System requirements Abas 2024.Q3

Forterro Deutschland Abas GmbH

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1. TARGET GROUP

- Prospects
- Abas Project Manager
- Customers who want to install further components

Several links in this document refer to extranet.abas.de (password-protected portal for partners and customers). Please note that prospects are not yet authorized to access this website.

2. GENERAL SYSTEM REQUIREMENTS

As an ERP system, Abas contains company sensitive data and should therefore be installed on a dedicated server (physical or virtual).

The number of concurrent users, the volume requirements of the data, the degree of customization, and the degree of automation of the Abas installation influence the required system dimensions. In this regard, the typical configurations for various installation sizes will be described.

2.1. Operating systems

You need a 64-bit Linux operating system for the Abas server. Distributions approved for Abas 2024.Q3 can be found in the customer portal (Extranet) under Abas versions - Supported operating systems.

2.2. Internet Protocol version

Using IPv4 is a mandatory prerequisite for the Abas server.

2.3. Samba

To enable access to Samba, we strongly recommend that the software used is provided with an Active Directory (AD) connection.

2.4. Docker

Docker is used to simplify the deployment of applications, since containers that contain all necessary packages can be easily transported and installed as files. Containers ensure the separation and management of resources used on a computer.

- Docker Engine (version >= 20.10)
- Docker Compose standalone (version >= 2.20)

2.5. JAVA

Oracle Java 17 or OpenJDK 17 of the used Linux distribution

2.6. SSL certificate

An SSL certificate is mandatory to operate the components and Docker containers such as Keycloak or Abas Dashboard described in the chapter "Abas 2024.Q3".

2.7. Server dimensions – typical configurations

Lizenzanzahl	1-10	10 - 20	20 - 40
CPU (Prozessoren)	intel/AMD neuer Generationen	intel/AMD neuer Generationen	intel/AMD neuer Generationen
Gesamtanzahl Kerne	ab 4	ab 6	ab 8
CPU GHz	2,8	2,8	ab 2,8 / optimal >3
RAM (Arbeitsspeicher)	ab 32 GB	ab 64 GB	ab 96 GB
HDD Linux	1 x 100 GB SAS 15K RPM bevorzugt SSD (RAID 1)	1 x 100 GB SAS 15K RPM bevorzugt SSD (RAID 1)	1 x 100 GB SAS 15K RPM bevorzugt SSD (RAID 1)
HDD Daten	ab 300 GB SAS 15K RPM bevorzugt SSD (RAID 5/10)	ab 300 GB SAS 15K RPM bevorzugt SSD (RAID 5/10)	ab 300 GB SAS 15K RPM bevorzugt SSD (RAID 5/10)
Datensicherung	Vorhandene Inhouse Sicherung	Vorhandene Inhouse Sicherung	Vorhandene Inhouse Sicherung

Lizenzanzahl	40 - 60	60 - 80	ab 80
CPU (Prozessoren)	intel/AMD neuer Generationen	intel/AMD neuer Generationen	intel/AMD neuer Generationen
Gesamtanzahl Kerne	ab 12	ab 16	ab 24
CPU GHz	mind. 2,8 / optimal 3	mind. 3	ab 3
RAM (Arbeitsspeicher)	ab 128 GB	ab 196 GB	ab 196 GB
HDD Linux	100 GB SAS 15K RPM bevorzugt SSD (RAID 1)	100 GB SAS 15K RPM bevorzugt SSD (RAID 1)	100 GB SAS 15K RPM bevorzugt SSD (RAID 1)
HDD Daten	ab 800 GB SAS 15K RPM bevorzugt SSD (RAID 5/10)	ab 1 TB SAS 15K RPM bevorzugt SSD (RAID 5/10)	ab 1 TB SAS 15K RPM bevorzugt SSD (RAID 5/10)
Datensicherung	Vorhandene Inhouse Sicherung	Vorhandene Inhouse Sicherung	Vorhandene Inhouse Sicherung

Figure 1. The following server dimensions apply to the Abas basic installation including its infrastructure (Abas Dashboard, License Controller, RabbitMQ/IceDaemon, REST API, full-text search, ...) as well as all standard installed services. An overview of the installed basic components can be found in the password-protected customer portal (Extranet).

