



TEOS  
MANAGE



# Technical specifications and requirements

TEOS Manage Version 2.0

## Description

TEOS Manage is an advanced workplace and campus management solution. This document outlines the minimum technical specifications required to install and run TEOS Manage software. It covers deployment on servers, virtual machines running on-premise or hosted in a data center that have network connectivity to on-premise devices.

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# 1. Server requirements

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

Devices / user connected	Processor	Memory	Disk space (for content)
1 - 49 devices / users	2 x 2.1 GHz. *	8GB RAM	40GB
50 - 99 devices / users	2 x 2.6 GHz *	12GB RAM	80GB
100 - 249 devices / users	2 x 3.0 GHz. *	16GB RAM	200GB
250 - 499 devices / users	3 x 2.6 GHz. *	24GB RAM	350GB
500 - 1000 devices / users**	4 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.

The server can **run on hardware** but also **run on a virtualization platform** like Hyper-V, VM-Ware, 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.

# 2. Client requirements

## 2.1 For TEOS Manage access

The TEOS Manage platform can be accessed by a "light access" which means that the user **doesn't need to install software** on their PC or MAC to be able to access TEOS Manage. The compatible web browsers to access the TEOS Manage interface are:

- Google Chrome, Mozilla Firefox, Microsoft Edge, Safari

**Google Chrome is the recommended web browser for TEOS**

## 2.2 For Employee App access

Employee App, a meeting management tool for employees known as TEOS Mobile, can be accessed from the same web browsers as detailed above but can be also installed on Android Smartphones (from version 5.1.1) and IOS devices (from version 11). It can be downloaded on both app stores (play store for Android and iTunes on IOS).

## 2.3 For TEOS Connect mirroring

For mirroring, TEOS Connect can be downloaded in a portable version on Windows (7 and higher) and Mac OS (10 and higher). This download is accessible from the TEOS Connect receiver or visiting the site <http://teos.work> For IT departments, an .msi is available to deploy the TEOS connect client for employees (please contact Sony to get this file).

TEOS Connect is available on Android Platforms (you can find it in the play store) and will be compatible soon with IOS.

# 3. Operating system requirements

The TEOS Manage application supports Windows server 2012 R2 and above version.

Category	Software versions
<b>Operating systems tested</b>	Microsoft Windows Server 2012 R2 Standard
	Microsoft Windows Server 2012 R2 Datacenter
	Microsoft Windows Server 2012 R2 Foundation
	Microsoft Windows Server 2016 Datacenter
	Microsoft Windows Server 2016 Standard
	Microsoft Windows Server 2019 Datacenter
	Microsoft Windows Server 2019 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) added for support purpose

## 4. Component requirements

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

The **roles that need to be installed** on 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 2012R2), 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 4.6.2 (for Server 2012R2):**
  - After installing 4.5 download and install .NET framework 4.6.2 from the Microsoft website

## 5. SQL Database (Microsoft SQL Server)

TEOS Manage needs a Microsoft SQL server to work properly. You can use the 2012 Express version or above.

Software versions tested	Microsoft SQL Server 2012 Express and above Microsoft SQL Server 2012 and above
SQL Configuration	Enable the <b>SA (SQL authentication, sysadmin permissions)</b> account and set a password ( <b>needed during TEOS installaton</b> ). 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

## 6. Domain Name Configuration (DNS Records)

The Domain Name of the server (website) is configurable during the installation of the TEOS application. For TEOS Manage to work properly there needs to be multiple DNS records pointing to the TEOS Manage server IP address, for example:

