

TRANSCAT



CAVA V1.X

for CATIA® V5

INSTALLATION GUIDE

CAVA



Symbols Used in the Manual

For better orientation in the manual the following symbols are used:

Warning symbol



The warning symbol signals *critical moments* to which you should pay attention in order to avoid problems in your work process.

Tip symbol



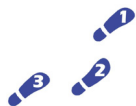
The lamp symbol signals a *tip* that offers you practical experience to make your work easier.

Info Symbol



The info symbol signals a background *information*.

Step Symbol



The step symbol signals that a *sequence of work operations* is given.

TRANSCAT PLM on the Internet:

<http://www.transcat-plm.com/>

E-mail:

cava@transcat-plm.com

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* * *

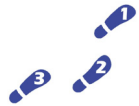
1. Software and Hardware Requirements

Hardware:	CATIA:
PC IBM HP SUN	Minimal required version: V5 R18
Operation systems (minimal required versions)	
Windows XP Professional (32 bit) Windows XP Professional x64 Edition Microsoft Windows Vista x86/Vista x64 Microsoft Windows 7 x64 AIX 5.3, AIX 6.1 HP-UX 11.11 SOLARIS 10	

2. Installing and Uninstalling

2.1 Installing and Uninstalling under WINDOWS

2.1.1 Installing



STEPS:

Do the following steps to install CAVA:

- (1) Start the installation routine in WINDOWS EXPLORER by double-clicking on the file name `cava_xxx_RXX.exe`.)
(where x stands for the CAVA version number, y for the CATIA release number).
- (2) Follow the installation instructions displayed on the monitor, which will be explained in the following text.

After starting `cava_xxx_RXX.exe` file; the following welcome screen will be displayed.

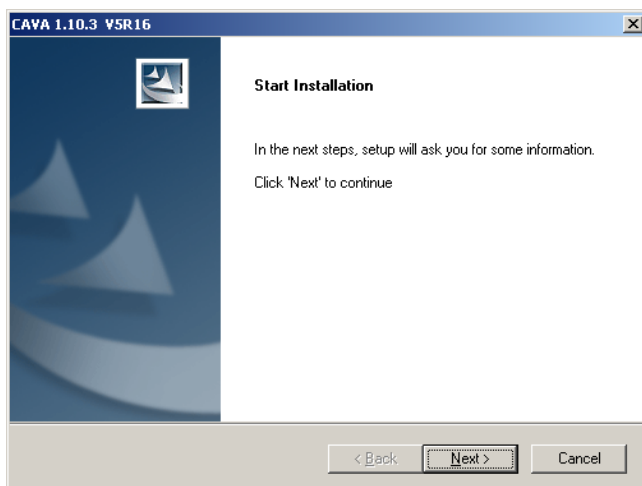


Fig. 2—1: “Welcome” screen of the CAVA installation routine

- To continue installing, click the *Next* button.
- To abort installing, click the *Cancel* button.
The installation preparation can be aborted in every one of the steps by clicking the *Cancel* button, as long as the installing itself not yet has been started. But if in the “Dialog box displaying the settings made for installation” (Fig. 2—11) the „*Next*“ button is clicked, the installation with the selected settings will be started with no return possibility.

If on the computer several instances of one CATIA release are installed, on the CATIA *Installations* window (Fig. 2—2) it can be selected in which one of the CATIA instances CAVA is to be integrated.

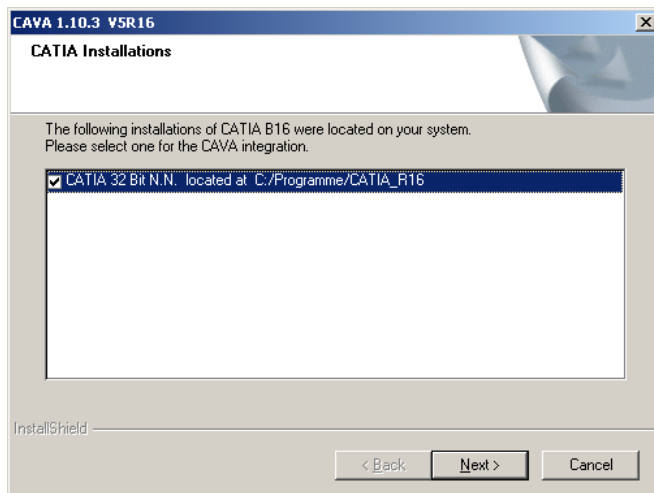


Fig. 2—2: Selection of a CATIA instance (here, only one instance is available)

