



# Planon ProCenter - Suite Installer

Planon Software Suite  
Version: L105

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# About this Document

## Intended Audience

This document is intended for *Planon Software Suite* users.

## Contacting us

If you have any comments or questions regarding this document, please send them to: [support@planonsoftware.com](mailto:support@planonsoftware.com).

## Document Conventions

### **Bold**

Names of menus, options, tabs, fields and buttons are displayed in bold type.



### *Italic text*

Application names are displayed in italics.

### CAPITALS

Names of keys are displayed in upper case.

## Special symbols

	Text preceded by this symbol references additional information or a tip.
	Text preceded by this symbol is intended to alert users about consequences if they carry out a particular action in Planon.

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# Before you start

This document describes the installation of Planon Software Suite by using the **Suite installer**, and installing and configuring various components in one go.



If required, you can install components on different servers; to accomplish this you must run the installer multiple times for each individual component.

For installing Planon Software Suite you can use the Suite Installer, an installation wizard that guides you through the installation procedure.

You can use the Installer in these situations.

- To perform a [new installation](#).
- To perform an update.

## Prerequisites

These are the prerequisites for installing *Planon Software Suite*.

- At least 2 GB is used for your Windows temporary location during installation and 6 to 7 GB for a full installation of all features on the hard disk.
  - For an installation update, Planon might require even more disc space to make a backup of the old installation. A standard update only creates a backup of the Planon software files, but a Java or Tomcat update makes a backup the old Java or Tomcat directories. A major update even creates a backup of the complete old installation.
- A database dedicated for Planon Software Suite (MSSQL / Oracle). For more information about loading a database and setting the proper rights and necessary configuration, see [Database Configuration](#).
- JavaScript and ActiveX must be enabled in the respective browser to view the Planon Software Suite WebHelp correctly.
- The Planon documentation can be downloaded from the following location: [Planon Customer Portal](#).



- For additional prerequisites, see [Online Release Notes](#).
- For a Planon Software Suite deployment setup, see [Deployment Overview](#).
- For installing a Service Pack, see Service Pack – Installation Guide
- For additional technical configuration (HTTPS, single-sign-on, etc.), see [Administrator's Guide](#).

- For supported operating systems and for compatible ORACLE, MSSQL, and Windows versions, see [Supported Configurations](#).

# Upgrading the database

When upgrading your Planon installation, you must upgrade your database by running the Suite Database Upgrade Tool. This tool can be installed through the Installer.



For a description of the steps involved in upgrading the database, see [Suite Database Upgrade Guide](#).



# New installation

This section describes the steps required to perform a new installation of Planon ProCenter.

## Running the suite installer

Use the installation wizard that guides you through the installation procedure.



To access the installation log during the installation, you can use the following shortcut key: CTRL-SHIFT-L. Windows Explorer opens, showing the current log file in the temp location of the computer, for example `C:\Users\username\AppData\Local\Temp`.

### Procedure

1. Start the Installer and click Next.
2. In the next screen, select the destination folder where you want to install Planon Software Suite and click Next.

If this is your first installation, the default installation folder location is displayed as C:\Planon. If previous versions are already present, the most recent installation folder location is selected by default.

The **Destination directory** field allows only the following characters and symbols:

**ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789 - \_ . \** and all lowercase counterparts.

3. In the next screen, select the components you want to install by selecting the appropriate check boxes and click Next.

You must run the installer once, for every installation you do separately. If you do not want to install the new software immediately but want to upgrade or check documentation first, we advise you to choose different destinations for the documentation, installation and the Suite database upgrade tool.

The following tables provides a brief description of these components:

#### Suite Database Upgrade Tool


Component	Description
Suite Database Upgrade Tool	<p>Select this option, when you perform an update of the Planon software, to upgrade your database. This will install the Suite Database Upgrade Tool in the location you have selected previously. After the installation of the upgrade tool, the tool can be executed to upgrade your database. Before installing the software, we recommend that you upgrade your database.</p> <p>You can install the upgrade tool separately. This will allow you to first do an upgrade and then, only if successful, do the software update.</p>

#### Install software - Application server

Component	Description
Planon server business logic	<p>Select this option if you want to install or upgrade the business logic of the Planon server.</p> <p>If you install a second application server, for example for clustering, the certificates and keystores for the trusted services, located in \Server\wildfly-*\standalone are automatically regenerated.</p> <p>However, you should use the same certificate and keystore combination on all application servers.</p> <p>The default certificate is valid for 3650 days, or approximately 10 years. After this time, the functionality will remain operational, only the validity of the certificate will expire. If you use the default certificate it will be replaced by a new version every installation update, to for come the expiration.</p> <p>Trusted services are automatically generated and the certificates are automatically loaded in the database on starting the application server. If you install and automatically start a second application server, the certificate will be overwritten. To prevent this from happening, clear the <b>Start service</b> check box in <i>Step 14</i> not to automatically start the application server after installation.</p>
CAD Import	<p>Select this option if you are using or want to use CAD import. If you run a lot of imports during working hours Planon provides the option to install CAD Import on a separate application server.</p> <p>To use the CAD Import, complete the configuration as described in the <i>CAD Workbench</i> document.</p>
Connect for Outlook	<p>Select this option, if you are using or want to use Connect for Outlook. This will install the Connect for Outlook application server components in the installation directory.</p>

Component	Description
	To use the Connect for Outlook for Outlook complete the configuration as described in the Administrator's Guide-Connect for Outlook.
Scheduler	Select this option, if you want to install the Scheduler.  To use the default scheduler, please complete the configuration steps described in <a href="#">The Scheduler</a> .

#### Install software - Web server

Component	Description
Planon Web Client	Select this option to install or upgrade the ProCenter Web server components, such as: <ul style="list-style-type: none"> <li>• Web Client</li> <li>• Planon Self-Service Web Client</li> <li>• Kiosk</li> <li>• Mobile</li> </ul>
Planon SOA Web Services and Planon Software Development Kit	Select this option, if you want to use or upgrade Web services. You can also select this option, if you want to connect through the Planon Software development kit API (SDK).
Connect for Outlook	Select this option, if you are using or want to use Connect for Outlook. This will install the Connect for Outlook web server components in the installation directory.
Agile Workplace Management – Planon reader	Select this option, if you want to install or upgrade the Agile Workplace Management solution.  Planon recommends to install the AWM Data engine on a separate web server. Only for test environments it is allowed to run on the same server.
<div style="border: 1px solid red; padding: 5px; display: inline-block;">  To run AWM Data engine, the Planon Web Client installation is mandatory. </div>	
After completing the installation, some configuration steps are required. For more information, see the <i>AWM Technical Reference</i> .	
Tomcat for WebDAV	Select this option, if you want to install or upgrade a specific web server to be used for WebDAV.

Component	Description
	For additional information, see <a href="#">WebDAV server</a> in the Administrator's Guide.

