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GENIUS TOOLS®

GENIUS TOOLS Starter

Release 8.0.1.0

Installation and Administration

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1 Preliminary Remarks

The GENIUS TOOLS Starter software can be installed independently or in conjunction with the Startup TOOLS. Basically, the procedures for installation, updates and administration are the same.

The special process for the migration of the Startup TOOLS 20xx is described in a separate document *Startup TOOLS Migration to version 6.pdf*

1.1 Scope of delivery

The setup file *setup-Startup-TOOLS-x.x.x.x-software.exe* contains the two software products GENIUS TOOLS Starter and GENIUS TOOLS for Creo (located in the GENIUS TOOLS Starter environment).

Please note: There are also so-called data setups *setup-Startup-TOOLS-x.x.x.x-data-creox.exe* for the different Creo releases.
These are needed in two types of situations:

1. Start environment for customers who have not worked with Creo Parametric before.
2. Comparative environment for customers who update to new Creo releases. The comparison is done manually with additional comparison or synchronization tools. The previous working environment is compared to the installed data from the install depot or a new working environment set up for test purposes.

Warning: You cannot create or update work environments with the setups of GENIUS TOOLS Starter. All setups unpack their data into the directory *installdepot* under the installation directory according to their versions.
The directory *installdepot* contains the program GENIUS TOOLS Environment Administrator (*gtsa.exe*) in the subdirectory *gtsa-latest*. This program can be used to create work environments, to update software in them and to change properties.

1. Setups write to the *installdepot*.
2. The GENIUS TOOLS Environment Administrator from the *installdepot* is used to create or to update work environments.

1.2 Licenses

A FLEXNET license is required for GENIUS TOOLS Starter. You need to install GENIUS TOOLS License Manager and enter the license there.

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Please note: The license file for the Startup TOOLS contains additional license keys for GENIUS TOOLS for Creo.

1.3 Important Terms

The **installation computer** is the computer on which the setup programs are run. The installation computer houses the **installation directory**, which has to be specified during software setup. The installation directory contains the subdirectories *Caddepot*, *Installdepot* and *Mediadepot*. All setup programs unpack their data to the Installdepot.

The installation computer is often also the administration computer, that is, the computer that houses the central Caddepot directory for all application computers. The Caddepot can also be placed on a different computer.

The registry contains an entry that points to the installation directory:

`HKEY_LOCAL_MACHINE\SOFTWARE\INNEO\GENIUS TOOLS Starter`

The setup creates two network shares. You can turn off the automatic creation of shares during the setup.

Path	Share name	Remark
<installdir>	GTSTARTER	installation directory
<installdir>\caddepot	CADDEPOT	The share for the Caddepot contains all work environments that are the source of synchronization for the application computers.

An **operating environment** is a directory that contains all the data required for working with the desktop application. This includes configuration data, libraries, templates and additional applications. The operating environment also contains a database with all configured projects. An operating environment can contain an arbitrary number of projects.

If you work locally, the directory you use for your operating environment is the Caddepot. If you work across a network, the directory for the operating environment is the Caddepot on the administration computer and the Cadpool on the application computers.

The operating environments contains the software GENIUS TOOLS Starter App (*GTS.exe*) in a defined version.

Caddepot is a subdirectory of the installation directory. It is the source for the synchronization of the local work environments on the application computers, that is, the source for the local *Cadpool* directories.

The *Caddepot* directory is shared to be accessible for distributed work.

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All work environments that are used locally, via network shares or via synchronization are managed in the *Caddepot*.

Cadpool is a directory on the application computer. It is synchronized with the *Caddepot* directory, which is generally placed on the installation computer. The synchronization of the work environments in *Cadpool* is managed by GENIUS TOOLS Starter App.

Installdepot is a subdirectory of the installation directory that contains the release and version setups without settings and customizations. All setup programs unpack their data to this directory.

The *Installdepot* directory contains the GENIUS TOOLS Starter App (<*GTS_work_environment*>*installdepot*\<*Version*>*software**GTS.exe*) and GENIUS TOOLS Environment Administrator (<*GTS_work_environment*>*installdepot**gtsa-latest**GTSA.exe*).

When you configure work environments using GENIUS TOOLS Environment Administrator, new data (GENIUS TOOLS Starter App, GENIUS TOOLS for Creo, data packages and configurations) is copied to the work environments in *Caddepot* from the *Installdepot* directory.

Warning: Always update the GENIUS TOOLS Starter App using GENIUS TOOLS Environment Administrator.

You can share the *Installdepot* to make it accessible to the administrator from any other device.

Mediadepot is a subdirectory of the installation directory. It contains setup files for different releases and versions. All setup files will unpack to the Installdepot directory.

The **administration computer** is a computer on which the administrative user has full write access to the Caddepot directory in order to manage all data on the file system level. It is the work station where

– GENIUS TOOLS Environment Administrator is used

– GENIUS TOOLS Project Configurator is used

– the configured projects can be run

GENIUS TOOLS Environment Administrator is a stand-alone administrative tool. It is used to create and update work environments, edit work environment properties and migrate from older versions of Startup TOOLS to version 6 and later.

GENIUS TOOLS Environment Administrator is located at ...*installdepot**gtsa-latest**gtsa-exe*.

Warning: GENIUS TOOLS Environment Administrator can only be used with work environments and Startup TOOLS software that have the same or older versions.

A **project** is a collection of application properties such as project directory, data directory and license. Projects allow users to start an application with a specific set of configuration

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settings. A project combines locally available data with a centrally managed configuration settings.

Projects are opened by the users via GENIUS TOOLS Starter App, and edited by the administrator using GENIUS TOOLS Project Configurator. Each project is saved in a work environment under *cadpool* > *configuration* > *projects*, e.g., *project_creo6p_en*.

When a project is started, the configuration settings in the standard directory as well as in the directories for the unit and for the user are considered.

GENIUS TOOLS Starter App is a stand-alone software tool that allows users to start Creo projects. In each work environment, GENIUS TOOLS Starter App is located at *...\caddepot\lokal\software\GTS.exe*. GENIUS TOOLS Starter App also manages the synchronization of the work environment with a central Caddepot.
GENIUS TOOLS Project Configurator is an administrative tool within the GENIUS TOOLS Starter software. It is used to configure projects and properties in a work environment. GENIUS TOOLS Project Configurator is opened from the GENIUS TOOLS Starter App. The administrator defines which users should have access to GENIUS TOOLS Project Configurator.

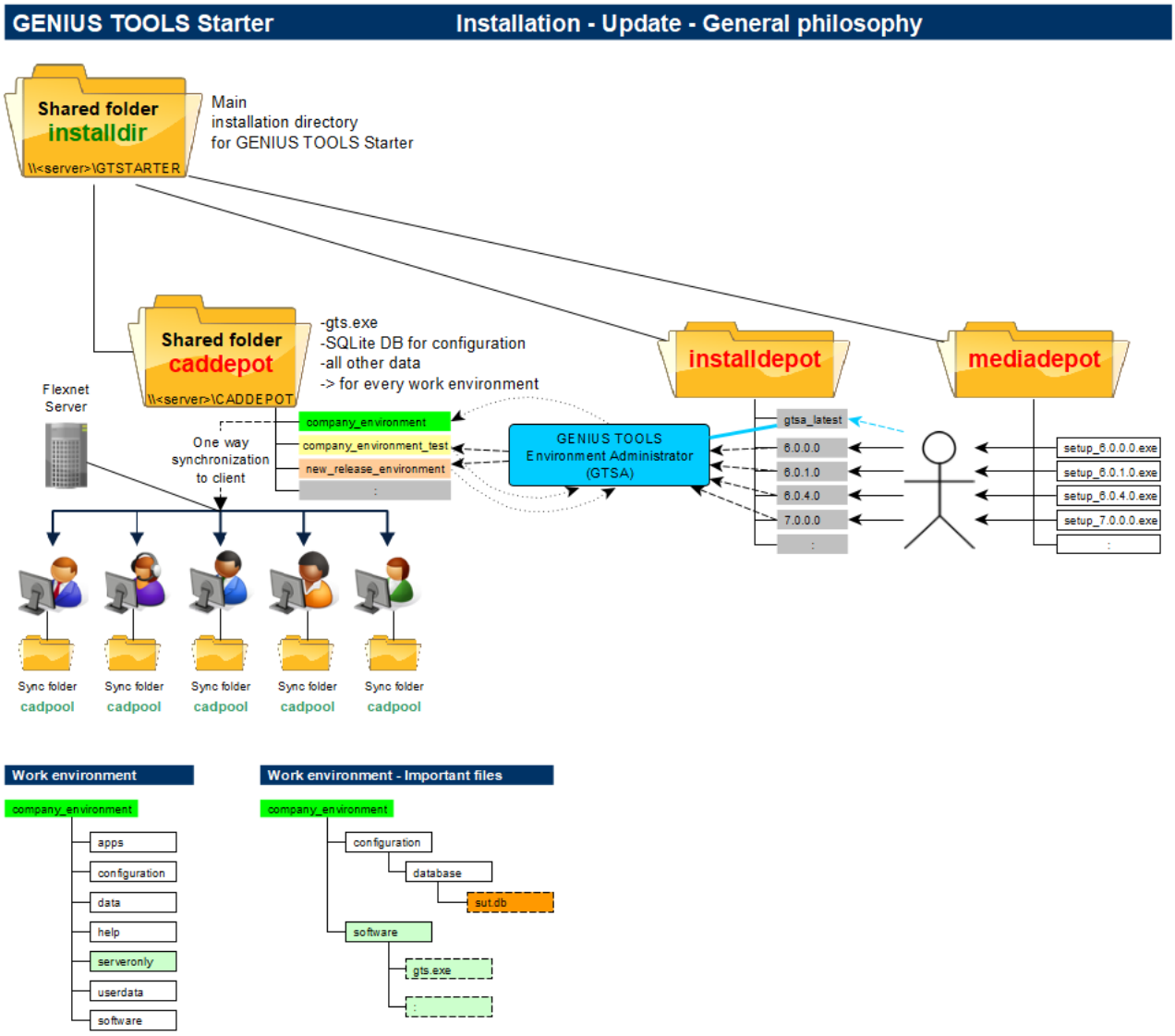
1.4 Installation Philosophy

Warning: You cannot create or update work environments with the setups of GENIUS TOOLS Starter. All setups unpack their data into the directory *installdepot* under the installation directory according to their versions.

The directory *installdepot* contains the program GENIUS TOOLS Environment Administrator (*gtsa.exe*) in the subdirectory *gtsa-latest*. This program can be used to create work environments, to update software in them and to change properties.

1. Setups write to the *installdepot*.
2. The GENIUS TOOLS Environment Administrator from the *installdepot* is used to create or to update work environments.

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Setup -> Installdepot -> Working Environment

Path	Name	Comment
<installdir>\caddepot	Caddepot	This directory has to be shared (default name CADDEPOT). Holds all working environments.
<installdir>\installdepot	Installdepot	Required for installations and updates. Setups unpack their data here.
<installdir>\mediadepot	Mediadepot	Optional for collection of setup files.

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1.5 Installation Scenarios

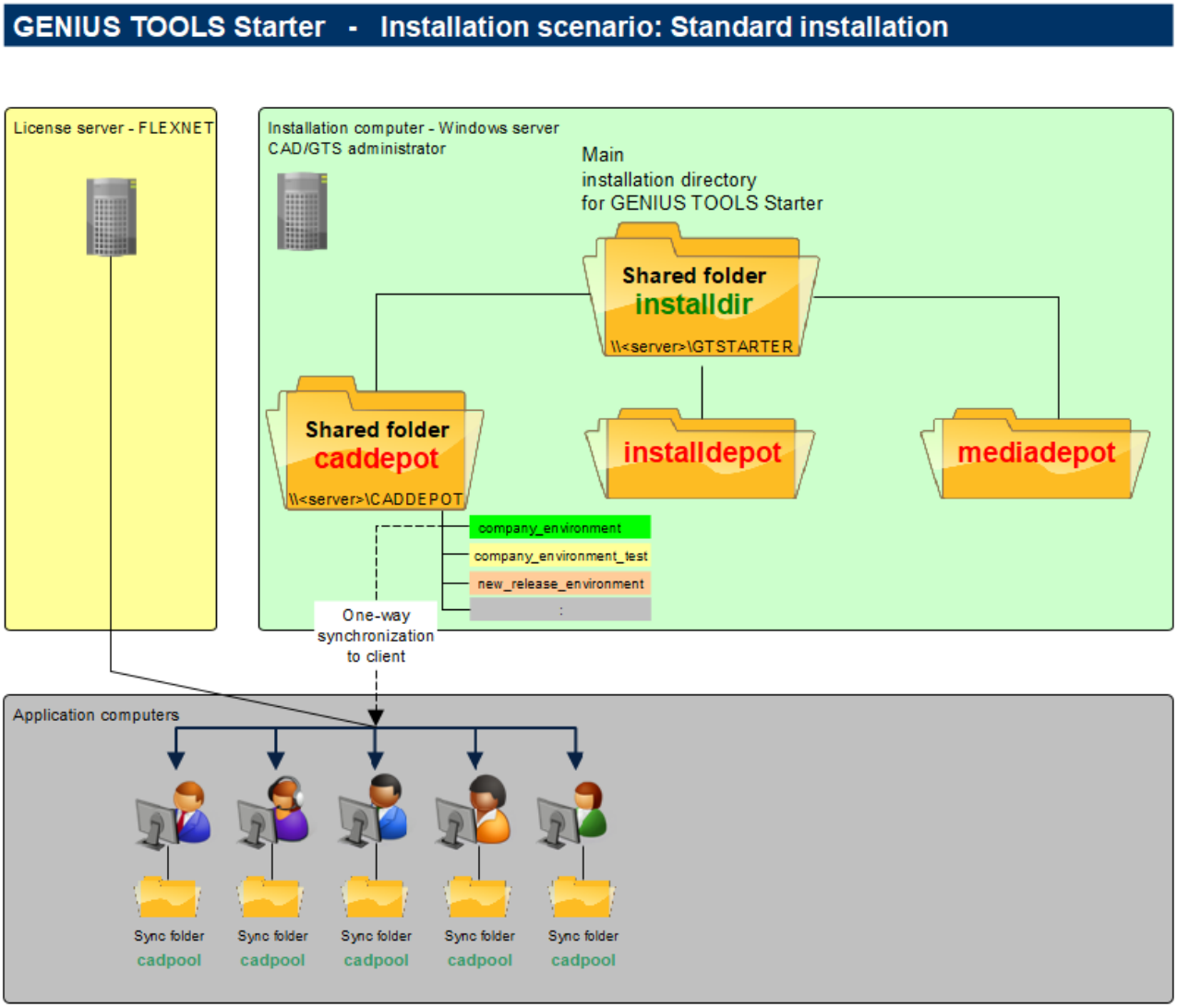
The descriptions in this document assume the standard installation scenario. However, there are different possible scenarios, which are described in the following section.

1.5.1 Standard scenario

The standard installation scenario uses a central Caddepot on a Windows server.

In this scenario, working environments are synchronized from a shared Caddepot to many application computers.

The Windows server is also the installation computer.



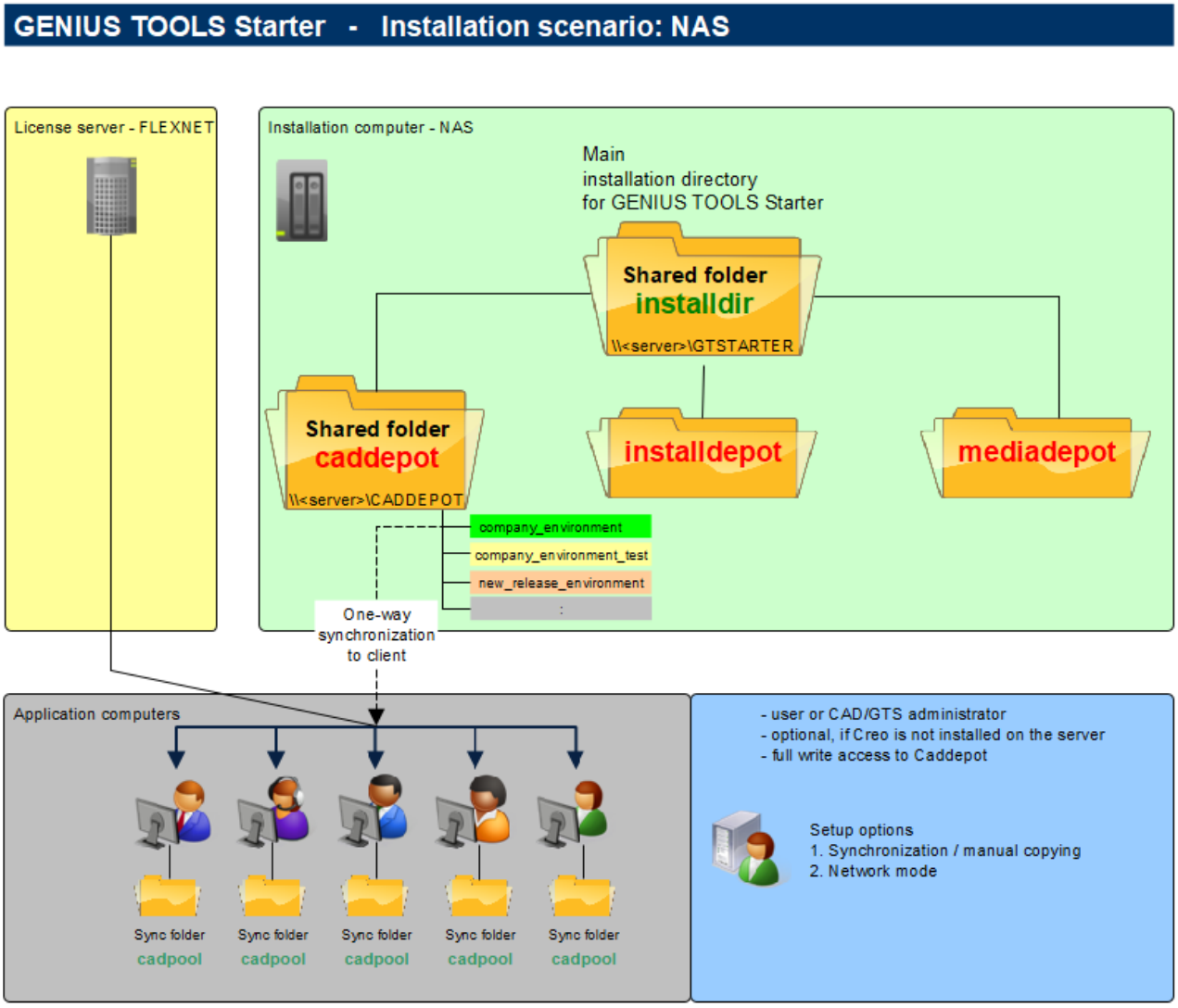
Standard Installation

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1.5.2 Caddepot on file server

In this scenario, working environments are synchronized from a shared Caddepot to many application computers.

