

# Software Product Information

## Fabasoft Folio 2023 Update Rollup 3

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## 1 Fabasoft Folio

Fabasoft Folio ensures the uniform, consistent and controlled management of business documents within the company and the efficient digitalization of business processes.

Provided product services and product characteristics of Fabasoft Folio are defined in this software product information. The product only supports features defined in this document.

The product's scope of supply includes:

Product Component	Description
Product software	Installable product software
Software product information (SPI)	Documentation defining the product characteristics
User help	Documentation for users
White papers	Technical documentation for installation and configuration

## 2 Product Services for User Purposes

Fabasoft Folio provides the functionality that is described in the following chapters.

### 2.1 Web Client

An easy-to-use, accessible web client is available for accessing Fabasoft Folio.

Use Case	Description
Starting the Fabasoft Folio Web Client	The Fabasoft Folio Web Client is opened like a website in a supported web browser.
Closing the Fabasoft Folio Web Client	The Fabasoft Folio Web Client is closed by closing all Fabasoft Folio Web Client windows.
Using the Fabasoft Folio Web Client	The web client is divided into the following areas: <ul style="list-style-type: none"><li>• Home (starting page) The dashboard concept of the home area allows to show or hide widgets, change their size and move them.</li><li>• Top bar The buttons displayed depend on the configuration of the Folio installation.</li><li>• Tool area Up to three tool areas can be displayed next to each other (e.g. "Tree View", "Actions" and "Team").</li></ul>

	<ul style="list-style-type: none"> <li>• Title bar The title bar contains the breadcrumbs of the currently opened hierarchy.</li> <li>• Menu bar Menu commands are offered via the menu bar (hidden by default).</li> <li>• Content area The content area displays the content of the current object. This can be the content of a folder or the preview of a document, for example.</li> </ul>
Customizing the Fabasoft Folio Web Client	In the basic settings you can, for example, adjust the language of the Fabasoft Folio Web Client.
Multilingual User Interface	Fabasoft Folio is available in 22 languages:  Bulgarian, Chinese (simplified), German, English, French, Croatian, Indonesian, Italian, Japanese, Dutch, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Czech, Turkish and Hungarian

## 2.2 Accessibility

Accessibility is a basic concept of Fabasoft Folio. To enable working with assistive technologies like screen readers or screen magnifiers Fabasoft Folio follows following standards:

- Accessible Rich Internet Applications (WAI-ARIA) 1.0
- Web Content Accessibility Guidelines (WCAG) 2.1, Conformity Level AA
- ISO 9241-171:2008 Guidance on software accessibility

Following screen readers are recommended for the use with Fabasoft Folio:

- Microsoft Windows
  - NVDA (NonVisual Desktop Access) with Mozilla Firefox
  - JAWS 2023
- Apple iPhone/iPad
  - VoiceOver (Fabasoft App)
- Android
  - TalkBack (Fabasoft App)

**Note:** VoiceOver and TalkBack provide only a restricted support for WAI-ARIA. Consequently, the Fabasoft Folio web browser user interface cannot be used with these screen readers.

### Accessibility Exceptions

The following functionality is restricted or not accessible:

- BPMN Editor
- Document View
- Content of Widgets

- New Events in Teamrooms
- Adjusting Images
- Adjusting Screenshots (Support Button)
- Menus in List Cells
- Manual Sorting of Lists

You can find more information about the restrictions and alternatives in the user help in the chapter "Accessibility Exceptions".

## 2.3 Enterprise Content Management

Enterprise content management covers the basic functionality of managing objects, documents and metadata in Fabasoft Folio.

Use Case	Description
Creating and Deleting Objects	By creating objects, data (metadata and content) can be saved.
Copying and Moving Objects	Objects can be copied, pasted, cut, duplicated and removed. In object lists, it is generally possible to perform the described actions on several objects simultaneously.
Displaying and Editing Objects	<p>Fabasoft Folio objects are generally available to several users. To prevent an object from being changed by several users at the same time, the object is automatically locked during editing.</p> <p>The server-side conversion of content of certain formats (e.g. DOCX to PDF or PDF/A) is possible by integrating corresponding third-party products.</p>
Uploading, Scanning, Downloading and Synchronizing	<p>Files can be uploaded to or downloaded from Fabasoft Folio. The following options are available:</p> <ul style="list-style-type: none"> <li>• Uploading and downloading files, e-mails, contacts, events</li> <li>• Scanning of paper documents</li> <li>• Access via web folder (WebDAV)</li> <li>• Synchronizing with the file system</li> </ul>
Working with Documents	Documents in Fabasoft Folio are objects that contain a file. A document is saved using the saving function of the third-party product. The document is automatically uploaded to Fabasoft Folio via the Fabasoft Folio Client.
Working with Object Lists	A folder is a typical object with an object list. Object lists are mainly displayed in the content area.

Defining the View of Object Lists	Several views are available for object lists to meet the various requirements.
Performing a Search	A search can be performed to find objects and, for example, store them in a folder for further processing. In the search dialog, the search criteria are defined. The result list displays the objects that match your search criteria.  <b>Note:</b> The integration of Fabasoft Mindbreeze Enterprise or Mindbreeze InSpire enables full-text search in objects and content objects.
Working with Versions	Versions reflect the status of an object at a certain point in time. By creating versions, you can later return to a previous point in time and view the status of the object at that time. Several versions of an object can exist.  By using a release version, an explicit release status can be defined. Thus, only authorized users can access the current version.
Indexing Based on Terms (Thesaurus)	Fabasoft Folio supports extensive indexing of objects in the sense of terms, which enables topic-specific searches or researches using terms.
Templates and Template Collections	Templates allow reusing content and metadata of objects that are defined as templates. Nearly any object, but especially documents, can be used as templates.
Managing a Classification System	A classification system is a hierarchical arrangement of shelves, which define defaults for new business objects (short form, responsibilities, standard process and retention periods).
Configuring User Settings	Users can use the user settings to adapt Fabasoft Folio to their needs.
SAP Archiving	Fabasoft Folio enables the archiving of content from SAP in the product's content repository via the SAP ArchiveLink interface.

## 2.4 Collaboration

Collaboration is the joint work of several users on objects. The access rights of users or groups are defined via ACLs (Access Control Lists). Additionally, security levels can be assigned to define access. The rights concept is generally implemented on a customer-specific basis.