#### Related components - Additional software

Component	Description
Planon Connect for AutoCAD	Select this option, to get the Planon Connect for AutoCAD installer (PC4A). Ensure that you run the PC4A installer to complete the PC4A installation.

#### Related components - Manual Installation Resources

Component	Description
Configuration files	Select this option, if you want to include a set of configuration files. These sample files can be configured to suit your specific installation configuration.  The administrator guide options use these sample files.
Planon Software Development Kit	Select this option, if you want to develop extensions to the Planon software.
Tools	The tools and Reset supervisor password are available for installation.
Language files	Select this option to get all available language files.

#### 4. Select or generate an access key.

The access key is used to encrypt and decrypt the passwords for the connections to external systems, such as WebDAV, Connect for AutoCAD, Connect for Calendars (C4C), default user passwords. (In general, the passwords the customer enters in the **System Settings**).

##### a. Generate new external access key?

If you do not yet have a key, use this option. For example the first Planon installation or an update to the version that introduces the key.

Please note that if you generate a new key, you must also update the passwords of external connections (WebDAV, email, etc.) in **System Settings**.

Make sure to save the generated access key in a secure location to use it later with other installations. After completing the installation the key can be found in:

```
..\(app)server\WildFly*\standalone\
```

```
..\Server\tomcat-*\
```

b. Please select the external access key

When you run an update installation - for a standard service pack installation, Tomcat or JDK update, or major update installation - the field is prefilled with the key that is available on the system.

The field is empty if a key cannot be found, in which case you can browse to provide the key you stored in the secure location.



If you install a second application server, for example for clustering, you need to provide the same access key.

5. Select the database platform and authentication you want to use and click Next.
6. Enter the database configuration settings.

If unaltered or cleared, the **Min pool size** and **Max pool size** take the default values of **10** and **30** respectively.

The exchange functionality will make heavy use of concurrent sessions. To support this, a higher minimal database poolsize is required to avoid problems creating many database connections at once.



The recommended minimal poolsize is 20. The <max-pool-size> must at least be equal to the <min-pool-size>

If Oracle is selected as database platform, you have to select the Oracle version used for Planon. The installer needs this information to install the proper driver for Planon. You can use the **Check connection** button to connect to the database and to automatically select the driver.

For additional (manual) configuration steps, see [Database configuration](#).

7. Enter the encoded license key in the License code area. Click Next.

The license key is written to a file called License.lic and is placed in:

```
\Server\wildfly-*\standalone\configuration
```

Note that the license will be sent to you through mail from Planon Customer Support.



If the license key is not correct, you will not be allowed to log on to Planon Software Suite.

If you do not have a license key yet, you can temporarily proceed by selecting the **Continue installation without license key** check box. This will allow you to complete the installation.

After receiving the license key from Planon, open the license key file and paste the newly received key in the License.lic.

If you paste the license key along with the prefix and suffix markers appended to the license key **[EE License key-BEGIN] <license key> [EE License key-END]**, these markers are removed and the license key is then stored in the database. You need to restart the application server to pick-up the license key if you already did a test login.



If any other markers are used or if any changes are made to the above mentioned markers, the license is rendered invalid and is not stored in the database when the first user logs on to the application.



For more information on licensing, see [Licensing](#).

After entering the license key and clicking **Next** the installer will perform a port set availability check.

8. To secure the JBoss CLI and HTTP management interface of the application server, a new management user will be added. Enter the credentials for this user. By default, both interfaces only allow access from the localhost.
9. In the next screen, select the port set you want to use.

There are 30 port sets available. The first available port set is selected by default. Click **Next**.

10. Enter the application server hostname and click Next.
11. Specify user name and password for the Planon web service client administration module.

The Planon SOA Web Services client administration module can be accessed through `http://<hostname>:<portnumber>/nyx/`.

The same user name and password can be used to log into the Administration Module.

**The hostname in the URL string should be replaced with the hostname of the Web Server installation machine. The port number is the port number on which the Planon Web Client runs.**

12. Enable clustering; if you run multiple application servers, clustering must be enabled for each application server. The application servers will be registered in the database as part of the cluster, which enables communication between the servers.

**If clustering is enabled, port 7600 is used to communicate between the application servers.**

If you are using the same machine for installing the application servers, you need to offset the ports (for example: 7600 and 7601). If you install the application servers on separate machines, you can use the default port number 7600.



Make sure the application servers are allowed to communicate via these ports.

Fill in the host that other Planon instances can use to connect to this instance:

- If you have multiple Planon instances on one machine, you can enter 'localhost' or '127.0.0.1'.
- If you have Planon instances on separate machines but on the same network, you can fill in the internal ipv4 address or an internal network host name.

To find the internal ipv4 address, you can open a command prompt, type 'ipconfig', and then copy the ipv4 address in the LAN section (usually it starts with 192).

- If you have Planon instances on separate machines and separate networks, you can connect over the internet with a public host or IP address.



There is a way to check whether you are actually setup and running in a cluster correctly. The application server logs should indicate a line that starts with *Received new*, either: 'Received new clusters view' or 'Received new, MERGED cluster view'.

### Example

```
Received new, MERGED cluster view for channel ejb: MergeView::[wildfly-1|1] (2) [wildfly-1, wildfly-0], 2 subgroups: [wildfly-1|0] (1) [wildfly-1], [wildfly-0|0] (1) [wildfly-0]
```

The number in parenthesis, such as (2), indicates the number of nodes in the cluster.

If you see a (1) in parenthesis and no other log line later, this indicates that the Planon instance has not found the other Planon instances, and something must be wrong with the configuration, environment, or deployment:

Received new cluster view for channel ejb: [wildfly-1|0] (1) [wildfly-1]



- **On-premise** customers who have installed a WildFly cluster must ensure that the *JGROUPSPING* table is emptied when a database is copied from one environment to another. This needs to be done - for example - to prevent the ACC environment connecting to the Prod environment.
- For Cloud, this is done automatically when restoring Production to ACC, TEST or DEV, or ACC to TEST etc.

13. In the next screen you can configure secure communication.

If configured the application will communicate via HTTPS.  
HTTP communication will be disabled.

14. In the next screen, enter the application server service name and Web server service name and click Next.

In Planon Software Suite, servers are registered as services in Windows. When entering the Application server service name, ensure the name is unique, if other application servers will be running as a service on the same system. If the service name matches any existing service name, the current installation may overwrite the previously installed service or the application may not be installed. The service name you enter in this screen will be prefixed with PlanonApplicationServer.

The service will also be suffixed with `_ID<generated number>`. This number is based on the version of the Planon Software Suite used for the installation. If a web server service or an application server service is reinstalled during an update, the suffix is updated to a new unique number.



Clearing the **Start service** check box prevents the application server from starting automatically after the installation is complete. This is recommended if you are installing a second application server and do not want the certificate of the first installation to be overwritten.