An installation computer is required in addition to the Caddepot on the file server. The share for the Caddepot has to be created manually. All work environments in the Caddepot are managed using GENIUS TOOLS Environment Administrator from the installation computer.



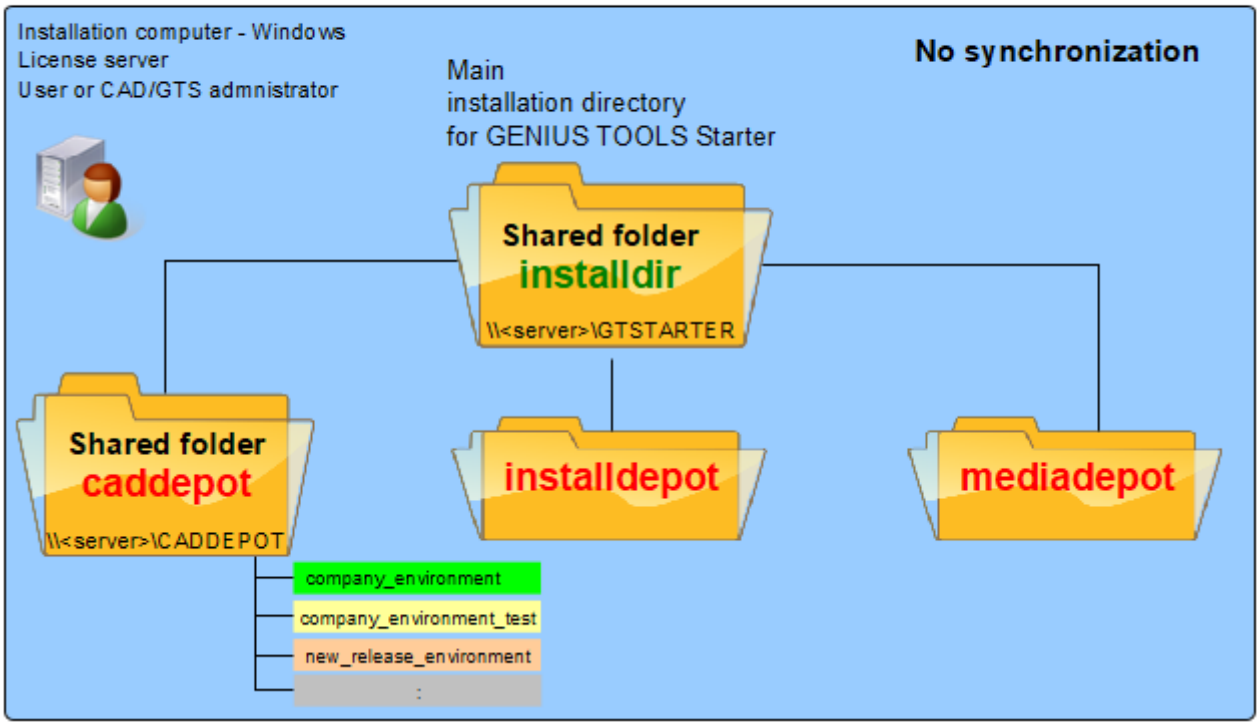
File Server Scenario

1.5.3 Caddepot on local computer

You can work locally. The installation computer is also the application computer. No shares are required and there is no synchronization.

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GENIUS TOOLS Starter - Installation scenario: Workstation



Single Workstation

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2 Requirements

The following section describes hardware, software and permissions requirements for GENIUS TOOLS Starter.

2.1 Hardware and software requirements

GENIUS TOOLS Starter works on all computers that fulfill the requirements for Creo 4.0 to Creo 7.0.

The following requirements are the same for installation computers, administration computers and satellites.

	GENIUS TOOLS Starter		
Version	**6.0**	**7.0**	**8.0**
Operating system	64-bit only Windows 10 / 8.1 / 7		
.NET Framework	4.6.2 Delivered with Windows 10 -1607 (+8.1; +7) (May have to be installed separately on WIN7/8.1)	4.8 Delivered with Windows 10 -1903 (+8.1; +7) (May have to be installed separately on WIN7/8.1)	
Minimum screen resolution	X=1280 Y=1024		
Flexnet	INNEO Licence Manager 1.0 M050 (Flexnet) and later		
Caddepot directory (Central storage location with UNC access)	circa 1 to 5 GB for each operating environment		
Cadpool directory (Storage location on the application	Sufficient storage space to set up at least one operating environment		

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	GENIUS TOOLS Starter	
computer)		
Data synchronization using GENIUS TOOLS Starter Service	-	Windows computer, where the Caddepot directory is located and where a service can be installed.
Operating satellites using GENIUS TOOLS Starter Service	-	Communication port for REST API on installation computer and satellites. Standard: 8092 Satellites need the same storage space as the installation computer.

Supported desktop applications

1. Programs starting with project configuration
   - Creo 2.0-7.0
     - Parametric
     - Simulate
     - Direct
     - Layout
     - Options Modeler
   - Creo Parametric 8.0
2. If installed, these programs will start automatically (autostart):
   - Creo Illustrate
   - Creo Schematics
   - Mathcad Prime
   - Creo Elements/Direct
   - KeyShot
   - Geomagic Design X

Caddepot

Read access: All users need read access to the Caddepot for synchronization to work.

Write access: For some functions users need write access to individual directories of an

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operating environment in the Caddepot.

- GENIUS TOOLS Starter App feedback on the last synchronization
  …\ *serveronly*_*SyncResults*\
- Central user configuration files
  …*userdata*
- Common databases for GENIUS TOOLS for Creo name generation (has to be configured manually)
  …*serveronly**gt_numgen*
  Warning: This functionality cannot be used offline.

Cadpool

Read / write access: The user needs full write access to the local Cadpool for synchronization to work.

Client computers

Write access: Write access needs to be granted to the following Creo installation directories

- if more than the standard key (e.g. *parametric.psf*) or the synchronization of the start key is wanted: to the directory that contains Creo startkeys,
- if the files *config.sup, config.pro, creo_parametric_admin_customization.ui* need to be adapted: to the directory ..*CommonFiles**text*

Please note: If Creo is installed into the Windows default program directory, you should not make any changes with GENIUS TOOLS Starter App. Install Creo into another directory, for example *C:**ptc*.

2.2 User rights

Caddepot

All users have to have read access to the Caddepot for synchronization to work.

For some specific functionality, users have to have write access to individual directories within a work environment in the Caddepot.

- GENIUS TOOLS Starter App feedback on the last synchronization
  …\ *serveronly*_*SyncResults*\
- Central user configuration files
  …*userdata*

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– Common databases for GENIUS TOOLS for Creo name generation (has to be configured manually)
...*serveronly**gt_numgen*
Warning! This functionality cannot be used offline.

Cadpool

The user needs full write access to the local Cadpool for synchronization to work.

Application computers

Some GENIUS TOOLS Starter functionality requires write access to the Creo installation directories.

If you need to use more than the standard key (e.g., parametric.psf) or want key synchronization, the users need write access to the Creo startkeys.

The users need write access to the directory ..*CommonFiles**text* if the following files need to be adapted.

– config.sup

– config.pro

– creo_parametric_admin_customization.ui

Please note: If Creo is installed into the Windows default program directory, you should not make any changes via GENIUS TOOLS Starter App. Install Creo into another directory, for example *C:**ptc*.

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3 Installation Process

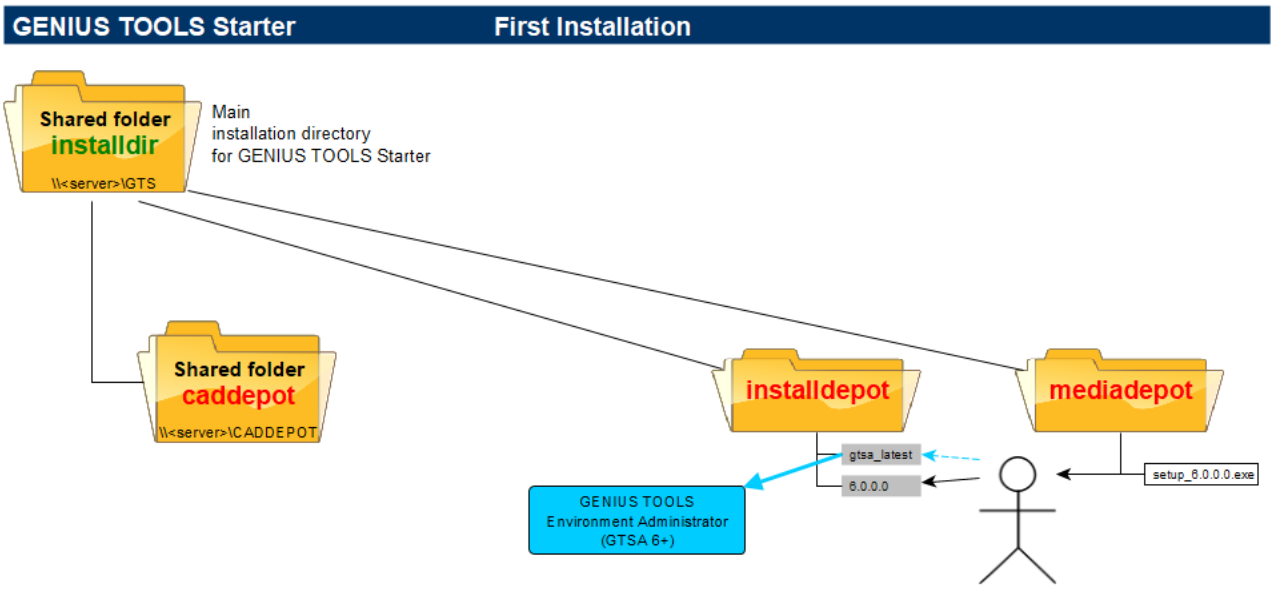
Warning: You cannot create or update work environments with the setups of GENIUS TOOLS Starter. All setups unpack their data into the directory *installdepot* under the installation directory according to their versions.

The directory *installdepot* contains the program GENIUS TOOLS Environment Administrator (*gtsa.exe*) in the subdirectory *gtsa-latest*. This program can be used to create work environments, to update software in them and to change properties.

1. Setups write to the *installdepot*.
2. The GENIUS TOOLS Environment Administrator from the *installdepot* is used to create or to update work environments.

3.1 Software setup

When you execute the software setup for version 6.0 and later on the installation computer (example installation path: *C:\gtstarter*), the following directory structure is created.



Software Setup

Only the directory *installdepot* will contain any data. Use GENIUS TOOLS Environment Administrator *(installdepot\gtsa_latest\gtsa.exe)* to create empty work environments. You can then fill the directory structure for the work environments manually. Use GENIUS TOOLS Project Configurator to create executable projects in a work environment.

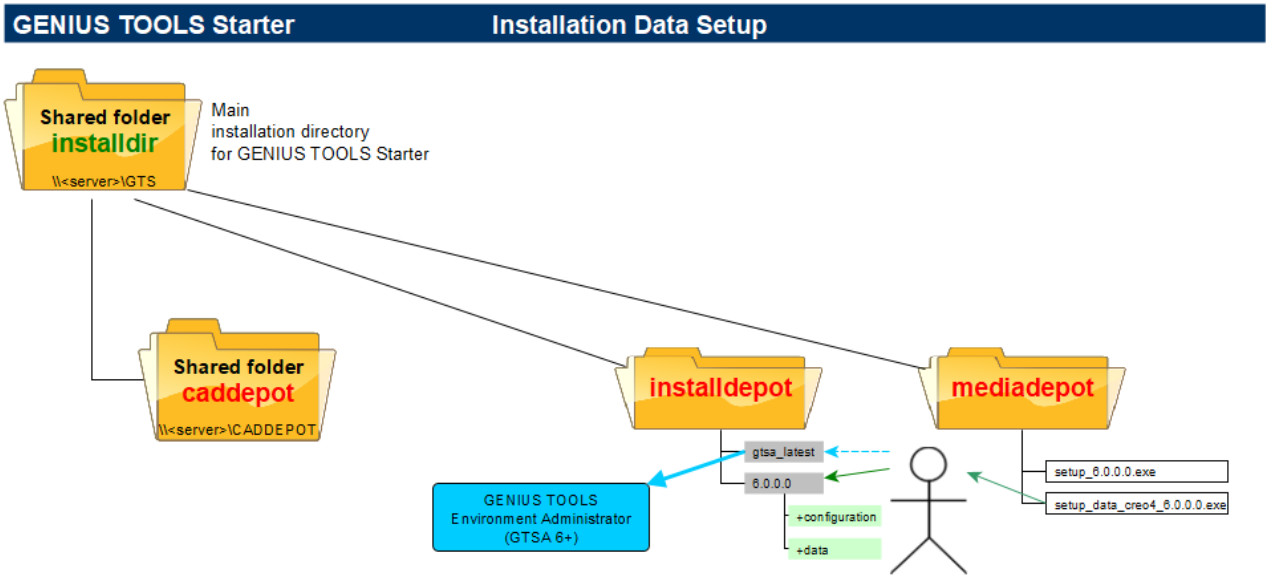
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Note about Startup TOOLS

The Startup TOOLS also include data setups for different Creo releases. The data setup for the required release has to be executed so that GENIUS TOOLS Environment Administrator can add configuration and Creo data to a working environment. This also creates executable projects.

3.2 Data setup

There is a separate data setup for every Creo release from Creo 4.0. These are only delivered as part of the Startup TOOLS package. When the setup is executed on the installation computer, data is added to the Installdepot according to the selected version.



Data Setup

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4 Update process

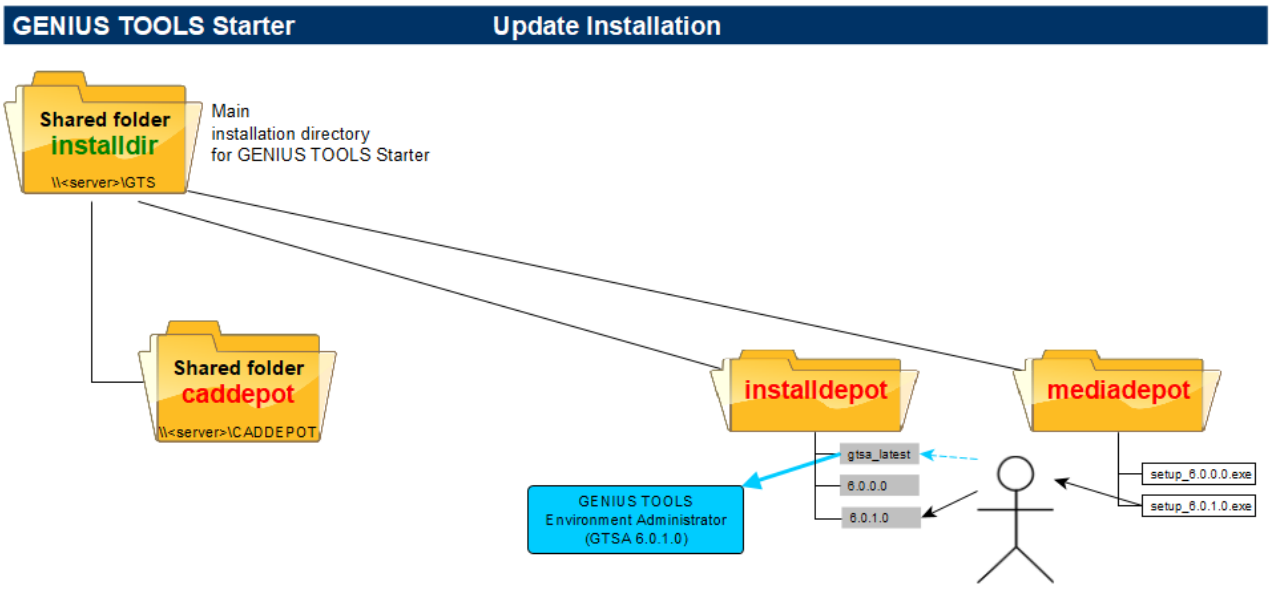
If setups for newer releases or versions are executed on the installation computer, the corresponding directories are created in the Installdepot.

The directory *gtsa_latest* always contains the latest version of GENIUS TOOLS Environment Administrator. Start this to update work environments.

GENIUS TOOLS Environment Administrator can update any work environment, including from different Caddepots, with the software versions present in the Installdepot.

With the GENIUS TOOLS Environment Administrator it is possible to update any working environment (also from different caddepots) with the versions of the installdepot.

Warning: The update functions of GENIUS TOOLS Environment Administrator only update the GENIUS TOOLS Starter App and GENIUS TOOLS for Creo software in a working environment. You have to update configuration settings, configuration files and Creo data manually.



Update Process

After the GENIUS TOOLS Starter App has been updated in the Caddepot, the local GENIUS TOOLS Starter App is automatically updated on the application computers.

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5 Setting up user computers

Before a working environment can be transferred to the application computers, it has to be created using GENIUS TOOLS Environment Administrator. The work environment is defined by the following settings:

– Work environment name (e.g., company short name)

– License server

– Source Caddepot directory

– Cadpool directory on the application computers

Please note: After the initial transfer of a work environment to an application computer, no further work needs to be done there. The application computer does not require maintenance as all data in the work environment is updated by the local GENIUS TOOLS Starter App, while the GENIUS TOOLS Starter App itself is updated automatically from the Caddepot.

5.1 Administration computer

Please note: Typically the first computer to receive a work environment is the administration computer for this environment. this means that the user (normally the CAD or Startup TOOLS administrator) has full write access to the Caddepot.

