White Paper
An Introduction to Fabasoft Folio

Fabasoft Folio 2020 Update Rollup 1
### Contents

1 Introduction ........................................................................................................ 7
   1.1 What Is Fabasoft Folio? ............................................................................. 7
   1.2 Benefits of Fabasoft Folio ........................................................................ 7
   1.3 Fabasoft Folio Editions ............................................................................ 7
      1.3.1 Fabasoft Folio Enterprise ................................................................ 8
      1.3.2 Fabasoft Folio Compliance .............................................................. 8
      1.3.3 Fabasoft Folio Governance .............................................................. 9
   1.4 The Fabasoft Software Product Portfolio ............................................... 9
      1.4.1 Fabasoft app.ducx ........................................................................... 9
      1.4.2 Fabasoft app.test ........................................................................... 9
      1.4.3 Fabasoft app.telemetry .................................................................. 10
      1.4.4 Fabasoft Mindbreeze Enterprise ...................................................... 10
   1.5 Who Should Read This Document? ............................................................ 10

2 Fabasoft Folio Basics ....................................................................................... 10
   2.1 Fabasoft Folio Architecture .................................................................... 11
   2.2 Fabasoft Folio Installation ....................................................................... 12
   2.3 The Fabasoft Folio Workspace .................................................................. 12
      2.3.1 Logging in to Fabasoft Folio ............................................................ 12
      2.3.2 Portal .............................................................................................. 13
      2.3.3 Fabasoft Folio Desk ......................................................................... 13
      2.3.4 User Environment ......................................................................... 14
      2.3.5 Roles ............................................................................................... 14
   2.4 Mobility ..................................................................................................... 15
      2.4.1 Folio Folder ...................................................................................... 15
      2.4.2 Mobile Clients ................................................................................ 16
   2.5 Accessibility .............................................................................................. 17
      2.5.1 Screen Reader Support .................................................................... 17
      2.5.2 Keyboard Support .......................................................................... 18
      2.5.3 Support for Low Vision Users ........................................................ 18

3 Enterprise Content Management ..................................................................... 18
   3.1 Working with Objects .............................................................................. 18
      3.1.1 What Is an Object? ......................................................................... 18
      3.1.2 What Is an Object Class? ................................................................. 18
      3.1.3 Creating, Deleting and Restoring Objects ........................................ 19
      3.1.4 Viewing and Editing Objects ............................................................ 20
      3.1.5 Working with Object Lists ............................................................... 20
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.6</td>
<td>Working With Documents</td>
<td>25</td>
</tr>
<tr>
<td>3.1.7</td>
<td>Searching for Objects</td>
<td>26</td>
</tr>
<tr>
<td>3.1.8</td>
<td>Copying, Pasting and Duplicating Objects</td>
<td>27</td>
</tr>
<tr>
<td>3.2</td>
<td>Importing and Exporting Contents</td>
<td>27</td>
</tr>
<tr>
<td>3.2.1</td>
<td>Importing Contents from the File System</td>
<td>27</td>
</tr>
<tr>
<td>3.2.2</td>
<td>Capturing Contents from an Office or E-Mail Application</td>
<td>28</td>
</tr>
<tr>
<td>3.2.3</td>
<td>Exporting Content</td>
<td>29</td>
</tr>
<tr>
<td>3.2.4</td>
<td>Digital Assets</td>
<td>30</td>
</tr>
<tr>
<td>3.2.5</td>
<td>Web Folders</td>
<td>31</td>
</tr>
<tr>
<td>3.3</td>
<td>Security and Access Control</td>
<td>31</td>
</tr>
<tr>
<td>3.3.1</td>
<td>Security Levels</td>
<td>32</td>
</tr>
<tr>
<td>3.3.2</td>
<td>Access Control Lists</td>
<td>32</td>
</tr>
<tr>
<td>3.3.3</td>
<td>Granting Permissions to Individuals and Groups</td>
<td>33</td>
</tr>
<tr>
<td>3.3.4</td>
<td>Document Encryption</td>
<td>33</td>
</tr>
<tr>
<td>3.4</td>
<td>Reporting</td>
<td>33</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Active Reports</td>
<td>33</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Relational Reports</td>
<td>33</td>
</tr>
<tr>
<td>3.4.3</td>
<td>BIRT Report</td>
<td>33</td>
</tr>
<tr>
<td>3.4.4</td>
<td>Apache POI</td>
<td>34</td>
</tr>
<tr>
<td>3.5</td>
<td>Integration of Third-Party Products</td>
<td>35</td>
</tr>
<tr>
<td>3.5.1</td>
<td>SAP</td>
<td>36</td>
</tr>
<tr>
<td>3.6</td>
<td>Interfaces</td>
<td>36</td>
</tr>
<tr>
<td>3.6.1</td>
<td>Web Service Interfaces</td>
<td>36</td>
</tr>
<tr>
<td>3.6.2</td>
<td>JSON</td>
<td>37</td>
</tr>
<tr>
<td>3.6.3</td>
<td>CMIS</td>
<td>37</td>
</tr>
<tr>
<td>3.6.4</td>
<td>WebDAV</td>
<td>37</td>
</tr>
<tr>
<td>3.6.5</td>
<td>CalDAV</td>
<td>38</td>
</tr>
<tr>
<td>3.6.6</td>
<td>Friendly URLs</td>
<td>38</td>
</tr>
<tr>
<td>3.7</td>
<td>Versioning</td>
<td>38</td>
</tr>
<tr>
<td>3.7.1</td>
<td>Tracking Changes</td>
<td>39</td>
</tr>
<tr>
<td>3.7.2</td>
<td>Release Versions</td>
<td>39</td>
</tr>
<tr>
<td>4</td>
<td>Collaboration</td>
<td>40</td>
</tr>
<tr>
<td>4.1</td>
<td>Granting Permissions to Other Users</td>
<td>40</td>
</tr>
<tr>
<td>4.2</td>
<td>Teamrooms</td>
<td>41</td>
</tr>
<tr>
<td>4.3</td>
<td>Newsfeed</td>
<td>43</td>
</tr>
<tr>
<td>4.4</td>
<td>Calendar</td>
<td>43</td>
</tr>
<tr>
<td>4.5</td>
<td>Notifications and History</td>
<td>43</td>
</tr>
<tr>
<td>4.6</td>
<td>Hyperlinks</td>
<td>45</td>
</tr>
<tr>
<td>4.7</td>
<td>The Project Folder</td>
<td>46</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>4.8 Sharing Objects via E-Mail</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>4.9 Term-Based Tagging of Objects (Thesaurus)</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>4.10 Search Folders and Selections</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>4.10.1 Search Folders</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>4.10.2 Selections</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>4.11 Templates</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>4.11.1 Template Collections</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>5 Relationship Management</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>5.1 Organizations</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>5.2 Persons</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>5.2.1 Object Roles</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>5.3 Address Management</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>5.4 Importing Contacts</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td>5.5 Bulk E-Mailings and Mail Merge</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>5.5.1 Dispatch Type</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>5.5.2 Body for a Mailing</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>5.5.3 Attachments</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>5.5.4 Fair Copies</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>5.5.5 Fields and Document Properties</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>6 Business Process Management</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>6.1 Processes and Activities</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>6.2 Ad Hoc Workflow</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>6.3 The Worklist</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>6.4 Access Control in Workflows</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>6.5 Workflow Notifications</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>6.6 Escalations</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>6.7 Substitutions</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>6.8 Business Processes With BPMN 2.0</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>6.9 Process Folder</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>7 Compliance Management</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>7.1 Overview</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>7.2 General Features of Business Objects</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>7.2.1 Numbering</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>7.2.2 Recorded Business Objects</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>7.2.3 Processing State</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>7.2.4 Life Cycle Rules</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>7.2.5 Document Category</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>7.2.6 Access Definitions</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>7.2.7 Remarks</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>7.3 Documents</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>7.3.1 Registering Contents to a Document</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>7.3.2 Addressees</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>7.3.3 Document Overview</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>7.4 Versions</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>7.5 Records and Cases</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>7.6 Auditing</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>7.7 Audit-proof archiving</td>
<td>67</td>
<td></td>
</tr>
<tr>
<td>7.8 Legal Hold</td>
<td>68</td>
<td></td>
</tr>
</tbody>
</table>
1 Introduction

This document is an introductory guide to Fabasoft Folio. It explains the technological concepts behind Fabasoft Folio, and presents numerous examples for providing you with the background knowledge allowing you to employ Fabasoft Folio in the most efficient way for solving your business problems.

1.1 What Is Fabasoft Folio?

Fabasoft Folio is part of the Fabasoft software product portfolio. In combination with Fabasoft app.ducx (an abbreviation for “digital use case execution”), Fabasoft app.test, Fabasoft app.telemetry and Fabasoft Mindbreeze Enterprise it is the ideal platform for composite content applications (CCAs), providing everything you need for designing, implementing, testing, hosting, and administering CCAs. Fabasoft software products support the entire content life cycle, allowing you to reduce your time to value so you can accomplish more with less effort and less resources.

1.2 Benefits of Fabasoft Folio

Fabasoft Folio is a versatile enterprise content platform offering the following key benefits:

- Fabasoft Folio is a fully-fledged, extensible, highly customizable, and rock solid enterprise content management platform supporting the entire content life cycle.
- With its integrated workflow engine, Fabasoft Folio covers all your business process management needs.
- Fabasoft Folio supports both Microsoft Windows and Linux platforms along with an open source application software stack.
- The Fabasoft reference architecture stands for availability and scalability, no matter if your Fabasoft Folio Domain supports a hundred users or a hundred thousand users.
- Fabasoft Folio is one of the leading software platforms in terms of compliance, security, transparency, extensibility, and integrability.
- The single instance content store allows you to reduce your costs, because identical copies of the same data are only stored once on your server's hard drives.
- Fabasoft Folio is available in over twenty languages, and provides extensive localization support.
- As the resilient content backbone for vertical business applications created with the Fabasoft app.ducx development platform, Fabasoft Folio allows for a significant reduction in time to value when implementing and integrating vertical business applications, enterprise portals, and e-services with Fabasoft app.ducx.
- Fabasoft Mindbreeze Enterprise integrates seamlessly with Fabasoft Folio to provide enterprise search capabilities.