15. Select the required Planon Software Suite Client shortcut that must be installed and provide a unique name. Click Next.

16. Select the directory which contains the certificates (\*.crt, \*.cer, \*.der, \*.pem) you want to import into the trust store and click Next.

The certificates are copied into the `..install4j/customerCertificates` directory and used during the installation. The certificates are only imported, if you are executing one of the following installations:

- New full installation
- New Java service pack installation

Select a new directory containing certificates, only if you want to:

- Include certificates and did not do this with a previous installation



- Introduce new certificate files in the installation (..install4j/customerCertificates). They will be added next to the existing ones.

If you want to remove certificates, remove them manually from the ..install4j/customerCertificates directory and also from the trust store if needed. Check [Updating Cacerts](#), to see whether you need to perform an intermediate update of certificates in the trust store (no full install, or new JDK installation).

17. The WebDAV configuration screen is displayed, if you selected **Tomcat for WebDAV**.

#### Enter the WebDAV settings:

- WebDAV location: This location will contain your files and a folder called WEB-INF. The WEB-INF folder will not be visible for the your users. The WebDAV location cannot be inside the installation location.
- WebDAV credentials: User name and password that will be used for securing the WebDAV location with BASIC authentication. After installation, you still need to configure these WebDAV settings in the System settings > WebDAV settings.



For more information, see [WebDAV](#) (System settings).

18. Check if the settings are correct and click Start to start the installation.
19. The next screen displays the installation in progress. The process creates the entire folder structure and copies the files into it. It also creates the database connection and configures the application server and web server and registers them as Services.

**After the installation, you can find an installation summary containing your port set selection in the following location:**

**..install4j\installation\_summary.txt**

20. Click Finish. The installation process is now complete. Planon Software Suite is installed on your computer. The version of the Suite Installer is logged in the serverboot.log on start up of the application server. Search for the string "Installation history:"

## Post-installation

### Loading a language



If you ran an upgrade from a previous version, the upgrade already takes care of importing new translations that are introduced by a new software version. You do not need to import language files manually after the upgrade to update the translations. The upgrade only updates those languages for which the language files are by default delivered by Planon.

#### Procedure

1. Go to System settings > Languages.
2. In the element list, select the language you want to load. For example, NLD, PLA and so on.
3. On the right panel (action menu), click **Import language**. The **Select files** dialog box appears.
4. Retrieve the language files from \language.
5. Select the appropriate language, and click **Select file** to load the file.



A warning might appear informing you of a difference between the language file and the version of Planon ProCenter Software Suite. Make sure that at least the first five digits of the version numbers match; if these versions do not match, you may risk lacking functionality.

6. Click **OK** to continue.  
The language import starts. When this progress bar disappears, the language file is loaded. Loading a language takes a while.
7. Restart the Planon Client to display the loaded language.

## Configuring the Help Center

The WebHelp is installed with the web server part. To enable the WebHelp functionality, you must configure the URL.

### Procedure

1. Go to System Settings > General. In the Help URL field, fill in the URL to the Planon Web help if you want the button on the toolbar or ALT+F1 to point to the online web help:

**If you want to display the WebHelp in another language, in the URL, replace /en/ with either: /de/, /fr/ or /nl/ to display German, French or Dutch respectively. But note that English is kept up to date.**

You can also provide a URL with instructions from your own company.

2. Click Save.

You have completed configuring the Help Center (press ALT+F1 to display the WebHelp).

## Connect for Outlook

To enable communication between the various components, please make sure the following ports are open:

- For communication between the application server and the Exchange server, http port 80 or https port 443 must be open.
- For sending notifications to room mailboxes, the Exchange server needs to be able to access the web server. In order to do so, the appropriate port should be opened. The default port is 8070, but you can select a different port during installation.
- For sending email to the organizer, the SMTP server needs to be accessible. For this, port 25 needs to be open.

## Planon Web Client as Trusted site

You must add the Planon site as a trusted site in the browser settings, for the functionality to work correctly. This will help you overcome your client or organization receiving annoying pop-up blocker alerts when they visit Planon site. You must make these browser settings on any browser you open the Planon site.

## The Scheduler

The scheduling mechanism is a generic solution that will eventually be used by a number of TSIs for handling jobs that need to run at a specified date / time.

Before being able to use the scheduling mechanism, some configuration is required.

By default, the Installer partly configures the scheduler.

To use the default scheduler, please complete the following configuration steps described in this chapter:

- Create and configure the [SCHEDULERENGINEADMIN account](#)
- Configure [email settings](#) (for alerts)



The scheduler is currently used by **Alerts**, **Planon Mobile Field services** and **Connect for Outlook**.

## Creating a Planon Software Suite account

A special user account in Planon Software Suite is used to find the corresponding accounts of users to be notified.

In **Accounts > User Groups > Users**, add a user as specified in the following table.

Field	Description
Name	SCHEDULERENGINEADMIN

Use this exact name (case sensitive, without spaces). A special client on the application server – planonschedulerengine.ear - will use this user to look for users/accounts to

Field	Description
	be notified and to check alarms and notifications definitions.
Password	Enter a password - you are free to select you own password.
Start date	Specify the date as of which this account is allowed to log on to Planon Software Suite.
Property set	The scheduler is property-set-independent. The SCHEDULERENGINEADMIN account can switch property sets and work in multiple property sets simultaneously.
Time zone	In order to be able to analyze log files, this account must be in the same time zone as the server running the planonschedulerengine.ear.

The SCHEDULERENGINEADMIN account needs to be authorized to execute the tasks it is used for, e.g. Alerts, Connect for Outlook and so on. So if you use authorization, we advise to provide the Scheduler with all rights.

When using the application locking and the SCHEDULERENGINEADMIN is not linked to the Admin group, this user is also locked and cannot perform the appointed tasks (notification, alarms, synchronizing meeting requests etc).

In addition, make sure that the SCHEDULERENGINEADMIN account is linked to a user group to which the *Scheduler* product definition is assigned: *Planon ProCenter Planned Services Scheduler*.



Keep in mind that when configuring the SCHEDULERENGINEADMIN account, the scheduler might already try to log on to the application, which might result in a locked account. The server log will display the locked account name. By default, accounts are locked for five minutes, but customers may use a different (longer) time window. The Scheduler however will not retry anymore, you need to restart the application server to make the scheduler login again.  
For more information on the locking mechanism, see the chapter on [Planon login module security](#) (Administrator's Guide).

After changing authorization for the SCHEDULERENGINEADMIN account, a cache refresh of the application server is required to make the scheduler aware of these changes.

## E-mail settings

When using Notifications & Alarms, specify the SMTP server address. This address is required for sending notification messages.

Go to **System Settings > Outgoing email**.