2.7.1. RAM (working memory) information

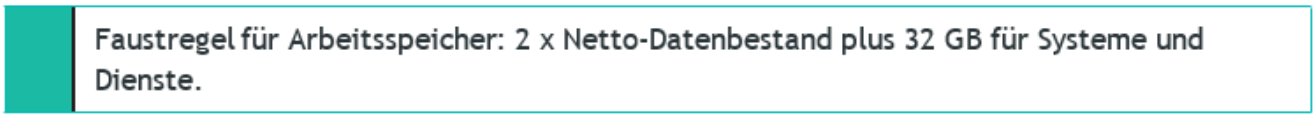


Figure 2. The working memory requirement depends on the data set on the hard disk as well as the degree of automation in the company. It must be ensured that the Abas database can be kept entirely in the working memory.

2.7.2. CPU information

The requirements for the CPU mainly depend on the evaluation frequency as well as on the number of persons working simultaneously in abas ERP.

CPU requirements increase with frequent use of Multisite (data export/data import) or evaluations via JFOP servers.

Abas requires strong single core performance for direct database queries.

2.8. Virtualization solutions

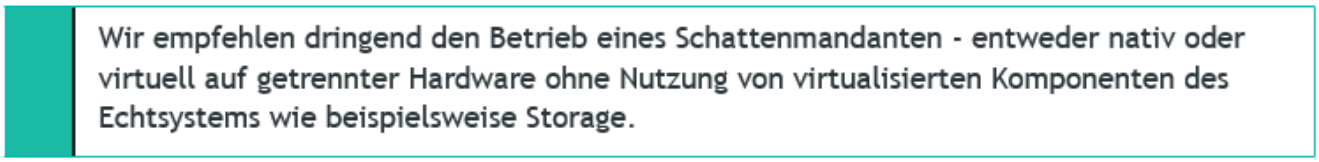
2.8.1. Virtualization (server)

Abas can be run in a virtual environment. The hardware setup is the same as the native hardware.

