

Installation Guide

Manage for TEOS – Document revision 1.5

Description

The Manage for TEOS solution is a server software which can control displays and projectors from a user-friendly web interface. As well as controlling devices, the BRAVIA device management server is also capable of collaborating with the meeting room application on BRAVIA displays so they can show calendar information provided by Microsoft 365, Exchange server and Google calendar. When licensed the device management server can also be used to create digital signage content. In this installation guide we will walk you through the installation of Manage for TEOS. It is advised that a system administrator with proper network knowledge perform this installation.

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1. Review of the requirements

Here are the main requirements for the installation of your TEOS server. For more details, please go to <https://teos.solutions> and download the technical specification and requirements documents.

- Windows Server 2019 or newer version
- Latest Microsoft updates
- IIS needs to be installed on the server
- .Net framework 4.8 needs to be installed on the server
- .Net framework 3.5 features need to be installed
- Microsoft SQL Express 2019 or Server 2018 needs to be installed or used for remote access
- The server needs to be connected to a network that can connect to the devices
- DNS records need to be done for Manage for TEOS to work
- The server can reach the calendar servers (Microsoft 365, Exchange or Google Calendar)

1.1. Server hardware requirement

To ensure that your system runs optimally, it's important to know the minimum requirements for Manage for TEOS server. The requirements for Manage for TEOS server are the following:

Devices / user connected	Processor	Memory	Disk space (for content)
1 - 49 devices / users	4 x 2.1 GHz. *	12GB RAM	80GB
50 - 99 devices / users	4 x 2.6 GHz *	16GB RAM	120GB
100 - 249 devices / users	4 x 3.0 GHz. *	20GB RAM	200GB
250 - 499 devices / users**	6 x 2.6 GHz. *	24GB RAM	400GB
500 - 999 devices / users**	8 x 2.6 GHz. *	32GB RAM	500GB

* In the case of virtual processors, it is not required to have 2 physical processors.

** The SQL server should be installed on a separate server with the same specifications as the TEOS server.

*** Performances are considering the usage of calendars such as Office365, Google or exchange, if there is no calendar use, performances can be decreased.

The server can **run on hardware** but also **run on a virtualization platform** like Hyper-V, VMWare, XEN server or others. For the best performance we recommend that the server has an **SSD storage device** directly connected, or in the case of **virtualization, a SAN with SSD storage**.

NOTE: If you require higher performance, please contact us for advice on hardware requirements.

NOTE: If Microsoft SQL Express is used in TEOS server localhost, it is recommended to use 1x socket with for 4 cores/CPU (maximum that SQL Express license can perform) just for SQL. If you use a Microsoft SQL Standard or any other license, please check the performance requirements to make sure it is efficient.

1.2. Operating system requirements

The Manage for TEOS application supports Windows server 2019 and above version.

Category	Software versions
Operating systems tested	Microsoft Windows Server 2019 Datacenter
	Microsoft Windows Server 2019 Standard
	Microsoft Windows Server 2022 Datacenter
	Microsoft Windows Server 2022 Standard

NOTE: The Windows server machine must have the **latest Microsoft update**

NOTE: Essential edition of Microsoft Windows Server is **not recommended**

NOTE: English language (for keyboard also) recommended for support purpose

1.3. Component requirements

The operating system roles and features (listed below) are required by the Manage for TEOS application to communicate with the devices and operate them.

The **roles that need to be installed** on the TEOS server are:

- **Web Server (IIS) role:**

- **Webserver:** Common HTTP Features, Default Document, Directory Browsing, HTTP Errors, Static Content, HTTP Redirection
- **Health and Diagnostics:** HTTP Logging, Custom Logging, Logging Tools, Tracing
- **Performance:** Static Content Compression, Dynamic Content Compression
- **Security:** Request Filtering, Windows Authentication
- **Application Development:** .NET Extensibility 3.5, .NET Extensibility 4.5 Application Initialization ASP, ASP.NET 3.5, ASP.NET 4.5, CGI
- **ISAPI Extensions:** ISAPI Filters, Server Side Includes WebSocket Protocol

- **NET Framework 3.5:**

- NET Framework 3.5 (Includes .NET 2.0 and 3.0), HTTP Activation

NET Framework 4.5 (for Server 2016), 4.6 (for Server 2016), 4.7 (for Server 2019) :

- HTTP Activation, Message Queuing (MSMQ) Activation, Named Pipe Activation, TCP Activation, TCP Port Sharing

- **NET Framework 4.8:**

- After installing 4.5 download and installing .NET framework 4.8 from the Microsoft website

Newer version of NET Framework .Net Core is installed by TEOS installer on full installation or update

1.4. SQL Database (Microsoft SQL Server)

Manage for TEOS needs a Microsoft SQL server to work properly. You can use the 2019 Express version or above.

Software versions tested	Microsoft SQL Server 2017 Express and above Microsoft SQL Server 2016 and above
SQL Configuration	Enable the SA (SQL authentication, sysadmin permissions*) account and set a password (needed during TEOS installaton). Port 1433 (IPAll), "Shared Memory", "Named Pipes" and "TCP/IP" needs to be enabled
SQL language	All language are compatible, only be sure that collation SQL server configuration is SQL_Latin1_General_CP1_CI_AS
SQL Architecture	SQL Server can be local or remote from TEOS Server
SQL Troubleshooting	We recommend to install SQL Management Studio

***SA account is mandatory for the installation/updates to create the databases and users. Account is not anymore mandatory during the usage of TEOS.**

1.1. Domain Name option (DNS Records)

The Domain Name of the server (website) is configurable during the installation of the TEOS application.

For Manage for TEOS to work properly there needs to be multiple DNS records pointing to the Manage for TEOS server IP address, for example:

TEOS Web Service	DNS Record	DNS record example
Main website client access	yourcompany.com	teos.sony.com

teos.sony.com can be replaced by your own domain name.

If you are using ssl certificate, please consider directly the full TEOS name to generate the certificate

1.5. Network specification

The server software will run on IIS on the web ports 80 or 443. Port 80 will use the http protocol and is not secured. If you want to use a secured connection than you should use port 443.

1.5.1. Manage for TEOS & TEOS devices

Device	Incoming port from server	Outgoing port to server
TEOS and other servers or Employee app	80 TCP -Web server	80 TCP -Web server
	443 TCP - Web server	443 TCP - Web server
	123 UDP - NTP	123 UDP - NTP
	143, 993 POP3 ports	25, 465, 587,2525 for SMTP server
Professional BRAVIA*	Type 8 and 0 ICMP - ICMP (PING)	80 TCP -Web server
	20332 TCP - BRAVIA meeting API	443 TCP - Web server
	20060 TCP - BRAVIA meeting API	123 UDP - NTP
	20335 TCP - BRAVIA Firmware API	5555 TCP - Maintenance
	443 TCP - BRAVIA meeting API	
	80 TCP - Sony display IP Control	
	6541 TCP - Signage application	
	9020 TCP - Connect for TEOS licensing	
	8889 UDP - Multicast 224.0.0.3 videowall	
	5555 TCP - Maintenance	
TEOS Tablets / Players	Type 8 and 0 ICMP - ICMP (PING)	80 TCP -Web server
	6541 TCP - Signage application	443 TCP - Web server
	5544 & 5545 TCP - Control for TEOS API	123 UDP - NTP
	5555 TCP - Maintenance	5555 TCP - Maintenance
	8889 UDP - Multicast 224.0.0.3 videowall	

* IP Control for devices run on port 80 and can be protected with a password.

*** When Adding a BRAVIA to TEOS an ADB allowance need to be done with the TV remote or using virtual remote and IP control (enter > right arrow > enter). For the player this procedure can only be done with the remote. No need to do this action for the tablet.**

1.5.2 Connect for TEOS & Client devices (Windows, MAC, Android, iOS)

Device	Incoming port from user PC
Professional BRAVIA TEOS Players	8888 UDP - App multicast discovery
	9001 TCP - Connect for TEOS Video
	9002 TCP - Connect for TEOS Audio
	9017 TCP – touch feedback to client
	9018 TCP – touch feedback to client
	9019 TCP - PIN/Code verification
	9020 - Integrated web server

1.5.2 Manage for TEOS & Projectors

Devices	Incoming port from server	Outgoing port to server
	53595 TCP - ADCP	443 TCP - Web server 80 TCP -Web server
	Type 8 and 0 ICMP - ICMP	123 UDP – NTP
NEC, Panasonic, Epson, Optoma, BenQ, Other PJlink compatible	4352 TCP - PJlink	80 TCP -Web server
	Type 8 and 0 ICMP - ICMP	443 TCP - Web server 123 P – NTP

1.5.3 Manage for TEOS & third-party monitors

Device	Incoming port from server	Outgoing port to server
Samsung (SSSP2 to SSSP6)	Type 8 and 0 ICMP	80 TCP -Web server
	1515 TCP - for control/status	443 TCP - Web server
		123 UDP – NTP
LG (SNMP)	Type 8 and 0 ICMP - ICMP	80 TCP -Web server
	161 UDP - IP Control using SNMP for control/status	443 TCP - Web server
	162 UDP - IP Control using SNMP for control/status	123 UDP – NTP
	10161 TCP - IP Control using SNMP (Secure) for control/status	
	10162 TCP - IP Control using SNMP (Secure) for control/status	
Philips (IP control)	5000 TCP - for control/status	80 TCP -Web server
		443 TCP - Web server
		123 P – NTP

1.5.4 Manage for TEOS & third-party devices

Devices	Incoming port from server	Outgoing port to server
BARCO Clickshare	4000 TCP – IP Control (ON/OFF, reboot)	80 TCP -Web server
	4001 TCP – IP Control (ON/OFF, reboot)	443 TCP - Web server
		123 UDP – NTP
Vision Exchange & Windows devices	80 TCP – Web request (shutdown)	80 TCP -Web server
	Wake on Lan (Power ON)	443 TCP - Web server
		123 UDP – NTP
Cisco Visioconference system	80 TCP – Web request	80 TCP -Web server

*port can be disabled in case of SSL only

**Outgoing ports are used to connect to the devices

1.5.5 Manage for TEOS & Web Server

Devices	Incoming port to server	Outgoing port to server
Web Interface User	TCP-15675	80 TCP -Web server
	TCP-15676	443 TCP - Web server
	80 TCP -Web server	
	443 TCP - Web server	
Device access to Content	TCP-15675	80 TCP -Web server
	TCP-15676	443 TCP - Web server
	80 TCP -Web server	
	443 TCP - Web server	

For more details, please consult the technical flowcharts

2. Guide to install pre-requisites

This section will detail all the procedures to install Manage for TEOS on a Windows server and make sure that all the features are working.