Setting	Value
Authentication	<input type="radio"/> Yes <input checked="" type="radio"/> No
ID user	
Password	
Port number	25
Reply email address	<name>@company.com
Sender's email address	<name>@company.com
Bcc email address	
Name of sender	<name>
SMTP Server address	mail.service
Email catcher on?	<input type="radio"/> Yes <input checked="" type="radio"/> No
ESMTP with TLS	<input type="radio"/> Yes <input checked="" type="radio"/> No
SMTP with SSL	<input type="radio"/> Yes <input checked="" type="radio"/> No
SMTP connection time-out	10000
SMTP read time-out	5000
Mail retry count	0
Mail retry interval	10
Log successful emails	<input checked="" type="radio"/> Yes <input type="radio"/> No

When using Notifications & Alarms, specify the e-mail accounts or cell phone numbers of users/accounts linked to the notification definitions. Notifications are sent via e-mail.

For users to receive text messages on their cell phones, their cell phone provider's e-mail address must be specified in: **Authorization > User groups > Users > Settings > Sender's email address**.

Sender's email address

For users to receive email notifications, this field should contain the user's email address.

Sender's email address

If this address is not specified, the messages will not be sent.

In a Cloud environment, the e-mail settings are automatically configured and set. Within the environment, customers can use the Planon managed email servers to send outgoing mails. For further configuration information, refer to [Emailing in the Cloud](#).

## Agile Workplace Management

If you are using Planon's Agile Workplace Management solution, some configuration is still required.

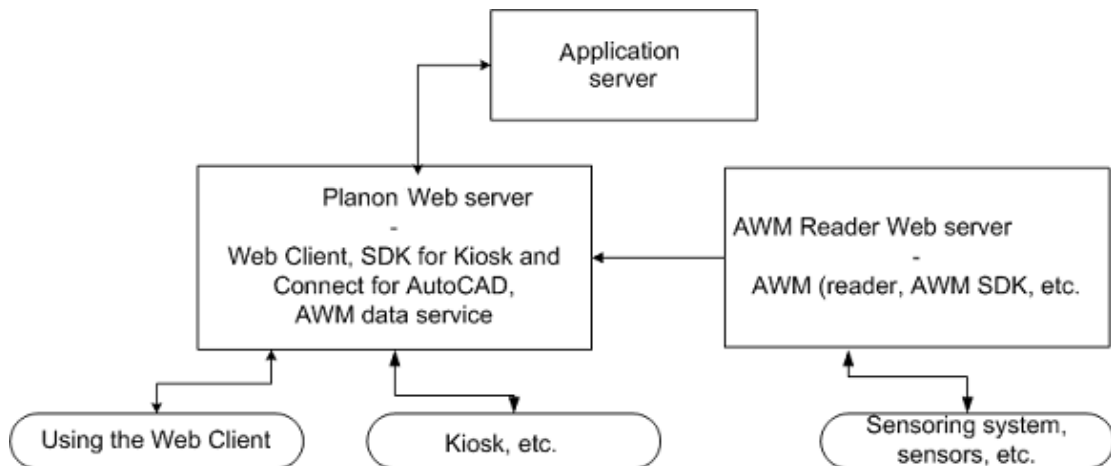
If you install Agile Workplace Management without completing the configuration part described in [Creating a dedicated user account](#) and [Creating a user group](#), you risk

receiving a great number of errors and warnings in your web server log. Check whether these steps are complete, and if not, you must complete them.

The AWM Data engine is the component responsible for the polling mechanism, retrieving data that will indicate whether the room or workspace occupancy has changed.

The Planon Suite Installer will recommend setting up a dedicated web server installation for the reader.

This image displays a possible deployment.



## Creating a dedicated user account

AWM needs a dedicated account that is used to run AWM processes for polling and synchronization.


1. Go to the User group details level.
2. On the action menu, click Add.
3. In the User name field, enter: **AWMDATAENGINEADMIN**.

 the name is case sensitive.

4. Complete the remaining mandatory fields and click Save.

**Even though you specified a property set, the **AWMDATAENGINEADMIN** account works across multiple property sets because it is only used to "communicate" with the sensing system.**

5. Go to the Settings level, and specify a language for the **AWMDATAENGINEADMIN** user.

 AWM warning and error messages will be logged in the language specified here. These messages and errors are logged in the Tanuki log. Note that the default language displayed in the log file is English; only the AWM messages and errors will be displayed in the language specified here.

## Creating a user group

It is a good practice to use a dedicated user group for AWM.

1. Go to the User groups level.
2. On the action menu, click Add.
3. In the System name and Description fields, enter a meaningful name, for example: **AWMDataEngine**.
4. On the action menu, click Users and link the **AWMDATAENGINEADMIN** to this user group.
5. On the action menu, click Product definitions and link **AWMDataEngine** (without subproduct).
6. In the Function profiles field, select Full functionality to grant full access to the AWM processes.
7. Complete the remaining fields and click Save.

**You have completed creating a user group and linking the required user and product definitions.**

## Planon Mobile Field Services (PMFS)

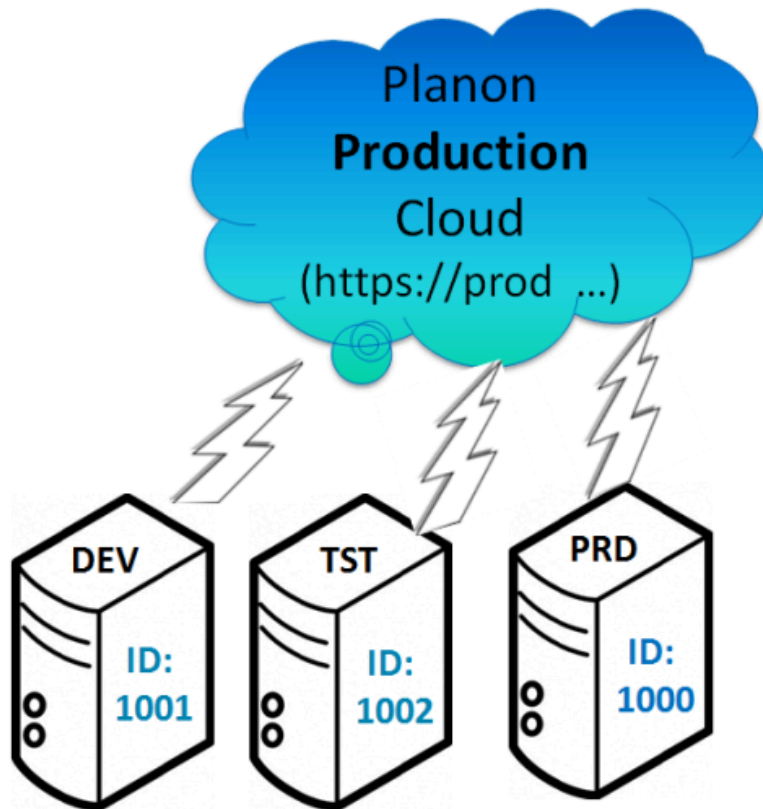
The suite installer will deploy the PMFS connector automatically.