1.3 Fabasoft Folio Editions

Fabasoft offers three editions of Fabasoft Folio to suit your needs in an optimal manner. This section provides a concise overview of the different Fabasoft Folio editions.

For a detailed listing of the features and requirements provided by each of the editions of Fabasoft Folio refer to the software product information “Fabasoft Folio”.
Via the Fabasoft Cloud (www.fabasoft.com) it is possible to have a look at Fabasoft Folio and to try a range of Fabasoft Folio’s features.

1.3.1 Fabasoft Folio Enterprise

• Process-oriented access control
• Easily customizable, extensible and scalable
• Single instance content store
• Support for up to 100,000 users and distributed, heterogeneous environments
• Full-text search with Fabasoft Mindbreeze Enterprise
• Connector to SAP (Fabasoft iArchiveLink)

Fabasoft Folio Enterprise is the extensible and scalable enterprise content and business process management platform for enterprise applications tailored to your business needs.

Implementing your business processes with Fabasoft Folio Enterprise leads to improved quality, productivity, speed and security in your organization, and provides for deadlines, automatic exception handling and process path optimization. A sophisticated access rights system safeguards your sensitive business data from unauthorized access.

Fabasoft Folio Enterprise is Fabasoft’s comprehensive base edition covering your enterprise document management, collaboration, business process management and relationship management requirements as well as providing a powerful content repository and cutting-edge Enterprise 2.0 features.

1.3.2 Fabasoft Folio Compliance

• Archive objects, versions and contents
• Single instance content store in archives
• Transfer content and metadata to cost-effective archive media
• Revision-safe long term archiving
• Content life cycle and retention management
• Full-text search in archives with Fabasoft Mindbreeze Enterprise
• Restore archived content to the production system

Fabasoft Folio Compliance is focused on providing compliance management and online archiving of objects, content and versions. Transparent for users, your enterprise data is written on cost-effective and auditable archive-media. Fabasoft Folio Compliance enables single instance storage of content independently from the chosen archive media by using a high performance resilient content store. This results in significant cost reductions for administration, backup and restore as well as for operations management.

Archived documents and metadata can be restored into the production system according to the configured access rights. Additionally, Fabasoft Folio Compliance also supports the reuse of data within your system for further processing. Automatic version management ensures complete traceability of changes within your organization.

Fabasoft Folio Compliance extends the Fabasoft Folio Enterprise edition with a sophisticated and seamlessly integrated archiving system that enables you to manage your content in a traceable, compliant, and verifiable way.
Fabasoft iArchive as integrated part of Fabasoft Folio Compliance provides for the revision-safe long term archiving of content on auditable and cost-efficient archive media. Featuring single instance store technology, Fabasoft iArchive allows for significant cost reductions and performance gains.

1.3.3 Fabasoft Folio Governance

- Electronic records management
- Corporate governance
- MoReq2 certified

Fabasoft Folio Governance extends the Fabasoft Folio Compliance edition with exhaustive electronic records management (ERM) capabilities covering your organization's corporate governance needs. Fabasoft Folio Governance is the world's first MoReq2 certified records management solution, compliant with MoReq2's comprehensive framework of over 700 records management use cases.

1.4 The Fabasoft Software Product Portfolio

In addition to Fabasoft Folio, the following software products briefly presented in this section are also part of the Fabasoft software product portfolio.

1.4.1 Fabasoft app.ducx

- Development platform for Fabasoft Folio
- Fully integrated with Eclipse
- Comprehensive life cycle management
- Platform independent

Fabasoft app.ducx is the use case based development environment for building business applications based on the powerful, reliable, and highly scalable Fabasoft Folio software platform.

Fabasoft app.ducx has been specifically designed to cover the application life cycle management (ALM) needs of our development partners, supporting you throughout the entire software development life cycle. The efficient implementation of business applications based on Fabasoft Folio is facilitated by domain-specific languages that immediately become familiar to Java, C# and C++ developers.

As a result, developers can create robust business applications tailored to your business needs quickly and more efficiently.

1.4.2 Fabasoft app.test

- Automated testing of business applications based on Fabasoft Folio
- Fully integrated with Eclipse
- Platform independent

Fabasoft app.test enables the convenient automated testing of business applications implemented using Fabasoft app.ducx. Featuring an intuitive and easy to use interface, the Fabasoft app.test workbench, which is fully integrated with Eclipse, allows you to identify and eliminate issues early in the software development life cycle to reduce development costs.
1.4.3 Fabasoft app.telemetry

- Application service level management
- Service access statistics
- Use case tracking

Fabasoft app.telemetry is a professional system and application management tool for monitoring and managing your hardware and software infrastructure as well as for maintaining your defined application service levels.

Using this revolutionary measuring and profiling software, you can record and analyze the activities of any software application at runtime spanning all layers of the Fabasoft reference architecture. This allows you to evaluate the effects of hardware, software and configuration changes and to address resource bottlenecks and stability issues systematically, quickly and efficiently.

1.4.4 Fabasoft Mindbreeze Enterprise

- Enterprise search
- Simple integration of business applications
- Actionable information

Fabasoft Mindbreeze Enterprise is an intuitive, robust, and scalable enterprise search software for finding information within your enterprise's data sources. Fabasoft Mindbreeze Enterprise supports a plethora of information sources such as file systems, mail servers (Microsoft Exchange, IBM Notes, Novell GroupWise), intranets and internet sites, deep web portals as well as business applications integrated with the Mindbreeze Integration Framework.

Producing only relevant search results, Fabasoft Mindbreeze Enterprise also features so-called actionable information allowing you to invoke actions on search results directly from within the result list so that you can use the functionality provided by different business applications from directly within Fabasoft Mindbreeze Enterprise.

1.5 Who Should Read This Document?

This compact guide was created as an overview of Fabasoft Folio geared towards a broad audience. It provides managers and decision makers with a synopsis of the features, capabilities, and benefits of Fabasoft Folio. New users can use the document as a concise getting started guide of Fabasoft Folio's possibilities.

For your convenience, the cutting-edge concepts and technologies implemented in Fabasoft Folio are explained in great detail throughout the document along with a vast array of practical examples. Additionally, the document provides numerous references to further literature and documentation.

2 Fabasoft Folio Basics

This chapter presents an overview of the architecture of Fabasoft Folio and explains the basic features of the Fabasoft Folio workspace that you need to know to get started.
2.1 Fabasoft Folio Architecture

The Fabasoft software product family is based on Fabasoft Folio technology, which provides the robust, modular, extensible, distributed, and highly scalable technological foundation for Fabasoft software platforms.

You can use a standard web browser to access Fabasoft Folio. When you interact with Fabasoft Folio, your web browser sends requests to the Fabasoft Folio Web Services, which are hosted by the Microsoft Internet Information Services or by the Apache HTTP Server.

The Fabasoft Folio Web Services host the Fabasoft Folio Kernel, which provides access to the object model of Fabasoft Folio. The Fabasoft Folio Kernel is also responsible for access protection, caching, transaction handling, and the invocation of methods.

The Fabasoft Folio Kernel communicates with the Fabasoft Folio Backend Services, providing access to data stored in the single instance content backbone of Fabasoft Folio.

The Fabasoft Folio Conversion Services allow for the conversion of content between different formats. For example, if you request the conversion of content in Microsoft Word format into PDF content, the Fabasoft Folio Web Services forward your request to the Fabasoft Folio Conversion Services, which then carry out the conversion and return the PDF content.

A Fabasoft Folio Domain is a logical construct comprised of Fabasoft Folio Web Services, Fabasoft Folio Conversion Services, and Fabasoft Folio Backend Services. In addition, the optional Fabasoft Folio AT Services (for processing automated tasks in the background), Fabasoft iArchive Services (providing an interface to archiving systems) and Fabasoft application integration services (e.g. Fabasoft iArchiveLink Services) may be added to a Fabasoft Folio Domain.

The next figure shows a simplified schematic illustration of the architecture of a Fabasoft Folio Domain for small and mid-sized installations. More complex implementations of the Fabasoft reference architecture can support up to 100,000 users.
2.2 Fabasoft Folio Installation

For an easy and user-friendly installation of Fabasoft Folio a wizard-driven setup is provided. The wizard leads you through the individual installation and configuration steps of Fabasoft Folio and offers predefined settings.

![Fabasoft Folio Setup](image)

For a detailed walkthrough of how to install Fabasoft Folio in a Microsoft Windows environment refer to the white paper “Fabasoft on Microsoft Windows - Installation of Fabasoft Folio Services”. For an installation guide describing the installation of Fabasoft Folio under Linux refer to the white paper “Fabasoft on Linux - Installation of Fabasoft Folio Services”.

2.3 The Fabasoft Folio Workspace

2.3.1 Logging in to Fabasoft Folio

Each user is required to authenticate themself when connecting to Fabasoft Folio. Only users with valid credentials are allowed to log in to Fabasoft Folio.

However, this authentication may be transparent to you so that you do not need to enter a username and a password.

