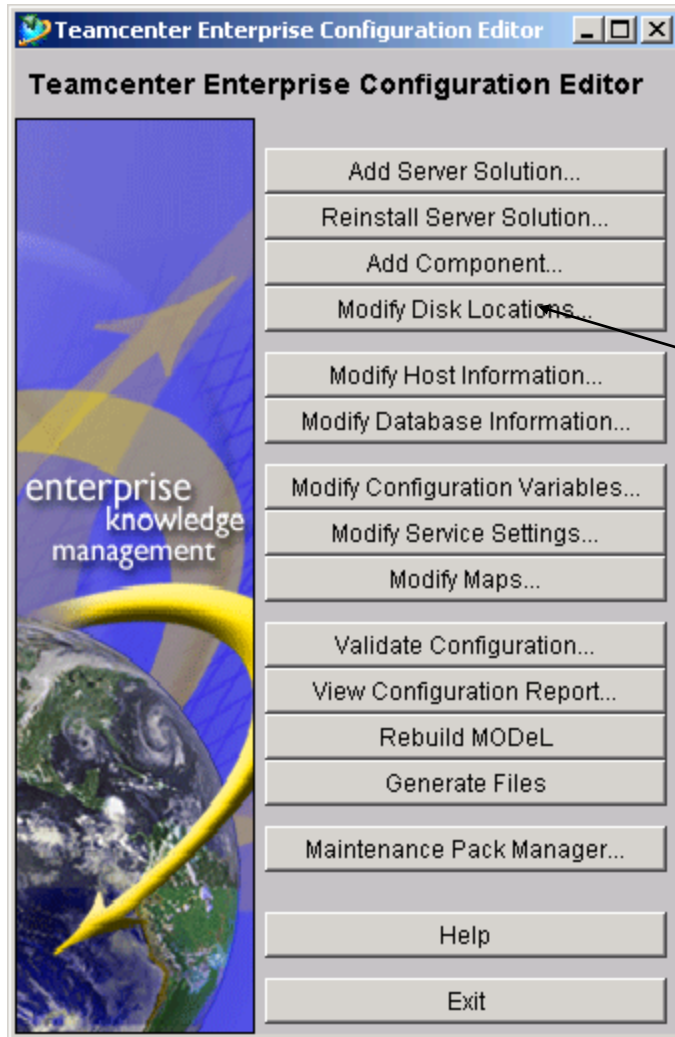
Click Modify Disk Location
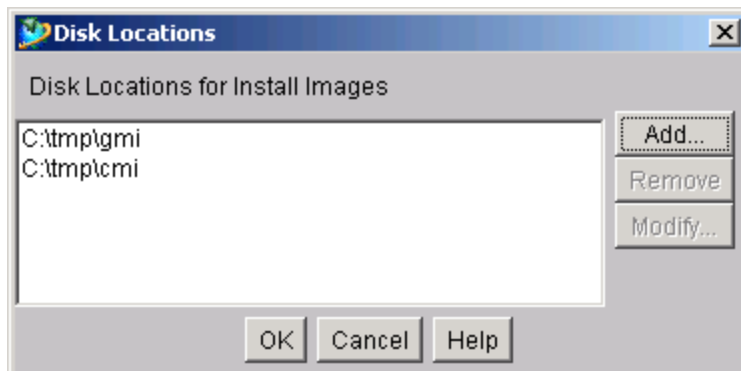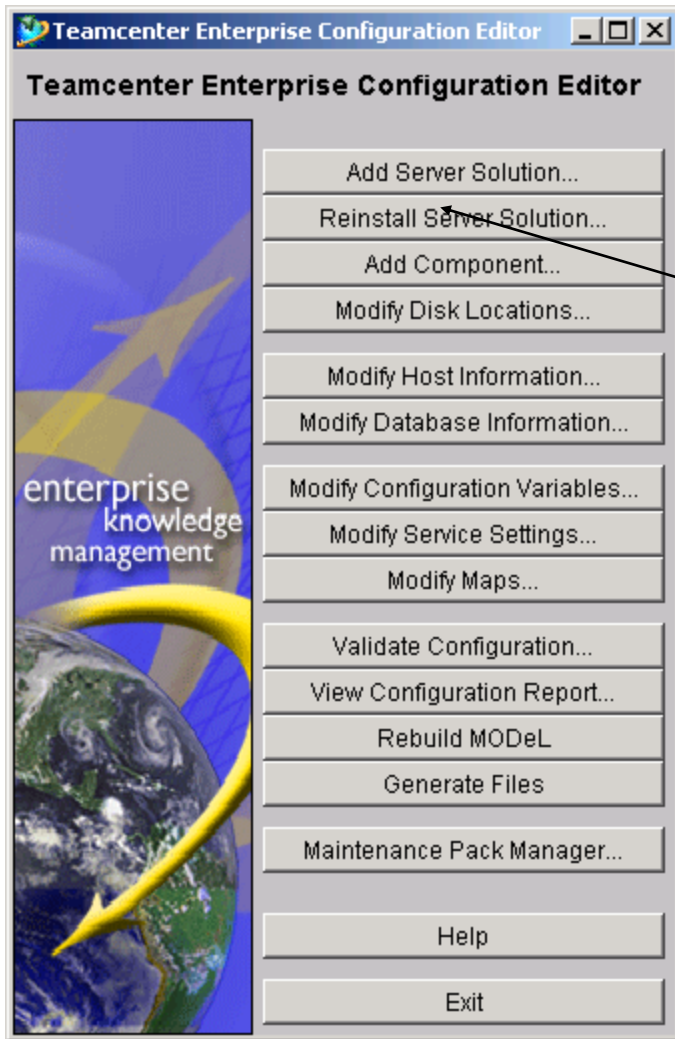
Click Reinstall Server Solution
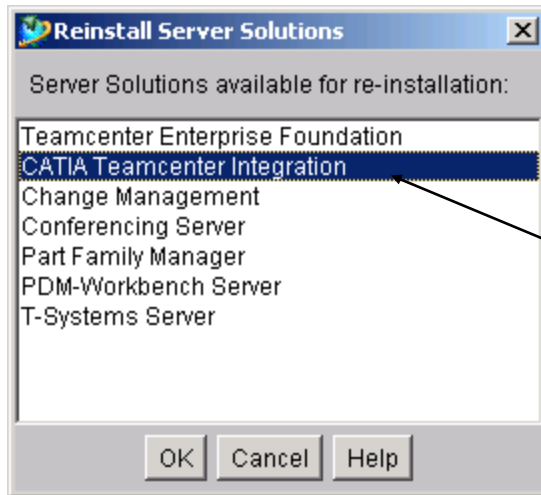
Select CATIA Teamcenter Integration
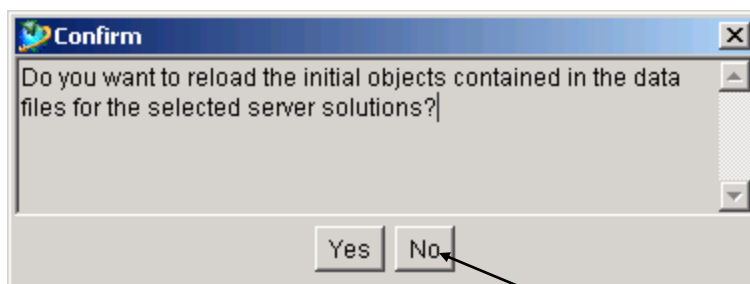
Click No

Finish Upgrade with OK

Upgrade of CMI-Rules

After Upgrade of CMI, CMI-rules should be upgraded too.