2.8.2. Recommended products for virtualization

- VMware ESX Server (version 6 or higher)
- Microsoft Hyper-V

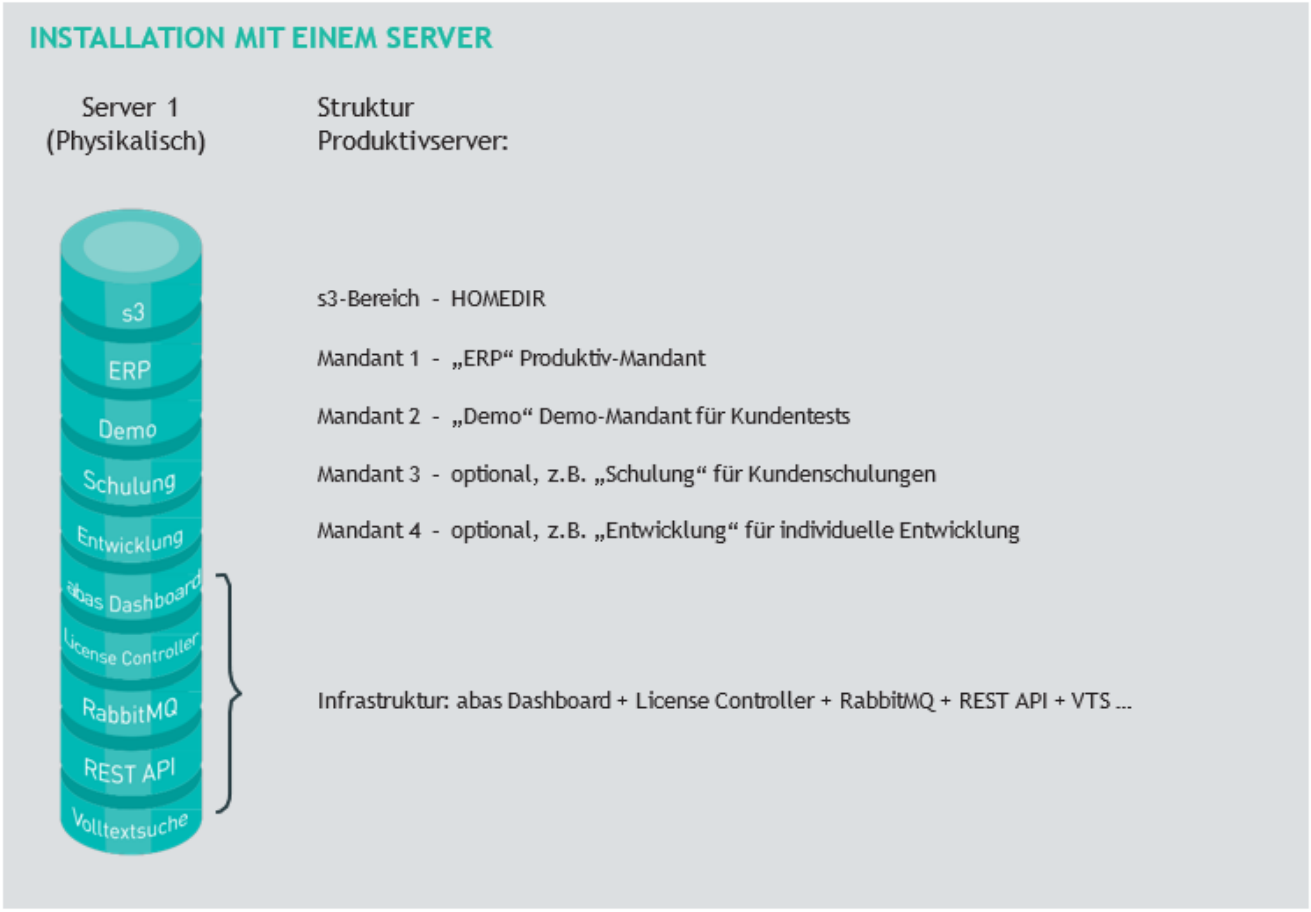
HIGHLY RECOMMENDED: SHADOW CLIENT



Detailed information can be found in the password-protected customer portal (Extranet) in the Administration FAQs*.

2.9. General recommendation

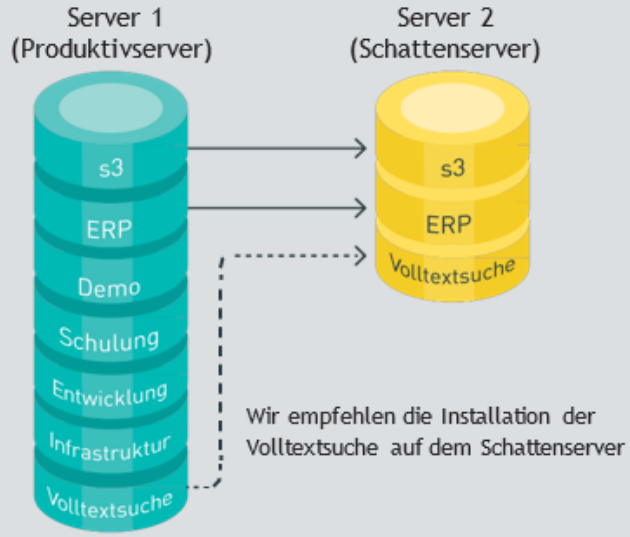
2.9.1. Installation with one server



2.9.2. Installation with a server and a shadow client

Wir empfehlen das Aufsetzen eines Schattenservers. Dadurch haben Sie eine zeitnahe und unabhängige Kopie Ihres Datenbestands. Im Schadensfall kann der Datenbestand schnell wiederhergestellt werden.

INSTALLATION MIT EINEM SERVER UND EINEM SCHATTENSERVER (EMPFOHLEN)



EXPLANATION OF THE FIGURE:

- Server 1 is the productive server. Installing the clients "Demo", "Training" and "Development" is optional.
- On Server 2, the s3 directory and the ERP client are synchronized at regular intervals (e.g., every 5 minutes). This ensures current and quickly available data backup.
- The full text search (FTS) should be relocated to the shadow client.
  Advantage: By relocating to the shadow client you can save significant memory capacity. The search index is very large, but does not need to be backed up, because it can be rebuilt at any time.