2.1. Installation of Windows Server roles and features

Below we will explain how to install all the roles and features needed for Manage for TEOS to work.

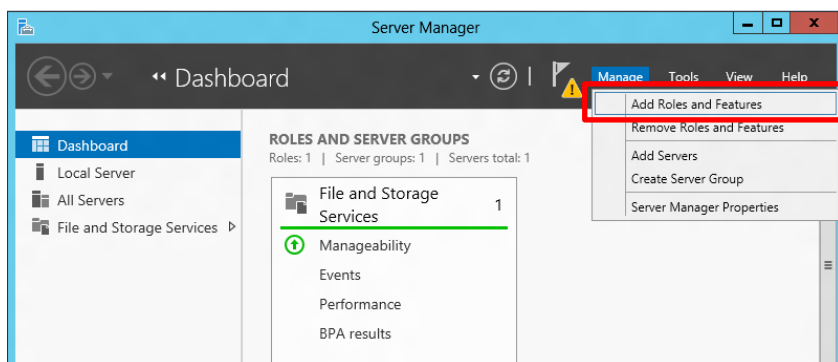
2.1.1. Installing IIS 8 on a Windows Server 2019 and above

Before Installing IIS, make sure that:

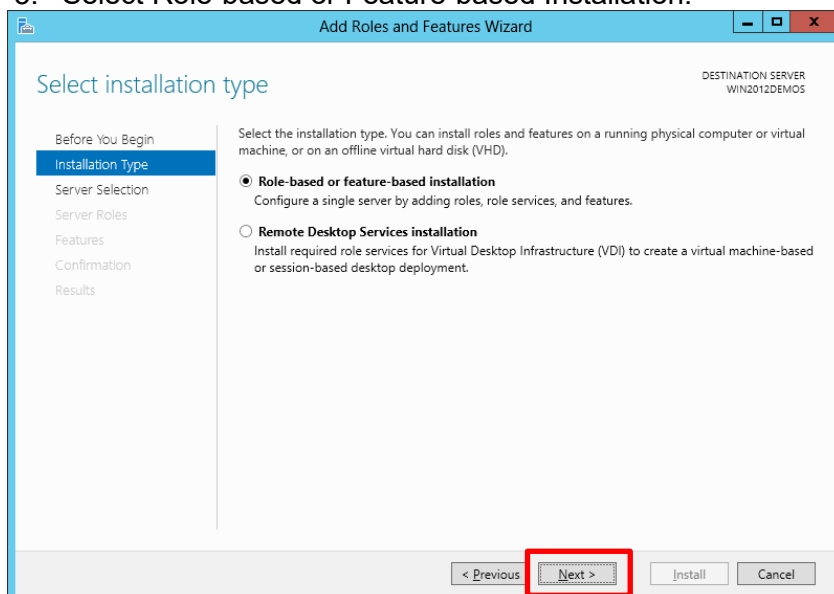
- Windows Server 2019 has been installed.
- Windows Server is up to date
- You have access to internet for the server being able to download the sources for the roles
- If server doesn't have access to internet, make sure you have the Windows Server image where the sources to install the roles can be found

To install IIS 8, use the following steps:

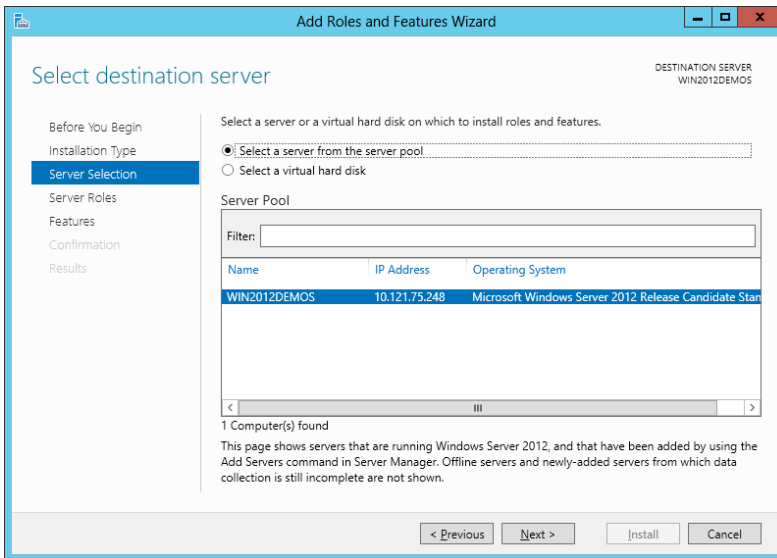
1. Open Server Manager.
2. Under Manage menu, select Add Roles and Features:



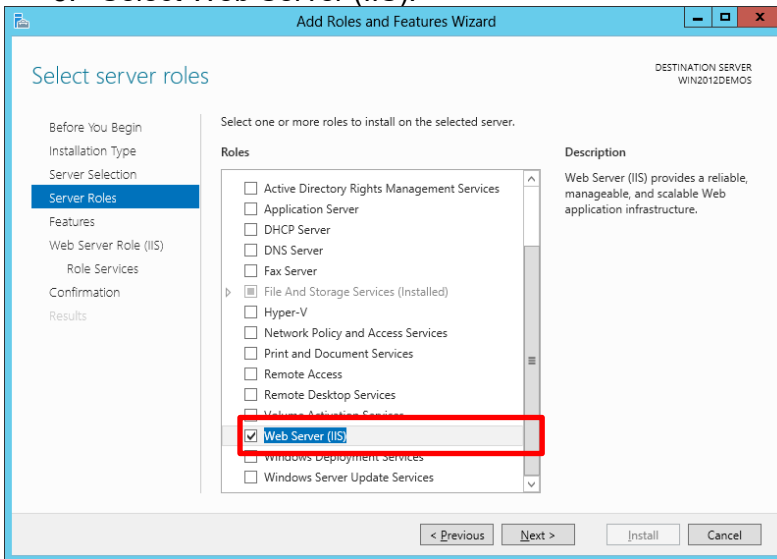
3. Select Role-based or Feature-based Installation:



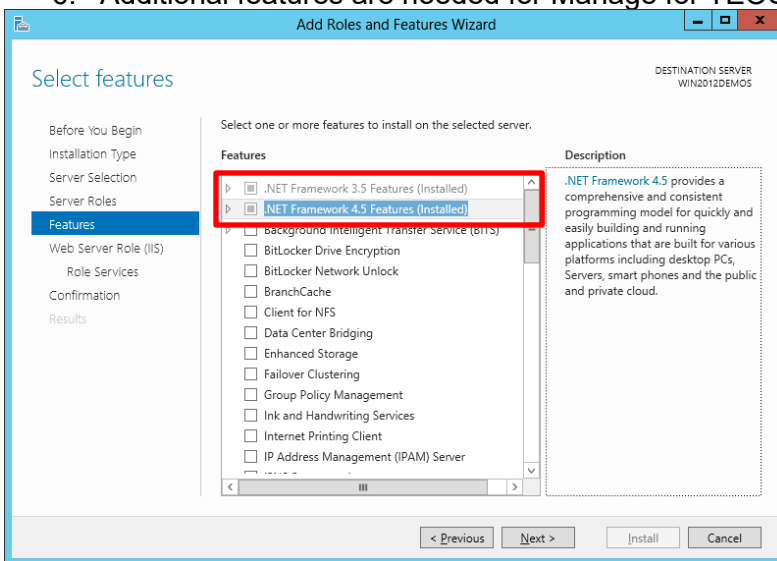
4. Select the appropriate server (local is selected by default), as shown below:



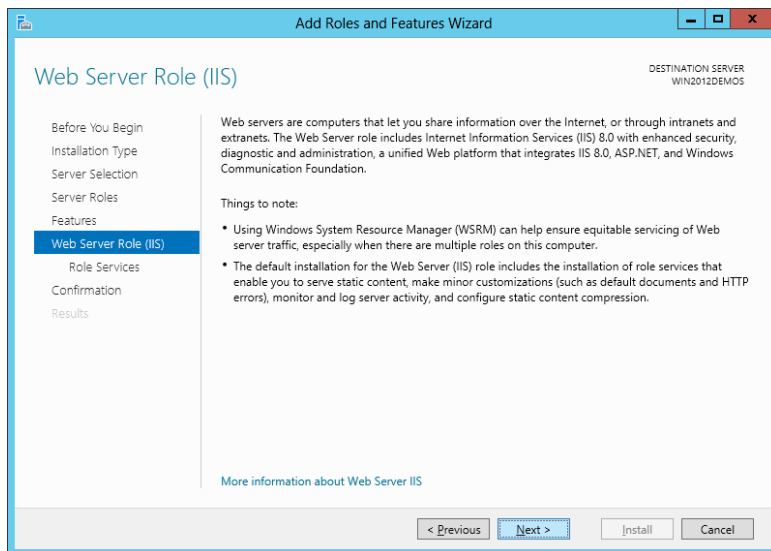
5. Select Web Server (IIS):



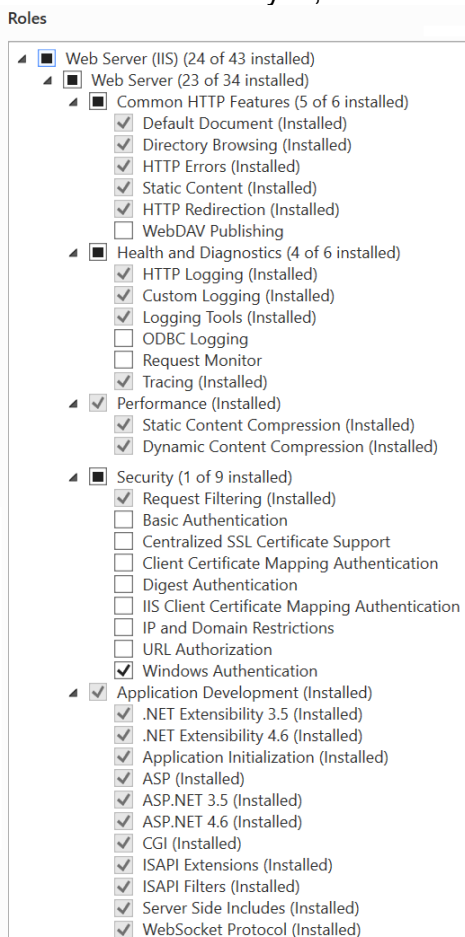
6. Additional features are needed for Manage for TEOS please select them, and click Next.