Use Case	Description
Access Rights	For each object, it is defined who is allowed to perform which action on the object. You will find the corresponding



	<p>settings for each object on the “Security” tab and optionally on the “Security Details” tabs.</p> <p>In general, access rights are already defined via the respective context.</p>
Audit Logs	Audit logs can be used to record access to properties and the execution of actions and applications.
Using a Teamroom	The Teamroom enables informal collaboration across departmental boundaries. A separate area in the Teamroom is available for the administration of the team. The simple access rights structure makes it easy to exchange documents within the team.
Using Newsfeeds in Teamrooms	With the newsfeed, you can keep your team members up to date with the latest news.
Using a Project	Projects can be used to manage the documentation of projects. Properties are available in the project to represent the project organization.
Involving a User via Workflow	Users can be included in the processing of business objects via workflow by prescribing an activity (for example, “Approve” or “For information”), which is consequently placed in the user’s work list.
Using Notifications	Via notifications, a user can be informed automatically about certain changes on subscribed objects.
Using Follow-Ups	When using the follow-up functionality an e-mail can be sent to a user or a process can be started at a particular time.
Fabasoft Folio Portlet	Fabasoft Folio provides a JSR-168 compliant portlet that allows integrating Fabasoft Folio applications into a website. Thus, collaboration with customers and partners via the Internet is possible.
RSS Feeds	Objects and events can be subscribed as RSS feeds. The user is informed about changes on these objects and events.

## 2.5 Contact Management

Fabasoft Folio supports the management of contacts. In addition to classic contact management in the context of file and business case management, a separate contact management app is also available.

### Classic Contact Management

Use Case	Description
Creating an Organization	An "Organization" is used to store the contact data of an external organization. Contact persons can be assigned to organizations.
Creating an Own Organization	An "Own Organization" is used to store the data of an internal organization. Employees can be assigned to own organizations.
Creating an Employee	An "Employee" is used to store the data of an in-house employee.
Creating a Contact Person	A "Contact Person" is used to store the contact data of an external contact person.
Displaying the Communication With a Person/Organization	For persons and organizations, the incoming and outgoing communication can be recorded.
Creating an Addressee List for Bulk Mailings	Addressee lists can be created for bulk mailings.

### Contact Management App

Use Case	Description
Dashboard	The contact management dashboard is the central access point to the contact management.  When a user is added to a contact management configuration, a dashboard is automatically created and placed on "Home". When a user is removed again, the dashboard is also removed.
Configuration	In the contacts configuration, contact administrators can define settings for the metadata of contacts and manage app users.
Contact Rooms	Contact rooms are used to manage contacts in a structured way and to define access rights and default categories.
Creating Contact Persons	A contact object is used to manage a contact's metadata.
Creating Organizations	An organization object is used to manage an organization's metadata.
Duplicate Check	When creating or changing contacts, the system checks whether a corresponding contact already exists. Duplicate matching is only performed with contacts that are accessible to the user performing the action. If a duplicate

	has been found, the contacts can be cleaned up or merged in a dialog.
Changing the Assignment of Contacts	Contacts can be assigned to another contact room.
Using Address Lists	Address lists can be created in a contact room (rights context). However, the contacts in address lists can be collected from different contact rooms.
Importing and Exporting Contacts	The import and export of contacts is possible in address lists. Contacts can be imported and updated using a CSV or XLSX file or exported as a CSV file.
Deleting Contacts	In order to delete a contact (put it in the wastebasket), change rights are required. If property values of the contact are assigned to another contact room, change rights are also required in this room.
Using Address Books	Access to contacts is also possible via third-party products such as "Apple Contacts", which support the CardDAV standard.
Serial E-Mails	Personalized e-mails to defined recipients from the contact management can be sent.

## 2.6 Business Process Management

The integrated workflow system is a core component of Fabasoft Folio.

Use Case	Description
Activities and Participants	Fabasoft Folio provides predefined activities and participants. Activities such as "Approve", add a signature to the object.
Executing an Ad Hoc Process	An ad hoc process allows the user to define the process flow by himself. Consequently, it can reacted flexibly to situations for which no predefined processes are available.
Executing a Predefined Process	Recurring processes can be efficiently represented with predefined processes.
Escalations	Escalation rules can be defined for activities. For example, a reminder e-mail can be sent if the start or completion date has been exceeded.
Work List	A central element of the workflow is the "work list", which lists the activities to be completed in the form of a "To Do"

	list. Processes are used to define who gets which activities in the work list and when.
Approval Processes	Approval processes comprise those process definitions and activity definitions that Fabasoft Folio provides as standard.
Business Processes With BPMN 2.0	The support of BPMN 2.0 (Business Process Model and Notation) allows you to model business processes and benefit from the advantages of a platform-independent notation. The created process diagrams can be directly executed with the Fabasoft Folio Workflow Engine.
Process Folder	The process folder allows to store processes in a structured way and link them with documents, participants and outputs. The processes can be viewed and analyzed from different angles.
Substitution	A user can be substituted by another user in a specific role and even personally. The substitute receives the same access rights for the role of the user who is being substituted.

## 2.7 Compliance Management

Fabasoft Folio allows to manage records, cases, incomings and outgoings in order to implement compliance in your organization.

Use Case	Description
Managing Business Objects in General	<p>Business objects include <i>Records</i>, <i>Cases</i>, documents (<i>Incomings/Outgoings</i>) and contents.</p> <p>Fabasoft Folio differentiates between recorded and not recorded business objects. Recorded business objects are those with an external effect and those that contain signed contents.</p> <p>Business objects can be in various states: "In Process", "Cancelled", "Suspended" and "Closed". Each state is linked to particular authorizations.</p>
Managing Incomings	<p>When recording content to an <i>Incoming</i>, metadata and recipients can be defined. For incomings that are not scanned or only partially scanned, only the metadata of the incoming and the location of the physical content must be entered.</p> <p>During registration, an incoming is assigned to a case or a record and, if necessary, prescribed to a responsible department via workflow.</p>

Managing Outgoings	The content of an outgoing can be sent to the addressees defined in the outgoing.
Managing Cases	A <i>Case</i> contains documents ( <i>Incomings</i> and <i>Outgoings</i> ) with a limited time horizon (for example, a project or a campaign). A <i>Case</i> is therefore a folder of documents with the same context.
Managing Records	A record comprises <i>Cases</i> and documents ( <i>Incomings</i> and <i>Outgoings</i> ) with a prolonged time horizon. A record is therefore a folder of documents and cases with the same context.
Incoming Invoice and Delivery Notes	Incoming invoices and delivery notes can be stored in business objects.
Contract	A contract stores documents and metadata.
Legal Hold	A legal hold can be defined for all objects that must be retained, for example, in the course of legal proceedings.  Objects with a defined legal hold cannot be deleted until the legal hold expired or has been removed.