SHADOW SERVER SYSTEM REQUIREMENTS

CPU (Prozessoren)	intel/AMD neuer Generation
Gesamtanzahl Kerne	ab 4
CPU GHz	2,8
RAM (Arbeitsspeicher)	ab 16 GB
HDD Linux	100 GB SAS 15K RPM bevorzugt SSD (RAID 1)

HDD Daten	Datenbestand des Produktivsystems (zum Beispiel 300 GB für 20 Bildschirmarbeitsplätze)
HDD Daten mit Volltextsuche	Volltextsuche benötigt bis zur 5-fachen Größe des Datenbestandes. Die Größe der HDD Daten ist von den technischen Abteilungen zu prüfen.

IMPORTANT: In a virtual environment, the shadow server should not run on the same virtualization platform as the productive server.

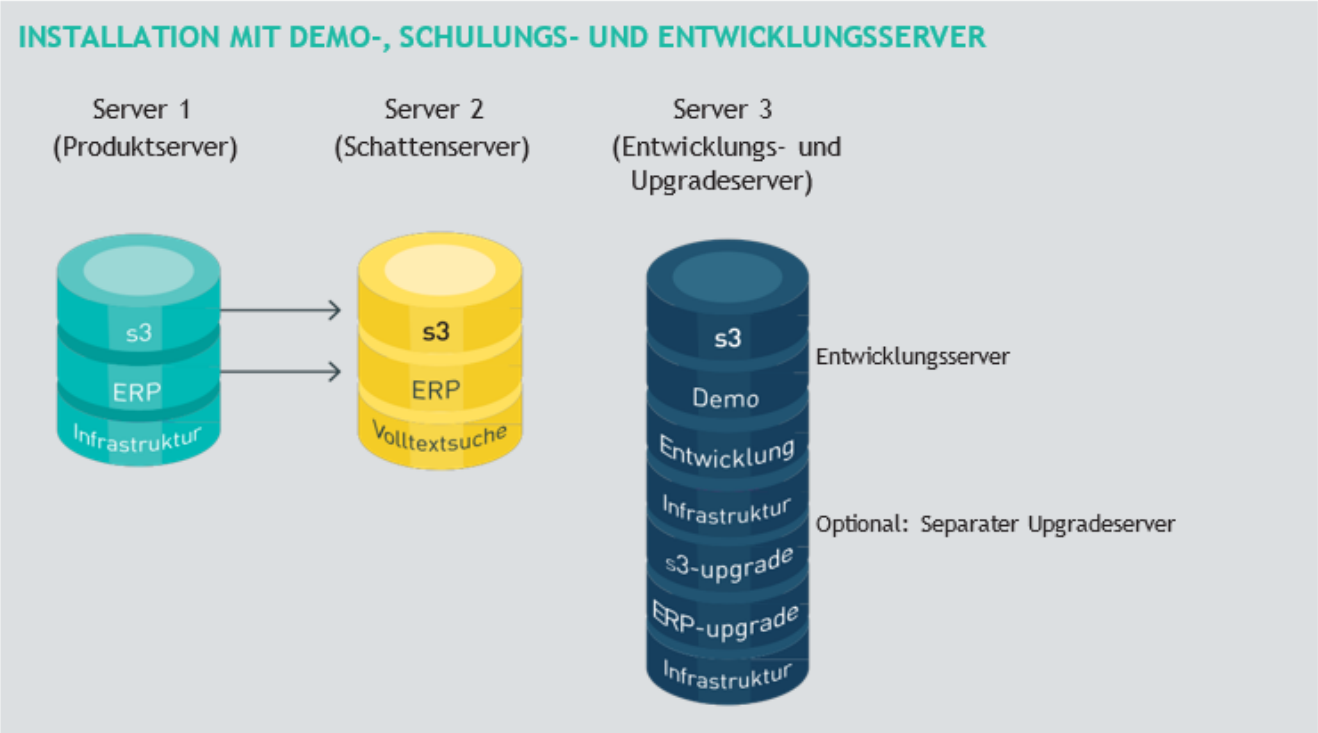
2.9.3. Installation with demo, training, and development server

HINWEIS ZU LIZENZEN

Aus Performance- und Stabilitätsgründen empfehlen wir, diese Mandanten auf separater Hardware (physikalisch oder virtuell) zu betreiben. Diese Konstellationen sind erlaubt, wenn s3-Bereich (HOMEDIR) und alle Mandanten Kopien des Produktiv-Systems sind und jederzeit neu erzeugt werden können. Wartungseingriffe, Datenreparaturen, Lizenzerweiterungen etc. durch die abas Software GmbH werden ausschließlich im Produktivsystem durchgeführt.