Each application client needs to run an initial synchronization, which means that the work environment has to be copied in full from the Caddepot directory on the administration computer to a new Cadpool directory. The copying and other initialization steps can be performed by GENIUS TOOOLS Starter. To use GENIUS TOOLS Starter, start it from the Caddepot directory:

1. Start GENIUS TOOLS Starter from the work environment of the Caddepot (<*Caddepot_path*>\<*work_environment_name*>*software**gts.exe*) on the application client (e.g., \\<*server*>\<*share*>\<*work_environment_name*>*software**gts.exe*).
2. When the central *gts.exe* is started, the software recognizes that the client computer does not yet have a Cadpool directory and work environment. This triggers the following initialization actions:
   a. Creating the local directories
   b. Copying the work environment
   c. Creating a desktop icon
   d. Creating an autostart entry in the registry

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e. Stopping GENIUS TOOLS Starter (central *gts.exe*)

f. Starting the local GENIUS TOOLS Starter (*gts.exe* from the Cadpool directory)

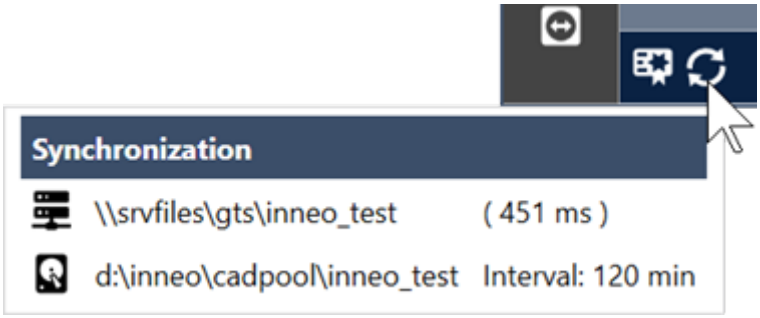
Synchronization status and license availability

The status line of the local GENIUS TOOLS Starter App should now look like this:



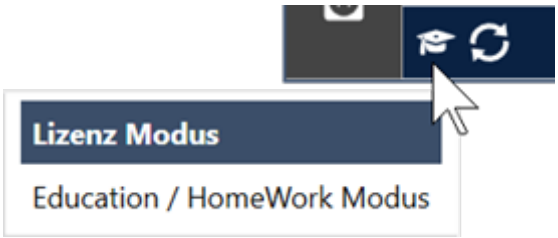
Status Line

The license status shows a full version and the synchronization status shows unrestricted synchronization.



Full Synchronisation

If the license is given as below, you need to check your license status.



Students License

Check whether the license is available or whether, for example, the license server has not been entered correctly in GENIUS TOOLS Starter.

Please note: Start *gts.exe* with the option `-gts:licDebug` to get error messages from GENIUS TOOLS License Manager.

5.2 Application computer

The initial transfer of a working environment has to be done for each application computer in the same way as for the administration computer. To start the initial transfer, call GENIUS TOOLS Starter from the work environment of the Caddepot on the application computer.

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GENIUS TOOLS Starter initial call path:
<Caddepot_path>\<work_environment_name>\software\gts.exe
That is, for example: *<server>**<share>**<work_environment_name>\software\gts.exe*

You can, for example, distribute an UNC path to your users via e-mail with a short set of instructions.

A work environment can also be copied to the application computers by any Windows distribution mechanism. A desktop icon for the local *gts.exe* can also be created using an alternative tool.

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6 Customizing the Starter environment

The following sections describe some options to customize your GENIUS TOOLS Starter environment.

6.1 Start parameters

You can start GENIUS TOOLS Starter App with the following parameters.

Start parameter	Description
-gts:admin	Starts GENIUS TOOLS Project Configurator
-gts:appdata	Redefines the path to the Appdata directory
-gts:debug	Activates debug logging
-gts:expcfg	Defines the location of the *expcfg.bat* file of the worker
-gts:debug	Activates debug logging
-gts:home	Sets the home directory. Example: *D:\gtstarter\cadpool\inneo\software\GTS.exe -gts:home=%SystemDrive%\home\%USERDOMAIN%.%USERNAME%\pro.creo3*
-gts:lang	Starts GENIUS TOOLS Starter App in a defined language (de/en/it/fr)
-gts:L	Sets Creo language
-gts:CL	Set language for GENIUS TOOLS Starter
-gts:licDebug	Activates debug logging for the license server (loud alarm when license problems occur)
-gts:licServer	Sets the license server
-gts:licTimeout	Defines the maximum waiting time to receive a license, in milliseconds. Entries from 1000 to 60000. Default: 10000. Setting is passed on to Creo by environment variable GT_LIC_TIMEOUT .
-gts:networkTimeout	Redefines the network timeout. Entries in milliseconds.

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Start parameter	Description
-gts:noChecksum	Deactivates checksum tests during synchronization
-gts:noProjectAutostart	Prevents the project (gts:p) from being started immediately
-gts:noSync	Deactivates synchronization
-gts:p	Starts a project and filters the project list
-gts:pui	Filters the project list to a list of projects specified separated by commas (-gts:pui=pname1,pname2,pname3)
-gts:temp	Redefines path to the Temp directory
-gts:worker	Starts in Worker setting

6.2 Environment variables

Created environment variables

GTS environment variable	Description / example	Old SUT variable
GT_LIC_SERVER		
GT_LIC_TIMEOUT		
GTFC_ADMIN		TBXADMIN
(GTS_CFG_LW) recommended instead: GTS_ROOT_DIR	GTS:<Cadpool>\<WorkEnvironment> GTS: D:\gtstarter\cadpool\2017_latest SUT: <DriveLetter> SUT: P:	STOOLS_CFG_LW
GTS_*_ESCAPED	Variant of a variable that prevents the variable from being erroneously being resolved, e.g. in mapkeys. (See explanation in section below.)	
GTS_COMPUTER_GROUP	Name of computer group	

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GTS environment variable	Description / example	Old SUT variable
GTS_DATA		SUTDATA
GTS_DATA_LIB		
GTS_ENV_NAME	Name of operating environment	
GTS_MC		SUTMC
GTS_NET_LW	Name of the first network drive	
GTS_PLOT_CONFIG_DIR		PLOT_CONFIG_DIR
GTS_PLOT_FILE_DIR		PLOT_FILE_DIR
GTS_PROEDATECODE		SUT_PROEDATECODE
GTS_PROERELEASE		SUT_PROERELEASE
GTS_PROJECT_DIR		APPL_PROJECT_DIR
GTS_PROJECT_NAME	Name of current project	SUT_PROJECT_NAME
GTS_ROOT_DIR		SUT_ROOT_DIR
GTS_SERVERONLY_DIR		
GTS_SERVER_DIR		
GTS_SYNC_LAST		
GTS_SYNC_MODE		
GTS_TRAIL_DIR		TRAIL_DIR
GTS_UNIT_DIR		
GTS_UNIT_DIR_NAME	Name of the unit directory	
GTS_UNIT_NAME	Name of unit	
GTS_USER		STOOLS_USER

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GTS environment variable	Description / example	Old SUT variable
GTS_USER_CONFIG_DIR		USER_CONFIG_DIR
GTS_USER_GROUP	Name of user group	
GTS_USER_LW	Letter of user drive	STOOLS_USER_LW
GTS_USERLONG		STOOLS_USER_LONG
GTS_USERSHORT		STOOLS_USER_SHORT
GTS_VERSION		
GTS_WCSRVNAME	Windchill server name	STOOLS_WCSRVNAME
GTS_WCSRVURL	Url of windchill server	STOOLS_WCSRVURL
LANG		LANG

Created environment variables: _ESCAPED variant

Since version 6.0.2.0 variables are resolved in configuration files. This means that mapkeys, in which environment variables with path specifications are used, no longer worked. Therefore new variants of environment variables were introduced, in which the variable is extended with the extension *_ESCAPED*. This makes it possible to continue using variables in mapkeys and other places where resolution is undesirable.

All variables can be extended with *_ESCAPED*. In particular, the following variables are required for use in Mapkeys: GTS_PLOT_CONFIG_DIR_ESCAPED, GTS_SERVERONLY_DIR_ESCAPED, GTS_SERVER_DIR_ESCAPED, GTS_TRAIL_DIR_ESCAPED, GTS_UNIT_DIR_ESCAPED, GTS_USER_CONFIG_DIR_ESCAPED.

Affected environment variables

PTC_WF_ROOT

Environment variable that overwrites the default location of the Creo directory. (WF comes from “Wildfire”, name of the predecessor product of Creo.)

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PTC_WF_CACHE

Environment variable that refers to additional cache space.

PTC_SESSION_LOG_PATH

PTC_SESSION_TRACEBACK_PATH

PTC_SESSION_TRAIL_PATH

6.3 Batch files

Batch files can be run at different times during the start of a project, before or after the desktop application (e.g. Creo Parametric) has been started.

Warning: Starting with GENIUS TOOLS Starter 6.0.1, a new configuration mechanism is in use. When you update from version 6.0.0.0 or migrate from Startup TOOLS 20xx, verify references to configuration files in your batch files. References to ..*configuration**projects*\ have to be changed to ..*configuration**standard*.
Batch files in the project-specific subdirectories under *projects* do not have to be changed.

Types of batch files

Prefix	Start time	Comment
prestart_	Started before the Creo Parametric configuration is created	When a project is started, GENIUS TOOLS Starter calls the *prestart_* batch files before the *config.pro* files for the project are assembled.
start_	Started before Creo Parametric is started	When a project is started, GENIUS TOOLS Starter assembles the *config.pro* files for the project, then calls the *start_ batch* files.
stop_	Started after Creo Parametric is closed	Please note that *Enable stop batches* has to be set to *Yes* in the Project Configurator under *Configuration* > *(Select group)* > *Creo Settings* > *Startup Settings*.

Warning: The batch file types *runonce_* and *env_* are not supported any longer. If you want to keep using your batch files, rename them to *start_*, e.g., *env_inneo.bat* to *start_inneo.bat*

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User or computer specific batch files

GENIUS TOOLS Starter can call batch files depending on which user, user group, computer, or computer group is used to start a project. You can use the same types of batch files, i.e., prestart, start and stop. User specific batch files are marked by a prefix of *U_<WindowsUserName>_*. Computer specific batch files are marked by a prefix of *C_<WindowsComputerName>_*.

Computer and user groups are specified by a prefix *CG_<GroupName>_* or *UG_<GroupName>_*.

Examples for the naming of user or computer specific scripts:

- `U_JDOE_stop_copy_workspace.bat`
- `C_CAD13_start_map_drive.bat`

Examples for the naming of scripts specific to user or computer groups:

- `UG_GroupA_start_copy_special_config.bat`
- `CG_ CREO ON C_start_set_buw.bat`

Please note: Avoid using special characters in group names! Special characters will be removed, for example turning *Creo on C:* into *Creo on C* without the colon.

Warning: What if Creo Parametric does not start? The most common cause is that a batch file causes the Creo call to stop. If there are start issues, first check which batch file could cause the Creo call to stop.

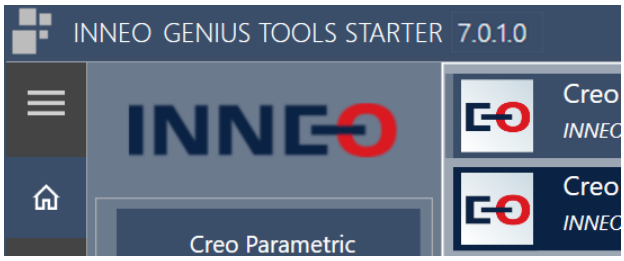
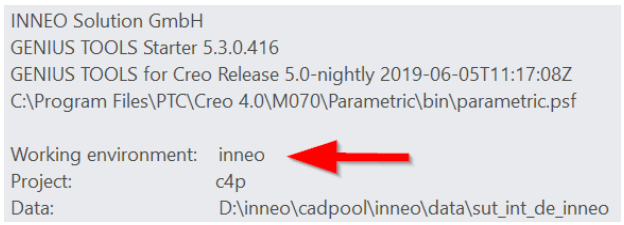
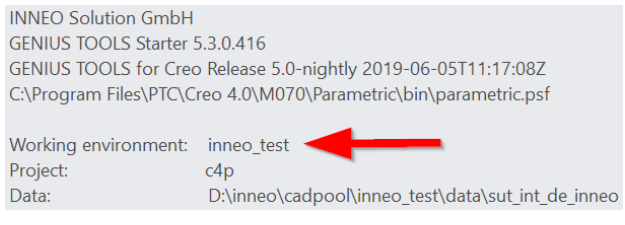
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7 Test environment

Use a test environment to check any changes before adding them to the productive environment. It is important for the test environment to be up-to-date with the productive environment. An exact match is only possible if the test environment is in the same Caddepot as the productive environment, as only then the Caddepot name in the GENIUS TOOLS Starter database will be the same.

Hint: Add different image files for the different work environments to the directory *_Images*. The users will be able to check their work environment at a glance. If you are using GENIUS TOOLS for Creo, you can also add information to the empty Creo graphics window.

Example

Productive environment	Test environment
\\SRVCAD01\caddepot\inneo	\\SRVCAD01\caddepot\inneo_test
	
	

7.1 Creating a test environment

Create a test environment by making a copy of the productive environment. Distribute the test environment to the test users in the same way as you would first distribute any other work environment. Afterwards, the test users' Cadpool will contain both work environments.

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Hint: In order to keep the test environment up-to-date with the productive environment, use a third-party synchronization tool such as FreeFileSync in mirror mode.

To move any changes from the test environment to the productive environment, just copy the changed files. To find the changes quickly, use a synchronization tool.

Warning: The configuration database ...*configuration**database**sut.db* is linked to the GENIUS TOOLS Starter App software version. If you have changed the software version in the test environment, for example to test an update, remember to copy the .. *software* directory together with the database.

7.2 Test environment in a different Caddepot

It is possible in theory to create a test environment in a different Caddepot, i.e., on a different server or share, but it is not recommended. There is a Caddepot entry in the configuration database which points to the Caddepot of the productive environment. The name of the Caddepot can be changed for the test environment using GENIUS TOOLS Environment Administrator before the environment is first used. However, as soon as users have accessed a work environment, the Caddepot name cannot be changed anymore.

This means that you cannot copy the configuration database back to the productive environment from the test environment. If you need to do this, copy the test environment again after testing to have a pristine, unused environment, then change the Caddepot name using GENIUS TOOLS Environment Administrator, then copy back the database.

7.3 Local test environment

Use a local test environment if the administrator is also the only user. Copy the productive environment into a local directory, then deactivate synchronization for the copied environment using GENIUS TOOLS Environment Administrator.

Warning: Remember to reactivate the synchronization before you copy the configuration database back to the productive environment!

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8 GENIUS TOOLS Environment Administrator

GENIUS TOOLS Environment Administrator is an administrative tool for managing operating environments. Use GENIUS TOOLS Environment Administrator to handle the following tasks.

– create operating environments *(Create)*

– add components to an operating environment *(Add Components)*

  – project folders (directories with *config.pro* and other project-specific files)

  – data folders

  – additional applications

– update operating environments (GENIUS TOOLS Starter App and GENIUS TOOLS for Creo) (*Update*)

– change the settings for an operating environment *(Modus)*

  – license server

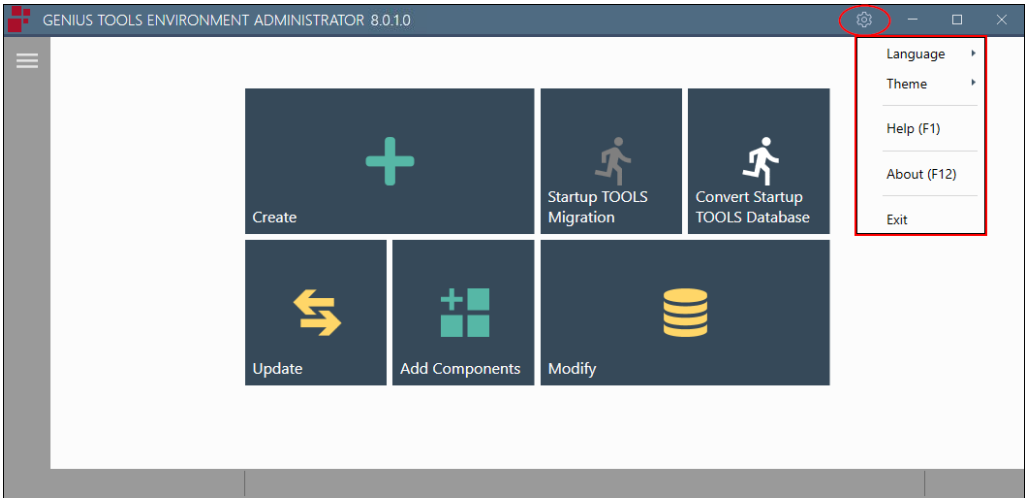
  – synchronization settings (Caddepot, Cadpool)

– migrate from Startup TOOLS versions prior to 6.0 (*Migration*)

– convert Startup TOOLS databases *(Convert)*

The following sections describe the functions of GENIUS TOOLS Environment Administrator. GENIUS TOOLS Environment Administrator also comes with inline help, which describes the individual steps and is displayed in the rightmost pane when you use the software.

8.1 User interface



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To access general settings for GENIUS TOOLS Environment Administrator, click on the gear symbol in the header.

Language: user interface language

You can switch the user interface language between English, German and French at any time. The language setting is saved and will be used the next time you start the software.

The software first starts with a German user interface if the operating system locale is set to German. For all other locale settings, the software first starts with an English user interface.

Theme: user interface color settings

The software comes with the color themes *Blue*, *Light* and *Dark*. You can switch themes at any time. The theme setting is saved and will be used the next time you start the software.