The following authentication possibilities are available:

- Kerberos (Microsoft Active Directory)
- LDAP
• Project-specific authentication (REMOTE_USER server variable)
• SAML 2.0
• OAuth 2.0 Draft 25, Bearer Tokens Draft 18

2.3.2 Portal

When you start the Fabasoft Folio Web Client, you are taken to your portal (see the next figure). The default Fabasoft Folio portal consists of the “Tasks” pane, the “Desktop” pane and the “Sent” pane:

• In the upper area of the “Tasks” pane, your worklist (described in chapter 6.3 “The Worklist”) is displayed. The lower area displays your Fabasoft Folio desktop.
• The Desktop pane simply displays your Fabasoft Folio desktop.
• The Sent pane displays sent invitations to Teamrooms.

To switch between different panes of a portal, click the desired pane in the header bar.

You can customize your portal by adding new panes. To customize your portal, select a folder or a hyperlink and drag it into the portal panes area.

Using Fabasoft app.ducx, developers can create custom Fabasoft Folio portals. In addition, the portal integration of Fabasoft Folio allows you to create portlets that can be deployed on a JSR 168 compliant portal server (e.g. Liferay Portal). For further information on Fabasoft Folio portal integration refer to the white paper “Fabasoft Folio Portlet”.

2.3.3 Fabasoft Folio Desk

The Fabasoft Folio desk allows you to create, access, and browse your objects.
The tree view on the left-hand side of your portal displays the elements on your desk in a hierarchical structure. You can navigate through folders and subfolders within the tree view. The right-hand side displays the object lists of the object selected in the tree view.

It is also possible to invoke a search for folders (and its subfolders) based on their names directly within the tree view.

![Image of tree view and object lists](image)

Figure 4: Searching within the tree view

### 2.3.4 User Environment

The user environment is used for storing the user language, the portal displayed to the user, and other user-specific settings concerning Fabasoft Folio.

Each user must have assigned at least one user environment to be able to log in to Fabasoft Folio. However, a user can also have more than one user environment.

For certain use cases or tasks it may be easier to simply switch between user environments instead of changing the user settings all the time.

### 2.3.5 Roles

In Fabasoft Folio, a role is defined as the position of a user in a group.

Multiple roles can be associated with a user. However, a user can only work in the context of one single role at a time.

**Example**

Assuming that David Porter is the head of the marketing & sales group, this role would be associated by defining that he has the position *Head* in the *Marketing & Sales* group.

Your current role influences your permissions and defines the following:
• which objects a user can create
• which actions and use cases can be invoked on an object by a user
• which objects can be accessed by a user
• the group assigned to new objects created by the user

Figure 5: Selecting a role

You can change your current role by selecting the desired role from the list of roles available to you, which is displayed when clicking on your name in the header bar (see previous figure).

2.4 Mobility

Nowadays mobility is a central aspect in business world. It is becoming more and more important to act quickly and to be able to access your documents and data anywhere and anytime. Therefore Fabasoft Folio offers offline functionality via the Folio Folder as well as Apps for smartphones and tablets. Additionally, Fabasoft Folio is optimized for mobile web browsers on tablets.

2.4.1 Folio Folder

The Folio Folder recreates the folder structure of the Fabasoft Folio Web Client in the file system and thereby provides the possibility to synchronize content that is stored in Fabasoft Folio with your local work stations. Hence the data is available directly on your local hard disk as well as in the Fabasoft Folio Web Client.
An Introduction to Fabasoft Folio

Figure 6: Folio Folder

You can now work with the files and folders both in the Fabasoft Folio Web Client and in the file system. To identify synchronized objects at a glance Fabasoft Folio uses different icons for the visualization of folder structures and documents according to their synchronization state.

2.4.2 Mobile Clients

Fabasoft Folio provides Apps for iPad and iPhone as well as for Android smartphones and tablets.

Figure 7: Fabasoft Folio iPad App

The Fabasoft Folio App enables access to your documents and data in Fabasoft Folio. It makes it possible to work together with your colleagues and external business partners when you’re on the move.

Using the Fabasoft Folio App you can
• access documents online,
• read, open and edit documents,
• make documents available offline and
• add comments to documents.


Figure 8: Fabasoft Folio iPhone App

Moreover, Fabasoft Folio's complete functionality can be accessed via mobile web browsers for tablets.

2.5 Accessibility

Fabasoft Folio is accessible and usable for people with disabilities. Fabasoft Folio's accessibility features support both users with blindness and low vision as well as those unable to use a mouse device due to motor disability.

Supportive measures for accessibility are described in the following chapters.

2.5.1 Screen Reader Support

Fabasoft Folio uses the WAI-ARIA technology from the W3C's Web Accessibility Initiative (WAI). This technology allows users of assistive technologies (such as screen readers) to enjoy the look and
feel of a standard graphical user interface where properly applied. An advanced screen reader user instantly knows how to operate a menu bar or a tree view after being advised by the screen reader of the currently focused control and its state.

2.5.2 Keyboard Support

To enable the usage of Fabasoft Folio for keyboard users and users of all kinds of assistive technologies, Fabasoft Folio supports full keyboard navigation and task activation. The available shortcuts and key assignments are mainly equal to the Microsoft Windows paradigm which makes working in Fabasoft Folio intuitive and straight forward.

2.5.3 Support for Low Vision Users

For low vision users Fabasoft Folio offers possibilities to enlarge the font size and to hide or enlarge certain parts of the portal (e.g. the tree view).

3 Enterprise Content Management

This chapter introduces you to the enterprise content management features of Fabasoft Folio, including the handling of contents, security and access control, collaboration features and templates.

3.1 Working with Objects

3.1.1 What Is an Object?

Real-world objects share two characteristics: they all have state and behavior. Objects in Fabasoft Folio are conceptually similar to real-world objects: they consist of state and related behavior. An object stores its state in its properties and exposes its behavior through use cases that can be invoked on the object. Use cases call methods that operate on an object’s internal state.

Each object in Fabasoft Folio is an instance of an object class. For example, “Jane Miller” and “Paul Baker” could be instances of object class Person.

3.1.2 What Is an Object Class?

An object class defines the properties of its instances. Additionally, actions and use cases can also be implemented in an object class and determine the behavior and the functionality provided by its instances.

Properties allow you to store metadata in Fabasoft Folio, which is descriptive information about an object including its attributes, context and condition.

Actions and use cases allow you to add functionality (e.g. sending an e-mail to a person) and behaviors (e.g. opening a custom form when double-clicking a person) to object classes.

Object classes form a hierarchy referred to as an object class tree. Each object class inherits the properties and behavior of its base class and may add new properties and use case implementations.

Fabasoft app.ducx can be used to create software components that extend Fabasoft Folio with new object classes to provide additional functionality.
3.1.3 Creating, Deleting and Restoring Objects

3.1.3.1 Creating Objects

New objects can be created via the menu ("Object" > "New") or via the toolbar icon ("New"). In some cases new objects may be created by clicking the plus icon.

The list of object classes available to you when creating a new object depends on the selected property as well as on your access rights.

![Creating a new object](image)

Figure 9: Creating a new object

Note: The “Favorites” list is based on the objects in the current folder or container object and on your personal favorites list. The “All” list contains a complete list of available object classes (see previous figure).

New objects can also be created by importing files from the file system. For further information refer to chapter 3.2 “Importing and Exporting Contents”.

3.1.3.2 Deleting Objects

One object can be referenced in multiple object lists.

When you delete an object, the selected object is deleted and thereby removed from all object lists that reference this object.

Also note that when using the “Remove” functionality (instead of deleting), the object is only removed from the current object list, but the object itself is not be deleted.

Fabasoft Folio allows you to create a Wastebasket on your desktop to prevent you from accidentally deleting objects. If you have a wastebasket and you delete an object, it is not deleted but placed in the wastebasket.
3.1.4 Viewing and Editing Objects

The Fabasoft Folio property editor is a universal tool for viewing and editing the properties of an object.

According to the user's configuration, the object is opened in read mode or edit mode. If the object is opened in read mode it is possible to switch into edit mode.

Objects can be used by more than one user at a time. To prevent users from editing an object at the same time (thereby accidentally overwriting the changes of each other), other users are blocked from editing an object once a user has opened it in editing mode. If another user attempts to open the object in editing mode, a dialog box is displayed to notify the user that the object is locked for editing. The lock is automatically removed when the user editing the object closes the property editor.

Required fields are indicated by a bold field label and a red asterisk. You must enter a value for all required fields in order to be able to save your changes to an object.

It is also possible to edit common properties of multiple objects at the same time.

![Figure 10: Fabasoft Folio property editor](image)

3.1.5 Working with Object Lists

3.1.5.1 View Mode

Fabasoft Folio offers different view modes for displaying the objects of the object list. To change the view mode for an object list, select the desired view mode from the "View" toolbar icon:

- By default, object lists are displayed in the tabular "Details" view showing the columns (e.g. Name) as defined by the column settings for the current object list. This view is especially used for displaying a lot of details and properties of an object.
• The “Thumbnails” view displays thumbnails of the content of the objects in the object list. If no thumbnail content can be generated for an object, the object’s icon is displayed instead. This view is useful for displaying pictures.

• The “Card View” displays objects as business cards, which display important meta data textually and symbolically. This view is useful for displaying contacts.

• The “Preview” displays previews of the content of the objects in the object list arranged side-by-side. This view is useful for displaying pictures as it also provides the possibility to start a slideshow.

• The “Carousel” view displays previews of the content of the objects in the object list arranged as a carousel arrangement (useful for pictures).

Figure 11: Object list in thumbnail view mode
3.1.5.2 Customizing Column Settings

Fabasoft Folio allows you to customize the columns displayed for an object list. You can add additional columns and change the order of the columns as you like.
The display view editor provides an additional possibility to define the displayed columns. You can filter property names, display the properties of the next level in the object hierarchy, add and remove several properties at once and change the position of the columns via drag-and-drop.

For efficient editing of several objects at the same time, shortcuts for copying, cutting, pasting and deleting similar to a spreadsheet program are provided in the details view. The values can also be copied e.g. from Microsoft Excel and pasted into Fabasoft Folio (and vice versa).