TEOS Web Service	DNS Record	DNS record example
Main website client access	yourcompany.com	teos.sony.com
HTML access	html.yourcompany.com	html.teos.sony.com
App interface	app.yourcompany.com	App.teos.sony.com
Backup service	backup.yourcompany.com	Backup.teos.sony.com
Content creation webpage	Designer.yourcompany.com	Designer.teos.sony.com
Licensing service	licenseservice.yourcompany.com	licenseservice.teos.sony.com
Device synchronization	html.yourcompany.com	html.teos.sony.com
Schedule service	Eventservice.yourcompany.com	Eventservice.teos.sony.com
Signage service	presentationservice.yourcompany.com	presentationservice.teos.sony.com
Analytics service	Statsservice.yourcompany.com	Statsservice.teos.sony.com
Content synchronization	Filesyncservice.yourcompany.com	Filesyncservice.teos.sony.com
Login service	logging.yourcompany.com	logging.teos.sony.com
External data service	dataservice.yourcompany.com	dataservice.teos.sony.com
TEOS meeting room	Meetingroom.yourcompany.com	meetingroom.teos.sony.com
Room booking with Google	googlecalendar.yourcompany.com	googlecalendar.teos.sony.com
Room booking with O365	Office365.yourcompany.com	Office365.teos.sony.com
Power management	powerservice.yourcompany.com	powerservice.teos.sony.com
Sony sales app	Sonysalesapp.yourcompany.com	sonysalesapp.teos.sony.com
Vw service	vw.yourcompany.com	vw.teos.sony.com
watcher	watcherservice.yourcompany.com	watcherservice.teos.sony.com
proof of play	proofofplay.yourcompany.com	proofofplay.teos.sony.com
Update management	Updateservice.yourcompany.com	Updateservice.teos.sony.com

\*All these DNS records need to point to the TEOS Manage Server  
teos.sony.com can be replaced by your own domain name

## 7. Network specification

The server software will run on IIS on the basic 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.

### 7.1 TEOS Manage & TEOS devices

Device	Incoming port from server	Outcoming 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) For the auto discovery functionality	80 TCP -Web server
	20332 TCP – BRAVIA meeting API	443 TCP - Web server
	443 TCP - BRAVIA meeting API	123 UDP – NTP
	80 TCP - Sony display IP Control	5555 TCP – Maintenance
	6541 TCP - Signage application	
	5555 TCP – Maintenance	
TEOS Tablets / Players	Type 8 and 0 ICMP - ICMP (PING) For the auto discovery functionality	80 TCP -Web server
	6541 TCP - Signage application	443 TCP - Web server
	5544 & 5545 TCP – TEOS Control API	123 UDP – NTP
	5555 TCP – Maintenance	5555 TCP – Maintenance

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

## 7.2 TEOS Connect & Client devices (Windows, MAC, Android)

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

## 7.3 TEOS Manage & Projectors

Devices	Incoming port from server	Outcoming port to server
SONY Projectors	4352 TCP - PJlink	80 TCP -Web server
	53595 TCP - ADCP	443 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 UDP – NTP

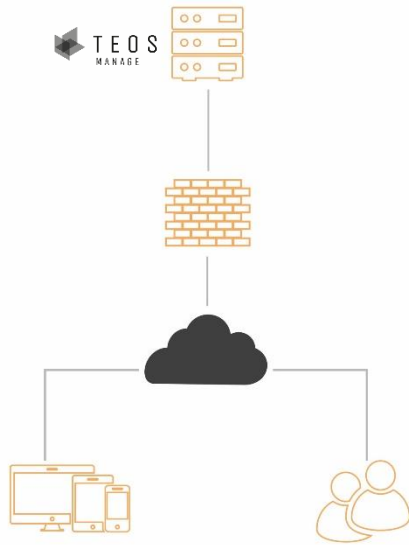
## 7.4 TEOS Manage & third party monitors

Device	Incoming port from server	Outcoming 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 UDP – NTP

## 7.5 TEOS Manage & third party devices

Devices	Incoming port from server	Outcoming 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

## 8. Software & security specification



The complete software suite is developed in Microsoft .Net and will run as server software.

The GUI of the software can be operated from out a web browser which is capable of HTML5 functionality.

