

[expleo]

Manual

**Expleo-Test/Professional
Suite 11.0**

Installation

expleogroup.com

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The manual refers to the Expleo-Test/Professional Suite as of **Version 11.0**
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1 Installation Test Center

1.1 Introduction

This document contains an **instruction** for the **installation** of Expleo-Test/Professional under **Windows**.

For Expleo-Test/Professional, a client and a complete client/server component can be installed. The set-up program provides selection options for this purpose which are explained in detail in chapter 1.3 Installation.

After the installation of the Expleo-Test/Professional server component the **license manager** needs to be configured and the license file set up.

The server installation must be completed with the Administration (Start->EXPLO Administration). After the installation of the server component, a **CORBA domain** must be created and started, and a **workspace environment** must be configured.

Subsequent client installations retrieve the server name and automatically configure the connection to the **CORBA domain**.

You will find background information regarding installation and configuration, checking the installation and trouble shooting in the document "**Technical Administration**".

1.2 Requirements

1.2.1 System Requirements

The operating systems Microsoft Windows Server 2012 R2, Windows Server 2016 and Windows 10 are supported. Please make sure that your Windows system is updated regularly.

The **recommended minimum configuration** for the **server components** requires a 2 GHz processor with 4 GB of main memory. The memory should be extended by 64 MB for each additional client with parallel access to the server components. Hard disk performance should at least be 50 MB/s.

This minimum configuration must be adjusted as required - for example, in the case of high user numbers, large work spaces or many work spaces used in parallel. In this case, the use of current multi-core processors and a hard disk system with high throughput is recommended. Especially the hard disk throughput has a great influence on the performance at high user numbers. As an empirical value, we recommend the following configuration for the high-performance use of a large work space that is accessed by 100 users in parallel: 4 processor cores with at least 2 GHz, 16 GB RAM (when using a 64-bit server from version 10.2) and a hard disk throughput of at least 200 MB/s.

For systems with less memory a Windows swap file of appropriate size can be provided. In cases of high load, the use of a swap file can result in performance losses.

For a **single user configuration** (e. g. on a Windows 7 notebook) a 1 GHz processor with 1 GB of memory is sufficient.

The **client components** should have at least a 1 GHz processor and 512 MB of memory at their disposal.

A complete installation requires approx. 1,5 GB, the client components alone approx. 850 MB of **disk space**. The installation of TPA requires 700 MB. During installation twice as much disk space is temporarily required in each case.

All Expleo-Test/Professional components also run on workstations. Server operating systems are not required.

To make it possible for the communication between client and server to function the **TCP/IP protocol must be configured**. This applies as well if all components are installed on one computer. However, in such a case the "loopback" interface is sufficient for the application to be useable (see the respective Microsoft documentation).

The **IP address** of the **computer** on which the **CORBA services** are installed must remain **static**. If you are using DHCP please contact your system administrator to ensure a static IP.

If the software **Orbix 6.3 (CORBA Server)** or **FastObjects (Repository Server)** which is required for Expleo-Test/Professional is already or will be installed independently of Expleo-Test/Professional the following **versions** are required:

- Orbix version 6.3.8 or higher
- FastObjects version 14.0 or higher

Before the Professional Client can be installed (see also section 2.1.1 – "Installation Programs to ensure that System Prerequisites are met") **Microsoft Edge** and the **Microsoft .NET Framework 4.5 must** be installed. For TCS (Test Case Specification) **DAO 3.6 must** be installed as well.

The monitor driver must be able to display 256 colors.

We advise against using **space characters** in names and path statements.

If the installation is executed via network, **no UNC path** (e.g. \\server name\shared name\path) must be used. The directory containing the installation package must be linked as a network drive (Windows explorer "extras >> connect network drive").

At least one printer driver must be installed for the client to run correctly. The printer driver "Microsoft XPS Document Writer", which is installed by default on Windows® operating systems, is sufficient for this.

Our product contains Java components all developed under **OpenJDK**. In our delivery a JRE is included, which is extracted from the OpenJDK, with which all affected product components are executable. If the customer uses his own installation of a JRE, he is responsible for the resulting licensing issues.

Note for Windows® Server 2008: If you receive error messages via the Windows Event Log concerning false activation environments, you will have to install the program „vcredist_x86.exe“ additionally. You find this program on the installation CD.

Note for Windows® 8 and upper: If not already installed, please install Windows program *.NET Framework 3.5* (contains *.NET 2.0* and *3.0*), because the formerly installed *.NET Framework 4.5* does not contain version *2.0*.

	Server	Client
Supported operating systems®	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019 Windows 10	Windows Server 2012 R2 Windows Server 2016 Windows Server 2019 Windows 10
Hardware	2 GHz 1024 MB RAM, plus 64 MB per client 500 MB hard disk space (1 GB through installation process)	1 GHz 512 MB RAM 312 MB hard disk space
Software	Microsoft .NET Framework 4.5 or upper	Microsoft .NET Framework 4.5 or upper Printer driver (standard Windows printer driver "Microsoft XPS Document Writer" is sufficient) DAO 3.6 (only for TCS, German or English)
Netzwerk	Workstation configuration TCP/IP is configured Fixed machine name required for usage of CORBA services	Workstation configuration TCP/IP is configured
Rights for installation	Local administrator rights	Local administrator rights

Table: System requirements overview

Installation Programs to ensure that System Requirements are met

In order to ensure that specific system prerequisites for Windows are met the CD provides different installation sets:

If applicable, perform the following installations before client installation:

- Install MDAC 2.7 on the computer if it does not exist. The setup program is located on the CD in the directory "MSSetups" in a German ("mdactyp2.7SP1de.exe") and an English version ("mdactyp2.7SP1en.exe").
- Install Microsoft .NET Framework 4.5.

- Install DAO 3.6. This program must be installed **after** MDAC. The setup program is located on the CD in the directory "MSSetups" in a German ("Jet40SP3.de_Comp.exe") and an English version ("Jet40SP3.en_Comp.exe").

In order to verify the existence of the correct versions of several system DLLs and to install those that do not exist please perform the following steps before installation:

- Launch the file "CheckDLLs.bat" in the directory "MSSetups\SystemDLLs" on the CD.
- If DLLs that are currently in use need to be replaced "CheckDLLs" will prompt you to execute "MoveFiles" in a specified directory.

1.2.2 Procedure with older versions installed

If you have already installed an older version of Expleo-Test/Professional (previously SQS-TEST®/Professional), please read the following details regarding the version number. The installation of a new version may vary from the already installed version.

The version number consists of three numbers, e.g.: 11.0.000:

11	0	000
Major release	Minor release	Patch release

As of version 8.0.x, the following rules apply for the installation of versions, for which one of the red marked digit varies:

11	0	100
Major release	Minor release	Patch release

Parallel installation after a major or minor release or a patch bundle. If one of the red marked digits of the version number changed, the old and the new version will be installed in parallel independently from each other.

11	0	001
Major release	Minor release	Patch release

If one of last two digits changes in patch release, a new version or the patch respectively will be installed for the currently installed version of Expleo-Test/Professional.

What exactly happens during a parallel installation?

Parallel installations use common components together. A new subdirectory with the version number of the affected component is created in the places where they differ. For parallel installations, the existing root installation directory should always be kept, so that common components are not installed twice and no conflicts can occur during uninstallation.

Note! Keep in mind to always apply a new name for the Workspace Environment, when installing a parallel version. This guarantees that the new servers can communicate with each other in a unique name space. You will find more detailed information about Workspace Environments in the manual „Technical Administration“.

What exactly happens during a patch installation?

In patch installations, there is basically no possibility to change the installation directory.

What do I have to pay attention to if I want to uninstall an older version?

The configurations are independent of the respective installation and should definitely be considered if one of the parallel installed versions is to be uninstalled. It must be verified whether workspace environments belonging to this version have to be stopped or whether configured CORBA domains and/or license managers are affected by the respective uninstallation. For the best way to proceed when uninstalling a parallel installed version, please refer to section 1.5 Deinstallation.

How to install two versions of Expleo-Test/Professional in parallel

In order to install a new version of Expleo-Test/Professional (previously SQS-TEST®/Professional) and at the same time maintain the previous version, a few notes should be taken into account, as both versions will share different components subsequently (e.g. CORBA).

Note! Please also note the special instructions for the respective versions, which are already installed parallel to the current version, following this chapter.

Parallel installation with version 9.0.xxx to 11.0.xxx

If you haven't uninstalled the earlier version, the current version will be installed in parallel.

Please do not select a new installation directory. You can take over the data directory of the earlier version.

1. Before installing the new version, you will need to stop all running CORBA processes.
2. When installing the current version on the same computer on which CORBA is installed, all running CORBA services must be stopped, either in the administration or by running this batch file: `<data directory>\etc\bin\stop_<domain name>_services.bat`. This ensures that the components that are shared from now on can also be updated without any problems. Note that this also stops all workspace environments.

3. Secure the database directory, if you want to migrate the existing workspaces of this version for the newer version. You find the databases below your data directory in the sub-directory ...\`<Workspace Environment>`\Repository. If the Workspace Environment is stopped, these directories can be saved to any location using copy and paste. Be careful to integrate the databases within a new environment.
4. Install the current version. Use a new name for the workspace environment.
5. A database migration is needed. You find a detailed description in the manual "Database Administration". The migration may be executed in the Administration.
6. As described in the document "Technical Administration", only one version of the API can be active on the clients at any one time (only important if VB connections are to be used on the client). The active version can be set in the start menu via 'Set COM Environment'.
7. Re-start the updated CORBA processes, in the administration or by executing
`<data folder>\etc\bin\Start_<domain name>_services.bat.`

Parallel patch installation for current version 11.0.0xx

Patch installations of the current version are installed through the existing version. **We strongly advise against changing the installation directory.**

A database migration is not required.

1.2.3 Takeover of an existing workspace environment

Since version 11.0.0, the database schemas have expanded at most from version to version. This means that usually a schema update is sufficient for the databases and a time-consuming migration is not necessary. Therefore, starting with version 11.0.6, one can simply take over an existing environment during the installation and work directly with the new version on this environment. The only thing to keep in mind is that you also have to upgrade all clients to the new version before you can work with the new server remotely. If you want to test the new version before going live, you should not take over the environment directly, so that you still have a fallback solution. The productive data should be backed up, as always before such an action.

1.3 Installation

1.3.1 Security and Firewall Options

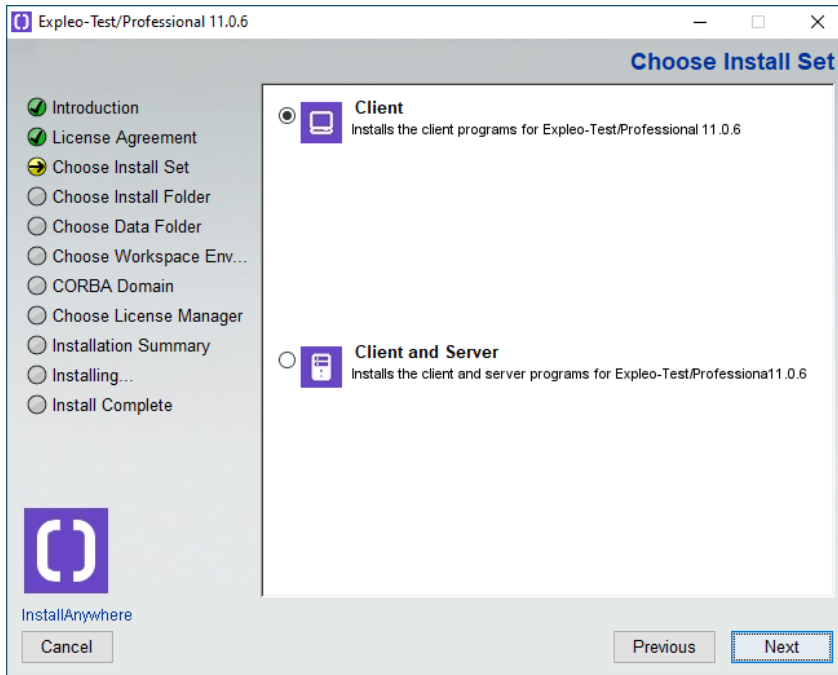
If you want to install Expleo-Test/Professional Suite on a Windows operating system, you must remove some security and firewall restrictions before installation to prevent a faulty installation:

- If the **Windows Firewall** is active during installation, then all questions about whether Expleo processes should be blocked must be answered with "Do not block".
- The **installation files (setup)** must be executed under Windows with the "Run as Administrator" property
- **Administration** must be started under Windows with the "Run as Administrator" property - this is especially necessary if you must set up Windows Services when you first create the CORBA domain and configure the TPA Manager.

1.3.2 Options

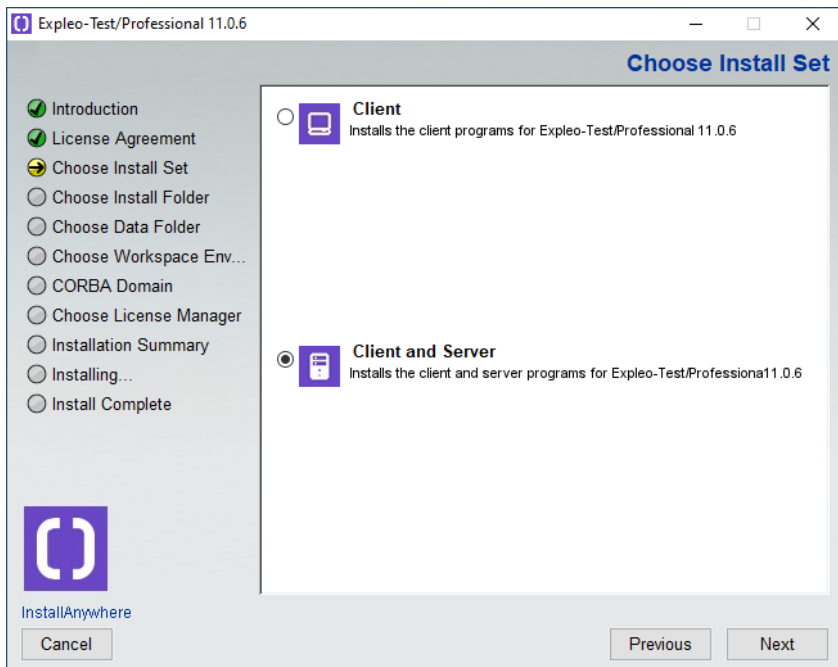
Three clients and four server components can be installed for Expleo-Test/Professional. For this purpose, the set-up program provides the following options:

- **Server installation**
All server components belonging to Expleo-Test/Professional and the Administration are installed on your computer. At the same time the Administration contains the plug-ins for server configuration. The server components are:
 - Management Server and Application Server
 - CORBA Middleware (Server Part)
 - Fast Objects OO DB
- **Client installation**
All clients belonging to Expleo-Test/Professional are installed on your computer. These are:
 - Test Center Client
 - Test Case Specification (TCS) Client
 - Administration Client (without the plug-ins for server configuration)
 - CORBA Middleware (Client Part)



- **Client and server**

All clients and server components belonging to Expleo-Test/Professional are installed on your computer in their entirety.



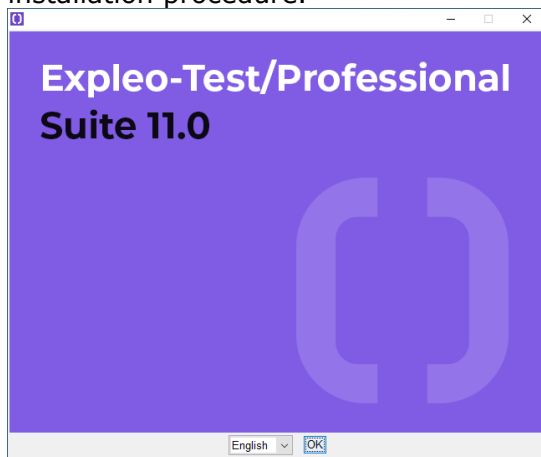
Note: We recommend starting with a complete installation on the intended server computer so that the configuration can be verified there.

Note: Make sure that, if applicable, the installations and the programs installed are not blocked by a firewall. For the most part in case of server installations the security rules of the firewall need to be defined during installation. In case of client installation, the security prompts usually only occur during start-up of the clients after installation.