### Application server configuration

Messages will be sent to the cloud using the **SSL protocol** so that the application server knows the location folder to store the cloud properties and the info for application mapping.

### Connection to the cloud

The Planon cloud is the mailman that delivers all messages to the correct devices and Planon environments. In order to be able to deliver the right messages to the right system, each customer environment that uses Planon Mobile Field services has a unique identifier called **systemid**.



It is not allowed to use the same systemID for another environment. This will result in wrong delivery of the messages.

- **Url:** the link to the cloud synchronization service.
- **Systemid:** a customer environment specific identifier for the cloud.
- **Password:** for authenticating the systemid.

#### Procedure

1. Open the jboss-wrapper-default.conf file again.
2. Add the following settings.



The text you add here is case sensitive.

```
wrapper.java.additional.<nr>=-DPMFS_CloudUrl=<url to the Planon cloud>  
wrapper.java.additional.<nr>=-DPMFS_SystemID=<nr of the system>  
wrapper.java.additional.<nr>=-DPMFS_Password=<password to connect to the system>
```





Verify that there are no gaps in the sequence of the <nr> parameter.

3. Grant access to the cloud url on the firewall. The port is the regular http port 443.
4. Check if the file ..\server\default\deploy\hornetq\hornetq-jms.xml has the following text: If not, add it.

```
<queue name="planonPMFSInboxMessageQueue">  
  
<entry name="queue/PMFSInboxMessage"/>  
  
</queue>  
  
<queue name="planonPMFSOutboxMessageQueue">  
  
<entry name="queue/PMFSOutboxMessage"/>  
  
</queue>
```



If a connection is established via a proxy, you must update the tanuki configuration file to be able to connect to the proxy. For details about proxy configuration, see [Proxy settings](#).

## Custom gadgets

The following procedure describes how to configure/install custom gadgets for the Planon home page.

Custom gadgets are html files referred to from an external content web definition in [Web configuration](#).

Currently, there are two ways of creating custom gadgets: a preferred way that is available for both on-premise and Cloud, and a way that is only available to on-premise installations.

### Preferred way

This way creating custom gadgets is done from within the Planon application itself. It does not require you to meddle with the installation directory.

The configuration of custom gadgets is done in Web configuration: [Adding Web content](#).

### On-premise only



The following procedure is only possible for on-premise installations.

The Planon installation root folder contains a folder called **customization**. This folder can be used for your custom files. This folder will not be removed during upgrades.

To install/deploy a custom gadget

1. Create a subfolder called `gadgets` in the customization folder.
2. Place all gadget related files in the `gadgets` folder. For example:  
`\customization\gadgets\gadget.html`

Note that each gadget must be configured in Web configuration.

1. Create an External content web definition.
2. Point the **Content URL** field to the gadget.  
For example, `http://[server]:[port]/customization/gadgets/gadget.html`. Or using a relative path such as `"../customization/gadgets/gadget.html"`
3. Add a block to the **Homepage** web definition and link it to the external content web definition.



For more information, see *Web Configuration* > [Adding gadgets to the homepage](#).

## Proxy settings

If a proxy is used to connect to Planon, add the following parameters to the `tanuki` configuration file of the server that should communicate via the proxy:

- Mandatory

```
wrapper.java.additional.<follow previous no.>=-Dhttp.proxyHost=<Proxy server host>
wrapper.java.additional.<follow previous no.>=-Dhttp.proxyPort=<Proxy server port>
```

- Optional

- When you use user name password authentication:

```
wrapper.java.additional.<follow previous no.>=-Dhttp.proxyUserName=<Proxy server username>
wrapper.java.additional.<follow previous no.>=-Dhttp.proxyPassword=<Proxy server password>
```

- When you want to exclude communication from the proxy, for example the WebDAV server installed by Planon:

```
wrapper.java.additional.<follow previous no.>=-Dhttp.nonProxyHosts="localhost|127.0.0.1|*.theDomaintoExclude.com"
```

- for example `"localhost|127.0.0.1|*.planon-fm.com"`



For details about the configuration, see [Networking properties](https://docs.oracle.com/en/java/javase/11/docs/api/java.base/java/net/doc-files/net-properties.html) (<https://docs.oracle.com/en/java/javase/11/docs/api/java.base/java/net/doc-files/net-properties.html>).

If configured for the web server, disable the minimal `httpClient` in the `remoting.xml` located in `\Server\tomcat-*\conf`:

```
<httpClient>
```

```
<minimal>false</minimal>
```

```
</httpClient>
```



If you want WebDAV to communicate via the proxy, user name password authentication is not supported for the proxy. You need to use another authentication method, such as IP or active directory.

## Reverse proxy settings

If a reverse proxy is used to connect to Planon, make sure to configure the RemoteIpValve for the Planon web server. For more information, see:<https://tomcat.apache.org/tomcat-9.0-doc/api/org/apache/catalina/valves/RemoteIpValve.html>

Planon has functionality that returns URLs for which this valve should be configured to return the correct URLs. The configuration of this valve is very specific to your reverse proxy setup and not to the Planon installation. We can only inform you that you must configure it, not what parameters are required.

# Updating your installation

This section describes how to update your existing Planon ProCenter installation.



If any specific manual effort is required for installation, this is described in the configuration guide of the respective product.

## Prerequisites

- Make sure all users are logged off.
- Stop all services. To stop a service, go to **Start > Control Panel > Services > Administrative Tools** or press Windows key + r and run `services.msc`. Select the service and click **Stop Service**.
- Create a backup of the current installations, (for example: `..\Backup`).

The main folder to backup for Planon ProCenter is:

`...\Planon`.

If the upgrade fails, you can use this backup to fix the issues in your database. If the installation needs to be reverted, you can copy this backup to your installation location.



The Installer tool's automatic reversal does not work properly. Hence, it cannot be relied on, you will end up with an invalid installation if it fails.

- When updating the software, you must upgrade all Planon software components together. If you only update a selection, you will end up with an application that is not working properly.



If you have Planon Software Suite distributed over multiple servers, update all (you will have to run the installer multiple times, for each separate server once).

## Impact of different types of update installations

There are three types of update installations:

1. Standard update:
  - only the Planon software is replaced
  - no manual post-processing required
2. JDK or Tomcat service pack update:

- In addition to replacing the Planon software, the Tomcat / JDK folder is also being replaced by a newly installed Tomcat / JDK folder.
- The old folder is not deleted, you can use it as a backup.
- Manual configuration for Tomcat / JDK must be reapplied.