For editing properties of an object directly within the details view press F2.

Fabasoft Folio provides various possibilities to ease working within object lists, which are described in this chapter.
An Introduction to Fabasoft Folio

Figure 16: Object list grouped by category, locked columns, active column filter "2012" and calculations

Sorting

By default, the objects in an object list are not sorted but appear in the order in which they have been added to the object list.

You can sort object lists by certain columns. Fabasoft Folio allows you to sort multiple columns at the same time. The column's priority is determined by the number displayed next to the arrow icons on the column header.

Grouping

To facilitate browsing, you can group the objects in an object list by different criteria. Date properties can be grouped by year, quarter, month, week, day and hour.

You may also define hierarchical groupings by enabling grouping for more than one column. In this case, the grouping priority is indicated by numbers displayed next to the arrow icons on the column header.

Freezing columns

To avoid that columns are hidden when scrolling horizontally, columns can be locked. Locked columns remain visible while the rest of the detail view scrolls.

Row filters

Row filters can be used for filtering the objects displayed in an object list. Row filters require a Filter Expression, which allows you to filter an object list according to multiple criteria at the same time. The filter is also considered in the tree view.

If a filter has been applied to an object list, a filter icon is displayed on the toolbar and in the tree view to indicate an active filter.

Column filters
In addition to row filters, object lists can also be filtered using the column filter where a simple string (including wildcards) can be entered. The column filter can be activated via the context menu of the column header.

Calculating within object lists

For numbers and currency values, which are displayed in a column, the count (of entries with a value), the sum and average can be calculated. The result is displayed at the end of the page. If the list is grouped, the calculations are performed per group and are displayed at the end of the group entries.

3.1.6 Working With Documents

In Fabasoft Folio, the term content object refers to an object storing one or more contents in addition to metadata. Put bluntly, contents are files imported to and stored in Fabasoft Folio.

Each content object has a primary content, which is the default property for storing contents. However, content objects may also have other content properties for storing additional contents.

Editing the primary content of an object will open the content in the third-party application registered for editing the particular content, e.g. Microsoft Word. The changes made to the content using the external application are transferred back into Fabasoft Folio after closing it.

Content objects can also be opened in read-only mode.

The Fabasoft Folio Client enables opening and editing documents directly from within Fabasoft Folio.

The Fabasoft Folio Client provides a notification symbol in the task bar of Microsoft Windows and Apple macOS. The notification symbol displays information about opened documents and possible problems.

![Figure 17: Fabasoft Folio system tray](image)

Fabasoft Folio provides seamless integration with leading office products such as Microsoft Office and LibreOffice.

Among others, the following features are supported by Fabasoft Folio:

- Transparent check-in and check-out of documents supporting multiple users working on the same document.
- Versioning and tracking of content modifications.
• Mail merge and bulk e-mailing with Microsoft Word and LibreOffice Writer.
• Synchronization of Microsoft Outlook contacts with Fabasoft Folio objects.
• Customizable buttons embedded within third-party office software products, e.g. Microsoft Office products, LibreOffice, IBM Notes, and Novell GroupWise.

3.1.7 Searching for Objects

You can use Fabasoft Folio's powerful search to find objects and place these objects onto the desktop or into another object list.

All specified search criteria must be met for an object to be included in the search results. The use of wildcards (e.g. “*” for any sequence of characters) is permitted.

Example

If you are searching for instances of object class Person, and specify First Name “Sam” and Surname “Adams”, only persons with a first name of “Sam” and a surname of “Adams” are included in the search results. “Denise Adams”, “Sam Brown” or “Samuel Adams” would not be included in the search results.

If you change the search criteria and specify First Name “Sam*” and Surname “Adams”, “Samuel Adams” is also included in the search results.

Note: By default, users can search for objects in the entire Fabasoft Folio domain. However, they need special access rights in order to find and access objects. If a user does not have the search permission for an object, this object will not show up in the search results presented to the user.

The Fabasoft Folio search also allows you to save a query for later use, to execute a predefined query, and to edit the query that is generated based on the search criteria defined by the user. For detailed information on searching objects refer to the Fabasoft Folio online help.

Figure 18: Search in Fabasoft Folio
3.1.7.1 Quick Search

You can use Fabasoft Folio's quick search functionality to search objects in object pointer properties and object lists without needing to invoke the search.

You may use wildcards in quick search mode.

**Note:** With Fabasoft Mindbreeze Enterprise installed, you can also carry out a full-text search using quick search. The full-text search can only be used if the Mindbreeze icon is displayed next to the quick search field.

3.1.8 Copying, Pasting and Duplicating Objects

Objects can be copied into the clipboard and then be pasted as originals or as duplicates.

For copying and pasting objects you can also use the common shortcuts Ctrl + C and Ctrl + V.

3.2 Importing and Exporting Contents

Fabasoft Folio supports several convenient approaches for importing content, including configurable buttons that integrate with third-party applications.

3.2.1 Importing Contents from the File System

Fabasoft Folio provides easy possibilities to import files and even folder structures. A file from the file system can be imported into Fabasoft Folio via an upload, via drag-and-drop or via the common shortcuts Ctrl + C and Ctrl + V. It is also possible to drag multiple files and folder structures at a time.

These import methods are also available for importing e-mails, events and contacts from Microsoft Outlook.

![Import Conflict](image)

*Figure 19: Checking for duplicates when importing*
When importing e-mails the user can select which parts of the e-mail (e-mail text and attachments) should be imported.

![E-Mail Import](image)

**Figure 20:** Importing e-mails

### 3.2.2 Capturing Contents from an Office or E-Mail Application

Fabasoft Folio integrates with a wide range of office and e-mail applications and allows you to define customizable buttons for importing content from the following office and e-mail applications:

- Microsoft Word (see the white paper “Fabasoft Integration for Microsoft Office”)
- LibreOffice (see the white paper “Configuration of LibreOffice Buttons”)
- Microsoft Outlook (see next figure; see the white paper “Fabasoft Integration for Microsoft Office”)
- Mozilla Thunderbird (see the white paper “Configuration of Mozilla Thunderbird Buttons”)
- Novell GroupWise (see the white paper “Fabasoft Integration for Novell GroupWise”)
- IBM Notes (see the white paper “Configuration of IBM Notes Menu”)

An Introduction to Fabasoft Folio 28
Moreover, you can install custom printer ports that allow you to capture content from any application that supports printing. For further information refer to the white paper “Configuration of Fabasoft Folio Printer Ports”.

Microsoft Office documents can also be imported via the “Save to Fabasoft Folio” button.

3.2.3 Exporting Content

Fabasoft Folio supports multiple approaches for exporting content to the file system.

The content of a content object (e.g. instances of object class Microsoft Word Document, Microsoft Excel Worksheet, PowerPoint Object or PDF Object) can be easily exported (see next figure). You may also select multiple content objects at a time.
Furthermore, content objects can easily be exported via Ctrl + C and Ctrl + V.

Note: Fabasoft Folio’s relational reporting functionality as well as its database export functionality allows you to export large volumes of data, including content and metadata.

3.2.4 Digital Assets

Fabasoft Folio provides various predefined possibilities for working with digital assets. For example, an image can be copied as a hyperlink or automatically converted into a certain format and size for use within a presentation or e-mail.

Note: The available conversion possibilities for images are adjustable.

It is also possible to crop and resize images directly within Fabasoft Folio.
3.2.5 Web Folders

Fabasoft Folio allows you to access your desktop via a web folder based on the web-based distributed authoring and versioning (WebDAV) protocol.

For further information on web folders including detailed instructions on how to configure clients, allowed object classes and how to configure web folders under Linux refer to the white paper “Fabasoft Integration for WebDAV”.

3.3 Security and Access Control

Fabasoft Folio ensures secure management of digital documents. The use of Fabasoft Folio always requires the personal authentication of the user and the communication between the client and Fabasoft Folio is always encrypted via https, even for the use via smartphones and tablets.
Fabasoft Folio’s access rights concept ensures that security guidelines – for example for personal documents – are adhered to.

### 3.3.1 Security Levels

Security levels depending on the user’s clearance or authentication method can be defined to protect objects.

Security levels can be defined hierarchically, e.g. “Top Secret” > “Secret” > “Confidential” > “Restricted”.

For further information refer to the white paper “Configuration of Protective Markings”.

### 3.3.2 Access Control Lists

In Fabasoft Folio, each object is protected by an access control list (ACL). An ACL specifies in which way a user is allowed to access an object.

Access rights can be defined very flexibly e.g. based on a user’s role or on the group the user belongs to. Hierarchical structures of your company can also be represented within an ACL.

Via the access types provided, different kinds of permissions can be granted or prohibited to users.

Examples for access types:
- Read/change properties
- Read/change contents
- Delete
- Read/change sensitive properties

![Figure 27: An ACL object in Fabasoft Folio](image-url)
An ACL can either be directly assigned to an object or inherited from another object. ACL referencing supports multiple hierarchy levels.

3.3.3 Granting Permissions to Individuals and Groups

In addition to role-based access rights authorized users can grant access rights directly to further users and groups. Therefore Fabasoft Folio provides the three specific properties:

- Read Access
- Change Access
- Full Control

For further information refer to chapter 4.1 “Granting Permissions to Other Users”.

3.3.4 Document Encryption

To provide additional protection for your documents alongside the definition of access rights, you can encrypt documents. The AES (Advanced Encryption Standard) algorithm with a key length of 256 bits is used for encryption. AES is approved for top secret classified governmental documents in the USA.

3.4 Reporting

This chapter provides a concise overview of the extensive reporting capabilities of Fabasoft Folio. Fabasoft Folio includes comprehensive reporting capabilities to allow you to create, format and process rich reports, and export data stored in Fabasoft Folio to external data sources.