Zudem benötigt natürlich jeder Nutzer von abas ERP unabhängig davon, ob er im Produktivsystem, im Backup-System oder beiden arbeitet, auch eine Lizenz. Zur korrekten Zählung muss die „Server-übergreifende Lizenzzählung“ eingerichtet sein.

For Cross-server license counting, please click here



The hardware requirements for the demo, training, and development server correspond to the configuration for "1 - 10 licenses" in the table in the "Server dimensioning – typical configurations" chapter.

3. ABAS 2024.Q3

3.1. Hardware requirements for the user interfaces

System	PC oder Notebook
CPU (Prozessoren)	Intel/AMD x86_64
RAM (Arbeitsspeicher)	4 GB
Festplatte	Desktop Standard
Netzwerkadapter	100 / 1000 MBit/s
Betriebssystem	› ab Windows Server 2016 (64-Bit Version) › ab Windows 10 (64-Bit Version)

Figure 3. The Windows client is available as the user interface for Abas.

Please note the requirements for the full text search client in the following sections.

3.2. Core components

The following components are included in Abas and covered with the system requirements described in the Server dimensioning – typical configurations chapter.

3.2.1. License Controller

To facilitate the licensing of Abas products, Abas operates a central license server for all customers. To operate Abas, the use of the Abas license server is required.

To use the Abas license server, a customer tenant in the Abas Cloud must be created and License Controller must be installed and set up for each customer installation. License Controller helps locally store the license information transmitted by the license server even without a permanent connection to the license server.

3.2.2. Identity & Access Management with Keycloak12

Keycloak is an open source project from Red Hat, which can be used by any application as an identity provider. Integrated in the project ecosystem, it can be used for user authentication and authorization using the standards OAuth2.0 and OpenID Connect 1.0.

Abas can be integrated well into this solution to meet all your requirements regarding authentication and authorization. The added value of this integration for you is that SSO is enabled in your environment.

3.2.3. Full text search

Can be installed manually from the archive. The full text search currently requires up to 5x the database size in hard disk space. For performance reasons we recommend moving the index files of the full text search to a separate server.

3.2.4. Multisite

The Multisite function can be used to exchange data between individual Abas clients. The RabbitMQ and iceDaemon technologies are used here.

3.2.5. Warehouse

As a fixed component of Abas, the scanner solution Warehouse is available to be used in-house on mobile devices. It supports you in time and labor intensive work steps in the warehouse and increases the traceability of incoming goods.

Further information can be found under Warehouse system requirements . ==== Shopfloor

Shop Floor is a web application for the use of the work list in the web browser. You can edit and confirm work slips from the work list via the user interface. A terminal PC or tablet is sufficient for this. The business logic runs in the background in Abas, As a result, customizations of the business logic are also available in Shopfloor.

Further information can be found under Shop Floor system requirements . ==== QM

QM is a solution fully integrated into Abas to organize and control your quality management. A variety of processes and function areas is available, using which you can configure and use your quality management individually.

Further information can be found under QM system requirements . === Connectors & APIs

3.2.6. REST API

Abas REST API is a modern interface, which is based on web standards (HATEOS-compliant RESTful web services) and allows read and write access to Abas in real time.

This web interface is included in Abas and covered with the system requirements described in the Server dimensioning – typical configurations chapter.

3.2.7. Microsoft SQL Connector

Using Microsoft SQL Connector, any data from Abas can be transferred to Microsoft SQLServer®. In this way, Abas data are made available for other applications fully automatically via the freely configurable interface.

The operation of the REST API as well as the installation of Abas ESDK are prerequisites for the use of Microsoft SQL Connector.

If Microsoft SQL Connector is to be used in connection with BI Reporting & Analytics, refer to the BI Reporting & Analytics system requirements.

3.2.8. DMS Connector

DMS Connector is a standard DMS interface to connect third-party DMS systems to Abas. Using the connector, documents generated in Abas as well as the corresponding index data can be exported for revision-proof archiving, and incoming documents can be linked with processes in Abas.

The connector is included in Abas and covered with the system requirements described in the Server dimensioning – typical configurations chapter.