7. Click Next:



8. Customize your installation of IIS, or accept the default settings that have already been selected for you, and then click **Next**:



The roles that need to be installed on the TEOS server are:

Webserver: Common HTTP Features, Default Document, Directory Browsing, HTTP Errors, Static Content, HTTP Redirection

Health and Diagnostics: HTTP Logging, Custom Logging, Logging Tools, Tracing

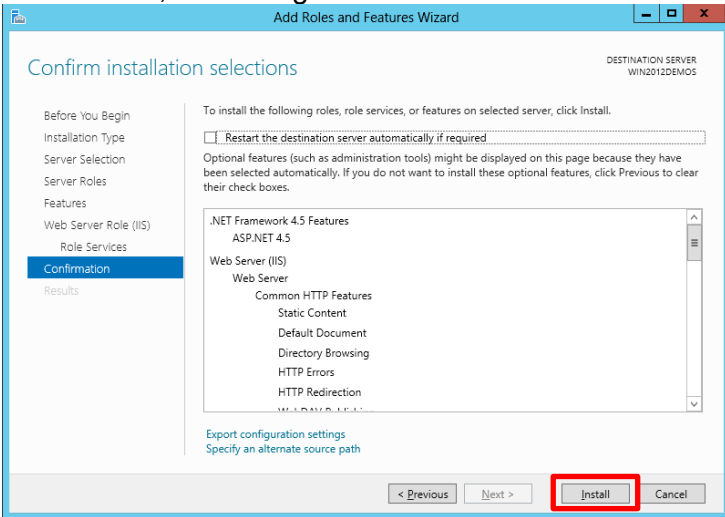
Performance: Static Content Compression, Dynamic Content Compression

Security: Request Filtering, Windows Authentication

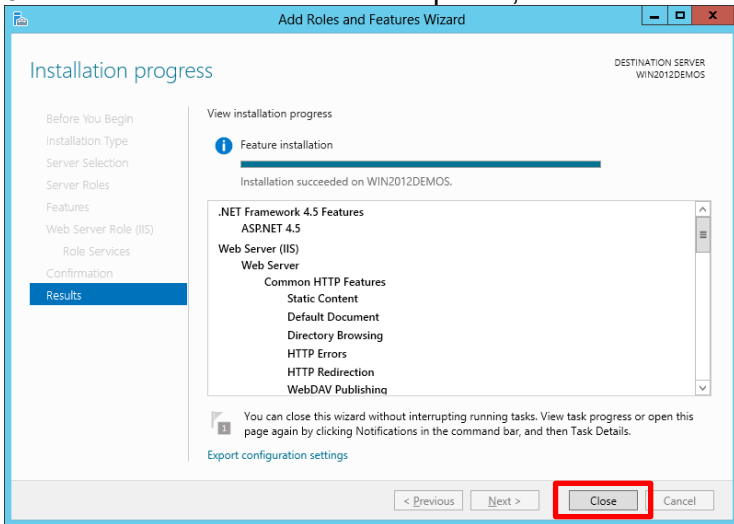
Application Development: .NET Extensibility 3.5, .NET Extensibility 4.5 Application Initialization ASP, ASP.NET 3.5, ASP.NET 4.5, CGI

ISAPI Extensions: ISAPI Filters, Server Side Includes WebSocket Protocol

Click **Install**, Restarting the server is not needed for this operation.

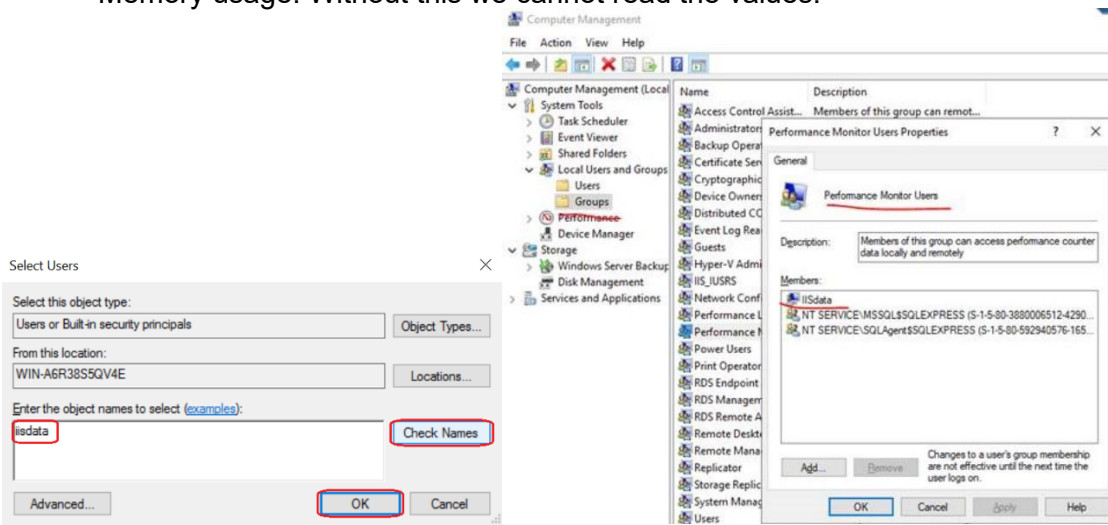


9. When the IIS installation completes, the wizard reflects the installation status:



10. Click **Close** to exit the wizard.

11. For the server alerts (CPU and Memory alert email) the user the application pool in IIS is running as needs some additional permissions. In most cases this user is IISdata. This user needs to be **added** as a member of the **Windows group called: "Performance Monitor Users."** When the user is added in this group, it has enough permissions to read CPU and Memory usage. Without this we cannot read the values.



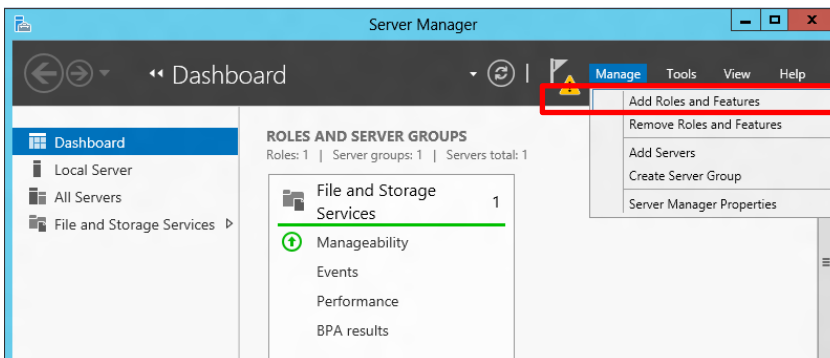
2.1.2. Installing .NET Framework

Before Installing IIS, make sure that:

- Windows Server 2016 has been installed.
- Windows Server is up to date
- You have access to internet for the server being able to download the sources for the roles
- If server doesn't have access to internet, make sure you have the Windows Server image where the sources to install the roles can be found

To install IIS 8, use the following steps:

1. In Server Manager, click **Manage** and then select **Add Roles and Features** to start the Add Roles and Features Wizard.



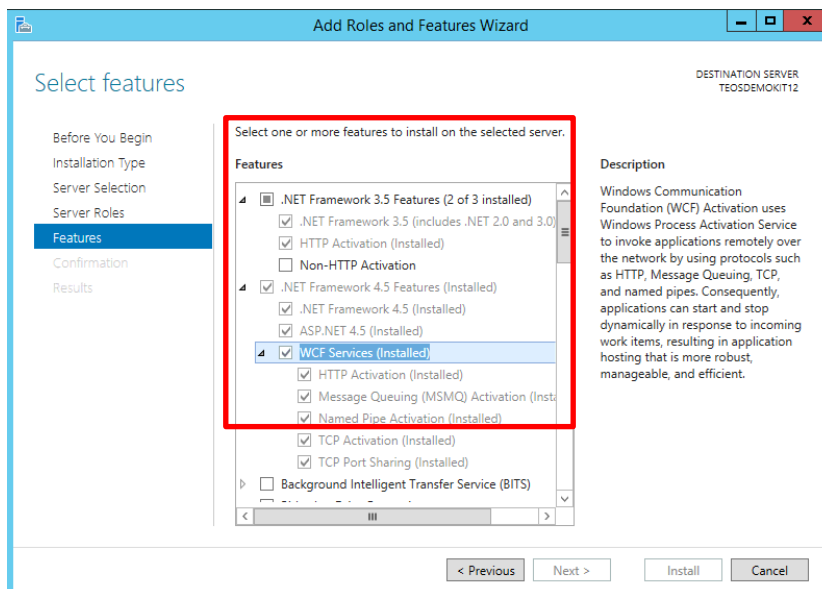
2. On the select installation type screen, select role-based or feature-based installation. Select the target server.
3. On the select features screen, check the box next to .Net Framework 3.5 and 4.5 Features

NET Framework 3.5:

NET Framework 3.5 (Includes .NET 2.0 and 3.0), **HTTP Activation**

NET Framework 4.5 (for Server 2019), or 4.6 (for Server 2019) or 4.7 (for Server 2019):

HTTP Activation, Message Queuing (MSMQ) Activation, Named Pipe Activation, TCP Activation, TCP Port Sharing



4. On the **confirm installation selections** screen, a warning will be displayed asking '**Do you need to specify an alternate source path?**' If the target computer does not have access to Windows Update, click the **specify an alternate source path** link to specify the path to the **\\sources\sxs** folder on the installation media and then click **OK**. After you have specified the alternate source, or if the target computer has access to Windows Update, click the **X** next to the warning, and then click **install**.