### 3. Major update:

- In addition to replacing the Planon software, several changes are also being applied in different libraries, such as a WildFly update.
- This is a complete new installation.
- The values you entered during the installation are reused.
- All manual configuration must be reapplied.
- A backup is made by renaming the original "planon" installation folder; a date-time stamp is added to the name. You can use this folder to restore your TMS (Tailor Made Software).

## Running the installer

### Procedure

1. Start the Installer. In the Welcome screen, click Next.
2. Choose the installation folder for which you want to deploy the update. The most recent Planon Software Suite install location is selected by default. To choose a different location, click Browse. Select the desired installation directory and click Next.
3. The installer indicates from which version to which version it is. Click Next.
4. If a Major update is required, the installer will indicate this. A Major update implies:
  - a. A complete new installation. The values you filled in during the installation will be reused.
  - b. All manual configuration needs to be reapplied. Check the Administrator's Guide for configuration changes.
  - c. A backup is created by post-fixing the original installation folder "planon" with a date time stamp. You can use this folder for restoring your TMS.
  - d. Continue with the steps from the paragraph "New installation".
5. If a Java or Tomcat update is needed the installer indicates from which to which version. Click Next.



Note that if a new Tomcat or Java version is installed, any changes you applied manually need to be reapplied.

6. The installed components are automatically selected. You can only add components, you cannot remove them. Click Next.
7. Select or generate an access key.

The access key is used to encrypt and decrypt the passwords for the connections to external systems, such as WebDAV, Connect for AutoCAD, Connect for Calendars (C4C), default user passwords. (In general, the passwords the customer enters in the **System Settings**).

a. Generate new external access key?

If you do not yet have a key, use this option. For example the first Planon installation or an update to the version that introduces the key.

Please note that if you generate a new key, you must also update the passwords of external connections (WebDAV, email, etc.) in **System Settings**.

Make sure to save the generated access key in a secure location to use it later with other installations. After completing the installation the key can be found in:

```
..\(app)server\WildFly*\standalone\
```

```
..\Server\tomcat-*\
```

b. Please select the external access key

When you run an update installation - for a standard service pack installation, Tomcat or JDK update, or major update installation - the field is prefilled with the key that is available on the system.

The field is empty if a key cannot be found, in which case you can browse to provide the key you stored in the secure location.



If you install a second application server, for example for clustering, you need to provide the same access key.

8. If you do not want to start the services, clear the check box and click Next.
9. In the Ready to Install screen, click Start to update the software.

The installation will now start.

10. Click Finish to exit Setup.
11. Update Apps: in the relevant App Store, verify whether there are updates available for the Planon Apps.



The Planon Apps must always be kept updated on all mobile devices to remain in sync with the Planon Software Suite.

12. Update Connect for AutoCAD. The appropriate files are located in ... \related\_components\additional\_software\". For the documentation see: ... \related\_components\documentation\2. Installation\English\Planon Connect for AutoCAD - Installation Guide.pdf.

You have updated the Planon Software Suite on your computer.

# Database configuration

The following topics describe how to configure your database server for Planon ProCenter.

## MSSQL Server

### Permissions

#### Suite Database Upgrade tool

The Suite Database Upgrade tool must have following SQL database rights. Also take care of sufficient quota on the default table space of the upgrade user.

```
use master,  
  
create login LoginName with password='Plan$QL', default_database=DatabaseName;  
  
Go  
  
use [DatabaseName];  
  
Create User UserName FROM LOGIN LoginName  
  
exec sp_addrolemember 'db_owner', 'UserName';  
  
Go
```

#### Planon application

The Planon application user must have the following SQL database rights. Also take care of sufficient quota on the default table space of the Planon application user.

```
use master  
  
create login LoginName with password='Plan$QL', default_database=DatabaseName  
  
Go  
  
use master;  
  
Grant View Server State To LoginName;  
  
Go
```

```
use [DatabaseName];

Create user UserName for login LoginName;

Go

use [DatabaseName];

GRANT CONNECT TO UserName

Go

use [DatabaseName];

GRANT SELECT,INSERT,UPDATE,DELETE TO UserName;

Go

use [DatabaseName];

GRANT EXECUTE TO UserName;

Go
```

## Import

When using an MSSQL Server, carry out the following tasks after importing the .bak data file.

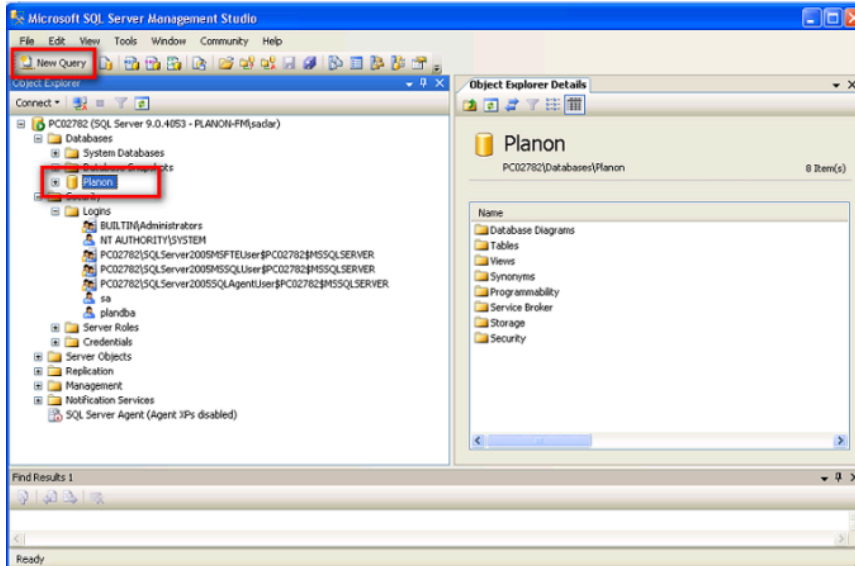
- Setting db user 'plandba' as dbo
- Setting the default database for user 'plandba'

## Setting db user 'plandba' as dbo

The user 'plandba' is given database administrator privileges by assigning the 'dbo' privilege. For more information, see [Setting the default database for user 'plandba'](#)

