

Open-Xchange™

Product Definition OX App Suite



Open-Xchange App Suite

V7.0 Community Version

V1.7

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1. Product Descriptions

1.1. Open-Xchange App Suite overview

OX App Suite has been designed from the ground up to provide a fresh, modern design that works across devices - tablets, desktops and notebooks - letting you communicate when you want and where you want. Based on HTML 5, Java Script and Java OX App Suite provides a more responsive and robust UI with no loss of data or app failure if connectivity is interrupted.

OX App Suite is modular in design and provides standard PIM functionality through OX Mail, OX Contacts, OX Calendar and OX Tasks. In addition OX Files provides centralized document management with versioning, publishing, sharing and file synchronization.

These modules are integrated into the OX Portal, which is highly configurable and provides one point of access for all OX App Suite functionality. With a reduced number of API's and enhanced modularity OX App Suite also offers better integration and extensibility.

Other enhancements include:

- the new "Halo View" which provides people centric navigation based on a persons social profile (LinkedIn, Facebook, Twitter etc.) and the emails they have sent, documents shared, common appointments and shared tasks.
- automatic selection of best preview format for users device
- integrated music and video player
- thread view
- optimized for tablet
- supports multiple email accounts

1.2. OX App Suite Server

OX Server is a Java based application, which authenticates users, stores and retrieves user's information, such as calendar appointments and contacts, enforces permissions across all of the groupware information and more. OX Server has been designed to integrate into a hosting provider's existing infrastructure leveraging services such as authentication, provisioning, billing, and email storage rather than require that these systems be replaced.

Java RMI and SOAP APIs, including user creation and modification and command line tools for provisioning are provided for integration into providers existing control panel and billing solutions.

1.3. OX Web Access

OX Web Access accomplishes the job of displaying the information stored on the backend server. This is a newly designed frontend application that runs in the end-user's web browser. This application utilizes JavaScript to manipulate the HTML, DOM and style-sheet properties of the browser page. When the user changes the state of data, such as uploading a new document, the application updates the information stored on the backend server.

1.4. OX Portal

The OX Portal is a new module which manages the integration and running of applications. The Portal allows us to offer a complete new user experience by tightly integrating OX applications, OX add-ons and external applications into one portal that can be individually customized by the end user.

The design of this new module is driven by the fact that more and more applications come from the cloud and the user experience of browser tabs and bookmarks can be very limiting and unsatisfactory. Additionally the goal is to provide an enhanced user experience by enabling copy & paste, drag & drop and program launcher functionality for application and window management.

1.5. OX PIM

Open-Xchange PIM includes the OX Mails, OX Calendar, OX Contacts and OX Tasks modules. Besides the most important standard features, OX PIM also provides webmail users with shared folders, also known as 'email folder subscribe /unsubscribe' (the underlying IMAP server must support email folder sharing). Additionally users will be able to share and publish OX Contacts and OX Tasks. For the appointment module a user can use the shared and public calendars, including privacy controls, Free/Busy, availability checking and delegated 'write' permissions

1.6. OX Files

Open-Xchange Files provides enhanced file and document management functionality. A user can store data centrally using OX Files eliminating the need to attach a document via E-Mail. Versioning of documents is also supported. Besides the personal OX Files folder, it is also possible to create further public document folders to share internally & externally with others thus enabling teamwork functionality across corporate firewalls.

1.7. Packages Basic, Advanced & Pro

With Open-Xchange App Suite Open-Xchange has created three new product tiers - Basic, Advanced and Pro packages. With the Basic package almost all features are included, for example the collaboration and sharing features. Going from Basic to Advanced we recommend certain storage increases and add the Connector for Business Mobility (EAS). Going from Advanced to Pro, Open-Xchange recommends unlimited storage and we add the Connector for Microsoft Outlook. The two Microsoft ecosystem components are the only exception to the rule that everything is already included in the Basic package.

2. OX App Suite – Module Descriptions

2.1. OX Webmail

OX Webmail is a highly sophisticated email solution that can be accessed from any mainstream web browser. Despite being viewed in a browser OX App Suite has the look and feel of a fat client. It boasts features such as Drag and Drop, and threading, as well as standard functionality like create, reply, reply to all.

Besides of email standard folders, webmail allows the creation of complex folder sub-structures. It is possible to add subfolders and rename and delete them. The folder view can be hidden to make better use of the available screen real estate and to present information more clearly., It is possible to mark mails via a checkbox so further actions can be carried out, such as move or delete, directly in the mail module.

Webmail allows you to organize folders by date, conversations, from, label, subject, ascending/descending and unread/read. In addition it is possible to search all webmail folders.

When sending an email, the webmail module provides the fields to, subject, Cc and Bcc. And from the create dialog, it is possible to add attachment, signatures and a personal business cards. The webmail dialog also provides the choice between HTML and text mails.

Email attachments can be saved to the local disk. When sending an email, users can access the data in the contact module without having to leave the email module. If users receive an appointment invitation via E-Mail, it is possible to switch directly to the appointment entry in the calendar module from within the email.

2.2. OX Contacts

OX Contacts is used for managing private and business contacts. The user can view, create, and edit contacts. The contact data for all groupware users is available in the global address book. It is possible to use the contact data for sending Email, for inviting participants to appointments from within the calendar module, or for delegating tasks to other users from within the task module.

Besides creating standard contacts, the user can create distribution lists with internal and external contacts.

The contact details are shown in an H-Split format, and it is possible to edit the chosen contact using the optional fields if required. As well as editing and deleting contacts, it is possible to move and copy contacts in other folders.