If you are using Server Manager in Windows Server 2016 to add a role or feature to a remote server, the remote server's computer account (DOMAIN\ComputerName\$) requires access to the alternate

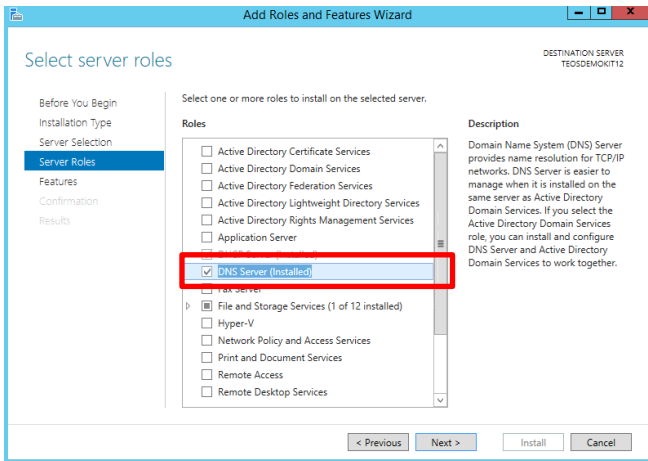
source file path because the deployment operation runs in the SYSTEM context on the target server.

After installing 4.5, download and install .NET framework 4.8 from the Microsoft website.

Creating DNS records

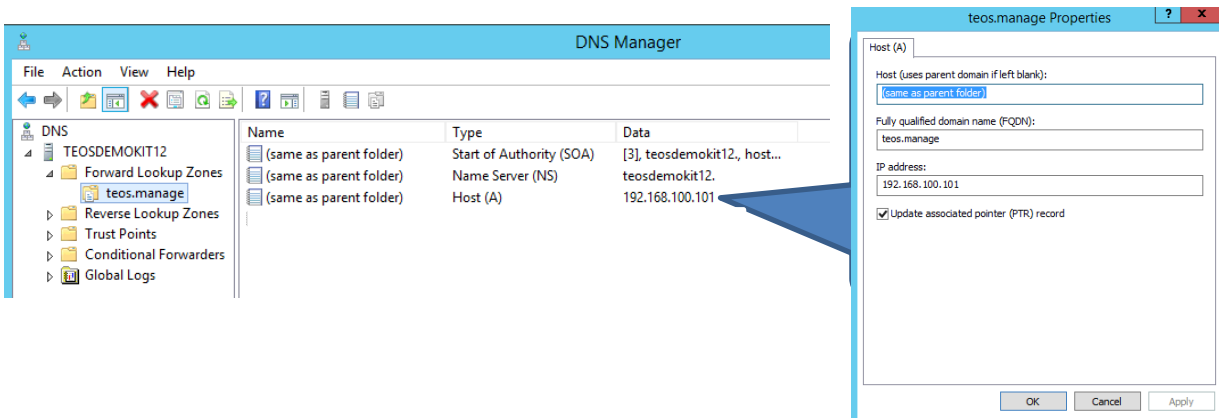
Taking an example of a standalone installation where the TEOS server also has a DNS server, this section will show how to install the DNS Server and how to create the DNS records.

In Server Manager, click **Manage** and then select **Add Roles and Features** to start the Add Roles and Features Wizard. Add DNS Server Role



Go to Server Manager>tools and select DNS. Create a new zone in the forward lookup Zones for TEOS with the domain name you will define later for TEOS (the domain in the example below is "teos.manage")

In this host, the fastest way is to create 2 hosts, one with the parent's name and another one with "*" and routing all the requested services to the TEOS server IP address.



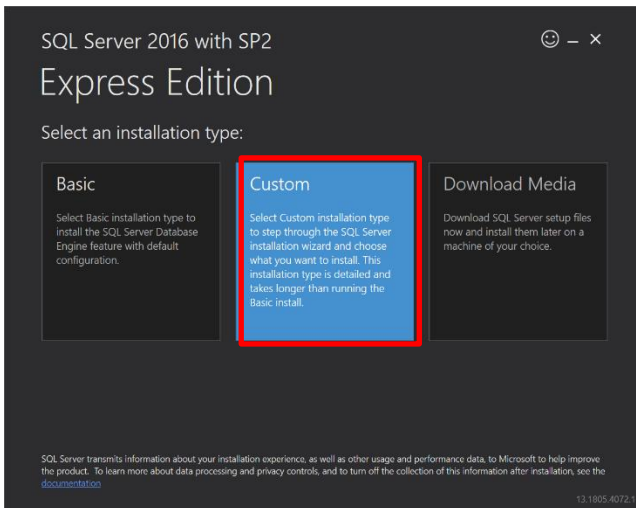
2.2. Installation of Microsoft SQL Express (standalone usage)

This section will explain how to install Microsoft SQL Express into Manage for TEOS when the SQL centralized server is not available for TEOS to synchronize with it.

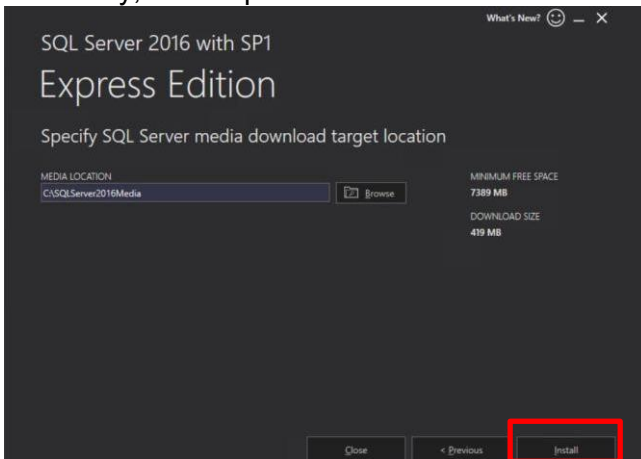
2.2.1. Installation of Microsoft SQL Express 2022

For this guide we used a SQL Server 2017 express. The installer for this version can be found at: <https://www.microsoft.com/fr-FR/Download/confirmation.aspx?id=101064>

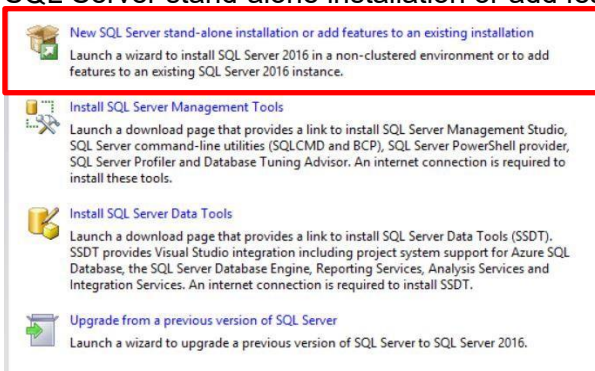
Once the SQL Server installer is downloaded and started you are presented with the following screen. Select the option Custom.



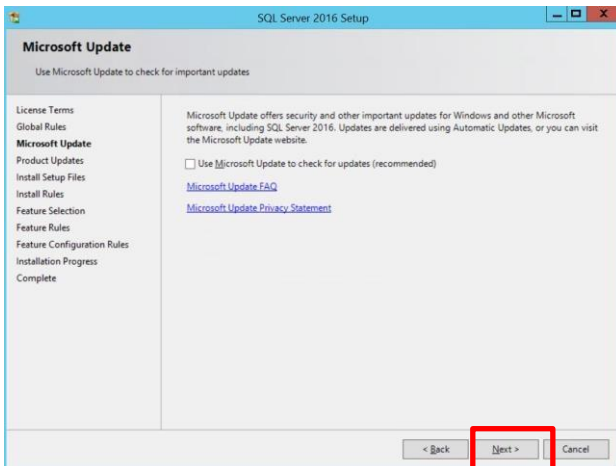
At the next screen choose a location where you want to place the installer files. The default option is usefully, fine so press Next.