Selecting the installation directory for the CAVA program files

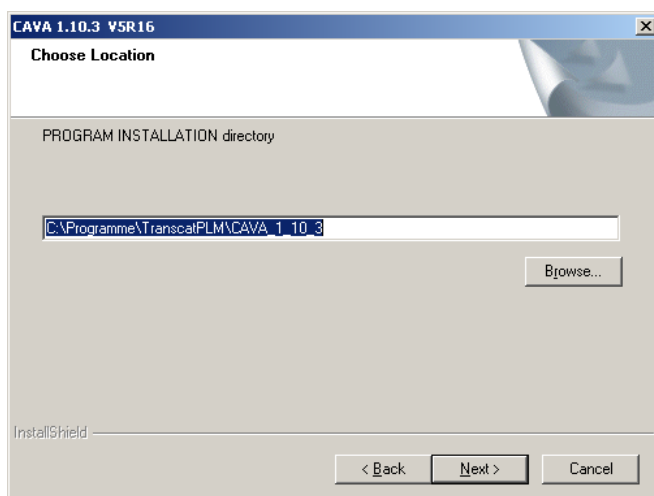


Fig. 2—3: Selecting the installation directory

In this dialog box, the installation directory for CAVA is to be selected. This window offers two alternatives:

- (1) To accept the indicated directory. To do so, press the „*Next*“ button, the next installation step will be initiated.

- (2) To define your own installation directory. To do so, press the *browse* button and select in the *Choose Folder* dialog box a target directory (see Fig. 2—4).

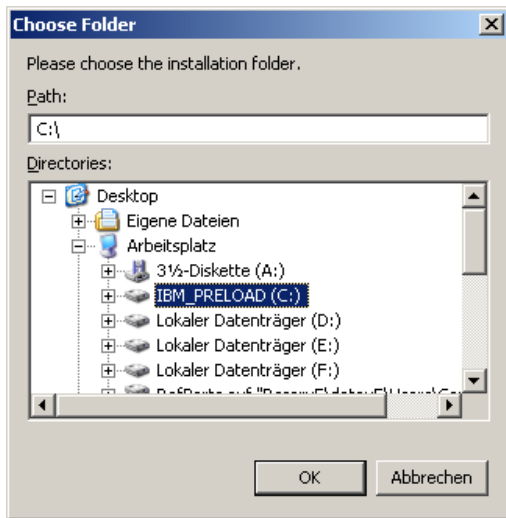


Fig. 2—4: Selecting your own installation directory

After having selected the directory, confirm the selection by clicking the *OK* button. After that, the preceding window will be reopened with the selected directory name filled in. After clicking the *Next* button, the *CATIA environment* dialog box will be opened.

Preparing the CATIA environment

To make the CAVA workbench available in CATIA, an environment must be prepared. This can be made in two ways:

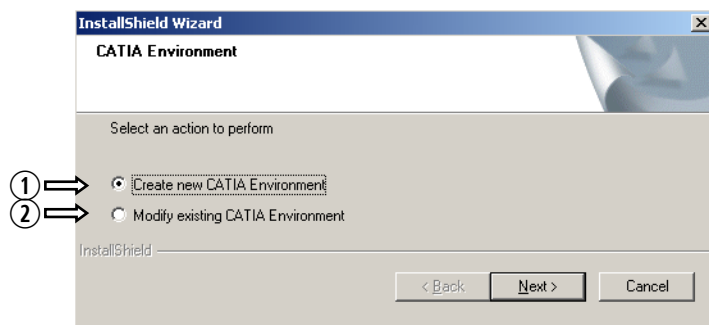


Fig. 2—5: Creating a CATIA environment

- (1) Create a new CATIA environment with all required entries *or*
 - (2) Adapt an existing environment in order to integrate the CAVA workbench in it.
- Both alternatives will be explained below.