Start a Command-shell:

cd %MTI_ROOT%\config

pdmsetup.bat

muxstart

dspstart

cd ..\dbinit

objload -f cmiupdateadmdb.dat -k cmiupdateadmdb.key

objload -f cmiupdateadmdb.key

dspstop

muxstop

All rules of "CATIA User/Specialist Grp" are removed and the new CMI-rules are inserted from dbinit\cmiupdateadmdb.dat

CHAPTER 3

Install Listener

The listener is a program which helps to connect any application to Teamcenter Enterprise. In this special case we connect the application CATIA to Teamcenter Enterprise.

The listener is a Teamcenter Enterprise client and uses Teamcenter Enterprise API functions to call Teamcenter Enterprise methods. On the other hand the program is listening on an IPC port if a certain application has requests which should be sent to Teamcenter Enterprise.

After the starting the listener program reserves a free port and calls a Teamcenter Enterprise message to store connection information in Teamcenter Enterprise. At this moment the listener starts listening for a request via IPC. If a request from outside is received, the request is analyzed and the listener passes the information to Teamcenter Enterprise.

The CMI module looks for the executable file **cmilis (cmilis.exe)** in the operating system search $PATH. You may copy the file **cmilis** to your **/usr/bin** directory or to the installation directory of the omf.

☞ **The CMI listener `cmilis` must be installed in the $PATH on each CATIA client workstation.**

CHAPTER 4

Adapting CATIA V4

The T-Systems International CATEDM (**CAT**IA **E**ngineering **D**ata **M**anagement system Integration) module extends the CATIA V4 functionality to handle assemblies and to communicate with PDM systems. The module is also used to integrate other PDM systems like Sherpa from Sherpa Inc. and CADIM from Eigner & Partner.

You should perform the following steps with your CATIA system administrator. The CATEDM module includes all of the supported platform data in a compressed file. Thus, you should choose an installation location for all CATIA V4 clients.

In the following example sections it is supposed that the software will be installed in directory **/catia/gii** and the name of the module will be **METAPHSE**. You can choose another destination and name for the module if you want (respective the restriction of 8 capitals).

Loading CATEDM Software from CD-ROM

Mount CD-ROM. See chapter "*Loading the Software from CD-ROM*" on page 1.

Log in as the CATIA administrator (i.e. **catadm**):

```
# su – catadm
```

Change to any temporary installation directory:

```
# cd /tmp
```

Unpack the compressed file:

```
# cat /cdrom/catedm/METAPHASE_4.6.2.tar.Z| uncompress -c|tar xvf -
```

This compressed file creates a new directory **METAPHSE**_4.6.2 at the current temporary installation location.

CATEDM Installation

After you have successfully transferred the installation files to your installation host; the following steps configure your installation and install the software within your destination directory.

Configuring the installation

The **configure** file asks you for some installation paths and stores the information in a configuration file. This file will be used to install the software. To configure the installation:

Change to the installation directory:

```
# cd METAPHSE_4.6.2/install
```

Start configure

```
# ./configure
```

The configure command generates the file `config.env`. All the paths and installation flags should be stored there (you can check or modify the file).
Here you can decide about:

- the installation destination,
- the name of the module that appears in the CATIA V4 menu bar,
- the exchange map name for each user in his/her home location.

Sample configure output:

```
# ./configure
loading cache ./config.cache

The configuration procedure will try to find out installation pathes and
flags. This will not modify anything within your system.

In general we propose to install the complete software in a separate
directory. The directory should be readable by each user. You do not
need to have root privilidges.

What is your main installation path ? [/catia/metaphse_4.6.2] :

Which license manager have you currently installed?

    0) none
    1) licman20

 Choose your licman installation [1]

 Please enter the full path of the start script licman20
 [/opt/Licman20/bin/licman20]:


 Please enter the license information for licman20
 (LICMAN_LICENSE_PATH_LLD).

 If you use nodelocked licenses please enter the full path of
 the license file.

 If you use floating licenses please enter
 <licman20_port>@<license_server_host>

 For more information about LICMAN_LICENSE_PATH_LLD please refer to
 the licman20 manual.

 [<licman20_port>@<license_server_host>]:
52818@MyLicenseServer

Which kind of help visualisation do you prefer? [XPDF | ACROBAT |
NETSCAPE] :
Pay attention: CMI context help is only available with XPDF!
XPDF
Where should binaries go ? [/catia/metaphse_4.6.2/bin] :

Where should the catia load modul go ? [/catia/metaphse_4.6.2/etc] :

Where should program data files go ? [/catia/metaphse_4.6.2/data] :

Where should doc files go ? [/catia/metaphse_4.6.2/doc] :

Where should example files go ? [/catia/metaphse_4.6.2/examples] :

Where should html- files go ? [/catia/metaphse_4.6.2/htdocs] :
```

```
Where should pdf- files go ? [/catia/metaphse_4.6.2/pdfdoc] :


The CATIA EDM Integration includes a CATIA Load Modul (CATIA EXTENSION).
Its name must be unique within your CATIA installation an can only use
8 characters. You may call it e.g. EDM, CATEDM, ...

What should be the name of the load modul ? [METAPHSE] :


CATIA and the EDM system have to exchange CATIA models. Therfore a user
specific directory is needed. You can specify the name of the subdir.
The HOME-Path of the user is always set as a prefix (e.g. if you specify
"maps/catiaexmap" the path "$HOME/maps/catiaexmap" is used ).

What should be the name of the subdir ? [catiaexmap] :

What is the path and name of your CATIA environment file?
[/catia422/v4r1/prod/START.env] :
```

```
It is recommended to use a CATIA swap model
Use a CATIA swap model Y|N ? [Y] :

It is recommended to use an empty startmodel
containing the standards of the actual project.
If there is no template defined, CMI CATIA generates an
empty model using ISO standards.

What template model for TMPAXIS.model should be used? :
/CATIA/TEMPLATE.model

Symbolic name of CATIA map of /CATIA/TEMPLATE.model :
TEMPL

Summary of configuration results
  CATEDM_ROOT:         /catia/metaphse_4.6.2
  CATEDM_ROOT_BIN:     /catia/metaphse_4.6.2/bin
  CATEDM_ROOT_ETC:     /catia/metaphse_4.6.2/etc
  CATEDM_ROOT_DAT:     /catia/metaphse_4.6.2/data
  CATEDM_ROOT_DOC:     /catia/metaphse_4.6.2/doc
  CATEDM_ROOT_EXAM:    /catia/metaphse_4.6.2/examples
  CATEDM_ROOT_PDFDOC:  /catia/metaphse_4.6.2/pdfdoc
  CATEDM_ROOT_HDOC:    /catia/metaphse_4.6.2/htdocs
  prefered helper:     XPDF
  CATEDM_LOADM:        METAPHSE
  CATEDM_EXMAP:        $HOME/catiaexmap
  CATEDM_CATIA_ENV:    /catia422/v4r1/prod/START.env

creating ./config.status
creating ./config.env

Configuration is finished, you may now check pathes in ./config.env
This pathes are used by the installation procedure.
You may run installation now by typing
> ./install_catedm
```

Installation

The script `install` will copy data to the places which you have defined before:

Start **install**:

```
# ./install_catedm
```

Here you can decide which architectures you want to install. The supported platforms are listed in chapter "System and Software Requirements" on page *1*.