Help (F1)

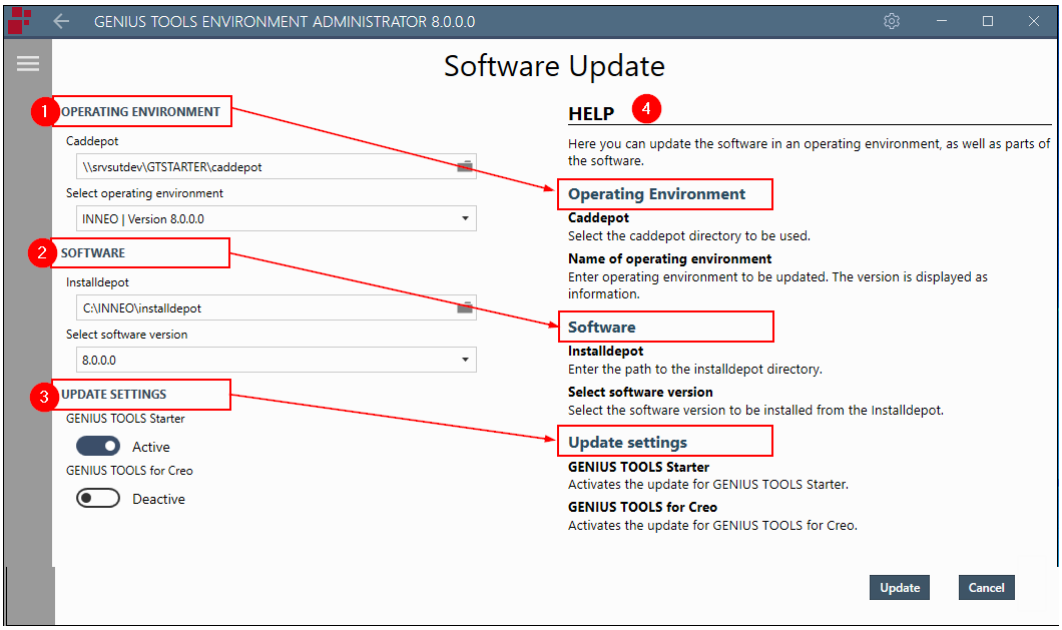
Opens the software help for GENIUS TOOLS Starter. The help corresponds to this document.

Info (F12)

Shows the current GENIUS TOOLS Starter version.

Step-by-step workflow

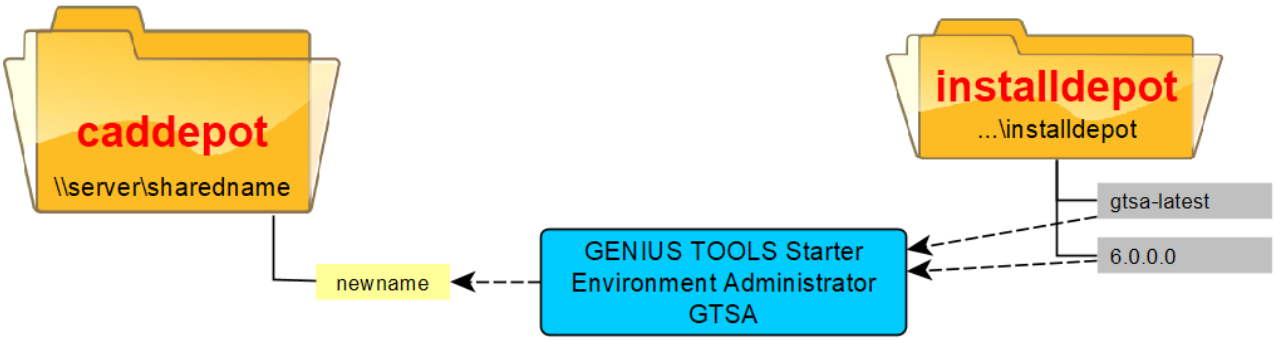
When you select a function on the GENIUS TOOLS Environment Administrator start page, a wizard with one or more dialog pages is displayed. The inline help in the rightmost panel supports each step of the workflow.



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8.2 Creating an operating environment

GENIUS TOOLS Environment Administrator lets you create different operating environments with only a few mouse clicks. Each operating environment consists of GENIUS TOOLS Starter App and its accompanying directory structure. You can add new components at any time, for example, UI and functional configurations for Creo (*config.pro, config.sup config.ui*), start object templates, project-specific libraries, drawing frames, ModelCheck configurations or additional applications (toolkit).



Creating a new operating environment

The *Create* wizard lets you start a new, empty operating environment. The new operating environment consists of the directory structure, the GENIUS TOOLS Starter software, and an empty *sut.db* database. Use the *Add Components* wizard to add toolkit applications, data packages or standard projects later on.

Creating a new operating environment with GENIUS TOOLS Environment Administrator



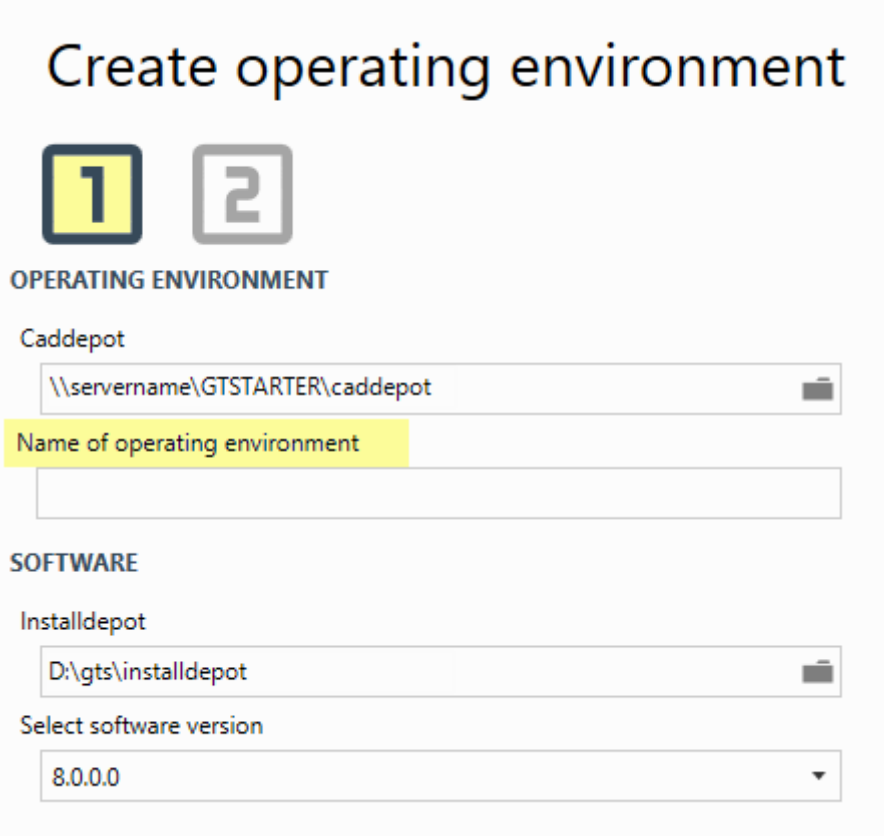
Step 1: Define operating environment

Click the *Create* symbol on the start page to start the *Create* wizard. GENIUS TOOLS Environment Administrator will find the Caddepot and Installdepot directories automatically if the software is started from a default installation setup. Verify the paths for the Caddepot and Installdepot directories and enter a name for the operating environment (1). The name is used to create a directory of the same name in the Caddepot and setting up the directory structure there.

Click *Next* to go on to the next page of the *Create* wizard.

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Please note: You can change the name of an operating environment at any time by just renaming its directory.



Creating an operating environment: Step 1

Step 2: Configuring license and synchronization server

The users need to connect to GENIUS TOOLS License Manager in order to use a full version of GENIUS TOOLS Starter App.

Under *Source* (1), enter the name of the server that GENIUS TOOLS Starter App should access to get licenses.

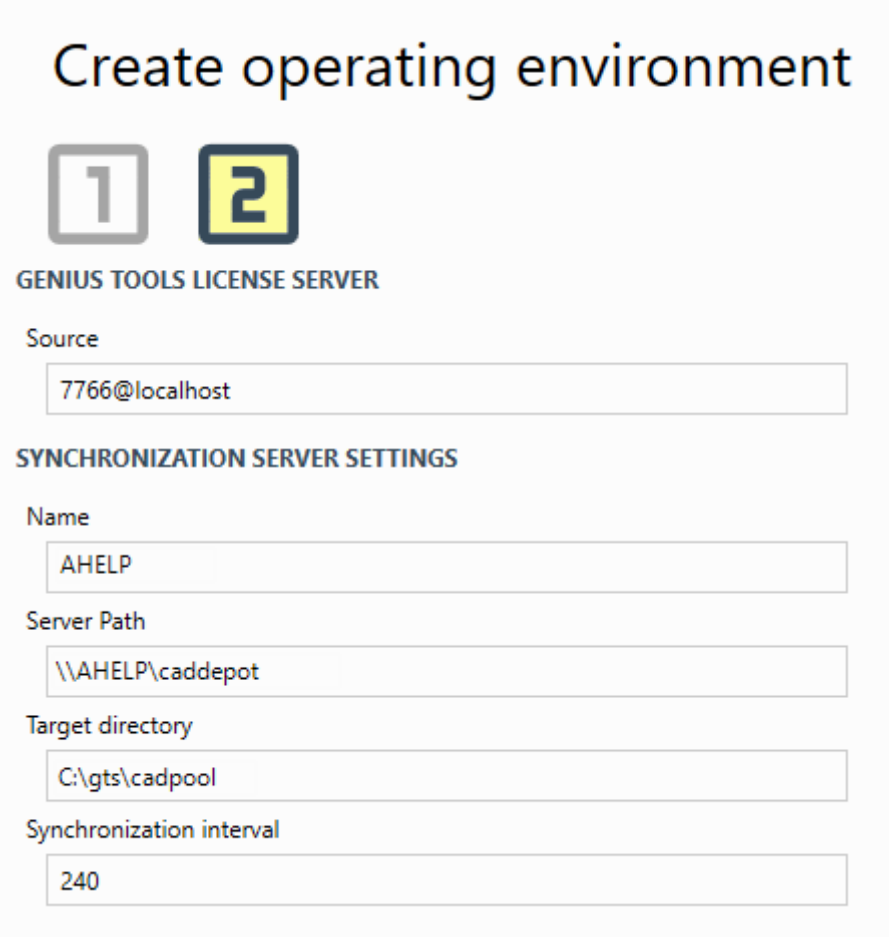
Under *Synchronization server settings*, define the synchronization to keep data current on the local application computers and give the users fast access to any changes.

The synchronization will not update any toolkit applications as long as Creo is running. For this to work, the toolkit applications have to be located in the *apps* directory of GENIUS TOOLS Starter.

Enter the synchronization server path (2) down to the Caddepot directory. GENIUS TOOLS Starter App will add the name of the current operating environment automatically. This makes it possible to copy operating environments, for example to create test environments quickly without having to change the settings. Also, operating environments can be renamed without having to change the settings.

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Under *Target directory* (3) enter the location where the Cadpool directory should be located on the application computers. If the Cadpool directory is not present yet, GENIUS TOOLS Starter will try to create it. It will also create a subdirectory named for the operating environment. You can use absolute paths or environment variables that are available on the application computers.



Arbeitsumgebung erstellen: Schritt 2

Enter the synchronization interval (4) in minutes. The synchronization interval defines how often GENIUS TOOLS Starter App should synchronize the data from the central Caddepot. A synchronization is also run automatically when GENIUS TOOLS Starter App is started.

The best setting for the synchronization interval depends on how often the data is changed and on how many GENIUS TOOLS Starter Apps are running at the same time. If there are many changes to the data, the interval should be shorter. If many users are accessing the Caddepot, the interval could be longer to avoid too much network load due to frequent synchronizations.

Please note: If you do not configure the synchronization settings, Environment Administrator will create a local operating environment without synchronization.

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8.3 Adding components to an operating environment

GENIUS TOOLS Starter App can provide the users with data and toolkit applications in addition to the configuration for the desktop application. The Startup TOOLS product package contains operating environments with stardardized templates and add-on applications for Creo (GENIUS TOOLS for Creo). When you create a new operating environment, an empty directory structure is created and the GENIUS TOOLS Starter software is copied. Use the *Add Components* functionality to add components from the Installdepot directory to an operating environment.

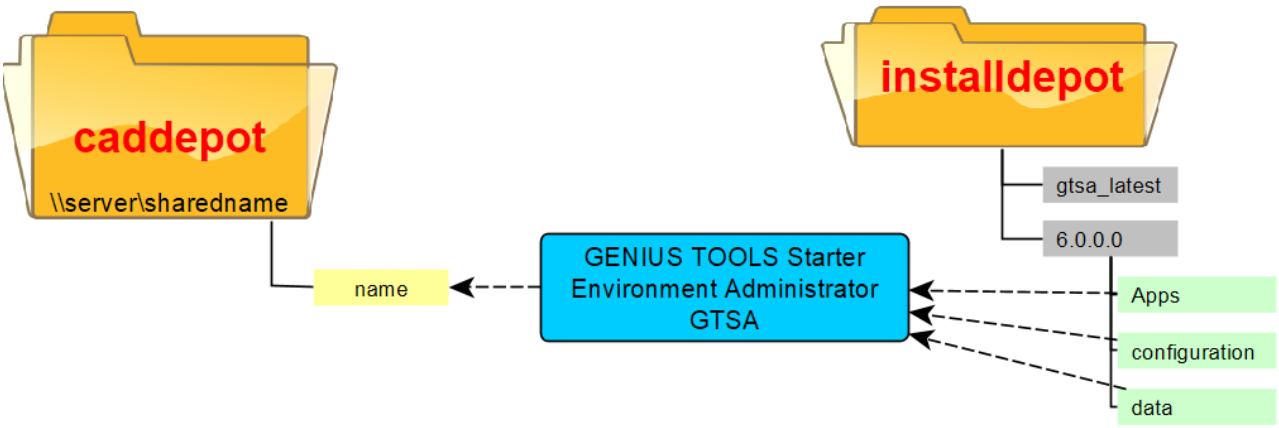
Examples for operating environment components:

– GENIUS TOOLS for Creo

– project configuration directory for Creo applications

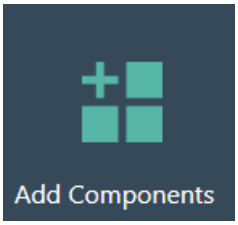
– project data directory for Creo applications

Please note: In order to add components, you first have to install them into the Installdepot directory from the data setups.



Adding components to an operating environment

Adding components to an operating environment



Step 1: Select operating environment

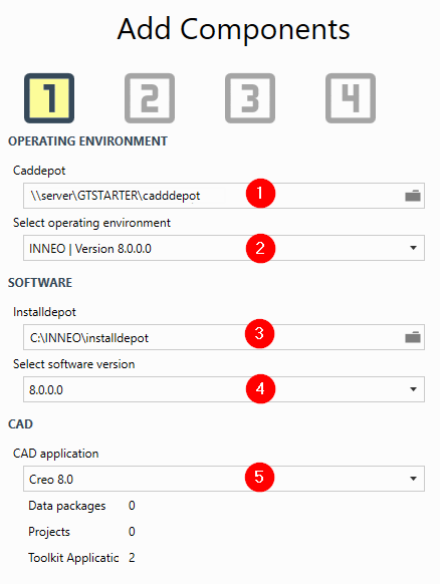
On the first page of the *Add components* wizard, first select the operating environment (2) you want to configure from the Caddepot (1).

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Then select the software version (4) to use from the Installdepot (3). Select a software version that has the required components installed.

Select the CAD application (5) that you want to use the new components with.

Please note: You can add components to the *apps* directory. GENIUS TOOLS Starter App will synchronize additional applications from this directory. Additional apps are only synchronized when Creo is not running. For example, you can add toolkit applications to the *apps* directory. However, there is no way to automatically check which Creo versions the applications are valid for.



Step 2: create projects

You can create standard projects that you can later modify using GENIUS TOOLS Project Configurator.

Set or unset the check boxes (1) to define which standard projects should be created. You will be unable to check the box of a project, if the project already exists in the directory *configuration* > *projects*. It cannot be created twice.

Double-click on the project name (2) or display name (3) if you like to edit it.

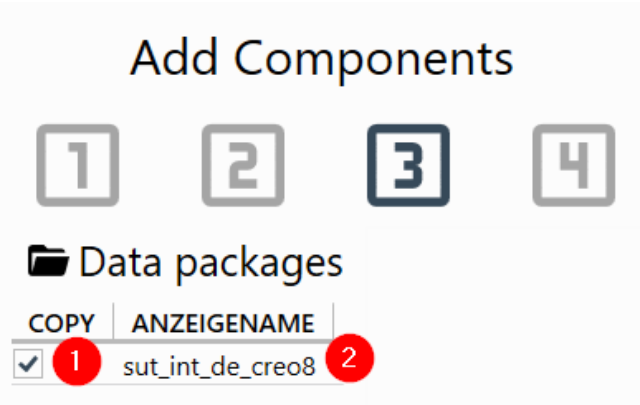
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Step 3: add data packages

Set or unset the check boxes (1) to define which data packages should be added to the operating environment. You will be unable to check the box of a data package, if the the package already exists in the directory *data*. It cannot be created twice.

Double-click on the display name (2) to change it. The display name is used as the name of the subdirectory under *data*. If a subdirectory with this name already exists, the data package cannot be copied to the operating environment.

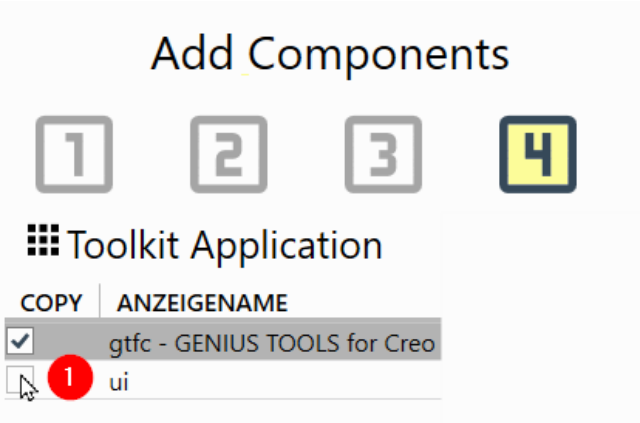


Step 4: add toolkit applications

Set or unset the check boxes to define which toolkit application should be added to the operating environment. You will be unable to check the box of an application, if the it already exists in the directory *apps*. IThe application cannot be created twice.

GENIUS TOOLS Environment Administrator tries to read the name of the toolkit applications from a *protk.dat* file. If Environment Administrator finds the name in this file, it is displayed in the *Add components* wizard. You cannot edit the target directory. The target directory will have the same name as the source directory under *apps* in the Installdepot. If a directory with this name already exists in the operating environment, the toolkit application cannot be copied.

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To finish the *Add components* wizard, click *Add*. All components that you have specified are added to the operating environment.

