

GENIUS TOOLS Starter

12.0.1.0

Documentation

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1	Basics	3
1.1	Scope of delivery	3
1.2	Licenses	4
1.3	Data synchronization	4
1.4	Caddepot and operating environments	5
1.5	Important Terms	7
2	Requirements	9
2.1	Hardware and software requirements	9
2.2	User rights	10
3	Installation scenarios	12
3.1	Standard scenario	12
3.2	Standard scenario with satellites	13
3.3	Caddepot on file server	15
3.4	Caddepot on local computer	16
3.5	Mainserver in cloud	16
4	Installation	18
4.1	Software setup	18
4.2	Data setup	21
4.3	General installation mechanism	24
5	GENIUS TOOLS Environment Administrator	25
5.1	Usage	25
5.2	Creating an operating environment	28
5.3	Adding components to an operating environment	32
5.4	Updating software in an operating environment	37
5.5	Modifying settings	40
5.6	Creating a Git repository	43
6	Update process	47
6.1	Updating Creo data packages and resource folder	49
7	Setting up user computers	52
7.1	Administration computer	52
7.2	Application computer	53
8	Customizing the GENIUS TOOLS Starter environment	55
8.1	Start parameters	55
8.2	Environment variables	56
8.3	Batch files	62

9	Test environment	64
9.1	Creating a test environment	64
10	GENIUS TOOLS Starter Service	66
10.1	Installation	66
10.2	Working with satellites	67
10.2.1	Operating active satellites	69
10.2.2	Operating passive satellites	73
10.2.3	Configuration options for satellites	74
11	Directory structure	77
12	Glossary	80
13	Copyright	87

1 Basics

GENIUS TOOLS® Starter enables the start of locally installed applications with a centrally managed configuration. All required data is synchronized from a central storage location (Caddepot) to local computers (Cadpool). Heterogeneous IT landscapes can thus be administered globally and organized on a user-specific basis.

GENIUS TOOLS Starter software can be installed independently or is a component of the product package Startup TOOLS. The procedures for installation, updates and administration are the basically same.

1.1 Scope of delivery

GENIUS TOOLS Starter

The setup file *setup-GENIUS-TOOLS-<version>-software.exe* contains

- the software for GENIUS TOOLS Starter App and GENIUS TOOLS Project Configurator

GENIUS TOOLS Starter App is a stand-alone software application (*GTS.exe*) that allows users to start those Starter projects they have access to. It is located in each operating environment in the system directory *software*.

GENIUS TOOLS Project Configurator is a component of the GENIUS TOOLS Starter software for the configuration of Starter projects. It is opened from the GENIUS TOOLS Starter App. Administrators can prohibit access to GENIUS TOOLS Project Configurator for users.

- the software for GENIUS TOOLS Environment Administrator program

GENIUS TOOLS Environment Administrator is a stand-alone application for the administration. It is used to create and update operating environments, as well as edit properties and addon-applications. It is located in the installation directory under *\installdepot\gtsa-latest\gtsa-exe*.

- the service GENIUS TOOLS Starter Service
- the service GENIUS TOOLS Gitea

All setups unpack their data in the installation directory into the directory *installdepot* according to their versions.

Startup TOOLS

Startup TOOLS is a product package consisting of the products GENIUS TOOLS Starter and GENIUS TOOLS Library / Parameter as well as Creo Parametric data packages.

The setup file *setup-Startup-TOOLS-<version>-software.exe* contains software products

- GENIUS TOOLS Starter and
- GENIUS TOOLS Library and / or GENIUS TOOLS Parameter. (The entirety of all Creo add-on modules is called GENIUS TOOLS for Creo. They are located in the GENIUS TOOLS Starter environment).

The data setup file *setup-Startup-TOOLS-<version>-data-creo<Creo-version>.exe* contains data for the different Creo releases. This is needed in two types of situations:

1. For installing a 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.

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.


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

1.3 Data synchronization

GENIUS TOOLS Starter is an application for synchronizing data from a central storage location to local user computers. Operating environments are synchronized from a shared caddepot directory to many user computers.

As of version 6.0 of Startup TOOLS, Creo users work with all data locally on their computers. This ensures the fastest possible access to the data and also allows users to work offline.

Local data (the operating environments) are located in the Cadpool directory and are synchronized from the central Caddepot directory at a configurable interval, i. e. the data is copied from Caddepot to Cadpool.

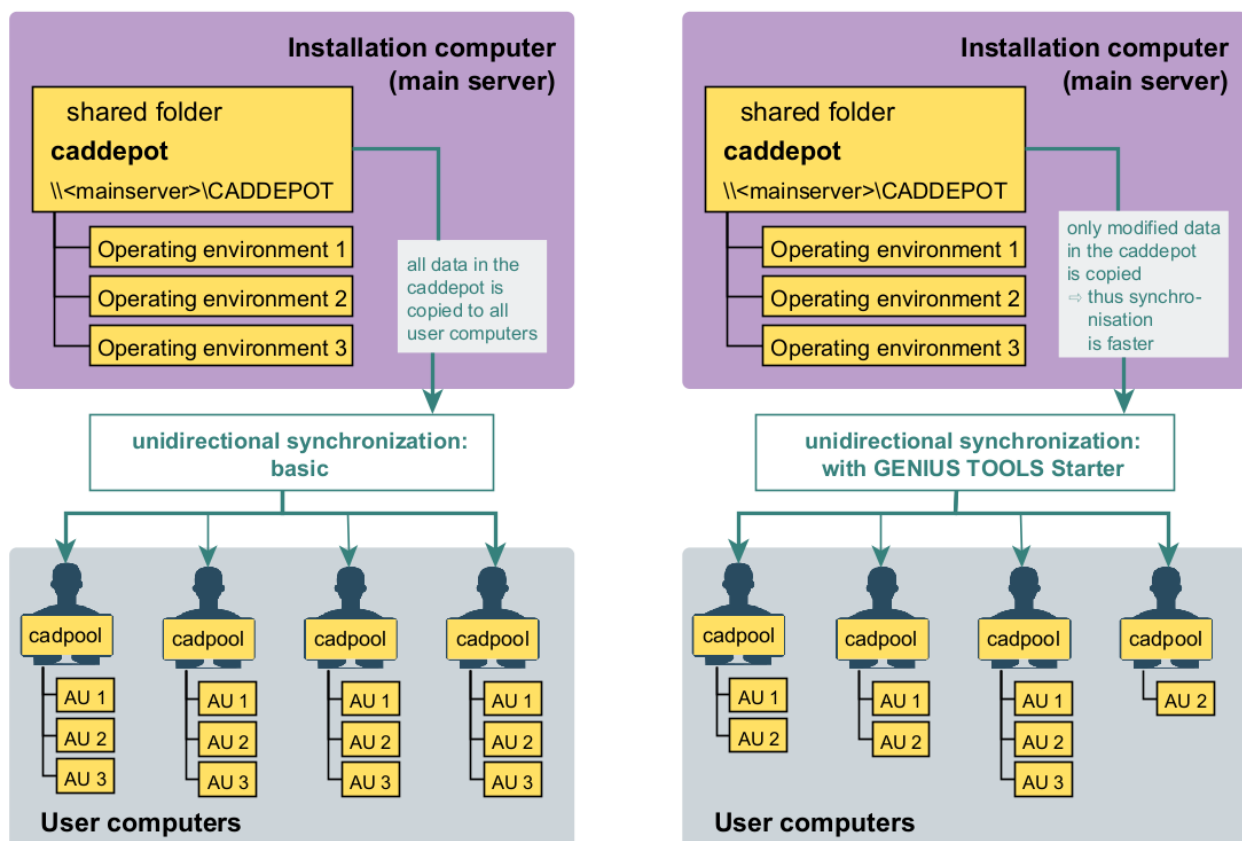
Data synchronization means that local modifications to a configuration will be overwritten in the synchronization process. Local changes that are to apply to all users – e. g. entries in a configuration block (config_*.pro file) – must be copied manually to the Caddepot. Synchronization must be suspended while you are making local changes. To pause synchronization, open GENIUS TOOLS Project Configurator and select *Pause synchronization* from the user menu .

Please note: For data synchronization to work, users need access to the Caddepot directory. We recommended granting read access only, if you do not want users to change settings by themselves.

The setup for working locally with synchronization is created by GENIUS TOOLS Starter by default. If you start the GTS.exe file, it will open from the local Cadpool directory, or create the Cadpool directory, if it does not exist yet (initial synchronization).

Data synchronization can be carried out with or without GENIUS TOOLS Starter Service. The service accelerates data synchronization and enables administrators to specify which operating environments are to be synchronized to which user computers.

GENIUS TOOLS Starter / Startup TOOLS – Synchronization of operating environments Basic or with GENIUS TOOLS Starter Service



GENIUS TOOLS Starter Service can be installed with the setups for GENIUS TOOLS Starter and Startup TOOLS, see chapter [Installation](#).

With GENIUS TOOLS Starter Service you can operate satellites (mirror servers).

1.4 Caddepot and operating environments

Caddepot is a directory on the installation computer that can contain any number of

operating environments. It is the source of synchronizing the local operating environments on user computers, that is, the source for the local **Cadpool** directories. The Caddepot directory must be shared to be accessible for distributed work.

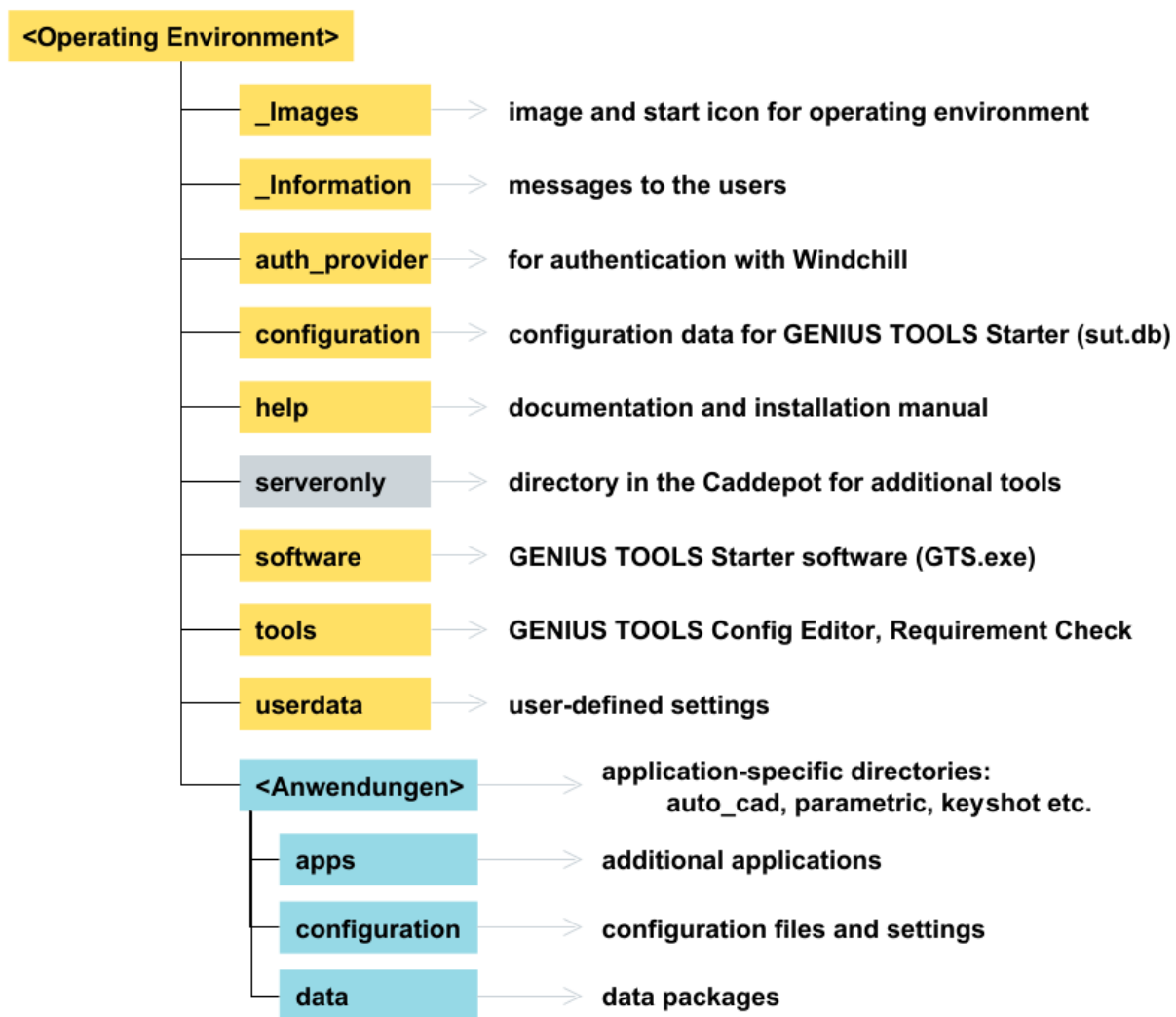
An **operating environment** is a directory in the Caddepot that contains all the data required for working with the desktop application. This includes configuration data, libraries, templates and additional applications. The operating environment also contains a database with all configured projects.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

If you work 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 contain the software components GENIUS TOOLS Starter, GENIUS TOOLS Starter App and GENIUS TOOLS Project Configurator of a defined version.

The database *sut.db* is located under *configuration\database* and the executable software for GENIUS TOOLS Starter, *GTS.exe*, in the software directory. The serveronly directory is the only directory that is not synchronized to the user computers.

The most important system directories of the first level are shown below. The complete directory structure can be found at the [end of the manual](#).



Directories of an operating environment on the installation computer

The GENIUS TOOLS Starter software is updated using GENIUS TOOLS Environment Administrator, while new data (data packages, configurations, etc.) is copied manually from the installdpot to the operating environments of the caddepot, see [Update process](#).

1.5 Important Terms

The **Installdpot** contains the release and version setups without settings and customizations. All setup programs unpack their data to this directory. The Installdpot can be shared to make it accessible to the administrator from any device.

The **mediadepot** can be used to store setup files as well as data packages for different releases and versions.

Caddepot is a directory on the installation computer that can contain any number of operating environments. It is the source of synchronizing the local operating

environments on user computers, that is, the source for the local **Cadpool** directories. The Caddepot directory must be shared to be accessible for distributed work.

An **operating environment** is a directory in the Caddepot 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.

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The operating environments contain the software components GENIUS TOOLS Starter, GENIUS TOOLS Starter App and GENIUS TOOLS Project Configurator of a defined version.

GENIUS TOOLS Environment Administrator is a stand-alone application for the administration. It is used to create and update operating environments, as well as edit properties and add-on applications. It is located in the installation directory under `\installdepot\gtsa-latest\gtsa-exe`.

GENIUS TOOLS Starter App is a stand-alone software application (*GTS.exe*) that allows users to start those Starter projects they have access to. It is located in each operating environment in the system directory *software*.

GENIUS TOOLS Project Configurator is a component of the GENIUS TOOLS Starter software for the configuration of Starter projects. It is opened from the GENIUS TOOLS Starter App. Administrators can prohibit access to GENIUS TOOLS Project Configurator for users.

A complete list of all terms can be found in the glossary at the end of the document.

2 Requirements

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

2.1 Hardware and software requirements

GENIUS TOOLS Starter (GTS) works on all computers that fulfill the requirements for Creo 10 to Creo 12.

The following Windows server operating systems are supported for GENIUS TOOLS Starter Service: Windows Server 2025 / Windows Server 2022.

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

	GENIUS TOOLS Starter					
Version	7.0	8.0	9.0	10.0	11.0	12.0
Operating system	64-bit only Windows 10 / 8.1 / 7		64-bit only Windows 11 / 10			
.NET Framework	4.8 Delivered with Windows 10 -1903 (+8.1; +7) (May have to be installed separately on WIN7/8.1)		4.8 Delivered with Windows 10 -1903		Installation computer: 4.8	
.NET	-				8.0 (is included in the GTS software setup)	
Minimum screen resolution	X=1280 Y=1024					
Flexnet	INNEO Licence Manager 1.0 M050 (Flexnet) and later					

	GENIUS TOOLS Starter
Caddepot directory (Central storage location with UNC access)	circa 1 to 5 GB for each operating environment
Cadpool directory (Storage location on the application computer)	Sufficient storage space to set up at least one operating environment
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.

2.2 User rights

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 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 to be used: to the directory that contains Creo startkeys,
- if the Creo configuration 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.

3 Installation scenarios

Two **installation scenarios** are possible for setting up data synchronization:

1. The Caddepot is located on a Windows computer: [Standard scenario](#)
2. The Caddepot is located on a [file server](#)

You can of course also use GENIUS TOOLS Starter locally without data synchronization, as a [single-user](#).

For companies that work at different locations, we recommend using mirror servers for faster data synchronization, see [Standard scenario with satellites](#).