Alternative (1): Creating a new CATIA environment

Select the *Create new CATIA Environment* option and click *Next* button. This opens the *Choose Location* dialog box.

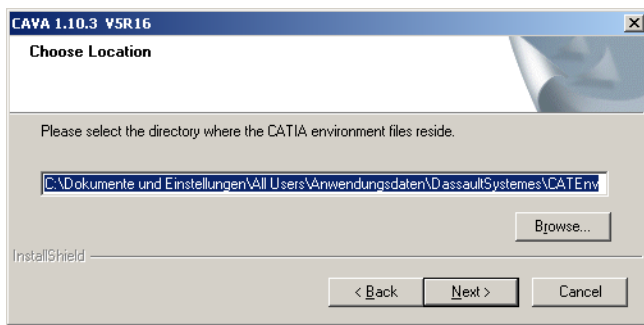


Fig. 2—6: Creating a new CATIA environment

Enter in the text box the name of the CATIA environment to be created, or select it using the file selection dialog box. After clicking the *Next* button, the *New CATIA environment* dialog box will be opened.

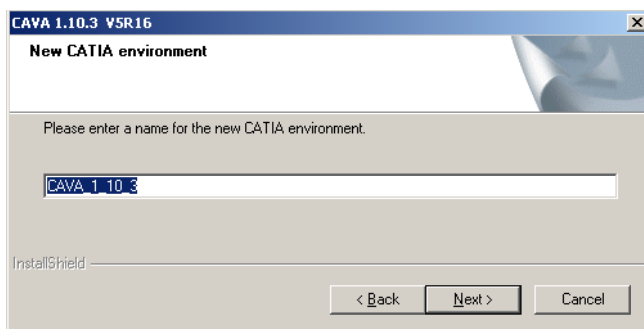


Fig. 2—7: Dialog box for defining the environment name

Enter in the text box the name of the new environment. It should be chosen a name indicating that it is a CATIA environment with integrated CAVA workbench. The name must contain no blanks.

If there should already exist a CATIA environment with the name you have specified, a dialog box will be opened with a message (see Fig. 2—8).

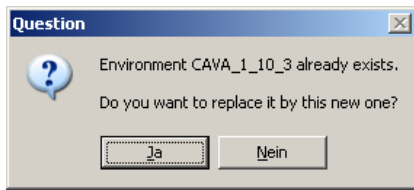


Fig. 2—8: Message pointing out that a CATIA environment with the respective name already exists

If the *YES* button is clicked, the existing CATIA environment will be replaced by the new one.

When the *NO* button is pressed, the *Creating a new CATIA environment* dialog box will be reopened (Fig. 2—6). Enter a different name for the CATIA environment to be created.

After clicking the *Next* button, the „*Check Setup Information*“ dialog box will be opened (Fig. 2—11).

Alternative (2): Adapting an existing CATIA environment

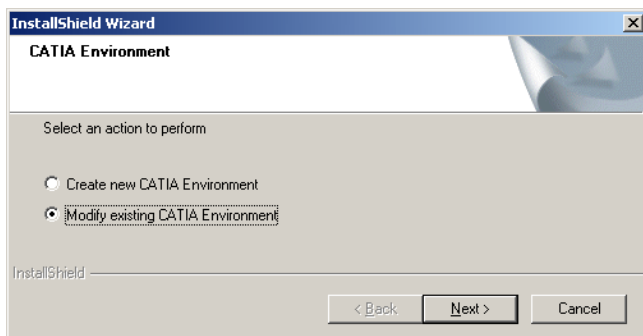


Fig. 2—9: Adapting an existing CATIA environment



Adapting an existing CATIA environment consists in adding to the text file with the environment variables the CAVA path information (additionally to the path information already existing on the programs to be loaded).

Select in CATIA in the *CATIA Environment* dialog box the *Modify existing CATIA Environment* option and click than the *Next* button.

After this, a file selection window is opened with the environment directory displayed that is preselected on your computer for the respective CATIA version. (Example: If you are installing CAVA for CATIA R16, the environment directory preselected for CATIA R16 will be opened.)