## 2.8 Online Archiving

Fabasoft Folio provides online archiving of objects, contents and versions. On the one hand, rarely used data can be transferred from a production system to an archive system and on the other hand, a revision-safe long-term archiving system can be realized.

Use Case	Description
Archive Contents	All contents of the object are archived.
Archive Contents and Versions	All contents and versions of the object are archived.
Archive an Object Completely	If an object is completely archived, meta data, contents and versions are archived.
Archive a Version	A version of the object is archived.
Archive a Copy of a Version	A version of the object is archived as copy.
Load an Object From the Archive	Allows accessing an archived object.
Unload an Archived Object	Unloads an object that was loaded from the archive.
Restore an Archived Object	The archive marker is removed and the object can again be edited and searched.

Search for an Object in the Archive	To search for an object in the archive the standard search can be used.
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## 2.9 Customizing

You can adapt the Fabasoft Folio to your requirements by means of model-based customizing.

Use Case	Description
Dashboard	<p>The templates and presettings dashboard is the central access point to the customizing.</p> <p>When a user is added to a customizing configuration, a dashboard is automatically created and placed on "Home". When a user is removed again, the dashboard is also removed.</p>
Configuration	In the customizing configuration, app administrators can manage template collections, text module collections, form and category collections, process collections, presetting collections, general settings and app users.
Template Collections	Template collections are used to manage templates and define access rights.
Defining Templates	<p>Almost all objects can serve as templates. In addition, settings can be made in that are particularly relevant when using fields in Word templates.</p> <p>Text module placeholders can also be inserted in Word templates, which are replaced by the content of the text module when the template is instantiated.</p>
Using Templates	In the create dialog, the templates are displayed according to the grouping by the template categories. Templates without a template category are displayed under "Others". During creation, a copy of the template is created, which can be edited independently of the template.
Text Module Collections	<p>Text module collections are used to manage text modules and define access rights.</p> <p>Text modules can be used to insert predefined standard texts in Microsoft Word documents.</p>
Defining Text Modules	<p>There are two types of text modules:</p> <ul style="list-style-type: none"> <li>• Static Text Module (Text) Allows you to enter unformatted text.</li> </ul>

	<ul style="list-style-type: none"> <li>• Static Text Module (Word) Allows you to enter formatted text in a Word document.</li> </ul>
Using Text Modules	In Microsoft Word an own ribbon is provided that allows you to insert text modules.
Form and Category Collections	Form and category collections are used to manage user-defined forms and categories and to define access rights.
Defining and Using Forms and Categories	User-defined forms can be used to add fields to objects for storing application-specific data. Categories can be assigned to objects and thus influence the behavior of the objects.
Process Collections	Process collections are used to manage ad hoc process templates and BPMN process diagrams and to define access rights.
Defining Processes	There are two types of process templates: <ul style="list-style-type: none"> <li>• Ad Hoc Process Template</li> <li>• BPMN Process Diagram</li> </ul>
Using Processes	The defined processes are offered for selection when using processes (e.g. "Tools" > "Start New Process").
Presetting Collections	Presetting collections are used to manage presettings and to define access rights.
Defining Presettings	There are two types of presettings: <ul style="list-style-type: none"> <li>• Display Settings</li> <li>• Search Form</li> </ul>
Using Presettings	You can apply the display settings in lists. Search forms can be selected during a search (e.g. in a search folder).
Personal Templates, Processes and Presettings	Each user can define his own templates, processes and presettings in the "Personal Templates", "Personal Processes" and "Personal Presettings" area.

### 3 Interfaces and Development

Fabasoft Folio offers the following interfaces and options for developing customer-specific solutions.

#### Reports

Using the integration for BIRT (Business Intelligence and Reporting Tools) and Apache POI it is possible to generate reports directly from Fabasoft Folio.

## E-Services

E-service applications can be used via a portal (Liferay Portal) by external portal users via the Internet.

## Web Services

Fabasoft Folio provides web services that can be used by third-party applications to execute actions in Fabasoft Folio.

## CMIS (Content Management Interoperability Services)

The integration of the open and manufacturer-independent CMIS standard enables access to the folder structure and contents in Fabasoft Folio.

## Supported Protocols

Access to data in Fabasoft Folio is possible via the following protocols:

- WebDAV (Web-Based Distributed Authoring and Versioning)  
Provides access to the folder structure and contents in Fabasoft Folio.
- CalDAV (Calendar Distributed Authoring and Versioning)  
Provides access to calendars in Fabasoft Folio.
- CardDAV (vCard Extensions to WebDAV)  
Provides access to address books in Fabasoft Folio.

## Mass Import

Fabasoft Folio supports mass import of content via the COLD product technology.

## Composite Content Applications With Fabasoft app.ducx

Fabasoft app.ducx allows partners and customers to develop content based vertical applications (Composite Content Applications), for example to manage insurance claims or personnel files. These applications utilize all the advantages of Fabasoft Folio like scalability and platform independence. Fabasoft app.ducx fully integrates with Eclipse, a professional, freely available and platform independent development environment.

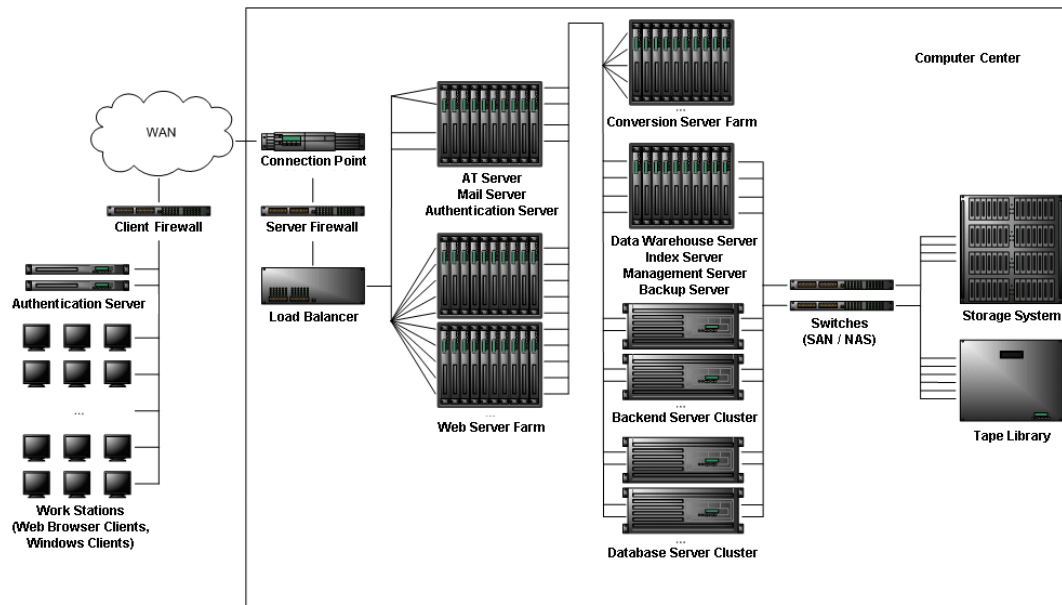
## 4 Installation and Handling

The following chapters describe the basic conditions for installing and operating Fabasoft Folio.