3.4.1 Active Reports

The active reporting engine of Fabasoft Folio allows you to define and create text-based reports (e.g. HTML reports) based on active report templates that can include placeholders containing expressions.

For each active report template you can specify the scripting engine you want to use for evaluating the active report. For example, you can enter “JavaScript” to use the JavaScript engine or “Fsc.Expression.ScriptEngine” to use the expression engine of Fabasoft Folio.

3.4.2 Relational Reports

Fabasoft Folio’s relational reporting functionality allows you to export data from Fabasoft Folio to an external database, which can then be used for reporting.

Fabasoft Folio allows you to easily create a relational report based on one or more objects selected in an object list or directly from within search results.

For further information on relational reporting refer to the white paper “Configuration of Relational Reporting”.

3.4.3 BIRT Report

Reports on Fabasoft Folio objects can be transformed into PDF, HTML, Microsoft Word or Microsoft Excel by using Eclipse BIRT (Business Intelligence and Reporting Tools).
Eclipse BIRT is an open source software project that provides reporting and business intelligence capabilities for web applications.

You can design individual reports for visualizing test trends or other key indicators. Eclipse BIRT provides a great way to design reports for various formats. It is also possible to include static or event dynamic images within a report.

For further information refer to the white paper "Fabasoft Integration for Eclipse BIRT".

Figure 28: BIRT report

3.4.4 Apache POI

The Apache POI integration allows Microsoft Office documents (Microsoft Excel, Microsoft Word, Microsoft PowerPoint) to be created using custom data from Fabasoft Folio objects. These Microsoft Office documents can be edited, splitted and merged.
With Fabasoft app.ducx and Apache POI it is for example possible to generate a Microsoft Excel report that merges a predefined template with data from Fabasoft Folio.

![Excel report generated with Fabasoft Folio](image)

**3.5 Integration of Third-Party Products**

Fabasoft Folio integrates following third-party products:

**Office tools:**

Objects of the following document formats can easily be opened, edited and saved again directly within Fabasoft Folio.

- Autodesk AutoCAD
- IBM Notes
- LibreOffice
- Microsoft Office
- Microsoft Project
- Microsoft Visio
- Mozilla Thunderbird
- Novell GroupWise
- Apple iWork
- Apple iCal
- Microsoft Office:mac

**Services:**

- SAP
3.5.1 SAP

Archiving SAP content in Fabasoft Folio’s repository ensures that ERP content is added to Fabasoft Folio’s corporate content repository and can be managed in a systematic way based on an organization’s compliance and governance policies.

Fabasoft Folio holds an SAP Integration Certification which ensures that SAP content can be archived in Fabasoft Folio’s content repository. The certification test result (archiving performance of more than 2,000,000 documents per hour) underlines the exceptional performance of Fabasoft Folio.

![Certificate](image)

Figure 30: SAP integration certification

3.6 Interfaces

Business applications can easily interact with Fabasoft Folio via several standardized interfaces such as SOAP, JSON, CMIS, WebDAV, CalDAV and friendly URLs.

3.6.1 Web Service Interfaces

SOAP is a XML based protocol for exchanging structured information of web services in computer networks. SOAP messages are transferred via Fabasoft Folio’s interface by means of the HTTP transport protocol.

The web service receives an XML document via the SOAP request as input and responses again with a XML document containing the output data of the web service.
3.6.2 JSON

JSON, or JavaScript Object Notation, is a lightweight text-based open standard designed for human-readable data interchange. It is derived from the JavaScript scripting language for representing simple data structures and associative arrays, called objects.

Fabasoft Folio allows a JSON string to be parsed and the data to be used as values represented in Fabasoft Folio data types. Values can also be converted into a JSON string and therefore be used in a JavaScript environment or as a transfer format when consuming a JSON aware web service.

For further information refer to the white paper “Fabasoft Integration for JSON”.

3.6.3 CMIS

The Fabasoft CMIS integration offers the functionality of a CMIS content repository and complies with the CMIS specification version 1.0. It satisfies all of the MUST or REQUIRED level requirements defined within.

Contents stored in Fabasoft Folio can be used in other third-party products via the CMIS interface. Furthermore, other applications can use the CMIS interface to store contents in Fabasoft Folio or to get contents from Fabasoft Folio.

3.6.4 WebDAV

The product provides access to all documents and objects via the standard protocol WebDAV (Web-based Distributed Authoring and Versioning). This allows the creation of compound documents by adding standardized WebDAV links to other documents and/or business objects within a document, as long as the productivity application for editing the document additionally supports WebDAV.

It is also possible to map a particular Fabasoft Folio WebDAV folder to a file system drive letter. In such cases links between documents can also be established using ordinary filenames. This option can be used for applications which do not support the WebDAV protocol.

Figure 31: Accessing Fabasoft Folio via WebDAV
3.6.5 CalDAV

Fabasoft Folio can act as a CalDAV server. CalDAV is an internet standard allowing a client to access scheduling information on a remote server.

Calendar clients supporting the CalDAV standard can be used as calendar client accessing the data in Fabasoft Folio, e.g.:

- Apple iPad
- Mozilla Thunderbird and Lightning
- Microsoft Outlook

Fabasoft Folio provides a friendly URL which allows downloading calendars or calendar entries as files compliant to the iCS format. It is also possible to import events from e-mail clients into Fabasoft Folio simply via drag-and-drop.

![Figure 32: CalDAV calendar in Fabasoft Folio](image)

3.6.6 Friendly URLs

Fabasoft Folio allows access to methods of web resources via friendly URLs. A friendly URL is a web address that is easy to read and includes words that describe the content of the web resource. Thus developers can easily provide self-built web services via a friendly URL.

For further information on friendly URLs refer to the white paper “Fabasoft Folio Friendly URLs”.

3.7 Versioning

Versioning is a key concept provided by Fabasoft Folio for transparency and traceability of changes on business objects and other documents.
In Fabasoft Folio, the term version refers to a snapshot of the entire state of an object. Thus, a version reflects the state of a specific object at a specific time.

Versions allow you to read an object's properties in a former state as well as to restore a former state of the object.

### 3.7.1 Tracking Changes

Fabasoft Folio provides convenient change tracking features that let you track changes made to an object's properties and contents between different versions.

You can track changes made to an object's properties by comparing two or more versions.

Fabasoft Folio allows you to track changes of contents by using the change tracking and review features of Microsoft Word and LibreOffice Writer.

![Figure 33: Show content modifications of the two selected versions](image)

### 3.7.2 Release Versions

Fabasoft Folio allows you to define a specific version of an object as its so-called release version.

This feature allows authorized users to work on the current version of an object while users who may only read the properties of the object are only granted access to the consolidated release version.

To ease the work of users with write access a red or green check mark is displayed next to the object, to indicate whether the current version or the release version is displayed.

**Example**

Steven Price is working on the annual report of his company.

Steven can edit the new version of the report without his changes being displayed to users reading this report. The updates made by Steven are only published when his new version is released.

Each object can only have one release version.
Collaboration refers to several users working together on the same business objects, which involves issues concerning security and the sharing of objects as well as the communication within the team. Fabasoft Folio therefore provides several features for collaboration.

- Fabasoft Folio offers an easy to use security concept to avoid unwanted access to your documents.
- The collective creation of content (user generated content) is created and securely stored in Fabasoft Folio.
- Agile collaboration and meticulous document management in Fabasoft Folio maximize the potential and efficiency of your business.

4.1 Granting Permissions to Other Users

An object’s ACL determines whether users are authorized to read or edit an object. In general, as the creator of an object, you always have the permission to read and edit the object.

However, depending on the context, users usually do not have any permission on objects created by other users (although there are exceptions, e.g. when an activity as part of a process concerning the object is assigned to another user). Therefore, when sharing an object you should make sure that the users you share the object with have the required permissions for reading or editing the object.

Fabasoft Folio provides three properties that allow you to assign permissions to individual users or groups (see next figure):

- Read Access
- Change Access
• **Full Control**

![Image showing full control access](image)

Figure 35: Defining users and groups with read and change access

**Example**

Maggie Ledger of the legal services department is assigned an intern, Julie Neal, to help her with some of her cases. However, Julie is not supposed to make any changes to Maggie’s cases.

To grant Julie read-only access to the cases she needs to work on, Maggie adds Julie to the *Read Access* property of these cases.

**Note:** The object’s ACL determines if the *Read Access* property is evaluated at all.

### 4.2 Teamrooms

The Teamroom allows informal collaboration across departmental boundaries. For the management of the team a separate area in the Teamroom is available. The easy access rights concept enables documents to be easily shared within the team. Team calendar, newsfeeds and other useful features complete the functionality of the Teamroom.

The following access rights can be granted to users of a Teamroom:

- **“Read Access”**
  Team members are only able to read existing documents. They cannot create new objects.

- **“Change Access”**
  Team members can modify existing documents and create new documents.

- **“Full Control”**
  Team members have the same rights as the owner of the Teamroom.

Access rights defined for a Teamroom are automatically valid for all folders and objects within the entire Teamroom. Due to the easy concept of access rights and the separate section within the
An Introduction to Fabasoft Folio

Teamroom for managing access rights, it is always clear and readily identifiable which user can access the Teamroom in which way.

For better visualization and identification of a Teamroom it is possible to define a custom logo and a theme.

![Teamroom](image)

Figure 36: Teamroom

To profit from the possibilities of cross-company collaboration Teamrooms can be transferred to Fabasoft Cloud. Thereby all folders and contents as well as calendars and newsfeeds are transferred. After completion of the work, the Teamroom can be retracted into the corporate Fabasoft Folio.

![Transferring Teamroom](image)

Figure 37: Transferring Teamrooms to the Fabasoft Cloud enables cross-company collaboration
4.3 Newsfeed

Communication within a team is very important. The newsfeed is therefore a key feature of Fabasoft Folio. Within a Teamroom you can create as many newsfeeds as you like to cover multiple topics.