If your environment files are saved in a different directory, open this directory.

Select now the CATIA environment file that you want to modify for the work with CAVA and click than the *Open* button.



If as directory to be adapted a file had been selected that already contains settings for CAVA, a warning message is displayed (Fig. 2—10). To resolve the problem, select one of the following procedures:

- (1) Delete the old CAVA settings from the environment file *or*
- (2) Create a new environment file.

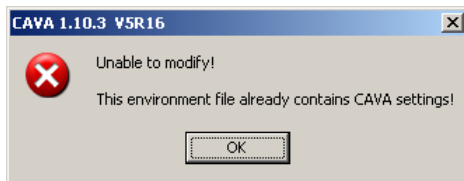


Fig. 2—10: Warning message displayed in case that an environment file has been selected that already contains CAVA settings.

After clicking the *Next* button, the „*Check Setup Information*“ dialog box will be opened (Fig. 2—11).

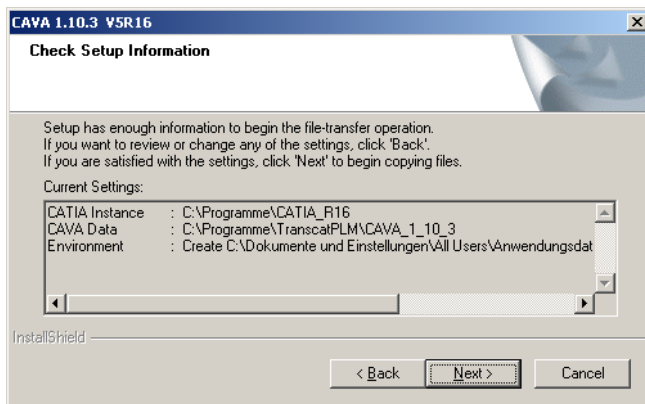


Fig. 2—11: Dialog box displaying the settings made for installation

In this dialog box, all settings selected for the installation are shown in order to be able to verify them before starting the installation. Control the settings.

If you want to modify the settings, click the *Back* button to return to the respective dialog box. After verifying the settings, click on the *Next* button to create the CATIA environment and to start the installation.

Completion of the installation routine

After clicking the *Next* button, the CATIA environment is created and the installation is started. The installation progress is shown in the following dialog box.

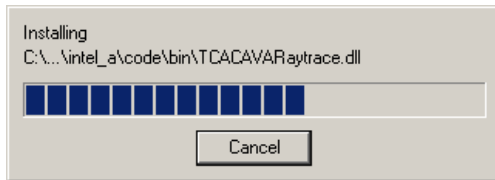


Fig. 2—12: Dialog box with the installation progress bar

In the course of the installation process, a message is displayed saying that a new environment file has been created or the selected environment file has been adapted, as the case may be (Fig. 2—13).



Fig. 2—13: Messages indicating the adaption and the creation of the CATIA environment respectively

When installing is completed, the following message is edited (Fig. 2—14).

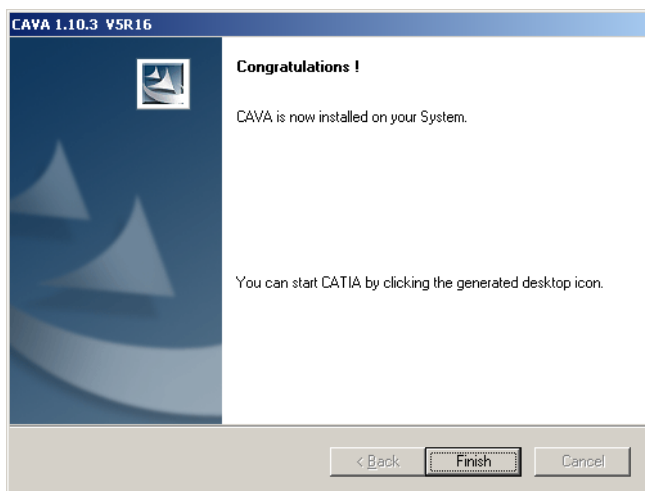


Fig. 2—14: Installing completed

Confirm this message by clicking the *Finish* button.

