



**SYSTEM REQUIREMENTS**

**TIM**

**2023**

**Λ** ALLPLAN  
**PRECAST**



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 "Software requirements" 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.





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# 1 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 two **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.

# 2 SYSTEM REQUIREMENTS

## 2.1 Basics

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 to find an appropriate system design.

TIM stores information in a Microsoft SQL database.

PDFs (e.g. element plans, installation plans, batch lists) are not stored in the database but in a separate directory that is defined during configuration. This directory can be set up on any server that can be reached in the network and to which access rights can be assigned.

Per document you have to calculate with approx. 100 KB to 1 MB.





## 2.2 Database server

HARDWARE REQUIREMENTS	SOFTWARE REQUIREMENTS
<p><b>Minimum configuration</b></p> <ul style="list-style-type: none"><li>▪ Intel processor from generation i7 or compatible</li><li>▪ AVX-support (Advanced Vector Extensions)</li><li>▪ At least 32 GB RAM</li></ul> <p>The size of the main memory depends in particular on the size of the database, since the server should always be able to keep the database in the main memory in order to optimize database queries.</p> <p><b>Disk requirement</b></p> <ul style="list-style-type: none"><li>▪ The <b>disk requirements</b> depend on the number of projects, the complexity of the precast elements and the number of drawings. General the following guidelines apply:<ul style="list-style-type: none"><li>▪ approx. 0,5 MB / Slab or Wall element</li><li>▪ ca. 1,0 MB / Constructive precast element</li></ul></li></ul> <p>Compliance with the minimum system requirements issued by Microsoft for the corresponding software products is assumed.</p>	<p><b>Operating system</b></p> <ul style="list-style-type: none"><li>▪ Microsoft Windows Server 2016, German/ English</li><li>▪ Microsoft Windows Server 2019, German/ English</li><li>▪ Microsoft Windows Server 2022, German/English</li></ul> <p><b>Database</b></p> <ul style="list-style-type: none"><li>▪ Microsoft SQL Server Standard 2016, German/English</li><li>▪ Microsoft SQL Server Standard 2017, German/English</li><li>▪ Microsoft SQL Server Standard 2019, German/English</li></ul> <p><b>Microsoft Reporting Services</b></p> <ul style="list-style-type: none"><li>▪ According the SQL Server version</li></ul>





## 2.3 Application server

HARDWARE REQUIREMENTS	SOFTWARE REQUIREMENTS
<p><b>Minimum configuration</b></p> <ul style="list-style-type: none"> <li>Intel processor from generation i7 or compatible</li> <li>AVX-support (Advanced Vector Extensions)</li> <li>At least 16 GB RAM</li> </ul> <p><b>Disk requirement</b></p> <ul style="list-style-type: none"> <li>Low (unless the directory for the PDFs is created there).</li> </ul> <p>Compliance with the minimum system requirements issued by Microsoft for the corresponding software products is assumed.</p> <p><b>Network</b></p> <ul style="list-style-type: none"> <li>The application server must not be a domain controller and must only be integrated in only one network, even if the server has several network cards.</li> <li>The application server must be in the same network as the database server and connected to it via LAN (Gigabit network).</li> </ul>	<p><b>Operating system</b></p> <ul style="list-style-type: none"> <li>Microsoft Windows Server 2016, German/ English</li> <li>Microsoft Windows Server 2019, German/ English</li> <li>Microsoft Windows Server 2022, German/English</li> </ul> <p><b>SQL Server Management Studio</b></p> <ul style="list-style-type: none"> <li>According the SQL Server version</li> </ul> <p><b>Configuration Manager for Microsoft Reporting Services</b></p> <ul style="list-style-type: none"> <li>According SQL Server Version</li> </ul> <p><b>.Net Runtime</b></p> <ul style="list-style-type: none"> <li>4.7.2 (is installed with TIM if necessary)</li> </ul>

The following TIM software systems are installed on the application server in addition to the standard programs mentioned above:

- **TIM Administration:** TIM Administration software
- **TIM App Service:** Controls user access to the database..
- **TIM Importservice:** Imports data automatically into TIM.