After confirming the list of installation decisions, the installation process will be started.

```
# install_catedm
for which architecture do you wish to make this installation?
type one of the following or enter for all:
AIX HP-UX IRIX SunOS :

  dat-dir              : /catia/metaphse_4.6.2/data
  doc-dir              : /catia/metaphse_4.6.2/doc
  html-dir             : /catia/metaphse_4.6.2/htdocs
  pdf-dir              : /catia/metaphse_4.6.2/pdfdoc
  helper-app           : XPDF
  examples-dir         : /catia/metaphse_4.6.2/examples

CATIA load module     : METAPHSE

CATIA exchange map     : $HOME/catiaexmap

CATIA environment      : /catia422/v4r1/prod/START.env

You can interrupt with cntr-C or continue with Return
creating directories ...
make dir  /catia/metaphse_4.6.2
make dir  /catia/metaphse_4.6.2/bin
make dir  /catia/metaphse_4.6.2/etc
make dir  /catia/metaphse_4.6.2/htdocs
.....
copying METAPHSE to /catia/metaphse_4.6.2/etc/AIX
copying XT0SHMOD to /catia/metaphse_4.6.2/etc/AIX
copying EDBPACK to /catia/metaphse_4.6.2/etc/AIX
copying OWNEDMOD module to /catia/metaphse_4.6.2/etc/AIX
copying EDMHELP module to /catia/metaphse_4.6.2/etc/AIX

copying binaries to /catia/metaphse_4.6.2/bin/AIX ...
 appconnectx
 netscape_request
 xpdf
 xt0request
copying examples to /catia/metaphse_4.6.2/examples ...
 ../examples/brake.model
 ../examples/brakedisc.model
 ../examples/caliper.model
....
copying html-files ...
....

 Press Return to continue:

  ----------------------------------------------------------------
   FOR FURTHER INSTALLATION STEPS PLEASE READ THE
   README_FIRST.txt and catstart.sh in
   /catia/metaphse_4.6.2/doc
   See also the WHATSNEW.txt file for new features and bugfixes.
  ----------------------------------------------------------------


  ----------------------------------------------------------------
   Before starting CATIA you have to include the following
   line into a global declartion File of your CATIA installation
   or into your USRENV.dcls file:

   INCLUDE ('/catia/metaphse_4.6.2/data/METAPHSE.include');

  ----------------------------------------------------------------
```

If the installation is finished successfully, you may remove the temporary **METAPHSE**_4.6.2 directory.

Please read the file **metaphse**_4.6.2**/doc/README_FIRST.txt** for detailed instructions how to adapt your CATIA V4 environment.

Modify and copy the file **metaphse**_4.6.2**/data/xt0request.sh** to any directory on the client workstation, which is in the operating system search path (i.e. /usr/local/bin).

☞   **The file xt0request.sh must be installed on each CATIA V4 client workstation.**

After a successful installation, the CATIA V4 environment must be modified.

A simple CATIA V4 start script and some modification tips are located in directory:

metaphse_4.6.2**/doc**

Directories

Following figure shows the standard directory tree of the CATEDM installation.
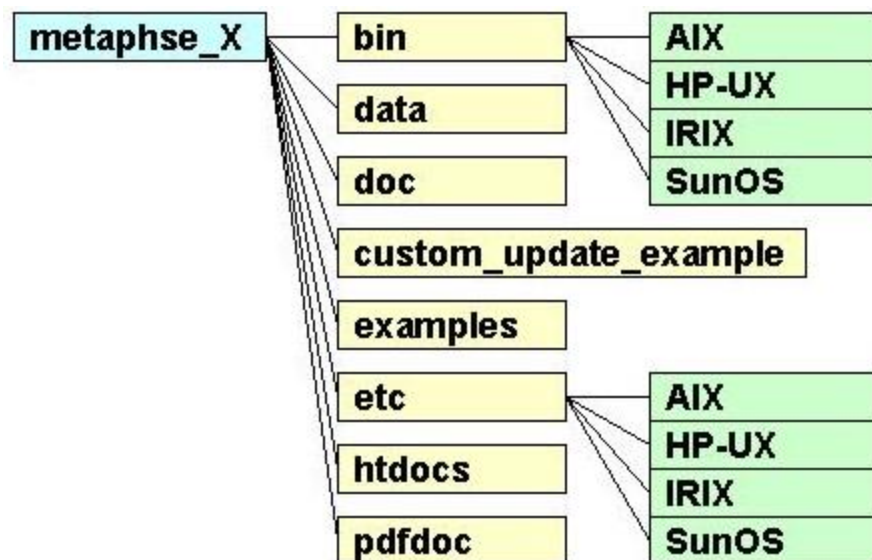
Figure 1: CATEDM installation path structure

Data/ :	Declaration include files, initialization scripts, error definition file, menu definition file, message definition file.
etc/<your OS>:	CMI CATIA V4 GII module in binary format (METAPHSE). All CATIA V4 user should have access privilege to this directory.
bin/<your OS>:	Some executables of the integration. All CATIA V4 user should have access privilege to this directory.
doc/ :	The latest information about the product, script file "xt0request.sh" and a simple CATIA V4 start script "catstart.sh".
examples/ :	Some example CATIA V4 models

| `htdocs/` | : | Help files in HTML-Format (start page is index.htm). |
| `pdfdoc/` | : | Help file in the PDF-Format (XPDF uses this file to get the context sensitive help) |

Files

The Following section describes some important files and their meaning.

doc/README_FIRST.txt:

This file contains some necessary tips for the CATIA V4 integration. You should read this file.

doc/WHATSNEW.txt:

This file contains the changes of the CATIA V4 module. There are new features, changes and bugfixes.

doc/README.environment:

This file contains the possible environment settings of the CATIA V4 module. The File `README.env.xls` is the same in the Microsoft Excel format.

data/xt0request.sh:

This file is needed for the communication between CATIA V4 client and Teamcenter server. You should modify this file and copy it into any directory in search path of CATIA V4 clients.

data/ini.env:

This initialization script contains some necessary environment settings for the integration. The meaning of the certain environment variables is described in the `ini.env` file. This file should be adjusted and <u>each user must run this script before starting CATIA V4</u>. Please refer the `README.environment` file for more information.

data/METAPHSE.include:

CATIA V4 declaration file for the integration. This file should be included to the users `USRENV.dcls` or to any other local or global CATIA V4 declaration file.

data/appdefault.obj:

This file contains some environment settings of the CATIA V4 module. Please refer the `README.environment` file for more information.

data/ERREDB:

This file contains the error messages in CATIA V4.

data/dshdrawingframe.sh:

This file contains some information how to fill a drawing title block. The customizing of title block filling is described in the *CATIA Teamcenter Integration Customizing Manual*.

data/cleanbox:

All text inside the boxes described in this file will be deleted during filling the drawing frame.

data/plotconf:

This file contains the options of the CATIA V4 PLOT UTILITY.

data/catiaedb.msg:

This file contains a list of all used messages appearing in CATIA V4 when you are using the CMI Module. You can customize this message file to your own needs.

data/catiaedb.menu:

This file contains a list of all menu points of the CMI Module. You can change each menu point to your own needs. A menu name consists of 8 characters at maximum. An empty entry means that the menu point is disabled. It is not possible to disable the first entry of a sub menu.

data/edmhelp.conf:

If xpdf is used as help tool, this file contains the bindings between the menu and the pages of the help file. If you write an own help file you must edit this file.