For the newly-created CATIA environment, now on your PC desktop an icon is available with the environment name, you have just entered. With this icon, you can start CATIA with integrated CAVA workbench.

The installation directory now contains the following directories:

• Intel_a or win_b64	Contains the CAVA program files.
• Configuration	Contains the CAVA configuration files in several sub folders.
• SampleTemplates	Contains the DrawingTextConfiguration and ReportTemplates sub-directories with some pre-defined sample templates, which can be used as base to create own templates that fit to your own special need.
• ReferenceParts	Contains files that are referenced by certain CAVA features to create geometry.



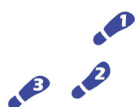
When the installation is accomplished, it is strongly recommended to check up the adapted CATIA environment. Some circumstances (write protection, very complex CATIA environment etc.) might have affected the adaptation.



Before starting the work with CAVA, some basic settings must be done.

In the CAVA *General* manual you can learn which settings must be made imperatively, and which ones are optional.

2.1.2 Uninstalling



STEPS:

To uninstall CAVA, do the following steps :

- (1) Click in WINDOWS the *Start* button and select the menu sequence *Settings > Control Panel > Add/Remove Programs*.
- (2) Select CAVA and click the *Add/Remove* button.

2.2 Installing under UNIX

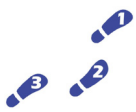
2.2.1 Unpacking the Files



To designate the installation files, the following representation form is used:
`cava_xxx_RXX_osds.taz`

where:

- xxx – CAVA version number
- RXX – CATIA release
- osds – platform designation, i.e. `irix_a`



STEPS:

Unpacking comprises three steps. Dependent on the format of your install files, the steps (1) and/or (2) can be skipped.

(1) If the data is available as `cava_xxx_RXX_osds.taz` file, do the following:

Action	OS ¹	Example:
Rename the TAR-archive file	*	<code>mv cava_xxx_RXX_osds.taz cava_xxx_RXX_osds.tar.Z</code>

Note: ¹ * stands for every CATIA V5 UNIX operation system

Continue with step (2).

(2) If the data is available as `cava_xxx_RXX_osds.tar.Z` file, do the following:

Action	OS ¹	Example:
Copy the TAR-archive into an installation directory of choice.	*	<code>cp cava*.tar.Z /catdat/tcsoft</code>
Change directory to the installation directory	*	<code>cd /catdat/tcsoft</code>
Unpack the archive file	*	<code>zcat cava*.tar.Z tar -xvf -</code>

Or: If the data is available as compressed and packed `cava_xxx_RXX_osds.tar.gz` file, do the following:

Action	OS ¹	Example:
Copy the TAR-archive into an installation directory of choice.	*	<code>cp cava_*.tar.gz /catdat/tcsoft</code>
Change directory to the installation directory	*	<code>cd /catdat/tcsoft</code>
Unpack the archive file	*	<code>gzip -d -c cava_*.tar.gz tar -xvf -</code>

Note: ¹ * stands for every CATIA V5 UNIX operation system

2.2.2 The Created Directory Structure

Directory	OS ¹	Description
CAVA_XXX/aix_a	AIX	Program-modules for AIX
CAVA_XXX/irix_a	SGI	Program-modules for SGI
CAVA_XXX/hpux_a	HP	Program-modules for HP
CAVA_XXX/solaris_a	SUN	Program-modules for SUN
CAVA_XXX/Log	*	Directory for the log files
CAVA_XXX/Configuration	*	Directory for the configuration files
CAVA_XXX/ReferenceParts		Directory for the files that are referenced by certain CAVA features to create geometry.
CAVA_XXX/CAVAEnv.csh	*	C-shell script to enlarge existing environment
CAVA_XXX/CAVAEnv.sh	*	Shell script to enlarge existing environment
CAVA_XXX/CAVASETEnv.sh	*	Shell script to create new environment

Note: ¹ * stands for every CATIA V5 UNIX operation system

2.2.3 Adapting CAVA to the Local CATIA Installation

Adapting CAVA to the local installation can be made in two ways:

- (1) Creation of a new CATIA environment and automatic creation of a CATIA-CAVA-icon in the application manager → see chapter 2.2.3.1;
- (2) Expanding an existing CATIA environment → see chapter 2.2.3.2.