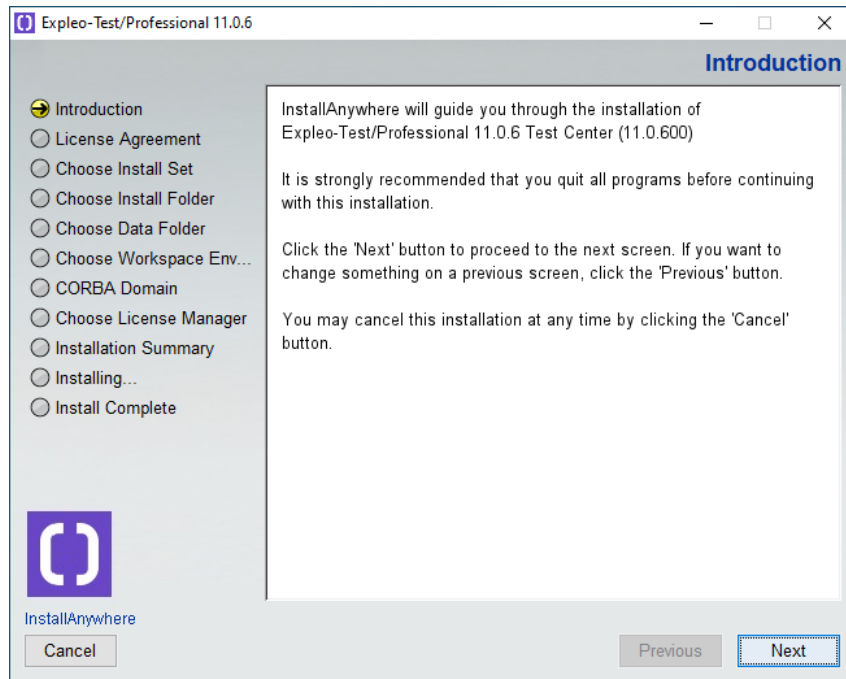
1.3.3 Procedure

Below you find a description of how to start the installation and which dialogs will be displayed.

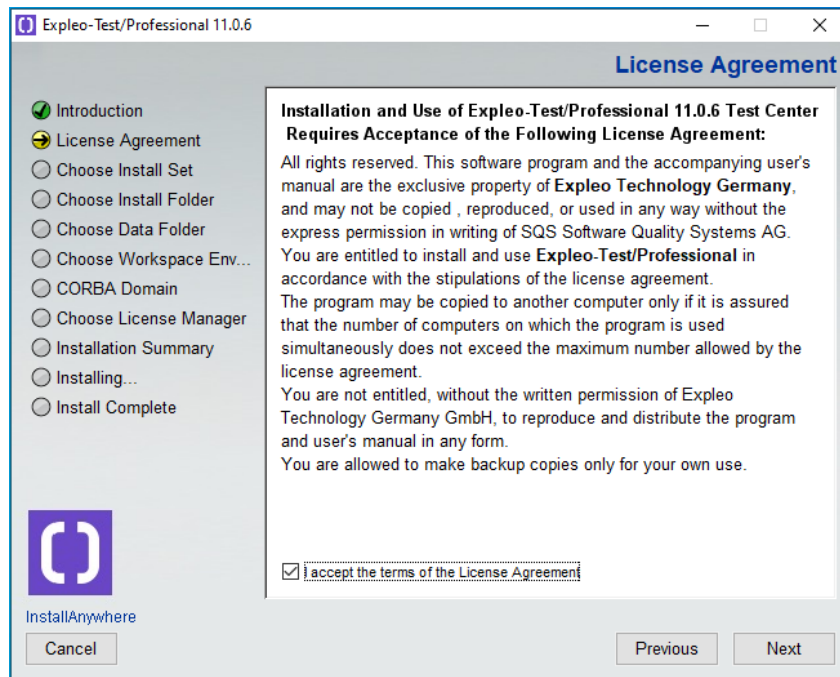
1. Start the installation program on the CD via the file "SetupTestCenterWin.exe".
2. The dialog for **language selection** is displayed at the beginning of the installation. With this you determine in which language the installation wizard guides you through the rest of the installation procedure.



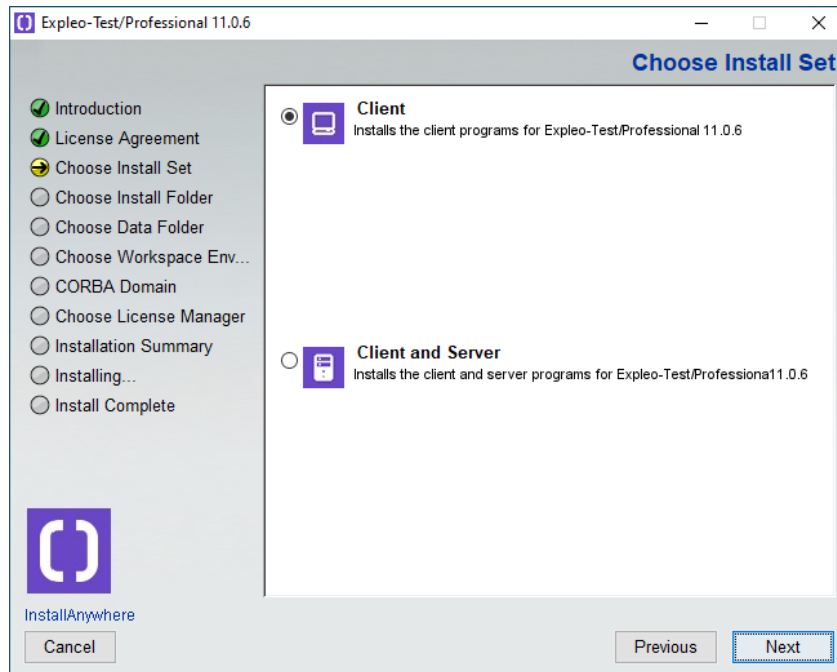
3. The installation wizard informs you that Expleo-Test/Professional is supposed to be installed. Confirm with "Next".



4. Please read the **license agreement** regarding Expleo-Test/Professional. To continue the installation, you must agree to the license agreement. Confirm with "Next".



5. Select the installation option applying to you in accordance with chapter 3.1. (Client or Client and Server).

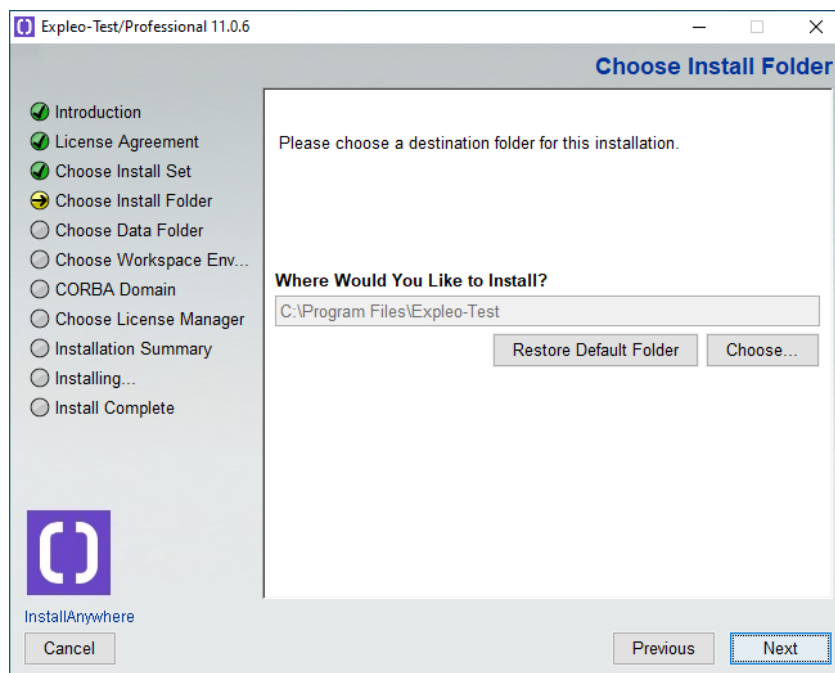


6. Select the **directory** in which the programs of Expleo-Test/Professional are supposed to be installed.

Default value: <system drive>:\<program directory>\EXPLEO-TEST

Important note: We strongly recommend to also use the selected directory for components of Expleo-Test/Professional (versions 11.0.0 respectively or higher) that will be installed on this computer at a later time. In this directory versioning is performed automatically.

No round brackets may be used in the path, as for example with 'Programs (x86)'.

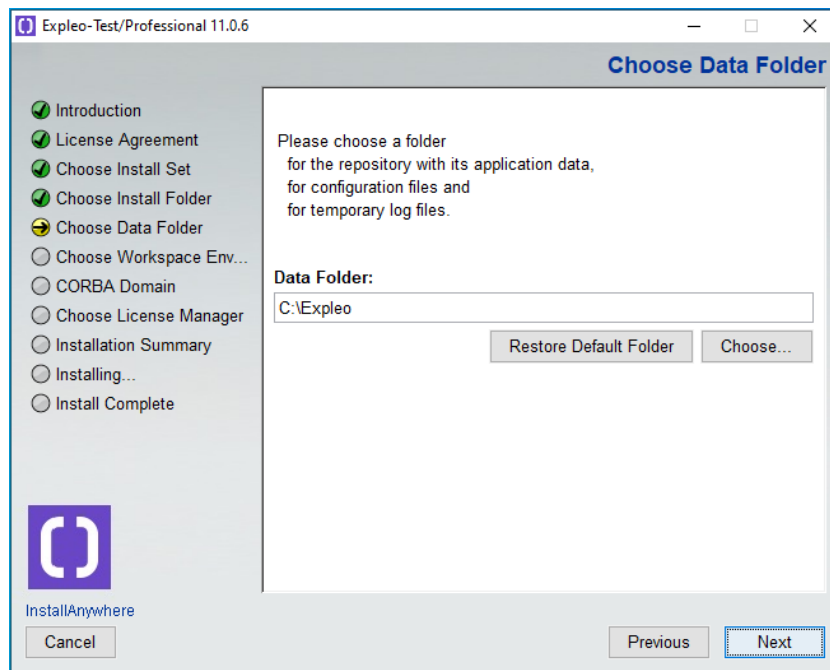


7. Choose the **target directory for the databases**.

Default value: <system drive>\Expleo

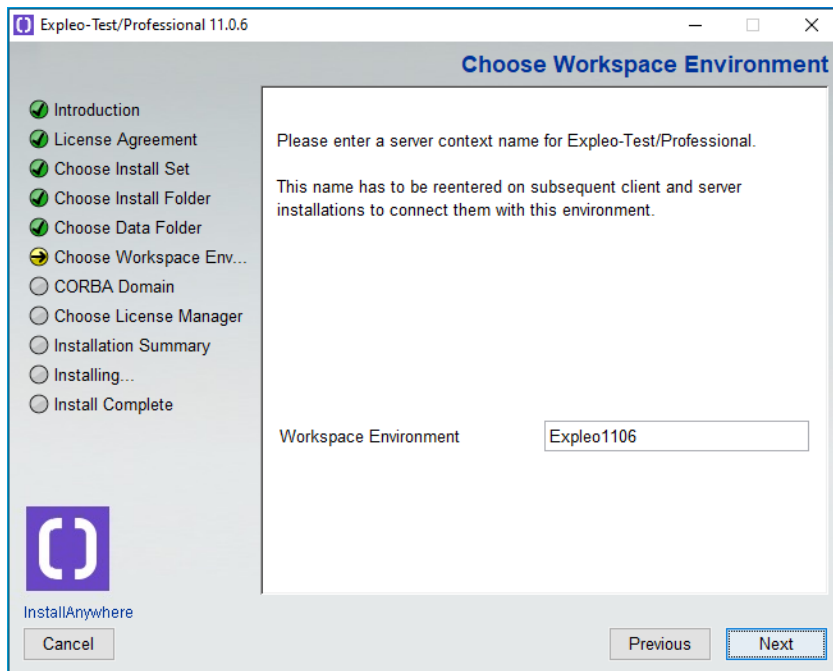
Note: If possible, avoid paths containing space characters.

Note: We recommend selecting the data directory for all components of Expleo-Test/Professional right away. A directory structure with data for backup and temporary data is created automatically. The repository with the databases is installed in the environment to be selected. The servers store their temporary log files in the data directory at `'...\var\<workspace_environment>\nl-logs'`.



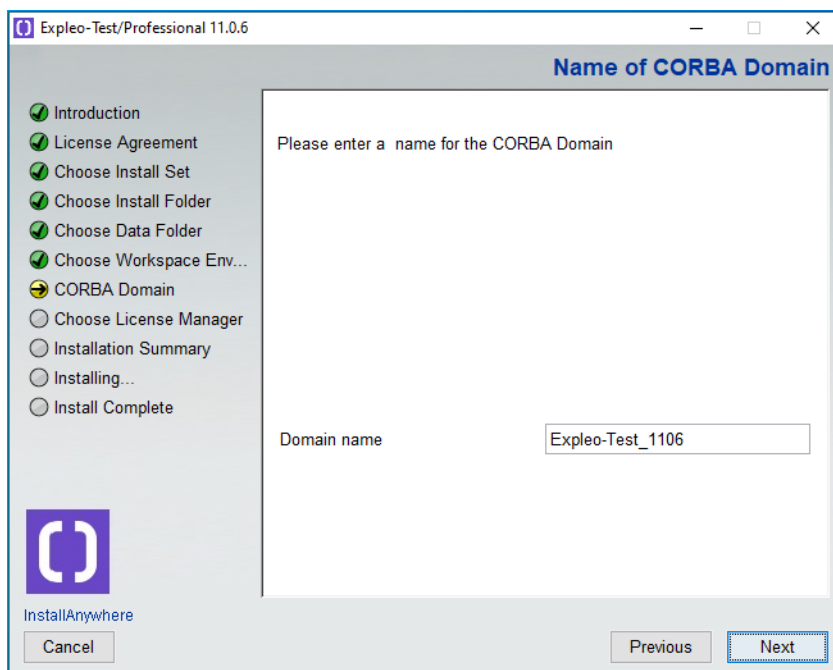
8. Select the Workspace Environment in which the databases are supposed to be installed. If database directories already exist under the indicated environment these are not overwritten. The clients also need this name to access the data.

Note: No characters other than numbers, letters, hyphens and underscores may be used for the name.

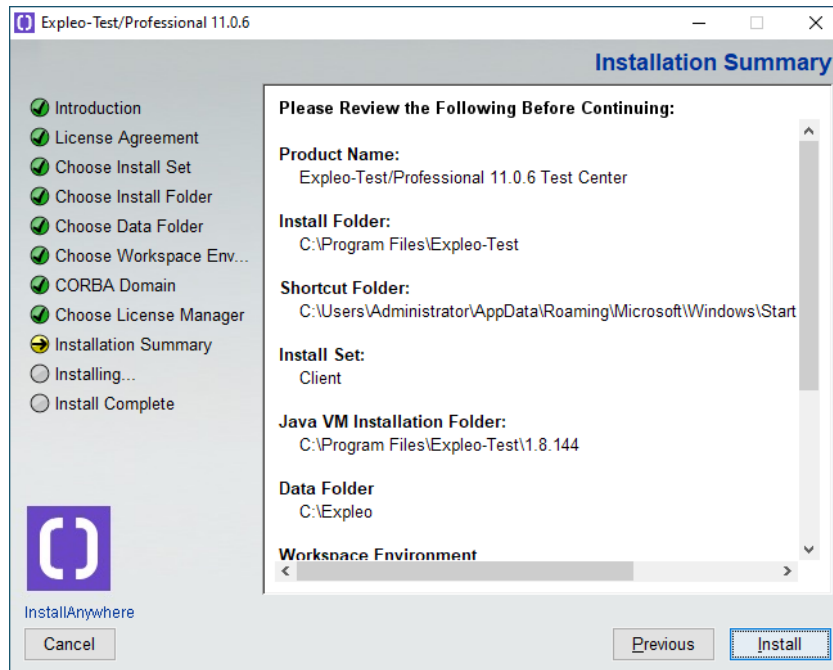


Default: Expleo<Version>

9. Only for client and server installation: Select a CORBA domain name.



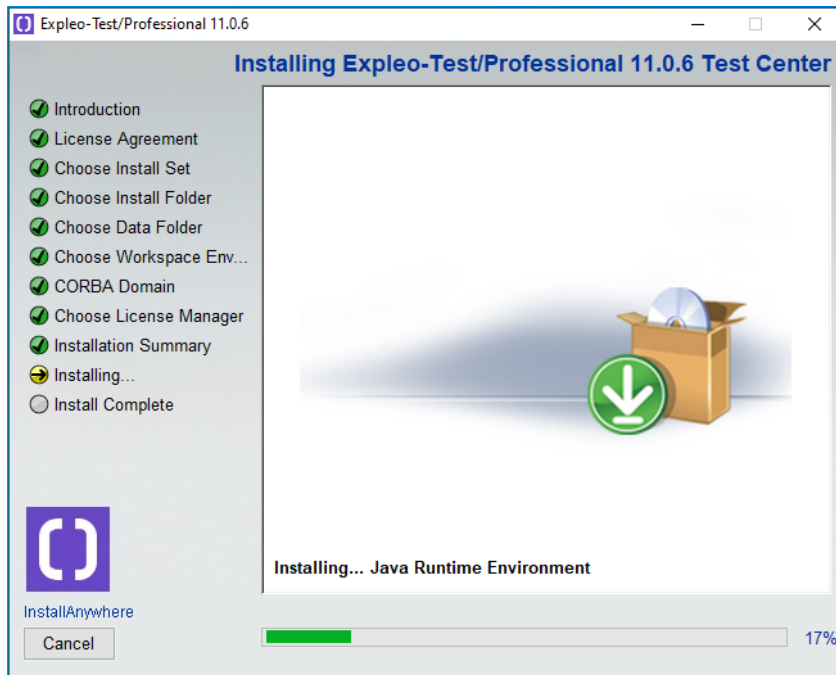
10. Verify your information. If you want to change settings, you can return to your specified entries with "Previous". If you confirm with "Install" the installation is started.