### 4.1 Fabasoft Reference Architecture

The Fabasoft reference architecture shows the exemplified infrastructure of a web based Fabasoft Folio installation:





## 4.2 Terminology

The terms of the reference architecture are explained in this chapter.

- Client  
Device or PC with graphical user interface.
- Client firewall  
The client firewall is designed to protect the client LAN from the corporate network.
- Corporate network  
A corporate network contains the whole network of a company.
- Connection point  
The connection point represents the handover point for the application and the location for service level measurements.
- Server firewall  
The server firewall is designed to protect the data center from the connection point.
- Load balancer, content switch  
The load balancer distributes requests from the user to the web server farm and thus to the Fabasoft Folio Web Services.
- DMZ firewall  
A DMZ firewall separates the portal server farm from data center.
- Portal server farm  
A portal server farm handles incoming HTTP requests from the Internet.
- Internet firewall  
An Internet firewall separates the portal server farm from the Internet.
- AT servers (Automated Tasks)  
AT servers run Fabasoft Folio AT Services for executing automated tasks in the context of a user without requiring user interaction.
- Mail server  
A mail server is responsible for sending e-mails in the background without any user interaction. On the mail server a SMTP mail server third-party product is installed.

- Web server farm  
The Web server farm consists of servers running Fabasoft Folio Web Services (business logic for applications and generation of on-screen representation).
- Conversion server farm  
The conversion server farm consists of servers running Fabasoft Folio Conversion Services (format conversion of documents).
- Frontend LAN  
The frontend LAN connects the load balancer to the web server farm.
- Backend LAN  
The backend LAN connects the web server with the backend server clusters and the conversion servers, plus the backend server cluster with the database server clusters. The backend LAN also connects the servers for basic services with the other servers.
- Backend server cluster  
The backend server cluster manages the persistence of business objects using Fabasoft Folio COO Services for structured data (in relational databases) and Fabasoft Folio MMC Services for unstructured data (documents, graphics, multimedia files in the file system).
- Database server cluster  
Relational database systems running on the database server cluster stores structured data in a database for each Fabasoft Folio COO Service.
- Storage area network (SAN)  
The SAN connects the backend cluster (saving documents in the file system) and the database cluster (saving database files) with the storage system.
- Storage system  
The (enterprise) storage system represents a highly available array of hard disks (capacity in the terabyte range).
- Tape library  
The tape library (tape robot) makes use of fast and reliable tape drives for saving data.

### 4.3 Fabasoft Folio Tenants

Fabasoft Folio Tenants allow a logical division of a Fabasoft Folio Domain, for example, to separate individual companies of a corporate group.

- With tenant-specific configurations, the behavior of the individual tenants can be customized.
- Tenants can be considered in the Fabasoft Folio permission system (ACLs). Thus, objects can be easily protected against access by users who only have roles for another tenant. However, it is also possible to grant a user access to objects of different tenants.

In order to use the functionality of Fabasoft Folio Tenants a multi-tenant license is required.

### 4.4 Conditions of Use

- All statements contained in this software product information concerning the intended use and conditions of operation of the program are understood as information only on principle. To ensure and guarantee the intended use and conditions of operation in everyday use of the program, expert training by specially qualified staff is recommended in any case.

- Performance and reaction time of Fabasoft software products significantly depend on the used infrastructure. For layout, configuration and sizing of the infrastructure we refer to the information, recommendations and specifications of the particular manufacturers.
- Without a suitable infrastructure for online backups a consistent backup of Fabasoft Folio resources is only possible within dedicated backup time slots (planned downtime). In both cases functionality for backup, restore and disaster recovery has to be implemented according to a separately defined concept.
- This program is intended for customary commercial use. This does not include usage that demands special requirements (like controlling of vehicles, machines and facilities, real-time applications).

## 4.5 Supported Platforms (Microsoft Windows Environment)

The following third-party products are supported in a Microsoft Windows environment.

### 4.5.1 Fabasoft Folio Management

If Fabasoft Folio Services have been installed on Microsoft Windows, for administering the Fabasoft Folio Services by means of Fabasoft Folio Server Management the following third-party products are supported.

Operating System	Architecture
Microsoft Windows 10 Enterprise	x64
Microsoft Windows 11 Enterprise	x64
Microsoft Windows Server 2019 Standard	x64
Microsoft Windows Server 2022 Standard	x64

### 4.5.2 Fabasoft Folio Backend Services

#### In General

- The Fabasoft Folio Backend Services are supported and tested with the reference system environments for database services according to the configurations listed below.
- Cluster operation of the system environments supported by Fabasoft Folio Backend Services is supported.
- When using an Oracle Database: Oracle Database can also be operated on system environments (operating systems) that do not correspond to the reference system environments listed below, if this is supported by Oracle.

#### Fabasoft Folio Backend Services

Operating System	Architecture
Microsoft Windows Server 2019 Standard or Microsoft Windows Server 2022 Standard	x64

<b>Microsoft Windows Data Access Component (when using Microsoft SQL Server)</b>
Microsoft Windows Data Access Component (WDAC) (part of Microsoft Windows Server)
<b>Oracle Instant Client (when using Oracle Database)</b>
Oracle Instant Client 19c (from 19.12.0.0.0) for Windows (x64)
<b>Software Requirements (all products)</b>
Microsoft .NET Framework 4.8
Eclipse Temurin OpenJDK 8 Update 392 (JRE, HotSpot)

### Database Services

Operating System	Architecture
Microsoft Windows Server 2019 Standard	x64
<b>Database</b>	
Microsoft SQL Server 2017 Enterprise	x64

Operating System	Architecture
Microsoft Windows Server 2022 Standard	x64
<b>Database</b>	
Microsoft SQL Server 2019 Enterprise	x64

Operating System	Architecture
Red Hat Enterprise Linux 8.8	x64
<b>Database</b>	
Oracle Database 19c Enterprise Edition (from 19.3.0.0.0) for Linux x86-64 with RAC	x64

### 4.5.3 Fabasoft Folio Web Services

Operating System	Architecture
Microsoft Windows Server 2019 Standard or Microsoft Windows Server 2022 Standard	x64

Software Requirements (all products)
Microsoft .NET Framework 4.8
Eclipse Temurin OpenJDK 8 Update 392 (JRE, HotSpot)

### 4.5.4 Fabasoft Folio Conversion Services

The prerequisites for Fabasoft Folio Web Services as well as the following additional requirements have to be considered for the operation of a Fabasoft Folio Web Service as a Fabasoft Folio Conversion Service.