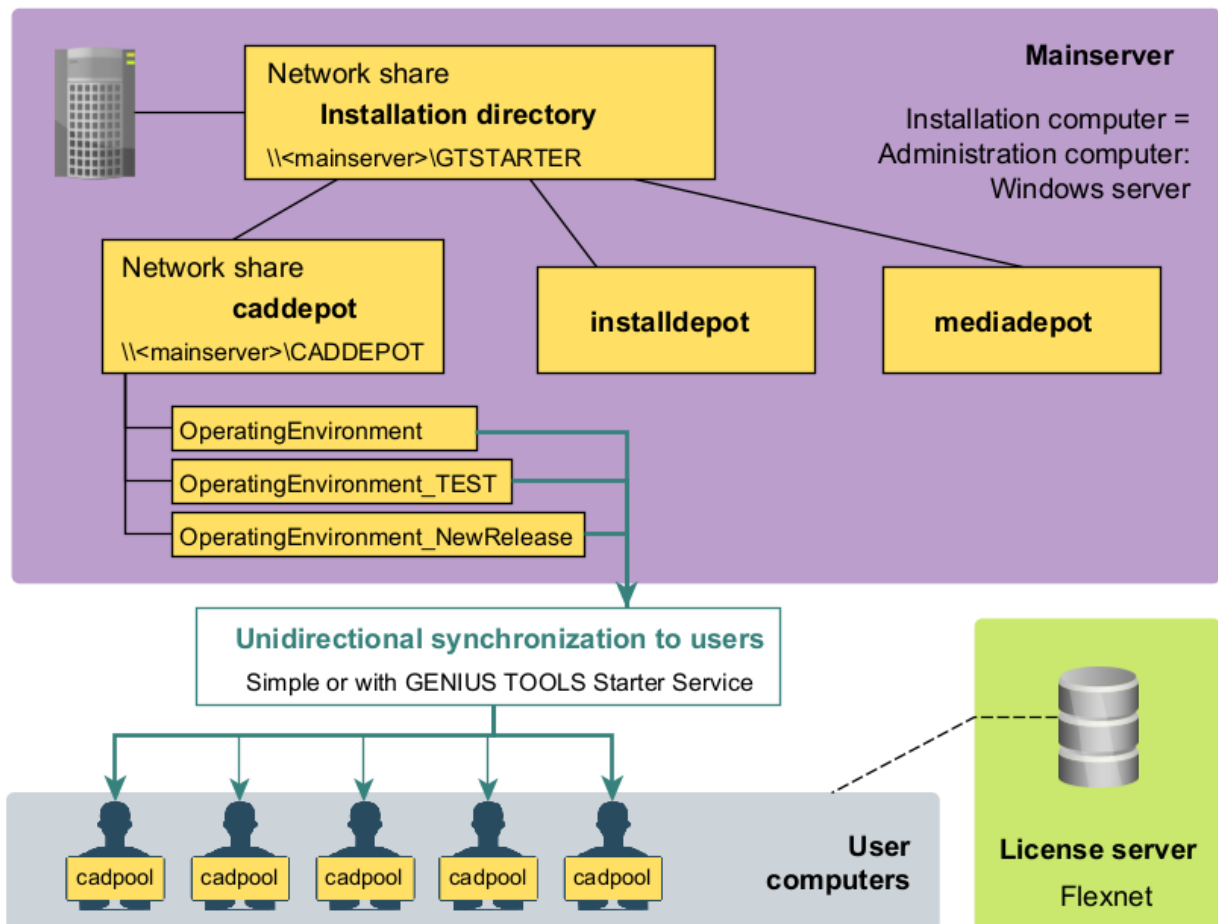
3.1 Standard scenario

In each installation scenario, operating environments are synchronized from a shared Caddepot directoy to many application computers.

In the standard scenario, the administration computer is also the installation computer, i. e. the computer that contains the Caddepot.

The installation computer is a Windows server.

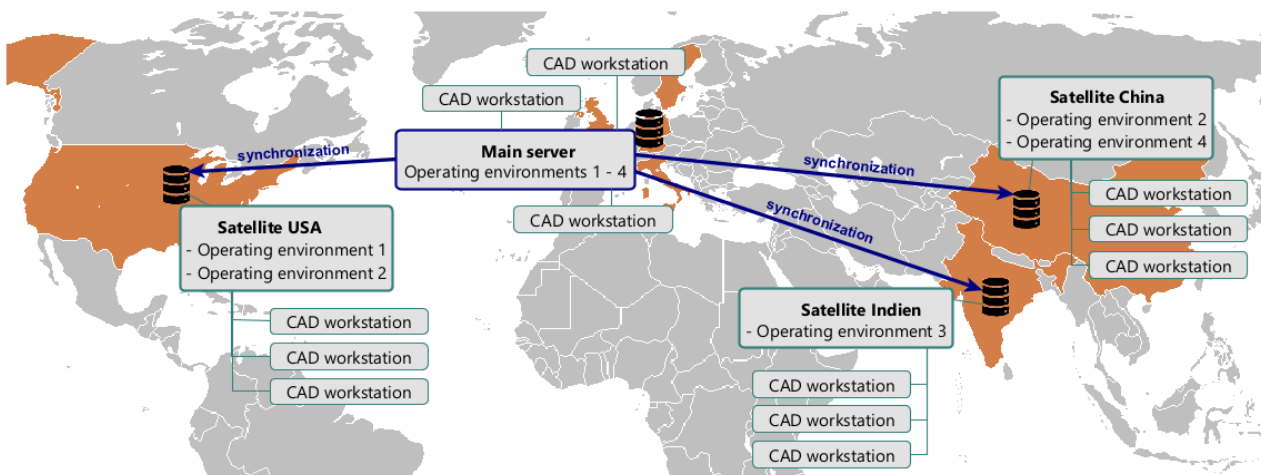
GENIUS TOOLS Starter / Startup TOOLS: Standard setting



3.2 Standard scenario with satellites

A **satellite** (also: synchronization or mirror server) is a computer or a sector of a computer onto which the state of one or more operating environments of a central main server is mirrored by data synchronization.

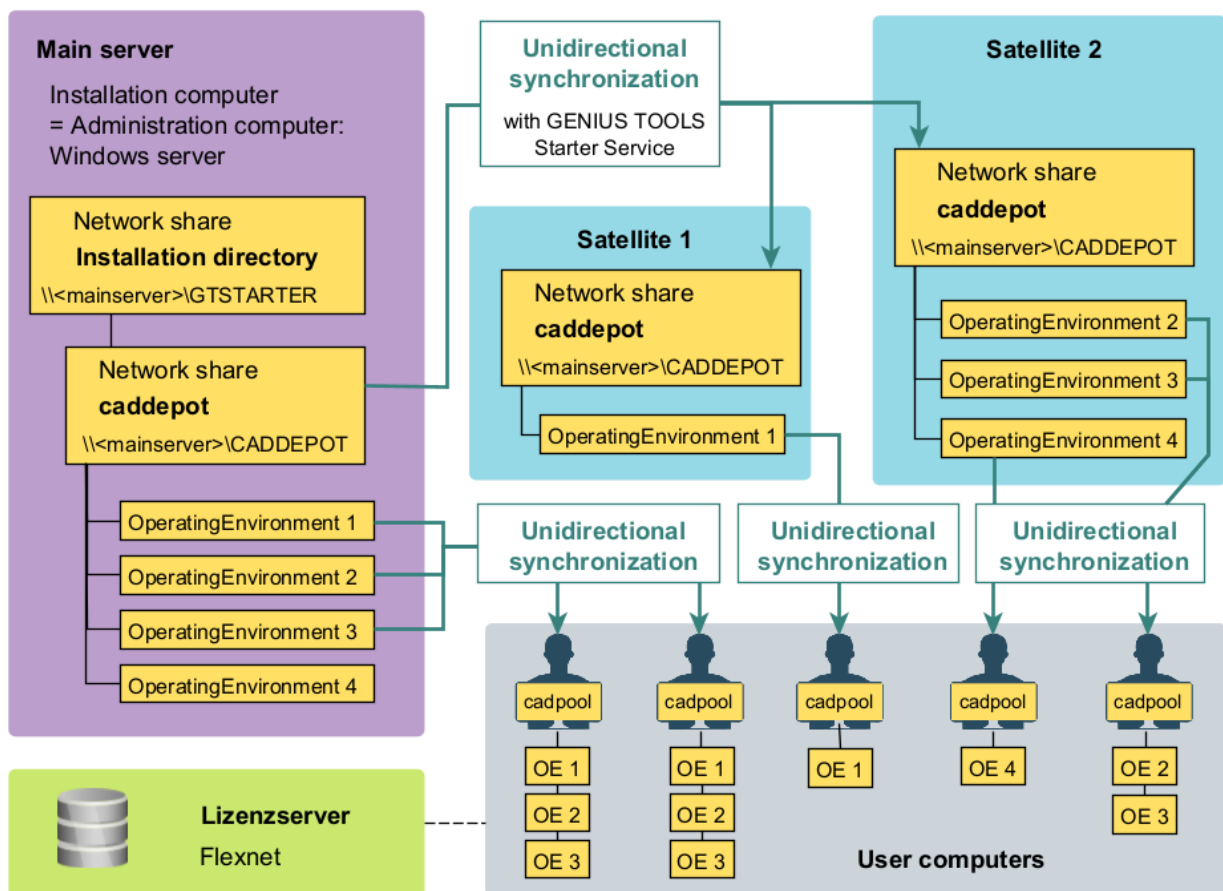
Locations with a slow connection to the main server would use this method to synchronize from a better accessible satellite, which can significantly reduce the time required for data synchronization.



In this installation, the Caddepot on the main server is the source of synchronization for both user computers and satellites.

Data synchronization is performed by GENIUS TOOLS Starter Service. It automatically determines which satellite or main server responds the fastest. This source is then used for synchronization.

GENIUS TOOLS Starter / Startup TOOLS: Installation with satellites



3.3 Caddepot on file server

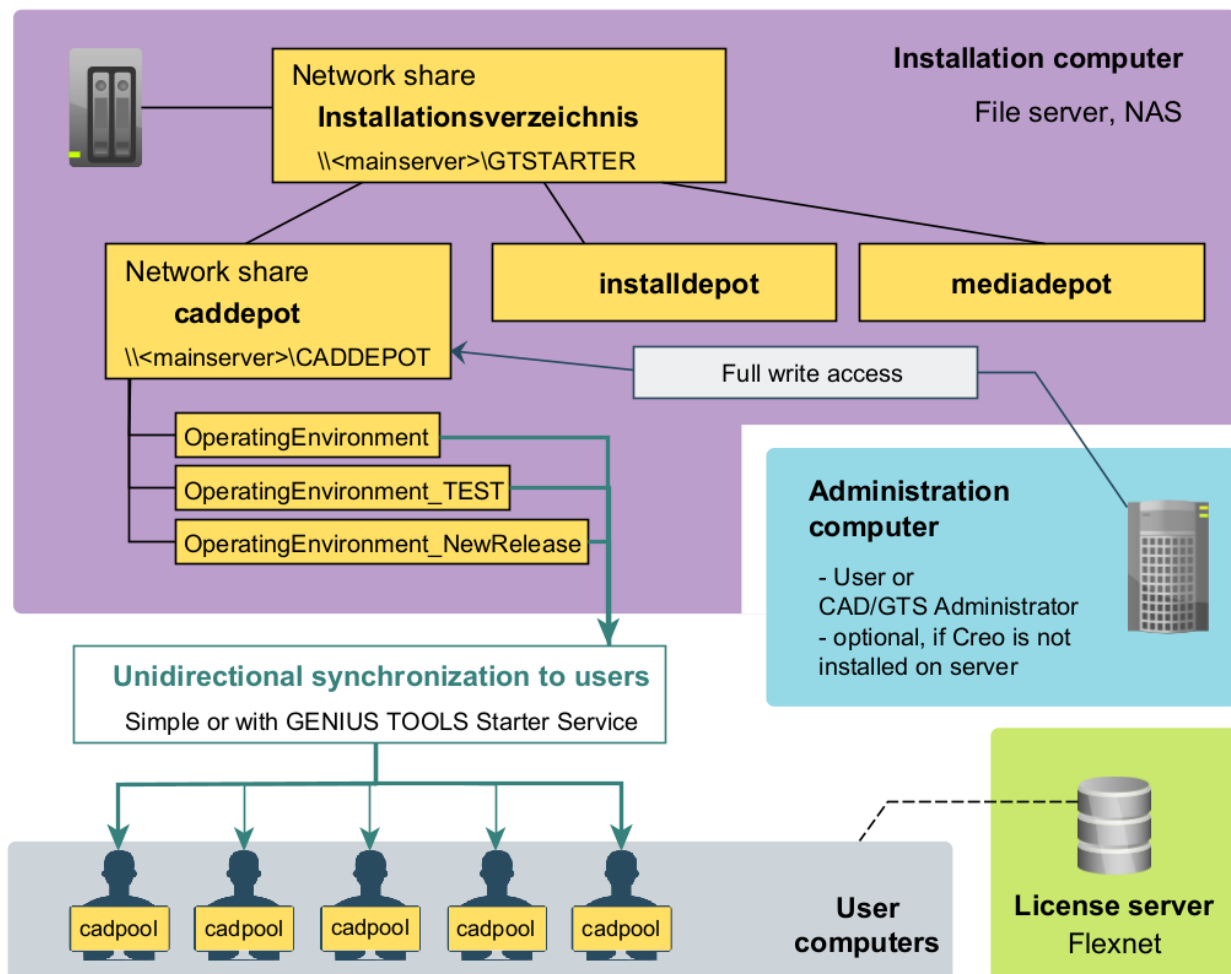
In this scenario, the operating environments are also synchronized from a shared Caddepot to many application computers. However, the Caddepot and the entire installation directory are located on a file server or NAS (Network Attached Storage). An administration computer is also required. The operating environments are managed from the administration computer using GENIUS TOOLS Environment Administrator.

The shared Caddepot directory must be created manually.

GENIUS TOOLS Starter Service cannot be used, since the service only runs on the computer that executes the setup.

The service GENIUS TOOLS Gitea cannot be used, which means that synchronizing the operating environment with Git is not possible in this installation scenario.

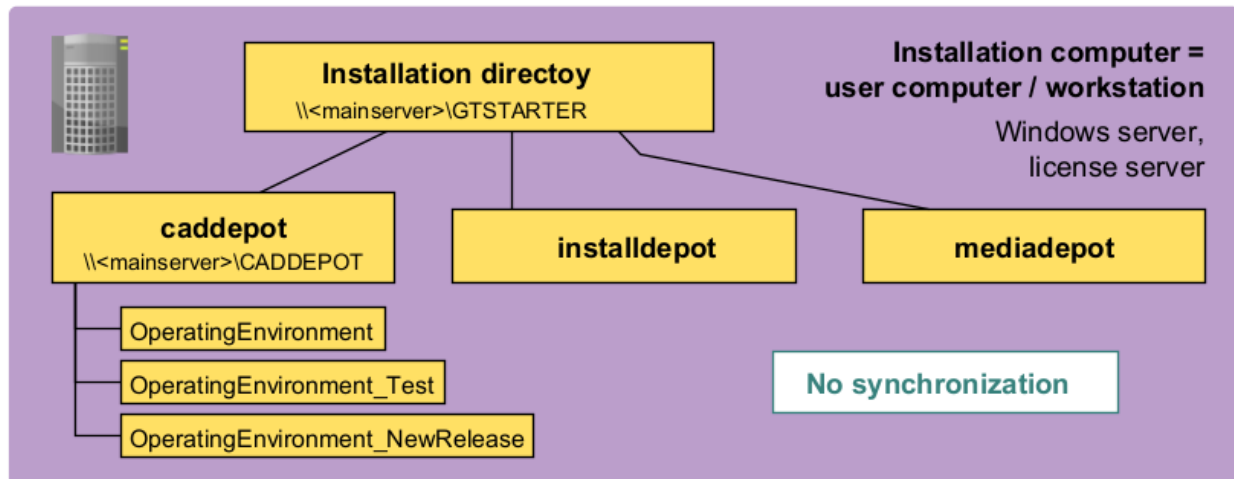
GENIUS TOOLS Starter / Startup TOOLS: Caddepot on file server



3.4 Caddepot on local computer

GENIUS TOOLS Starter can be used without data synchronization. The installation computer is also the application computer. No network shares are required.

GENIUS TOOLS Starter / Startup TOOLS: Caddepot on local computer



3.5 Mainserver in cloud

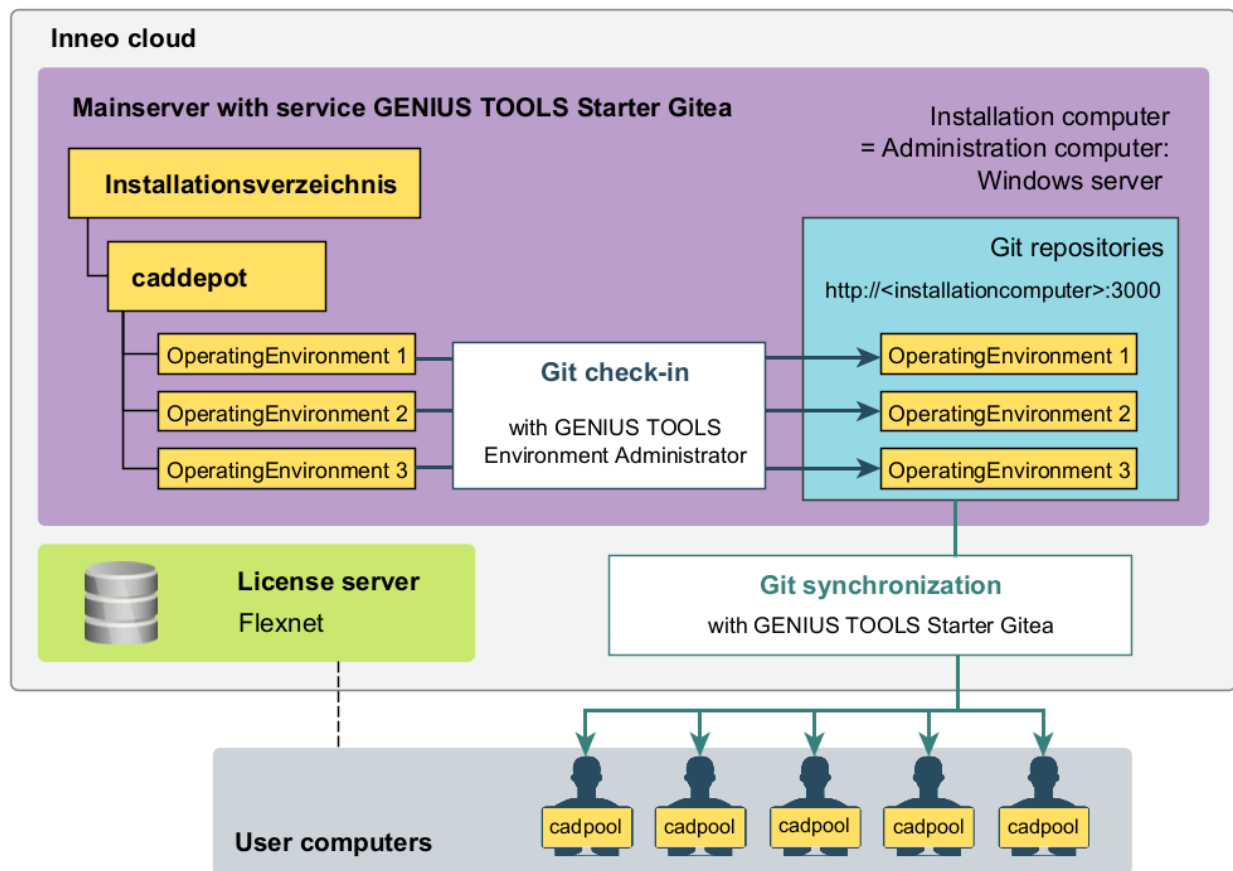
In this installation scenario, the main server, on which the caddepot and the service GENIUS TOOLS Starter Gitea are located, and the license server are located in the Inneo cloud.