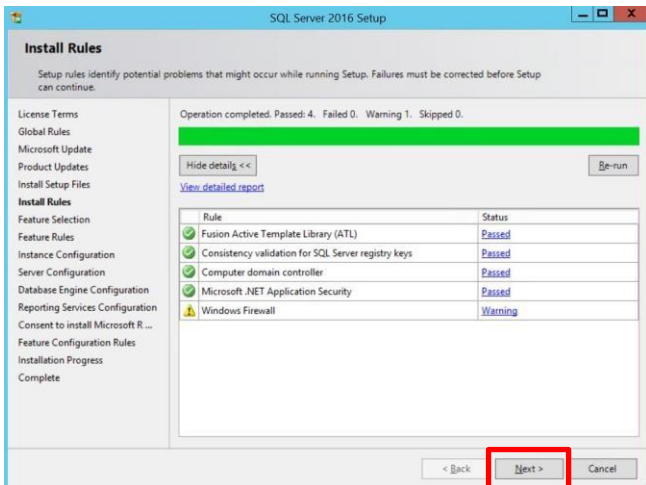
After the files are downloaded the wizard will open the following screen. Select the first option: “New SQL Server stand-alone installation or add features to an existing installation”



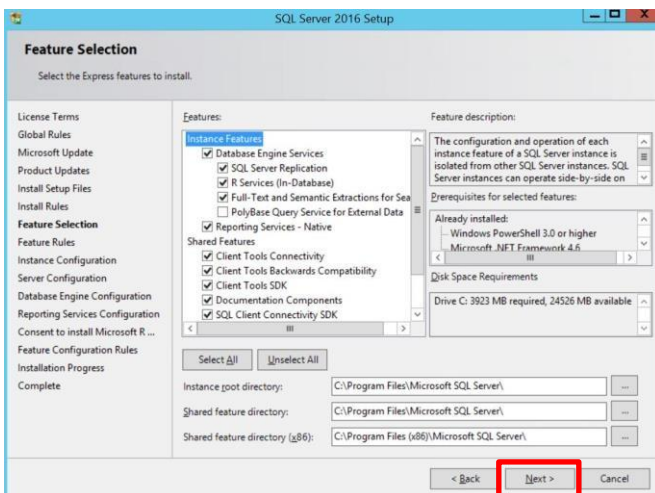
At the following screen select next



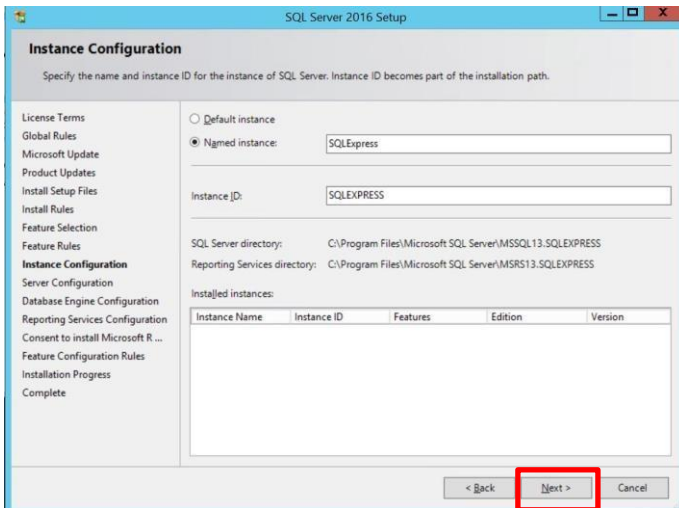
If all the checks pass (they should) then press next.



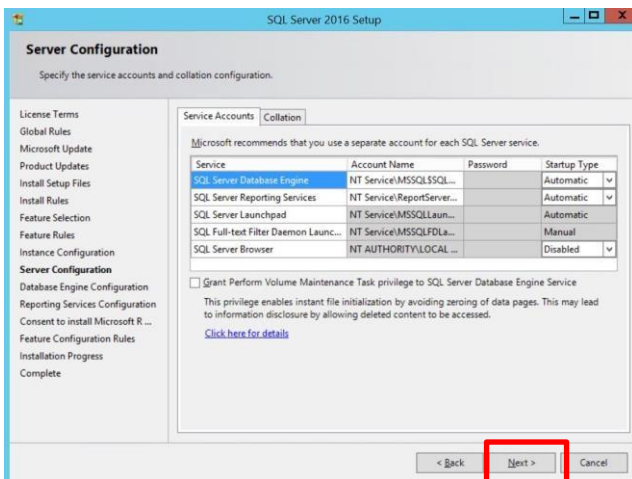
You can change which items to install and where to install them to in this screen. The default should be fine so press Next.



You can specify an instance name in the following screen, default should also be fine here so press Next.

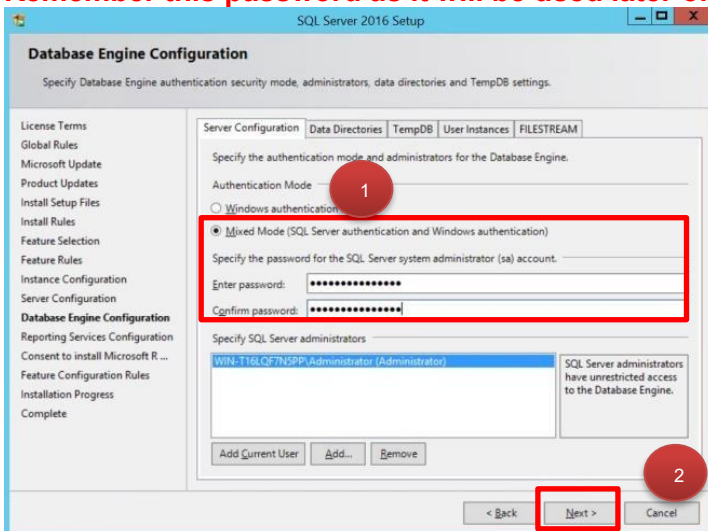


In the next screen select Next again

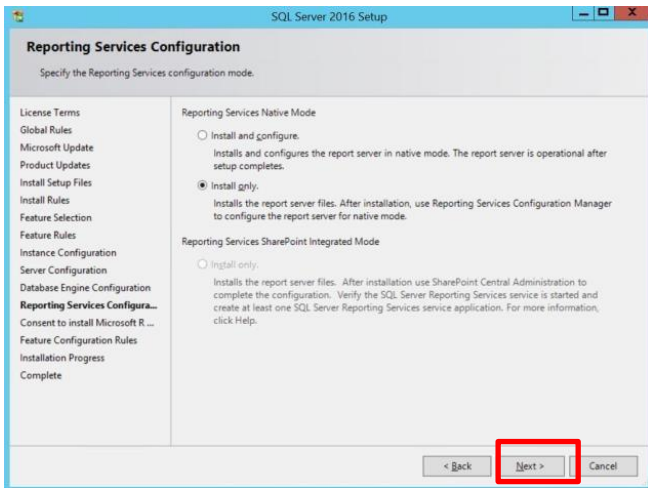


In the next screen you can configure the authentication options. In here **select Mixed mode** (so change it from the default windows authentication mode). Afterwards specify a password for the SA user.

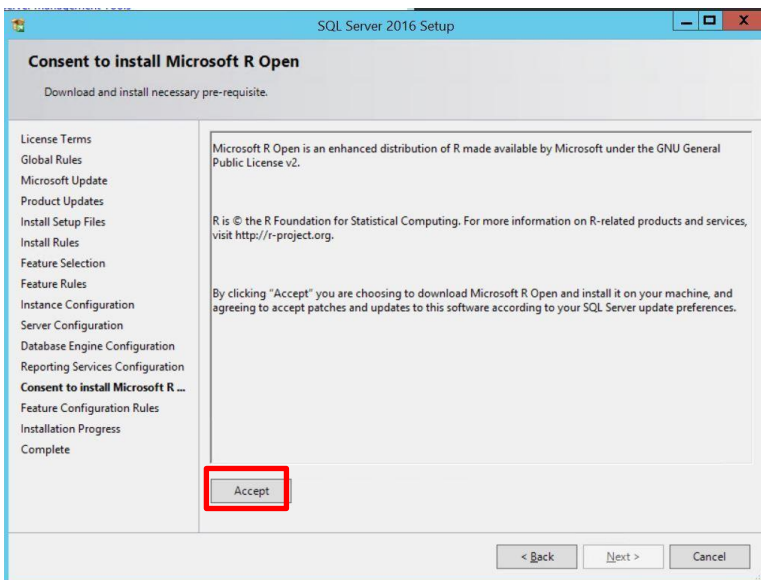
Remember this password as it will be used later on.



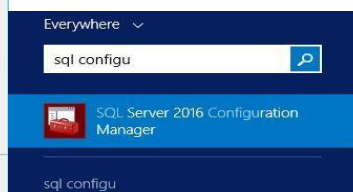
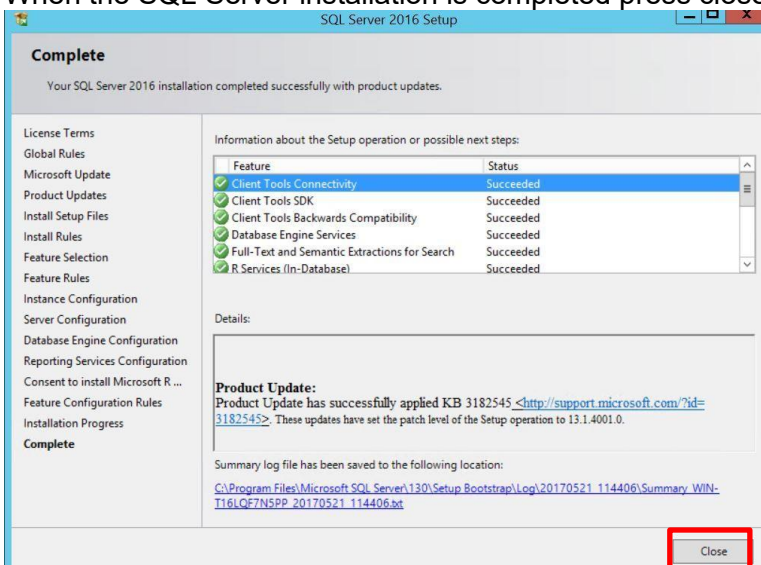
In the Next screen select "install only" and press next



Accept the terms and press Next. The installation will now start. You need to have internet access when accepting the installation of the source otherwise you will have to download independently the Windows source .cab

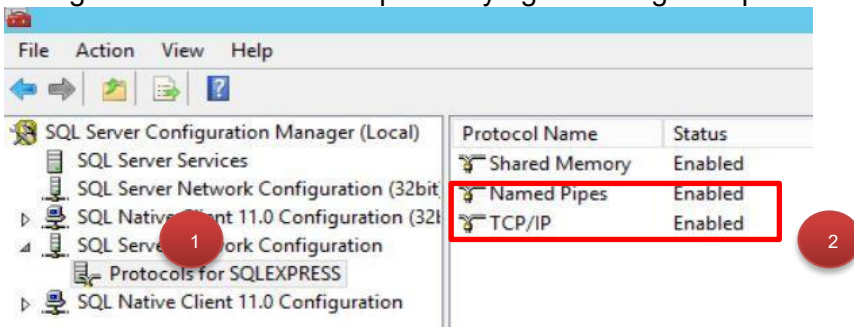


When the SQL Server Files installation is completed press close.