Software Requirements
<b>Conversion of Microsoft Office documents:</b> Microsoft Office 2016 (x64) or Microsoft Office 2019 (x64) or Microsoft Office 2021 (x64)
Adobe Acrobat DC Pro (x86) or Ghostscript 10.01 (x64)
<b>Conversion of LibreOffice documents:</b> LibreOffice 6.4.7 (x86) <b>Note:</b> Conversion of Microsoft Office documents with LibreOffice is not supported.
<b>Conversion of videos:</b> FFmpeg 4.4 (x64)
<b>Conversion of CAD files (DWG, DXF):</b> QCAD 3.25 (x64)
<b>Extracting meta data:</b> ExifTool 12.60 (x64)

#### 4.5.5 Fabasoft Folio AT Services

Operating System	Architecture
Microsoft Windows Server 2019 Standard or Microsoft Windows Server 2022 Standard	x64

Software Requirements
Microsoft .NET Framework 4.8
Eclipse Temurin OpenJDK 8 Update 392 (JRE, HotSpot)
<b>Conversion of videos:</b> FFmpeg 4.4 (x64)

#### 4.5.6 Fabasoft iArchiveLink Services

Operating System	Architecture
Microsoft Windows Server 2019 Standard or Microsoft Windows Server 2022 Standard	x64

Software Requirements
Microsoft .NET Framework 4.8
Eclipse Temurin OpenJDK 8 Update 392 (JRE, HotSpot)
SAP ERP Central Component (ECC) 6.0 EHP 8
SAP Content Server HTTP Interface 4.7
Microsoft Visual C++ Redistributable 2019 and SAP GUI for Windows 7.40 (Fabasoft Folio Web Client with supported Microsoft Windows operating system)

#### 4.5.7 Fabasoft iArchive

Applications and Software Requirements
Integration for Dell EMC ECS

Dell EMC ECS 3.4
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**Note:** For the integration for Dell EMC ECS, the Centera SDK Version 3.3 is used.

#### 4.5.8 Fabasoft Folio Web Client

Operating System	Architecture
<b>Operating Systems With Long Term Support</b>	
Microsoft Windows 10 Enterprise 2021 LTSC	X64
<b>Operating Systems Without Long Term Support</b>	
Microsoft Windows 10 Enterprise <b>Note:</b> Microsoft Windows 10 Enterprise (22H2) has been tested explicitly. or Microsoft Windows 11 Enterprise <b>Note:</b> Microsoft Windows 11 Enterprise (22H2) has been tested explicitly.	X64

Supported Devices
<b>Device A</b>
Microsoft Windows 10 Enterprise or Microsoft Windows 11 Enterprise or Microsoft Windows 10 Enterprise 2021 LTSC
Microsoft Edge 119.0 (as desktop program) or Mozilla Firefox 119.0 (as desktop program) or Google Chrome 119.0 (as desktop program)

Applications and Software Requirements
<b>Display of PDF contents</b>
Adobe Acrobat Reader DC
<b>Integration for Autodesk AutoCAD</b>
Microsoft .NET Framework 4.8 Autodesk AutoCAD 2022 (x64)

or Autodesk AutoCAD 2023 (x64)
<b>Integration for HCL Notes</b>
HCL Notes 11.0
<b>Integration for LibreOffice</b>
LibreOffice 7.3.7
<b>Integration for Microsoft Editor</b>
Microsoft Editor (version corresponding to supported operating system)
<b>Integration for Microsoft Office</b>
Microsoft Excel 2019
Microsoft Outlook 2019
Microsoft PowerPoint 2019
Microsoft Word 2019 with adaptation of <a href="#">Microsoft Knowledge Base Article - 825765</a>
Microsoft Excel 2021
Microsoft Outlook 2021
Microsoft PowerPoint 2021
Microsoft Word 2021 with adaptation of <a href="#">Microsoft Knowledge Base Article - 825765</a>
Microsoft Excel 365 (Desktop Version)
Microsoft Outlook 365 (Desktop Version)
Microsoft PowerPoint 365 (Desktop Version)
Microsoft Word 365 (Desktop Version) with adaptation of <a href="#">Microsoft Knowledge Base Article - 825765</a>
<b>Integration for Microsoft Project</b>
Microsoft Project Professional 2019
Microsoft Project Professional 2021
<b>Integration for Microsoft Visio</b>
Microsoft Visio Professional 2019



Microsoft Visio Professional 2021
<b>Integration for Mozilla Thunderbird</b>
Mozilla Thunderbird 102
<b>Integration for Novell GroupWise</b>
Novell GroupWise 2014
<b>Folio Folder</b>
Local file system: NTFS 3.1 <b>Note:</b> Each Folio Folder is assigned to exactly one user and device. Therefore, it is not supported that several users synchronize in the same Folio Folder or that one user synchronizes from several devices in the same Folio Folder.

<b>Digital Signature</b>
<b>Supported Certificates</b>
PKCS#12
PKCS#7 (Soft Certificate)

#### 4.5.8.1 Limits

- A maximum of 10000 entries should be stored in an object list.
- The import of files in the attribute editor is carried out in a single transaction (also if several objects are selected and contents are sequentially imported in these objects via „Edit Properties“). The overall size of the imported data in Base64 coding has to be smaller than the configured maximum size of the request limit.

#### 4.5.9 Fabasoft Integration for Mindbreeze

Please note the specifications of Mindbreeze regarding system requirements.

<b>Software Requirements</b>
Fabasoft Mindbreeze Enterprise or Mindbreeze InSpire

**Note:**

- For the integration, the Mindbreeze SDK 2022 is used. According to the Mindbreeze software product information, versions can be used, that are supported by this SDK.
- The kernel-based integration for Mindbreeze is no longer supported.

#### 4.5.10 Fabasoft Integration for Fabasoft app.telemetry

Please note the specifications of Fabasoft app.telemetry regarding system requirements.

Software Requirements
Fabasoft app.telemetry

**Note:** For the integration, the Fabasoft app.telemetry SDK 2022 is used. According to the Fabasoft app.telemetry software product information, Fabasoft app.telemetry versions can be used, that are supported by this SDK.

