Technical Information & Integration Manager

System requirements

for TIM 2019

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1 Introduction
This document provides information on the hardware and software requirements to be met by the customer for a TIM installation.

Any deviation from the software defined below as “TIM is released for” is at the customer's own risk. Precast Software Engineering does not accept any liability for malfunctions caused by an installation not carried out in accordance with the following definitions.

2 Architectural options
TIM is a so called client/server application. That means that some parts of the software are running on a server (Microsoft SQL database, TIM-Administration, central background services, …) and the TIM clients (= TIM Workstation software) will get access via client software to that data or rather to the results of the central background services.

There are 2 options available for a productive system of TIM (we would be happy to help you with the decision, installation and ongoing support):

1. **Identical database and application server**
   In this variant, the central database and the central TIM programs are installed on one virtual or physical server.

2. **Different database and application server**
   In this variant, the database server (for the database) and the application server (for the central TIM software) are installed on 2 separate virtual or physical servers.

If you want to set up an independent test system in addition to your productive system, we will be happy to advise you on the possibilities.

3 Hardware- and software requirements
The following specifications are guidelines for TIM installations with up to 10 users and up to a total of 50,000 precast parts. If this limit is exceeded, we are happy to advise you on a approbiate system design.

3.1 Database server

Main memory
- Ad least 32 GB

Note: The size of the main memory depends in particular on the number of users, since the server should always be able to keep the users' data in the main memory in order to optimize database queries.

**Software to be installed**
1. Microsoft SQL Server
TIM System requirements

2. Microsoft Reporting Services
3. .Net Runtime 4.7.1 (or later)

TIM is release for the following server operation systems

1. Microsoft Windows Server 2016, german
2. Microsoft Windows Server 2016, english

TIM is release for the following Microsoft SQL version

1. Microsoft SQL Server Standard 2016, german
2. Microsoft SQL Server Standard 2016, english

Compliance with the minimum system requirements issued by Microsoft for the corresponding software products is assumed.

Disk space

The needed disk space depends on the number of projects, the complexity of the items, and the number of drawings. SSD hard drives are recommended. In general, the following guidelines apply:

- ca. 0.5 MB / Floor or wall elements
- ca. 1.0 MB / Precast part elements
- ca. 1.0 MB / element drawing

3.2 Application server

Main memory

At least 16 GB

Software to be installed

1. Microsoft SQL Management Studio according to Microsoft SQL database version
2. Configuration Manager for Microsoft Reporting Services according to Microsoft SQL database version
3. TIM Administration
4. TIM Services

TIM is release for the following server operating systems

1. Microsoft Windows Server 2016, german
2. Microsoft Windows Server 2016, english

Compliance with the minimum system requirements issued by Microsoft for the corresponding software products is assumed.

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1 Microsoft Reporting Services are part of the Microsoft SQL installation and can be installed during the first setup or as an option afterwards.
2 They can be saved on a separate file server as well.
The application server must not be a domain controller and must only be integrated in one network, even if the server has several network cards.

### 3.3 Identical database and application server

Basically, the same hardware and software requirements apply as described under 3.1 and 3.2. However, due to the fact that both tasks are performed by one server, the hardware requirements must be added accordingly.

### 3.4 Client

**Main memory:**

- At least 8 GB

**TIM is release for the following client operation systems:**

1. Microsoft Windows 10, 64 Bit

The graphics card must support DirectX 11 (or later). A separate graphics card (at least 2 GB graphics card memory) is recommended.

### 3.5 Network

The TIM clients are directly connected via LAN connection (Gigabit network) to the database server and the directory for external files. The TIM clients must be set up in the same domain as the servers.

### 3.6 mTIM

The mTIM server must be accessible from mobile devices from the outside. It is recommended to use a DMZ or another secure connection.

**mTIM server**

An independent Microsoft SQL Server and the IIS Server must be installed on this server.

**Main memory**

- At least 16 GB

**mTIM is release for the following server operation systems**

1. Microsoft Windows Server 2016, german
2. Microsoft Windows Server 2016, english

**mTIM is release for the following Microsoft SQL versions**

1. Microsoft SQL Server Standard 2016, german
2. Microsoft SQL Server Standard 2016, english

**mTIM device**

An Android-based smartphone or tablet must be used as the mTIM device.
mTIM App is release for the following Android operation systems

- Android 8.0 (Oreo)