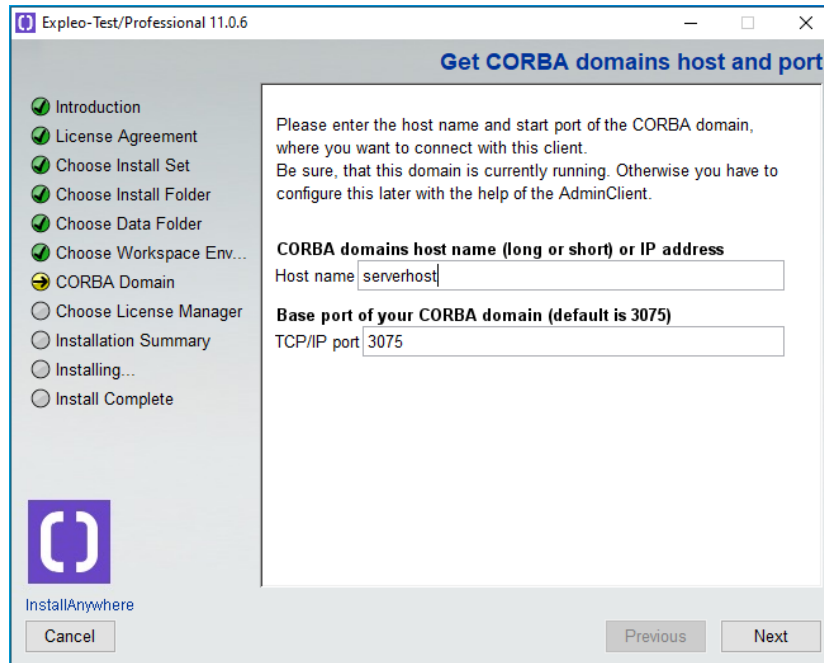
11. The progress bar appears. The required files are being installed. If the following prompt is displayed:

"<file name> exists on the system and is more recent than the file to be installed. Do you want to replace this file?"

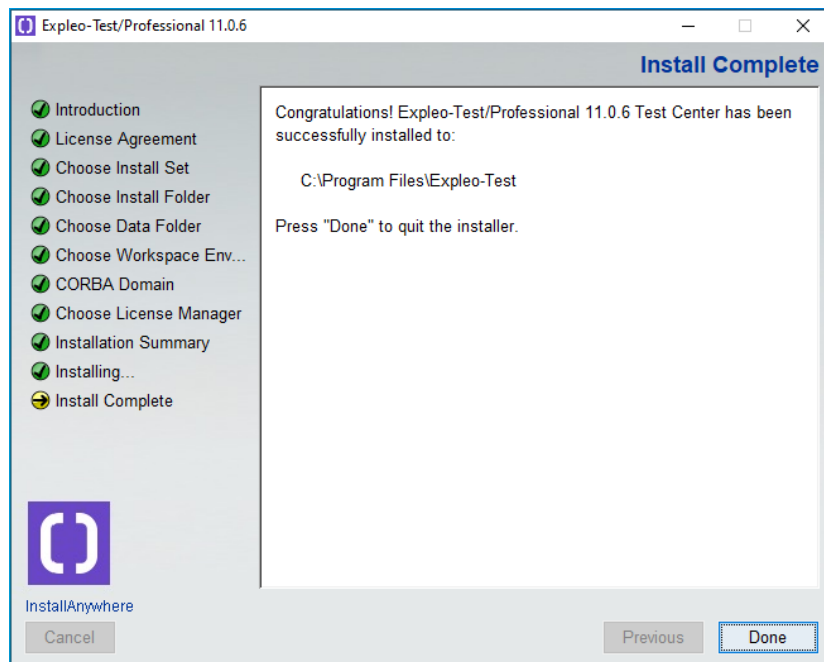
You should select the response option "No to All. This way the most recent version will remain on your computer.



12. In case of a pure client installation the name of the CORBA domain, the computer name and the port of the CORBA domain are enquired (see position 14). These data are required for the connection of the client with the servers.



13. Confirm the dialog for completion of the installation. A restart may be required.



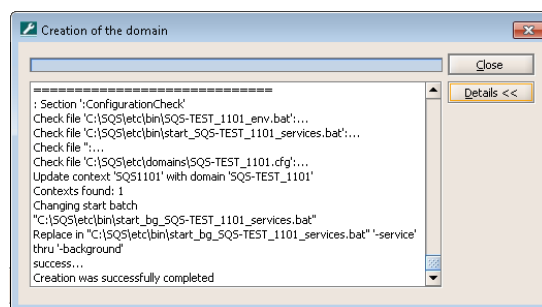
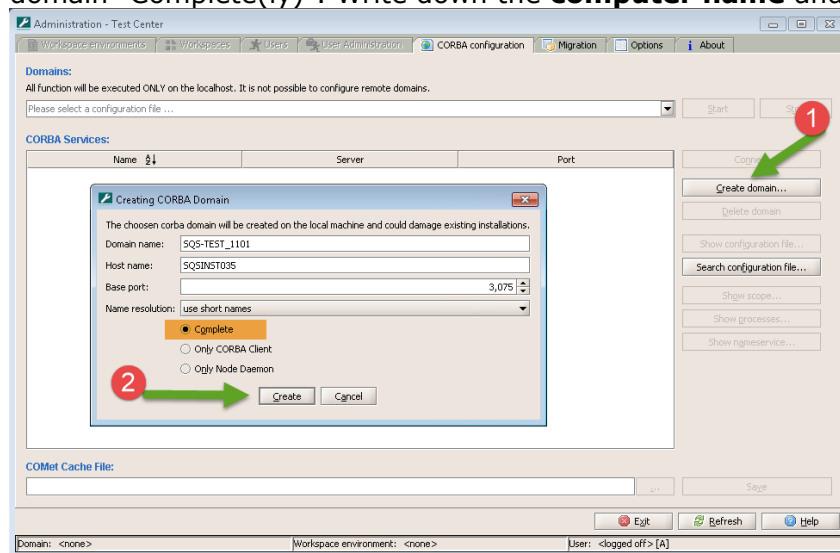
14. In case of a server installation start the Administration (with administration rights)

For a server installation, start the "Administration" in the Windows menu "Start >> Programs>> Administration >> Administration 11.0.x".

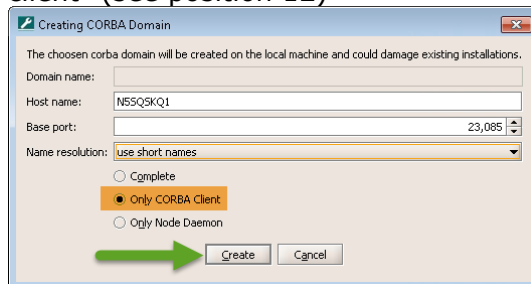
Note: Make sure that this client is started with administrator rights (select "Run as administrator" in the context menu of the menu item).

15. Configure the connection of the components via the CORBA middleware. To do so, select the button "**Create domain...**" on the tab "CORBA Configuration". (see document Administration.pdf)

- a. Provided that you have installed the CORBA server you need to create a CORBA domain "Complete(ly)". Write down the **computer name** and the configured **port**.

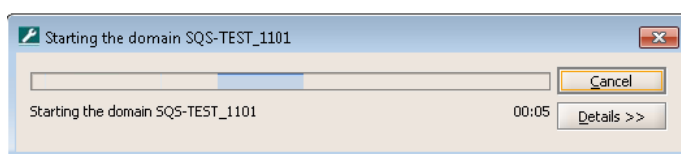
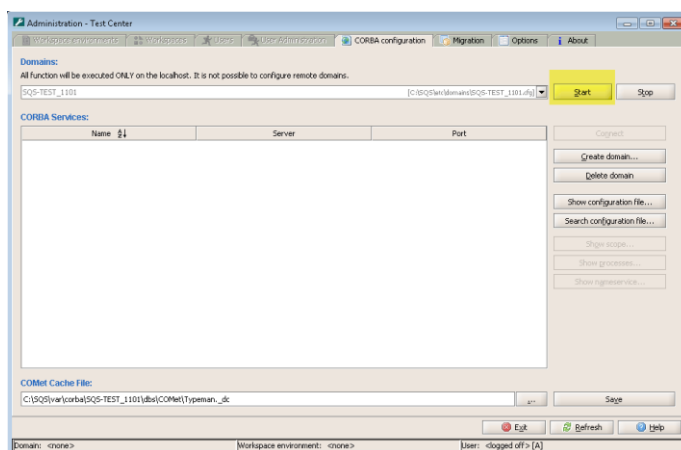
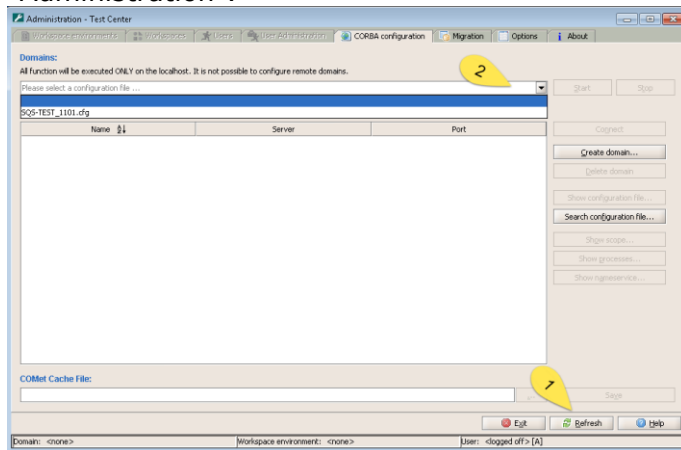


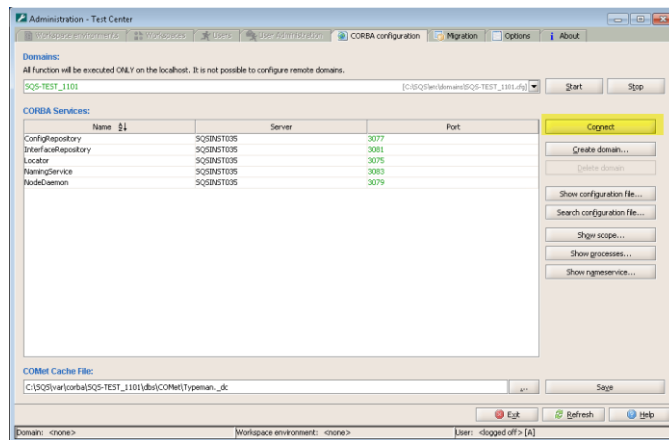
- b. If you have installed a client, no server is installed locally, and the CORBA domain is located on a different computer the installation program creates "Only the CORBA client" (see position 12)



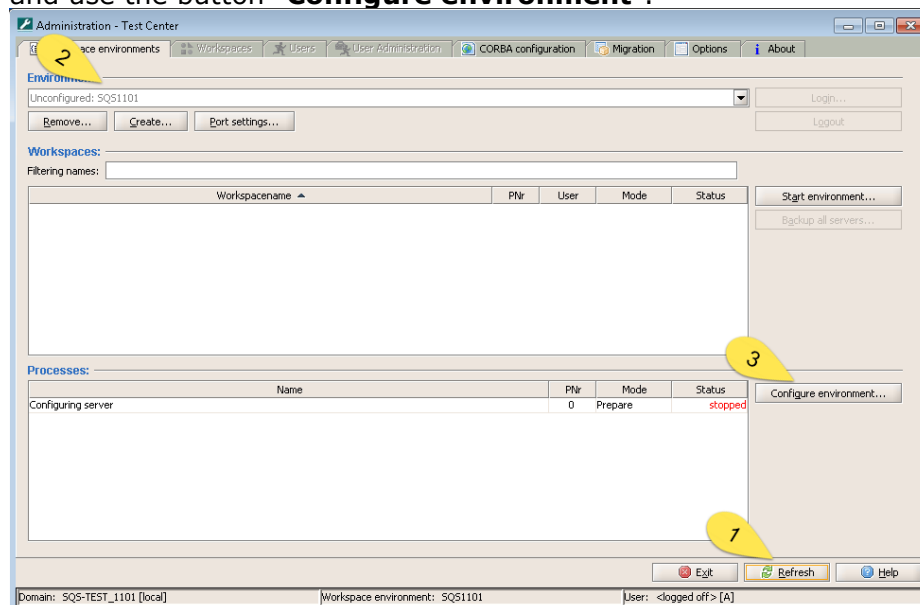
- c. If you have installed a server and the CORBA domain is located on a different computer, you need to create "Only NodeDaemon".

16. Start the services of the CORBA domain with the button "**Start**" and then select "**Connect**". You will find further information in the manuals "Technical Administration" and "Administration".

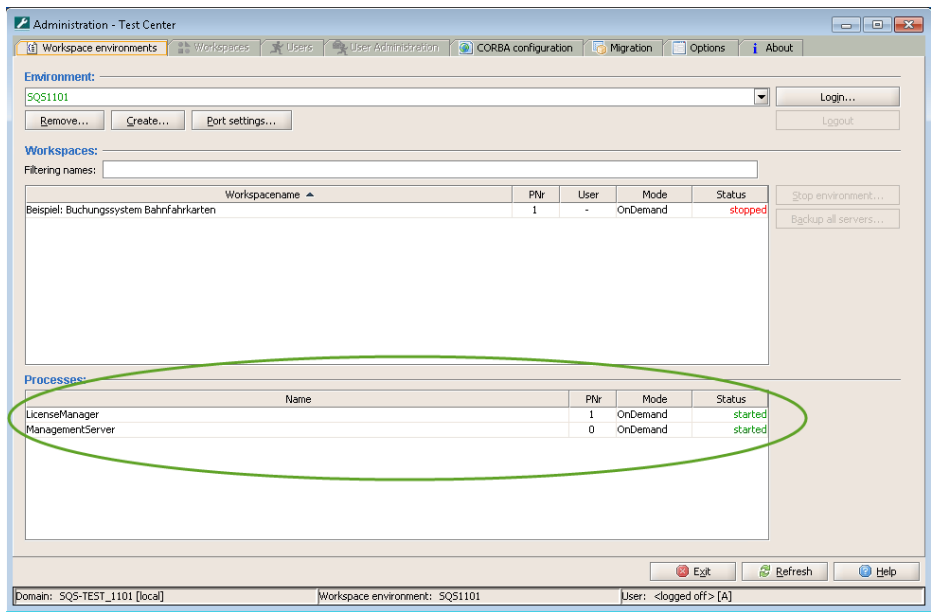




17. In case of a server installation select the tab "Workspace environments" in the Administration and use the button **"Configure environment"**.



18. After successful configuration, the servers are started automatically



19. Only members of the group "Administrators" can stop server processes after "log in. "Log in" is also required to configure workspaces and user accounts later.
20. If you want to make use of the public programming interface (Public API) you must follow the instruction "Technical Infrastructure" in the Public API help.
21. If the management server has been installed the licensing of the software (see chapter 4) must be executed.
22. You will find further information for special configuration options in the document "Technical Administration".

1.3.4 Changes in System Folder and Registry

The following files are copied to the Windows system folder if they do not already exist there:

Dateiname	Client	Server	Kommentar
Mfc71.dll	X	X	
Mfc71deu.dll	X	X	
Msvcp71.dll	X	X	

Msvcpr71.dll	X	X	
Uxtheme.dll	X	X	
Comctl32.ocx	X		will be overwritten, if current
Comdlg32.ocx	X		will be overwritten, if current
Picclp32.ocx	X		will be overwritten, if current
Vsflex8n.ocx	X		will be overwritten, if current
Vsflex8u.ocx	X		will be overwritten, if current
Vsprint8.ocx	X		will be overwritten, if current

The OCX files are also registered. This leads to entries in the registry by the Windows command `regsrv32.exe`.

Depending on the configuration, the following keys with their subkeys are also created in the registry:

Registry path	Client	Server	comment
HKCU\software\sqs\SQS-TEST/Professional NL\<Version>	X		Created the first time the client is started
HKLM\system\CurrentControlSet\Services\IT*		X	created during the configuration of the CORBA domain

A total of four third-party packages are automatically installed via the MSI installer, which are needed by the software in exactly this version. These include two versions of the Microsoft redistributable packages, as well as two runtime versions of Crystal Reports 11.

A Java Runtime version is also located in the installation directory as a pure copy deployment.