#### 4.5.11 Support of Full-Text Search

Software Requirements
<b>Full-Text Search in Contents</b>
Fabasoft Mindbreeze Enterprise or Mindbreeze InSpire
<b>Full-Text Search in Meta Data</b>
Microsoft SQL Server 2017 Enterprise or Microsoft SQL Server 2019 Enterprise or Oracle Database 19c Enterprise Edition (from 19.3.0.0.0) for Linux x86-64 with RAC or Fabasoft Mindbreeze Enterprise or Mindbreeze InSpire

#### 4.5.12 Fabasoft E-Services

**Fabasoft E-Services support following portal server system environments:**

Additionally to the listed reference system environments portal servers are supported that support JSR 168 compliant portlets as well as the Java servlet 2.4 specification (or higher if backwards compatible to version 2.4).

Reference System Environment
Liferay Portal CE 7.4 GA51
Apache Tomcat 9.0.65
Eclipse Temurin OpenJDK 8 Update 392 (JRE, HotSpot)

Fabasoft E-Services support following client system environments:

Microsoft Windows Operating Systems
Microsoft Edge 119.0
Mozilla Firefox 119.0
Google Chrome 119.0
Linux Operating Systems
Mozilla Firefox 119.0
Apple macOS
Mozilla Firefox 119.0
Apple Safari 17.1
Google Chrome 119.0

## 4.6 Supported Platforms (Linux Environment)

The following third-party products are supported in a Linux environment.

### 4.6.1 Fabasoft Folio Management

#### Fabasoft Folio Web Management

If Fabasoft Folio Services have been installed on Linux, for administering the Fabasoft Folio Services by means of Fabasoft Folio Web Management the following third-party products are supported.

Software Requirements
Mozilla Firefox 102.5 ESR

#### Fabasoft Folio Server Management

If Fabasoft Folio Services have been installed on Linux, for administering the Fabasoft Folio Services by means of Fabasoft Folio Server Management the following third-party products are supported.

Operating System	Architecture
Microsoft Windows 10 Enterprise	x64
Microsoft Windows 11 Enterprise	x64
Microsoft Windows Server 2019 Standard	x64

Microsoft Windows Server 2022 Standard	x64
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## 4.6.2 Fabasoft Folio Backend Services

### In General

- The Fabasoft Folio Backend Services are supported and tested with the reference system environments for database services according to the configurations listed below.
- When using an Oracle database: Oracle Database can also be operated on system environments (operating systems) that do not correspond to the reference system environments listed below, if this is supported by Oracle.

### Fabasoft Folio Backend Services

Operating System	Architecture
Red Hat Enterprise Linux 8.8 or AlmaLinux 8.8 <b>Note:</b> Oracle Database is not supported when using AlmaLinux.	x64
Oracle Instant Client (when using Oracle Database)	
Oracle Instant Client 19c (from 19.13.0.0.0) for Linux x86-64	
Software Requirements	
OpenJDK 8 (JRE, headless, included in the supported operating system)	

### Database Services

Operating System	Architecture
Red Hat Enterprise Linux 8.8	x64
Database	
Oracle Database 19c Enterprise Edition (from 19.3.0.0.0) for Linux x86-64 with RAC	x64

Operating System	Architecture
Red Hat Enterprise Linux 8.8	x64
Database	
PostgreSQL 14.10	x64

Operating System	Architecture
AlmaLinux 8.8	x64
Database	
PostgreSQL 14.10	x64

#### 4.6.3 Fabasoft Folio Web Services

Operating System	Architecture
Red Hat Enterprise Linux 8.8 or AlmaLinux 8.8	x64

Software Requirements
OpenJDK 8 (JRE, headless, included in the supported operating system)

#### 4.6.4 Fabasoft Folio Conversion Services

The prerequisites for Fabasoft Folio Web Services as well as the following additional requirements have to be considered for the operation of a Fabasoft Folio Web Service as a Fabasoft Folio Conversion Service.

Software Requirements
Ghostscript 10.01 (x64)
<b>Conversion of LibreOffice documents:</b> LibreOffice 6.4.7 (x64) <b>Note:</b> Conversion of Microsoft Office documents with LibreOffice is not supported.
<b>Conversion of videos:</b> FFmpeg 4.4 (x64)
<b>Conversion of CAD files (DWG, DXF):</b> QCAD 3.25 (x64)
<b>Extracting meta data:</b> ExifTool 12.60 (x64)

#### 4.6.5 Fabasoft Folio AT Services

Operating System	Architecture
Red Hat Enterprise Linux 8.8 or AlmaLinux 8.8	x64

Software Requirements
OpenJDK 8 (JRE, headless, included in the supported operating system)
<b>Conversion of videos:</b> FFmpeg 4.4 (x64)

#### 4.6.6 Fabasoft iArchiveLink Services

Operating System	Architecture
Red Hat Enterprise Linux 8.8 or AlmaLinux 8.8	x64

Software Requirements
OpenJDK 8 (JRE, headless, included in the supported operating system)
SAP ERP Central Component (ECC) 6.0 EHP 8
SAP Content Server HTTP Interface 4.7
Microsoft Visual C++ Redistributable 2019 and SAP GUI for Windows 7.40 (Fabasoft Folio Web Client with supported Microsoft Windows operating system)

#### 4.6.7 Fabasoft iArchive

Applications and Software Requirements
<b>Integration for Dell EMC ECS</b>
Dell EMC ECS 3.4

**Note:** For the integration for Dell EMC ECS, the Centera SDK Version 3.3 is used.

#### 4.6.8 Fabasoft Folio Web Client

Operating System	Architecture
Ubuntu 20.04 (with Xorg window system)	x64

Supported Devices
Device B
Ubuntu 20.04
Mozilla Firefox 119.0

The following optional third-party products are supported.

Applications and Software Requirements
Display of PDF contents
Document Viewer (version corresponding to supported operating system)
Integration for Mozilla Thunderbird
Mozilla Thunderbird 102
Integration for LibreOffice
LibreOffice 6.4.7 <b>Note:</b> Document comparison is not supported.

##### 4.6.8.1 Limits

- A maximum of 10000 entries should be stored in an object list.
- The import of files in the attribute editor is carried out in a single transaction (also if several objects are selected and contents are sequentially imported in these objects via „Edit Properties“). The overall size of the imported data in Base64 coding has to be smaller than the configured maximum size of the request limit.

#### 4.6.9 Fabasoft Integration for Mindbreeze

Please note the specifications of Mindbreeze regarding system requirements.

Software Requirements
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Fabasoft Mindbreeze Enterprise or Mindbreeze InSpire
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**Note:**

- For the integration, the Mindbreeze SDK 2022 is used. According to the Mindbreeze software product information, versions can be used, that are supported by this SDK.
- The kernel-based integration for Mindbreeze is no longer supported.