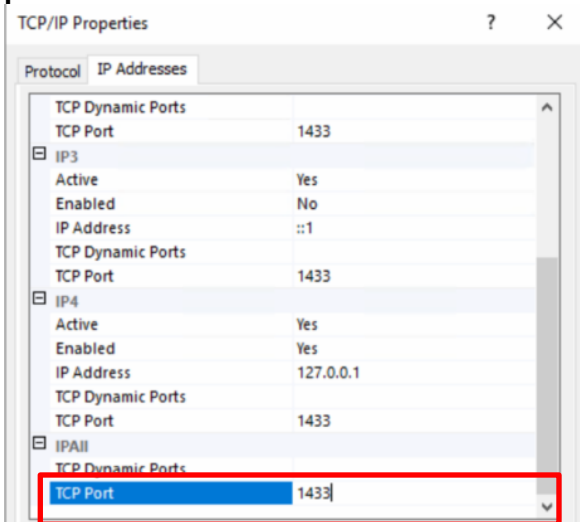


After the installation we must enable a couple of options within the SQL Server Settings. To do these settings open the SQL Server 2016 Configuration Manager.

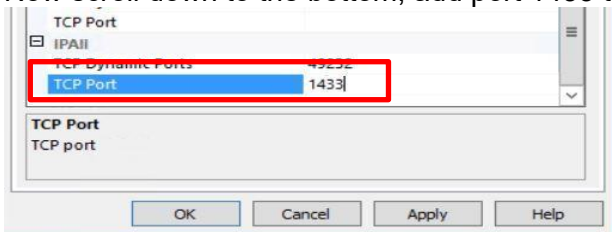
On the left side select: **SQL Server Network Configuration -> Protocols For SQLEXPRESS**. On the right side enable all the options by right-clicking the options and select enable.



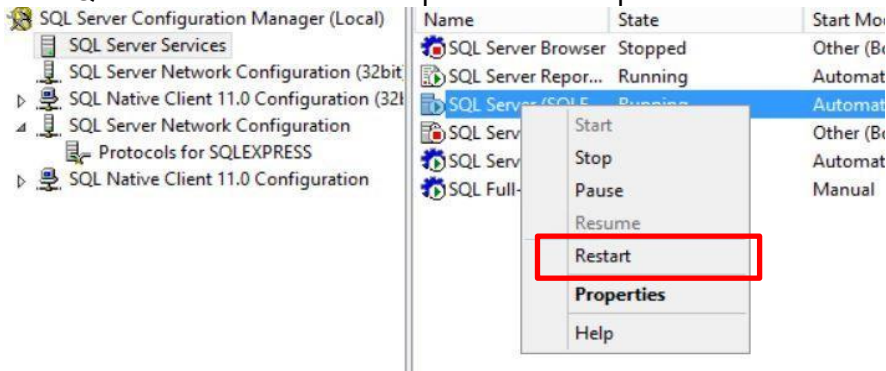
Afterwards **right-click on TCP/IP** and select properties. Select the IP Addresses tab and set Enabled to yes for the required IP addresses. Under IP All Clear the TCP Dynamic Ports field and **add the port 1433**.



Now scroll down to the bottom, add port 1433 to the TCP Port field and click apply -> OK.



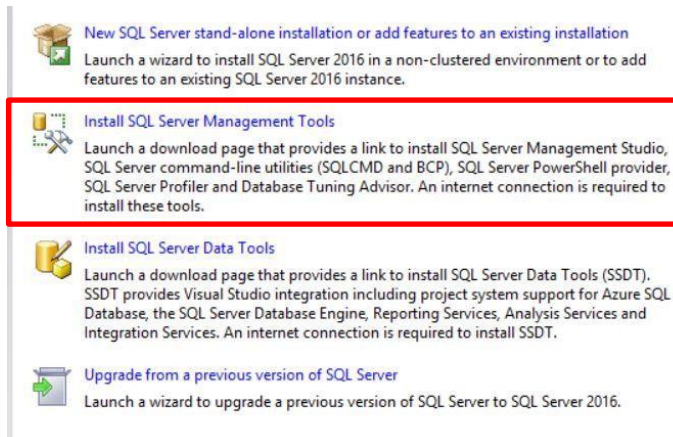
As the message prompt indicated you now need to restart the SQL Server. To do this select SQL Server Services in the left menu, right-click on SQL Server(SQLEXPRESS) and select restart. After the SQL Server is restarted this part of the setup is finished.



2.2.2. Installation of Microsoft SQL Management Tool

We recommend Installing Microsoft SQL Management Tool, for this go back to Microsoft SQL

Express Installation page and select "Install SQL Server Management Tools".



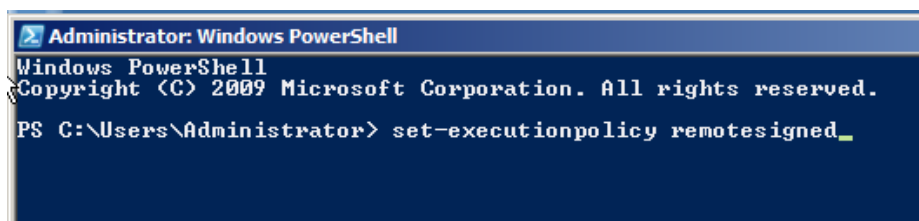
You can go directly to Microsoft website:

<https://docs.microsoft.com/en-us/sql/ssms/sql-server-management-studio-ssms?view=sql-server-2017>



2.3 Allow remote signed PowerShell

The Manage for TEOS installer executes a couple of PowerShell scripts. This needs to be allowed on the server. To allow this open PowerShell and execute the command: "Set-executionpolicy remotesigned" and allow the prompt.



After the installation has completed you can disable the execution of PowerShell again by executing the following command: "set-executionpolicy restricted".

3. Installing Manage for TEOS

Before installing Manage for TEOS server please make sure that your environment complies to the pre-requisites. For help on installing the pre-requisites please refer to page 3 of this installation guide.

3.1.1. Download Manage for TEOS Installation File

When purchasing Manage for TEOS devices and server licences, you will receive an email where you will get a link to download the setup.

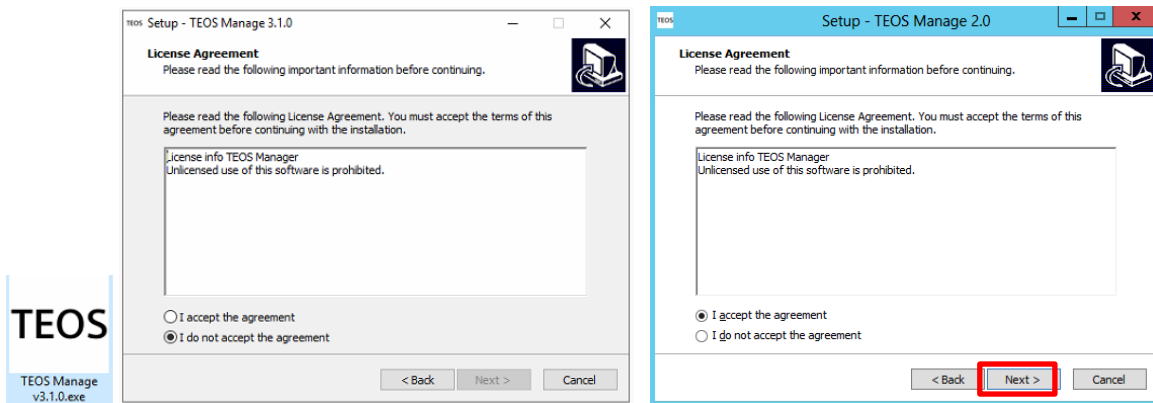
The file name is the following: **Manage for TEOS v3.0 - Full Installer.exe**

You may have to install after a patch like Manage for TEOS **Patch 3.X.X** with the same method as for the full installer.

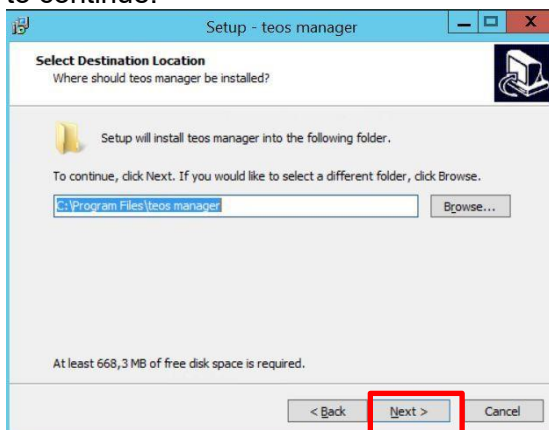
3.1.2. Installing Manage for TEOS

After you have downloaded the Manage for TEOS installation file to the server, open it to start the setup.

At the first screen read the License Agreement, accept, and press Next.



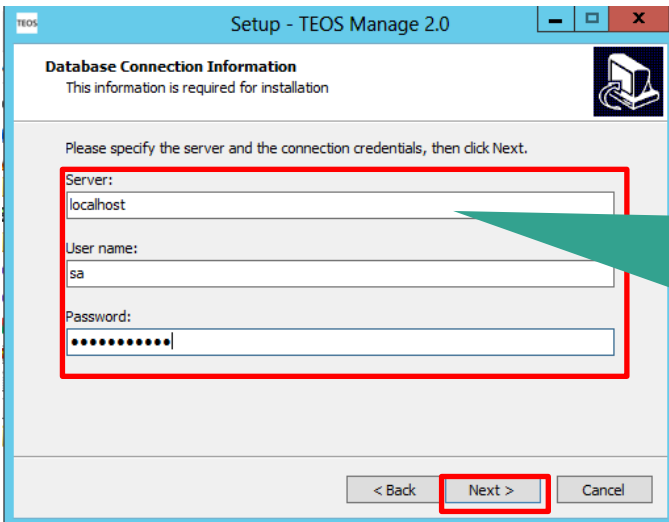
Select a location where you want to install the application. The default option installs Manage for TEOS in C:\Program Files\Manage for TEOS. In this screen you can verify the location, press Next to continue.