Questions on a particular topic can be posted in the newsfeed. All team members have access to this knowledge exchange and can post a response.

![Newsfeed](image)

Figure 38: Newsfeed

4.4 Calendar

For a better coordination within teams, a calendar is available in Fabasoft Folio. A calendar can be shared via the usual access rights concept or by creating a calendar for a team within a Teamroom.

Calendars can also be viewed via smartphones or other mobile devices supporting the CalDAV standard, so you can arrange meetings anytime and anywhere.

For further information on CalDAV refer to chapter 3.6.5 “CalDAV”.

4.5 Notifications and History

Via notifications a user can be informed automatically about changes to subscribed objects. It is possible to define exactly which kind of changes you are interested in (e.g. document removed, document changed) and how they are represented to you (via e-mail, RSS feeds or in the welcome screen).
The timeline of a Teamroom provides a convenient overview of the changes that have occurred over time in the Teamroom. The changes can be filtered based on keywords, predefined categories or points in time. The bold links can be used to open the related objects directly for further research.

Figure 39: Notifications

Figure 40: Timeline
Alternatively, the history of a Teamroom provides an overview of all changes in list form.

Figure 41: History of a Teamroom

4.6 Hyperlinks

With *Hyperlink* objects you can provide a collection of hyperlinks directly in Fabasoft Folio for your entire team.

Hyperlinks can be created manually or imported via drag-and-drop from the file system, from the web browser's address bar or from the content of a webpage.

Figure 42: Importing a hyperlink via drag-and-drop
4.7 The Project Folder

But not only Teamrooms simplify collaboration. This flexible concept for access rights in Fabasoft Folio is also used for project folders (project specific roles can be used in the access definitions, too) and other object types.

All business objects within the project folder are assigned to it uniquely and can't be used in any other project folder because this project is used to extend the access to the members of the project organization.

4.8 Sharing Objects via E-Mail

Sharing objects and content via e-mail is the most common means of collaboration.

For sharing objects and content via e-mail, Fabasoft Folio provides the following options:

- If the recipients have access to Fabasoft Folio, you can send objects in form of hyperlinks.
- You can send the contents of content objects as e-mail attachments.
- You can have Fabasoft Folio convert the contents of content objects into PDF and send the PDF contents as e-mail attachments.

You may also select more than one object in order to send multiple objects in a single e-mail.

The Fabasoft Folio Client provides a Microsoft Outlook COM add-in for verifying that the recipients have valid Fabasoft Folio user accounts and the necessary rights to access the objects before sending the objects as hyperlinks to them.
4.9 Term-Based Tagging of Objects (Thesaurus)

Fabasoft Folio provides you with powerful and extensive term-based tagging and thesaurus functionality.

Terms are used for tagging objects. These terms can be selected from thesauri. For each term you can specify more general and more specific terms as well as synonyms and homonyms. Thesauri can also be imported and exported using standardized formats (e.g. RDF).

4.10 Search Folders and Selections

Fabasoft Folio provides powerful tools for searching and selecting objects based on queries or highly flexible selection definitions.

4.10.1 Search Folders

Search folders provide a convenient way to search for objects based on predefined search criteria that are stored in the form of an F-SQL query. The objects matching the query are referred to as the result list.

Search folders require you to reference a so-called search form. The search form is used for defining and storing the F-SQL query to be executed by the search folder.

4.10.2 Selections

Selections allow you to retrieve sets of objects based on predefined queries and object lists, and to process the retrieved objects by applying processing rules that will ultimately yield a list of objects matching the criteria defined in the underlying selection definition.

Selection results, for example, can be used for defining addressee lists as well as for defining the objects to be included in a relational report.
4.11 Templates

Fabasoft Folio allows you to define and reuse templates for simplifying recurring tasks and day-to-day work. Any kind of object, in particular content such as *Microsoft Word Document* and *Microsoft Excel Worksheet*, can be used as a template.

In addition to this, templates can be categorized with template categories to classify them into subject areas such as “Business Report”, “Status Report”, and “Letter”.

**Example**

Every week, Steven Bauer has to prepare a time sheet listing his activities for the week using Microsoft Excel, and send it to his manager for approval.

To simplify this task, Steven creates a template using Microsoft Excel, imports it into Fabasoft Folio as a *Microsoft Excel Worksheet*, and adds the *Microsoft Excel Worksheet* to his personal template collection.

![Creating a report based on a template](image)

**Figure 45: Creating a report based on a template**

4.11.1 Template Collections

Templates are managed in special folders referred to as template collections (see next figure). In order to become available for use, templates must be added to a template collection. The same template can be added to multiple template collections.
5 Relationship Management

Fabasoft Folio supports the management of your customers, suppliers, distributors, and other contacts, and provides you with the means to manage and improve the relationship to your contacts.

You can manage and communicate with existing or potential customers as well as with other contacts directly from within your Fabasoft Folio portal. Moreover, the relationship management features of Fabasoft Folio provide you with a customer-centric view on all of your related documents and processes.

Delivering an intuitive, efficient, flexible, and highly extensible relationship management platform, Fabasoft Folio allows you to drive and improve your relationship management processes, and provides you with the means to understand how these processes work.

As an extensible relationship management platform, Fabasoft Folio allows you to define additional relationships reflecting your business-specific needs and requirements.

Relying on Fabasoft Folio's functionality, you can represent virtually any given real-world relationship in Fabasoft Folio. For example, you can rapidly build a course management solution based on Fabasoft Folio that allows you to manage courses, trainers, attendees and required resources.

The previous figure shows the object classes for relationship management that are provided by Fabasoft Folio. Contact provides the basic features for managing contacts, whereas derived object classes add characteristics and features specific to the particular entity.
5.1 Organizations

In Fabasoft Folio, an organization corresponds to a third-party legal entity, e.g. a commercial customer, supplier or distributor.

An own organization represents your own company. It is possible to have multiple own organizations in case of a holding company or to manage subsidiaries, joint ventures and so forth.

5.2 Persons

A physical person can be represented in Fabasoft Folio as Person, Contact Person or Employee.

A Contact Person is supposed to represent a contact e.g. from a supplier or distributor, whereas an Employee represents workers of your own company.

5.2.1 Object Roles

In Fabasoft Folio, persons can have multiple roles. For example, a person can be employee of your company but also work part time for one of your customers. Moreover, some of your employees are also users of your Fabasoft Folio Domain. In Fabasoft Folio it is possible to represent this relationship.

![Figure 48: Selecting another role](image)

The term “object role” is used for referring to the general concept of an object having multiple roles that are instantiated as distinct objects in a Fabasoft Folio Domain.

**Note:** Do not confuse object roles with the concept of user roles, which refer to a user’s position in context of a group. For further information on user roles, consult chapter 2.3.5 “Roles”.

A physical person can have the following object roles in Fabasoft Folio:

- **Person:** A generic person who is neither an employee nor associated with another organization.
• **Contact Person**: A person associated with an external organization, e.g. a sales representative of a supplier.

• **Employee**: A person employed by your organization.

• **User**: A person accessing your Fabasoft Folio domain.

### 5.3 Address Management

For each contact you can define multiple addresses, e-mail addresses and telephone numbers. In addition to usual address information such as street or zip code, it is also possible to categorize an address, e.g. as a business address or as a private address. E-mail addresses and telephone numbers can also be categorized.

### 5.4 Importing Contacts

Contacts can be imported directly from Microsoft Outlook into Fabasoft Folio via **Ctrl + C** and **Ctrl + V** or simply via drag-and-drop.

When importing contacts, Fabasoft Folio checks for existing similar and equal contacts and displays them to you so that you can decide how to handle them.
5.5 Bulk E-Mailings and Mail Merge

Fabasoft Folio allows you to create and send personalized mailings to one or more addressees using an *Outgoing*. You can therefore define multiple addressees for an *Outgoing*.

Personalized mailings can either be dispatched via e-mail or saved as PDF file for printing or for miscellaneous purposes.

To specify an addressee, you can either select a person, an organization or define a free-text addressee.

It is also possible to define addressees using an *Addressee List*, which is a predefined list of contacts encompassing persons and organizations.

![Figure 51: Defining addressees for an outgoing](image)

### 5.5.1 Dispatch Type

An outgoing can either be dispatched as bulk e-mailing or as a mail merge. Moreover, e-mails can either be dispatched interactively or in the background.

The following dispatch types are available:

- **“E-Mail Dispatch (Interactive)”:** In interactive mode, personalized e-mails are dispatched using your locally installed e-mail client. For each addressee, a new e-mail message is created and opened in your e-mail client where you can edit the e-mail before sending it to the recipient.

- **“E-Mail Dispatch (Background)”:** Dispatching bulk e-mailings in the background does not require a local e-mail client. In background mode, personalized e-mails are dispatched by a mail server via SMTP. For each e-mail dispatched as part of a bulk e-mailing, a status indicating if the e-mail could be delivered successfully is logged along with a time stamp and other information.

- **“Mail Merge”:** This will generate and open a PDF content containing the personalized mailings for each addressee.
5.5.2 Body for a Mailing

Fabasoft Folio allows you to define the body for a mail merge or an e-mail dispatch by entering plain text and placeholders for properties of Fabasoft Folio objects.

The following example illustrates the use of predefined fields for a mail body.

Example

Dear [=addressee_FSCFOLIO_1_1001_FieldAddrFirstName] [=addressee_FSCFOLIO_1_1001_FieldAddrSurName],

We received your inquiry regarding incident [=doc_FSCFOLIO_1_1001_FieldDocumentNumber].

Best Regards,
Customer Service

5.5.3 Attachments

Fabasoft Folio allows you to define attachments for an outgoing, which are also attached to all of the e-mails sent to the addressees when the outgoing is dispatched.