#### 4.6.10 Fabasoft Integration for Fabasoft app.telemetry

Software Requirements
Fabasoft app.telemetry

**Note:** For the integration, the Fabasoft app.telemetry SDK 2022 is used. According to the Fabasoft app.telemetry software product information, Fabasoft app.telemetry versions can be used, that are supported by this SDK.

#### 4.6.11 Support of Full-Text Search

Software Requirements
Full-Text Search in Contents
Fabasoft Mindbreeze Enterprise or Mindbreeze InSpire
Full-Text Search in Meta Data
Oracle Database 19c Enterprise Edition (from 19.3.0.0.0) for Linux x86-64 with RAC or Fabasoft Mindbreeze Enterprise or Mindbreeze InSpire

#### 4.6.12 Fabasoft E-Services

**Fabasoft E-Services support following portal server system environments:**

Additionally to the listed reference system environments portal server are supported that support JSR 168 compliant portlets as well as the Java servlet 2.4 specification (or higher if backwards compatible to version 2.4).

Reference System Environment
Liferay Portal CE 7.4 GA51



Apache Tomcat 9.0.65
OpenJDK 8 (JRE, headless, included in the supported operating system)

Fabasoft E-Services support following client system environments:

<b>Microsoft Windows Operating Systems</b>
Microsoft Edge 119.0
Mozilla Firefox 119.0
Google Chrome 119.0
<b>Linux Operating Systems</b>
Mozilla Firefox 119.0
<b>Apple macOS</b>
Mozilla Firefox 119.0
Apple Safari 17.1
Google Chrome 119.0

#### 4.7 Supported Platforms (Apple macOS Environment)

The following third-party products are supported in an Apple macOS environment.

##### 4.7.1 Fabasoft Folio Web Client

Operating System	Architecture
Apple macOS 13.2	x64, Apple M

Supported Devices
<b>Device C</b>
Apple macOS 13.2
Apple Safari 17.1 or Mozilla Firefox 119.0 or Google Chrome 119.0

The following optional third-party products are supported.

<b>Applications and Software Requirements</b>
<b>Display of PDF contents</b>
Adobe Acrobat Reader DC
<b>Integration for Apple iWork</b>
Apple Pages 12.1
Apple Numbers 12.1
Apple Keynote 12.1
<b>Integration for CalDAV</b>
Apple Calendar 11.0
<b>Integration for LibreOffice</b>
LibreOffice 7.3.7 <b>Note:</b> Mail merge and document comparison is not supported.
<b>Integration for Microsoft Office for Mac</b>
Microsoft Excel 2021 for Mac
Microsoft Outlook 2021 for Mac
Microsoft PowerPoint 2021 for Mac
Microsoft Word 2021 for Mac <b>Note:</b> Mail merge is not supported.
<b>Folio Folder</b>
Local file system: HFS+ or APFS <b>Note:</b> Each Folio Folder is assigned to exactly one user and device. Therefore, it is not supported that several users synchronize in the same Folio Folder or that one user synchronizes from several devices in the same Folio Folder.

## 4.8 Supported Platforms (Mobile Devices)

The following third-party products are supported on mobile devices.

#### 4.8.1 Fabasoft Folio Web Client on Mobile Devices

Supported Devices
Tablets/Phones with iPadOS/iOS 17.1 Apple Safari (version corresponding to the supported operating system)
Tablets/Phones with Android 14.0 Google Chrome 119.0 (setting: mobile version)

Following use cases are supported on the mentioned mobile devices:

- Read and edit meta data of objects
- Read contents

#### 4.8.2 Fabasoft App

The Fabasoft App 8.5.0 (Android) or 8.5.0 (iOS) can be used with the Folio versions from 2021 to 2023. The full functionality of the app is available with the current Folio version.

Supported Devices
Tablets/Phones with iPadOS/iOS 17.1
Tablets/Phones with Android 14.0

#### 4.9 Additional Conditions

- The minimum hardware and software requirements for any future versions of this product may differ from the requirements of this version.
- A certain version of a third-party product integrated into any Fabasoft software product is supported by Fabasoft as long as the software product itself is supported by the third-party itself. For instance, a particular version of an integrated Microsoft software product is only supported by Fabasoft until the date on which the Microsoft “Extended Support Phase” for this product version ends.
- Third-party products that are required or supported by Fabasoft products, proper licensing and installation of them, necessary tests for product release as well as corresponding manufacturer support are not included in the scope of supply and services and therefore they are not subject to warranty of Fabasoft regarding functionality, mode of operation or features. Fabasoft is not responsible for errors or malfunction, which are caused by third-party software products and/or products that are not included in the scope of supply and services.
- Fabasoft software products are only supported and tested on the mentioned reference system environments. In addition to the third-party product editions listed in the reference system environments the editions listed in chapter “Supported Editions of Third-Party Products” are supported but not tested.
- The values for CPU, available RAM and free disk space are minimum requirements for a demo installation.
- Fabasoft Folio Services are supported and tested in virtual environments.

- The installation of Fabasoft Folio Services of different versions on a single computer is not supported.
- A mixed environment of different versions of Fabasoft Folio Services and Fabasoft Folio client components is not supported.
- A mixed environment of Fabasoft Folio Services on operating systems from different vendors (Microsoft Windows, Red Hat Enterprise Linux or AlmaLinux) is not supported. Fabasoft Folio Conversion Services are an exception. These have to run on Microsoft Windows or Linux corresponding to the document formats used and the third-party products necessary for it.
- Fabasoft Folio defines an SELinux policy (for RHEL and AlmaLinux) that provides access controls on operating system resources for Fabasoft Folio Services. The rules defined for a standard installation may need to be extended accordingly for project-specific use cases and configurations.
- When using Fabasoft Folio Services (x64), OpenJDK has to be installed in a 64 bit version, too.
- A conversion from PDF to PDF/A generates PDF/A-3b compatible documents.
- A conversion to PDF/A with Microsoft Office or LibreOffice Writer generates PDF/A compatible documents corresponding to the third-party product.
- A conversion with Adobe Acrobat can either only generate PDF documents or only generate PDF/A documents.
- Only watched folders are supported for the conversion with Adobe Acrobat.
- Fabasoft DTS Gateway version 4.9 is supported.
- Opening documents via Citrix Virtual Apps and Desktops 7 1903 is supported as long as all applications are running on the server (incl. Fabasoft Folio Client, Explorer, web browser etc.) or all applications are running on the client.
- Editing of Microsoft Office documents with LibreOffice and editing LibreOffice documents with Microsoft Office is not supported.
- The integration in Microsoft Office (buttons) is only available under Microsoft Windows.
- The contact synchronization requires Microsoft Outlook 2019 or 2021.
- The drag and drop functionality is only partially available for Microsoft Edge, Mozilla Firefox, Google Chrome and Apple Safari.
- The copy and paste functionality is not available in Ubuntu when using SMB shares.
- Video and audio files are not playable on all supported web browsers depending on the format.
- The BPMN editor provides only a read-only mode on mobile devices.
- The Fabasoft Folio client components are only supported on operating systems for which they were developed. If a client component is provided for multiple operating systems, the functionality may vary depending on the operating system.