$HOME/exchangemap:

This directory is a local UNIX directory in user's home directory. On each CATIA V4 client workstation an exchange map must exist. The task of this UNIX directory is to exchange data between CATIA V4 and Teamcenter. Each user should have an own exchange map. For more information about customizing tasks please refer to *CATIA Teamcenter Integration Customizing Manual*.

$HOME/.dshcatiarc.obj:

This optional script file overwrites the default settings for the user. Please refer the **README.environment** file for more information.

Modify CATIA V4 Environment

extend STEPLIB and CATDEC environment settings as following (example):

```
STEPLIB= ..... :/usr/lpp/catia/v4r1_code/gii/steplib
STEPLIB=$STEPLIB:/catia/gii/metaphse_4.6.2/etc/<your OS>
export STEPLIB
CATDEC=$CATDEC: /catia/gii/metaphse_4.6.2/data
export CATDEC
```

Include the file **data/METAPHSE.include** to each user's **USRENV.dcls** file as following (example):

```
/*------------------------------------------------*/
/* USRENV.dcls     DECLARATION FILE               */
/*------------------------------------------------*/
INCLUDE ('/catia/v4r1/prod/USRENV.include');


/*------------------------------------------------*/
/*  INCLUDE all other Configuration - files       */
/*------------------------------------------------*/
INCLUDE ('/catia/gii/metaphse_4.6.2/data/METAPHSE.include');
/*------------------------------------------------*/
```

User dependent configurations

Normally you don't need any modifications for a certain user (except user's personal `USRENV.dcls` file). Therefore, each user can overwrite the default settings. You may copy the file `data/appdefault.obj` to the user's home directory and rename it to `.dshcatiarc.obj`. Now you can edit this file and overwrite the existing settings.

Following the order of running the setting files:

optional { $HOME/.samcatiarc.obj

mandatory { data/samdefault.obj
data/ini.env
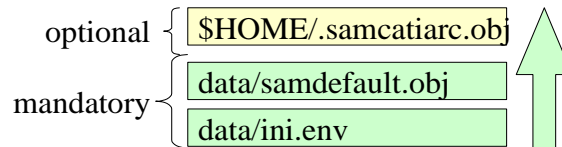
Figure 2: Initialization files with their order.

The following Environment settings are possible:

Name of Environment Variable (ini.env)	Name of Configuration Flag (appdefault.obj .dshcatiarc.obj)	Short Description	Possible Values
CATEDM_DEBUG	Debug	set a debug level	0 - no debug 66 - full debug
CATEDM_BINDIR	-	path to the executables of CATEDM installation	
CATEDM_SCRIPTDIR	-	path to the scripts and configuration files of CATEDM installation	
CATEDM_CONN	Connectmethod	method to connect with CMI workbench	
CATEDM_EXCHANGEMAP	Exchangemap	directory were CMI and CATIA V4 exchange model files	
CATEDM_EXMAPDLNAME	exchange_dlname	logical map name which is realated to the exchange map	
CATEDM_MLINKS	Modellinks	create a symbolic link (description) to each model in exchange map	
CATEDM_TMPAXIS	Tmpaxis	use a start model	0 - no start model 1 - use a start model
CATEDM_TMPAXISDLNAME	tmpaxis-dlname	logical CATIA V4 map for the TEMPAXIS model	If there I no TMPAXIS MODEL (MAP) defined the INITIAL_MODEL of CATIA V4 is used
CATEDM_TMPAXISDSNAME	tmpaxis-dsname	CATIA V4 map for the TEMPAXIS model	
CATEDM_TMPAXISNAME	tmpaxis-name	template for the TMPAXIS model: the CATIA V4 model without ".model" extension	
CATEDM_NAMETYP	modelnametype	position from which a CATIA V4 model name is displayed in CATIA V4 status	
		field. usefull for names longer than 32	

		types.	
CATEDM_LOGF	Logfile	name of the file were the log should go.	
CATEDM_HELPERTOOL	Helper	name of the installed helper application (xpdf, netscape, acroread)	
CATEDM_HELPFILE	Alias	name of the online help file	
CATEDM_CATIAVER	Catiaversion	to set the current CATIA V4 version	
CATEDM_PROJECT	Project	defines the name of the current CATIA V4 project	
CATEDM_WPMODUS	wpmodus	default workplane modus	0 - assembly 1 - default workplane 2 - geometry 3 - multiselection
CATEDM_GEOPOS	geoposallowed	geometry position support	0 - off 1 – on
CATEDM_APPDEF	-	name of the CATEDM configuration file (default is appdefault.obj)	
CATEDM_RCFILE	-	path and name of the user specific configuration file	
		(default is $HOME/.dshcatiarc.obj)	
CATEDM_CONNECTXFILE	connectx-script	alternative way to connect to the workbench – not used yet	
CATEDM_NORMPART	normpart-support	support for norm part integration NIS	0 - off 1 – on
CATEDM_REFRESH	autorefresh	refresh the current CATIA V4 session after a CATEDM READ action	0 - off 1 – on
CATEDM_RM_MODELS	remove-models	remove models from exchange map at first CATEDM startup time	0 - off 1 – on
CATEDM_ASSEMBLY_SYMMETRY	assembly-symmetry	allow MOD POS->MOVE->SYMMETRY for assembly positions	0 - off 1 – on
CATEDM_LOADWARNING	load-warning	show a warning panel when a read action is started from workbench	0 - no warning 1 - at READ 2 - at REREAD 3 - at READ and REREAD
CATEDM_MERGE	merge-support	CATEDM supports CATIA V4 MERGE	0 - off 1 – on
debisLICDIR	-	location of debis licman license file	
debisLICBIN	-	location of debis licman executables	
CATEDM_LICMAN_START	license-startscript	license manager start script - default is licman12	Licman12
CATEDM_LLD_AUTOSTART	lld-autostart	start local license daemon at first CATEDM startup time	
CATEDM_SETUPSTAT	setupstatus	reads configuration flags from appdefault.obj at any module entry only used for debug	0 – off 1 – on