When dispatching an outgoing, the attachments are “personalized”, i.e. placeholder fields are populated with contact-specific values.

By default, each attachment is converted into PDF before it is attached to the outgoing e-mail or merged into the PDF content created for a mail merge.

5.5.4 Fair Copies

A fair copy is a personalized outgoing for a single addressee.

Fair copies are automatically created in the course of the interactive e-mail dispatch of an outgoing. You can also manually create fair copies for the addressees.

5.5.5 Fields and Document Properties

Fabasoft Folio provides integration with Microsoft Office to allow you to embed and edit metadata stored in Fabasoft Folio within third-party applications. You can distinguish the following mechanisms:

- Fields allow you to embed editable metadata in Microsoft Word documents.
- Document properties allow you to embed read-only metadata in documents edited with Microsoft Office and LibreOffice applications.
Fields and document properties are especially useful for the production of serial letters by merging letter templates with addressee information.

![Image of Addressee fields of a Microsoft Word document](image)

**Figure 52: Addressee fields of a Microsoft Word document**

### 6 Business Process Management

Through integrated workflow functions you can optimize your internal processes and ensure that you no longer waste any time with lengthy, tedious processing steps. Incoming documents, e-mails, memos and orders are forwarded to the responsible employees via individual controls and saved to the relevant case file (to the appropriate business context). Via the files, employees and colleagues also have all information about a business case instantly available to them. This allows you to optimally distribute work assignments across all departments and locations without risking knowledge bottlenecks.

- Shorter processing times through automated forwarding.
- Clear, traceable business processes.
- Assurance of conformity to internal and external compliance regulations.
- Optimal distribution of tasks to those with the relevant know-how.
- Model your company’s business procedures in an audit-proof way.
- Business processes with the relevant documents proceed along the defined structure automatically from work station to work station.
- Ad hoc process editing enables employees to react quickly and independently to changes.
- Active notification of changes on a business document, either by RSS feed or e-mail.
6.1 Processes and Activities

In Fabasoft Folio, the terms business process (or simply process) and workflow are used synonymously to describe an ordered sequence of serial or parallel activities, which in turn consist of a list of steps to be executed, and control elements such as conditions and loops.

A process can be attached to one or more objects. Additionally, multiple independent processes may be attached to an object at the same time.

Activities must be embedded within a process and cannot be instantiated independently, so they are always part of a process.

The following list provides a brief overview of the process elements of Fabasoft Folio:

- Activities are process elements for the execution of tasks. An activity is assigned to a so-called workflow participant who is responsible for its completion. Each activity contains a list of steps describing the tasks that must be executed in order to complete the activity. In addition to this, an activity can also have deadlines, e.g. a deadline for its completion.
- Control elements include conditions, case differentiations and loops.
- Sub processes are processes embedded within a process.

Fabasoft Folio provides a process editor for the visualization and an easy editing of processes.

![Image of Approval process in Fabasoft Folio](image.png)

**Figure 53: Approval process in Fabasoft Folio**

**Note:** The white paper “An Introduction to Fabasoft app.ducx” provides extensive examples on how to define activities, processes and process control elements using Fabasoft app.ducx.

6.2 Ad Hoc Workflow

Users can prescribe ad hoc activities to other groups, user roles and/or users. The following actions result in ad hoc process changes:

- Delegating activities
• Rejecting activities
• Taking over activities
• retracting activities
• Suspending activities

6.3 The Worklist

The worklist in a user's portal contains the list of activities assigned to the user, to one of the groups the user belongs to, or to one of his user roles.

6.4 Access Control in Workflows

Fabasoft Folio enables the modeling of a customer's concrete organizational structure using users, groups and roles. This makes it possible to define access rights for the concrete organizational structure.

• Only registered and securely authenticated users have access to the business documents.
• Access rights are flexibly controllable.

6.5 Workflow Notifications

Notification definitions allow you to define notifications for the following events:

• a deadline of an activity has expired
• a new activity has been received
• an activity has been taken over by another workflow participant
• a process has been suspended
• a process has been terminated

For each defined event, you can specify a custom notification text.
6.6 Escalations

Escalations allow you to inform users (e.g. via e-mail) about deadlines defined for activities that already expired or are about to expire. Escalations are triggered by an automated task executed in the background by the Fabasoft Folio AT Service. Escalations are therefore not processed in real time but in the interval defined in the automated task.

6.7 Substitutions

Fabasoft Folio allows you to define substitutions so other users can act as proxies and complete activities on your behalf, e.g. if you go on vacation.

You can delegate one or more of your roles to another user substituting as you for a defined period of time. The user to whom the roles are delegated can then assume these roles for the specified period of time.

Note: Administrators may also set up substitutions on behalf of other users.

![Substitutions](image)

Figure 55: Substitutions

6.8 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 used as a basis for automating your business processes.

In the graphical BPMN editor, besides the modeling of the process, for example Folio users and activity definitions can be assigned to BPMN elements, in order to be able to execute the process directly with the Fabasoft Folio Workflow Engine.

The BPMN editor is subdivided in three areas. The left pane contains the BPMN elements that can be dragged and dropped on the middle design pane. The right pane (folded by default) shows
properties for the element that is selected in the design pane. The right pane is also used to assign Folio objects for process execution purposes.

![BPMN editor](image)

Figure 56: BPMN editor

To be able to execute BPMN processes, the processes have to be released. The process can be released for the user himself (testing purposes) or for groups that are assigned to the user.

![Release process for execution](image)

Figure 57: Release process for execution

### 6.9 Process Folder

The process folder allows you to file processes in a structured way and link them with documents, participants and outputs. The processes can be viewed and analyzed from different angles.

The process folder is structured in following four areas:

- **Processes**
  A modeled business process can reference subprocesses, documents, participants and outputs.

- **Documents**
  The documents that are needed in the process.
- Participants
  A participant represents an area of responsibility within a process.

- Outputs
  An output defines a result of a process. Outputs can be structured with help of output groups.

![Process folder](image)

For each document, participant and output you can view the related processes at any time.

![Related processes](image)

7 Compliance Management

This chapter describes how to work with business objects including records, cases, incomings and outgoings. It also gives an overview of Fabasoft Folio’s powerful possibilities for fulfilling compliance requirements concerning auditing, archiving and legal holds.

7.1 Overview

The term “business object” refers to special types of objects that offer additional features required for managing various business scenarios in Fabasoft Folio.

Business objects allow you to attach and manage content, which are electronic documents that have been imported into Fabasoft Folio. Among others, they include Microsoft Word Documents,
Microsoft Excel Worksheets, e-mail objects, and scanned images. Most contents can be edited using external applications. For further information on contents refer to chapter 3.1.6 “Working With”.

The different types of business objects provided by Fabasoft Folio are all directly or indirectly derived from object class Business Object.

Fabasoft Folio differentiates between the following types of business objects:

- Documents can be considered as envelopes for content. In addition to references to one or more contents, documents store metadata that must be maintained for compliance and life cycle management reasons. Fabasoft Folio distinguishes between two main types of documents:
  - Incomings are documents containing content that has been received from external sources (e.g. business partners).
  - Outgoings are documents containing content that will potentially be sent to external entities (e.g. business partners).

- Cases combine documents that logically belong together (for example, because they belong to the same project or campaign). Therefore, cases can be considered folders of documents sharing the same context. Cases typically also have a restricted time frame during which they complete some sort of life cycle process.

- According to the ISO 15489 standard, records are “information created, received, and maintained as evidence and information by an organization or person, in pursuance of legal obligations or in the transaction of business” (ISO 15489-1: Information and Documentation - Records Management - Part 1: General). In Fabasoft Folio, records combine and structure cases and documents belonging to the same procedure or sharing the same context, and typically have a long life cycle that usually spans several months or years.

![Figure 60: Logical hierarchy of business objects in Fabasoft Folio](image-url)

Business objects form a logical hierarchy as depicted in the previous figure, which is supplemented by the object models for contact and relationship management, business process management, and so forth.

### 7.2 General Features of Business Objects

This chapter provides a brief overview of general features of business objects in Fabasoft Folio.
7.2.1 Numbering

In Fabasoft Folio, each object is uniquely identified by an Address in a proprietary format. However, the object address is not visible to users and should not be used for external communications sent to customers and other partners.

Therefore, a human-engineered unique reference number is generated for each business object (i.e. documents, cases, and records). By default, the unique reference number is also incorporated into the Name of the business object. Using the unique reference number, both Fabasoft Folio users and external partners can explicitly and unambiguously refer to a specific business object.

7.2.2 Recorded Business Objects

For compliance reasons, Fabasoft Folio distinguishes recorded business objects and business objects without commitment.

Recorded business objects have an external effect or may cause some sort of external commitment. This external effect also needs to be confirmed by an employee (for example, through approval). Business objects without commitment, however, are unconfirmed and only have an internal effect.

When a business object is recorded, a version of the business object is generated and automatically saved.

Usually, the transition from without commitment to recorded is implicitly defined as part of the life cycle process of a business object (e.g. when a business object is approved or sent to a customer).

The following list provides a brief overview of the recorded state of business objects and how it is initialized:

- Content, in general, is without commitment until it is electronically signed or associated with partners, and thereby acquires an external effect.
- The recorded state of documents depends on whether it is an incoming or outgoing document. When a document is recorded the contents attached to the document also become recorded. However, contents can also become recorded before the document they are attached to get recorded.
  - Incomings and their attached contents are, in general, always recorded.
  - Outgoings and their attached contents are without commitment until they are dispatched or approved. Then they become recorded.
- Cases are initially without commitment, but can become recorded when they are approved. When a case is approved, its attached documents also become recorded.
- Records are always recorded even though the cases and documents contained therein do not necessarily need to be recorded. However, when a record is approved, the cases and documents contained therein also become recorded.