2.2.3.1 Creating a New CATIA Environment

For the creation of a new CATIA environment, with the CAVA-software the shell script `CAVASetEnv.sh` is delivered.

Below you will find an excerpt from this file. Check the passages marked **gray**, they might need to be adapted. The information how to do this you will find in the subchapters below.

```
...
# Name of the new environment
#
CAVA_ENV="CATIA_CAVA"
#
# Store the new environment in this directory
#
CAVA_ENV_PATH="$HOME/CATEnv"
#
# Installation directory of CAVA
#
CAVA_INSTALLATION="/catdat/tcsoft/CAVA"
#
# Catia installation directory
#
CATIA_INSTALLATION="/usr/catiav5r11"
#
...
#
setcatenv -e $CAVA_ENV -d $CAVA_ENV_PATH -p $CATIA_INSTALLATION:$ CAVA_INSTALLATION -new yes
                    -desktop yes -a global \
&& change_cat_env || echo "\aCreating the environment failed."
```

2.2.3.1.1 Adapting the Declaration to the Local CATIA Installation

The following CAVA variables must be adapted to the local installation. The entries shown in the example above are only an example.

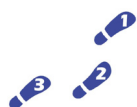
Variable	Description:
CAVA_ENV	Name of the CAVA-CATIA environment
CAVA_ENV_PATH	Path of the environment file
CAVA_INSTALLATION	Path where CAVA is installed
CATIA_INSTALLATION	Path where CATIA V5 is installed
CAVAPATH	Path where CAVA is installed (identical with the variable CAVA_INSTALLATION)

2.2.3.1.2 Defining the Action Options

For the creation of CATIA environments different options exist:

Variable	Value	Description:
-new	yes	An existing environment with the same name will be replaced. (Recommended)
	no	An environment with the same name will be not replaced; the existing environment will be maintained.
-desktop	yes	On the desktop an icon of the environment is created. (Recommended)
	no	On the desktop an icon of the environment is not created.
-a	global	A global environment is created. Note: To create a global environment you must have administrator rights.
	user	A user environment is created.

2.2.3.1.3 Creating an Environment



To create the above-mentioned CATIA environment, execute the `CAVAsSetEnv.sh` shell script.

Steps	OS ¹	Example:
(1) Change directory to the installation directory	*	<code>cd /catdat/tcsoft/CAVA_xxx</code>
(2) Execute the script	*	<code>./CAVAsSetEnv.sh</code>



Note:

To create a global environment you must have administrator rights.



Note:

The icon for the CATIA-CAVA environment that can be renamed by the user (on screenshot below named CAVA_1.1.x) will be displayed in the application manager in the CATIA directory only after re-login.

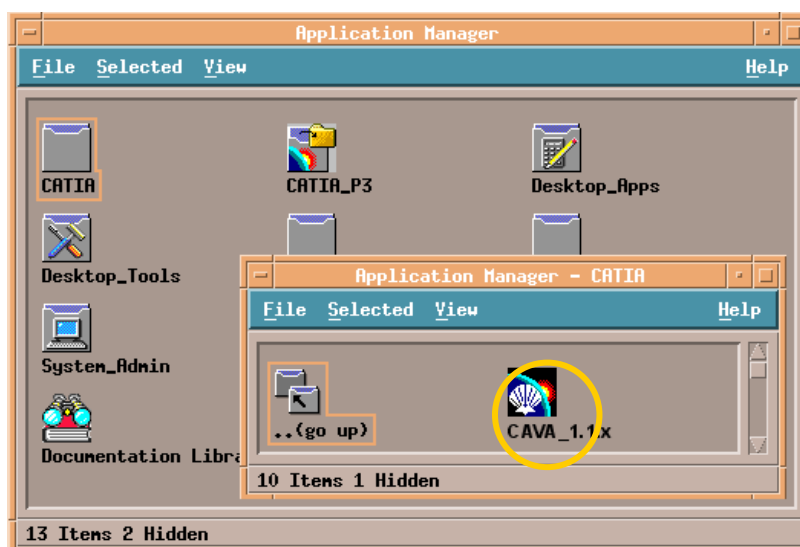


Fig. 2-1: Icon for the CAVA environment

Continue the installation, following the instructions of chapter 3. *Enrolling Licenses*, starting on page 19.