#### 4.9.1 Supported Editions of Third-Party Products

Following editions of third-party products are supported. Explicitly tested are only those editions that are listed in the reference system environments.

- The third-party product Microsoft Windows Server 2019 is supported in the following editions: Essentials and Standard. The Datacenter edition is only supported in projects (the following values for CPU, available RAM and free disk space do not apply for Datacenter Edition).
- The third-party product Microsoft Windows Server 2022 is supported in the following editions: Essentials and Standard. The Datacenter edition is only supported in projects (the following values for CPU, available RAM and free disk space do not apply for Datacenter Edition).
- The third-party product Microsoft SQL Server 2017 is supported in the following editions: Standard and Enterprise.
- The third-party product Microsoft SQL Server 2019 is supported in the following editions: Standard and Enterprise.
- The third-party product Microsoft Windows 10 is supported in the following editions: Pro and Enterprise.
- The third-party product Microsoft Windows 11 is supported in the following editions: Pro and Enterprise.
- The third-party product Red Hat Enterprise Linux 8.8 (x64) is additionally supported in the following edition: Advanced Platform.

#### 4.9.2 Authentication Possibilities

##### Microsoft Windows System Environment

Following authentication possibilities are provided for Fabasoft Folio Web Services:

- Kerberos (Microsoft Active Directory)
- LDAP
- Project-specific authentication (`REMOTE_USER` server variable)  
**Note:** Use cases that require password verification are not supported with project-specific authentication (e.g. electronic signature).
- SAML 2.0  
 When using this authentication method third-party products have to transfer the cookies for each request to the web server. Therefore, the access via WebDAV is not supported. This authentication method implements the "SAML Web Browser SSO Profile". "SAML AuthnRequest responses" must be signed.  
 The following SAML identity providers are supported:
  - Shibboleth IdP 4.2.1 (<http://shibboleth.net/>)
- OAuth 2.0 Draft 25, Bearer Tokens Draft 18  
 "Refresh Tokens" are not supported.

##### Linux System Environment

Following authentication possibilities are provided for Fabasoft Folio Web Services:

- Kerberos (Microsoft Active Directory or MIT Key Distribution Center)
- LDAP
- Project-specific authentication (`REMOTE_USER` server variable)  
**Note:** Use cases that require password verification are not supported with project-specific authentication (e.g. electronic signature).
- SAML 2.0  
 When using this authentication method third-party products have to transfer the cookies for

each request to the web server. Therefore, the access via WebDAV is not supported. This authentication method implements the "SAML Web Browser SSO Profile". "SAML AuthnRequest responses" must be signed.

The following SAML identity providers are supported:

- Shibboleth IdP 4.2.1 (<http://shibboleth.net/>)
- OAuth 2.0 Draft 25, Bearer Tokens Draft 18  
"Refresh Tokens" are not supported.

### 4.9.3 Minimum Requirements

#### Fabasoft Folio Services

Architecture	CPU	RAM	Disk Space
x64	2,0 GHz	4 GB	5 GB

#### Fabasoft Clients

Architecture	CPU	RAM	Disk Space
x64	1,6 GHz	1 GB	100 MB

### 4.9.4 Limits

#### Server Limits

- A Fabasoft Folio Domain or tenant can consist of a maximum of 255 Fabasoft Folio COO Stores.
- A Fabasoft Folio Backend Service can run a maximum of 10000 client connections at the same time.
- A maximum of 16 million objects can be created in a Fabasoft Folio Store.
- A maximum of 65534 tenants can be created in a Fabasoft Folio Domain.
- A maximum of 120 worker-threads can be created in a Fabasoft Folio Backend Service.

The specified limits can be reduced by operating system limitations.

#### Fabasoft Folio Kernel Limits

- A Fabasoft Folio Kernel can run a maximum of 1000 service connections at the same time.
- A Fabasoft Folio Kernel can process a maximum of 1000 open connections.
- In one process a maximum of one Fabasoft Folio Kernel can run.
- A Fabasoft Folio Kernel can run a maximum of 1024 threads.
- A Fabasoft Folio Kernel can connect directly to a maximum of one Fabasoft Folio Domain.

The specified limits can be reduced by operating system limitations.

#### Limits

- A maximum of 10000 entries should be stored in an object list.
- A maximum of 10000 hits can be displayed at once in the Fabasoft Folio search GUI.

## 4.9.5 Updates

An existing installation of Fabasoft Folio 2013 or higher is required to perform an update.

## 4.10 Application Performance Management

With Fabasoft app.telemetry a powerful tool for effective application service level management is provided.

Fabasoft app.telemetry collects detailed performance data from data flows and response time behavior (performance) for distributed software applications and facilitates the analysis of these data in the context of the respective operating steps (use cases). Fabasoft app.telemetry reproduces a user enquiry through servers and locations and collects detailed information about each involved application (service). Such information is, e.g., the execution time, the retention time within a service or item (query) and the duration of a database query. Thereby Fabasoft app.telemetry details the respective system path. This enables the service team to immediately identify critical points in terms of time.

Fabasoft app.telemetry also provides users with the possibility to report unsatisfactory system queries. The most recent queries are then automatically summarized and made available for immediate analysis.

Fabasoft app.telemetry raises the level of corporate efficiency through immediate identification of bottlenecks in the IT systems. Particularly complex and service-oriented architectures profit from the Fabasoft app.telemetry targeted identification of performance and resource bottlenecks, as they can be rapidly isolated and repaired.

The software also provides a complete overview of all performed queries. Data such as the query execution time are prepared jointly with application specific information and are available immediately for an analysis of the overall situation.

Fabasoft app.telemetry also performs classic system management functions. The software monitors cluster resources or services as well as observes SNMP values (Simple Network Management Protocol), performance data or availability checks.

### **Fabasoft app.telemetry SDK**

Fabasoft app.telemetry SDK (Software Development Kit) provides a simple and quick-to-use interface for applications. It enables software developers to easily integrate their applications into the Fabasoft app.telemetry.