1.3.5 Notes regarding Start-up after Installation

1. After the installation the license manager must be configured with an valid license file 'license.lic', which have to be copied in the server installation configuration directoy (default: 'C:\Expleo\etc').
2. The CORBA domain must have been created on the server during or after the installation. The CORBA services must be running.
3. The server processes of the Workspace Environment must have been activated after the installation.
4. Entries for the clients "**Test Center**" and "Test Case Specification" as well as the Administration have been created in the Windows start menu
5. The following **user** is **preset** for the Professional Client and the Administration after the installation if a user administration has not yet been set up:
User name: Administrator
Password: Administrator
New users can be registered in the Administration.

You will find further information in the document "Technical Administration".

1.3.6 Silent Installation

You can install Expleo-Test/Professional in silent mode.

The silent installation is generally used to execute distributed client installations on windows computers. No user dialogs occur during this process. The necessary entries are filled with the default values or from a parameter file.

In order to perform a silent installation with default values enter the following command:

```
SetupTestCenterWin.exe -i silent
```

If you want to deviate from the default values, you can automatically store the settings in a parameter (or response) file during a master installation.

```
SetupTestCenterWin.exe -r <fully qualified response file>
```

You can then use the response file for all following installations.

```
SetupTestCenterWin -f <qualified response file>
```

For this purpose, you can use the direct or a relative path to the response file.

The installation program automatically searches the directory in which it is located for the file `installer.properties` or `SetupTestCenterWin.properties`.

Define the following line in the response file to do without the switch "`_i silent`" upon launch.

```
INSTALLER_UI=silent
```


1.4 Setting up and starting the Licence Manager

As of release 11.0.8, the own licence manager is used for licensing the tool components. This eliminates the need to set up and configure a third party licensing service. As before, the own licence manager is legitimised via a file (license.lic in the configuration directory of the server installation). The LicenceManager runs as a singleton within a CORBA domain and is responsible for all environments configured within it.

1.4.1 Performing Licensing

If you do not have a valid licence file yet, you have to generate one via the Expleo Test Support. If you already have a valid licence file, you can start with point 3.

1. Open the program "License Management Information" via the start menu to get the necessary information for generating a licence and save it as expleo-license-info.txt file via the button "Save...".
2. Send this file to support_etp@expleogroup.com so that we can send you a licence file.
3. When you have received the licence file from us, save it in the already existing directory <data directory>\etc as license.lic.
4. Now open the administration client, log in and, if necessary, start the LicenseManager in the "Workspace environment" view via the context menu "Start process".
5. If you can log in afterwards, the licensing is completed. In the event of problems, you can view the cause of a problem in the log file via the context menu under the menu item 'Show process details' and take appropriate action.

1.4.2 Hotline

In case of installation problems our hotline is available the e-mail address support_etp@expleogroup.com or the telephone number +49 2203 / 91 54 - 11. Please have the following information at hand to ensure quick processing.

- Installed version(s) of Expleo-Test/Professional
- Operating system including version information on the server and on the client computer
- The last executed installation step
- Content of the most up-to-date file "ManagementServer_<timestamp>.log" from "<data directory>\var\nl\log"

- Log files of the installation: <installation directory>\SetupTestCenterWin.log> and <temp directory>\ setupNLwin_stderr.txt
- The indicated result file of the call <installation directory>\nl\<Version>\bin\CheckEnv.bat

1.5 Deinstallation

If you want to uninstall Expleo-Test/Professional Server, you have to stop it first before deinstallation.

If your Release less 11.0.8 stop the service of the FLEXlm License Manager (default value: FlexLM License Service) before deinstallation of the management server.

Start the deinstallation via the start menu under settings\control panel\software.

At first you should uninstall TCS, because there are some files used by TestCenter and TCS.

Select there "*Expleo-Test/Professional TCS 6.6*" and "*Remove*". Confirm the dialog

Select there "Expleo-Test/Professional 11.0.x Test Center" and "Remove". Confirm the dialog.

Attention: We recommend a backup of the current data and the license file before deinstallation. Usually these are not uninstalled.

1.5.1 Deinstallation of the version 9.0.x when a parallel version of 11.0.x is installed

If you want to uninstall the version 9.0.x of Expleo-Test/Professional and the version 11.0.x is installed in parallel, consider the following while uninstalling:

Secure your license file and the files of the FlexLM Licence Manager. Proceed as follows:

1. Switch to the sub-directory of the FlexLM Licence Managers in the Expleo-Test/Professional installation directory. This may be for example:
`C:\Program Files\Expleo-Test\flexlm\11.18`
2. Secure the complete directory by copying the directory to another location.
3. Your license file `licence.dat` is per default located in the data directory in the sub-directory etc. This may be for example: `C:\Expleo\etc`. Secure this file by copying it to another location. If your license file is located in a different directory than the data directory you can skip this step.
4. Uninstall version 9.0.x.
5. Restore the starting position again: Copy the directory of the FlexLM Licence Manager back to the Expleo-Test/Professional installation directory, e.g. to this directory
`C:\Program Files\Expleo-Test\flexlm\11.18`.

6. Start the FlexLM Licence Manager und let the program re-read the license file. We recommend copying the license file back to the data directory, e.g. to this directory:
C:\Expleo\etc.

2 Installation TPA

2.1 Introduction

This section provides information on how to install TPA Server in the operating system platform Windows (all supported versions).

2.1.1 What is TPA?

Test Process Automation (in short TPA) is an application framework for the support of activities in processes pertaining to quality management and software development. A typical application is to develop and manage test systems for test process automation (TPA).

With TPA you manage and develop test systems. More information is provided in the TPA manual.

The manual on hand describes the installation under Windows operating systems.

2.1.2 System requirements

The following operating system platforms are required by TPA Server:

- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019
- Windows 10

For the **client** availability Microsoft Edge is assumed.

2.1.3 Additional components

In addition to TPA further components are part of the installation:

- TPA Editor
- Distributed Test Environment (DTE)

The **TPA Editor** provides a comfortable option for the editing of documents from TPA. The TPA Editor is available in TPA Server after successful installation and is automatically downloaded and started by the client when you open a document. Optionally, you can install the **TPA Editor** with the client to edit documents from the TPA client: This saves download time. See section 2.3.2, Installation TPA Editor for more information on the TPA Editor.

The component Distributed Test Environment, DTE for short, included with TPA allows automated testing of distributed applications in the network. When you implement a test automation that needs to be executed across multiple computers you need to install the **target computer component DTE** on each system that is supposed to be addressed. You will find information regarding this aspect in the installation instruction DTE.

2.1.4 Required files for the installation

Following files are relevant for TPA Server installation:

- Installation file "*Setup_TPA.exe*" for an installation of TPA Server on the operating system platform Windows
- Optional: Installation file „*Setup_SQS-Editor.exe*“ for the installation of the additional component TPA Editor on the operating system platform Windows on the clients

2.2 Installation TPA Server under Windows

2.2.1 Preparations

Prior to the installation of TPA server you need to install, if you did not do so already, the **Java Runtime Environment** for the respective operating system platform on the server system.

For some functionalities and in order to use the administration interface of TPAs it is necessary to install the Java Runtime Environment on the workstations of the users. Please install these as well prior to first start of TPA on the workstations of the users.

During installation some additional information is required - for example pertaining the location of the installation. The installation wizard will retrieve this information.

Link to Test Center

Normally you install TPA with the optional link of the user administration to the Test Center (see also section "Option: Link to Test Center").

If you intend to link your TPA installation to your Test Center installation you need to have completely configured the Corba domain as well as a server context and have a user with administrator permissions set up in Test Center who is used for TPA's access to Test Center **prior** to installation. We recommend giving the user the name "ppm". This user should be used exclusively for the link and should not be used for interactive logon for Test Center!

Please note: During the installation of TPA it is strongly recommended that the related CORBA domain is running and that all server contexts (also known as environments) on the server are stopped. If this requirements are disregarded, you may get problems during the configuration of TPA.

Update

If TPA has already been installed on the server an update is executed automatically.

Before updating it is best to backup your old installation directory. Example:

```
D:\Program Files\Expleo-Test\wl\11.0.x
```

Before you update, stop all clients and the TPA server.

You will find more information on the backup of TPA Server in the TPA manual.

2.2.2 Installation procedure

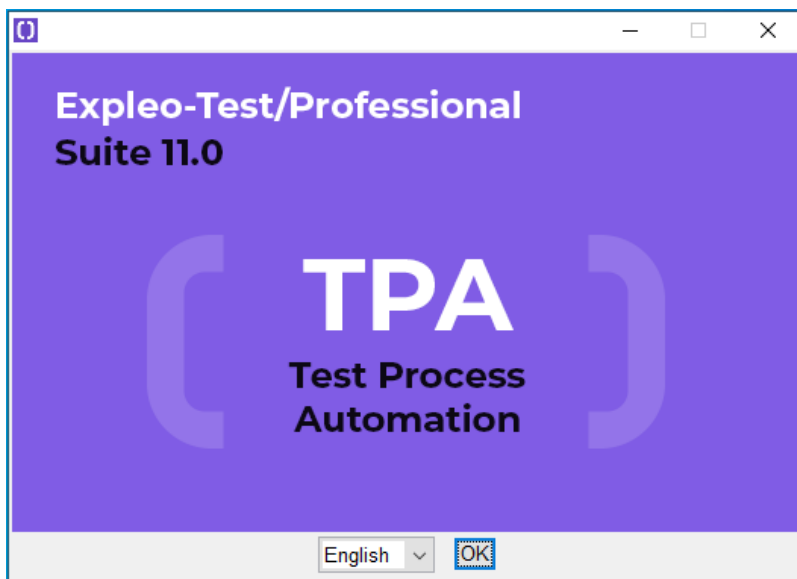
The installation of TPA is executed by starting the program "Setup_TPA.exe". Double-click this installation program or call the program via command line. Installation will then start automatically and will be the same on all Windows versions. The installation program needs to be executed with administrator permissions. Refer to the documentation of your respective Windows platform for information on how to start a program with administrator permissions.

The following components are installed automatically by the installation program:

- Installation Apache Tomcat
- Installation of the TPA components

Language selection dialog

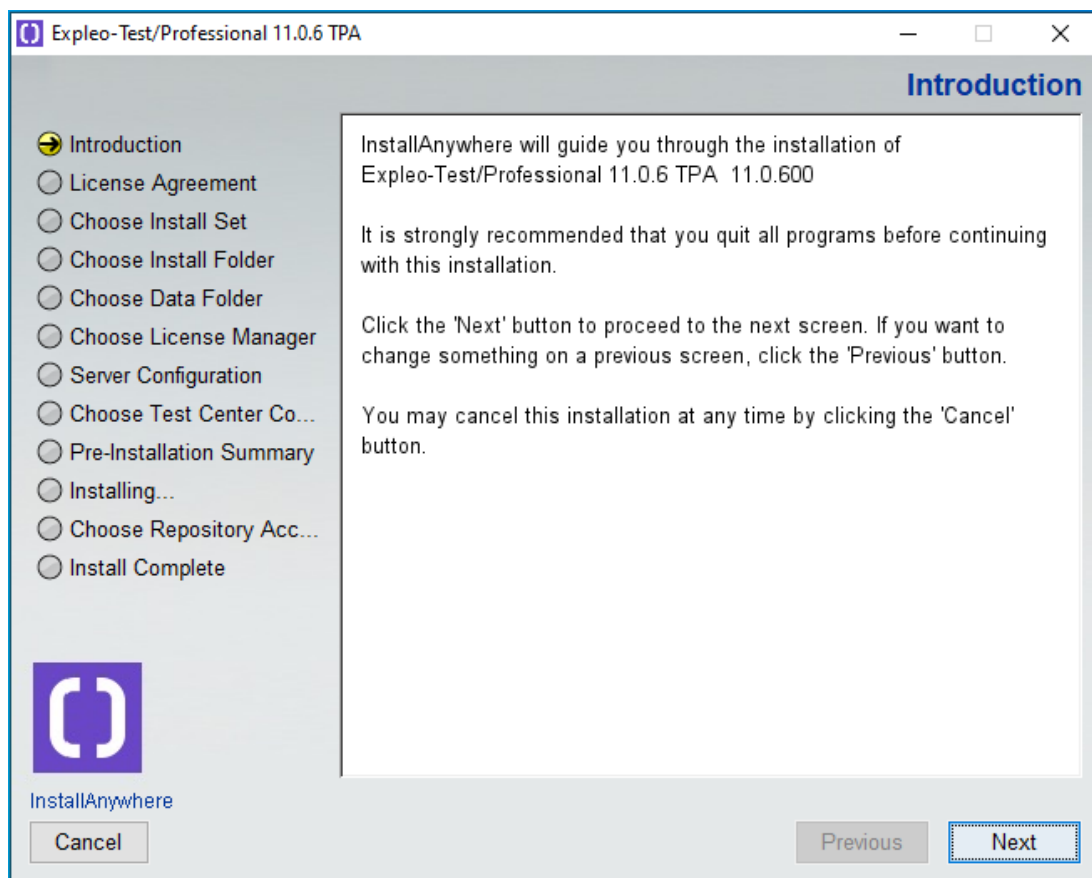
The installation starts with the following dialog:



Here you can select the language for the installation program (default: German).

Click .

After that a wizard guides you through the installation.



Click **Next**.

License agreement

The next step shows the license agreement for the software. You need to confirm this license agreement in order to continue the installation.



Select the option "I agree to the conditions of the license agreement" and click **Next** to continue with the installation.

Next you can select the scope of the installation (see following chapter).

Here you can select an installation with or without link to Test Center.



Only select Test Center link if you performed a complete configuration of the Corba domain in Test Center and of a server context as well as created a user with administrator permissions **prior** to installation.

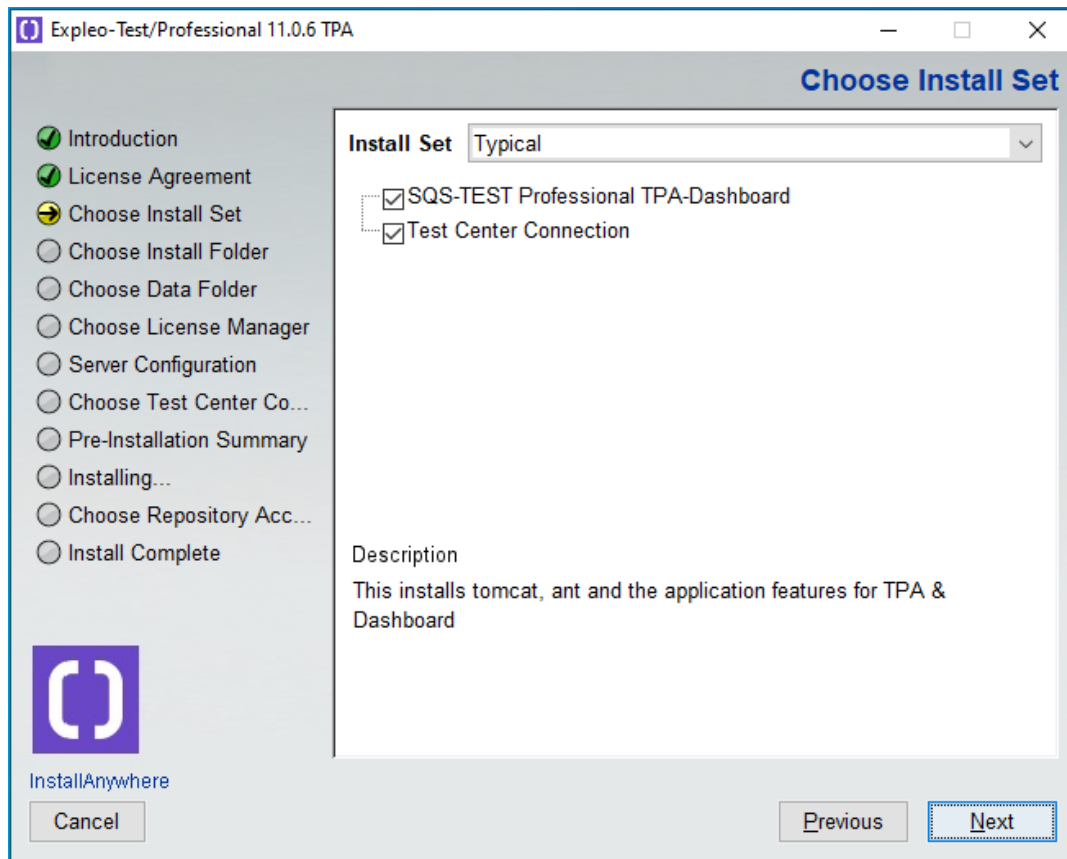
Link to Test Center

TPA can and usually is installed with the link to the tool Test Center. Through the link TPA uses the user administration of Test Center, i. e. you only need to create the users once for both systems. The users can log on to both systems with the same user ID and the same password.

If you want to set up a system for test process automation with TPA then it is imperative to select the link to Test Center.

Users who exclusively want to create key figure or report systems with TPA and/or do not use Test Center have to/may deselect this option.

After selecting the components click **Next**.