2.2.3.2 Expanding an Existing CATIA Environment



To integrate CAVA in an existing CATIA environment, do the following steps:

(1) If necessary, adapt the shell script

For the expansion of an existing CATIA environment, with the CAVA-software the shell scripts `CAVAEnv.sh` and `CAVAEnv.csh` are delivered. Depending on the shell available, either the `CAVAEnv.sh` or the `CAVAEnv.csh` script is to be used.

Below you will find an excerpt from a shell script file (the excerpt is only an example). Check the passages marked **gray**, they might need to be adapted.

Variable	Description:
CAVAPATH	Path where CAVA is installed

```
set +u
CAVAPATH=/catdat/tcsoft/CAVA
\export CAVAPATH

CAVACAA=${CAVAPATH}/$OSDS
\export CAVACAA
```

(2) Set the CATIA environment

Example:

```
. /transcatsf/CATEnv/CATIA_P3.V5R11.B11.sh
. /catdat/tcsoft/CAVA/CAVAEnv.sh
```

(3) Start CATIA V5 by CNEXT

For the newly-created CATIA environment, now on your PC desktop an icon is available with the environment name, you have just entered. With this icon, you can start CATIA with integrated CAVA workbench.

3. Enrolling Licenses

TRANSCAT PLM uses for CAVA the *LUM* license system, which is used also for CATIA licensing. TRANSCAT PLM offers two types of licenses:

License type	Description
<i>NODELOCK</i>	Password valid only on one computer (license is bound to the CPU number).
<i>CONCURRENT</i>	License is available in the network, license server is essential.



Note:

On UNIX work stations, licenses can be enrolled only by the root user, on PCs only by user with administrator rights.



Note:

For CAVA different license packs are available. Before starting the work, under the menu item *Tools > Options > Infrastructure > Cava Vehicle Architecture* is must be set which license is to be used. Depending on this setting, for the user afterwards different modules will be available. See "CAVA GENERAL MANUAL".

3.1 Installation of *Nodelocked* Licenses

The *Nodelock* password must be input by the means of a text editor into the *nodelock* file. This file is, dependent on your platform, in one of the following directories:

Operation system	Directory
IBM	/var/ifor
HP	/var/lum
SGI	/var/lum
SUN	/var/lum
WINDOWS XP	c:\Documents and Settings \All Users\Application Data\IBM\LUM
WINDOWS VISTA/7	c:\ProgramData\IBM\LUM



ENROLLING A NODELOCKED LICENSE

Steps	OS ¹	Entries
(1) Change to user root	*	su - root
(2) Change to password directory	AIX	cd /var/iform
	SGI	cd /var/lum
	HP	cd /var/lum
	SUN	cd /var/lum
(3) Create or edit the nodelock file	*	vi nodelock
(4) Add new lines at the end (<i>vi</i> command)	*	<ESC>Go
(5) Incorporate password	*	(see example below)
(6) Save file (<i>vi</i> command)	*	<ESC>wq
(7) Set right of file	*	chmod 644 nodelock

Note: ¹ * stands for every CATIA V5 UNIX operation system

In the license e-mail, sent by TRANSCAT PLM, you can find a text analogous to the following example:

Put the following 2 lines into your nodelock file:

```
# TransCAT: TC-qchecker-all, version 1.x, expiration date 12/31/2037
7db765b90080.02.81.96.00.18.00.00.00 64tkq3wzfzxi2gzci5j7t8p49keaa "" "1"
```

For the step "*Incorporate password*", copy the last two lines, starting with the number sign # (including it), and insert these two lines in your nodelock file.