1. Open MSSQL Management Studio.
2. Select the 'Planon' database.
3. On the toolbar, click New Query.



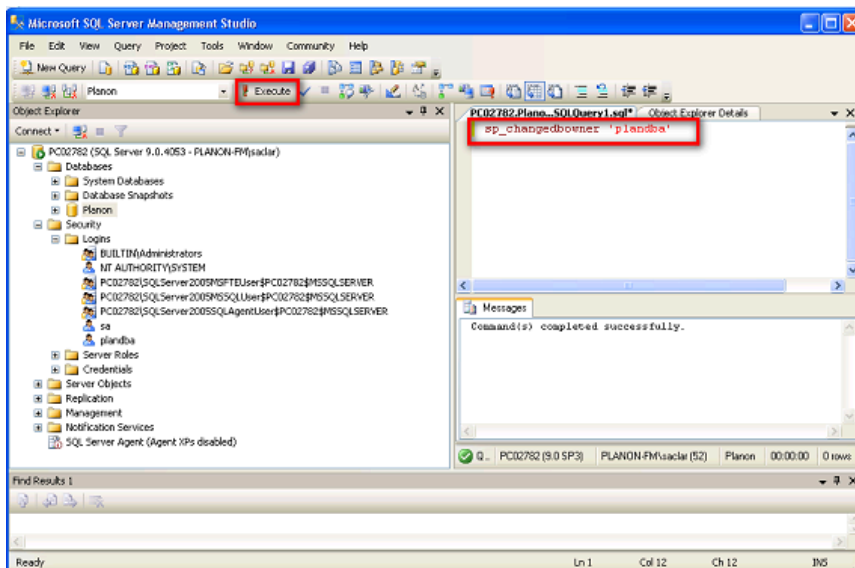


4. Run this stored procedure.

`sp_changedbowner 'plandba'`



Do not forget to carry out this step, as you will not be able to access the database when this step is overlooked.

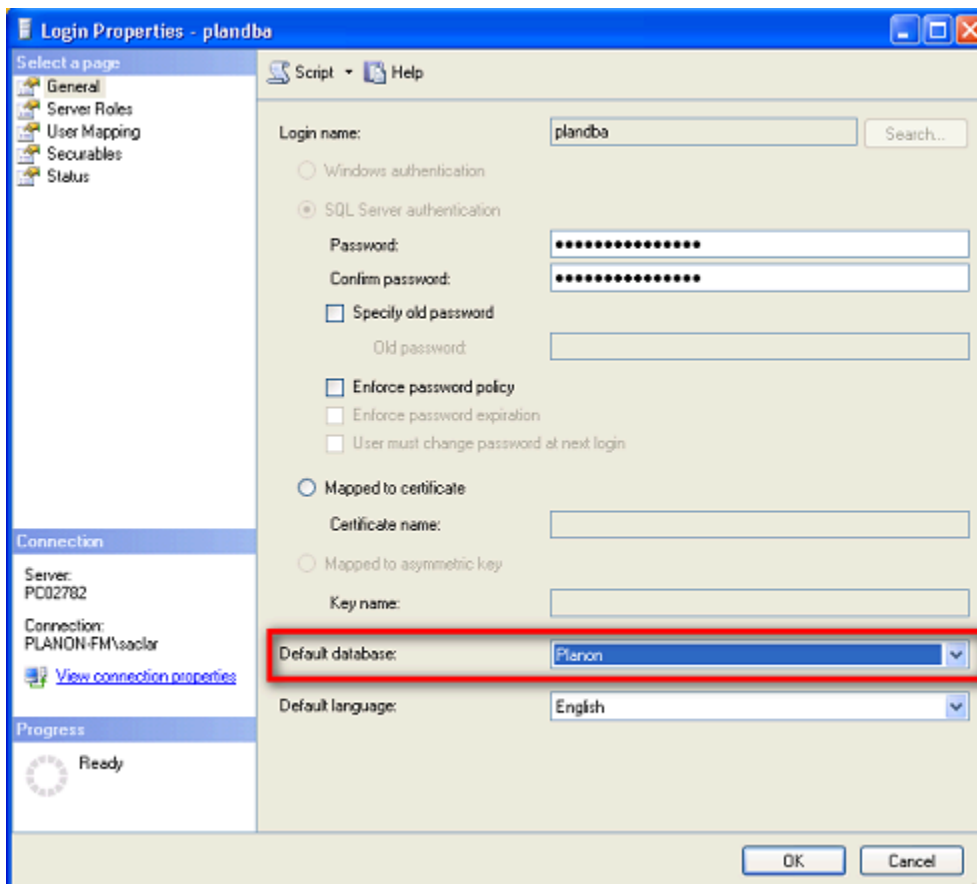


## Setting the default database for user 'plandba'

The used connection strings do not always specify the desired database to connect to. It is therefore necessary to designate the Planon database as the default database for user 'plandba'.

## Procedure

1. Open MSSQL Management Studio.
2. Under Security> Logins select user plandba.
3. Right-click on user plandba and select Properties from the list.
4. Set the Default database to Planon.
5. Click OK to save and exit.



## Deadlock prevention

Used with default settings on MSSQL highly concurrent Planon sessions can lead to deadlocks. Planon recommends changing some settings on database level in order to decrease the chances of a deadlock situation. Apply the following statements to achieve the READ\_COMMITTED\_SNAPSHOT level of isolation:

```
ALTER DATABASE <DB Name> SET SINGLE_USER WITH ROLLBACK IMMEDIATE;  
ALTER DATABASE <DB Name> SET READ_COMMITTED_SNAPSHOT ON;
```

```
ALTER DATABASE <DB Name> SET MULTI_USER;
```

Replace <DB Name> by the database name.



These statements should be executed by a DBA only.

If these settings are not configured, the following warning will be logged in the serverboot.log file when starting the applicaiton server:

```
WARN [SystemBODefinitionCache] database property
```

```
READ_COMMITTED_SNAPSHOT is not ON! change your DB configuration!
```

## Case and accent insensitive search

The collation of the database defines if the search is case and accent insensitive or not. Install the database with the correct collation, to have the behavior you want.

## Oracle server

### Minimal required permissions

#### Suite Database Upgrade tool

The Suite Database Upgrade tool must have following Oracle database rights. Also take care of sufficient quota on the default table space of the upgrade user.

```
GRANT ALTER SESSION TO <<username>>

GRANT CREATE PROCEDURE TO <<username>>

GRANT CREATE SESSION TO <<username>>

GRANT CREATE TABLE TO <<username>>

GRANT CREATE TRIGGER TO <<username>>

GRANT CREATE VIEW TO <<username>>

GRANT QUERY REWRITE TO <<username>>

GRANT CREATE SEQUENCE TO <<username>>
```

#### Planon application

The Planon application user must have the following Oracle database rights. Also take care of sufficient quota on the default table space of the Planon application user.

```
Grant Create Session to <<username>>
```

```
Grant Alter Session to <<username>>
```

## Security aware permissions

This page describes the minimum configuration of an Oracle database server in terms of permissions granted. Some customers prefer to assign minimum permissions to users and to the PUBLIC role in order to enhance security. The following set constitutes the minimum set of permissions for running the Planon software.

### Required permissions

Here it is assumed that the user SYSTEM is used to manage other users. Usage of user SYS is kept to a minimum.