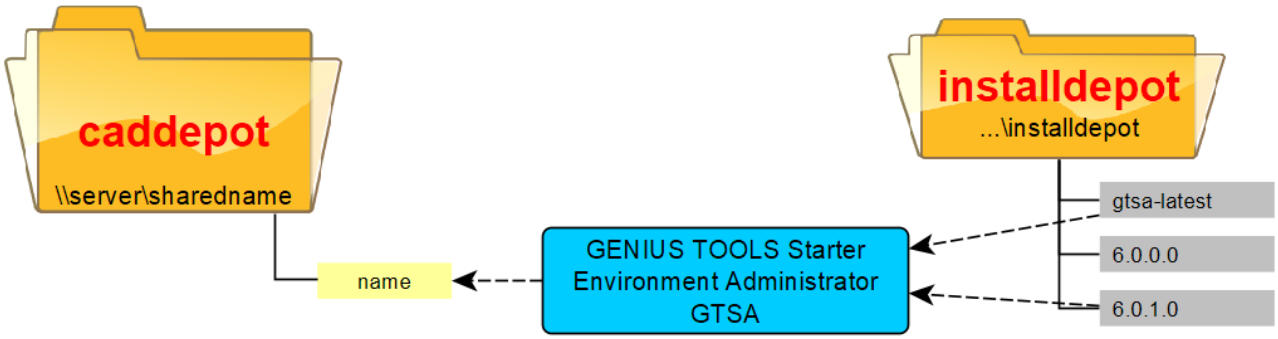
8.4 Updating software

All software setups in GENIUS TOOLS Starter unpack their data to the Installdepot directory. You can use the *Update* function of GENIUS TOOLS Environment Administrator to update the software for GENIUS TOOLS for Creo and GENIUS TOOLS Starter App in the operating environments. This two-step process allows you to make targeted adjustments to individual operating environments. You can upgrade or downgrade to any version that is available in the Installdepot.

If you have configured synchronization, the configuration for the software update will be made in the background without the users having to stop Creo or GENIUS TOOLS Starter App. The new software version will then be used on the application computer after the next synchronization.

If you update GENIUS TOOLS for Creo, the synchronization on the application computers will only be run after Creo has been closed.

Warning: If you are using network mode, make sure that all users have closed GENIUS TOOLS Starter App and Creo, as the software cannot be updated otherwise.



Updating an operating environment

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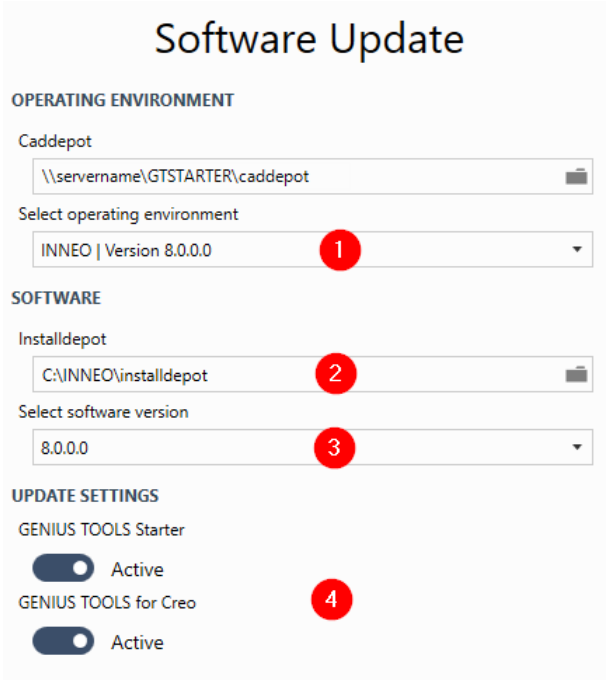
Updating software in an operating environment

In GENIUS TOOLS Environment Administrator click the *Update* button.



On the first page of the *Update* wizard, first select the operating environment you want to configure (1). Then select the new software version (2). Under *Update settings* (3) you can select the components to update: GENIUS TOOLS Starter, GENIUS TOOLS for Creo, or both. Click *Update* to start the update process.

The update process writes a new software directory for GENIUS TOOLS Starter and updates the database. For GENIUS TOOLS for Creo, the *gtfc* directory under *apps* is re-written. The *main.cfg* file remains untouched.



8.5 Modifying settings

Some settings for operating environments can only be changed using the *Modify* wizard in GENIUS TOOLS Environment Administrator. The most important one of these setting is the Caddepot path. You can also edit synchronization and licensing settings.

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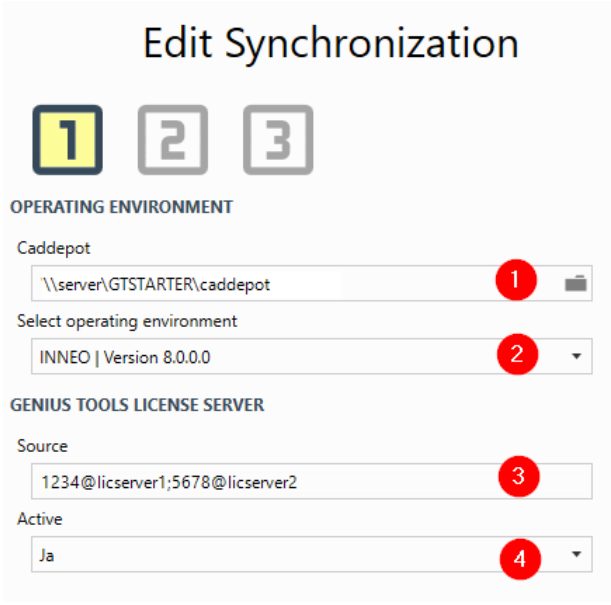
Please note: GENIUS TOOLS Environment Administrator only changes the standard settings, that is, the settings for the group *Standard*. If you have made individual settings for a user group or computer group, you have to change these settings using GENIUS TOOLS Project Configurator (*Configuration* > *(select group)* > *Synchronization*)

Modify settings for an operating environment



Step 1: Change license server

On the first page of the *Modify* wizard, you can change the license server settings. First, select from the Caddepot (1) the operating environment (2) you want to modify. Then enter the license server settings (3). You can also deactivate the license server (4). An inactive license server will not be used by GENIUS TOOLS Starter App. This means that you can only use home-use or educational Creo licenses.



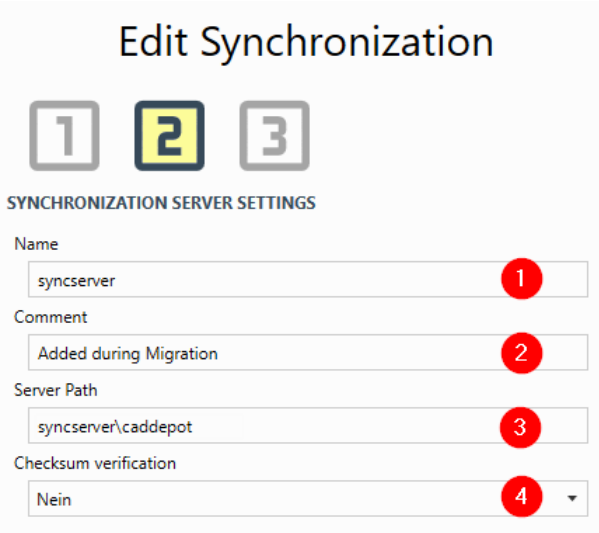
Step 2: Change synchronization settings

The server path is always given down to the Caddepot directory (1).

When *Checksum verification* (2) is active, a checksum for each copied file is calculated and compared to the checksum of the file on the server. If the checksum differs, the server is queried for the file again. If checksum verification is not active, the files will just be copied.

Warning: Activating checksum verification often allows significantly shorter synchronization times.

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If you have moved your synchronization server, proceed as follows:

1. Create a new Caddepot and adapt the synchronization server settings in the *new* operating environment there.
2. Test the new operating environment to make sure that the configuration settings are correct and the synchronization works.
3. In the *old* operating environment, switch the synchronization server to the new Caddepot
   When GENIUS TOOLS Starter App is restarted, it switches to the new Caddepot and synchronizes the data from there.

Warning: Please be extremely careful when changing the Caddepot directory in an operating environment that is already in use on multiple application computers. Wrong settings can lead to the application computers not synchronizing. However, it is still possible to change the Caddepot directory when you move a server. Create a new Caddepot, then set the synchronization path in the old operating environment to the new Caddepot. The application computers will switch over accordingly.

Step 3: Edit settings for the application computers

You can activate or deactivate synchronization between the central Caddepot and the application computer Cadpool directories (1).

Warning: If you deactivate synchronization, you permanently separate the application computers from the Caddepot. Any changes you make to the central synchronization settings or the operating environment will not be transferred to the application computers!

Under Target directory (2), specify the location of the Cadpool directories on the application computers, where the local copy of the operating environment is stored. If the Cadpool directory cannot be found, GENIUS TOOLS Starter will try to create it. A

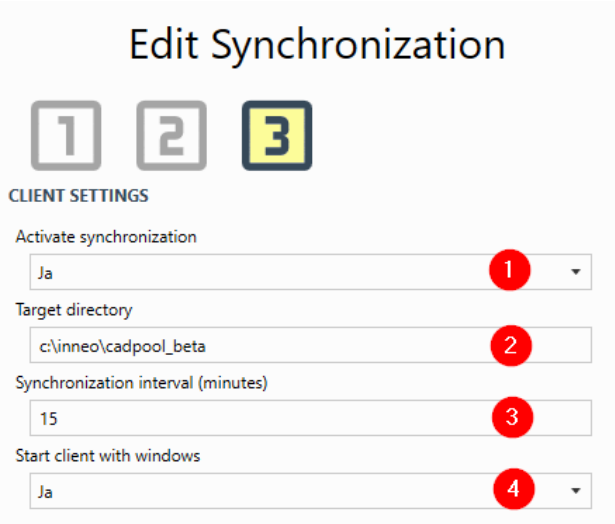
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subdirectory named after the operating environment will also be created. You can use absolute paths such as *C:\Cadpool*, or environment variables that are available on the application computers, e.g., *%GTS_SYNC_DESTINATION%*.

Under Synchronization interval (3), specify an interval in minutes. The synchronization interval determines how often GENIUS TOOLS Starter App will synchronize the data. A synchronization is also run automatically when GENIUS TOOLS Starter App is started.

The best setting for the synchronization interval depends on how often the data is changed and on how many GENIUS TOOLS Starter Apps are running at the same time. If there are many changes to the data, the interval should be shorter. If many users are accessing the Caddepot, the interval could be longer to avoid too much network load due to frequent synchronizations.

If Start client with Windows (4) is activated, GENIUS TOOLS Starter App will be started automatically when the operating system is started on the application computers.



8.6 Migrating a Startup TOOLS environment

Startup TOOLS 2018 and earlier (20xx) are based on a different technology than GENIUS TOOLS Starter. When you migrate a Startup TOOLS environment, the data from the specified Startup TOOLS directory are copied to the Caddepot. The database also has to be migrated and the directory cleaned up. Cleaning up the directory during migration will never lead to any data loss, as you make any changes to the copied data only, while the original data remain untouched. This also means that you can work in parallel on GENIUS TOOLS Starter and on your previous Startup TOOLS 20xx environment.

The migration workflow helps you to use your current configuration setup as a base for the GENIUS TOOLS Starter configuration. However, manual adaptations may be necessary.

Please note: GENIUS TOOLS Starter does not contain web server functionality. If you require a web server in your new setup, please install and maintain it separately.

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Migration from Startup TOOLS 20xx to GENIUS TOOLS Starter 6.0.

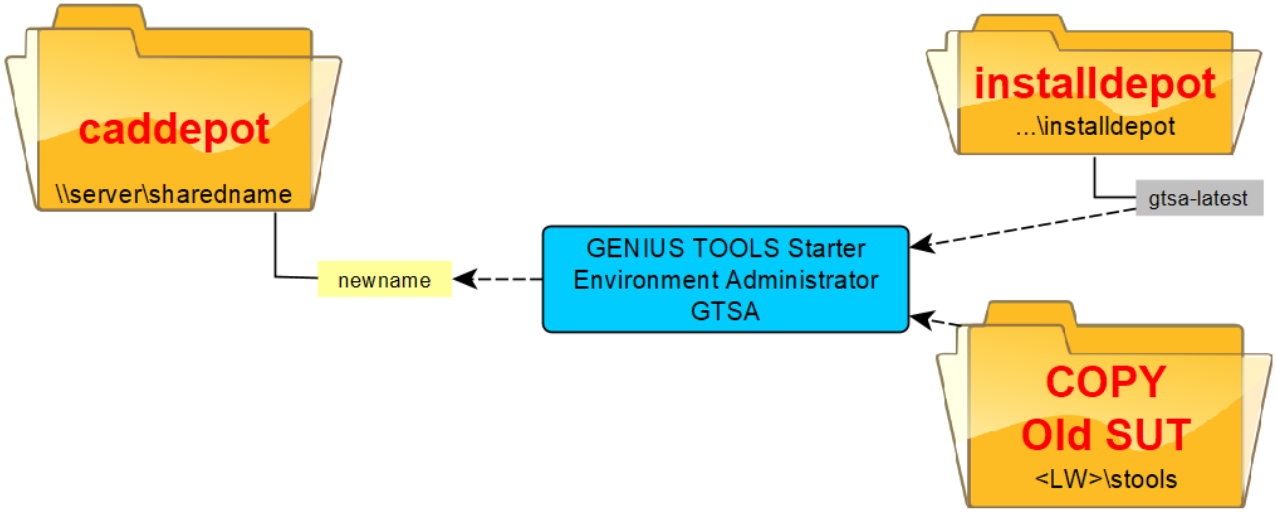
For a thorough description of the migration process, please refer to the separate document *Startup TOOLS-Migration to version 6*. The following section gives an overview of the steps that you have to take in the GENIUS TOOLS Environment Administrator software. We recommend working on a copy of the Startup TOOLS directory.

Preparations

1. Copy the Startup TOOLS directory. Stop the Startup TOOLS service while you copy.

Please note: If you cannot stop the Startup TOOLS service for copying the directory, the ABS databases cannot be copied. Starting with version 6, only one configuration database is supported. Rename one of the **abs.bak* files in the copied data to *sut.abs*.

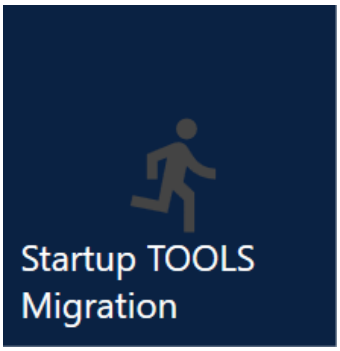
2. We recommend cleaning up the copied Startup TOOLS directory and deleting any data that is not required anymore, such as setups, backup copies etc. This reduces the amount of data that will have to be synchronized with the application computers.



Migrating a Startup TOOLS 20xx environment

3. Run the software setup for Startup TOOLS 6.x on the administration computer (example installation path *C:\gtstarter*). This step creates the directories *caddepot*, *installdepot* and *mediadepot*.
4. Open GENIUS TOOLS Environment Administrator and run the function *Startup TOOLS Migration*.

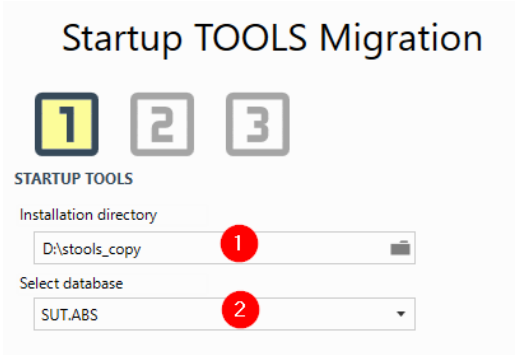
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Step 1: Select database

Under Installation directory (1), enter the path to your copy of the old Startup TOOLS installation (stools). The migration wizard will automatically find the Startup TOOLS installation if it is on the same computer, but you can correct the directory or select another one.

Under Select database (2), select the database *sut.abs*. If there is no database with this name, select a database that should be converted.

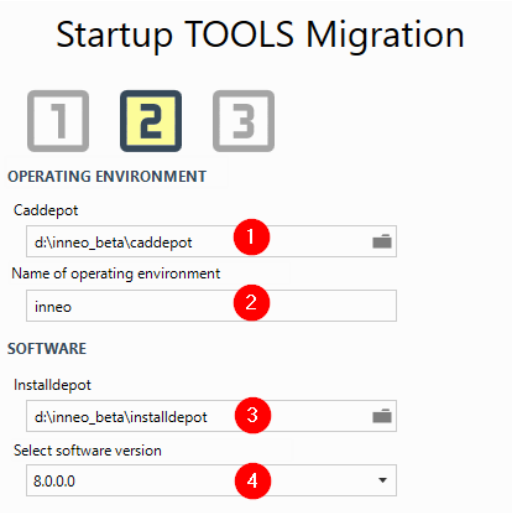


Step 2: Target of migration

On the second dialog page, specify the Caddepot directory (1) and the operating environment name (2), e.g., *company-name*. The migration will be done in the operating environment defined here. First, the old Startup TOOLS data will be copied to the operating environment, then the migration proper will be run. In this way, any changes are made to the copied data in the new operating environment, and the original data remains untouched.

Under Software, select the Installdepot directory (3) from which to get the GENIUS TOOLS software. Then select the GENIUS TOOLS Starter version (4) to be used.

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Step 3: Configuring license and synchronization server

Under Source (1), enter the license server that GENIUS TOOLS Starter App should use to get licenses. Enter the license server in the format *Port@ServerName*, e.g., *7766@<license_server_name>*.

Configure the synchronization between the administration computer (Caddepot) and the operating environment on the local computer (Cadpool). Synchronization to the local Cadpool allows fast access to the local files. Note that toolkit applications will not be synchronized while Creo is running. For this to work, the toolkit applications have to be located in the *apps* directory of GENIUS TOOLS Starter.

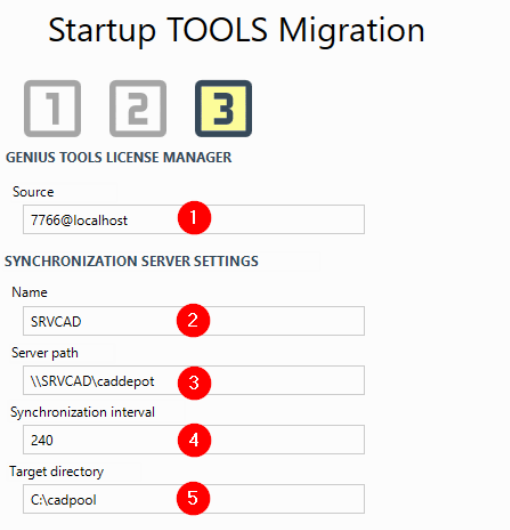
Enter a descriptive server name (2), then enter the path to the Caddepot on the administration computer (3).