CATEDM_DMPF	stdumpfile	information file - only needed for VMI	
CATEDM_EDBHOST	edbapphost	CATIA V4 client host name	
CATEDM_SMD_WEIGHT	smd-weight-support	CATEDM supports to read the weight and the position of SMARAGD models	0 – off 1 – on
CATEDM_DESCINFOAPP	desc-info-applications	read the user defined blocks and write the data to the info object. To	application list
CATEDM_DESCINFOELE	desc-info-elements	accsess to the blocks you need three things:	pt, ln, ...
CATEDM_DESCINFODESC	desc-info-descriptions	1. The application string: before any description, modification or read rotine is used, the user must declare the application string 2. Element type 3. Types of the description: (1-16000) This routine restricts the size of the data block to 32 elements of each type.	types of the descriptions
	example:	CATEDM_DESCINFOAPP EDBCATIA CATIAEDB CATEDM_DESCINFOELE PT LN TXTN CATEDM_DESCINFODESC {12345 2456} 3457 {1111} "==> PT: search for application string EDBCATIA and CATIAEDB and types 12345 and 2456	
CATEDM_COMMENT	comment-support	read the comment lines of a model file and write them into a file into the exchangemap directory. The full filename stands into the info obj	0 – off 1 – on
CATEDM_NEWUPD	Newupd	Selection of the models to save in CATIA V4	1 - in CATIA V4 (default) 0 -no selection of the models in CATIA V4
CATEDM_REPLACEMODEL	replace-model	Save As / Create can replace the original CATIA V4 model in the current SESSION by the new registered Teamcenter CATIA V4 model. (This is only possible if the model was loaded by CATIA FILE->open) If the replace functionality is turened off: The new model is loaded additional into the CATIA SESSION	1 - replace (default) 0 - do not replace
CATEDM_CUSUPD	cmi-custom-update	calls the shared lib libcmi_custom_update.<a,sl,so> The customer can use its own libs to perform some CATIA action at update / create	1 - use the shared lib 0 - do not use the shared lib

CATEDM_BBOX	bbox-support	bounding box generation for CATIA models (2 points for each model: D3D_{X,Y,Z}{1,2}) bounding box points will be sent for each model at UPDATE ALL/MODELS, CREATE/SAVE AS and MULT CRE.	0 - no bbox support at all 1 - standard bbox support (without checkbox at update and muticreate) 2 - bbox support with checkbox (default support off) 3 - bbox support with checkbox (default support on)
CATEDM_BBOXLAYER	bbox-layer-list	Only the elements of these layers are used to generate the bounding box. If no layer is set the current layer is used.	0 1 2 ... 254 - creates a bounding box using these layers -1 - uses the actual layer filter -2 - creates the box using all layers

This is a short documentation of the configuration environment of CUSTOM ATTRIBUTES		
ATTRIBUTE	VALUE	DESCRIPTION
VolumeMass	Type: REAL CATIA V4 uses the units of the specific model	1. Sets the model standards 2. Calculates the weight and the Center of Gravity (COG) of the Volume (VOL) and the Polyhedral and exact solid (SOL) The results are written into the info object: {SOLWEIGHT} value {SOLCOG} {x-value} {y-value} {z-value} {VOLWEIGHT} value {VOLCOG} {x-value} {y-value} {z-value}

| SurfaceMass | Type: REAL

CATIA V4 uses the units of the specific model | 1. Sets the model standards
2. Calculates the weight and the Center of Gravity (COG) of the Surface (SUR), the Face
(FAC), the Skin (SKI) and the SPACE polyhedral surface (POL)
The results are written into the info object:
{SURWEIGHT} value
{SURCOG} {x-value} {y-value} {z-value}
{FACWEIGHT} value
{FACCOG} {x-value} {y-value} {z-value}
{SKIWEIGHT} value
{SKICOG} {x-value} {y-value} {z-value}
{POLWEIGHT} value
{POLCOG} {x-value} {y-value} {z-value} |

CHAPTER 5

Adapting CATIA V5

The CMICATV5 (**CMI-CAT**IA **V5** Integration) module provided by T-Systems International GmbH extends the CATIA V5 functionality to communicate with the Teamcenter Enterprise PDM system.

OMF and CATIA V5 have to be started in the same environment.

You should perform the following steps with your CATIA system administrator. The CMICATV5 module includes all of the supported platform data in a compressed file. Thus, you should choose an installation location for all CATIA V5 clients.

In the following example sections it is supposed that the software will be installed in directory `/catia/cmicatv5` on UNIX and c:\catia\cmicatv5 on Windows 2000. You can choose another destination for the module if you want.

Loading CMICATV5 Software from CD-ROM

Mount CD-ROM. See chapter "*Loading the Software from CD-ROM*" on page 1.

UNIX

Change to any temporary installation directory:

```
catusr~> cd /home/catusr
```

Unpack the compressed file:

```
catusr~> cat /cdrom/CMICATV5_[Rxx]_V[xxx].tar.Z|uncompress -c | tar xvf
-
```

☞ **Caution: the tar utility included with Solaris/AIX may truncate filenames. We recommend to use GNU tar.**

Windows

Use the Windows Explorer to locate the **d:\cmicatv5\CMICATV5_[Rxx]_V[xxx].tar.Z** file on the CD. Extract the content of the archive file to a temporary installation location.

☞ **Caution: WinZip™ versions before 8.0 do not support the tar file correctly. We recommend to use WinZip™ 8.1 or above.**

CMICATV5 Installation

After you have successfully transferred the installation files to your installation host; the following steps will install the files and configure your installation.

Configuring the installation

The `CMICATV5_[Rxx]_V[xxx]` Installation Directory has the following structure:
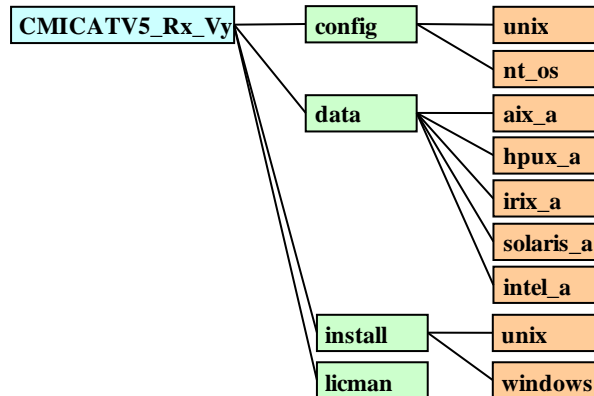
Figure 3: Directory structure of the CMICATV5 installation files

The **config** directory contains the file **cmiEnv.txt**. During the installation (UNIX) the file is merged with the actual CATIA V5 environment.

The **config** directory also contains sample CATIA V5 Configuration files for UNIX and Windows. The **unix** configuration contains two sample environment settings for the shells **sh** and **csh**. The **nt_os** configuration contains a sample CATIA V5 Environment file for the CATIA V5 Environment editor.

The data directory contains the binary distributions for the CMICATV5 module for the supported operating system mnemonics.

The supported operation systems and their mnemonics are:

AIX5.3/6.1	aix_a (32bit CATIA)
AIX5.3/6.1	aix_a64 (64bit CATIA)
HPUX 11	hpux_a
IRIX 6.5	irix_a
Solaris 2.7/8	solaris_a
Windows	Intel_a
Windows 64 Bit	Win_b64

UNIX

☞   **You do not need root access to install the CMI CATIA V5 module.**

The licman license manager must be installed on the CATIA V5 client host.