#### To user SYSTEM

As user SYS

```
Grant Execute On DBMS_LOB To SYSTEM With grant option;  
Grant Execute On DBMS_SQL To SYSTEM With grant option;  
Grant Execute On DBMS_UTILITY To SYSTEM With grant option;  
Grant Execute On DBMS_ASSERT To SYSTEM With grant option;  
Grant Execute On DBMS_OUTPUT To SYSTEM With grant option;  
Grant Execute on UTL_FILE To SYSTEM With grant option;  
Grant Select on sys.v_$session to system with grant option;
```



The *With grant option* part ensures that user SYSTEM can further assign permissions to other users.

#### To users for running the Planon software

For this example, the user containing the Planon data is called “PLANON”

As user SYSTEM (if configured as described previously)

All users need the following permissions:

```
GRANT CREATE TRIGGER TO PLANON;  
  
GRANT CREATE PROCEDURE TO PLANON;  
  
GRANT CREATE SESSION TO PLANON;  
  
GRANT ALTER SESSION TO PLANON;  
  
GRANT CREATE CLUSTER TO PLANON;  
  
GRANT CREATE DATABASE LINK TO PLANON;  
  
GRANT CREATE SEQUENCE TO PLANON;  
  
GRANT CREATE SYNONYM TO PLANON;  
  
GRANT CREATE TABLE TO PLANON;  
  
GRANT CREATE VIEW TO PLANON;  
  
GRANT QUERY REWRITE TO PLANON;  
  
GRANT SELECT ON SYS.V_$SESSION TO PLANON;  
  
GRANT CREATE MATERIALIZED VIEW TO PLANON;
```

By default, the following required permissions are obtained by the PUBLIC role. This is a default role that each user always gets. However, when you follow the security best practises, these can be removed from the PUBLIC role. In this case, the following permissions must be granted to the user directly:

```
Grant Execute On DBMS_LOB To PLANON;  
  
Grant Execute On DBMS_SQL To PLANON;  
  
Grant Execute On DBMS_UTILITY To PLANON;  
  
Grant Execute On DBMS_ASSERT To PLANON;  
  
Grant Execute On DBMS_OUTPUT To PLANON;
```



The Upgrade (Suite Database Upgrade tool) and standard application will have the same permissions.

## GPS field type support

To support fields of the type SDO\_GEOMETRY, Oracle locator should be installed on the Oracle server.



For a description on how to verify whether Oracle Locator (and only Oracle locator, not Spatial) is installed, refer to the [Oracle Support documentation](#) (Doc ID 357943.1).

#### **Known issue in Oracle with GPS fields**

During data pump imports of databases containing GPS data in columns with type SDO\_GEOMETRY, the following error may occur:

"ORA-39779: type "MDSYS"."SDO\_GEOMETRY" not found or conversion to latest version is not possible"

#### **Solution**

1. Log on as sysdba and run `$ORACLE_HOME/md/admin/sdoupggeom.sql` on the destination database also to increase the size of the Ordinate Array definition.
2. Then perform the import again.



For more information, see the [Oracle Support documentation](#) (Doc ID 1584858.1).

## Case and accent insensitive search

Oracle is always case and accent sensitive.

# Updating Cacerts

If you need to perform an intermediate update of certificates in the trust store because no full install, major upgrade install, or new JDK installation is needed, you can use the `planon_certificate_tool.bat` located `...\install4j\customercertificates\...`

## Procedure

1. Place the new certificate in the `...\install4j\customercertificates` folder.



During a subsequent upgrade of Planon that includes a new JDK version, the new certificate will automatically be included in the cacerts.

2. Run the tool: `planon_certificate_tool.bat import <certificate file name>` you placed in step 1>

Command	Explanation
<code>import &lt;certificatefile&gt;</code>	Imports the certificate file in the server JDK.
<code>list</code>	Lists the certificates that were added with this script in the server JDK.
<code>?</code>	Help

# Uninstalling Planon Software Suite

Uninstall Planon Software Suite from your machine using the following procedure:

## Procedure

1. In the Planon Software Suite root folder, double-click uninstall.exe to start the installer.
2. Click Next to start uninstalling Planon ProCenter Software Suite.
3. Uninstalling is now in progress. The relevant services are stopped and deleted. Planon Software Suite files and folders are removed.
4. Click Finish to complete uninstalling Planon Software Suite.



After uninstalling Planon Software Suite, some folders are still not deleted. If you no longer need them, you can delete these folders manually.



# Silent install

The installer can also be executed without GUI:

- Always run as an administrator.
- You must run the silent installer from a batch file. Running it directly from the command prompt is known to give problems, or not work at all in some cases.
- Most errors do not cause the Silent installer to stop or fail. To check the installation results, check the installation.log, for no occurrences of [ERROR]. Make sure to add the parameter "-Dinstall4j.alternativeLogfile" to have this log file available.

Add the following parameter to have timestamps in the log file (the default is "false"):

```
-Dinstall4j.logTimestamps=true
```

- All installations with the Silent installer need a full set of parameters to run properly.

## Silent installer Help

For the Silent installer

Execute the following command:

```
Planon_SuiteInstaller_*.exe -q -console -?
```

You will be provided with:

- The component IDs to be provided by a full installation to indicate which components you want to install.
- The parameters that can be provided for a full installation to configure your system. For example the components to be installed, your database type and database connection information, service names etc.

## New install

Execute the following command using the parameters you can retrieve with the Help function:

```
Planon_SuiteInstaller_*.exe -q -Dinstall4j.alternativeLogfile=[alternative directory]\installation.log -Dinstall4j.logTimestamps=true -console -dir [installation directory] componentIds=[component1,component2,etc] [other parameters]
```

For example install the Planon server business logic at C:\Planon:

```
Planon_SuiteInstaller_*.exe -q -console -dir c:\Planon ^  
  
componentIds=789 ^  
  
databaseType=mssql ^  
  
dbhostname=DBServer ^  
  
dbinstancename=InstanceName ^  
  
dbusername=DBUserName ^  
  
dbpassword=Plan$QL ^  
  
licensefile=C:\Planon\license.lic ^  
  
portSet=1 ^  
  
startAppServer=true ^  
  
appserverManagementUsername=cli ^  
  
appserverManagementPassword=cli
```



You can copy this example to a batch file, including the ^ signs. Make sure to remove extra white spaces introduced by copying at the end or the beginning of the lines. Also do not add extra white spaces in the <variable>=<value> expressions.

Parameter handling:

- If you miss parameters which are needed you will get an error.
- If you miss parameters that have a default they will fall back on the default. See Help for the parameters that have a default.
- If you enter too many parameters they will be ignored.

## Version update install

Execute the following command:

```
Planon_SuiteInstaller_*.exe -q -Dinstall4j.alternativeLogfile=[alternative  
directory]\installation.log -console -dir [installation directory]
```

## Major upgrade install

A major upgrade is upgrading from another major release (for example R15) to this new release. The command should be equal to the command you executed for the release you are running, extended with the new parameters introduced by the new release.

## Uninstall

Execute the following in the location of the:

```
[installation directory]\uninstall.exe -q -console
```

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