7.2.3 Processing State

In Fabasoft Folio, each business object has a processing state. The next table shows a list of the permissible values for the processing state.

<table>
<thead>
<tr>
<th>Processing state</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>In Process</td>
<td>The business object is in process. This is the default state for business objects.</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Canceled</td>
<td>The business object has been discarded and can no longer be edited. Any active processes have been suspended. <strong>Note:</strong> Only recorded business objects may be canceled. For compliance reasons, recorded business objects may not be deleted but must be canceled instead.</td>
</tr>
<tr>
<td>Suspended</td>
<td>Work on the business object has been (temporarily) suspended. Any active processes have been suspended as well. A suspended business object may not be changed or deleted.</td>
</tr>
<tr>
<td>Closed</td>
<td>Work on the business object has been completed, and any active processes have been suspended. A closed business object can no longer be edited or deleted.</td>
</tr>
</tbody>
</table>

Table 1: Processing states of business objects

To narrow a business objects processing state, it is possible to define own sub-states for „In Process“. These sub-states can also be used within life cycle rules, as well as for defining access rights depending on a business object’s state.

7.2.3.1 Validation of Processing State Changes

Certain transitions from one processing state to another processing state require your confirmation in form of an electronic signature and a remark describing the reason for the processing state change.

By default, a transition from any processing state to “Canceled” or “Closed” requires validation in form of an electronic signature.

7.2.3.2 Automatic Propagation of the Processing State

If the processing state of a business object is changed, this change is propagated to its subordinated business objects.

For example, if the processing state of a case is changed, the change is propagated to the documents attached to the case as well as to the contents attached to these documents.

There are, however, certain rules that determine whether the processing state of a business object is changed during propagation:

- **Top-Down Propagation**
  Changes are propagated in a top-down manner, from the parent object to its children. If the processing state of a child object is changed, the change is not propagated to its parent object.

- **Conditional Propagation**
  The processing state of a parent object is only inherited during propagation if it has not been explicitly defined before.

7.2.4 Life Cycle Rules

A list of life cycle rules can be defined for a business object.
Life cycle rules let you define actions that are invoked when specified events are triggered. Additionally, life cycle rules also support conditions that must be fulfilled for an action to be invoked when the event the action is mapped to is triggered.

Each life cycle rule consists of the following components:

- a Period that allows you to define a time span used for calculating the point in time an event is triggered
- an Event as described in the next table
- an optional Condition defined using Fabasoft app.ducx expression language
- an Action to be invoked

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Creation</td>
<td>This event is triggered after the business object has been created.</td>
</tr>
<tr>
<td>After Processing Start</td>
<td>This event is triggered after the processing state of the business object has been set to “In Process”.</td>
</tr>
<tr>
<td>After Suspending</td>
<td>This event is triggered after the processing state of the business object has been set to “Suspended”.</td>
</tr>
<tr>
<td>After Closing</td>
<td>This event is triggered after the processing state of the business object has been set to “Closed”.</td>
</tr>
<tr>
<td>After Cancelling</td>
<td>This event is triggered after the processing state of the business object has been set to “Canceled”.</td>
</tr>
<tr>
<td>After Set Recorded</td>
<td>This event is triggered after the business object has been recorded.</td>
</tr>
</tbody>
</table>

Table 2: Life cycle events

Using Fabasoft app.ducx, developers can create their own actions for life cycle rules.

### 7.2.5 Document Category

Document categories allow you to categorize your business objects, and to customize life cycle-specific settings for business objects of the same document category.

A business object may be assigned a document category when it is created.

New document categories can be created by administrators or developers.

For every document category a short form must be specified. The short form is used for building a unique name for business objects. This way, the short form string easily allows you to identify business objects of the same document category by looking at their names.

**Note:** In Fabasoft Folio, the name of a business object also contains its document number serving as a unique reference number, e.g. for external communications.

You can specify a pre-defined process for a document category. It can be defined whether the standard process should be initialized and started when a business object referencing this document category is created.
7.2.6 Access Definitions

Certain business applications require a fine-grained security concept that is tied to a business object's life cycle. Therefore, Fabasoft Folio allows you to specify the ACL assigned to a business object based on its processing state and document category to give you as much control as needed to implement the most complex security concepts.

Access Definitions allow you to map predefined ACLs to processing states, and are used for determining a business object's ACL when it is created or when its processing state changes. This, for example, allows you to enforce that suspended business objects cannot be edited until they are reactivated.

If a custom access definition is assigned to a document category, the business objects of that specific document category are assigned the ACLs defined in the custom access definition instead of the default ACLs.

This feature allows you to enforce that users only receive access to business objects of a certain document category. Moreover, you can tailor your security concept to the particular life cycle of specific document categories.

7.2.7 Remarks

Business objects also allow you to add textual remarks. Once appended, remarks can no longer be edited for transparency and compliance reasons.

You can also add references to other objects to your remarks.

In addition to this, electronic signatures, such as approvals, are automatically logged as remarks.

For each remark, either appended manually or automatically, the user adding the remark or triggering the event causing the remark (e.g. approving a business object) and the date and time the remark was added is logged.

7.3 Documents

Fabasoft Folio considers documents to be envelopes for content that also store additional metadata (for instance, date of receipt or addressees), and distinguishes between two types of documents:

- An Incoming is a document containing content that has been received from an external source.
- An Outgoing is a document containing content that will potentially be sent to external entities.

A document is comprised of metadata, and a list of attached contents. The first attached content automatically becomes the so-called main content. However, it is possible to explicitly change the main content.

7.3.1 Registering Contents to a Document

In short, registering content to a document refers to declaring the content to be a legitimate part of the document. This is also commonly referred to as “attaching” content to a document, since all content registered to a document is added to its list of Contents.
At any one time, content can only be registered to a single document. However, it is permissible to move content from one document to another, thereby implicitly triggering a reregistration of the content.

Figure 61: Registering an incoming to a case

7.3.2 Addresses

A list of addresses can be defined for a document:

- For an incoming, it is used for documenting the sender of the content assigned to the incoming.
- For an outgoing, the address list is used for specifying the recipients of the outgoing.
- Records and cases also allow you to define addressees. When a child object is created, the addressees are initialized with the values of the parent's addressees. For example, if you create an outgoing, the addressees are initialized with the values defined in the case the outgoing is registered to.

If an e-mail (e.g. a Microsoft Outlook Mail Object) is registered to a document, the addressee information is extracted from the e-mail, and used for automatically populating the addressee.

7.3.3 Document Overview

The document overview consists of three panes:

- the header pane showing the document's name, and date and time of the last change
- the task pane on the left-hand side, showing a list of menu items that can be invoked on the document
- the PDF overview on the right-hand side, displaying an embedded PDF containing the individual contents attached to the document
Document content can be explicitly excluded from the PDF overview.

7.4 Versions

If a document is changed by different users, a new version is created automatically before another user’s changes are saved to the document. However, if the same user changes a document subsequently, no automatic version of the document is created.

Moreover, if a document’s main content is changed by different users, an automatic version is created for the content not the document. You can also create a version of a document manually at any time.

For further information on working with versions refer to chapter 3.7 “Versioning”.

7.5 Records and Cases

Records are used for bundling cases, incomings and outgoings logically belonging to the same procedure with a long time frame (e.g. a program comprised of multiple projects). Simply put, a record is a folder of documents and cases sharing the same context that also stores additional metadata describing this context.

Cases are used for bundling the incomings and outgoings logically belonging to the same procedure, which typically is restricted to a short time frame (e.g. a project or a campaign). In simple terms, a case is a folder of documents sharing the same context that also stores additional metadata describing this context.

Content and documents can be registered to a case by dragging them directly onto the case. You create relationships between business objects (i.e. records, cases, documents, and content).

Working with records and cases is similar to working with documents.
7.6 Auditing

Fabasoft Folio supports precise and extensive auditing for business documents.

- Detailed information on who accesses business documents, when and how.
- The auditing of read accesses can be switched on and off.
- The auditing information is collected on a separate database for analysis.

Using audit logs, it is possible to record access to properties, calls to actions or applications and the review of access rights.

7.7 Audit-proof archiving

Fabasoft Folio supports the integration of revision-safe archives via Fabasoft iArchive. This enables the transfer of digital records from Fabasoft Folio into audit-proof archives. An expiry date can be defined for documents - the system then sorts out the file or sends a reminder after the retention period expires.

There is no change in the user interface reflecting the access to archived content.

Moving high volume content from the content repository to an online archive results in a significant reduction of storage costs because content repository storage is more expensive than online archive storage.

Fabasoft Folio allows the archiving of business objects to an online archive based on configurable rules which can be based on business requirements.

Fabasoft Folio integrates EMC Centera and NetApp SnapLock as third party products for archiving.

Fabasoft Folio provides variable archiving possibilities. It is possible to completely archive contents and business objects including all of their versions, as well as to archive single versions, or only a copy of a certain version. Objects can be loaded or restored from the archive. The default search of Fabasoft Folio also searches for objects in the archive.

Figure 63: Archived objects need to be restored before they can be edited again
7.8 Legal Hold

A legal hold allows you to preserve all relevant objects when litigation is reasonably anticipated. Usually, a legal hold is issued as a result of current or anticipated litigation, audit, government investigation or similar matter to avoid evidence spoliation. Objects on legal hold cannot be deleted until the legal hold is removed again.

Moreover, a retention date can be defined preventing objects from being deleted before this date (editing of objects is still allowed).

In case of a legal hold, objects cannot be deleted even though the retention date may be reached.

Using EMC Centera or NetApp SnapLock, retention periods defined in Fabasoft Folio are also automatically used for objects within these archives.

![Figure 64: Legal hold](image-url)