In the following screen you must specify the database connection settings.

You can localhost as the server address, "sa" as the username and specify the password that you used in the SQL Server installation.

When all the fields are filled in correctly press Next. The setup will now also extract a couple of temporary files, so this might take a while. Be patient as the setup might seem unresponsive.

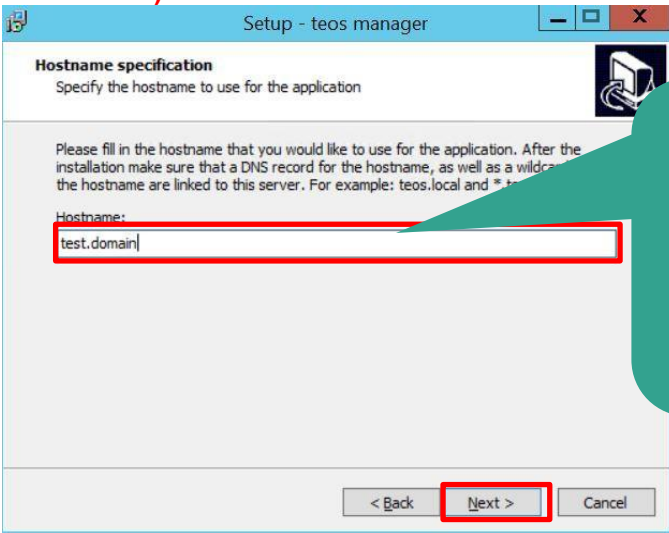


Remote SQL connection can be done here (change Server address including a special port) Make sure that TEOS setup will have sysadmin right to be able to create and update tables.

When the setup continues you are met with the following screen. You must specify the URL under which the Manage for TEOS has to be online.

For this setup the example is URL: "test.domain". After filling in the URL press Next.

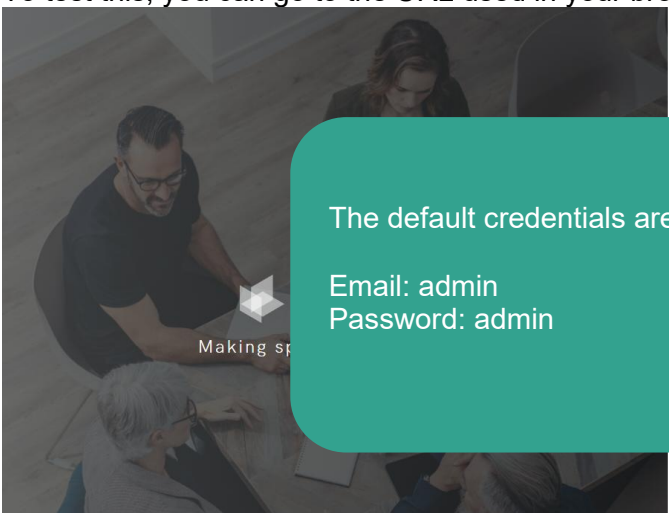
Please take note that the domain that is filled in needs to have a DNS zone (you can check section 1.5)



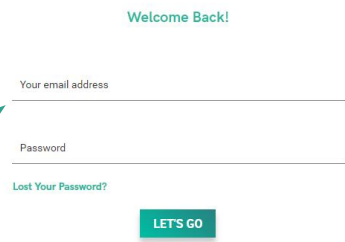
It Is Important to create a consistent Domain name, for a full usage of TEOS, domain name can be public. Recommendation is: teos.yourcompany.com or similar. No need to put "http://" behind

The rest of the installation now takes place. When it is fully completed press finish.

The application is now installed. The installation is available on the server (thanks to host file) To test this, you can go to the URL used in your browser (in the example http://test.domain)

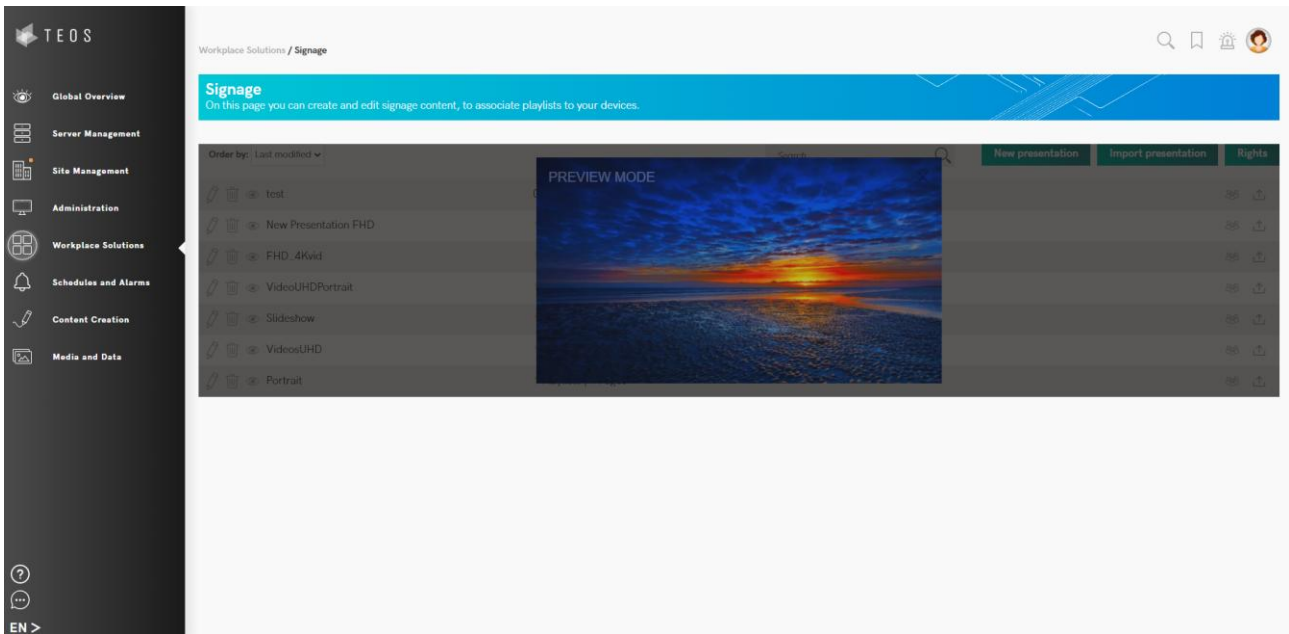


The default credentials are:
Email: admin
Password: admin

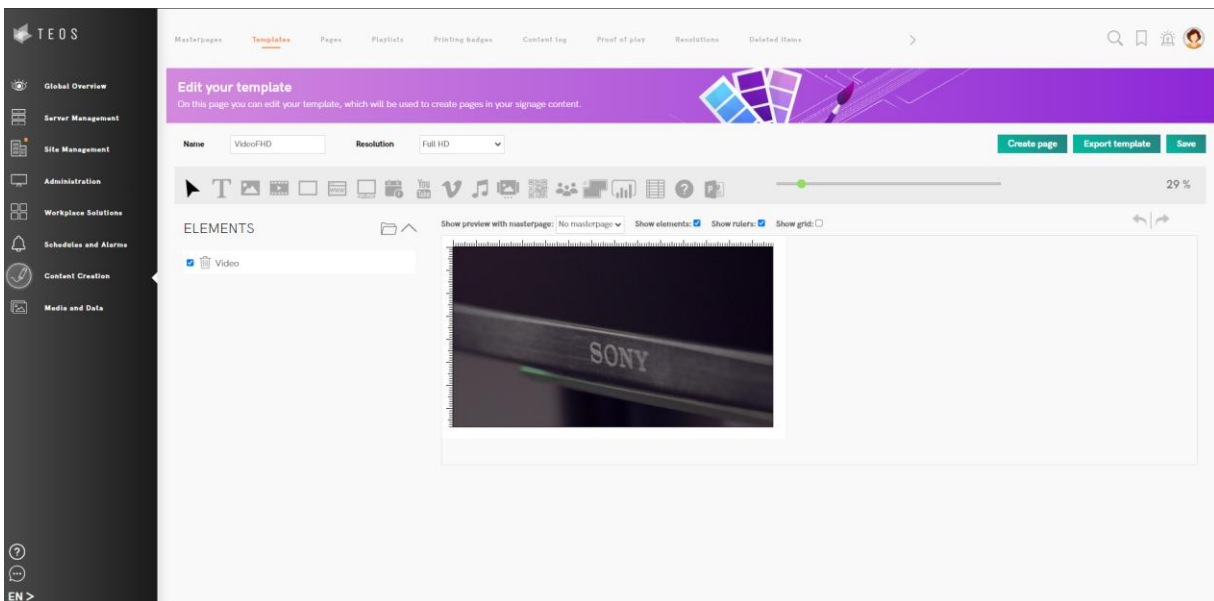


Open your TEOS website from a client PC or from TEOS Server and check the following pages:

Go to Workplace Solutions > Signage and try to open a preview of a Signage. If you can see the content, that means that the main Service is working



Go to content creation and try to edit a masterpage or template, if not possible please contact Sony support.



4. SSL Configuration (in case it is used)

This document will explain the steps required to complete the SSL configuration after installing 3.3 in case the operation could not be automated due to a specific SSL certificate.

```
#certificate has no private key so we can't automate this, customer will have to do this themselves.  
write-host "has no priv key"  
[System.Windows.MessageBox]::Show("The TEOS installation is using HTTPS, but no exportable certificate could be found. Please follow the manual to finalize the HTTPS configuration.")
```

You need to have:

- Manage for TEOS 3.3 On Premise installed
- Have access to the certificate used for TEOS 3.3, including the private key.