Start the installation script install.sh and follow the instructions. Your installation setting will be stored in the file config.env. This file will be located in the same directory as the install.sh script.

```
catusr~> CMICATV5_[Rxx]_V[xxx]/install/unix/install.sh

*********************************************************
*                                                       *
*           CMI CATIA V5 INSTALLATION                   *
*                                                       *
*                                                       *
*        The installation performs two steps            *
*                                                       *
*        1. Step:       Configuration                   *
*                                                       *
*        2. Step:       Installation                    *
*                                                       *
*********************************************************

You can interrupt with cntr-C or continue with Return
*********************************************************
*                                                       *
* Installing CMI CATIA V5
*                                                       *
* 1. Step:       Configuration                          *
*                                                       *
*********************************************************


 To continue the installation of CMI CATIA V5 an
 installation of the T-Systems license manager
 licman20 is required.

 Note: It is not possible to use multiple licman
       installations on a single machine at the same time.

 Which license manager have you currently installed?

    0) none
    1) licman20

 Choose your licman installation [1]

 Please enter the full path of the start script licman20
 [/opt/Licman20/bin/licman20]:


 Please enter the license information for licman20
 (LICMAN_LICENSE_PATH_LLD).

 If you use nodelocked licenses please enter the full path of
 the license file.

 If you use floating licenses please enter
 <licman20_port>@<license_server_host>

 For more information about LICMAN_LICENSE_PATH_LLD please refer to
 the licman20 manual.

 [<licman20_port>@<license_server_host>]:
52818@MyLicenseServer

In which directory would you like to install
the CMI CATIA V5 package?
Type the full path or hit return to accept the default.
[/home/catusr/cmicatv5_r[xx]_v[xxx]]

Installation directory of standard CATIA.
Type the full path or hit return to accept the default.
[/usr/DassaultSystemes/B[xx]]

Environment file of standard CATIA
```

```
Type the full path or hit return to accept the default.
[/CATEnv/CATIA.V5R[xx].B[xx].txt]

Get the Metaphase / Teamcenter Environment ($MTI_ROOT/pdmsetup)
[<full_path_to>/pdmsetup]
/opt/TeamCenter/config/pdmsetup

The CMI CATIA V5 package
needs a local directory to perform the file exchange
between Metaphase / Teamcenter and CATIA. This directory is
located in the $HOME directory of each user, e.g. if you
want to use $HOME/xmap then type xmap. Make sure this
directory exists for every user.
[xmap]

***********************************************************
* CMI CATIA V5 package Installation                       *
*                                                         *
* 2. Step:      Installation                              *
*                                                         *
***********************************************************
*                                                         *
* If you are not sure if all settings are correct         *
* (see below) this is your last chance to interrupt       *
* the installation and make corrections in config.env:    *
*                                                         *
***********************************************************
*
* Installation dir       : /home/catusr/cmicatv5_r[xx]_v[xxx]
* CMI exchange map        : $HOME/xmap
* CATIA V5 environment    : /CATEnv/CATIA.V5R[xx].B[xx].txt
* Metaphase environment   : /opt/TeamCenter/config/pdmsetup
*
***********************************************************

You can interrupt with cntr-C or continue with Return

For which architecture do you wish to make this installation?
type one of the following or enter for all:
 aix_a hpux_b irix_a solaris_a :

install for all architectures!
 /home/catusr/cmicatv5_r[xx]_v[xxx] created
 /home/catusr/cmicatv5_r[xx]_v[xxx]/config created

installing aix_a
aix_a/
aix_a/code/
aix_a/code/productIC/
aix_a/code/productIC/CMIFrameworkIC.script
aix_a/code/lib/
aix_a/code/lib/CMIAddin.exp
aix_a/code/lib/CMIBackbone.exp


< installing many files >


Generating new environment files

. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . .

***********************************************************
*                                                         *
*     CMI CATIA V5 Installation finished                  *
*                                                         *
```

```
************************************************************
*                                                          *
* CMI CATIA V5 package Lisece:                             *
* To get a trial license please fill the form at:      *
* http://www.cmi-support.com/trial_license.html        *
* Copy the licenses (clients) file to                  *
* /home/catusr/cmicatv5_r[xx]_v[xxx]/licman/data          *
*                                                          *
* You can start CATIA V5 with the script              *
* cmicatstart.sh or cmicatstart.csh                   *
* in the installation directory                       *
* /home/catusr/cmicatv5_r[xx]_v[xxx]                      *
* (Make sure the script uses the correct              *
* Metaphase / Teamcenter environment)                 *
*                                                          *
* For more information refer to the file              *
* /home/catusr/cmicatv5_r[xx]_v[xxx]/README               *
*                                                          *
************************************************************
```

The installation procedure creates two scripts to launch CATIA V5 with CMI. **cmicatstart.csh** can be used if you use a C-shell, use **cmicatstart.sh** if you use a K-shell in your pdmsetup.

The start scripts use the new generated CATIA V5 environment file "**cmicatiaenv.txt**". This environment includes the old CATIA V5 environment and the CMI settings.

The file README shows additional information about the installation / configuration of the CATIA V5 part of CMI.

Windows / Windows 64

For the 32bit version of CATIA, use the Windows Explorer to run the **setup.exe** in the directory CMICATV5_**R[xx]_[XX]V[xx]\install\windows** of the installation package.

For the 64bit version of CATIA, use the Windows Explorer to run the **setup.exe** in the directory CMICATV5_**R[xx]_[XX]V[xx]\install\windows_64** of the installation package.

The setup will **NOT** modify the native installation of CATIA V5 and Teamcenter.

CATIA Installation directory
If the installation routine can't find a unique CATIA V5 installation in the Windows registry, that fits to the installation package, the user is asked to select the proper CATIA V5 installation directory.

Installation directory
Target directory of the CMI CATIA V5 module

CMI Exchange directory:
CMI needs a temporary directory to perform the file transfer between CATIA and Teamcenter. Make sure that a separate exchange directory exists for each CMI user.

Teamcenter Enterprise Environment:
Selection of the Teamcenter environment

Select the pdmsetup.bat of the teamcenter client installation

Adapting Teamcenter Enterprise

Add the following lines to your pdmsetup on the client:

```
call <CMI installation directory>\cmicatv5_r[xx]_v[xxx]\config\cmicatiaenv.bat
```

Alternatively you can apply the following settings in the PDM setup:

```
set CATDefaultEnvironment=<CMI installation directory>\config\cmicatiaenv
set PATH=<CMI installation directory>\<platform>\code\bin:%PATH%
set PATH=<CATIAV5 installation directory>\<platform>\code\bin:%PATH%
```

The licman20 license manager has to be installed on the CATIA V5 client host. For the Installation of the license manager please refer to the *Licman 2.0 Installation Manual*.

Recommended CATIAV5 Environment Settings

The following CATIA variable settings are recommended to avoid the "ghost links" issue that may occur in CATIA V5 when Products are edited in variing toplevel contexts:

```
set FORCE_SYNCHRO_ON_OPEN=ON
set SYNCHRO_REPAIR_ON_OPEN=ON
```

User dependent configurations

For an overview of all possible environment settings for the CMI Catia V5 client, see the CMI Customization Manual

Testing the installation

Common prerequisites

The CATIA V5 must be started in the OMF – Teamcenter environment and the omfcl executable (Teamcenter) must be present in the executable search path.

The **CMIXMAP** (CMI exchange map) environment variable must point to a directory with write permissions.

Windows

Use: Start Progams->T-Systems->CMICATV5_RXX_VXX->CMI_START to launch CATIA V5

CATIA V5

After the CATIA V5 has started the following message should appear in the command window:

```
"@(#)################################"

"@(#)#   CMI CATIAV5 Module            #"

"@(#)#   Version: 97V00                #"

"@(#)#   CATIAV5R19                    #"

"@(#)#   (c) T-Systems 2002, 2010      #"

"@(#)################################"


CMI: Module Number 1011 : license successful allocated
```

The License Module Number may vary.