3.2 Installation of *Concurrent* Licenses

Concurrent licenses are generated for a specific license-server and are bound to its CPU ID. As a precondition a *LUM License Manager* must be installed, configured and activated, so that *Concurrent* passwords can be entered. To enroll the license keys of the *Concurrent* type, you can use: the *i4blt command line interface* (in all platform cases) or the *Graphic User Interface* (since LUM version 4.6.5 for WINDOWS and all UNIX platforms, previous LUM versions only for AIX and WINDOWS).

For more information refer to the *LUM Documentation* delivered with your operating system—chapter 6 “Using License Use Management Runtime”.



Note:

A license can be entered

- on a UNIX workstation only by the root user,
- on PC only by users, having administrator rights.

The tools and entries for the license manager are located in the following directories:

Operating System	Directory
IBM (AIX)	/var/ifor
HP (HP-UX)	/var/lum
SGI (IRIX)	/var/lum
SUN (SOLARIS)	/var/lum
WINDOWS (XP/Vista/7)	X:\ifor\WIN\BIN (X is the drive, on which LUM is installed)

Enrolling a *Nodelocked* License

The registration can be made in three ways:

- **Automatic registration**

If you have got the license certificate as e-mail attachment, automatic registration is recommend.

To install the license, store the file on the *LUM* server in a directory of your choice. Then enter the following command:

Command	Description
<code>i4blt -a -f filename</code>	'filename' stands for path and name of the certificate file stored on the LUM server.

- Registration using the **IMPORT** function of the **GUI i4blt** version

After starting the **GUI i4blt** version, the license certificate file can be read in and registered by the means of the **IMPORT** function (only in case of AIX and NT platforms).



STEPS:

Proceed as follows:

- (1) Start the `i4blt` tool.
- (2) Select the *Products* menu > *Single product...* submenu.
- (3) The *Enroll Product* window is opened. Press there the *Import* key.
- (4) The *Import* window is opened. Select there the license certificate and confirm by pressing the *OK* button.
- (5) After the return to the *Enroll Product* window, conclude the registration pressing the *OK* button.

- Manual registration with the **i4blt** command line interface

To enter the license, use to following syntax:

```
i4blt -a -n Server-Name -v "VendorName [VendorID VendorPassword]"
-p "ProductName ProduktVersion ProductPassword"
```

(The text above is shown on the screen in one line.)

Example:

```
i4blt -a -v "TransCAT 7db765b90080.02.81.96.00.18.00.00.00 ak9nui9b2ftjs" ##
-p "TC-qchecker 1 46pdi5veptf5wket9xriygtqpnaaaa"
```



Note:

- The text must be entered in one line without line brake.
- The two number signs ## stand for 1 space sign.

The parameters are to be entered in analogy to the following example.

Note: For the exact parameters to be used for the different key words, please, refer to your license certificate. The parameters used in the following example can differ from the parameters in your license certificate.

Example:

```
# i4admin -a -v "TransCAT" 7db765b90080.02.81.96.00.18.00.00.00 chh5afnqs6jx6
# i4admin -a -p "TransCAT" "TC-qcheckerV5" vmbif9d3s3vfcttqcpaiv83ug2qsaaa "1"

[LicenseCertificate]
Checksum=D08CE54292F1ECE4720A49A52ADC70E1
TimeStamp=382196610
VendorName=TransCAT
VendorPassword=chh5afnqs6jx6
VendorID=7db765b90080.02.81.96.00.18.00.00.00
ProductName=TC-CAVA-ALL
ProductID=5000
ProductVersion=1
ProductPassword=vmbif9d3s3vfcttqcpaiv83ug2qsaaa
ProductAnnotation=
LicenseStyle=concurrent
LicenseStartDate=02/05/2002
LicenseDuration=14214
LicenseEndDate=12/31/2037
LicenseCount=1
MultiUseRules=none
RegistrationLevel=3
TryAndBuy=No
SoftStop=No
TargetType=13
TargetTypeName=IBM AIX
TargetID=4fbf5a4c
```

3.3 Silhouette functionality in the Generative Shape Design (GSD) workbench

If you are using the CAVATOOLS or the CAVA ALL license and you want the *Silhouette* functionality to be available not only in the CAVA Workbench but also in the Generative Shape Design (GSD) workbench, create a system variable named CAVA_TOOLS_ONLY and sets its value to *true*.