Clouds from other providers can be used to host the main server, but not to connect the license server.

The Git repositories of an operating environment are the synchronization source for the user computers. The service GENIUS TOOLS Starter Gitea is used for synchronization.

The network shares for the installation directory and caddepot are not required.

GENIUS TOOLS Starter / Startup TOOLS: Mainserver in Inneo cloud



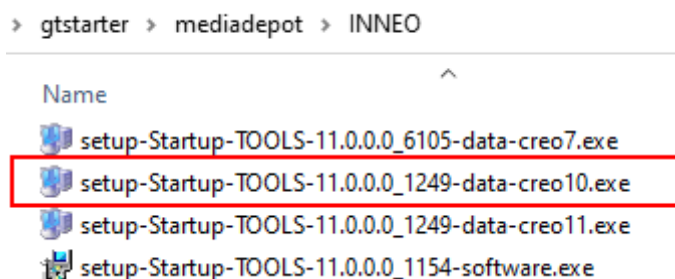
4 Installation

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.

The **installation computer** is the computer on which the installation directory is located, i. e. the computer that contains the caddepot directory. In the standard scenario, the administration computer is also the installation computer.

The **installation directory** (also: installdir) contains the subdirectories *Caddepot*, *Installdepot* and *Mediadepot*.

- Caddepot: empty directory which will later contain the **operating environment(s)**. This directory must be shared. (Default share name: CADDEPOT.)
- The **Installdepot** contains the release and version setups without settings and customizations. All setup programs unpack their data to this directory. The Installdepot can be shared to make it accessible to the administrator from any device.
- The **mediadepot** can be used to store setup files as well as data packages for different releases and versions.



4.1 Software setup

This chapter describes the initial installation of GENIUS TOOLS Starter for the **standard scenario**, i. e. the installation computer is the administration computer with the Windows operating system.

Warning: The GENIUS TOOLS Starter setups cannot be used to set up or update an operating environment. The stand-alone software component GENIUS TOOLS Environment Administrator is used for this purpose.

The installation of GENIUS TOOLS Starter is executed with the file

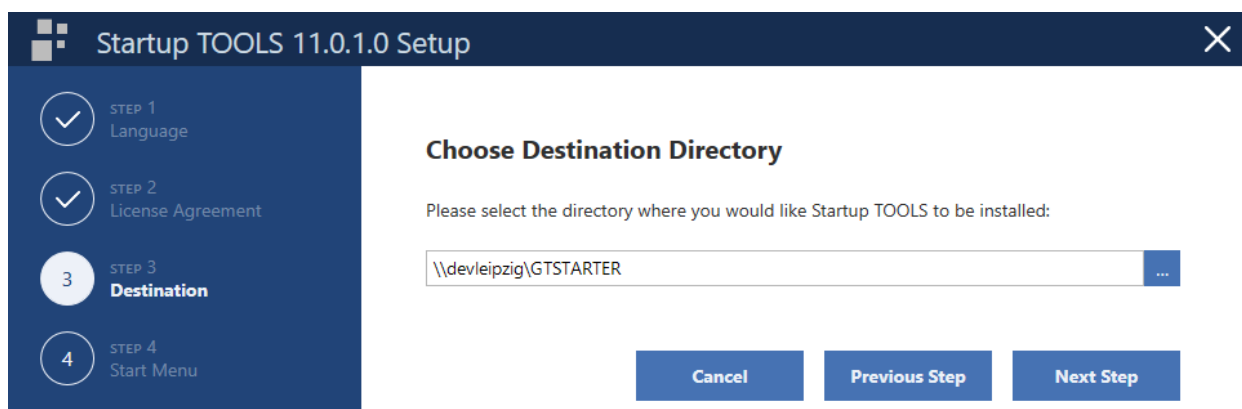
setup-GENIUS-TOOLS-Starter-<Version>-software.exe, or, if the program is part of the Startup TOOLS product package, with the file

setup-Startup-TOOLS-<Version>-software.exe.

Procedure:

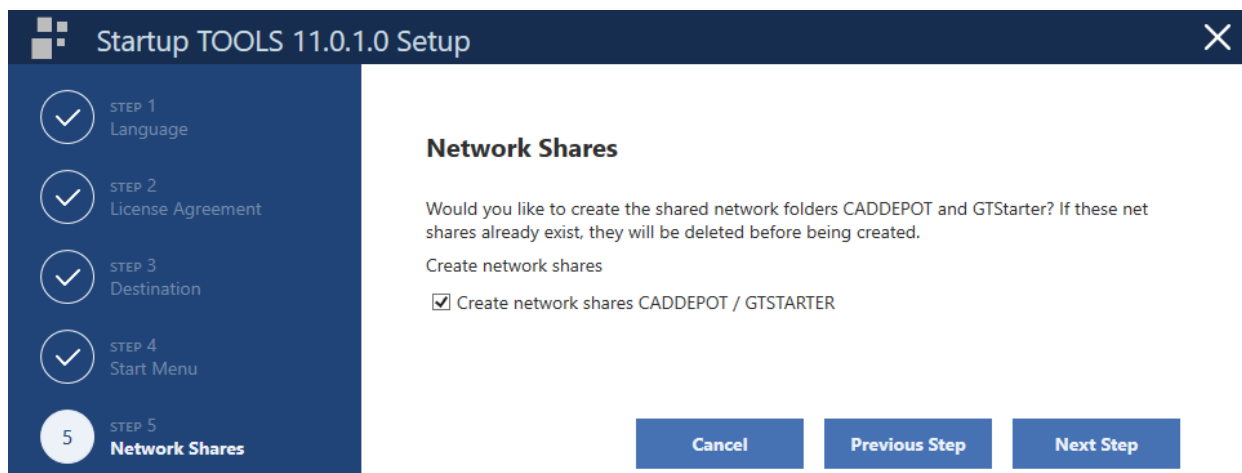
1. Select language
2. Accept license agreement
3. Select target directory. This is the installation directory.

Hint: Select "GTSTARTER" as the name, as the subsequent release will have this name: (\\<server name>\<drive>\GTSTARTER).



4. Specify the start menu folder
5. Create network shares

Activate the CADDEPOT and GTSTARTER shares. Shares to the installation directory and the caddepot are needed.



6. Install GENIUS TOOLS Starter Service

As of version 7.0.0.0, it is possible to accelerate data synchronization with GENIUS TOOLS Starter Service. Find more information in the chapter [GENIUS TOOLS Starter Service](#)

7. Complete installation

Result:

1. There is an entry in the registry containing the installation directory:

`HKEY_LOCAL_MACHINE\SOFTWARE\INNEO\GENIUS TOOLS Starter`

2. The setup program creates two network shares:



CADDEPOT



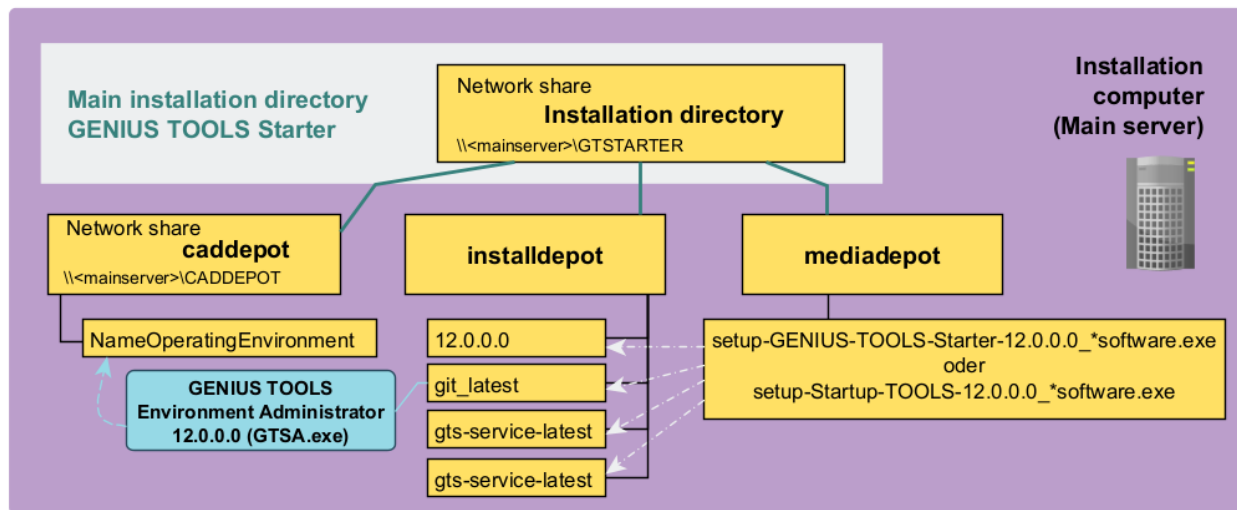
GTSTARTER

Path	Name of shared folder	Explanation
<installationdirectory>	GTSTARTER	Installation directory
<installationdirectory>\caddepot	CADDEPOT	All operating environments are located under this share. It is the source of synchronization for all workstations.

3. Three folders are created in the installation directory:

Path	Name of shared folder	Explanation
<installationdirectory>\caddepot	caddepot	<ul style="list-style-type: none"> – Contains all operating environments. – Source of data synchronization for all work stations.
<installationdirectory>\installdepot	installdepot	<ul style="list-style-type: none"> – Setups unpack their data here. – Is required for installations and updates.
<installationdirectory>\mediadepot	mediadepot	<ul style="list-style-type: none"> – For the collection of setups. – Use is optional.

GENIUS TOOLS Starter / Startup TOOLS: Initial installation



The **installd Depot** contains three directories:

- release directory of the GENIUS TOOLS Starter software:
includes GENIUS TOOLS Starter App, GENIUS TOOLS Project Configurator and GENIUS TOOLS Config Editor.
- **git_latest**:
includes the latest version of GENIUS TOOLS Gitea service for [Synchronization with Git](#)
- **gtsa-latest**:
latest version of [GENIUS TOOLS Environment Administrator](#), program for creating or updating operating environments
- **gts-service-latest**:
latest version of [GENIUS TOOLS Starter Service](#), the service for faster data synchronization and for working with satellites

4.2 Data setup

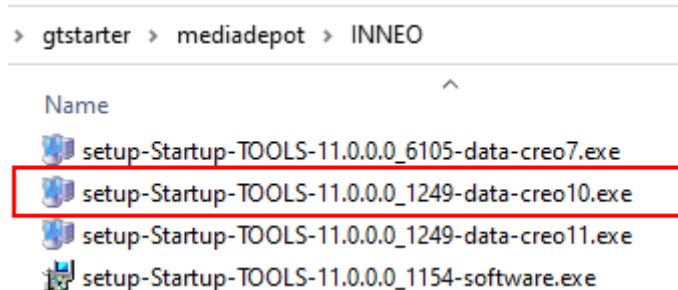
Startup TOOLS provide you with data packages for every Creo Parametric release from version 7.0.

The required data packages must be installed so you can, in a second step, add configuration and Creo object data to an operating environment. This is done with GENIUS TOOLS Environment Administrator.

Each data package also contains data for standard projects. You can use such standard project directories directly for Starter projects.

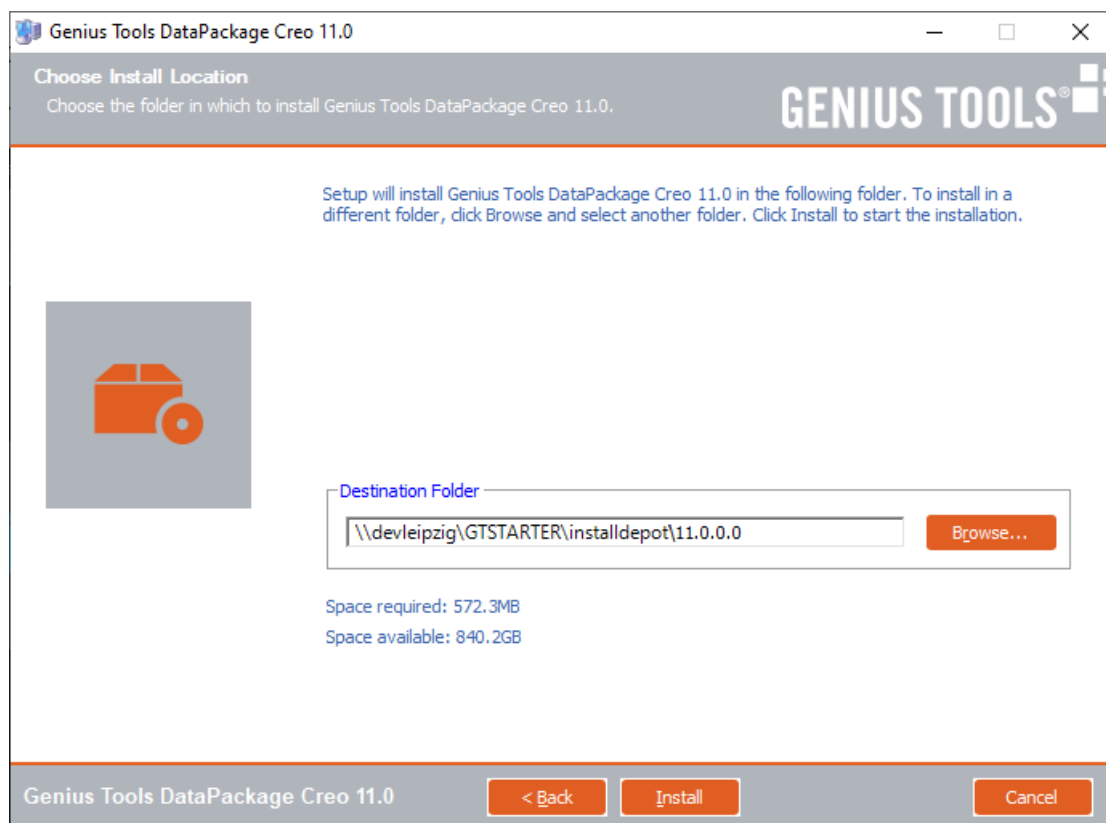
The installation of Creo data is executed with the file
setup-Startup-TOOLS-<Version>-data-creo<CreoVersion>.exe.

Store this file in the media depot, e.g. in a separate directory for INNEO products.



Procedure: Installing Creo data package

1. Select language
2. Accept license agreement
3. Select target directory. This is the installdepot of a specific version.



4. Complete installation

Result: Data is added to the install depot according to the version:

- Creo object data in the Data directory:

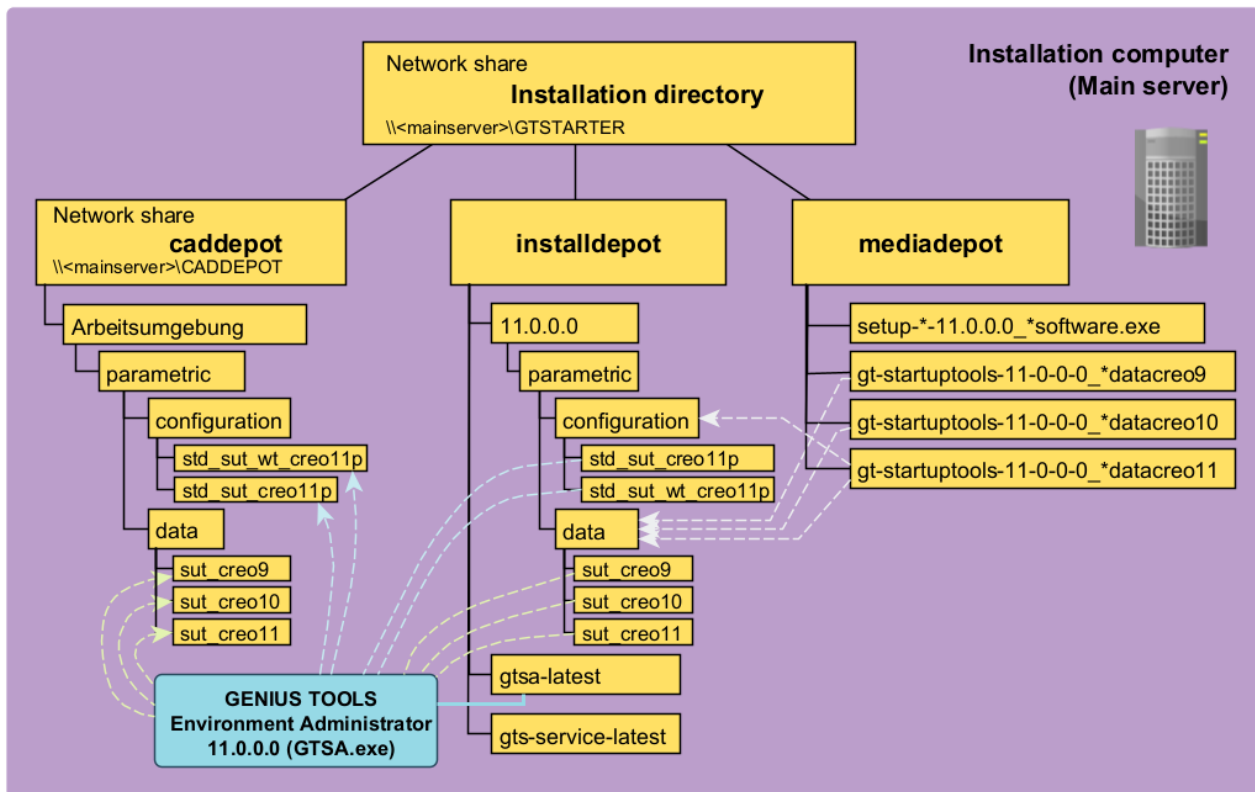
<installationdirectory>\installdepot\11.0.0.0\parametric\data\sut_creo10

- Standard start projects with and without Windchill in the Projects directory:

```
<installationdirectory>\installdpot\11.0.0.0\parametric\configuration\projects\std_sut_creo10p
```

```
<installationdirectory>\installdpot\11.0.0.0\parametric\configuration\projects\std_sut_wt_creo10p
```

Startup TOOLS: Installation of Creo data packages



Add Creo data packages to an operating environment

5. Open GENIUS TOOLS Environment Administrator and follow the description under **Adding components to an operating environment**.