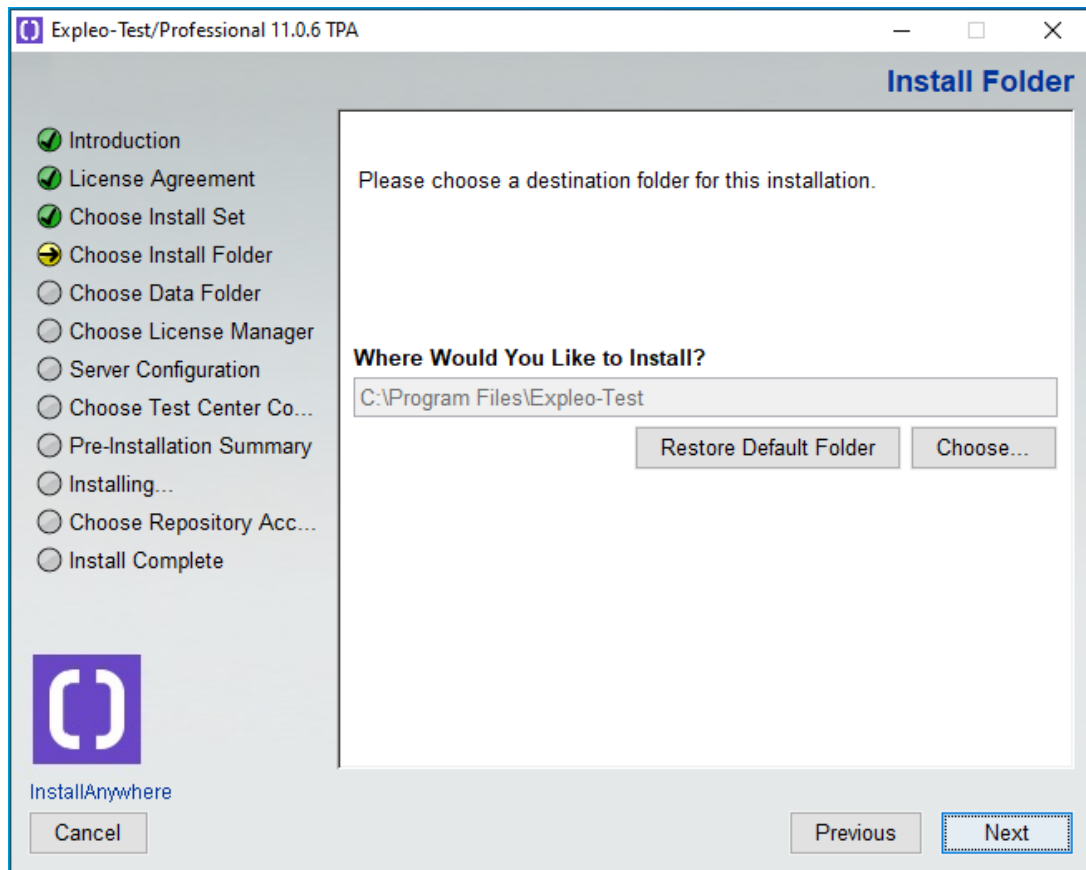


Installation path

If you use the link to Test Center then Test Center must already be installed. In the event that you already have an Expleo component installed you will see an appropriate message.

Read the information and click **Next**.

After clicking **Next** you are prompted to specify the path for the installation of TPA.



The default installation path is suggested automatically. However, you may select an alternative installation directory.

We recommend, if possible, not to change the path that has been determined from a previous installation of a Expleo-Test/Professional component.

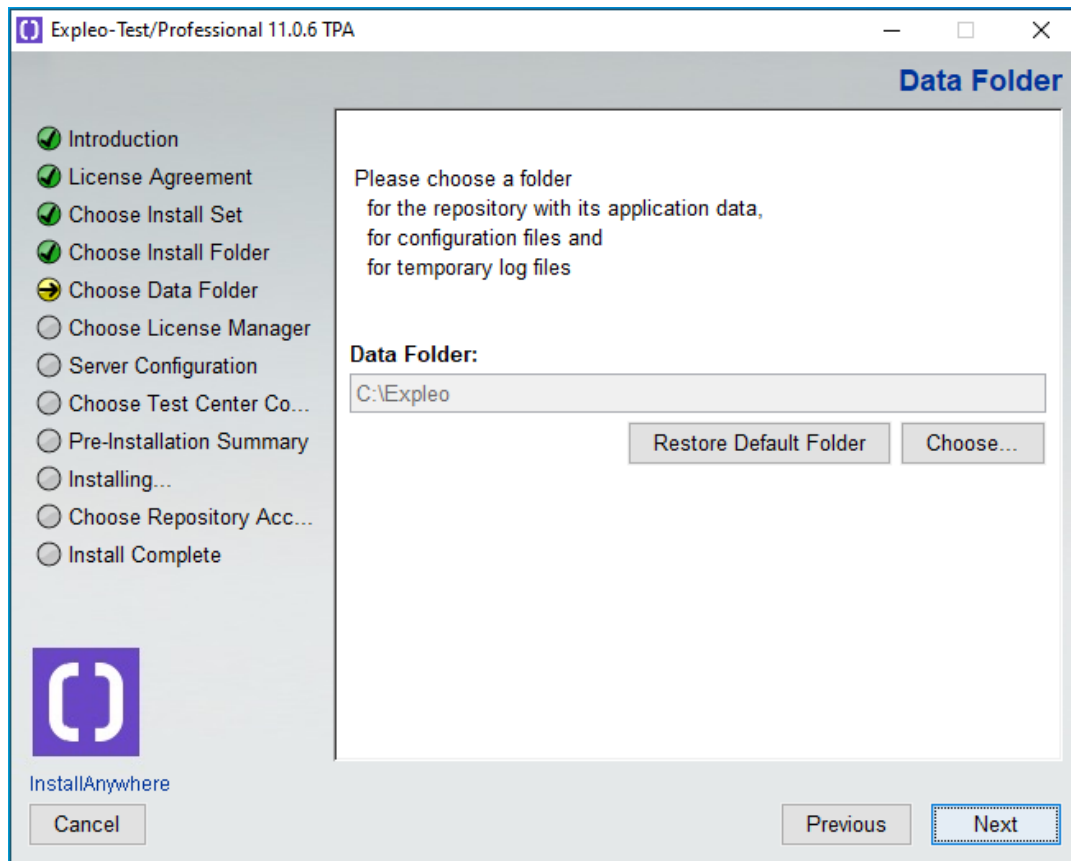
After you have indicated the installation path of the application, clicking **Next** takes you to the next step of the installation.

Path for repository, log and configuration files

In the following step you are prompted to indicate the storage location for the data directory. By default data directory will be created on the system drive under `\sq\`. If you want to store the data directory under a different path then indicate that path here.

Data directory contains in particular the repository and the files needed by all users, the so called share. If you choose data directory to be stored in `C:\Expleo` for example, installation program will create directory `C:\Expleo\var\<environment>\ppm`. That directory contains repository and share directories.

Furthermore, you need to specify the network paths that the users can use to access the repository. All users require the possibility of full access to the indicated network shares. We recommend, if possible, not to change the path that has been determined from a previous installation of a Expleo-Test/Professional component.

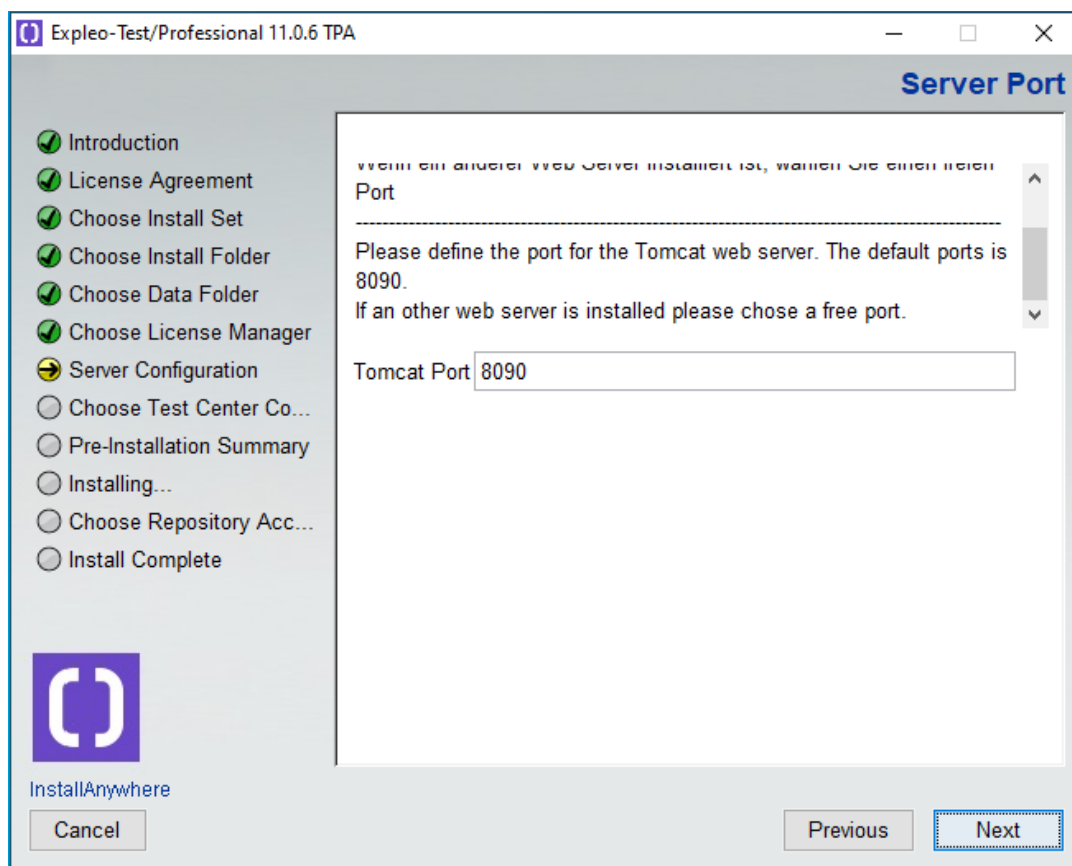


Setup Apache Tomcat Web Server

TPA is a web application that uses an Apache Tomcat Web Server to make the applications available.

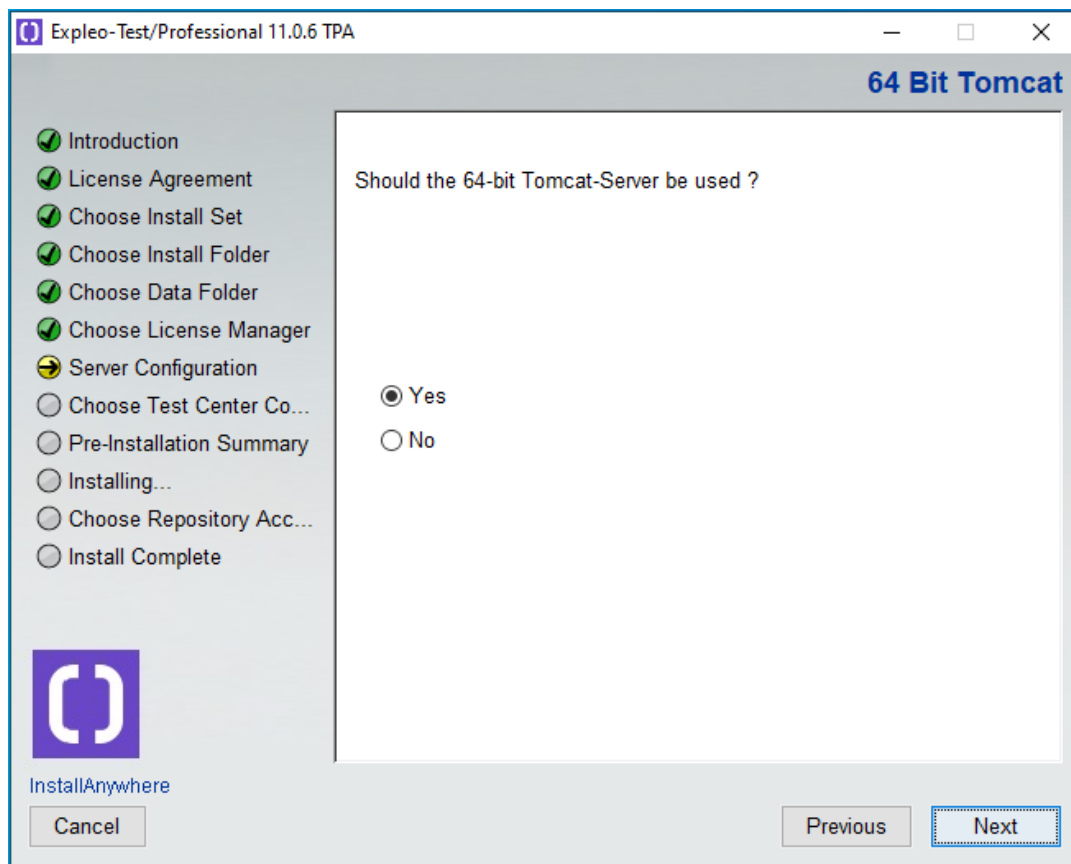
The Apache Tomcat Web Server requires the indication of two port numbers that allow the web server to operate. By default these are port 80 for access from the Internet Explorer - this is the default port for the http protocol - as well as the internal port 8005.

Should there already be other web servers installed on the server or another instance of the Apache Tomcat Web Server then specify ports here that are not yet occupied by these web servers.

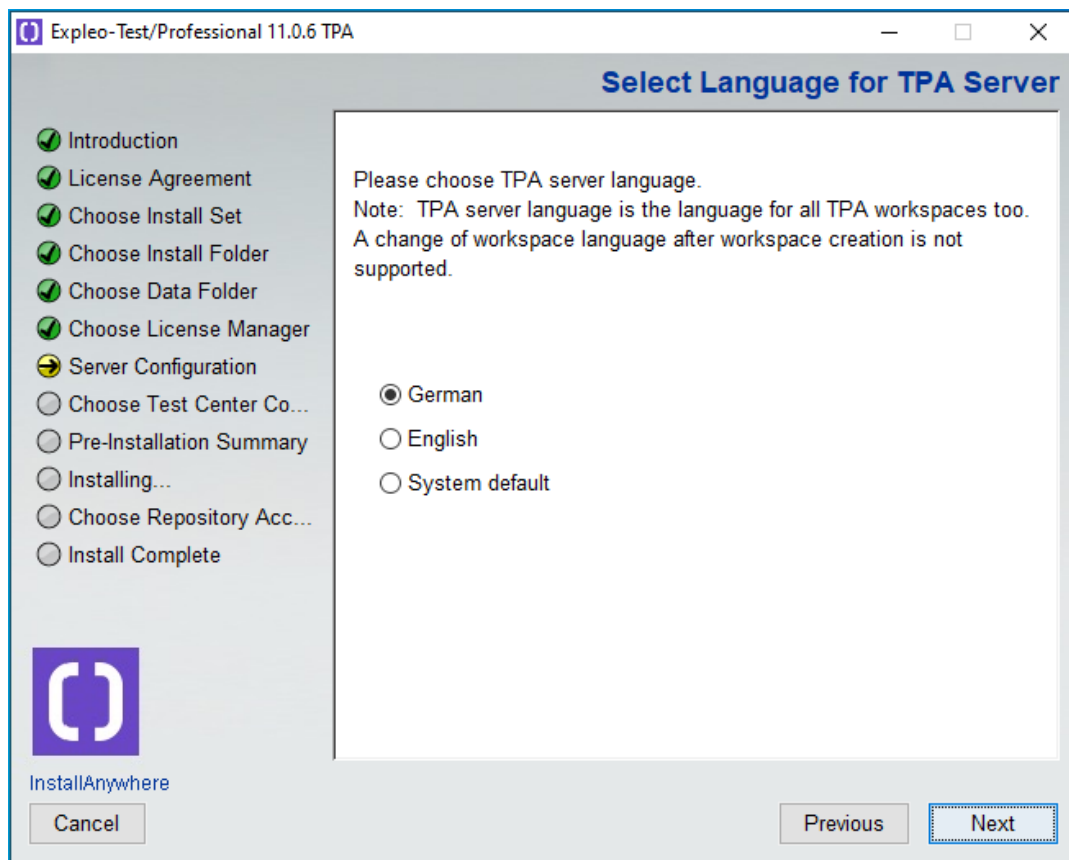


Furthermore on a 64 bit system you can choose if you want to use the 64 bit Tomcat.

Select 'yes', if you want to use the 64-bit tomcat server, otherwise select 'No'.



Select the language for TPA:



Link to Test Center

If you selected the option "Link to Test Center" for the installation then you need to enter some additional information about the installation of Test Center in the next step of the installation.

These include:

- Installation path of Test Center
- Installation path of the Corba infrastructure
- Configuration path of the Corba domain
- Name of the Corba domain

This information can usually be retrieved automatically. Should it not be possible to identify these paths automatically then select the respective directories using [Select](#).