Specify the synchronization interval (4) in minutes. The synchronization interval defines how often GENIUS TOOLS Starter App runs the data synchronization. Additionally, the synchronization is run automatically when GENIUS TOOLS Starter App is started.

The best setting for the synchronization interval depends on how often the data is changed and on how many GENIUS TOOLS Starter Apps are running at the same time. If there are many changes to the data, the interval should be shorter. If many users are accessing the Caddepot, the interval could be longer to avoid too much network load due to frequent synchronizations.

Under Target directory (5), enter the location where the Cadpool directory should be located on the application computers. If the Cadpool directory is not present yet, GENIUS TOOLS Starter will try to create it. It will also create a subdirectory named for the operating environment. You can use absolute paths or environment variables that are available on the application computers.

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Click *Migrate* to run the migration process. Afterwards, the Caddepot will contain a migrated operating environment that contains all previously present project configurations.

Please note: The time required for the migration process depends on the amount of data and on the network connection speed.

8.7 Converting a Startup TOOLS database

In GENIUS TOOLS Environment Administrator use the function *Convert Startup TOOLS Database* if you are using a GENIUS TOOLS Starter or Startup TOOLS version 6.0.0.0 or later and want to convert a database from a previous Startup TOOLS version (up to 2018). If you are not using a ≥ 6 version of GENIUS TOOLS Starter or Startup TOOLS yet, use the function *Startup TOOLS-Migration* instead.



When you convert a Startup TOOLS database, a single ABS database is converted into the new SQLite format without copying the directory structure.

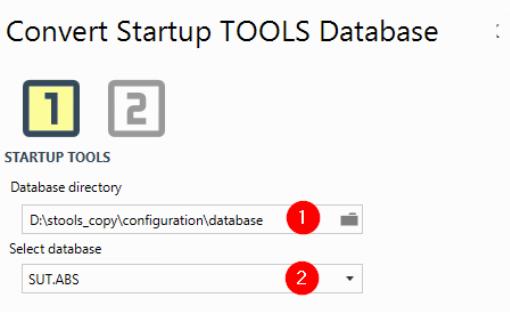
The *Convert* wizard corresponds to steps 1 and 3 of the *Startup TOOLS Migration* wizard.

Step 1: Select database

Under Database directory (1), enter the path to your copy of the old Startup TOOLS installation (stools). The convert wizard will automatically find the Startup TOOLS installation if it is on the same computer, but you can correct the directory or select another one.

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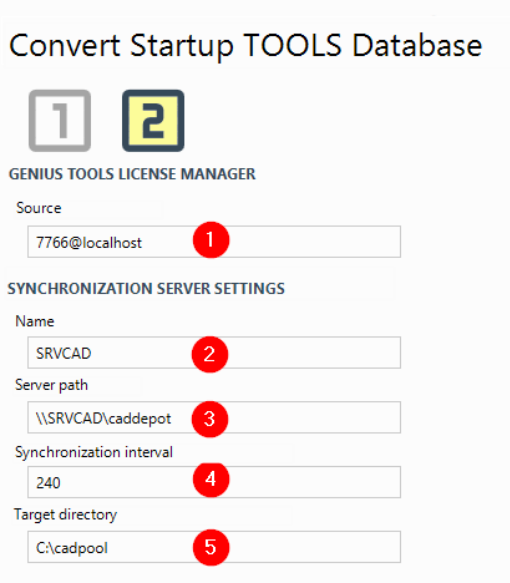
Under Select database (2), select the database *sut.abs*. If there is no database with this name, select the database you wish to convert.



Step 2: Configuring license and synchronization server

Under Source (1), enter the license server that GENIUS TOOLS Starter App should use to get licenses. Enter the license server in the format *Port@ServerName*, e.g., *7766@<license_server_name>*.

Configure the synchronization between the operating environment of the Caddepot and that of the local computer (Cadpool). Enter a descriptive server name (2), then enter the path to the Caddepot on the administration computer (3).



Specify the synchronization interval (4) in minutes. The synchronization interval defines how often GENIUS TOOLS Starter App runs the data synchronization. Additionally, the synchronization is run automatically when GENIUS TOOLS Starter App is started.

The best setting for the synchronization interval depends on how often the data is changed and on how many GENIUS TOOLS Starter Apps are running at the same time. If there are many changes to the data, the interval should be shorter. If many users are accessing the Caddepot, the interval could be longer to avoid too much network load due to frequent synchronizations.

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Under Target directory (5), enter the location where the Cadpool directory should be located on the application computers. If the Cadpool directory is not present yet, GENIUS TOOLS Starter will try to create it. It will also create a subdirectory named for the operating environment. You can use absolute paths or environment variables that are available on the application computers.

Click *Convert* to start the database conversion.

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9 GENIUS TOOLS Starter Service

GENIUS TOOLS Starter Service provides a further type of data synchronization. The service monitors the caddepot for changes and makes this information available in the working environments in the ZIP file *gts_filetree_structure.zip*. During a synchronization process, GENIUS TOOLS Starter App only needs to load this information to detect changes and reload the data. This reduces the synchronization time significantly and will be especially useful when connection speed is slow.

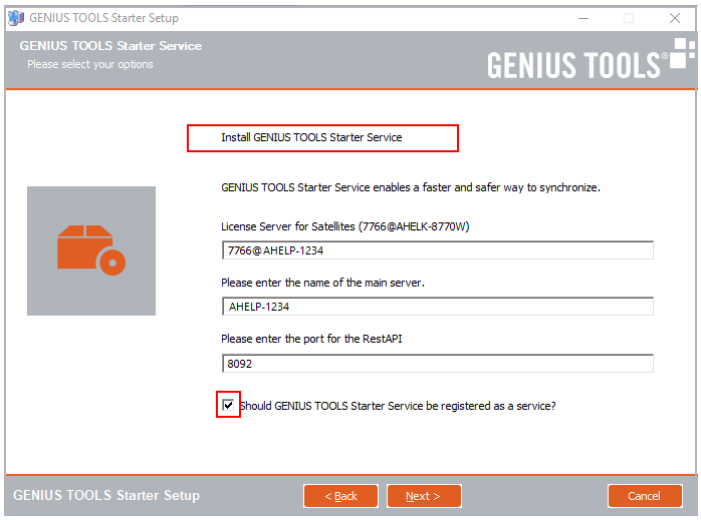
GENIUS TOOLS Starter Service can be installed on the installation computer with the software update to Startup TOOLS 7.0.0.0 and later versions. It will be located in the *gts-service-latest* directory in the installation depot and will be updated automatically to the latest version. The service checks the caddepot for changes and writes these changes into the *gts_filetree_structure.zip* file in the operating environment.

9.1 Installation

GENIUS TOOLS Starter Service is installed in the installdepot directory with every installation. However, the service is only registered and started if this has been selected in the installation wizard for GENIUS TOOLS Starter.

To do so, open the EXE file with the path *GTSTARTER\installdepot\gts-service-latest\setup-GENIUS-TOOLS-Starter-Service-XXX-software.exe*

Check the box to register the service in the dialog *Install GENIUS TOOLS Starter Service*.



GENIUS TOOLS Starter Setup

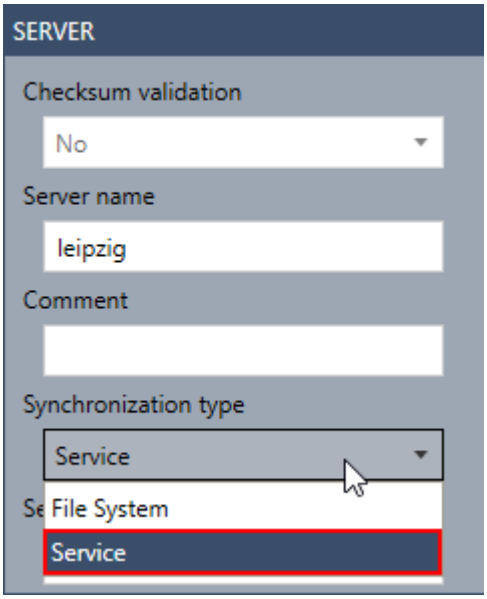
The service will then start when Windows is started. The service is located in in directory *gts-service-latest* and must not be moved elsewhere. The service automatically finds the Caddepot which it checks for changes in data. No further configuration is needed.

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Warning: The service must not be located elsewhere as it cannot otherwise find the Caddepot directory. It must be named GENIUS TOOLS Starter Service so it can be updated by the setup.

Hint: If you have not installed GENIUS TOOLS Starter Service during setup, start the file *registerService.cmd* in the directory *gtsa-service-latest* for installation. Administration rights are needed.

After installing GENIUS TOOLS Starter App open GENIUS TOOLS Project Configurator and switch the synchronization type to *Service* in *Configuration* > *Synchronization* > *Server*.



GENIUS TOOLS Project Configurator

9.2 Working with satellites

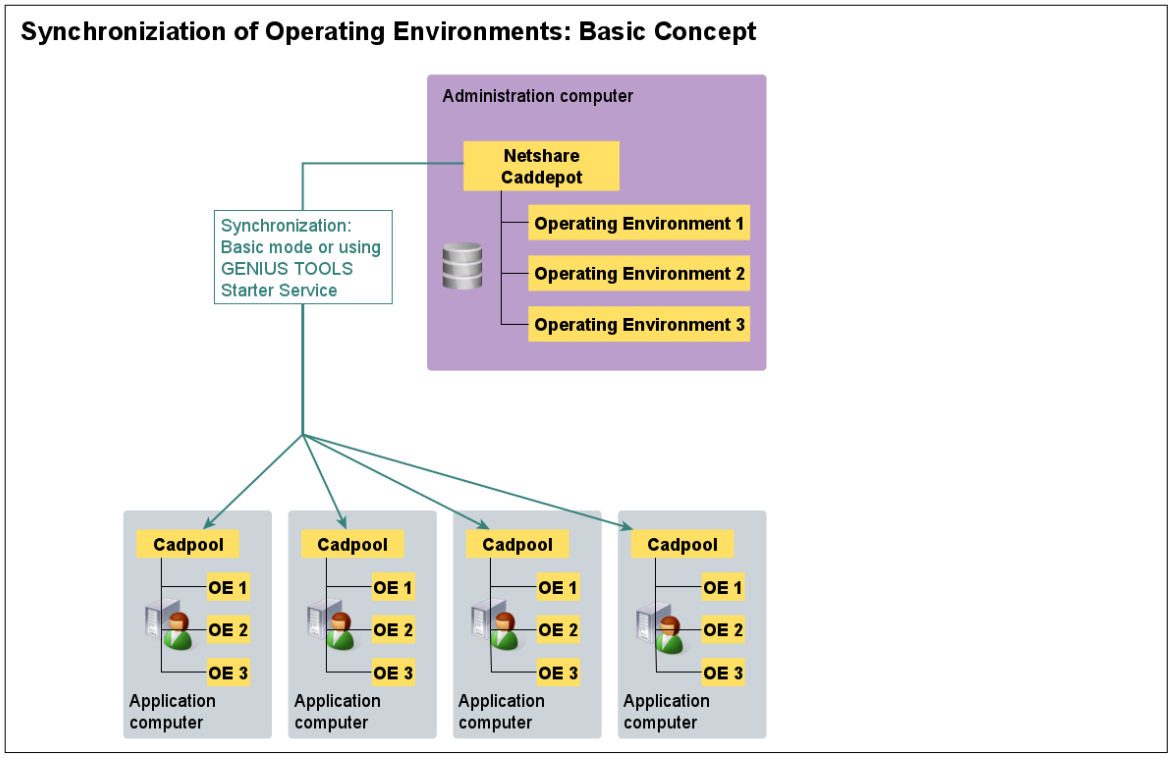
With GENIUS TOOLS Starter 7.0.1.0 the data synchronization of GENIUS TOOLS Starter Service can be operated with satellites. The state of one or more operating environments of a central main server is mirrored on a satellite.

Business locations with a slow connection to the main server can access a more accessible satellite instead. This significantly reduces the time needed for data synchronization.

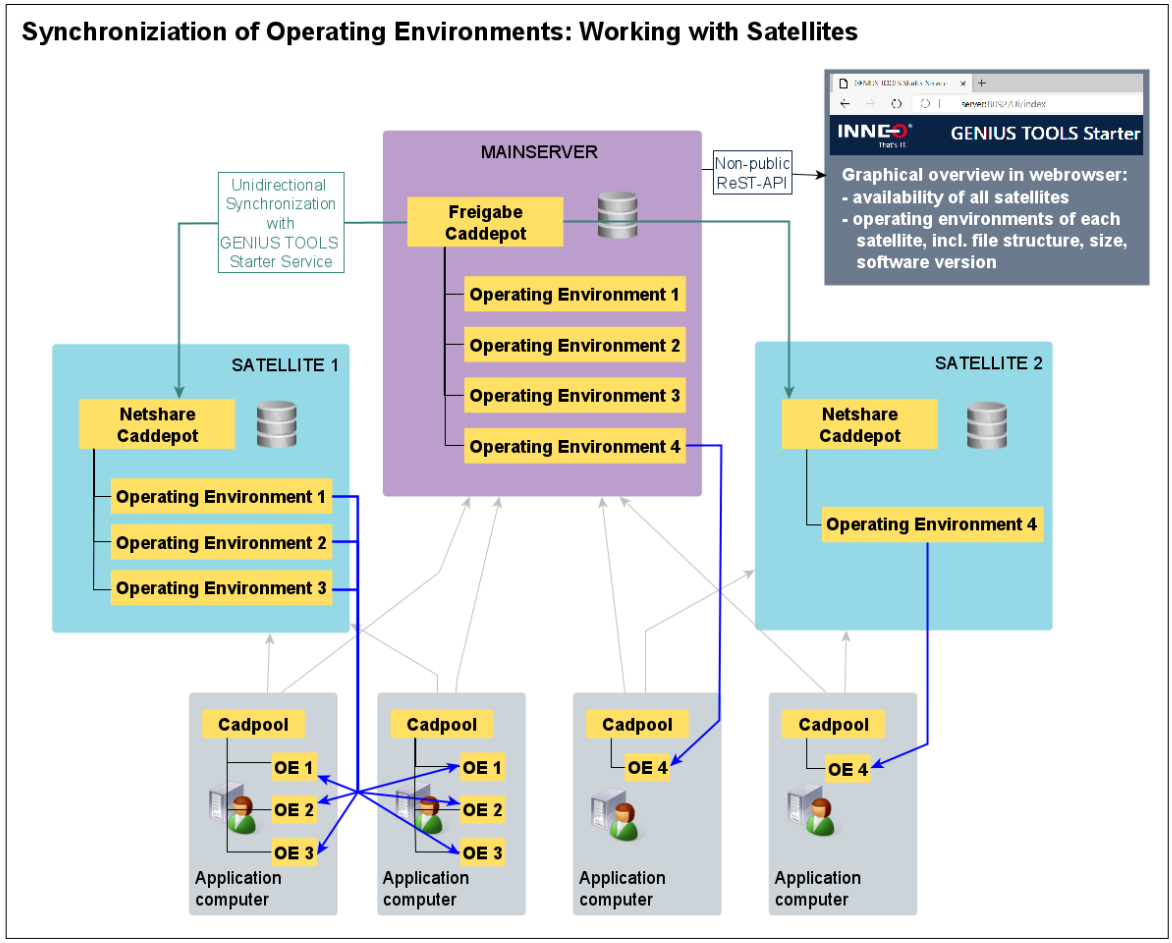
GENIUS TOOLS Starter App automatically determines which satellite or main server responds fastest based on the ping runtime. This is then used for synchronization.

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Synchroniziation of Operating Environments: Basic Concept



Synchroniziation of Operating Environments: Working with Satellites



Legend

AU 1 Operating environment with GENIUS TOOLS Starter

Synchronization from defined source

Ping query

Synchronization from server that is available more quickly

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Active and passive satellites

You may operate active or passive satellites.

An active satellite is a server that request data to be synchronized from the main server at a defined time interval. This requires GENIUS TOOLS Starter Service.

A passive satellite is a shared directory on a computer, to which data from the main server is copied. It does not require a service.

Active satellit	Passive satellite
Server	Shared folder on a computer
Requires GENIUS TOOLS Starter Service	No service required
Changes in files on the main server will be synchronized to the target with the next synchronization according to the defined time interval	Changes in files on the main server will be synchronized immediately. The defined synchronization interval serves as a back up, meaning that after this period all files will be synchronized at the latest.

9.2.1 Operating active satellites

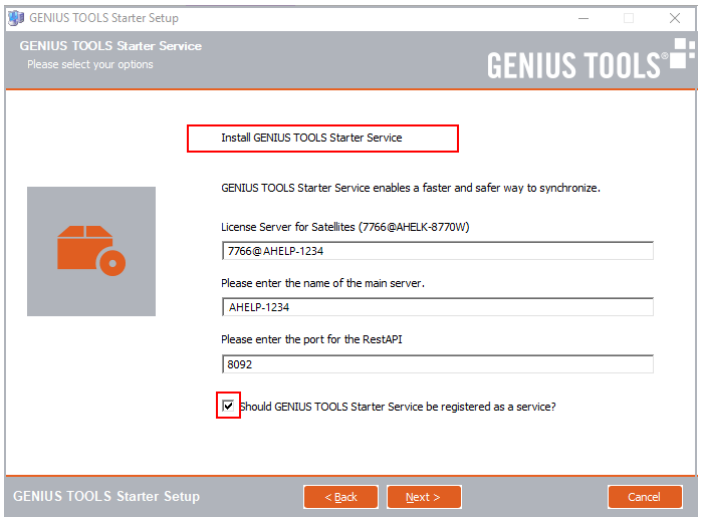
A computer will be installed as a satellite if you specify this in a configuration file of GENIUS TOOLS Starter Service.

Follow these instruction for setting up active satellites.

Install GENIUS TOOLS Starter on main server

1. Open the setup file of GENIUS TOOLS Starter on the main server, i. e. the server where the Caddepot directory is located. The Caddepot is the synchronization source for satellites. The path to the main server is set in GENIUS TOOLS Environment Administrator.
2. In the dialog *Install GENIUS TOOLS Starter Service* check the box to register the service.

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3. If port 8092 is not free, change the default value in the dialog.
4. In the next dialog check the box *Create net shares CADDEPOT / GTStarter* and finish the setup.