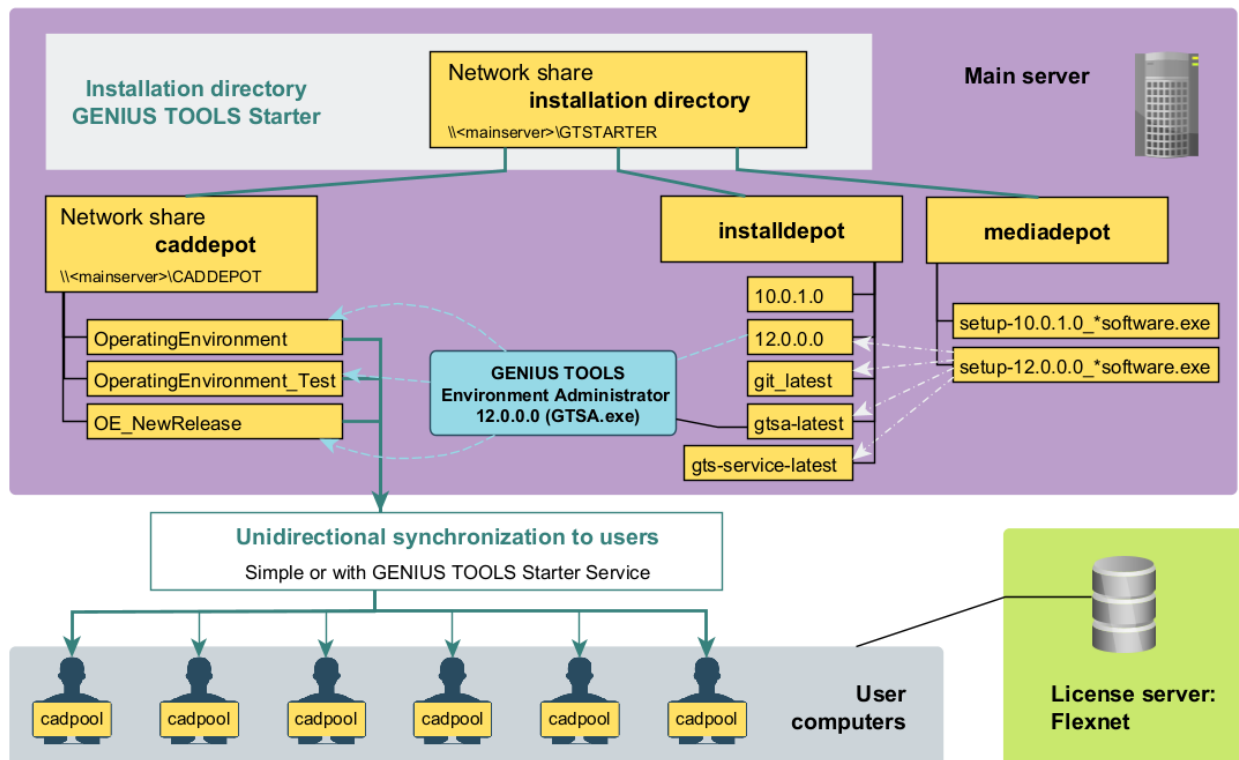
Customize data package according company-specific requirements

6. Change individual files depending on the company-specific requirements.

Warning: Once a data package has been customized, it must be manually adapted to newer software versions, see chapter [Updating Creo data packages and resource folder](#).

4.3 General installation mechanism

GENIUS TOOLS Starter / Startup TOOLS: General installation mechanism



5 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.

1. Create operating environments
2. Add components to an existing operating environment
 - project directories (directories with *config.pro* and other project-specific files)
 - data directories
 - additional applications
3. Update operating environments (Software update for GENIUS TOOLS Starter App and GENIUS TOOLS for Creo)
4. Modify settings for an operating environment for
 - license servers
 - synchronization servers (Caddepot, Cadpool)

The next chapters describe each function in detail.

Warning: The following applies to git-versioned operating environments: All changes made on the user computer that have not been committed into Git are discarded when executing a function in GENIUS TOOLS Environment Administrator.

5.1 Usage

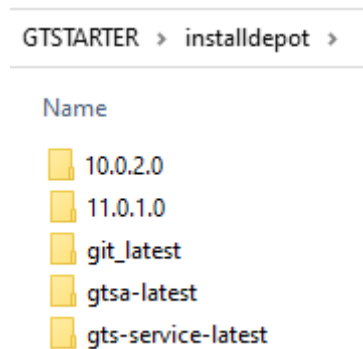
GENIUS TOOLS Environment Administrator must be started with write access to the caddepot directory.

If you open the software from an administration computer which does not have an AppData directory, you must start GENIUS TOOLS Environment Administrator with the command `-gts:appdata=%TEMP%`.

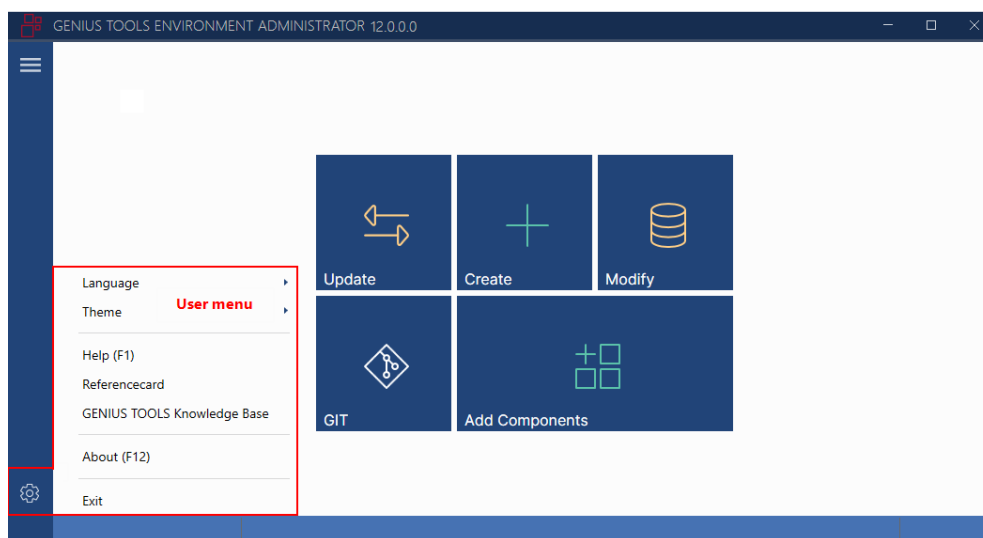
Warning: GENIUS TOOLS Environment Administrator can only be used with operating environments and Startup TOOLS software that have the same or older versions.

You need administrator rights on your computer for all functions that are used after creating an operating environment. GENIUS TOOLS Environment Administrator is restarted after a warning.

After installing the software for Startup TOOLS or GENIUS TOOLS Starter, the GTSA.exe file is located in the install depot in the gtsa-latest directory.



The user interface contains the user menu and the following functions.



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 on the right side supports each task of the workflow.

Dialog for completing three tasks and integrated help

First, you always need to select the Caddepot. Then, the option list shows the operating environments that are available for selection.

All changes in Caddepot are stored in a database that cannot be edited by multiple users at the same time. The following hint message means that another user is working either in GENIUS TOOLS Project Configurator or in GENIUS TOOLS Environment Administrator.

Operating environment in use

User ahelp on computer AHELP has locked database of operating environment INNEO at 03.06.2022 10:00:00.

OK

Notification that the selected operating environment is currently modified by another user

User menu

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 installation manual for GENIUS TOOLS Starter. The help corresponds to the document *GENIUS TOOLS Starter Installation.pdf* in the directory *help* of an operating environment.

Reference card

Opens a reference card for a quick overview of all functions.

Info (F12)

Shows the current GENIUS TOOLS Starter version.

Exit

Closes the software. Clicking on the *Close* button (X) in the header will minimize the program window.

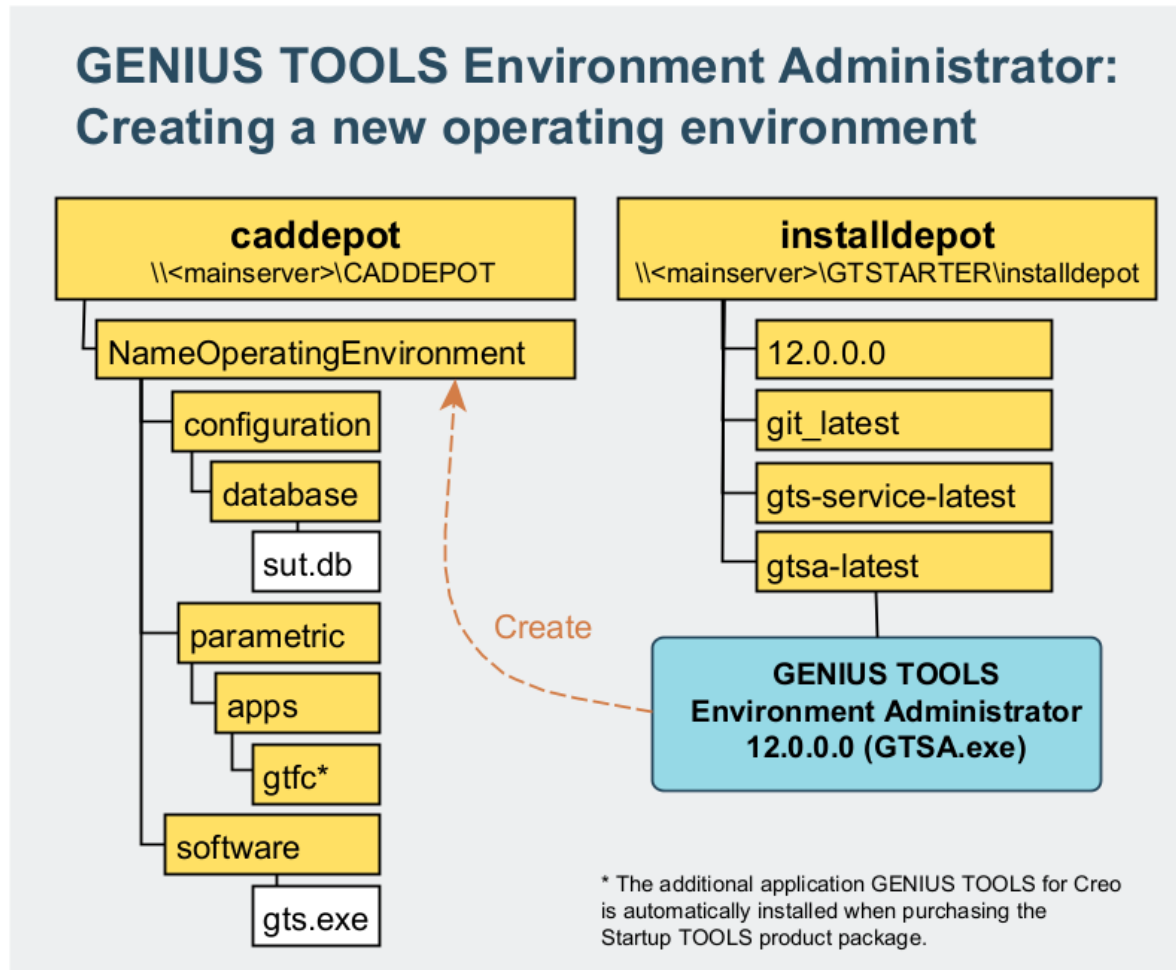
5.2 Creating an operating environment

GENIUS TOOLS Environment Administrator lets you create different operating environments with just a few mouse clicks.

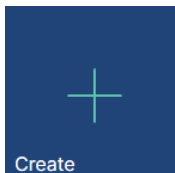
The function *Create* creates an empty, new operating environment. This contains the *directory structure*, the GENIUS TOOLS Starter software *GTS.exe* and an empty database, *sut.db*. All settings defined in GENIUS TOOLS Project Configurator are stored in this database file, which is located in the *<OperatingEnvironment>\configuration\database* directory.

If you have purchased the Startup TOOLS product package, the add-on application GENIUS TOOLS for Creo is automatically installed in the *<OperatingEnvironment>\parametric\apps* directory when you create a new operating environment. This provides you with an operating environment with standardized templates (start object templates, project-specific libraries, drawing frames, ModelCheck configurations), interface and function configurations for Creo (config.pro, config.sup config.ui) and many additional functions for Creo (toolkit applications).

You can add data packages and standard start projects at any time thereafter via the *Add Components* function.



Click the *Create* symbol on the start page to start create a new operating environment.



Step 1: Define operating environment

GENIUS TOOLS Environment Administrator will find the Caddepot and Installdpot directories automatically if the software is started from a default installation setup.

Verify the paths for the Caddepot (1) and Installdepot (3) directories.

Enter a name for the operating environment (2). The name is used to create a directory of the same name in the Caddepot and setting up the directory structure there.

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

Select a software version (4) from the Installdepot.

Please note: With GENIUS TOOLS Environment Administrator 11.0.0.0 and newer, operating environments of versions 10.0.2.0 and older cannot be created. This is due to the migration to .NET 8.

The button *Send telemetry data* (5) transmits anonymized telemetry data from GENIUS TOOLS Starter, Model Processor User and the add-on applications GENIUS TOOLS for Creo to servers of Inneo Solutions GmbH. The data is collected for the purposes of troubleshooting and optimizing performance as well as for product improvement and development (user-centered development and sustainable decision-making in the development process). See *Documentation telemetry data* in the help directory. The environment variable GT_TELEMETRY is set to 1. Click *Next*.

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.

Data synchronization allows you to keep all data up-to-date on the local application computers and give users fast access to any changes.

The synchronization process is adapted to Creo in that it will not update toolkit applications as long as Creo is running. For this, the toolkit applications, such as GENIUS TOOLS for Creo, have to be located in the *apps* directory of Creo Parametric.

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

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

Under *Synchronization server settings*, the server name (2) that has been entered at setup is displayed.

Enter the path to the Caddepot netshare (3) of the synchronization server using UNC paths (\\GTSServer\\caddepot), environment variables (%GTS_SERVER_NAME%) or a mixed form (\\%GTS_SERVER_NAME%\\caddepot).

Under Target directory (4) 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.

Create operating environment

1 2

GENIUS TOOLS LICENSE MANAGER

Source

7766@localhost 1

SYNCHRONIZATION SERVER SETTINGS

Name

DEVLEIPZIG 2

Server path

\\DEVLEIPZIG\\caddepot 3

Target directory

C:\\GTSTARTER\\cadpool 4

Synchronization interval

240 5

Please note: 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 quickly create test environments without having to change the settings. Also, operating environments can be renamed without having to change the settings.

Enter the synchronization interval (5) 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.

Click on *Create*.

5.3 Adding components to an operating environment

If you want to add components, you first have to install them into the Installdepot directory from the data setups, see [Data setup](#). With the Add components function you can then add the following components to an existing operating environment.

For Creo Elements/Direct Modeling:

- TSPRO environment
- SOLIDPOWERPARTS

For Creo Parametric:

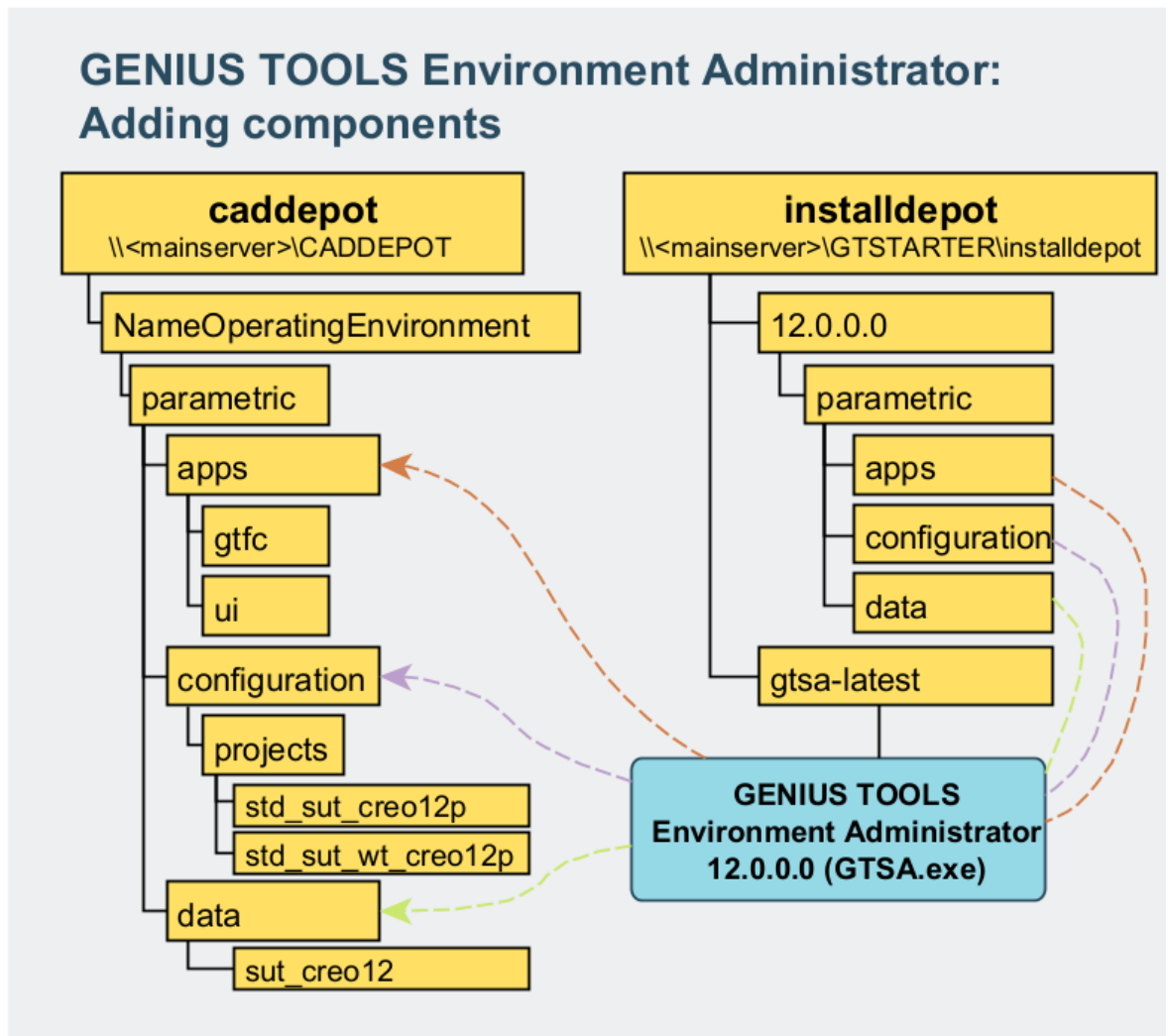
- data directories (data packages)
- project directories (directories with configuration blocks and other files)
- Toolkit applications (GENIUS TOOLS for Creo, UI)

Data packages

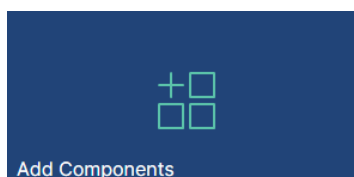
Data packages are subdirectories of the data directory, e. g. for Creo Parametric:

`<mainserver>\GTSTARTER\installdepot\11.0.0.0\parametric\data\sut_creo11.`

If you add data packages to an operating environment, you will get an operating environment with standardized templates (start object templates, project-related libraries, drawing frames, ModelCheck configurations), interface and function configurations for Creo (config.pro, config.sup, config.ui) as well as many add-on functions for Creo (toolkit applications).