2.3. OX Calendar

OX Calendar allows the management of private and business appointments. Users can view, create, and edit appointments and it is possible to create a recurring appointment for regular meetings. If additional information is required users can attach documents to an appointment. If another participant invites more participants to an appointment, it is possible to accept or decline the invitation again

If other participants are added to an appointment it is possible to use the data from the contact module, which is delivered as part of the halo view. Users can check whether other participants are free for the scheduled appointment and whether resources such as rooms or devices are available. Other participants are automatically notified about appointment changes. In addition it is possible to create appointments via the inline & create function visible in all views.

The calendar module provides different views for personal and work events. And it is possible to hide the folder structure of private, public and shared folders. All important appointment information is visible in the day, workweek, week, month or list view. By clicking on the appointment a detailed view with all additional information is displayed. In this view it is possible to edit, delete or change confirmation of the appointment.

2.4. OX Files

OX Files is a document management app providing photo, music and video sharing with in app streaming capabilities, document sharing, versioning and access control. OX Files can also serve as backup location for documents and other important files.

OX Files also serves as a central information pool for a company's knowledge. This requires the creation of OX Drive folders that can be shared with other users or other teams and controlled by allocating read or write permissions. Users can send OX Files documents as a link or Email attachment to other users.

The module provides icon or H-Split views with a preview of each file type, and an HTML Editor is included.

2.5. OX Tasks

OX Tasks allows users to view, create, and edit private and business tasks, set the start and due date and enter the current status of the task. If more detailed information is required users can attach documents to the task. Users can also delegate tasks to other participants..

2.6. OX Options

This is where the settings for OX App Suite are controlled. Here it is possible to change country settings, the groupware's behavior and design, and personal settings like password and a vacation notice.

2.7. OX "Halo View" – People Centric Navigation

The new "Halo View" provides people centric navigation based on a person's social profile (LinkedIn, Facebook, Twitter etc.) and the emails they have sent, documents shared, common appointments and shared tasks.

With Halo, users have a summary of all the relevant information relating to a particular contact in one overview. This means a user can click on an contact, for example from within the email module, and will be provided with a complete summary of that contact, including details, recent conversation, received emails, sent emails and shared appointments and social profile. They can use this information directly from the overview in a number of ways, for example to connect via LinkedIn or to set up an appointment directly without having to open the calendar module.

2.8. OX Sharing and Social Functionality

2.8.1. Folder Sharing

Sharing folders is a vital part of exchanging information with other users. Each groupware object is saved in a specific folder. Use the folder tree for managing and sharing folders. Use the personal folders to sort email, contacts, tasks, and OX File items. Share and collaborate with your team by creating public folders with read or write access.

2.8.2. External Mail Accounts

External Mail-Accounts like Gmail© or Yahoo© can be integrated directly into the Open-Xchange inbox via a configuration wizard. Users simply have to supply their E-Mail-Address and password and the account will be created automatically for the above providers. Additional external accounts can be added in the user configuration page, new mails can then be sent from this account from the create new mail dialog.

2.8.3. Social Integration at the Portal

Social accounts like Facebook©, Twitter© or RSS Feeds can be set up and integrated into the Portal page, where a user can display (read only) information

from their accounts. In addition it is possible to integrate Tumblr© Picture Feeds and Flickr© Picture Streams.. Social integration on the portal page can be activated or disabled from the settings page.

3. OX App Suite Architecture

Open-Xchange App Suite is built to be deployed in a wide variety of environments and usage scenarios. To achieve this, it is built with extensibility and customization in mind and utilizes the following technologies:

3.1. OSGi Structure

On the backend, we use a service platform and module system called OSGi. It allows us to separate functionality into modules and abstract services as Java interfaces. Our backend comes with a range of SPIs that you can implement to plug in to your own mail system for example (authentication system, contact store, file store etc.) or implement your own backend functionality for use by the UI. A typical scenario is writing a custom authentication scheme for an installation, so the App Suite seamlessly plugs into your existing architecture.

3.2. Theming Functionality

To enable theming and branding of the frontend, we use less.js, a CSS precompiler that enhances CSS by introducing some programming concepts (variables, mixins, functions and calculations). Thanks to this branding, or creating a theme is very straightforward.

3.3. Modularization with RequireJS

'RequireJS' implements a modularization system (called "AMD", Asynchronous Module Definition). This enables the frontend to incrementally load parts of the program or assets when it needs them. This increases the perceived speed of the application and, more importantly, enables us to separate the frontend into logical sub modules without tainting the global namespace – otherwise a common javascript ailment.

3.4. Extension Points

Extension points allow plugins to add extra features and functionality to nearly all aspects of the frontend, which in turn may offer extension points themselves. This architecture is used rigorously in the App Suite Frontend allowing a wide range of extensibility. As an example, consider the detail view of a mail message. It offers an extension point for mail renderers. This extension point is extended by, for example the renderer for the message subject, the renderer for the message body, the renderer for message attachments and an extension that draws the menu with the inline actions. This last one again offers an extension point that is extended by all the actions you can perform with a mail message

(forward it, reply to it, etc.). So, if you wanted to offer an additional action to be performed with mail, you can do so by extending the menu's extension point. If you wanted to show additional data in the mail view (say, because your mail system sets a unique header with information for employees in it), you could extend the detail view's extension point to display the data. All extensions can be disabled or replaced entirely with your own custom ones.

The Extension Point system is used extensively in the UI, to ensure you can extend every part of the frontend.