Result
The GENIUS TOOLS Starter Service setup creates four files under \
\<*mainserver*>*gtstarter**installdepot**gts-service-latest**conf*\

- *gt_service_main.cfg* for the base configuration. This file must not be edited.
- *gt_service_<mainservername>.cfg* for the configuration of the main server. This file can be partially modified.
- *gt_service_satellite.cfg* is the copy template for active satellites. This file must be copied and renamed. (Step 8)
- *gt_service_share.cfg* is the copy template for passive satellites.

Edit configuration file for main server

5. Open the file with the name *gt_service_<mainservername>.cfg*
6. The file contains two commands that must not be changed: `service.type=main` and `service.rest.baseaddress=<mainservername>`
7. Edit the file if you want to change other information. The commands are listed in the table below.

Create configuration file for each active satellite

8. Copy the file *gt_service_satellite.cfg*
9. Rename the file to *gt_service_<passivesatellitename>.cfg.* Each active satellite requires a separate file.
10. The file contains one command that must not be changed: `service.type=satellite`
11. Add the remaining information from the table below.

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Information for		Command	Explanation
Main server	Act. satellite		
X		service.type=main	Information, that this is the configuration file for the main server
	X	service.type=satellite	Information, that this is the configuration file for an active satellite
X	X	service.rest.baseaddress=	Enter name of main server
X	X	service.sync.interval=	Interval in minutes after which the active satellite will be synchronized from the main server. Default value: 60 If entries differ in the configuration files for main server and active satellite, the interval in the satellite file will be used.
	X	service.sync.source=	Path of the caddepot directory that will be synchronized from. Usually: \\<mainserver>\gtstarter\caddepot
	X	service.update.source=	Path to the gt-service-latest directory on mainserver. Usually: \ \\<mainserver>\gtstarter\installdepot\ gt-service-latest
	X	service.lic.server=	Address of GENIUS TOOLS License server, e. g. 7766@gtslicenseserver
X	X	service.rest.port=	Standard port. 8092
	X	service.environment.whitelist=	List of operating environments that are to be synchronized from the main server (separated by colon) Empty entry: All operating environments will be synchronized

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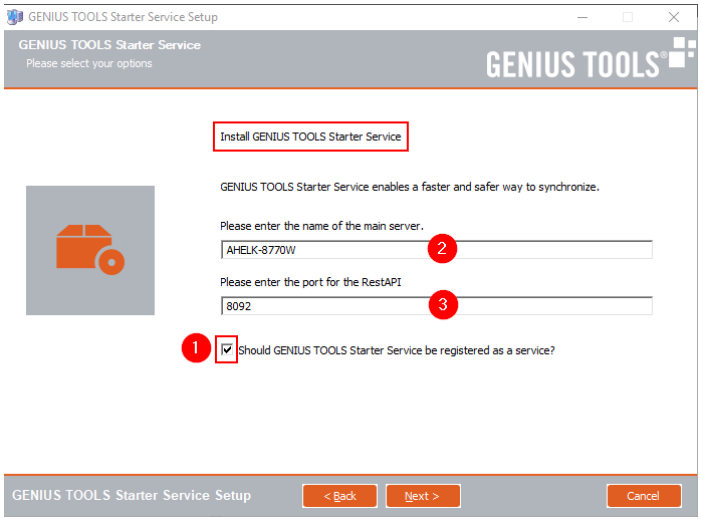
Information for		Command	Explanation
Main server	Act. satellite		
X		`service.generateMd5=1` or `service.generateMd5=0`	1: Synchronization of files will additionally be checked with a MD5-checksum. 0: No additional test will take place.
X		`service.admin.pwd =`	Password for the website which displays status and content of all satellites. Without an entry, the default password *admin* must be used.

Install GENIUS TOOLS Starter Service on the satellite

The installation of a satellite is carried out on the computer that is to function as a satellite.

12. Open on the satellite computer the GENIUS TOOLS Starter Service Setup from the main server: \\<*mainserver*>*gtstarter**installdepot**gts-service-latest**setup-GENIUS-TOOLS-Starter-Service-XXX-software.exe*

13. In the dialog *Install GENIUS TOOLS Starter Service* check the box (1) to register the service.

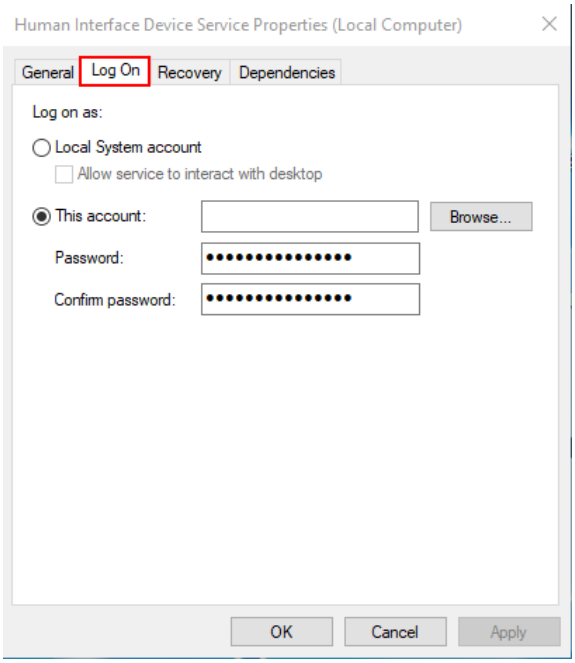


14. Enter the data of the main server. (2)

17. If port 8092 is not free, change the default value in the dialog. (3)

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15. Check if the local system account has read access to data on network drives. An administrator account with read access to the main server is required to run GENIUS TOOLS Starter Service. If the local system account does not have read access, change to another account for the service. To do this, go to *Services* in Windows and in the GENIUS TOOLS Starter Service, right-click on *Properties*. In the *Log On* tab, switch from *Local System account* to *This account* and enter the administrator account and its password. Overwrite the password dots preset by Windows.



Log On Tab in the Services Dialog for GENIUS TOOLS Starter Service

Confirm in the following dialog that the account under which GENIUS TOOLS Starter Service runs has read access by checking the box.

17. In the next dialog check the box *Create net shares CADDEPOT / GTStarter* or create the net shares manually.

Result:
The setup

- creates the corresponding directory structure on the computer (caddepot/installdepot/mediadepot),
- generates the required approvals Caddepot and GTStarter (if selected),
- installs, registers and starts GENIUS TOOLS Starter Service.

GENIUS TOOLS Starter Service loads the configuration files from the main server and restarts itself.

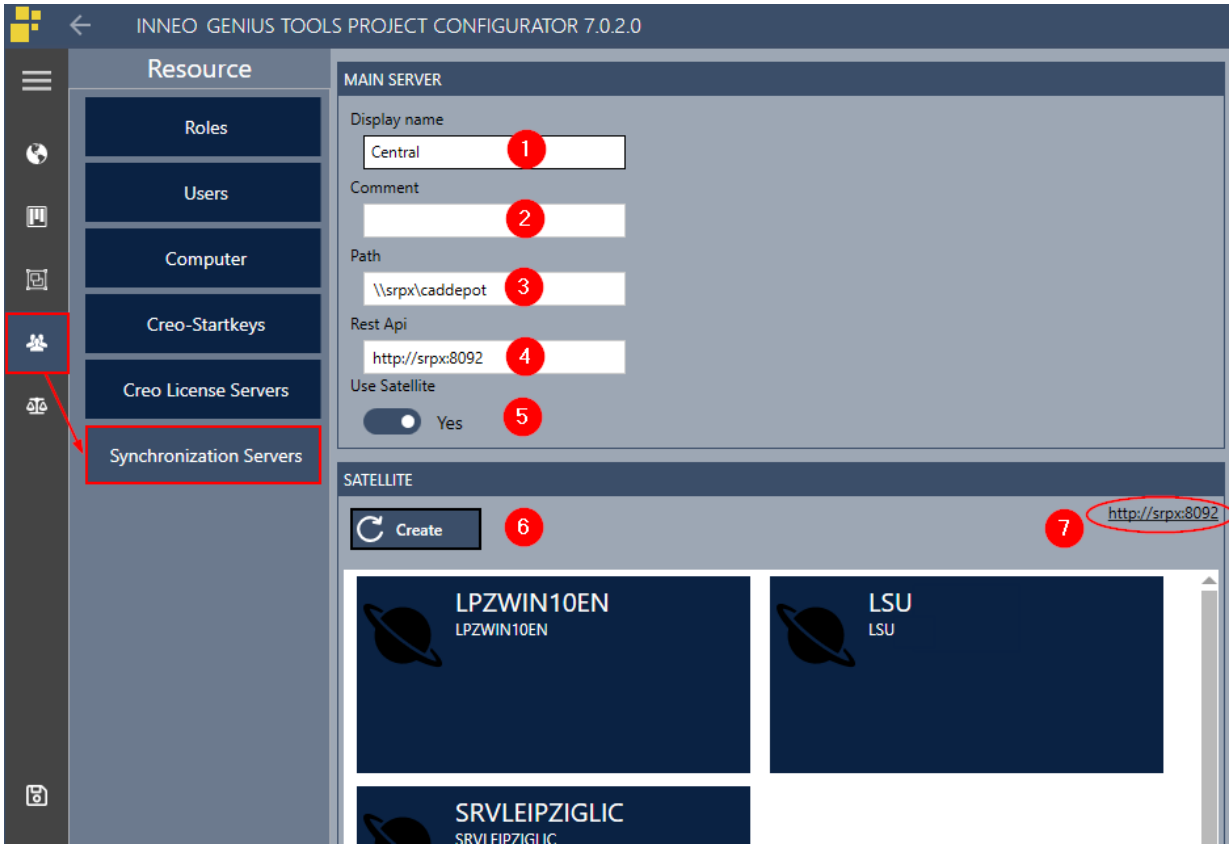
The configuration settings are used on the satellite.

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The satellites communicate their current status to the main server via an interface and can be accessed in a browser window. This allows the administrator to easily monitor the status of the satellites. (See Overview of satellites in browser.)

Integrating satellites in GENIUS TOOLS Starter

18. In GENIUS TOOLS Project Configurator go to the *Resources* > *Synchronization Servers*. The displayed values 1 to 3 are those that have been specified in GENIUS TOOLS Environment Administrator.



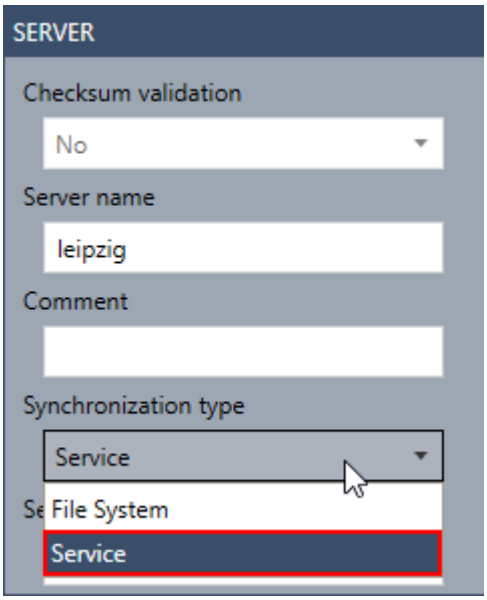
Linking satellites to GENIUS TOOLS Starter

19. Enter the Web URL in the notation `http://<mainservername>:<portnummer>` The port name is the entry under `service.rest.port=` in the configuration file (Standard: 8092)
20. The action *Create (5)* links GENIUS TOOLS Starter to GENIUS TOOL Starter Service and displays all satellites.
21. Click the link (6) for more detailed information of each satellite in a new browser window.

Synchronization type: service

22. Check that in GENIUS TOOLS Project Configurator the synchronization type is set to *Service (Configuration > Synchronization > Server)*.

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GENIUS TOOLS Project Configurator

Setting up satellites for working environments
There is no need for assigning a satellite to an operating environment because the satellite or main server with the lowest ping time will be automatically used for synchronization.

Monitoring satellites
You can open a graphical overview showing the states and the operating environments of all satellites in a web browser with *http://<mainservername>:<portnumber>*, see Overview of satellites in browser 60.

Updating satellites
Satellites are updated automatically. Software updates from GENIUS TOOLS Starter Service are uploaded to the main server via setup. With the next synchronization, the satellite server downloads the update and restarts itself automatically.

The web browser offers the possibility to update a satellite manually by pressing *Sync,* see non-automated actions. 60

9.2.2 Operating passive satellites

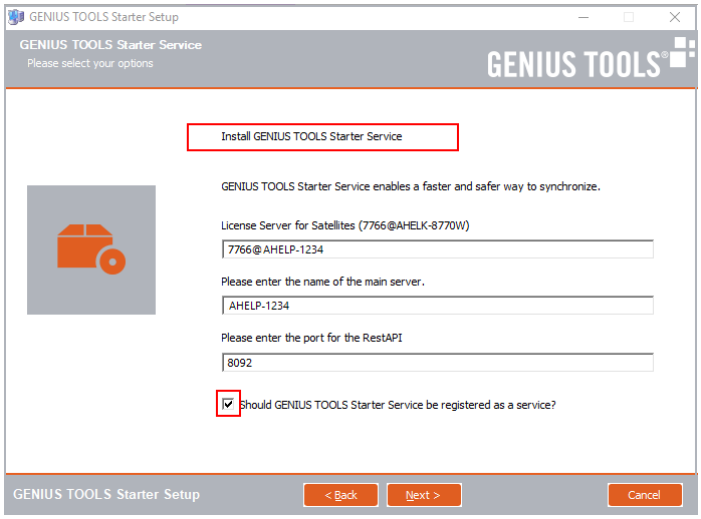
A net share on a computer will be installed as a passive satellite if you specify this in a configuration file of GENIUS TOOLS Starter Service.

Follow these instruction for setting up passive satellites.

Install GENIUS TOOLS Starter on main server
1. Open the setup file of GENIUS TOOLS Starter on the main server, i. e. the server where the Caddepot directory is located. (The Caddepot is the synchronization source for satellites.)

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2. In the dialog *Install GENIUS TOOLS Starter Service* check the box to register the service.



3. If port 8092 is not free, change the default value in the dialog.
4. In the next dialog check the box *Create net shares CADDEPOT / GTStarter* and finish the setup.

Result
The GENIUS TOOLS Starter Service setup creates four files under \
\<*mainserver*>*gtstarter**installdepot**gts-service-latest**conf*\

- *gt_service_main.cfg* for the base configuration. This file must not be edited.
- *gt_service_<mainservername>.cfg* for the configuration of the main server. This file can be partially modified.
- *gt_service_satellite.cfg* is the copy template for active satellites.
- *gt_service_share.cfg* is the copy template for passive satellites. This file must be copied and renamed. (Step 8)

Edit configuration file for main server

5. Open the file with the name *gt_service_<mainservername>.cfg*
6. The file contains two commands that must not be changed: `service.type=main` and `service.rest.baseaddress=<mainservername>`
7. Edit the file if you want to add the information in the table below.

Configuration for main server in the file *gt_service_<mainservername>.cfg*	
`service.type=main`	Information, that this is the configuration file for the main server
`service.rest.baseaddress=<mainservername>`	Enter name of main server

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Configuration for main server in the file *gt_service_<mainservername>.cfg*	
`share.sync.interval=`	Interval in minutes for synchronizing the target directory on the passive satellite from the main server. Default value: 480
`service.rest.port=`	Standard port. Default: 8092
`service.generateMd5=1` oder `service.generateMd5=0`	1: Synchronization of files will additionally be checked with a MD5-checksum. 0: No additional test will take place.
`debug=`	1: Debug logging set 0: No debugging executed (default)
`service.add.firewall=`	1: Directories on passive satellites are automatically shared (default setting) 0: Directories on passive satellites must be shared manually

Create configuration file for each passive satellite

8. Copy the file *gt_service_share.cfg*
9. Rename the file to *gt_service_share_<passivesatellitename>.cfg*. Each passive satellite requires a separate file.
10. Add the remaining information from the table below.

Configuration for passive satellite in file *gt_service_share_<passivesatellitename>.cfg*	
`service.share.name=`	Enter name of passive satellite, i. e. the shared folder on the satellite
`service.satellite.share=`	Path of the caddepot directory which is to be synchronized. Usually: \\<*passivesatellitename*>*gtstarter**caddepot*
`service.environment.whitelist=`	List of operating environments that are to be synchronized from the main server (separated by colon) Empty entry: All operating environments will be synchronized

Restart Main server

11. Start the service GENIUS TOOLS Starter Service on the main service fresh.

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Integrate satellites, check synchronization type

12. Proceed with step 18 and following in operating active satellites. 56

9.3 Overview of satellites in browser

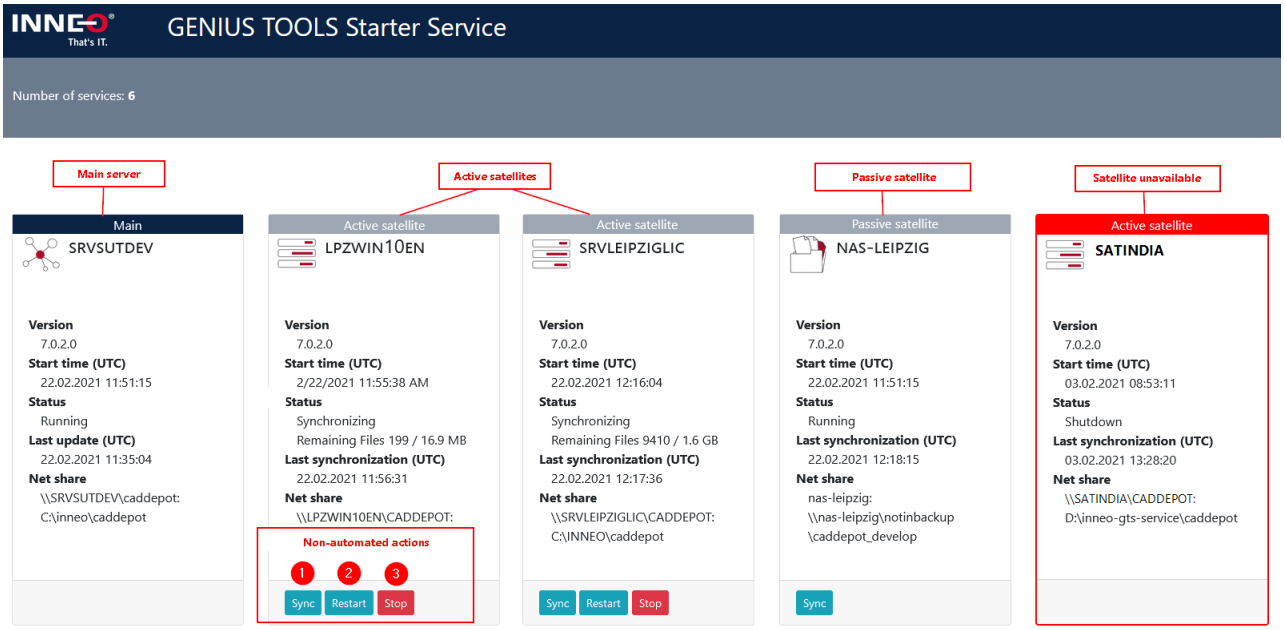
An overview of all satellites and the working environments located on them can be viewed in a browser with the URL:

http://<servername>:<portnummer>

Alternatively, you can access the web interface in GENIUS TOOLS Project Configurator, under the main menu item *Resources* > *Synchronization Server* > *Dialog Satellites (6)*

The website can be protected by a password, see section 62 below.