The CMI Toolbar should be present. Availability of the individual commands depends on the active workshop.

In the CATIA Settings the following options must be set as described below:

The *Load Referenced documents* option must be set in **Tools->Options-> General** settings (see Figure 4).
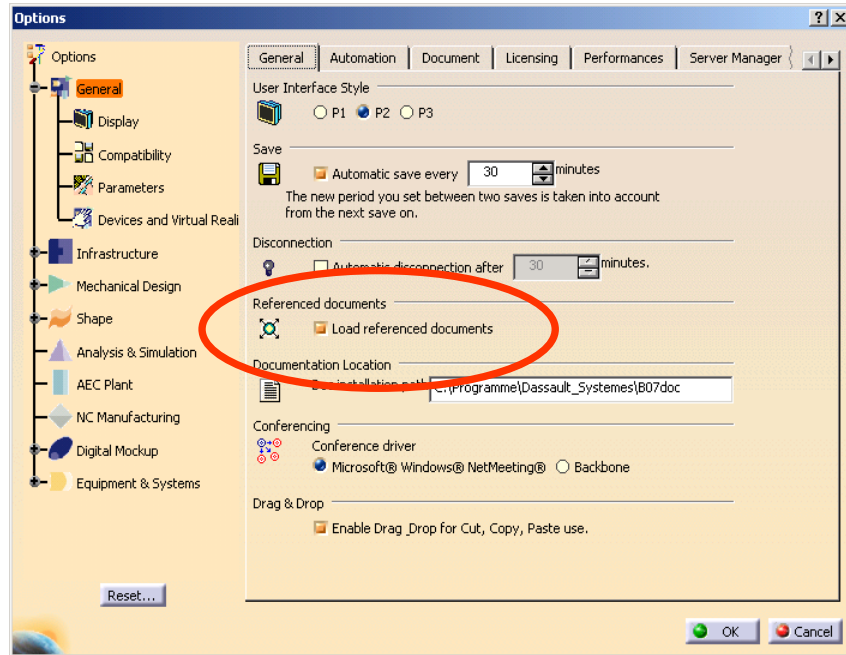

Figure 4: CATIA V5 General->General Settings

In the Linked Document localization the Options *Folder of the pointing document* and *Folder of the link* must be set to yes, and should be in this order. (see Figure 5).
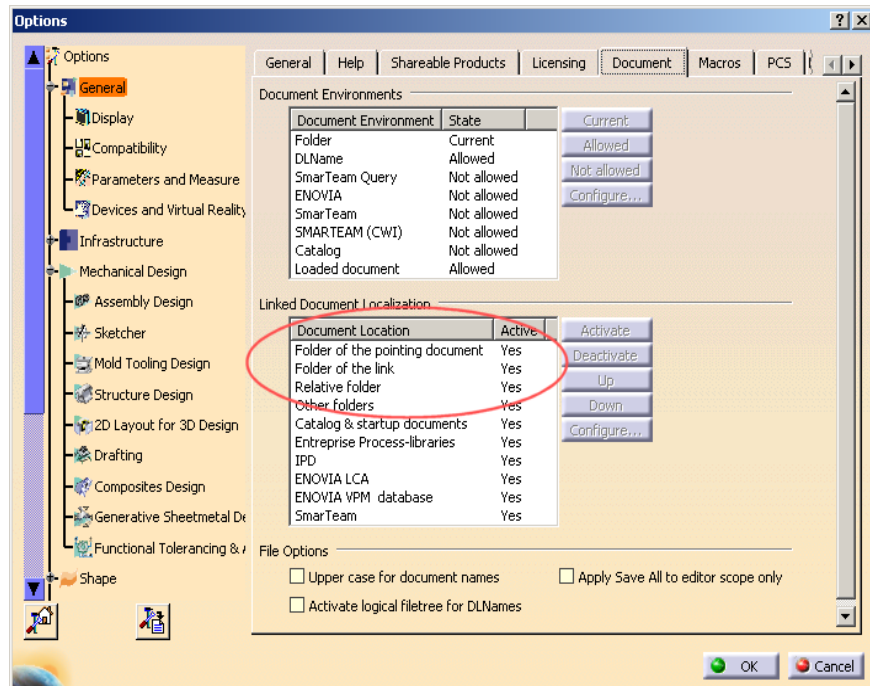

Figure 5: CATIA V5 General->Document Settings

CHAPTER 6

Optimization of Teamcenter Performance

Disable unused functionality

Following are some CMI functionalities that should be disabled or not enabled if they are not used by your processes. None of these abilities is enabled by default, though.

Cfg-Variable CMI_DESIGN_TABLES

If CMIs facility to mange Design-Tables in Teamcenter is not used, the config-variable CMI_DESIGN_TABLES should be set to OFF (or unset) to avoid needless database queries for Design Tables during "To Catia".

Cfg-Variable CMI_USE_BLACKBOX

If Black-Boxes are not used with CMI the config-variable CMI_USE_BLACKBOX should be set to OFF (or unset) to avoid needless expand of products for Black-Box-details during "To Catia". Black Box was a precursor functionality of the CMIArchive and its use is no longer encouraged.

Cfg-Variable CMI_VIEW_NETWORK_EXPAND

If View Networks are not used in the context of Catia, the config-variable CMI_VIEW_NETWORK_EXPAND should be set to OFF (or unset) to allow performant treatment of product structures during Update and Synchronize.

Class clustering

It is recommended to use class clustering where possible, to minimize database access. *See Teamcenter Documentation*

Considerations for a distributed Teamcenter environment

Teamcenter Enterprise allows for an arbitrary distribution of services, file data and metadata (databases) in a global enterprise with distributed workgroups.

However, in order to ensure usability in terms of execution times, some consideration is necessary.

For optimal CMI-performance the omfsvr and cmi/gmi server should be near to the database. I.e. for a central database GMI/CMI is only installed on the corporate server. With distributed databases you would have to ensure that remote sites actually have all data that the users access or modify in their local database. In practice, this is hard to achieve. Therefore an architecture with a central database is recommended.

Vaults and work locations should be locally accessible, on the clients LAN, eg. by bulk data replication.
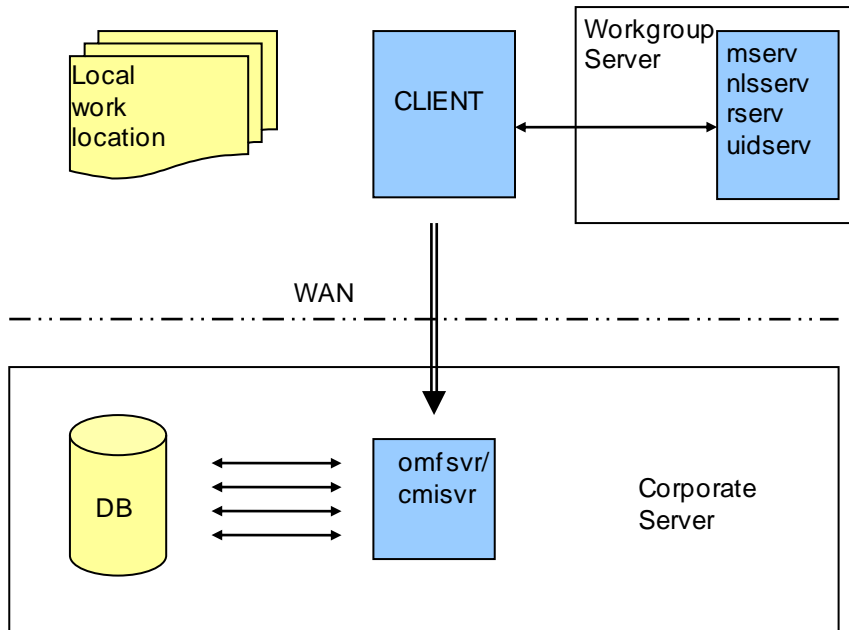
Use of CCS-Server