4.1 Preparing required certificate files.

TEOS 3.3 has an additional installation for RabbitMQ. When updating to version 3.3, this installation is automated. In case the TEOS installation is configured with HTTPS, this also requires some specific configuration to be done for RabbitMQ.

This process is automated as much as possible, but in case the certificate used is not exportable on the server, not everything can be automated.

For the configuration to be complete, we need three certificate files in PEM format:

- 1) The CA certificate
- 2) Private key of the certificate
- 3) Public key of the certificate

Depending on the issuer of the certificate, these can either be downloaded directly or will have to be converted. The conversion can be done with different tools, below is an example of generating these files based on a .pfx file with OpenSSL.

Examples generate private key file called private-teos.pem from pfx

```
Openssl.exe pkcs12 -in <example.pfx> -nocerts -nodes -password pass:"<password>" |  
Openssl.exe pkcs8 -nocrypt -out "private-teos.pem"
```

Example generate public key file called public-teos.pem from pfx

```
Openssl.exe pkcs12 -in <example.pfx> -clcerts -nokeys -password pass:" <password>" |  
Openssl.exe x509 -out "public-teos.pem"
```

Examples generate CA key file called ca.pem from pfx

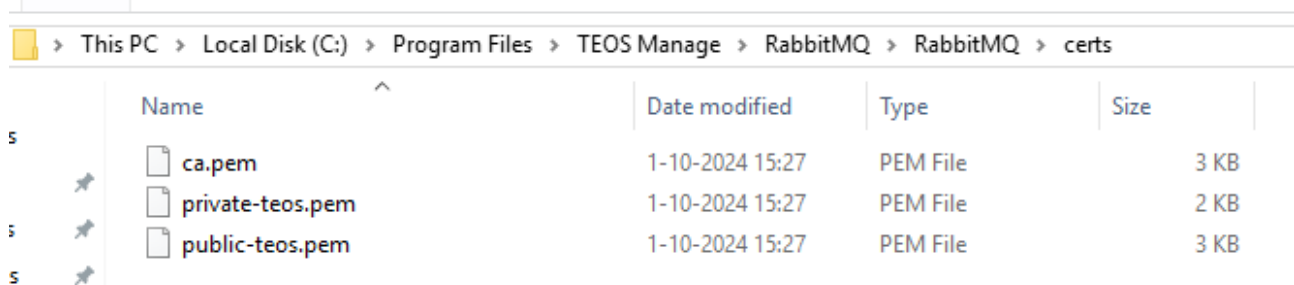
```
Openssl.exe pkcs12 -in <example.pfx> -cacerts -nokeys -password pass:" <password>" |  
Openssl.exe x509 -out "ca.pem"
```

4.2 Installing the certificate and configuration

Placing the certificates

Once the three certificate files are available, we need to place these on the server hosting TEOS. This can be done, for example in:

C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs where this would then look like this:



Name	Date modified	Type	Size
ca.pem	1-10-2024 15:27	PEM File	3 KB
private-teos.pem	1-10-2024 15:27	PEM File	2 KB
public-teos.pem	1-10-2024 15:27	PEM File	3 KB

File configuration Replacement

Next, we need to change a few configuration settings. We assume TEOS is installed in “C:\Program Files\TEOS Manage”, but in case a different directory is used, use that directory.

In the file:

Appsettings

In the file “C:\Program Files\TEOS Manage\www\tdm5\appsettings.json” change the following:

- Change every occurrence of “http://” to “https://”
- Change the port number “15675” to “15676”
- Change the port number “15672” to “15671”
- Change “Secure“: false” to “Secure“: true”

web.config

In the file “C:\Program Files\TEOS Manage\www\backbone\web.config ” change the following:

- Search for “baseUrl” and change the “http” to “https.”
- Search for “playerBaseUrl” and change the “http” to “https.”

RabbitMQ Configuration

When the certificates are in place, and the configuration files have been updated, the final step is to add some additional configuration to RabbitMQ.

RabbitMQ uses the directory of the admin account used to install the Update. This is for example: C:\Users\Administrator\AppData\Roaming\RabbitMQ. This folder will look like this:

Create a new file in this folder called: “rabbitmq.conf”.

Put the following content in this file. Replace the path to the .pem files to the path where you placed your pem certificates if needed.

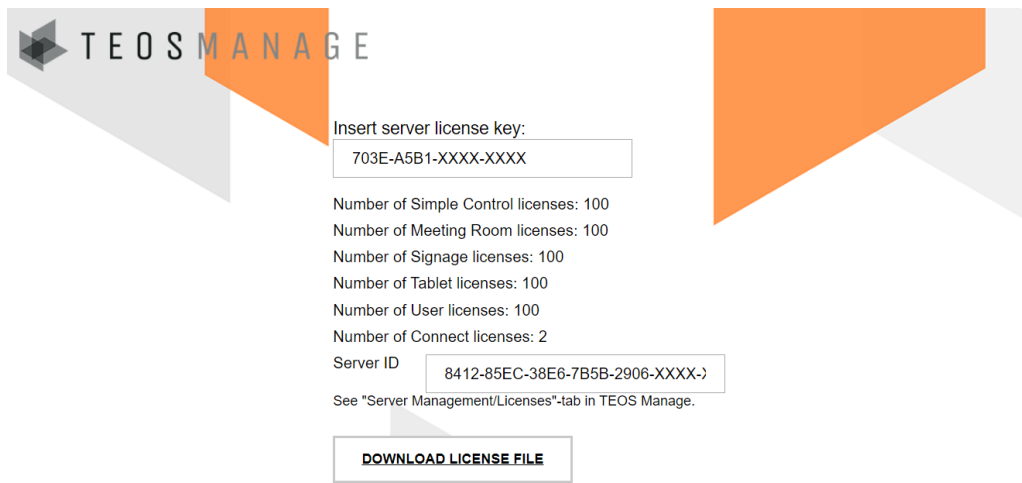
```
listeners.ssl.default = 5671
ssl_options.cacertfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\ca.pem
ssl_options.certfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\public-teos.pem
ssl_options.keyfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\private-teos.pem
```

```
management.ssl.port = 15671
management.tcp.port = 15672
management.ssl.cacertfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\ca.pem
management.ssl.certfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\public-teos.pem
management.ssl.keyfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\private-teos.pem
```

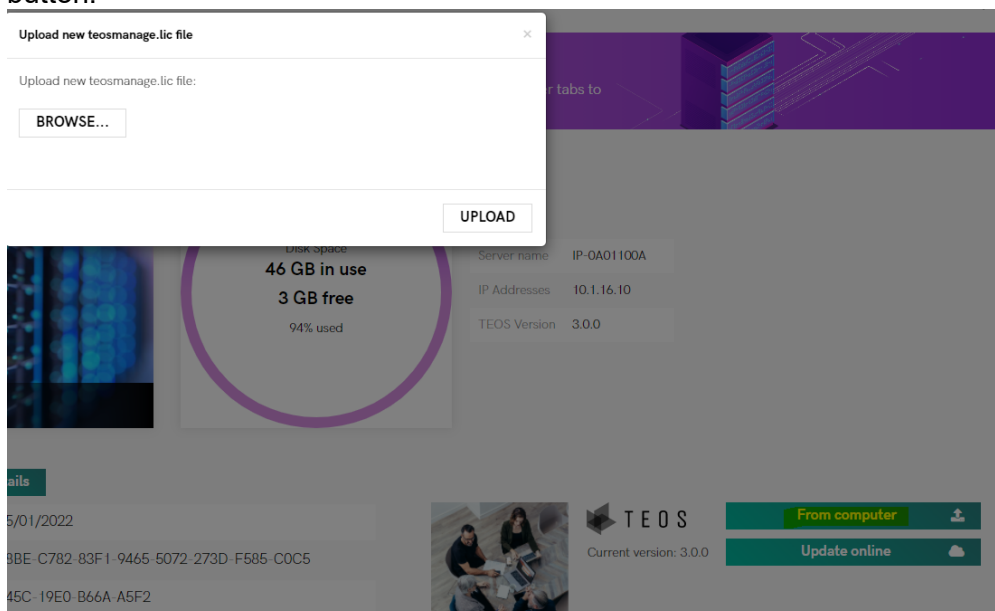
```
web_mqtt.tcp.port = 15675
web_mqtt.ssl.port = 15676
web_mqtt.ssl.backlog = 1024
web_mqtt.ssl.cacertfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\ca.pem
web_mqtt.ssl.certfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\public-teos.pem
web_mqtt.ssl.keyfile = C:\Program Files\TEOS Manage\RabbitMQ\RabbitMQ\certs\private-teos.pem
```

After this file is created and saved, the final step is to restart the RabbitMQ Service. To do this, open the services (services.msc in run), find the service called RabbitMQ and select restart.

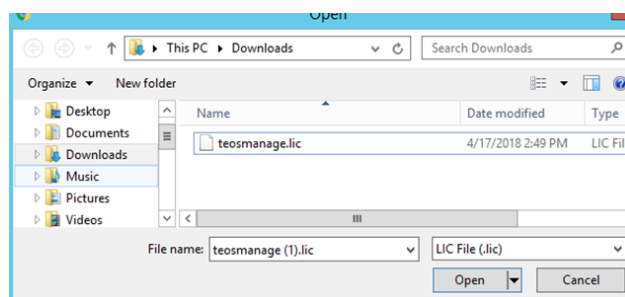
The Configuration for SSL is now completed.



- Your license file has now been downloaded. Please go back to the Server Management section in your Manage for TEOS platform. Click the "Chose File" button.



- Next, select your TEOS license file downloaded in step 6, and press "Open"



- Next press

the "Upload" button
 10. If the Manage for

TEOS server does not have an Internet connection, please follow the same steps from step 1 to download an updated license file.

You have now successfully installed your Manage for TEOS licenses.

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<https://teos.solutions>

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