Furthermore, you need to specify the domain and server context TPA is supposed to be linked to. Please check the prefaced domain name, if you have already installed previous versions, it usually differs. In previous versions, the domain with the name "SQSPProfessional03" was created by default.

Expleo-Test/Professional 11.0.6 TPA

CORBA Connection

Please check or define the connection to the CORBA Installation.
If you don't have already created a CORBA Domain, be sure that you will create a CORBA Domain with the given name.

Corba Installation
C:\Program Files\Expleo-Test\corba
Restore Default Choose...

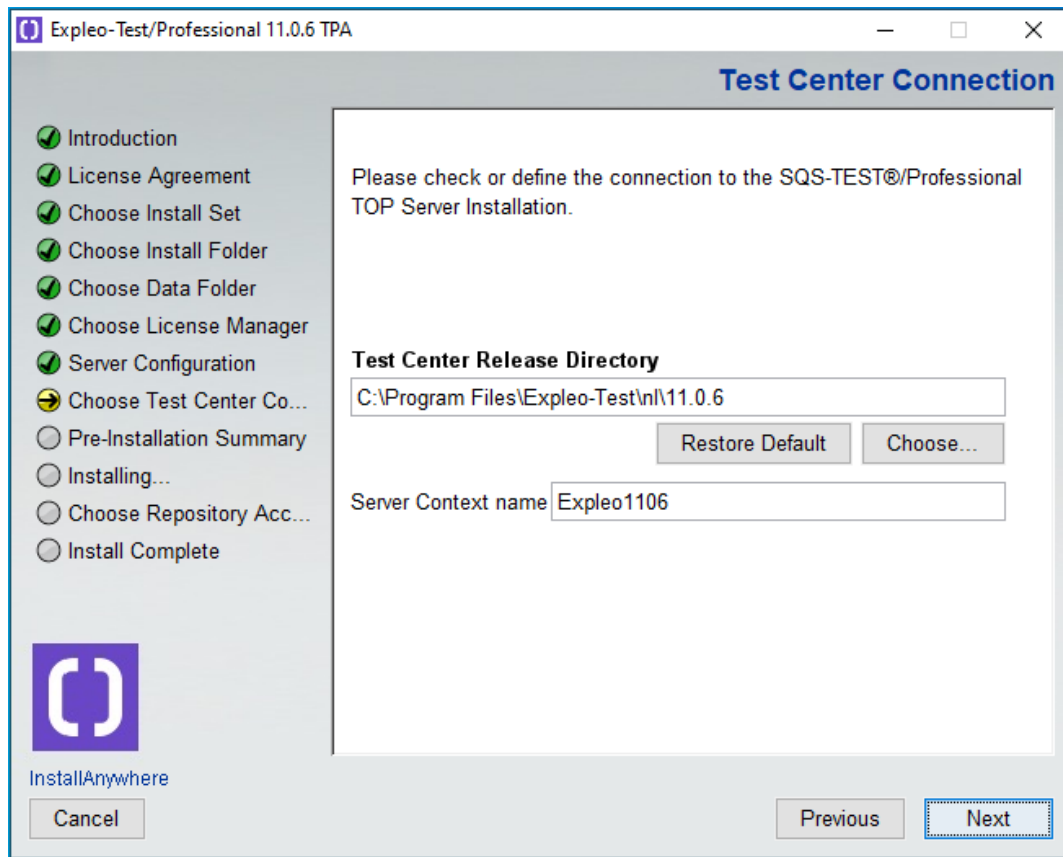
Domains directory
C:\Expleo\etc\domains
Restore Default Choose...

Domain name Expleo-Test_1106

InstallAnywhere

Cancel Previous Next

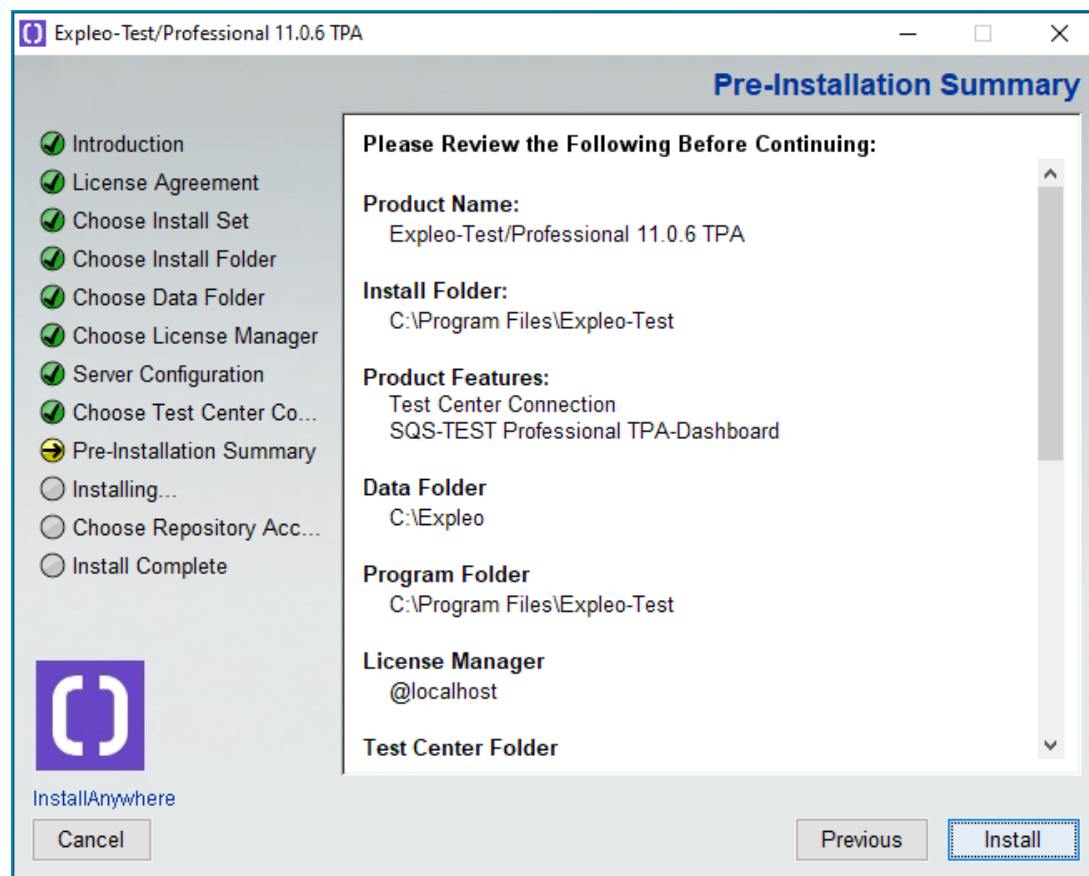
Click **Next**.



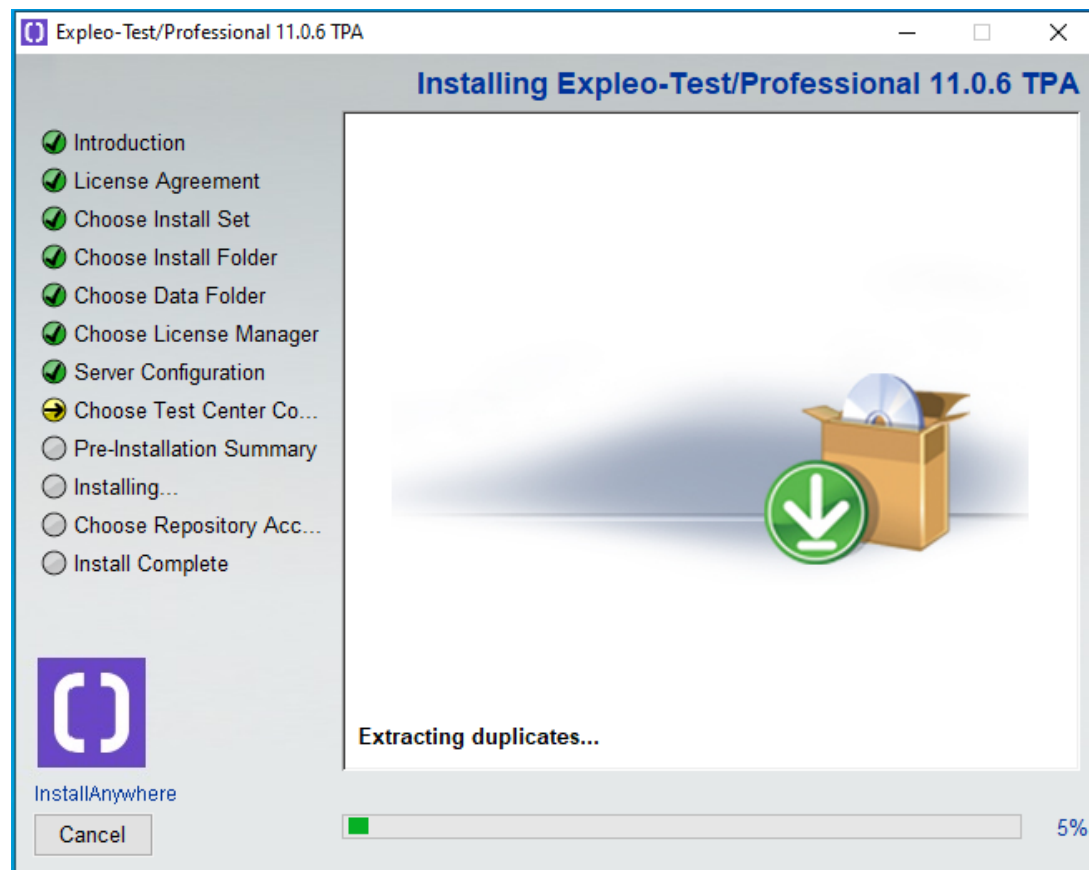
Click **Next** to continue with the installation.

Confirming the installation

Until now your system has not been modified by the installation wizard. You are now prompted one more time to confirm the installation options. When your settings are correct start the installation by clicking **Install**. You can still make changes to the configuration by clicking **Previous** if you need to.



The installation program now displays a progress dialog. You can stop the installation by clicking **Cancel**. (Not recommended!)

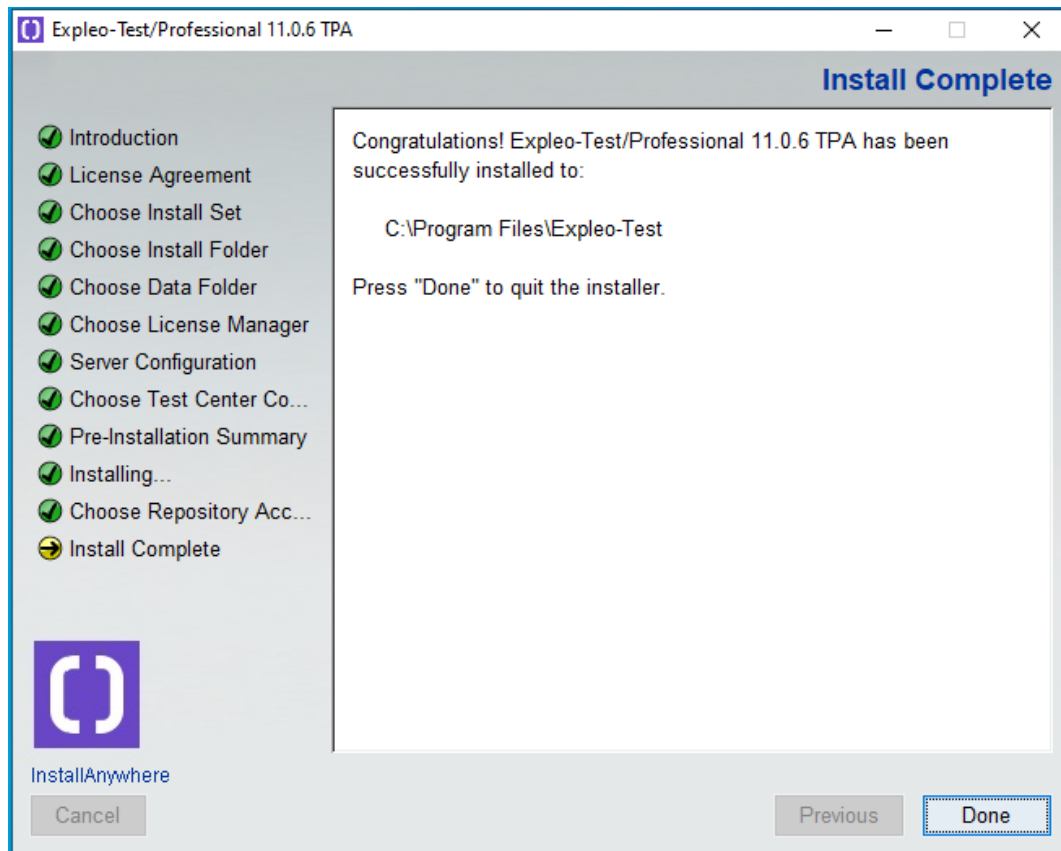


Finishing the installation

With this the installation of TPA is successfully completed and you can now exit the installation wizard.



We recommend to reboot the installation computer before using TPA for the first time.



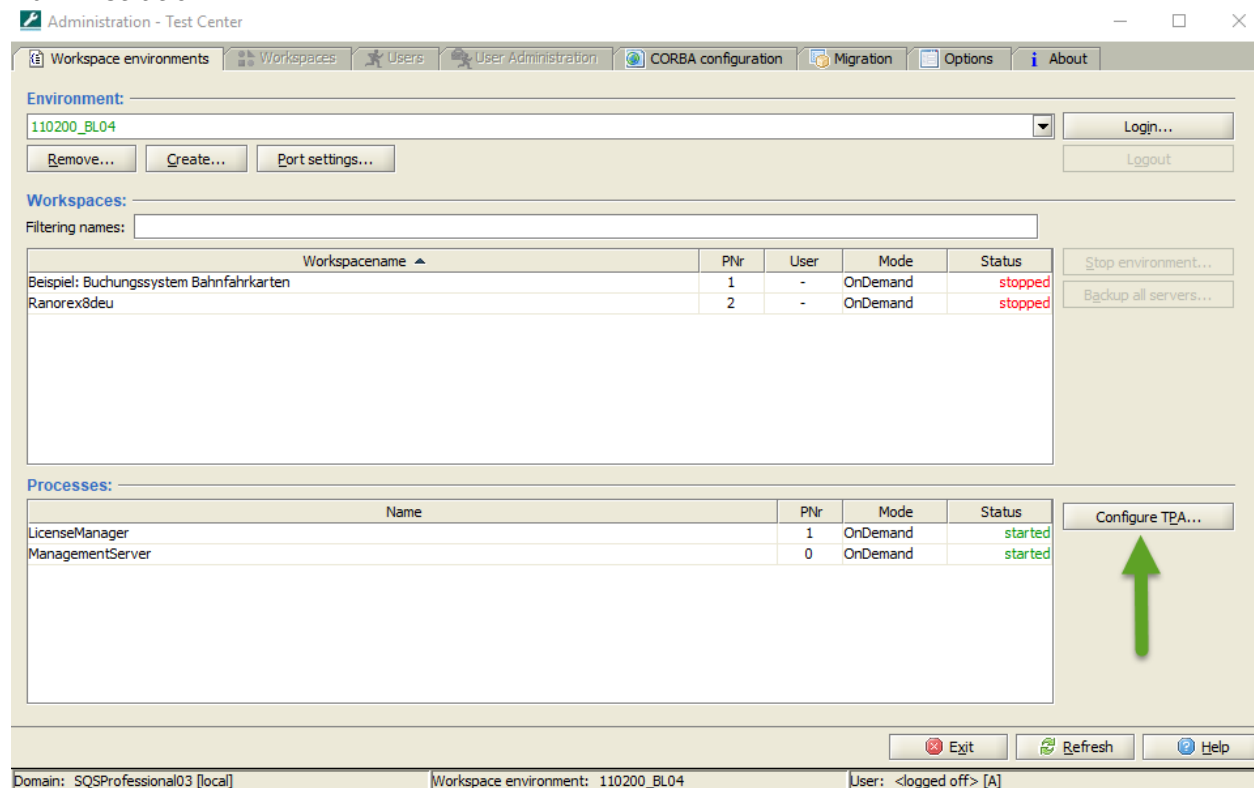
Click **Done** to complete the installation.

2.2.3 Starting the server

Before you can start the TPA server a license server needs to be available and running.

If you have not yet set up a license server and a license server is not yet available, then please read the installation manual for Test Center before you continue.

You configure and start TPA server using the Configure TPA dialog, part of Test Center Administration.



Sharing the directories “reports” and “share” of the repository

All Expleo-Test/Professional TPA users require full-access to the indicated network shares. Full-access is needed for both, **for the network share access from network** and **for the files himself, at file system**.