Optional (depending on license scope):

- **TIM Integrationservice:** For web service-based data exchange with other systems.
- **TIM PTS Service:** For the integration of the PTS Service for automatic testing of the producibility of reinforcement.



## 2.4 Identical database and application server

Basically, the same hardware and software requirements apply as described under chapter 2.2 and 2.3. However, due to the fact that both tasks are performed by one server, the hardware requirements must be added accordingly.

## 2.5 Client

HARDWARE REQUIREMENTS	SOFTWARE REQUIREMENTS
<p><b>Minimum configuration</b></p> <ul style="list-style-type: none"><li>▪ Intel processor from generation i7 or compatible</li><li>▪ AVX-support (Advanced Vector Extensions)</li><li>▪ At least 8 GB RAM</li></ul> <p><b>Disk requirement</b></p> <ul style="list-style-type: none"><li>▪ Low, since only the TIM application program is installed.</li></ul> <p><b>Network</b></p> <ul style="list-style-type: none"><li>▪ Direct connection via LAN connection (Gigabit network) with the database server and the directory for external files.</li><li>▪ The TIM clients must be set up in the same domain as the servers.</li></ul>	<p><b>Operating system</b></p> <ul style="list-style-type: none"><li>▪ Microsoft Windows 10, 64 Bit, German/English</li><li>▪ Microsoft Windows 11, 64 Bit, German/English</li></ul> <p><b>Graphics card</b></p> <ul style="list-style-type: none"><li>▪ A separate graphics card (at least 2 GB main memory) is recommended.</li><li>▪ The graphics card must support DirectX 11 (or later).</li></ul> <p><b>.Net Runtime</b></p> <ul style="list-style-type: none"><li>▪ 4.7.2 (is installed with TIM if necessary)</li></ul>





## 2.6 mTIM server

The mTIM server must be externally accessible from mobile devices (tablet, mobile phone) via Internet / Wi-Fi. It is recommended to use a DMZ or another correspondingly secure connection.

HARDWARE REQUIREMENTS	SOFTWARE REQUIREMENTS
<p><b>Minimum requirement</b></p> <ul style="list-style-type: none"><li>▪ Intel processor from generation i7 or compatible</li><li>▪ AVX-support (Advanced Vector Extensions)</li><li>▪ At least 16 GB RAM</li></ul> <p><b>Disk requirement</b></p> <ul style="list-style-type: none"><li>▪ Depending on the configuration and the application, normally about 20 GB (excl. operating system and standard software) are sufficient.</li></ul> <p><b>Network</b></p> <ul style="list-style-type: none"><li>▪ Direct connection via LAN connection (Gigabit network) with the application server.</li></ul>	<p><b>Operating system</b></p> <ul style="list-style-type: none"><li>▪ Microsoft Windows Server 2016, German/English</li><li>▪ Microsoft Windows Server 2019, German/English</li><li>▪ Microsoft Windows Server 2022, German/English</li></ul> <p><b>Database</b></p> <ul style="list-style-type: none"><li>▪ Microsoft SQL Server Standard 2016, German/English</li><li>▪ Microsoft SQL Server Standard 2017, German/English</li><li>▪ Microsoft SQL Server Standard 2019, German/English</li></ul> <p><b>.Net Runtime</b></p> <ul style="list-style-type: none"><li>▪ 4.7.2 (is installed with TIM if necessary)</li></ul> <p><b>Internet Information Server</b></p> <ul style="list-style-type: none"><li>▪ Configuration according to installation documentation of TIM</li></ul>







## 2.7 mTIM device

An Android-based smartphone or tablet must be used as the mTIM device.

The mTIM app is for the following Android systems:

- Android 8.0 (Oreo)
- Android 9.0 (Pie)
- Android 10 (Q)

released.

The mTIM app is not available via Google Playstore, but is provided separately.