Click the *Add Components* symbol on the start page to start the installation assistant.



Step 1: Select operating environment

First select the operating environment (2) you want to configure from the Caddepot (1).

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

Add Components

1 **2**

OPERATING ENVIRONMENT

Caddepot
\\devleipzig\caddepot **1**

Select operating environment
INNEO | Version 11.0.1.0 **2**

SOFTWARE

Installdepot
\\devleipzig\GTSTARTER\installdepot **3**

Select software version
11.0.1.0 **4**

Step 2: Add CAD applications

Here, project components that have been installed in the install depot are selected.

Select the CAD application to which you wish to add components.

For Creo Elements/Direct:

- TSPRO-Umgebung
- SOLIDPOWERPARTS

For Creo Parametric:

1. Ddata packages
2. projects (directories for standard start projects)
3. toolkit applications (gtfc, ui)

Add Components

1 **2**

CAD

CAD application
Creo Parametric

Data packages **1**

Projects **2**

Toolkit Application **3**

Components for Creo Parametric

Data packages and toolkit applications are added separately.

Projects can be added together with the data package subsequently as well as in their own.

1. Add data packages and create standard projects

All data directories for Creo Parametric from the previously selected software version in the installdepot are displayed here, e.g. D:

\\GTSTARTER\\installdepot\\9.0.0\\parametric\\data.

Select a data package. Data packages in gray are directories that have already been

copied to the caddepot once.

Enter a target name under which it should be copied in the directory data in the caddepot. (*Caddepot\<operatingenvironment>\parametric\data.*)

The target name can be overwritten.

📁 Data packages

Copy	Name	Target name
<input type="checkbox"/>	sut_creo7	
<input checked="" type="checkbox"/>	sut_creo10	INNEO_c10
<input checked="" type="checkbox"/>	sut_creo11	INNEO_c11

Data packages that have already been copied are grayed out, but can be copied again under a new name.

When selecting a data package, you can in the second step create standard projects whose settings should be adjusted afterwards in the GENIUS TOOLS Project Configurator. Here, the supplied standard projects – one standard project per Creo version with and without Windchill – are copied from the project directory (*Caddepot\<OperatingEnvironment>\parametric\configuration\projects*) under a new name (target project name).

If a project is grayed out, it means that it has already been copied once. It can be copied again under new name.

⚙️ Project directories

Create	Project name	Target project name	Display name	Target display name
<input checked="" type="checkbox"/>	std_sut_creo8p	INNEO_c8	Creo Parametric 8.0	INNEO - Creo Parametric 8.0
<input type="checkbox"/>	std_sut_wt_creo8p		Creo Parametric 8.0 Windchill	
<input checked="" type="checkbox"/>	std_sut_creo9p	INNEO_c9_2	Creo Parametric 9.0	INNEO - Creo Parametric 9.0
<input type="checkbox"/>	std_sut_wt_creo9p			

Projects that have previously been copied (gray) can be copied again under a new name.

The target project name is the name of the folder in the project directory and at the same time the name of the project in GENIUS TOOLS Project Configurator. The display name is the name that appears in GENIUS TOOLS Starter App. It can be changed in GENIUS TOOLS Project Configurator.

2. Create standard start projects

If the data packages have already been installed, standard start projects can be created here as in the previous point.

Project directories

Create	Project name	Target project name	Display name	Target display name	Data directory
<input type="checkbox"/>	std_sut_creo9p		Creo Parametric 9.0		sut_creo9
<input checked="" type="checkbox"/>	std_sut_wt_creo9p	INNEO_c9_wt	Creo Parametric 9.0 Windchill	Inneo - Creo with Windchill	sut_creo9

3. Toolkit applications

Select the toolkit application you wish to add.

- GENIUS TOOLS for Creo: Additional functions for Creo Parametric which are included in the products GENIUS TOOLS Library, GENIUS TOOLS Parameter and GENIUS TOOLS MBD for ISO GPS.
- ui: Application that allows reloading multiple customization.ui files.

If it is not possible to tick an application, it means that it already exists in the application-specific apps directory. The application cannot be created again.

Please note: The toolkit application GENIUS TOOLS for Creo will be automatically installed to the *parametric\apps* directory when creating a new operating environment, if you have purchased the Startup TOOLS product package.

Toolkit Application

Copy	Display name
<input type="checkbox"/>	gtfc - GENIUS TOOLS for Creo
<input checked="" type="checkbox"/>	ui

After clicking *Add* all specified components are added to the operating environment.

4. Customize data packages

When using Startup TOOLS for the first time, we recommend adapting the supplied data directory ("data package"). All company-specific data should be adapted, such as

- Startup parts,
- material files,
- drawing frames.

Data directories should be created version-neutral.

If data files are accidentally deleted, they can be copied back from the install depot at any time, i. e. no backup copies need to be made.

Hint: If possible, always work with variables. A reference to a data directory from a configuration block is made via the variable `$GTS_DATA`.

Once a data package has been adapted to company-specific requirements, it must be manually adapted to newer software versions, see [Updating Creo data packages and resource folder](#).

5.4 Updating software in an operating environment

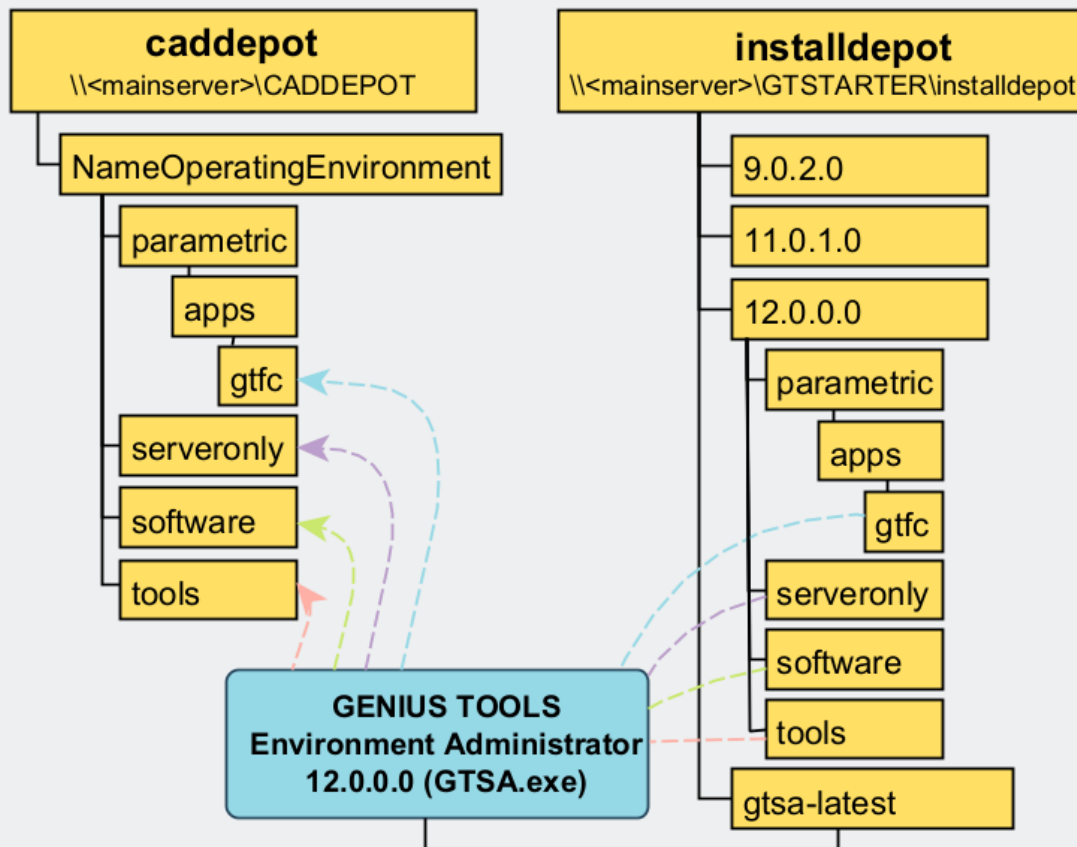
All software setups in GENIUS TOOLS Starter unpack their data to the Installdepot directory. You can use the *Update* function of GENIUS TOOLS Environment Administrator to update the software for GENIUS TOOLS for Creo and GENIUS TOOLS Starter App in the operating environments. This two-step process allows 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.

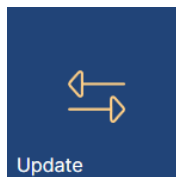
If you update GENIUS TOOLS for Creo, the synchronization on the application computers will only be run after Creo has been closed.

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.

GENIUS TOOLS Environment Administrator: Updating software



In GENIUS TOOLS Environment Administrator click the *Update* button to start the installation assistant.



Software update

First, select from the Caddepot (1) the operating environment (2) you want to configure (1).

Then select from the Installdepot (3) the new software version (4) you want to install.

Under Update settings (5) you can select the components to update:

The screenshot shows the 'Software Update' interface. It is divided into three main sections: 'OPERATING ENVIRONMENT', 'SOFTWARE', and 'UPDATE-EINSTELLUNGEN'.
 1. 'OPERATING ENVIRONMENT' contains 'Caddepot' (a file browser showing '\\devleipzig\\caddepot') and 'Select operating environment' (a dropdown menu showing 'INNEO | Version 11.0.1.0').
 2. 'SOFTWARE' contains 'Installdepot' (a file browser showing '\\devleipzig\\GTSTARTER\\installdepot') and 'Select software version' (a dropdown menu showing '12.0.0.0').
 3. 'UPDATE-EINSTELLUNGEN' contains a list of components with toggle switches: 'GENIUS TOOLS Starter App' (Aktiviert), 'GENIUS TOOLS Library/Parameter' (Aktiviert), 'GENIUS TOOLS MBD for ISO-GPS' (Deaktiviert), 'Tools-Verzeichnis' (Aktiviert), 'Freeware-Tools' (Deaktiviert), and 'Telemetriedaten senden' (Aktiviert).
 Red circles with numbers 1 through 5 point to these specific elements: 1 points to the Caddepot field, 2 points to the operating environment dropdown, 3 points to the Installdepot field, 4 points to the software version dropdown, and 5 points to the 'UPDATE-EINSTELLUNGEN' section header.

- the software GENIUS TOOLS Starter (component of the Startup TOOLS product package)
- the software GENIUS TOOLS Parameter and GENIUS TOOLS Library (add-on application GENIUS TOOLS for Creo, component of the Startup TOOLS product package)

Please note: An update does not update the resource folder (*gt_resource_folder*). This has to be updated manually, see chapter [Update process](#).

- the software GENIUS TOOLS MBD for ISO GPS (add-on application GENIUS TOOLS for Creo)
- the tools directory, which contains GENIUS TOOLS Config Editor and Requirement Check, as well as
- several freeware products which are located in the Caddepot in the serveronly directory under tools. (GENIUS TOOLS Comma To Dot, GENIUS TOOLS Flexnet Watcher, GENIUS TOOLS Material Browser, GENIUS TOOLS Purge, FreeCommander, XML-Import and others).

The button *Send telemetry data* (5) transmits anonymized telemetry data from GENIUS TOOLS Starter, Model Processor User and the add-on applications GENIUS TOOLS for Creo to servers of Inneo Solutions GmbH. The data is collected for the purposes of troubleshooting and optimizing performance as well as for product improvement and development (user-centered development and sustainable decision-making in the development process). See *Documentation telemetry data* in the help directory. The environment variable GT_TELEMETRY is set to 1.

Under Migration settings (6), you can set whether access restrictions for projects are transferred when updating to version 11.0.0.0 and newer.

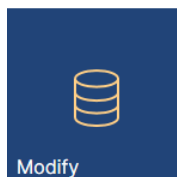
Result: The update process writes a new software directory for GENIUS TOOLS Starter and updates the database. For GENIUS TOOLS for Creo, the *gtfc* directory under *apps* is re-written. The *main.cfg* file remains untouched. The directories *tools* and *serveronly\tools* are copied from the Installdpot to the Caddepot.

5.5 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.

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

In GENIUS TOOLS Environment Administrator click the *Modify* button to start the installation assistant.

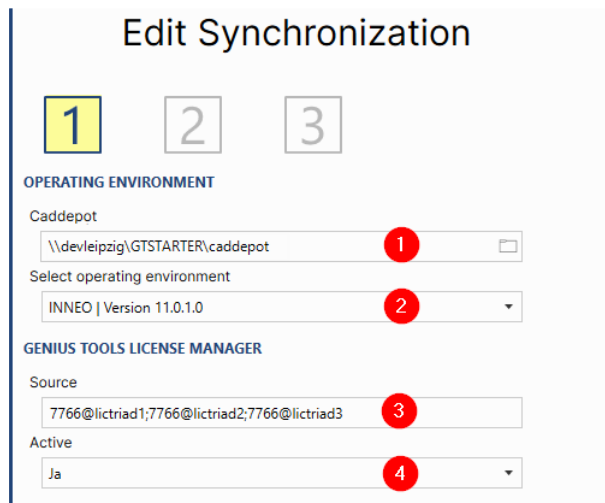


Step 1: Change license server settings

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.



Edit Synchronization

1 2 3

OPERATING ENVIRONMENT

Caddepot
\\devleipzig\\GTSTARTER\\caddepot 1

Select operating environment
INNEO | Version 11.0.1.0 2

GENIUS TOOLS LICENSE MANAGER

Source
7766@lictriad1;7766@lictriad2;7766@lictriad3 3

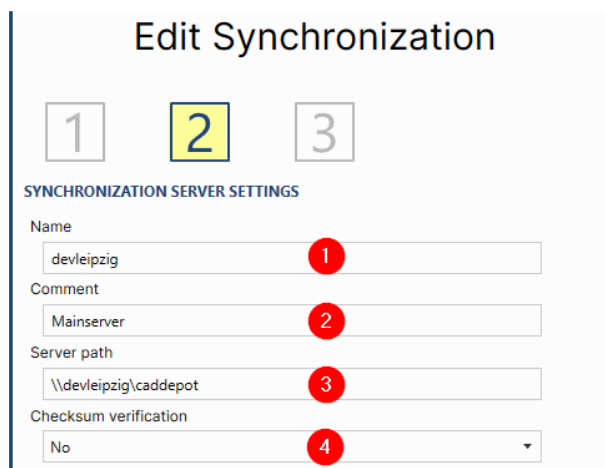
Active
Ja 4

Step 2: Change synchronization settings

Specify the server path (3) so that it points to the caddepot on the synchronization server. The server name (1) is automatically taken from this information.

You can enter a description for the server (2).

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.



Edit Synchronization

1 2 3

SYNCHRONIZATION SERVER SETTINGS

Name
devleipzig 1

Comment
Mainserver 2

Server path
\\devleipzig\\caddepot 3

Checksum verification
No 4

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

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

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

Edit Synchronization

1 2 3

CLIENT SETTINGS

Activate synchronization 1
Ja

Target directory 2
C:\GTSTARTER\cadpool

Synchronization interval (minutes) 3
360

Start client with windows 4
Ja

Send telemetry data 5
☒ Activated

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.

The button *Send telemetry data* (5) transmits anonymized telemetry data from GENIUS TOOLS Starter, Model Processor User and the add-on applications GENIUS TOOLS for Creo to servers of Inneo Solutions GmbH. The data is collected for the purposes of troubleshooting and optimizing performance as well as for product improvement and development (user-centered development and sustainable decision-making in the development process). See *Documentation telemetry data* in the help directory. The environment variable GT_TELEMETRY is set to 1.

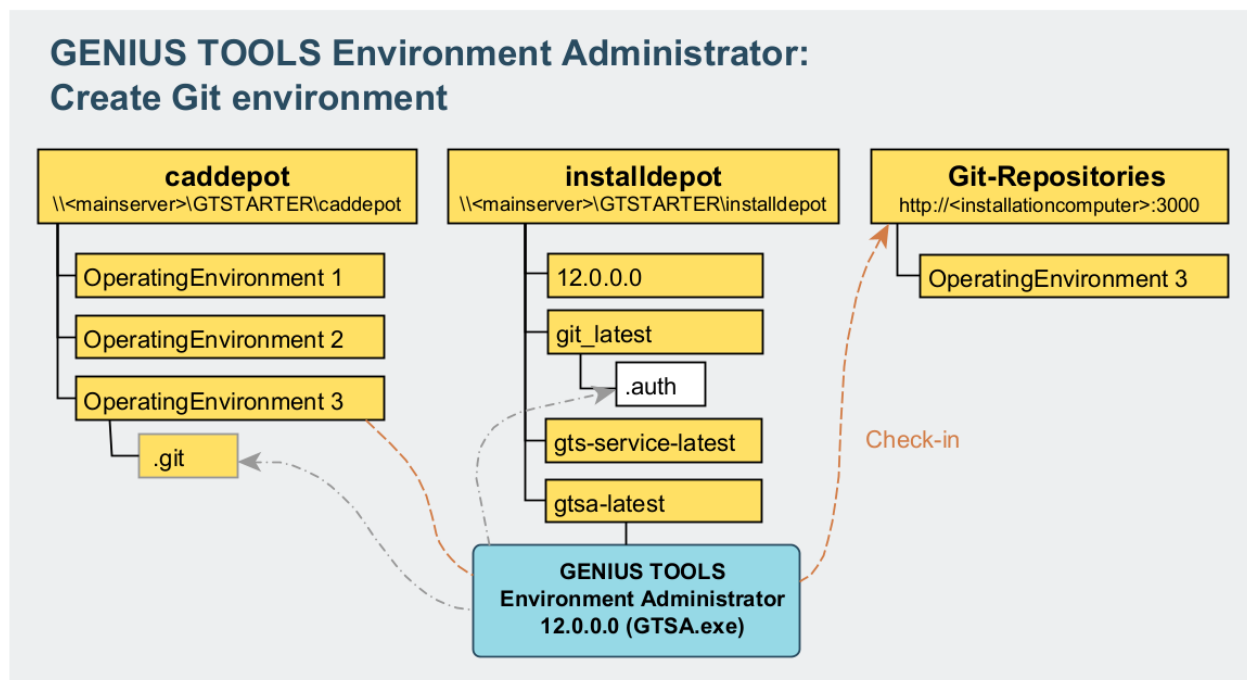
5.6 Creating a Git repository

GENIUS TOOLS Environment Administrator allows you to connect an existing operating environment to the version control system Git.