3.2.9. PDM Connector

PDM Connector is used to connect PDM systems. In addition to standard connections to PRO. FILE (PROCAD GmbH & Co. KG) and keytech PLM (keytech Software GmbH), any other PDM systems can be connected by adapting the exchange configuration.

The connector is included in Abas and covered with the system requirements described in the Server dimensioning – typical configurations chapter.

3.3. Tools

3.3.1. Abas Tools

Abas Tools is a compilation of tools to help you adapt Abas. Abas Tools is based on the free development environment Eclipse and is available for different operating systems.

In the customer portal (Extranet), you can find a list of all Abas Tools versions that are appropriate for Abas 2024.Q3.

System	PC oder Notebook
CPU (Prozessoren)	Intel/AMD x86_64
RAM (Arbeitsspeicher)	ab 8 GB
Festplatte	ab 1 GB
Betriebssystem	Mac, Windows oder Linux (Desktop)
Software	Oracle Java 17, Amazon Corretto 17 oder OpenJDK der Linux Distribution - JRE oder JDK

Figure 4. The minimum requirements are as follows:

3.3.2. Abas ESDK

Abas ESDK is a customizing tool for the easy development as well as convenient and secure rollout of individual adjustments for Abas.

For further information see Abas ESDK

3.3.3. Abas Dashboard

Abas Dashboard is a self-service technology for adapting existing and creating custom cockpits for Abas.

Abas Dashboard is included in Abas and covered with the system requirements described in the "Server dimensioning – typical configurations" chapter.

Abas Dashboard is only available to those customers who have at least accepted the license conditions as of September 2017 and for whom Forterro Deutschland Abas GmbH has documented this consent in the configuration of the customer installation by activating the corresponding configuration switch.

3.3.4. Abas Connect

Abas Connect is a platform that simplifies and standardizes the integration of applications. For this, Abas Connect provides various connectors and flexible modules using which interfaces between systems can be modeled.

Further information can be found under Abas Connect system requirements . ==== ABAS MOBILE APPLICATIONS FRAMEWORK

Abas Mobile Applications Framework is a tool based on the Xamarin development platform for cross-platform development of mobile applications for offline use. Templates for external sales forces (CRM) as well as customer service employees (Field Service) are part of the framework.

Depending on the device used you require at least Windows 10, Android 5+ or iOS 12 as the operating system.

3.3.5. Abas BPM Toolkit

Abas BPM Toolkit provides an easy-to-use set of tools, libraries, workflow examples as well as documentation and guides to create custom Business Process Management solutions based on Abas.

Abas BPM Toolkit is included in Abas and covered with the system requirements described in the "Server dimensioning – typical configurations" chapter.

Further information can be found in the Abas BPM Toolkit documentation . ==== Abas PDM Documents Toolkit

Abas PDM Documents Toolkit includes an infosystem that accesses the PDM system via a RESTful API and retrieves and displays the documents linked to the product. The infosystem is integrated in the print process through a layout and prints the drawings released for a document.

Abas PDM Documents Toolkit is included in Abas and covered with the system requirements described in the Server dimensioning – typical configurations chapter.

Further information can be found under Abas PDM Document Toolkit system requirements .

4. ADD-ONS

4.1. Abas APS

System	PC, Notebook, etc.
CPU (Prozessoren)	Intel/AMD ab 1,8 GHz
RAM (Arbeitsspeicher)	ab 4 GB
Festplatte	Desktop Standard
Netzwerkadapter	100 / 1000 MBit/s
Betriebssystem	› Windows 10 oder neuer › Windows Server 2016 oder neuer

Figure 5. Abas APS requires a Windows workstation. There are no additional hardware requirements on the server side.

The **gawk** program normally supplied with the Linux distribution must be installed.