Directories for the shares “Reports” and “Share” are located in file system in the following paths:

```
<DataDirectory>\var\<WorkspaceEnvironment>\ppm\share  
<DataDirectory>\var\<WorkspaceEnvironment>\ppm\reports
```

Example:

```
C:\Expleo\var\Expleo1107\ppm\share  
C:\Expleo\var\Expleo1107\ppm\reports
```



The shares are defined as follows:

```
\\<ComputerName>\sqsshare<version>-<WorkspaceEnvironment>  
\\<ComputerName>\sqreports<version>-<WorkspaceEnvironment>
```

Example:

```
\\MYSERVER\sqsshare11.0.7-Expleo1107  
\\MYSERVER\sqreports11.0.7-Expleo1107
```

It is recommended to create a group, containing all Expleo-Test/Professional TPA users in order to grant access-rights to that group. The group must contain the Service User for the TPA Service or “SYSTEM” if the Service User ist not given.

It is absolutelly necessary to do this adminitrative step prior to start for the first time and use Expleo-Test/Professional TPA.

You can configure the Shares and access rights easily by clicking the button in your Configure TPA dialogue.


Shares...

 Configure TPA

×


Web Server

Architecture: ☐ x32 ☒ x64 Language: ☒ German ☐ English

Java Home: 

JVM:

Port: Stop Port:

Log Path: 

Log Level:

Service

☒ Start as service Start Mode: ☐ auto ☒ manual

Name:

Description:

Parameters

Name	Value
Temporary directory of JVM	E:\SQSProfessional\11.0.200_BL04\var\110200_BL04\temp
Repository Share	E:\SQSProfessional\11.0.200_BL04\var\110200_BL04\ppm\repository\share
Name of the server	DS4EM1429
Repository Root	E:\SQSProfessional\11.0.200_BL04\var\110200_BL04\ppm
Document Base	.././ppm
useWebDAV	off
Report Share	E:\SQSProfessional\11.0.200_BL04\var\110200_BL04\ppm\repository\reports

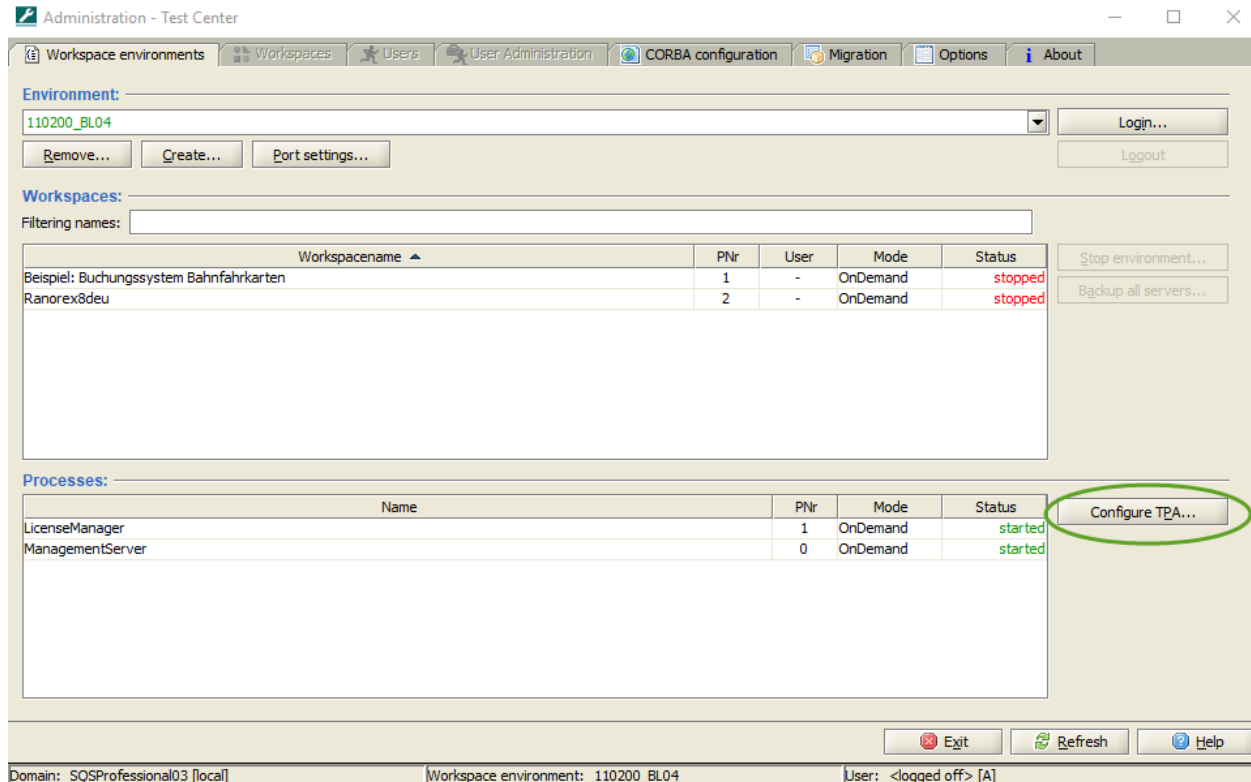
Under Windows the TPA server can be started in two different ways:

- **Start as application:** The server is started as needed via Configure TPA dialogue.
- **Start as service:** The server is executed with system service in the background. When start type "automatic" is selected additionally then the TPA server is also available when no user is logged on to the server computer.

2.2.4 Changing the configuration of the server

Here you will find information for the event that you may need to change the configuration of the server after successful installation of TPA.

The preferred method for changing the configuration of TPA Server is using Administration of Test Center.



Please refer to the documentation regarding Administration of Test Center for information on how to proceed.

Adapting the memory pool for the server

If you realize during operation of the server that the available memory is insufficient you should provide the Java environment of the server with more main memory.



If you get the error message „java.lang.OutOfMemoryError“ while working with TPA then this is a sure sign that more memory is required.

The approach varies depending on whether TPA Server was started as service or as application. Both ways are explained below:

Memory adaptation with the server as service (Windows)

The strongly recommended way to change memory setting for TPA Server is via Test Center Administration → Configure TPA. The dialog TPA Process Management contains the following parameters for the configuration of the same values of the JVM:

- JVM maximum heap in MB
- JVM minimal heap in MB
- JVM stacksize in KB

Value meanings and recommendations for optimal configuration of server-side applications as well can be found in the Java™ documentation.

A not recommended alternative is the use of Apache Tomcat Dialog for service configuration. This is how it works:

1. Start an input prompt in Windows with administrator permissions.
2. Switch to the bin directory of the server installation, i. e. for example to:
`C:\Program Files\Expleo-Test\wl\11.0.6\tomcat\bin`
3. Execute the following command to call the dialog for the configuration of the Tomcat server:
`tomcat7w //ES//<name_of_the_service>`

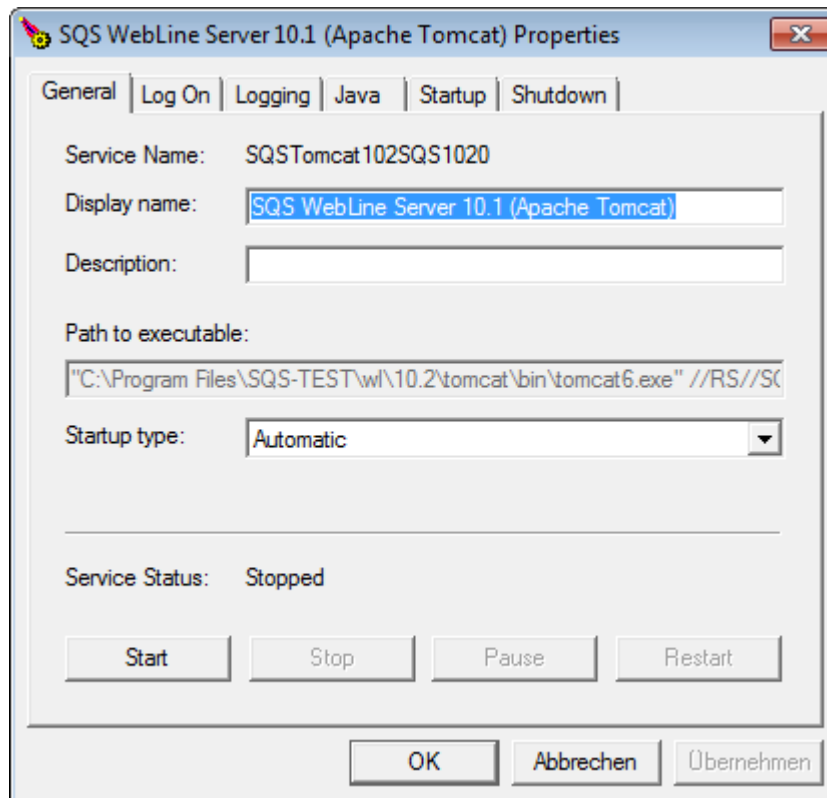
The name of the service consists of `SQSTomcat`, the version number to minor and without dot, in this case `1106`, plus the context name, for example `Expleo1106`. The complete command line can be for example:

```
tomcat7w //ES//SQSTomcat1106Expleo1106
```



If several versions are installed, please make sure that you use the correct service name and not that of a previous version (e.g. *SQSTomcat91* for 9.1). Otherwise you will change the memory settings of the old service, not of the one you currently use.

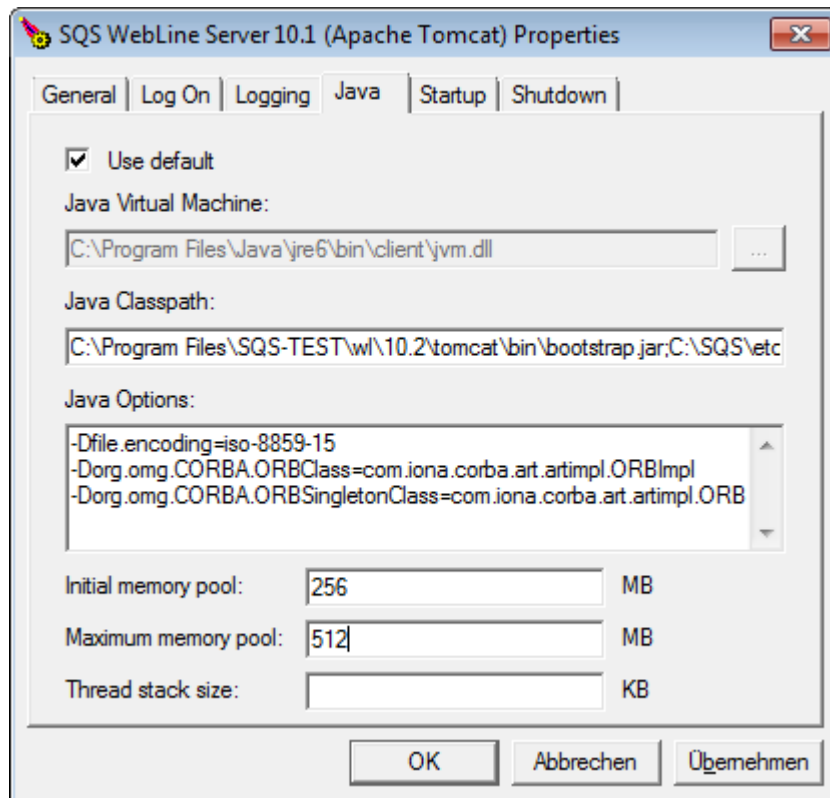
4. A dialog box for the configuration of Tomcat opens. On the tab General of the dialog that is now open you will see, among other things, the service name ("Service Name") and the name under which the service is entered in the service administration ("Display Name"). Here you can verify your service selection one more time.



- Switch to the tab Java and specify the following settings:

Initial memory pool: 256 MB

Maximum memory pool: 512 MB



- Click **OK** to adopt the settings. However, the new settings will only be used after stopping and then restarting the service.

Memory adaptation for server as application (Windows)

The modification in the Java configuration for the start of the server program as application is performed in the file *catalina.bat* which is also located in the bin directory of the application. Proceed as follows:

- First, stop the Tomcat server by executing the following batch file:

```
stopserver.bat
```

You will find the file in the bin directory of the server installation, for example here:

```
C:\Program Files\Expleo-Test\wl\11.0.6\tomcat\bin
```
- Open the configuration file *catalina.bat* with an editor. The file is located in the bin directory of the server installation, i. e. for example here:

```
C:\Program Files\Expleo-Test\wl\11.0.6\tomcat\bin\catalina.bat
```

3. Add the following parameters to the variables `JAVA_OPTS` in order to increase the main memory for Java:

- `Xms256m` Is the initial memory pool
- `Xmx512m` Is the maximum memory pool

The complete line for setting the variables `JAVA_OPTS` is then:

```
set JAVA_OPTS=-Xms256m -Xmx512m -Dfile.encoding=iso-8859-15 -  
Djava.awt.headless=true -  
Dorg.omg.CORBA.ORBClass=com.ion.corba.art.artimpl.ORBImpl -  
Dorg.omg.CORBA.ORBSingletonClass=com.ion.corba.art.artimpl.ORBSingleton
```

4. Save the file *catalina.bat*.
5. Finally you can restart the server:
`startserver.bat`

Changing the port number

A simple option to change the port number of the Apache Tomcat Web Server is to run the installation program on the server again. The new port numbers are entered as described in section 0, „

Setup Apache Tomcat Web Server".

Alternatively, you can change the configuration file of the server using a text editor to configure the port number of the Apache Tomcat Web Server. This file is located at the following path:

```
<installation path>\Expleo-Test\wl\11.0.6\<environment>\conf\server.xml
```

This file contains links to documentation by the Apache Software Foundation (<http://www.apache.org/>) which is imperative for the modification of the parameters. The information included with this manual is not a substitute for this documentation. Below you find a brief description of the relevant parameters:

- `<Connector port="80" protocol="HTTP/1.1">`: This is the port number of the web server for the communication with the clients. Change this value if all clients are supposed to communicate through a port other than 80. Make sure that the clients will then indicate the port you selected. See also section 2.3.3, „Starting the TPA client“. `<Server port="8005" shutdown="SHUTDOWN">`: The port number (attribute port) is the internal communication port number of the web server.
- For further details see the documentation of the Apache Software Foundation. (<http://www.apache.org/>)

Changing the link for Test Center

If you installed TPA with link to Test Center and the configuration is changed by Test Center server at a later time or a different Test Center server needs to be used than indicated during installation, then you also need to change the configuration of TPA's link to Test Center.

To modify the configuration of the link to Test Center you first need to stop the TPA server.

The easiest way to change the configuration of the link is to run the installation program on the server again. The new parameters for the link to Test Center are entered as described in section 0 „Link to “.

Alternatively, you can open the following configuration files on the server with a text editor and change the relevant values there:

```
<installation path>\Expleo-Test\wl\11.0.6\<environment>\conf\
Catalina\localhost\ppm.xml

<installation path>\Expleo-Test\wl\11.0.6\<environment>\conf\
server.xml
```

In order to change the configuration you need to modify the affected parameters as needed for the desired configuration. Here you find a description of the parameters for the configuration of the link to Test Center.

Changes in ppm.xml: The values of the following parameters need to be changed:

Parameter name="corba" value= installation path of the Corba infrastructure.

Parameter name="domain" value= name of the Corba domain of Test Center server.

Parameter name="domainsdir" value= location of the configuration of the Corba domain.

Parameter name="user" value= name of the user for Access to Test Center.

Parameter name="password" value= Password of the user for access to Test Center.

In the following example for the file ppm.xml, both the TPA server and Test Center server were installed under Windows in the path F:\ExpleoProfesssional on the computer cndecgn2870:

```
<?xml version='1.0' encoding='utf-8'?>
<Context crossContext="true" displayName="Expleo-Test/Professional WebLine"
docBase="../../ppm" path="/ppm" privileged="true" reloadable="true"
workDir="work/Catalina/localhost/ppm">
<Manager className="org.apache.catalina.session.StandardManager" pathname=""/>
    <Parameter name="repository" value="F:\Expleo\var\wl\ppm"/>
    <Parameter name="sqsshare" value="\\cndecgn2870\sqsshare"/>
    <Parameter name="sqsreports" value="\\cndecgn2870\sqsreports"/>
    <Parameter name="corba" value="F:\ExpleoProfessional\Expleo-
Test\corba"/>
    <Parameter name="domain" value="SQSProfessional03"/>
    <Parameter name="domainsdir" value="F:\Expleo\etc\domains"/>
    <Parameter name="context" value="Expleo1106"/>
    <Parameter name="user" value="ppm"/>
    <Parameter name="password" value="ppm"/>
    <Parameter name="loglevel" value="SEVERE"/>
    <ResourceLink global="UserDatabase" name="wlUserDatabase"
type="org.apache.catalina.UserDatabase"/>
</Context>
```

Changes in server.xml: Look for the following element:

```
<Realm className="de.sqs.tomcat.realm.BITRealm"
corba="F:\ExpleoProfessional\Expleo-Test\corba" domain="SQSProfessional03"
domainsdir="F:\Expleo\etc\domains"
context="Expleo1106"
user="ppm"
password="ppm"/>
```

This element contains all values relevant for the link to Test Center. The attributes of the element are analogous to the parameters in ppm.xml. The same values need to be entered in both files.