TEOS Server can be connected to other systems:

- **SMTP Services (incl TLS/SSL encryption)**
- **POP3 services (incl TLS/SSL encryption)**
- **Microsoft Active Directory (AD)**
- **Office365**
- **Microsoft Exchange 2010 R2 (minimum)**
- **Google Calendar**
- **Web services (RSS,XML, etc)**

Please contact us for any custom integration requests

The server software can be secured with a SSL certificate and can be firewalled

\*port can be disabled in case of SSL only

\*\*Outgoing ports are used to connect to the devices

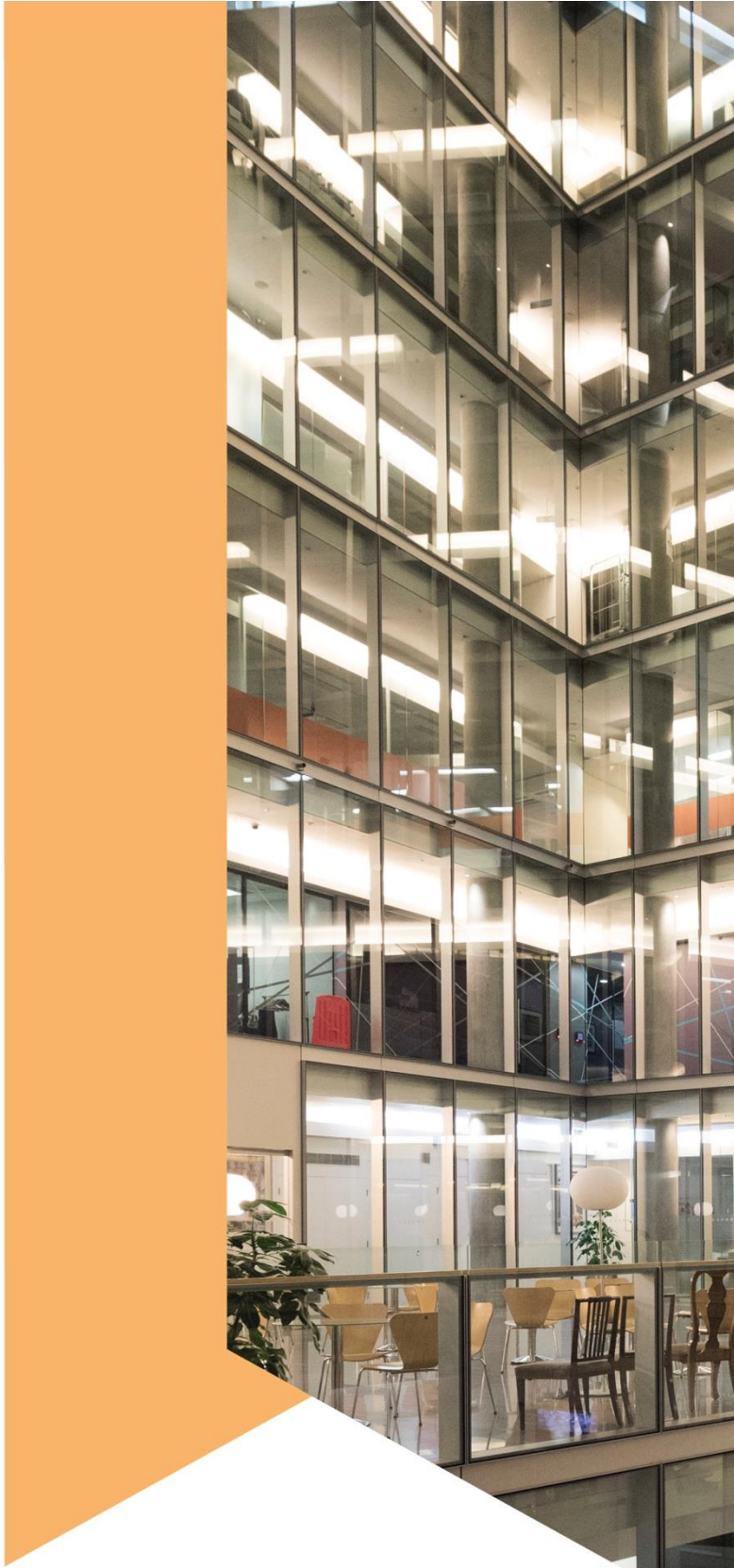
## 9. Backup specification

You can create regular back-ups of your server with back-up software which is capable of creating regular and MSSQL backups. We recommend to backup also your machine using Microsoft tools or your Virtual machines options (automatic backups and restores options)

On top of that a static backup of all the configuration, devices, content can be done by client administration using the TEOS web interface. Option for a ponctual backup and not for High availability

**Back-up and Restore**

 Log in



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