An active Abas password record with:

- System authorization
- Authorizations for the allspp workspace

4.2. Abas DMS (Version 10, 2nd generation)

4.2.1. ABAS DMS Server

Recommended setup

CPU (processors)	Server system with the latest Intel/AMD processor
Total cores	4 or more
CPU GHz	2.4 or more
HDD operating system	80-100 GB
HDD data	250 GB or more At least 30 GB free memory (memory volume dependent on the document volume. Basis for calculation 80 KB per DIN A4 page in black and white at 300 dpi, TIFF-G4 compression.)
RAID	Redundant array of independent disks (e.g., RAID 1/RAID 5)
Network connection	1 GBit or higher
Data backup	LTO/NAS 100GB/RX1000/RDX Existing in-house
Remote management	Yes

Operating system	• Windows Server 2022; Editions: Standard, Datacenter • Windows Server 2019; Editions: Standard, Datacenter • Windows Server 2016; Editions: Standard, Datacenter
Software	.NET Framework 4.8
Supported database systems	• MySQL 8.0.20 or later • as of MSSQL 2014 SP3 • as of MSSQL 2016 SP2 • MSSQL 2019

4.2.2. Abas DMS archive

The following list provides a hardware recommendation for the use of the Abas DMS archive solution on a server.

Components

- ABAS DMS Server
- Abas DMS Web Client Viewer Server
- MS SQL server or mySQL server

Recommendation:

	30-50 employees (minimum requirement)	50-200 employees	>200 employees
CPU GHz	>=2 GHz	>=2 GHz	>=2 GHz
Cores	>=8	>=16	>16
RAM (working memory)	>=32	>=48	>48
Hard disk	3x "X" GB (depending on data volume)	3x "X" GB (depending on data volume)	3x "X" GB (depending on data volume)
Network	Gigabit LAN	Gigabit LAN	Gigabit LAN

Note:

- The hardware recommendation only serves as a rough orientation, as performance will ultimately depend on the number of accesses and the data volume.
- For larger user groups and data volumes, the components listed above can be distributed across up to 6 server systems.
- The data (SQL databases, write cache, read cache, image cache, full text, etc.) should be stored on at least one hard disk separated from the system drive.
- The system drive must always have at least 32 GB free space available.

- The customer is responsible for the necessary error tolerance and fail-safes (data backups, RAID, USV, etc.).

4.2.3. Abas DMS Web Client Viewer Server

The Web Client Viewer Server can also be operated on a separate server. For operation in a separate virtual environment:

- CPU >= 2 GHz (8 cores)
- >=16 GB RAM
- 60 GB hard disk space, mirrored/SSD according to the server landscape
- OS: Linux CentOS 7

4.2.4. Scan PC/Workstation

- CPU >= 2 GHz (4 cores)
- 8 GB RAM
- Preferrably large monitor

4.2.5. Release Abas DMS Archive server modules

The following SQL databases are supported:

- Microsoft SQL server as of Version 2012
- Oracle mySQL server as of Version 8.0.16

The following operating systems are supported:

- Windows Server 2012
- Windows Server 2016
- Windows Server 2019
- Windows Server 2022

4.2.6. Release of Abas DMS Archive client modules

The following operating systems are supported:

- Windows 8.1 x64**
- Windows 10 x64**
- Windows 11 x64**
    - only in connection with the Professional x64 and Enterprise x64 version (current patch status).

The following browsers are supported:

The browser versions that were up to date at the time of the release of the server application are always supported. New browser versions are included in quality assurance promptly.

The web client can be operated using the following browsers:

- Microsoft Edge (Windows)
- Microsoft Edge (Windows)
- Microsoft Edge (Windows)

4.2.7. Other hardware & backup

Scanners

Existing multifunctional devices can be used in the "Scan to a folder in the file system" function . From a certain number of documents it may be more useful to use dedicated document scanners. Existing scanners to be used for this purpose should be checked for compatibility. Please inform us of any scanner models used.

These sample scanner models have been tested and approved by Abas DMS:

Small volume of documents	**Medium document volume**	**High volume of documents**
Kodak Alaris S2070	Kodak i2900	Kodak i3250

Please refer to the respective manufacturer's information for detailed performance data.

Long-term archiving (WORM–DVD/CD and Jukeboxes)

For long-term archiving, Abas DMS automatically provides data as a (WORM-compatible IMG file (e.g., DVD image). These files can be stored manually on a DVD/BluRay jukebox or WORM storage using a standard DVD burner or automatically by retrieving them from a UNC share.

Backup of Abas DMS

Backing up the Abas DMS data on a backup medium is absolutely necessary. The data backup is used to **back up archived files that have not yet been moved**. Furthermore, a **backup of the databases** is required. To back up databases during operation, an extension of the backup software, a so-called SQL Agent, is used for MS SQL Server. This configuration ensures that the Abas DMS system does not have to be shut down for data backup.