If the omfsvr is centralized, together with the database, this speeds up database access. File transfers, on the other hand, are slowed down, because they are initiated by the omfsvr which is now across the WAN.
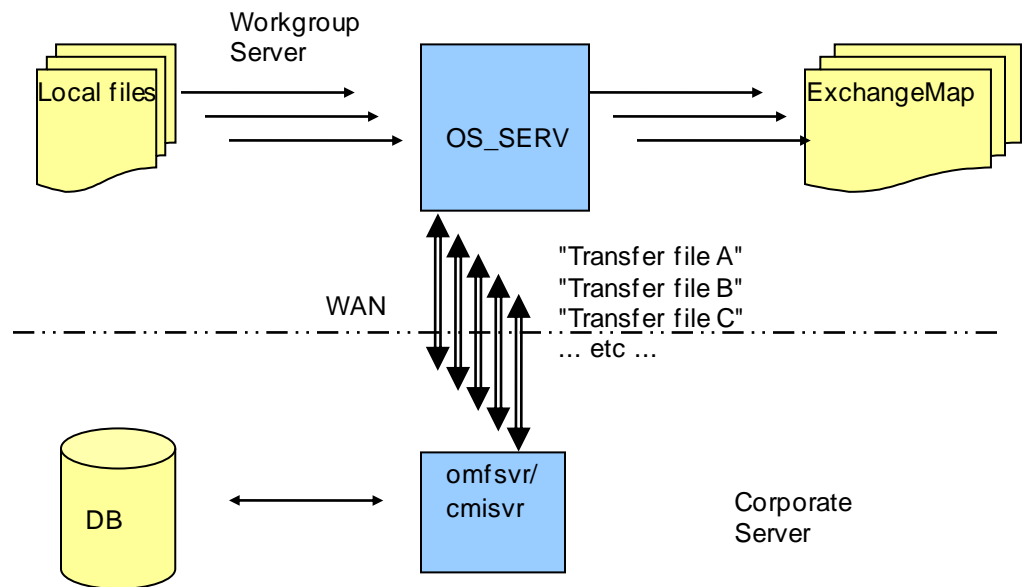

Figure 6: Centrally managed file transfer

Figure 7: Centrally managed file access

The purpose of the CCS-Service is to control where file transfers are initiated.

It should be placed close to where the files are, i.e. on a file server or workgroup server.
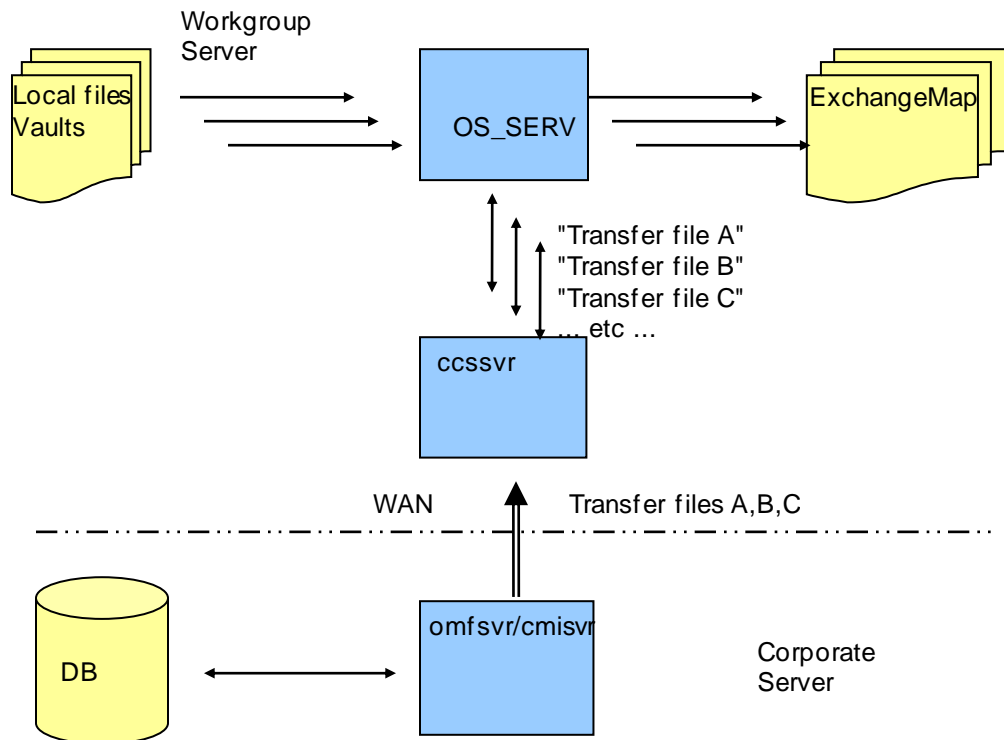

Figure 8: File transfer managed by CCS

Installation of CCS-Server

Add Module CCS – goes on top of GMI/CMI. No impact on the database.

Install CCS service on the central site and on remote Workgroup Servers

In the configuration of the corporate server – where the omfsvr runs - Enable CCS for clients of a remote Workgroup Server:
```
set CMI_USE_CCS host ={<Workgrp-clients>} "True";
```
this configuration is evaluated for the client host.

Do **not** enable CCS for clients of the central server (that have their file data close to their omfsvr)
```
set CMI_USE_CCS host={<Corporate-clients>} "False";
```

Verify that a ccsserv process is employed on the Workgroup server when files are transfered by CMI.
Clients of a central objserv should not use a ccsserv.

CHAPTER 7

CMI License manager installation

Remarks

Use of CMI is licensed on a per user basis. License is required for the CATIA workstation, or for the OMF Workstation if the viewer integration is used.

CMI requires licman2 as its license manager. Licman 1.2 is no longer supported.

Licman21 is recommended.

For the installation of licman please refer to the licman documentation.

For CMI functionality please refer to the *CMI User Manual.*

Windows 7

During installation of licman, you have to specify a temporary working directory. Choose a directory where the user has full access rights. With Licman20 prior to ptf19, the windows/temp directory that is given as a default will not work under Windows 7.

Running Licman as a regular executable on Windows

If you install Licman with the setup program on Windows, it will be run as a service and require administrator rights. Beginning with ptf19, it is possible to launch Licman as a regular executable when CATIA V5/CMI is started.

You need to set the license path variable:

SET LICMAN_LICENSE_PATH=<port>@<host>

Then call licman21_lld.exe as a regular executable.

No execution of the setup routine is required in this case.

For more information, see *Licman User Manual*.