Changing the language for TPA

Step 1: Changing the language Internet Explorer shows TPA user interface

1. Open the Internet Explorer and select the menu *Extras >> Internet options*.
2. Switch to the tab **General** and click on the button **Languages** in the area appearance.
3. A dialouge opens. Select the language you want to use with TPA in the field *Language* or add the language *English* as language option. Make sure that the language you want is listed as first option. If it is not, select the language and click **Up**.



4. Confirm with **OK**.
5. It may be necessary to restart Internet Explorer for the changes to take effect.

Step 2: Changing the language of TPA Server

Change the language of TPA server using the Configure TPA dialog, part of Test Center Administration.

Configure TPA

Web Server

Architecture: ☐ x32 ☒ x64 Language: ☒ German ☐ English

Java Home: C:\SQSPRO~1\10A61F~1.000\jre\x64\1.8.0

JVM: C:\SQSPRO~1\10A61F~1.000\jre\x64\1.8.0\jre\bin\server\jvm.dll

Port: 9104 Stop Port: 9105

Log Path: C:\SQSPRO~1\10A61F~1.000\var\107000_BL13\wl-logs

Log Level: FINEST Show Logs

Service

☒ Start as service Start Mode: ☐ auto ☒ manual

Name: SQS WebLine Server 10.7.0 (107000_BL13)

Description: Apache Tomcat 7 for SQS Test Center 10.7.0

Optional Parameters

Name	Value
Service user	localroot
Repository Share	C:\SQSProfessional\10.7.000_BL13\var\107000_BL13\ppm\repository\share
Name of the server	n59944x1
Repository Root	C:\SQSProfessional\10.7.000_BL13\var\107000_BL13\ppm
Document Base	../../ppm
Report Share	C:\SQSProfessional\10.7.000_BL13\var\107000_BL13\ppm\repository\reports
Service password	*****

Start Stop Reset Save Close



Important: TPA server language determines TPA workspace language for all TPA workspaces. Changing the language of a TPA workspace is not supported. For that reason: Please chose TPA server language with care and do not change it after creation of TPA workspaces.

Please refer to the manual for Test Center Administration, chapter "Configure TPA" for details on TPA configuration, in particular on how to change TPA server language.

2.3 Installation TPA Client

2.3.1 Preparations

Client-side, Internet Explorer 7.0 is required. Furthermore, a current Java plugin for the Internet Explorer is required for some functionalities on the clients.

Further installation is not necessary for starting the client.

To edit documents from TPA the TPA Editor needs to be additionally installed.

2.3.2 Installation TPA Editor

The TPA Editor provides a comfortable possibility to edit documents from TPA, in particular action word libraries: For the latter, TPA Editor's online help offers direct support: With a click of the mouse you can create new action words, new parameters, conditions, tasks, etc. The help function also provides access to a list of the predefined TPA variables.

Local installation of the Editor is **optional**. By default, the Editor is automatically downloaded and launched by the TPA server. For future use, for example by test system administrators, we recommend a local installation for a quicker startup of the Editor.

If you did not already do so, first install the Java Runtime Environment. However, it should already be available through other installation of Expleo-Test.

Installation of the TPA Editor is executed by starting the program "Setup_SQS-Editor.exe". Double-click this installation program. Installation will then start automatically. Just follow the instructions of the installation program.

A configuration of the TPA Editor is not necessary.

2.3.3 Starting the TPA client

When you use TPA with link to Test Center you have access to TPA in the view Automation. This requires that the workspace that is open in Test Center client at this time is set up for use of TPA. You will find information about how that works in the TPA manual.

After successful installation you can call TPA by starting the Internet Explorer and entering the following address:

`http://<SERVER>/ppm`

If you entered a port number other than 80 in step "Setup Apache Tomcat Web Server" you need to enter the correct port number in the URL above. For example, if you specified port number 8080 the browser call looks like this:

`http://<SERVER>:8080/ppm`

After that you need to log on with a correct user name and a correct password. With a new installation the user "Administrator" is set up with the password "Administrator". Administration manual describes how you can change the password and add additional users.

After correct logon you can work with TPA.

You will find further information in the TPA manual.

2.3.4 Starting the TPA Editor

TPA starts the TPA Editor as soon as you open a document in TPA. The TPA Editor offers numerous forms of support for the editing of documents in the test system. You will find more information in the TPA manual.

2.4 Licenses

2.4.1 Instruction

In this section we assume that you have already set up the LicenceManager under Windows and have already carried out the licensing of the software, in particular the import of the licence file. See the installation manual for Test Center for information on this.

2.4.2 Licensing of TPA

By connecting to Test Center, TPA no longer needs to be configured itself for licence management.

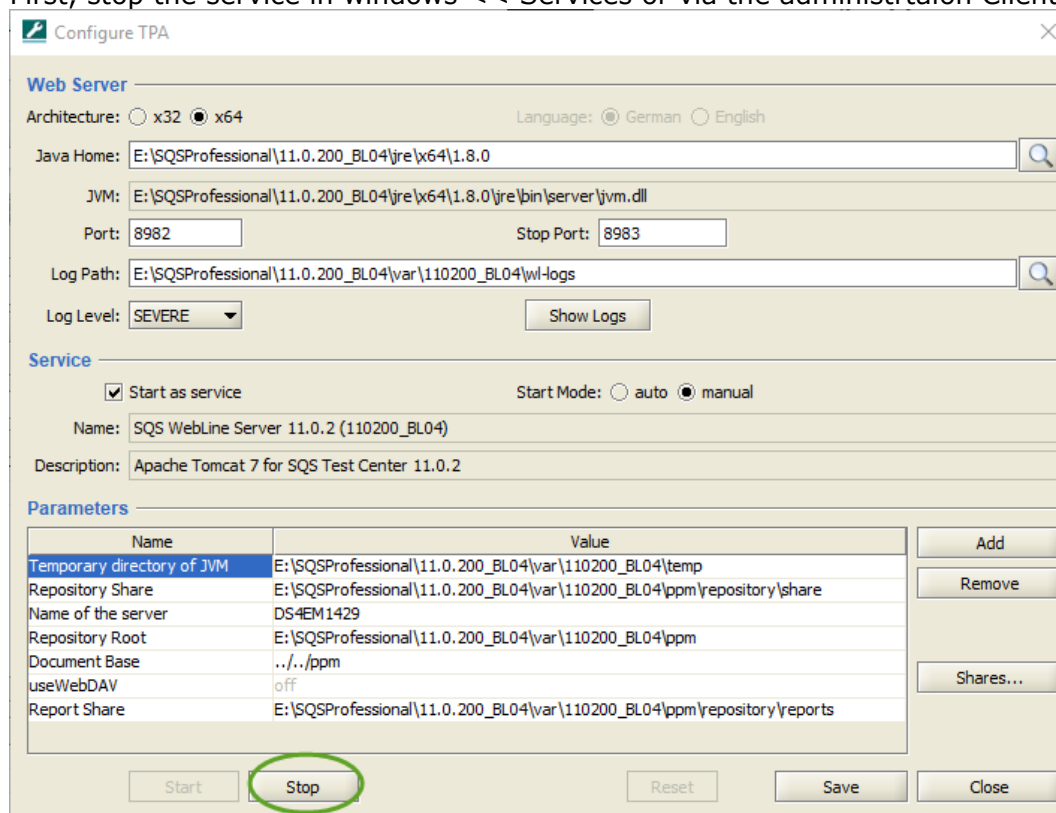
2.5 Deinstallation

2.5.1 Uninstall TPA

If TPA Server has been set up as a service you first need to uninstall the service. The service is indicated in the list of the Windows service administration as "SQS Webline Server 10.s (Apache Tomcat)".

Proceed as follows if you want to uninstall TPA:

1. First, stop the service in windows << Services or via the administration Client of Test Center:



2. Then trigger the uninstall service process by running the batch script:
 <installation folder>\Expleo-Test\wl\11.0.x\tomcat\bin\uninstallservice.bat
3. Uninstall TPA through Windows software administration:
 Control panel >> Software >> Expleo-Test Professional TPA 10.x >> Remove

Finally the folder wl\11.0.x should have been removed here: <installation directory>\Expleo-TEST

3 Installation of DTE

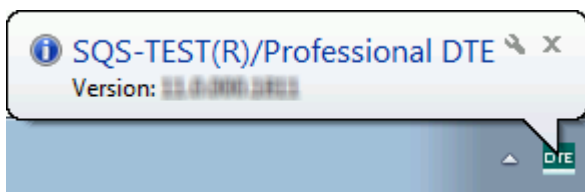
In this section you will find detailed information regarding the installation of the component Distributed Test Environment (DTE), part of the Expleo-Test/Professional Suite.

3.1 Introduction

3.1.1 What is DTE?

The component Distributed Test Environment, DTE for short, included with TPA allows automated testing of distributed applications in the network. When you implement a test automation that needs to be executed across several computers then you need to install the **target computer component DTE** (DTE) on each system to be addressed.

In Windows operating systems the DTE tray icon is displayed in the Windows task bar.



The installation manual on hand describes the installation under Windows operating systems, Solaris and z/OS.

3.1.2 System requirements

DTE supports the following operating system platforms:

- Windows (current version)
- Ubuntu (current version)
- Red Hat Enterprise Linux (current version)
- CentOS Linux

Notes:

- With limited functionality (no user switch), DTE can be used on any operating system platform for which a Java Runtime Environment is available. In this case, the installation must be done manually. A manual installation is created by creating the directories, copying the files from another system on which it was previously installed with the installation program, and setting up the start scripts. We will not discuss this type of installation and use here.

- Under **Suse Linux** (kernel version 2.6.16.13 and higher) and zOS (with USS) as well, full functionality of DTE can be used, including *user switch*. Compare section [User Switch Utility](#). However, in this case as well installation must be performed manually.

Required files for the installation

The following files are relevant for DTE installation:

- Target component DTE:Installation file for the target computer component of DTE for all types of the operating system platform Windows: **Setup_DTE.exe**
 - Installation file for the operating system platform Solaris: **Setup_DTE.bin**
 - Installation file for the operating system platform z/OS: **dte_zos.tar**

Note regarding z/OS: The Java runtime environment for the host needs to be installed prior to the installation of DTE under z/OS_USS (Unix System Services)

J2RE 1.7.0_25 IBM J9 2.3 z/OS s390-31 j9

This Java runtime environment is not supplied.

3.2 Licensing

DTE is already licensed in combination with TPA. Additional licensing is not required.

3.3 Platform Windows

3.3.1 Preparations

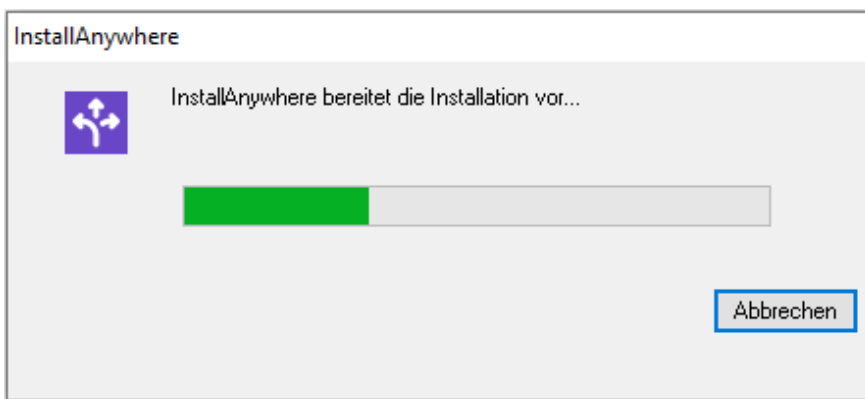
None.

3.4 Installation

The installation of the target computer component DTE is executed through starting the program „**Setup_DTE.exe**“. DTE's target computer component is operational after successful installation.

3.4.1 Installation procedure

- Execute the **Setup_DTE.exe** as administrator. You will find details on how to execute an application as administrator in the documentation of your Windows platform.
- The installation program indicates the progress.



- Select the language for the installationThe installation program displays a prompt to close all other applications for the duration of the installation process. Close all other applications and then click *Next*.
- Accept the conditions of the license agreement and click *Next*.
- Should there be other products by Expleo already installed on this computer the installation program will display information to this effect. Please read and take note of this information and click *Next*.

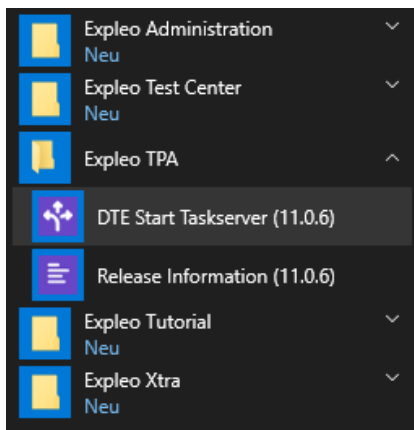
- Select the installation folder and click *Next*. You can browse for the installation directory using *Select* or reset the value to default using the button *Restore default*.
- Select the data folder and click *Next*. Here as well you can browse for the data directory using *Select* or reset the value to default using the button *Restore default*.
- The installation program now shows an overview of the selected options. If you want to correct your selection click *Previous* to return to the previous dialog. If you want to keep your settings click *Install* to start the installation.
- The installation program shows the progress of the installation.
- The installation program displays a message when the installation is complete. Verify the information and then click *Done* to close the installation process.

3.4.2 Created objects

The following files and directories have been created by the installation program:

- <installation path>\dte\11.0.x: Files for DTE.
- <installation path>/jre: Java environment matching version 11.0.x of Expleo-Test.
- <data directory>\var: Directory for temporary and log files of DTE.

The installation program creates the following program links:



- *Start / (All) Programs / Expleo TPA / DTE Start Task Server (<version_number>)*: Starts the DTE target computer component with the default parameters on this computer.
Start / (All) Programs / Expleo TPA / DTE 11.0.1 / Start Task Server (without Userswitch): Starts the DTE target computer without the user switch feature.
- *Start / (All) Programs / Expleo TPA / DTE 11.0.1 / Start Task Server (Debug)*: Starts the DTE target computer component in such a way that the outputs of the program are visible in a window. This link is useful for debugging and troubleshooting.

- The installation program of DTE does not create further files and directories. The installation program does not set up system variables or registry entries.

3.4.3 Post-processing


Optionally you can change the configuration of the target computer component as described in *3.6 Configuration*.

3.4.4 Starting the target computer component DTE

Start the target computer component DTE via command line.

Example (in one line):

```
/opt/Expleo-Test/jre/1.6.0/bin/java -jar  
/opt/Expleo-Test/dte/11.0/bin/sqsdt.jar -port 13469
```

When using Windows, a menu entry is created and an icon appears in the task bar: 

Optionally, you can create a script for starting the target computer component.

3.5 Linux Platforms

This section covers the Linux platforms such as, Ubuntu, Red Hat Enterprise Linux, and CentOS Linux.

3.5.1 Installation

Please log in as root to perform the installation of DTE.

Prerequisite for the installation is an existing and executable JRE Java 8 with current patch.

Start the installation with the supplied installation program, file Setup_DTE.bin.

To perform the installation, open a terminal and start the installation program with the following command line:

```
./Setup_DTE.bin -i console
```

The installation program queries the installation and data directories. Default values are:

- Installation directory: /opt/expleo
- Data directory: /var/expleo

Please follow the instructions of the installation program to complete the installation.

3.5.2 Objects created

The installation program has created the following files and directories:

- <installation directory>/dte/<version>/bin: Files for DTE. In particular:
 - <Installation Directory>/dte/<Version>/bin/<Platform ID>: User Switch Utility with s-bit set and PAM configuration. (Compare to the Administration manual for more details).
- <data directory>: Directory for temporary files and logs.

3.5.3 Post-processing

Optionally you can change the configuration of the target computer component as described in *3.6 Configuration*.

3.5.4 Starting and stopping the target computer component DTE

No administrator rights are required to start and stop the target computer component DTE, even if the full functionality of DTE is used, i.e. including user switch.

The target computer component DTE is started by starting the following script:

```
<Installationsverzeichnis>/dte/<Version>/bin/startdte.sh
```

The target computer component DTE can be stopped with the following script.

```
<Installationsverzeichnis>/dte/<Version>/bin/stopdte.sh
```

3.6 Configuration

Information on DTE configuration for all platforms can be found in the Administration manual.

3.7 Troubleshooting

Please try the following:

- Open DTE Details dialog and check the messages shown in it.
- Stop DTE. Start DTE again via Start Taskserver (DEBUG) link (Windows only). Run some remote job.
- Stop DTE and start DTE again using the `-extendedlog <logdir>` setting. Run some remote job and check the logs in the given directory. If this don't help to find the problem out, you may in addition use the parameter `-nospyagent false` (please see the configuration section in the TPA Administration manual).

Contact support_etp@expleogroup.com if you are not able to find out, what is going wrong. In order to get the best support, please describe the problem as exact as possible and include relevant log files if present.