The start page contains an overview of all satellites that are known to the main server. If a service is not running or the synchronization is overdue, the satellite is framed in red.



Start page: Overview of the main server and all satellites

Non-automated actions on satelllites

1. Sync: Initiate synchronization
Satellites and satellite shares are synchronized immediately, independently from the configured interval.

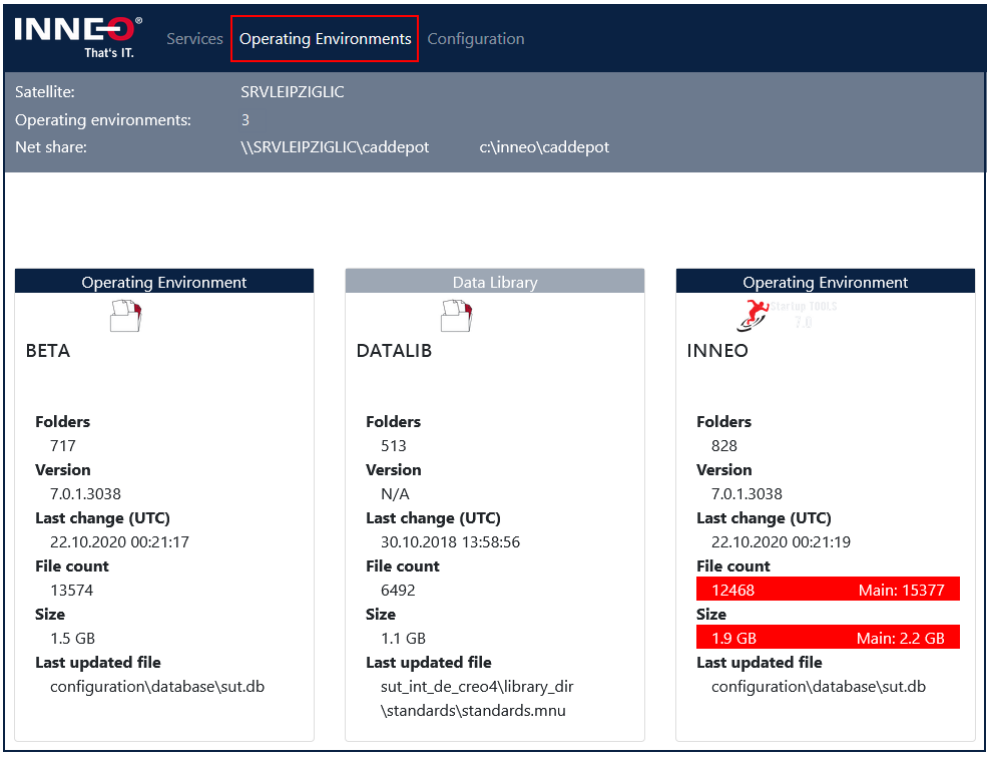
2. Restart: Restart GENIUS TOOLS Starter Service
GENIUS TOOLS Starter Service is closed and starts fresh at the satellite server.

3. Stop: End GENIUS TOOLS Starter Service
Attention: If using this option, you have to restart the service on the satellite server.

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Operating environments on a satellite

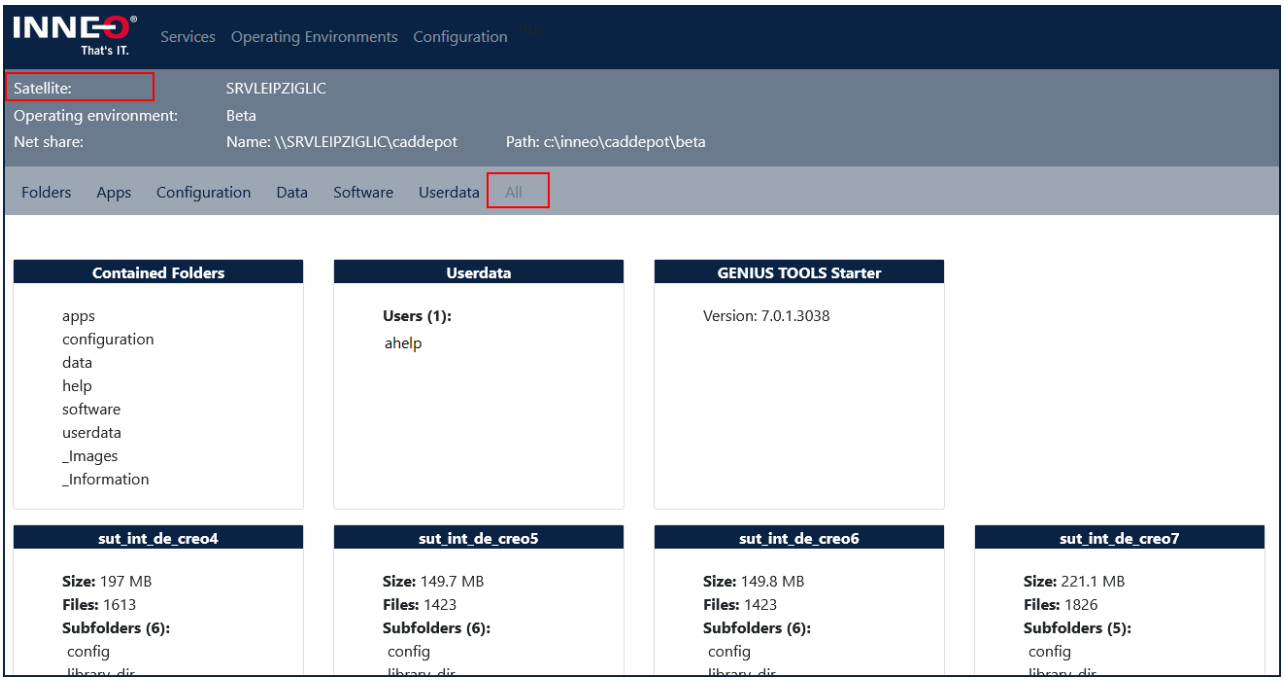
By clicking on a satellite, you can view the working environments in a separate browser window. Here you can check the status of individual operating environments. The data from the *gt_filetreestructure.zip* is compared with the current data on the hard disk. If there are any differences, because e.g. data synchronization is not working or the process has been stopped, the corresponding values (number of folders, size etc.) are highlighted in red and the current value is displayed on the left.



Display of operating environments and library

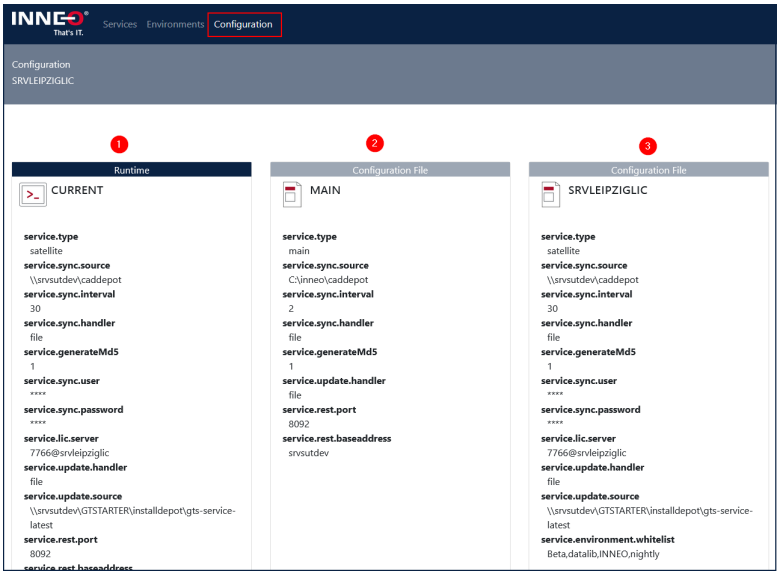
By clicking on an operating environment, information about it can be retrieved, e. g. which applications are available under Apps or how much data is available in the Data folder.

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Configuration settings of a satellite

The *Configuration* button displays the configuration settings for the satellite under Runtime (1), which is made up of the configuration files (CFG files) of the main server (2) and the satellite (3).

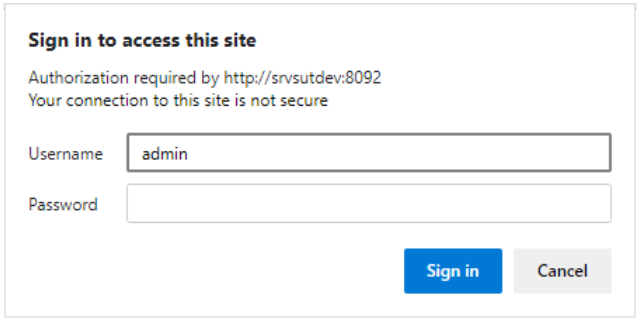


Display of configuration settings of a satellite

Password protection for website

Access to the website is protected by a password. For changing the standard password *admin*, enter the command `service.admin.pwd = nameofpassword` in the configuration file of the main server (*gt_service_<mainservername>.cfg*, see Operating active satellites 51).

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Password query

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10 Glossary

Administration computer
Computer on which the administrative user has full write access to the Caddepot directory in order to manage all data on the file system level.

Application computer, workstation
Computer on which the (Creo) user works. The application computer houses the Cadpool directory, which contains the local operating environment.

Creo
CAD software by PTC with the applications Creo Parametric, Creo Elements, Creo Direct.

Creo startkey (also: PSF key, start command)
Configured start command that opens Creo with one or several defined licenses or license extensions. Stored as PSF file in PTC bin directory.

Cadpool
Directory on the application computer that contains the local operating environments. The Cadpool directory is synchronized from the Caddepot.

Caddepot
Directory on the administration computer that contains the central operating environment.

Client
Term for application computers for Startup TOOLS versions up to 2018.

Computer group
A defined group of configured Windows computers. Contains settings in which the computers' configuration differs from the general system-wide configuration.

Conditional config.pro block
Config.pro block whose validity is restricted to condition(s) by one or more tag ID(s). Notation: config_*.TAGID.pro

Configuration file
File which determines settings for a Creo application. There are four types of configuration file: *config.pro*, *customization.ui*, *config.sup* and *config.val*.

Config.pro block
Configuration file which is read by GENIUS TOOLS Starter and assembled to form a config.pro file for Creo. Contains Creo configuration options. Notation: *config_*.pro,* e. g. *config_sut_de_c5p_mapkeys.pro*.

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Config.pro file (short: config.pro)
Most important Creo configuration file, defines user settings.

Config_*.pro file
See config.pro block

Config.sup file
Creo configuration file which contains settings that cannot be changed by the users, e.g., to ensure drawing standards.

Config.val file
Creo configuration file which contains validation settings for data import.

Customization.ui file
Creo configuration file which contains user interface customizations for a user.

Data directory
Main directory for all data related to an operating environment at *<GTS-OperatingEnv>\data*.

Educational license
License for academic institutions.

Free tag ID
Textual marking in a config.pro block 64 which restricts the file to the selection of a combined project option.

GENIUS TOOLS
Family of software products by INNEO Solutions GmbH, including Startup TOOLS, Model Processor, and freeware tools such as Purge.

GENIUS TOOLS for Creo
Component of the Startup TOOLS software product which contains functional enhancements for Creo.

GENIUS TOOLS Environment Administrator
Stand-alone administrative tool. It is used to create and update work environments, edit work environment properties and migrate from older versions of Startup TOOLS to version 6 and later. GENIUS TOOLS Environment Administrator is located at ... *\installdepot\gtsa-latest\gtsa-exe*.

GENIUS TOOLS License Manager
Administrative tools for managing Startup TOOLS licenses.

GENIUS TOOLS Project Configurator
Administrative component of GENIUS TOOLS Starter for managing project configurations and other properties of an operating environment. Open GENIUS TOOLS

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Project Configurator from the user menu of GENIUS TOOLS Starter App.

GENIUS TOOLS Starter
Software product consisting of the three components GENIUS TOOLS Project Configurator, GENIUS TOOLS Starter App and GENIUS TOOLS Environment Administrator.

GENIUS TOOLS Starter App
Stand-alone component of GENIUS TOOLS Starter which lets users start configured Creo projects. GENIUS TOOLS Starter app is located in each operating environment under *...\caddepot\lokal\software\GTS.exe*.

GENIUS TOOLS Starter App Config Analyzer
Dialog box in GENIUS TOOLS Starter App, in which configuration settings of projects can be analyzed and edited.

GENIUS TOOLS Starter Service
Method in GENIUS TOOLS Starter for faster data synchronization.

GTS
Abbreviation for GENIUS TOOLS Starter.

GTS.exe
Name of the executable file for GENIUS TOOLS Starter App.

GTSA.exe
Name of the executable file for GENIUS TOOLS Environment Administrator.

GTS Alias
User alias in GENIUS TOOLS Starter, for use in additional applications for Creo. The GTS alias is available as an environment variable (`%GTS_USER%`) in Creo. If you do not specify an alias, the Windows user name will be used.

GTS Alias Long
Long user alias. The long alias is available in Creo via the environment variable `%GTS_USERLONG%`.

GTS Alias Short
Short user alias. The short alias is available in Creo via the environment variable `%GTS_USERSHORT%`.

Home Use license
License for private use.

Initial synchronization, initialization
First synchronization run which creates the Cadpool directory on the application computer and synchronizes it with the Caddepot.

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Installdepot
Subdirectory of the installation directory that contains the release and version setups without settings and customizations. All setup programs unpack their data to this directory.

Installation computer
Computer on which the setup programs are run. Typically, this is also the administration computer.

LDAP (Lightweight Directory Access Protocol)
Network protocol for accessing a distributed directory service, e.g. the Windows user management.

Mapkey
Macro defining a sequence of commands and functions which can be created in Creo to simplify often-used procedures.

Mediadepot
Subdirectory of the installation directory. It contains setup files for different releases and versions. All setup files will install or unpack to the Installdepot directory.

NAS (Network Attached Storage)
File server providing independent storage capacity in a network of computers.

NC (Numerical Control)
Computer-based applications for controlling machine tools and production lines.

Operating environment
Directory that contains all the data required for working with the desktop application. This includes configuration data, libraries, templates and additional applications. The operating environment also contains a database with all configured projects.

Operating environment, local
Operating environment on the application computer.

Organization tree
Structure of all units and subunits that specifies the call hierarchy. Created in GENIUS TOOLS Project Configurator.

Perpetual license, permanent license
License that allows using a defined version of a software for an unlimited period of time.

PDMLink
Component of the Windchill software product family that is used for product data management.

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PTC
The software company that develops Creo.

Project
Collection of configurable application properties such as project directory, data directory and license, e.g. for Creo Parametric.

Project, blocked
Project that a user can neither access nor see in GENIUS TOOLS Starter App.

Projekt, hidden
Project that a user cannot see in GENIUS TOOLS Starter App, but is able to access it with a transfer parameter.

Project, invalid
Project, for which a user has no valid license or required license extensions. Access to it an display in GENIUS TOOLS Starter App can be configured.

Project directory
Directory for project data at *<GTS-OperatingEnv>\configuration\projects\% GTS_PROJECT_DIR%*

Project option
Option to select on one or more projects in GENIUS TOOLS Starter App the Creo language, Creo startkey as well as license extensions and add-on programs.

Role
Group of users or computers that are assigned access rights to projects and GENIUS TOOLS Starter App functionality.

Satellite (also: synchronization or mirror server)
Computer or shared folder on a computer to which the state of one or more operating environments of a central main server is mirrored.

Searchmode directory
Subdirectory of the directory *Standard*, *Units*, *Projects* or *Users* which is included into the call hierarchy for configuration files and batch files if Windchill is active.

Startup TOOLS
Software package that comprises the products GENIUS TOOLS Starter, GENIUS TOOLS Library, GENIUS TOOLS Parameter, as well as Creo data packages and the GENIUS TOOLS License Manager.

Startup TOOLS Server
Term for the administration computer for Startup TOOLS versions up to 2018.

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STOOLS
Root directory name for Startup TOOLS versions up to 2018.

Subscription license
License that allows using a software for a limited period of time.

Subunit
Subordinate unit created by attaching a unit to another unit in the organization tree 67.

SUT
Abbreviation for Startup TOOLS.

Synchronization
Functionality that copies the data of an operating environment in the Caddepot directory to the Cadpool directory on an application computer.

Tag ID
Textual marking in a config.pro block that is recognized by GENIUS TOOLS Starter. There are tag IDs for units (unit tag ID 69) and for project options (free tag ID 65).

TeamViewer
Third-party software used by INNEO Solutions GmbH to provide remote support.

UDF (User-defined feature)
Template for repeatedly required Creo features.

Unit
Group of users who belong to a company department defined either geographically or organizationally. Created in GENIUS TOOLS Project Configurator.

Unit directory
Directory in the units system directory that contains config.pro blocks 64 and other files for a unit.

Unit tag ID
Tag ID that is assigned to a unit in GENIUS TOOLS Project Configurator.

Unit type
Individually defined category for units, for better representation in GENIUS TOOLS Project Configurator.

User group
A defined group of configured Windows users. Contains settings in which the users' configuration differs from the general system-wide configuration.

Windchill
Software product by PTC for managing product data over the entire product life cycle.

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Rindelbacher Str. 42

73479 Ellwangen

Germany

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