The software for the Git server is supplied with GENIUS TOOLS Starter. Other Git servers are not supported.

Requirements

- A Git environment must be created on the [installation computer](#), i. e. on the computer on which the caddepot is located.
- For versioning with Git the service GENIUS TOOLS Gitea must be running. This requires GENIUS TOOLS Environment Administrator to be started with administrator rights. A warning message appears if this is not the case and GENIUS TOOLS Environment Administrator restarts.
- The administrator who creates the operating environment in Git is the administrator who checks in changes to GENIUS TOOLS Project Configurator.
- The security requirements are met, see [Encryption of the Auth file](#).



Creating Git environment

In GENIUS TOOLS Environment Administrator click the *GIT* button to start the installation assistant.



From the caddepot (1), select the operating environment (2) you want to connect to Git.

Under Git server (3), the URL address of the computer on which GENIUS TOOLS Environment Administrator is running is displayed. This must be the installation computer, see *Requirements* above.

Create Git environment

OPERATING ENVIRONMENT

Caddepot
 1

Select operating environment
 2

GIT

Git server
 3

Results

On the installation computer

1. The service GENIUS TOOLS Gitea is set up.

2. The Git server is automatically created with the address `http://<installationcomputer>:3000` and entered as the main server.

On the installation computer in the installdpot

3. The file `.auth` is created in the directory `git_latest`. This file should not be readable, see [Auth-Datei](#).

On the installation computer in the caddepot

4. The hidden directory `.git` is created in the operating environment.
5. The file `GTS_Update.exe` is stored in the directory `software`.

On the Git server

6. Repositories (Git folders) are created on the Git server for each application.
7. Three users are created for Git:
 - A user for GENIUS TOOLS Environment Administrator ("Owner"): Is the user from the `auth` file.
 - A user for GENIUS TOOLS Project Configurator ("Contributor"): Has write access to all repositories.
 - A user for GENIUS TOOLS Starter App ("Reader"): Has read access to all repositories.

In GENIUS TOOLS Project Configurator

8. The Git checkin button in GENIUS TOOLS Project Configurator replaces the previous Save button in the user menu. This checkin process commits all changes to the database `sut.db` and to files of the operating environment.
9. Under *Configuration > Settings: Synchronization > Section: Server*, the synchronization type is changed to Git. The synchronisation type can no longer be changed in GENIUS TOOLS Project Configurator.
10. GENIUS TOOLS Project Configurator cannot be started in network mode.

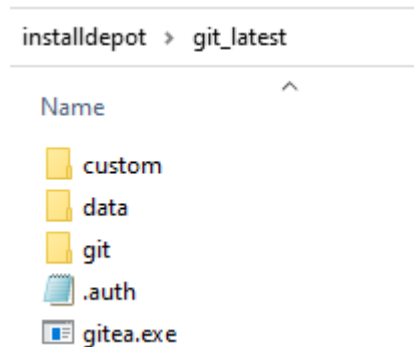
In GENIUS TOOLS Environment Administrator

11. During a software update, GENIUS TOOLS Environment Administrator recognizes whether an operating environment is git-versioned and installs the new version in the repository of the Git server.

Encryption of Auth file

Once the operating environment has been created in Git, the file `.auth` is created in the directory `git_latest`. This file is required to be able to check in to Git.

The Auth file contains the user name and password of the global administrator for GENIUS TOOLS Gitea service and is stored in encrypted form if all conditions are met. If errors occur during the encryption attempt, they are written into the log file `gtsa.log` in the user directory.



Warning: Save the Auth file in a safe place so that you can restore the installation environment if necessary.

Check out from Git

After migrating an operating environment to Git, GENIUS TOOLS Starter must be restarted on user computers.

For an initial installation of GENIUS TOOLS Starter, start the EXE file `GTS.exe` on the application computer.

Path: `\\<mainserver>\gtstarter\caddepot\<operatingenvironment>\software\gts.exe`

Check in to Git

With GENIUS TOOLS Environment Administrator the following changes are made on the installation computer: [Adding components](#), [Updating software](#) and [Modifying settings](#). These are checked in automatically.

Warning: The following applies to git-versioned operating environments: All changes made on the user computer that have not been committed into Git are discarded when executing a function in GENIUS TOOLS Environment Administrator.

On the user computer, changes are made in GENIUS TOOLS Project Configurator (database `sut.db`) and in configuration and batch files, which must be checked in with GENIUS TOOLS Git Utility.

All information on check in can be found in the chapter [Connecting operating environments to Git](#).

6 Update process

GENIUS TOOLS Environment Administrator can update any operating environment – even if located in different Caddepots – with the software versions stored in the Installdepot.

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

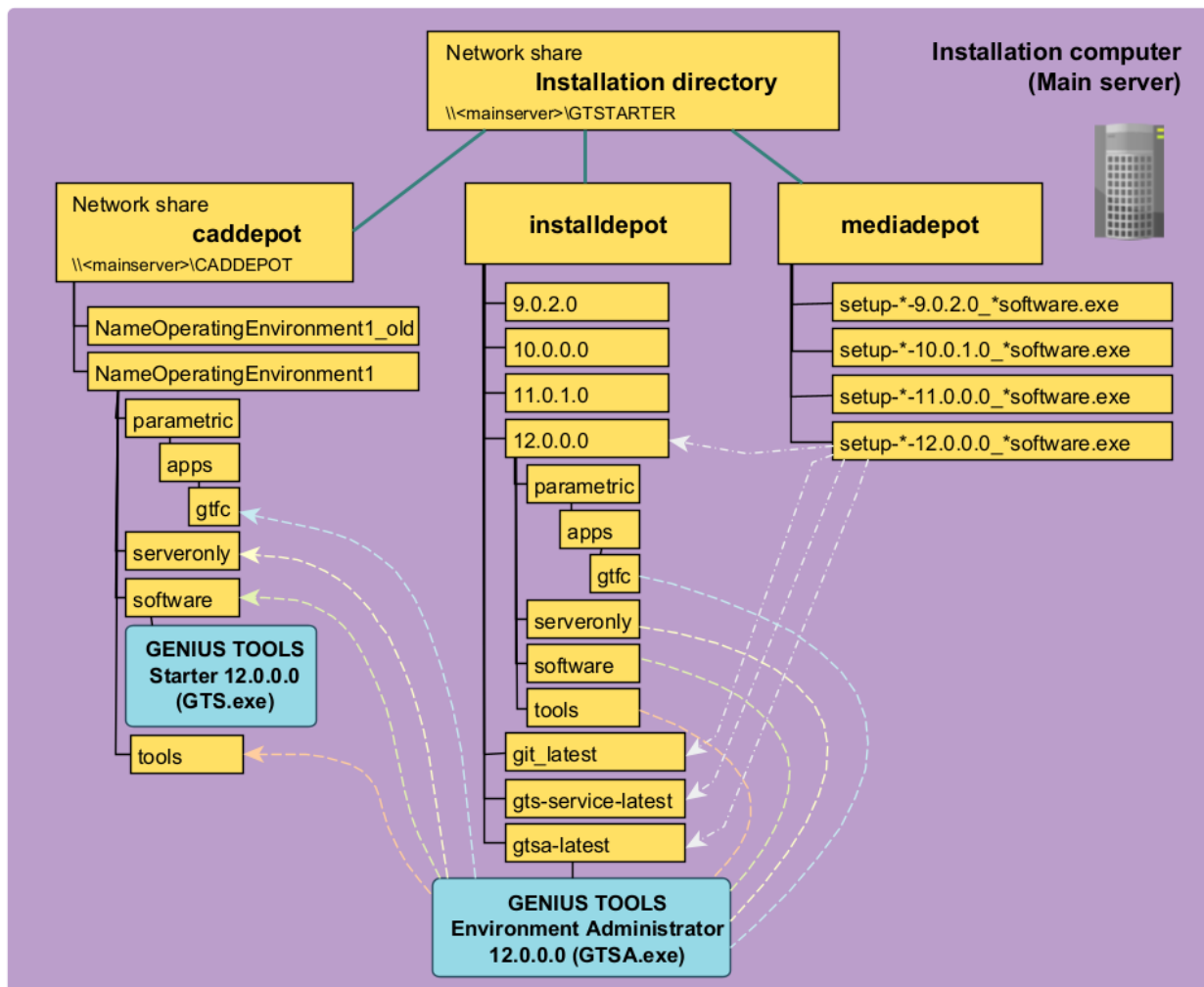
With GENIUS TOOLS Environment Administrator you can update:

- the software GENIUS TOOLS Starter (component of the Startup TOOLS product package)
- the software GENIUS TOOLS Parameter and GENIUS TOOLS Library (add-on application GENIUS TOOLS for Creo, component of the Startup TOOLS product package)

Please note: An update does not update the resource folder (*gt_resource_folder*). This has to be updated manually, see chapter [Update process](#).

- the software GENIUS TOOLS MBD for ISO GPS (add-on application GENIUS TOOLS for Creo)
- the tools directory, which contains GENIUS TOOLS Config Editor and Requirement Check, as well as
- several freeware products which are located in the Caddepot in the serveronly directory under tools. (GENIUS TOOLS Comma To Dot, GENIUS TOOLS Flexnet Watcher, GENIUS TOOLS Material Browser, GENIUS TOOLS Purge, FreeCommander, XML-Import and others).

GENIUS TOOLS Starter: Update-Installation



Hint: Important information that you should consider when updating and all new functions can be found in GENIUS TOOLS Update Advisor at <http://updateadvisor.inneo.com>.

If you use synchronization, the software is updated in the background and the new software version is automatically transferred to the user computers during the next synchronization process.

If the add-on application GENIUS TOOLS for Creo is updated, synchronization to the user computer only takes place when Creo is closed.

If network mode is used, make sure that GENIUS TOOLS Starter App and Creo have been closed by all users, otherwise an update will not be possible.

Please note: The update function of GENIUS TOOLS Environment Administrator only updates the selected software GENIUS TOOLS Starter as well as, optionally, GENIUS TOOLS Parameter / Library, GENIUS TOOLS MBD for ISO GPS, GENIUS TOOLS Config Editor/Requirement Check and freeware products as well as the help directory in an operating environment. Updating configuration settings, configuration files and object data of an application (data packages) has to be undertaken manually, see chapter *Update process* in the Installation manual of GENIUS TOOLS Environment Administrator.

Update to versions 6.0.1. and following

From GENIUS TOOLS Starter version 6.0.1, there are license-dependent differences in product functionality, meaning that many new functions are only available with a subscription license. From 2020, GENIUS TOOLS Starter will only be sold with subscription licenses.

If you work with mixed licenses (permanent and subscription), please note the following: If functions that are linked to a subscription license are configured in GENIUS TOOLS Project Configurator, you can no longer start projects with a permanent license. If you want to undo an activation of subscription functions, use the backup copy *sut.db* of the database under `..\caddepot\<working environment name>\configuration\database\BackupBeforeUpgrade`

Update to versions 9.0.0. and following

Due to new features in GENIUS TOOLS Starter version 9.0.0.0, the folder structure and the software are no longer backwards compatible, i. e. after updating an operating environment to version 9.0.0.0 or later, it is no longer possible to revert to an older version.

Due to this change, the update process takes longer than usual.

Warning: GENIUS TOOLS Environment Administrator 9.0.2.0 and newer cannot be used to create installations of versions 9.0.1.0 or 9.0.1.1.

Please note that due to the conversion of the database to release 9.0.0.0, GENIUS TOOLS Environment Administrator cannot be used to create versions older than version 9.0.0.0.

6.1 Updating Creo data packages and resource folder

Data packages for Creo Parametric are part of the Startup TOOLS product package and are primarily intended for new customers. They contain the latest INNEO state of the art that allows you to work optimally with Creo Parametric and Windchill.

- The data packages are subdirectories of the data directory in the parametric directory, e. g. : `<operatingenvironment>\parametric\data\sut_creo9`

The resource directory contains information for the modules GENIUS TOOLS for Creo, e. g. templates for export tables for GENIUS TOOLS Inspect or the material database for GENIUS TOOLS Material.

- The resource directory is located in the configuration directory of Creo Parametric: `<operatingenvironment>\parametric\configuration\gt_resource_folder`.

Each customer data package contains company specific customizations, e.g. the drawing frames. Therefore, there is no automatic update function for data packages. The principle is that everything should continue to work immediately after an update of the Startup TOOLS.

Warning: An update of Startup TOOLS does not change any data in the data packages or the resource folder within an operating environment.

Before updating, always check the "Important Information" section in the Startup TOOLS news document (`<operatingenvironment>\help\en\Startup TOOLS_News.pdf`).

Update process

Changes in data packages can be diverse and vary in complexity. In a simple case, a Creo Parametric symbol may be changed – in this case only one file would be affected, which can easily be transferred manually after a user check. However, if a work process is changed, e. g. the use of appearances and hatch definitions in material files, many files and configuration settings will be affected.

To update new data, resource directory and Startup TOOLS configurations, two steps are necessary:

1. Installing the new data packages:
 - The data is only unpacked into the installation repository.
 - There is no change to an operating environment.
2. Testing data packages:
 - Each file that is manually transferred from the installation depot to an operating environment must be checked for its effects.
 - It is recommended to use a test environment.

Extensive modifications (e. g. changes in material appearances and hatching) are best implemented together with an INNEO expert.

Update of hatching, appearances and materials

If you want to transfer changed data for hatching, appearances and material files into your own operating environment, you have to adapt various settings starting with Startup TOOLS version 9.0.1.

Hatching

Creo Parametric 4.0 introduced the default hatching format **.pat*. Before, Creo Parametric used its own format **.xch*. Starting with Creo Parametric 9.0, the default value changed from XCH to PAT.

The configuration option *default_hatch_type* must be set to the new default PAT. All Startup TOOLS XCH files are converted to PAT format and are no longer delivered as XCH files.

Appearances

When updating to version 9.0.1, the graphics library must be changed from the Creo Parametric installation directory (*..\Common Files*) to the data directory. To do so, specify the data directory in the configuration option *graphics_library_dir*: *\$GTS_DATA*.

Material files

The material files include an additional default appearance as well as a hatch definition (if different from the default line). The material file only stores the names of the appearance or hatch definition. In a Creo Parametric session, access to the definitions/files must be configured accordingly.

7 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.

7.1 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 TOOLS 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


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

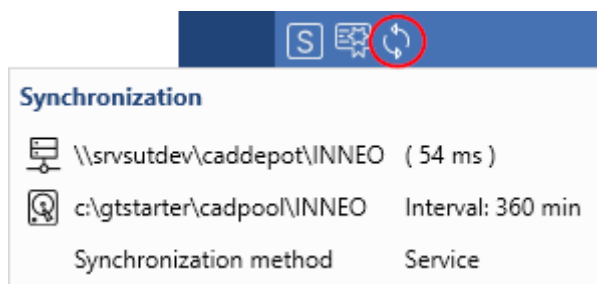
Synchronization status and license availability

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



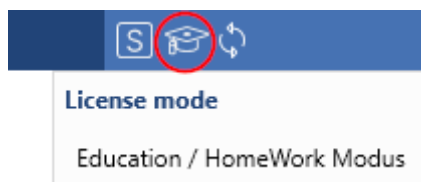
Status line

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



Unrestricted synchronization

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



Student 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.

7.2 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.

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.

8 Customizing the GENIUS TOOLS Starter environment

8.1 Start parameters

Start parameter	Description
-gts:admin	Starts GENIUS TOOLS Project Configurator.
- gts:appdata= <directorypath>	Redefines the path to the Appdata directory.
-gts:debug	Activates debug logging.
-gts:exp= <directorypath>	Defines the location of the <i>expcfg.bat</i> file of the worker.
-gts:home= <directorypath>	Sets the home directory. Example: <i>D:\gtstarter\cadpool\inneo\software\GTS.exe -gts:home=%SystemDrive%\home\%USERDOMAIN%.%USERNAME%\pro.creo3</i>
- gts:lang= <languageacronym> >	Starts GENIUS TOOLS Starter App in a defined language (de/en/fr).
-gts:L= <languageacronym>	Sets Creo language.
-gts:CL= <languageacronym>	Set language for GENIUS TOOLS Starter.
-gts:licDebug	Activates debug logging for the license server (loud alarm when license problems occur).
-gts:licServer= <licenseserver>	Sets the license server.
- gts:licTimeout= <timespecification>	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= <timespecification>	Redefines the network timeout. Entries in milliseconds.

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= <projectname>	Starts a project and filters the project list.
-gts:pui= <projectlist>	Filters the project list to a list of projects specified separated by commas (-gts:pui=pname1,pname2,pname3).
-gts:temp= <directorypath>	Redefines path to the Temp directory.
-gts:units= <unitIDstring>	Starts GENIUS TOOLS Starter with the defined unit ID string. (The ID string is displayed in GENIUS TOOLS Project Configurator under <i>Configuration</i> > <i>GENIUS TOOLS Starter App</i> > <i>Desktop shortcut</i> for the selected unit).
-gts:worker	Starts in Worker setting.
-gts:workingDir= <directorypath>	Defines the directory where the runtime data (log files) of GENIUS TOOLS Starter is stored.

