



IT Minimum Requirements

Version 7.21.1+

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As technology evolves, requirements change regularly. Please request the latest specifications if needed. Before installing a Klaes solution for the first time or updating an older version, check your computer's specifications. Additional program features may increase the requirements for standalone systems, servers, or workstations. In terminal server networks, clients do not need to meet these minimum requirements, as only the server needs to be updated.

General Notes

- The specified hardware requirements are minimum requirements. For better performance, exceeding them is recommended.
- **Recommended architecture:** 64-bit editions of the supported operating systems.
- **Operating systems:**
 - Windows 11
(Win 11 Versions still within Microsoft's lifecycle)
 - Windows Server 2016 to 2025
(The ReFS file system is not supported.)
- Klaes 7 does **not** run on:
 - Older Windows 10 and 11 versions that are no longer supported by Microsoft
 - Windows 8.1 and earlier, Windows Server 2012 and earlier
 - Linux, macOS, NAS drives

Database Requirements

- **Microsoft SQL Server 2016 - 2022** (Older versions are no longer supported.)
- **Important note:** Backups from newer SQL Server versions cannot be restored to older SQL Server versions. Data packages for trade programs can be imported into older SQL versions, provided the Klaes version is the same.
- **Standalone installation:** If required, Microsoft SQL Server Express 2016 or 2022 will be installed automatically.



Software Requirements

- **Microsoft Excel** required for detailed calculation data: Version 2013-2024, or Excel for Microsoft 365.
- **Email integration:** a MAPI-compatible 32-bit email software (e.g., Microsoft Outlook classic) is required. Klaes has an additional interface to Outlook classic, so it can also be installed as a 64-bit edition.
- **Telephony:** Compatible with TAPI 32-bit; terminal server support is required for terminal server environments (selection and assignment of lines).

Hardware Requirements by Environment

Standalone System

- **Processor:** Minimum Intel Core i3 (2.9 GHz) or equivalent
- **Memory:** Minimum 8 GB RAM
- **Storage:** At least 20 GB for Klaes + 20 GB for the SQL Server
- **Operating systems:** Windows 11 (Win 11 Versions still within Microsoft's lifecycle)

Network

- **Network topology:** Gigabit or 10-Gigabit Ethernet (*professional setup recommended*)
- **Database Server** (*Recommendation: Install directly on the file server or terminal server*)
 - Microsoft SQL Server Standard Edition 2016 - 2022 required (*Express version not supported*)
 - A SQL instance named "KLAES" must be installed.
 - If needed, you can purchase the SQL Server Standard Edition from us at very favorable prices (*Runtime or full version*).
- **File Server:**
 - Minimum Intel XEON with 2 physical cores or equivalent
 - Minimum 16 GB RAM (*8 GB reserved for SQL Server*)
 - Minimum 30 GB free storage (*SSD/NVMe recommended*)
 - Supported operating systems:
 - Windows Server 2016 - 2025
- **Network Clients**
 - Processor: Minimum Intel Core i3 (2.4 GHz) or equivalent
 - Memory: Minimum 4 GB RAM



- Storage: Minimum 3 GB free
- Operating systems: Windows 11 (Win 11 Versions still within Microsoft's lifecycle)
- For terminal server clients, older operating systems with less memory can be used.

- **Terminal Server**
 - Processor: Same as file server but with high clock speed and approximately 0.5 cores per user, with at least 3.0 GHz clock speed recommended
 - Memory Calculation:
(Number of clients × 4 GB) + 4 GB (Server) + 4 GB (SQL Server)
 - Example for 4 clients: $4 \times 4 \text{ GB} + 4 \text{ GB} + 4 \text{ GB} = 24 \text{ GB RAM}$
 - Operating Systems: Windows Server 2016 - 2025

Recommendation for Networks: Terminal Server

We recommend using a terminal server. It offers significant advantages over traditional network structures, particularly in terms of computing power and worldwide access. For best performance, we recommend installing Klaes and Microsoft SQL Server directly on the terminal server. Implementation requires careful planning and configuration.

We are happy to advise you on the latest technology and a hardware concept tailored to your business, as well as our cloud server solutions in our German data centers.

Feel free to contact us at:
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