4.3. Abas PM

System	PC
CPU (Prozessoren)	Intel/AMD 64 Bit, ab 2 Kernen
RAM (Arbeitsspeicher)	8 GB
Festplatte	Desktop Standard
Netzwerkadapter	100 / 1000 MBit/s
Betriebssystem	› Windows 8.1 oder neuer › Windows Server 2012R2 oder neuer
Software	Server: Oracle Java 17 oder OpenJDK 17 der verwendeten Linux-Distribution. Client: abas PM verfügt über eine integrierte clientseitige Java-Umgebung. Daher existieren keine zusätzlichen Anforderungen an den Client.

Figure 6. Abas PM requires a Windows workstation.

IN ADDITION:

- Access to the shared directory of the client
- Read and write access to the subdirectory "projectsuite"
- Configured EDP server
- Configured DDE server for rungui.exe
- RabbitMQ (Abas MessageBus)

4.4. Abas Service Planner

System	PC
CPU (Prozessoren)	Intel/AMD 64 Bit, ab 2 Kernen
RAM (Arbeitsspeicher)	8 GB
Festplatte	Desktop Standard
Netzwerkadapter	100 / 1000 MBit/s
Betriebssystem	› Windows 8.1 oder neuer › Windows Server 2012R2 oder neuer
Software	Server: Oracle Java 17 oder OpenJDK 17 der verwendeten Linux-Distribution. Client: Der abas Service Planner verfügt über eine integrierte clientseitige Java-Umgebung. Daher existieren keine zusätzlichen Anforderungen an den Client.

Figure 7. Abas Service Planner requires a Windows workstation.

IN ADDITION:

- Access to the shared directory of the client
- Read and write access to the subdirectory "servplan"
- Configured EDP server

- Configured DDE server for rungui.exe
- RabbitMQ (Abas MessageBus)
- MS SQL server (optional)

4.5. Abas Exchange Connector

Microsoft Exchange Server	› Lokale Installation eines Microsoft Exchange Servers in der Version 2013 oder neuer › Aktivierte EWS-Schnittstelle (Exchange Web Services) › Möglichkeit zum Aufbau einer Verbindung mittels http oder https ausgehend vom abas ERP Server auf die URL des EWS-Dienstes auf dem Exchange Server › Ein zentraler Exchange-Nutzer mit dem Recht **MailboxFolderPermission** in der Ausprägung **Editor** auf die Kontakt- und Kalenderordner der einzelnen Nutzer-Postfächer
Microsoft Exchange Online	› Registrierung des abas Exchange Connectors als Anwendung in Azure AD › Die registrierte Anwendung benötigt den Anspruchswert **full_access_as_app** auf die API **Office 365 Exchange Online**

Figure 8. Abas Exchange Connector requires a Windows workstation.

4.6. Browser-based user interface Web Client

The Web Client is the browser-based user interface for Abas, which enables work to be carried out anywhere and from any device.

Further information can be found under Web Client system requirements .

5. REMOTE ACCESS

For the required remote support by the Abas partner and Forterro Deutschland Abas GmbH, it is necessary to establish a communication channel. This can be established using an existing or separate DSL router/firewall per OpenVPN technology (market standard).

Remote access is set up together with your system partner or the internal administrator. (Further information can be found on the password-protected customer website under Abas administration*).

6. GENERAL INFORMATION

6.1. Hardware partner

We assume that you already have a partner for hardware requirements. If this is not the case, contact your Abas partner.

We recommend the use of certified and tested hardware from brand name manufacturers such as HP, Dell, IBM, TERRA, Fujitsu, etc. Systems from brand name manufacturers are tested regularly to ensure that all assembled components (controller, hard disks, chip sets, etc.) are supported by the operating systems (Windows, Linux). Ensure that the supported Linux operating systems are certified by the manufacturer.

6.2. Guarantee and servicing

Particularly for sensitive systems (Abas server), it is important to note which service options are available for the system. All recognized manufacturers offer hardware services for their systems. These warranty extensions and service packages are generally recommended to ensure "long term" maintenance and replacement parts services (generally 3 to 5 years). Preferably you will also contract 4-hour Critical Support, which ensures a reaction time of maximum 4 hours.