8.2 Environment variables

Created environment variables

GTS environment variable	Description / example	Old SUT variable
GT_LIC_SERVER	contains the specifications of -gts:licServer	
GT_LIC_TIMEOUT	contains the specifications of -gts:licTimeout (maximum waiting time of a license query)	

GTS environment variable	Description / example	Old SUT variable
GT_TELEMETRY	1 if <i>Send telemetry data</i> is activated, otherwise 0	
GTFC_ADMIN	contains the result of the switch <i>Is GTfC Admin</i> in <i>GENIUS TOOLS Project Configurator > Organization > Access > Role > Function Access</i>	TBXADMIN
GTS_APPS_DIR	Finds the selected, application-specific directory for add-on applications. <Caddepot>\<operatingenvironment>\<application>\apps	
(GTS_CFG_LW) recommended instead: GTS_ROOT_DIR	GTS: <Cadpool>\<operatingenvironment> 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 resolved, e. g. needed in mapkeys. Is defined automatically, see explanation in section below .	
GTS_CONFIGURATION_DIR	Finds the selected, application specific configuration directory. <Caddepot>\<operatingenvironment>\<application>\configuration	
GTS_CREO_INSTALL_DEFINITIONS_DIR	definitions directory under the install folder	
GTS_CREO_INSTALL_DIAGNOSTIC	1 if <i>diagnostic tools</i> are activated, otherwise 0	
GTS_CREO_INSTALL_FIREWALL	1 if <i>Write firewall entries</i> is activated, otherwise 0	
GTS_CREO_INSTALL_HELP	1 if <i>Install help</i> is activated, otherwise 0	

GTS environment variable	Description / example	Old SUT variable
GTS_CREO_INSTALL_HELP_XML_DIR	XML directory for the help (install/definitions/<Unit or standard>/XML/help_Creo<MainVersion>)	
GTS_CREO_INSTALL_MAIN_VERSION	Creo main version to be installed	
GTS_CREO_INSTALL_TASKILL	1 if <i>Taskkill</i> is activated, otherwise 0	
GTS_CREO_INSTALL_UNIT_FOLDERS	List of the currently selected units (e. g. "Germany Leipzig Construction")	
GTS_CREO_INSTALL_UPGRADE	-upgrade if the installation type was set to upgrade, otherwise ""	
GTS_CREO_INSTALL_VERSION	Creo version to be installed (e. g. 11.0.1.0)	
GTS_CREO_INSTALL_VIEWER	1 if <i>Install Thumbnail Viewer</i> is activated, otherwise 0	
GTS_CREO_INSTALL_XML_DIR	XML directory (install/definitions/<Unit or standard>/XML/Creo<MainVersion>)	
GTS_DATA	Finds the selected data package directory, is from version 9.0 application specific: i. e. in Creo Parametric it has been changed from <Caddepot>\<operatingenvironment>\data\<companydata> to <Caddepot>\<operatingenvironment>\<application>\data\<companydata>	SUTDATA
GTS_DATA_LIB	Datalib directory	
GTS_ENV_NAME	Name of operating environment.	
GTS_EXECUTION_DIR	Points to the directory which contains the executed file (*.exe, *.bat, *.pdf).	

GTS environment variable	Description / example	Old SUT variable
GTS_MAIN_SERVER_DIR	Server path of the main server	
GTS_MC		SUTMC
GTS_NET_LW	Name of the first network drive	
GTS_PLOT_CONFIG_DIR	Directory for the plot configuration of Creo Parametric	PLOT_CONFIG_DIR
GTS_PLOT_FILE_DIR	File for the plot settings of Creo Parametric	PLOT_FILE_DIR
GTS_PROEDATECODE	Version of Creo Parametric	SUT_PROEDATECODE
GTS_PROERELEASE	Version of Creo Parametric	SUT_PROERELEASE
GTS_PROJECT_DIR	Finds the selected project directory, from version 9.0 application-specific. Path: <Caddepot>\<operatingenvironment>\<application>\configuration\projects\<projectname>	APPL_PROJECT_DIR
GTS_PROJECT_DIR_NAME	Name of project directory (until version 9.0 GTS_PROJECT_DIR.)	
GTS_PROJECT_NAME	Name of current project	SUT_PROJECT_NAME
GTS_ROOT_DIR	Main directory of the operating environment	SUT_ROOT_DIR
GTS_SATELLITEONLY_DIR	Directory that only exists on the main server and the satellite	
GTS_SERVERONLY_DIR	Directory that exists only on the server	
GTS_SERVER_DIR	Path to the server	
GTS_SYNC_LAST	Last synchronization date	
GTS_SYNC_MODE	Synchronization mode	
GTS_TEMP	Points to the temp directory	

GTS environment variable	Description / example	Old SUT variable
GTS_TRAIL_DIR	Trail directory of Creo Parametric	TRAIL_DIR
GTS_UNIT_DIR	Finds the selected unit directory, from version 9.0 application-specific. Path: <Caddepot>\<operatingenvironment>\<application>\configuration\units\<unitdirectoryname>	as of version 11.0, use instead of: GTS_USER_GROUP, GTS_COMPUTER_GROUP
GTS_UNIT_DIR_NAME	Name of unit directory	
GTS_UNIT_NAME	Name of unit that is selected by the user	
GTS_USER	Contains the alias name of the user entry in GENIUS TOOLS Starter („GTS alias“)	STOOLS_USER
GTS_USER_COMMENT	Contains the comment of the user entry in GENIUS TOOLS Starter	
GTS_USER_CONFIG_DIR	Directory that contains the personal settings of users	USER_CONFIG_DIR
GTS_USER_EMAIL	Contains the email address of the user entry in GENIUS TOOLS Starter	
GTS_USER_LW	Letter of user drive	STOOLS_USER_LW
GTS_USERLONG	Contains the long alias name of the user entry in GENIUS TOOLS Starter („GTS alias long“)	STOOLS_USER_LONG
GTS_USERSHORT	Contains the short alias name of the user entry in GENIUS TOOLS Starter („GTS alias short“)	STOOLS_USER_SHORT
GTS_VERSION	Version of GENIUS TOOLS Starter	
GTS_WCSRVNAME	Windchill server name	STOOLS_WCSRVNAME

GTS environment variable	Description / example	Old SUT variable
GTS_WCSRVURL	Url of windchill server	STOOLS_WCSRV URL
GTS_WORKING_DIR	Points to the start directory (for Creo Parametric: working directory)	
LANG	Language	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 work. In order to allow you to continue using variables in mapkeys and other places where a resolution is undesirable, a new variant of all environment variables was introduced with the extension *_ESCAPED*.

The ESCAPED variant of a variable is defined automatically: If an environment variable is defined without the ESCAPED extension, GENIUS TOOLS Starter automatically writes the value of this environment variable into the ESCAPED environment variable.

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.)

PTC_WF_CACHE

Environment variable that refers to additional cache space.

PTC_SESSION_LOG_PATH

PTC_SESSION_TRACEBACK_PATH

PTC_SESSION_TRAIL_PATH

8.3 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.

Types of batch files

Batch files that configure the CAD applications Creo Parametric, Inventor und Solidworks have to start with one of the following prefixes.

For all other applications, e. g. Creo Elements/Direct Modeling, Apps projects and Auto projects, only start batch files can be executed.

Prefix	Start time	Comment
prestart_	Started before the configuration is created.	When a project is started, GENIUS TOOLS Starter calls the <i>prestart_</i> batch files before the <i>config.pro</i> files for the project are assembled.
poststart_	Started after the application has been started.	This type of batch file can be used for accessing the running Creo session with the help of additional programs.
start_	Started before the application is started.	When a project is started, GENIUS TOOLS Starter assembles the <i>config.pro</i> files for the project, then calls the <i>start_</i> batch files.
stop_	Started after the application is closed.	Please note that <i>Enable stop batches</i> has to be set to <i>Yes</i> in the Project Configurator under <i>Configuration > (Select unit) > Creo Settings > Startup Settings</i> .

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.

User or computer-specific batch files

GENIUS TOOLS Starter can call batch files depending on which user or computer starts a project. These batch files and their call sequence do not differ from the general batch files.

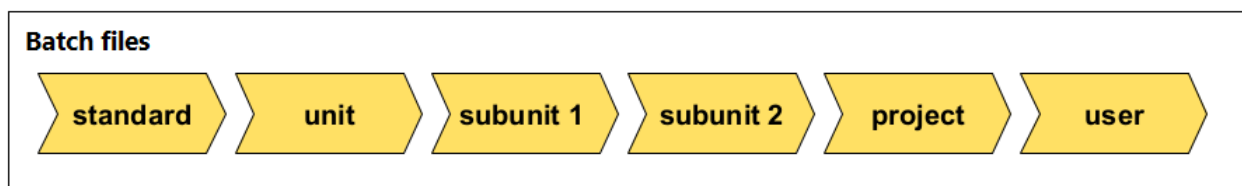
Use the following prefixes and be careful not to use special characters.

Batch file	Prefix (without the characters <>)	Beispiel
User-dependent	U_<WindowsUsername>_ >_	U_MUELLER_stop_copy_workspace.bat
Computer-dependent	C_<WindowsComputername>_ >_	C_CAD13_start_map_drive.bat

Please note: User and computer groups are converted into units when updating to version 11.0.0.0 and later. Configuration blocks that were created for user or computer groups (*UG_<nameofusergroup>_config.pro* or *CG_<nameofcomputergroup>_config.pro*), will be migrated into a new unit directory of the same name.

Call hierarchy for batch files

Batch files are started in the order that they are located in the configuration layers, starting from the standard directory and ending with the users directory.



Call hierarchy for batch files of a Starter project

9 Test environment

Using a test environment allows administrators to check any changes before adding them to the productive environment. It is important that the test environment corresponds exactly to the productive environment. Test and productive environment should be located in the same Caddepot.

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.

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!

9.1 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 Cadpool of test users will contain both environments.

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.

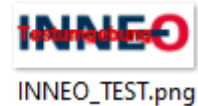
To immediately recognize the environment in which one is working, we recommend to:

- add a different image file in the test environment in the Images directory:

caddepot/<NameOperatingEnvironment</_Images

The name of the image file has to be the same as the operating environment.

caddepot > INNEO_TEST > _Images



or

- delete the image file from the Images folder of the test environment. This results in the display of the name of the operating environment without a logo, as in the example below.

Example

Productive environment	Test environment
\\SRVCAD01\caddepot\inneo	\\SRVCAD01\caddepot\inneo_test
<p>Hint: If you are using GENIUS TOOLS for Creo, you can also add information to the empty Creo graphics window.</p>	
<pre> INNEO Solutions GmbH GENIUS TOOLS Starter 11.0.0.6634 GENIUS TOOLS for Creo: 11.0.0.1222 C:\PTC\Creo 11.0.0.0\Parametric\bin\parametric.psf Working environment: INNEO UNIT: Development PTC_WF_ROOT: C:\Users\ahelk\AppData\Roaming\PTC\ProENGINEER\creo11 Project: INNEO_sut_creo11p Data: C:\GTSTARTER\cadpool\INNEO\parametric\data\inneo </pre>	<pre> INNEO Solutions GmbH GENIUS TOOLS Starter 11.0.0.6634 GENIUS TOOLS for Creo: 11.0.0.1222 C:\PTC\Creo 11.0.0.0\Parametric\bin\parametric.psf Working environment: INNEO_TEST UNIT: Development PTC_WF_ROOT: C:\Users\ahelk\AppData\Roaming\PTC\ProENGINEER\creo11 Project: INNEO_sut_creo11p Data: C:\GTSTARTER\cadpool\INNEO\parametric\data\inneo </pre>

10 GENIUS TOOLS Starter Service

10.1 Installation

GENIUS TOOLS Starter Service provides a further type of data synchronization. The service reduces the synchronization time significantly, as only the changed data needs to be loaded by GENIUS TOOLS Starter App, i. e. not every file must be copied.

The service monitors the caddepot for changes and makes this information available in the operating environments in a ZIP file:

```
\\<installationdirectory>\caddepot\<operatingenvironment>\gts_filetree_structure.zip
```

The data synchronization time is significantly reduced. This variant offers a clear advantage, especially with slower connection speeds.

GENIUS TOOLS Starter Service can be installed on the installation computer with the software setups for GENIUS TOOLS Starter and GENIUS TOOLS Startup TOOLS. Alternatively, it can be started subsequently in the installation depot under the directory *gts-service-latest*. Only the latest version is installed.

GENIUS TOOLS Starter Service is installed in the installdpot 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.

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

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.

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*.

^ SERVER	
Checksum validation	Nein
Server name	Mainserver
Comment	Berlin
Synchronization type	Service
Server path	Dateisystem
	Service
	Git

GENIUS TOOLS Project Configurator

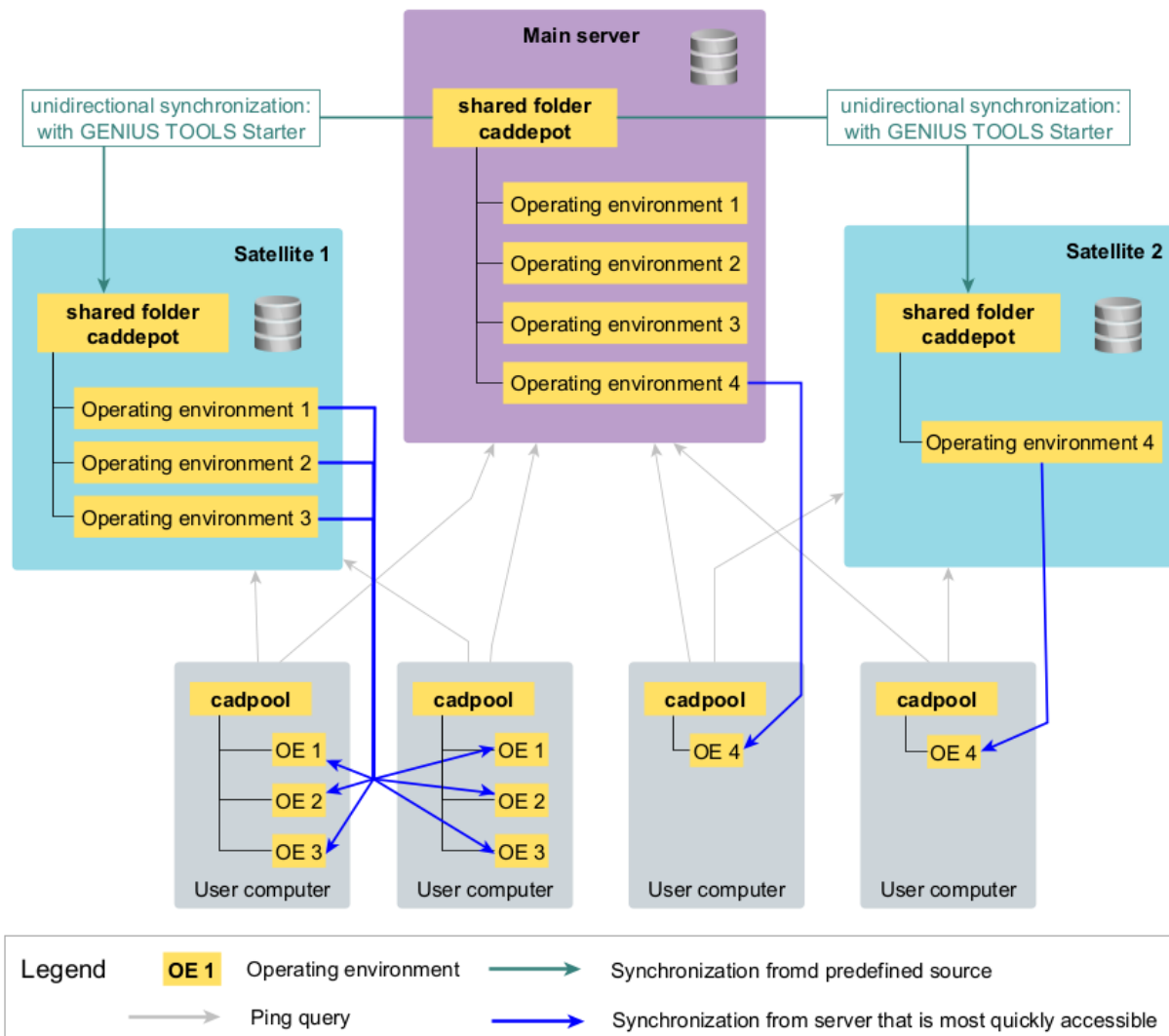
10.2 Working with satellites

Data synchronization with GENIUS TOOLS Starter Service can be operated with satellites from version 7.0.1.0. A satellite is a server on which the state of one or more operating environments of a central main server is mirrored.

Using this method, business locations with a slow connection to the main server would instead access a satellite, which can significantly reduce the time needed for data synchronization.

GENIUS TOOLS Starter App automatically determines which satellite or main server responds fastest. This is then used for synchronization. You can check in the log file *gts-starter-INNEO.log* whether GENIUS TOOLS Starter is able to access the satellites.

GENIUS TOOLS Starter / Startup TOOLS – Synchronization of operating environments Working with satellites



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

Active satellit	Passive satellite
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.

Please note: Git-versioned operating environment cannot be operated with satellites.

10.2.1 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 Service 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.
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 the following 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.
- *_gt_service_main_template.cfg* is the template file of the current version to see which options are available and which values are allowed.

You can copy and edit the templates manually or create them in GENIUS TOOLS Project Configurator.

Hint: Configuration files can be created in the Satellites menu item in GENIUS TOOLS Project Configurator (steps 5 - 15). Use the input help in the program.

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  
service.rest.baseaddress=<mainservername>
```
7. Edit the file if you want to add other information. The commands are listed in the table [Configuration options](#).

Create Windows Defender Firewall rules

8. Open the Windows Defender Firewall with the key combination Win + R and enter "wf.msc" in the input field.
9. Click on *Inbound Rules* in the left column.
10. Create a new rule under *Action*. The dialog window *Assistant for new inbound rules* opens.
11. Choose the following settings:
 - Rule Type: Port
 - Protocol and Ports: Tick *TCP* and *Custom local ports*
Read the value for *Custom local ports* from the entry `service.rest.port` in the configuration file *gt_service_main.cfg*. The default value is 8092.
 - Action: Check *Allow the connection*.
 - Profile: Check the required profiles.
 - Name: Enter a name for the firewall rule.
12. Save the rule.
13. Restart the service.

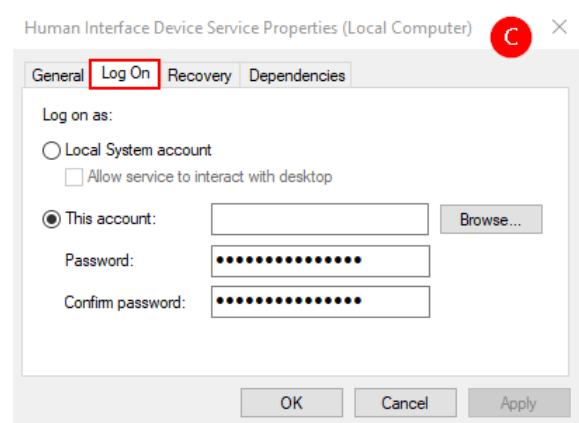
Create configuration file for each active satellite

14. Copy the file *gt_service_satellite.cfg*
15. Rename the file to *gt_service_<activesatellitename>.cfg*.
16. The file contains one command that must not be changed:

```
service.type=satellite
```
17. Add the remaining information from the table [Configuration options](#).
18. Each active satellite requires a separate file.

Create account with read access to the main server

19. 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.
 - Confirm in the following dialog that the account under which GENIUS TOOLS Starter Service runs has read access by checking the box.

**Install GENIUS TOOLS Starter Service on the satellite**

20. On the computer that is to function as a satellite: Download the GENIUS TOOLS Starter service setup at www.inneo.co.uk > *Download* > *GENIUS TOOLS Downloads* > *GENIUS TOOLS Starter* and click on *Service*. This will download the service setup *setup-GENIUS-TOOLS-Starter-Satellite-Service-XXX-software.exe*. Open this file.
21. In the dialog *Install GENIUS TOOLS Starter Service* check the box (1) to register the service.

22. Enter the name of the main server. (2)

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

21. 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.

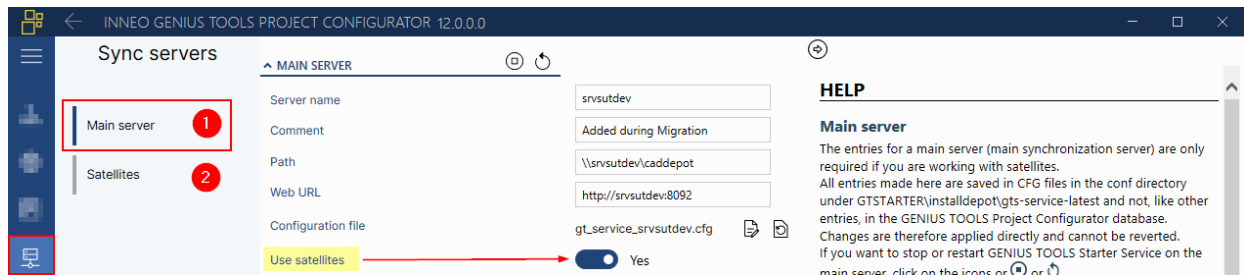
GENIUS TOOLS Starter Service loads the configuration files from the main server and restarts itself.

The configuration settings are used on the satellite.

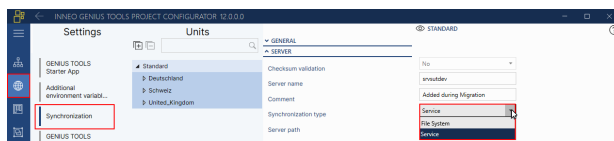
The satellites communicate their current status to the main server via an interface and are read into GENIUS TOOLS Project Configurator. The administrator can monitor the status of the satellites there. Additionally, the freeware GENIUS TOOLS Flexnet Watcher can be used for monitoring purposes.

Switch on use of satellites in GENIUS TOOLS Project Configurator

22. In the menu item Sattellites  in GENIUS TOOLS Project Configurator go to the section Main server (1).
23. 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)
24. Switch on the Use satellites radio button.




25. The Satellites page (2) contains an overview of all satellites, i. e. the configuration files in the directory `installdepot\gts-service-latest\conf` and displays their configuration settings and status.
26. Check that in GENIUS TOOLS Project Configurator the synchronization type under *Configuration > Synchronization > Server* is set to *Service*.



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

The availability of satellites and synchronization process – can be checked in GENIUS TOOLS Project Configurator in the menu item Satellites  and data synchronization can be triggered.

The freeware GENIUS TOOLS Flexnet Watcher can also be used to monitor the satellites.

Updating satellites

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

10.2.2 Operating passive satellites

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

For setting up passive satellites, follow steps 1 to 11 of the procedure described in the previous chapter.

The following steps can be carried out in the Satellites menu item in GENIUS TOOLS Project Configurator. Use the input help in the program. Alternatively, you can copy and edit the file templates manually and edit them as follows.

Create configuration file for each passive satellite

12. Go to the configuration directory: `\\<mainserver>\gtstarter\installdepot\gts-service-latest\conf\`
13. Copy the file `gt_service_share.cfg`
14. Rename the file to `gt_service_share_<displayname>.cfg`. The display name is the name shown in GENIUS TOOLS Project Configurator.
15. Add the remaining information from the table [Configuration options](#).
16. Each passive satellite requires a separate file.

Restart main server

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

Connect satellites

18. Proceed with step 22 and following of the chapter [Operating active satellites](#).

10.2.3 Configuration options for satellites

The configuration options listed in the following table define the behavior of the main server and the satellites. They must be specified in the corresponding configuration files. Please note the necessary information.

<code>gt_service_<mainservername>.cfg</code>	Settings for the main server (M).
<code>gt_service_<satellitename>.cfg</code>	Settings for an active satellite (A).
<code>gt_service_share_<displayname>.cfg</code>	Settings for an passive satellite (P).

Please note: If the configuration files for the main server and satellites contain different information, the setting of the satellite applies.

Command / configuration option	Required?	Explanation
<code>service.type=</code>	X (M,A)	Information, that this is the configuration file for the main server (main) or satellite (satellite)

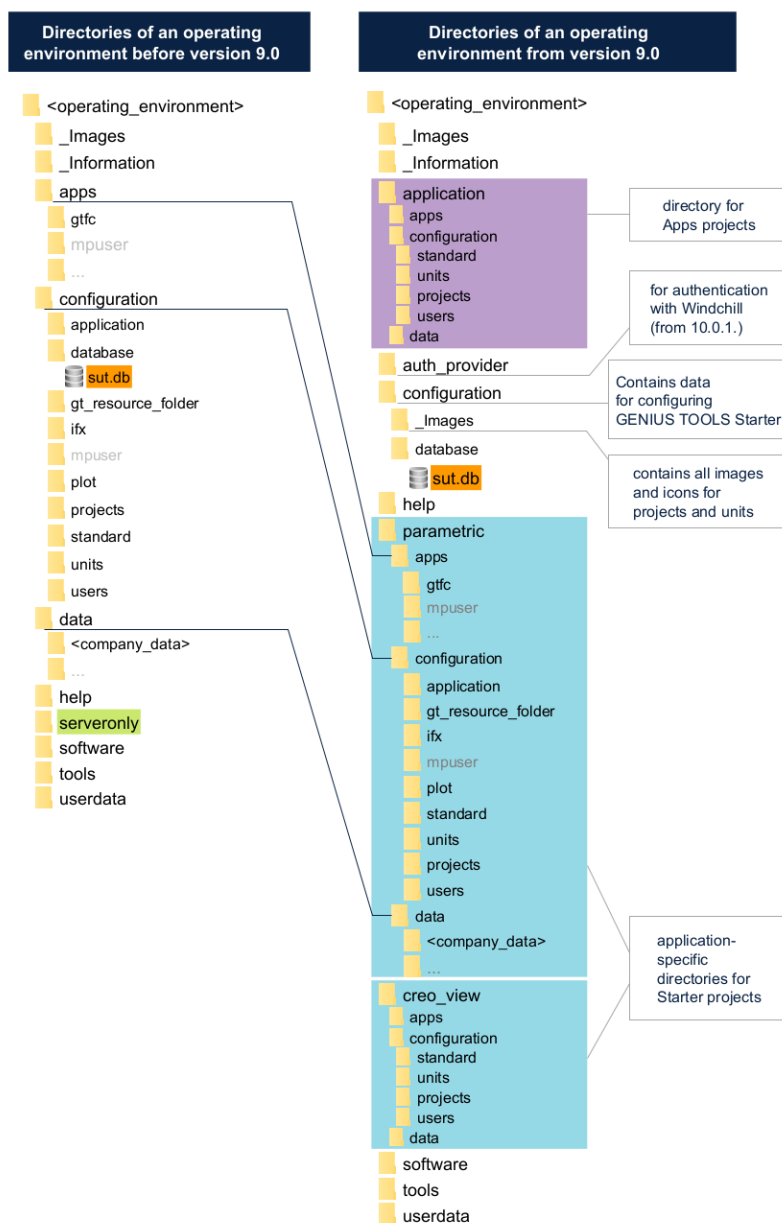
Command / configuration option	Required?	Explanation
<code>service.rest.baseaddress=</code>	X	Enter name of main server or URL in notation <code>http://<mainservername>:<portnummer></code>
<code>service.sync.interval=</code>		Interval in minutes after which the active satellite will be synchronized from the main server. Default value: 60
<code>service.sync.source=</code>	X	Path of the caddepot directory that will be synchronized from: <code>\\<mainserver>\gtstarter\caddepot</code>
<code>service.update.source=</code>	X	Path to the GENIUS TOOLS Service directory on mainserver: <code>\\<mainserver>\gtstarter\installdepot\gt-service-latest</code>
<code>service.lic.server=</code>	X	Address of GENIUS TOOLS License server, e. g. <code>7788@gtslicenseserver</code>
<code>service.rest.port=</code>	X	Standard port: 8092
<code>service.environment.whitelist=</code>		Operating environments that are to be synchronized from the main server to the satellite: <code><environment1>,<environment2></code> (list, separated by colon) – name(s) of operating environment(s) <code><leer></code> (empty entry) – all environments

Command / configuration option	Required?	Explanation
service.push.whitelist=		all data: all data is synchronized immediately when changes are made Breakpoint (default): no triggering before the synchronization interval expires software: GENIUS TOOLS Starter Service software (installdpot\gts-service-latest) and GENIUS TOOLS Starter (caddepot\<operatingenvironment>\software) specify directories: Name(s) of directory / directories
debug=		0 (default): No debug output is written to the log file 1: Debug output is written
service.satellite.share=	X (P)	Path to the Caddepot directory that is the synchronization target: \\<rechnername>\<freigabename>\-<caddepot>
share.sync.interval=		Interval in minutes for synchronizing the target directory from the main server on the passive satellite. Default value: 480
service.share.name=	X (P)	Display name of the passive satellite in GENIUS TOOLS Project Configurator.
service.add.firewall=		1 (default): Directories on passive satellites are automatically shared 0: Directories on passive satellites must be shared manually

11 Directory structure

With GENIUS TOOLS Starter you can create projects for Creo Parametric as well as Creo Elements/Direct Modeling, Inventor and SolidWorks. In order to be able to include data for other CAD systems, the entire directory structure has been changed in version 9.0.0.

Warning: Due to these new features in GENIUS TOOLS Starter, the directory structure and the software are no longer backward compatible, which means that after updating an operating environment to version 9.0.0.0 or newer, it is no longer possible to revert to an older version. Read the chapter *Important information* in the News document before updating.



System directories of the first level

_Images contains images (JPEG, PNG, SVG) for the operating environment as well as the start icon (ICO). See also chapter *Configuring* Configuring the desktop link.

_Information contains messages to the users as text files. See also Sending messages to the users.

application directory for applications of App projects, e.g. Model Processor.

auth_provider contains the executable files *Auth_Windchill.exe* and *Auth_Windchill_SSO.exe* for authenticating against Windchill (authentication provider).

configuration contains images and icons for units and projects, and the *sut.db* database which stores the configuration settings of an operating environment.

help contains the manuals and installation instructions for GENIUS TOOLS for Creo, GENIUS TOOLS Starter and Startup TOOLS.

satelliteonly is located in the caddepot of the main server and all satellites. It can contain data specific to satellites.

serveronly is located in the caddepot directory of the main server only. It contains additional tools such as GENIUS TOOLS Comma-to-dot or GENIUS TOOLS Purge. The subdirectory *_ErrorLog* contains log files for errors.

software contains the GENIUS TOOLS Starter software.

tools contains the software component GENIUS TOOLS Config Editor and Requirement Check, a tool which returns a log file with a list of all available applications.

userdata contains user-defined settings, e. g. mapkeys and user images. The name of a subfolder corresponds to the login name. See Create user with image.

In contrast to the directory in *configuration/Users*, this directory can be managed by the user themselves. See chapter User-driven configuration

The following application-specific directories are created:

auto_cad AutoCAD, AutoCAD Architecture, AutoCAD LT und AutoCAD Mechanical

ced_drafting Creo Elements/Direct Drafting

creo_view Creo View

elements_direct Creo Elements/Direct Modeling

geomagic_design_x Geomagic Design X

illustrate Creo Illustrate

inventor Inventor

key_vr KeyVR

keyshot Keyshot

mathcad Mathcad

parametric contains data packages, standard projects and add-on applications for Creo Parametric

schematics Creo Schematics

solid_works SolidWorks

For some applications, only one Starter project can be created: so-called auto projects.

Please note: Empty directories are not synchronized.

Directories of the second level for the various applications

Each of the above listed application-specific directories has three sub-directories for data, configuration settings and add-on applications.

apps contains all additional applications.

- For Creo Parametric: the GENIUS TOOLS for Creo products Library and/or Parameter (gtfc) and the freeware tool GENIUS TOOLS UI File Loader (ui).
- It is represented by the variable GTS_APPS_DIR.

configuration contains configuration settings for system-wide standards, units, projects, users as well as further directories.

- For Creo Parametric: *gt_resource_folder*.
- It is represented by the variable GTS_CONFIGURATION_DIR.

data contains all data packages (subdirectories) available in a project, e.g., libraries, materials, ModelCheck configuration files etc.

- A subdirectory of *data* is represented by the variable GTS_DATA.

install contains all data and setup files for installing Creo Parametric on user computers.

12 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.

Authentication provider

An authentication provider is an executable file that requests or receives user data from an authentication system.

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

When updating to version 11.0.0.0 and newer, existing computer groups will be transformed into units.

Conditional configuration block

Configuration file whose validity is restricted to condition(s) by one or more tag ID(s).
Notation: `config_*.TAGID.pro`

Config file (also: `config_*.pro` file)

See configuration block.

Configuration block

Configuration file which is read by GENIUS TOOLS Starter to create the configuration of a Starter project. Notation: `config_*.pro`, `config_*.sldreg`.

Config.pro

Most important Creo Parametric configuration file, defines user settings.

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 Parametric configuration file which contains validation settings for data import.

Creo

Name of CAD software by PTC with the applications Creo Parametric (formerly Pro/Engineer) and Creo Elements/Direct (formerly CoCreate).

Creo configuration file

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

Creo startkey (also: PSF key, start command)

Configured start command that opens Creo Parametric with one or several defined licenses or license extensions. Stored as PSF file in PTC bin directory.

Customization.ui file

Creo Parametric configuration file which contains user interface customizations for a user. The precise name of the file is *creo_parametric_customization.ui*

Data directory

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

Educational license

License for academic institutions.

Escaped variable

Variant of an environment variable that prevents the variable from being resolved. It is defined automatically.

Free tag ID

Textual marking in a [configuration block](#) 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 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 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 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%.

GTS-config-variable

Variable that defines settings in a configuration block to create a single project option for GENIUS TOOLS Starter App, e. g. *gts_display_name*

GTS variable

Environment variable that creates information for GENIUS TOOLS Starter, e. g. *GTS_UNIT_DIR*.

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.

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.

License extension

License for additional Creo Parametric functionality that is drawn at the start of the program and blocked during the session.

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.

PDM directory

Subdirectory of the directory *standard*, *units*, *projects* and *users* which is included into the call hierarchy for configuration files and batch files if Windchill is active.

PDMLink

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

Power Extensions

Application from INNEO for central administration of an operating environment for Creo Elements/Direct projects.

PTC

The software company that develops Creo.

Project

See Starter project.

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.

Resource directory

Directory *gt_resource_folder*, which is located in the system directory *configuration* of Creo Parametric and contains information for the modules of GENIUS TOOLS for Creo.

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

Name of the directory *PDM* until version 9.0.0.

Starter project

Project created in GENIUS TOOLS Project Configurator which contains company-specific data and additional applications and whose settings, such as license and project specifications, can be made in different configuration levels.

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.

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](#).

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 configuration block that is recognized by GENIUS TOOLS Starter. There are tag IDs for units ([unit tag ID](#)) and for project options ([free tag ID](#)).

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 [configuration blocks](#) 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, dynamic

Variable entry in the Resources menu item under *Role > LDAP or User group (authentication provider)*.

User group

When updating to version 11.0.0.0 and newer, existing user groups will be transformed into units.

User, permanent

Manually entered entry in the Resources menu item under *Users*.

Windchill

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

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- A -

access rights 10
apps directory 77

- B -

batch files 62

- C -

caddepot 5, 18
cadpool 5
configuration directory 77

- D -

data directory 77
data packages 21
data synchronization 4, 66
directory structure 77

- E -

environment variables
 affected environment variables 55
 created environment variables 55

- G -

GENIUS TOOLS Environment Administrator 25
GENIUS TOOLS Starter Service 4, 66
glossary 7, 80

- H -

hardware requirements 9

- I -

install directory 77
installation scenarios 12
installdepot 18

- L -

licenses 4

- M -

mediadepot 18
mirror server 67

- O -

operating environment 5
 add components 32
 create 28
 modify settings 40
 update 37, 47

- P -

parameters
 Start parameters 55

- S -

satellite 67
 configuration options 74
 operate active satellites 69
 operate passive satellites 73
satellites 13
scope of delivery
 GENIUS TOOLS Starter 3
 Startup TOOLS 3
software requirements 9
start parameters 55
synchronization 4, 66
synchronization server 67

- T -

test environment 64

- U -

update 47
 appearances 49
 data packages 49
 hatching 49
 materials 49
user computers
 set up 52