OPEN-XCHANGE™ Whitepaper

keep in touch

Open-Xchange™ Hosted Edition Directory Integration

Concept to integrate Open-Xchange Hosted Edition into Company Directory Services

v1.00

Author: Manuel Kraft
Editors: Manuel Kraft
Layout: Robert Colombara

1. Introduction

Open-Xchange Server Hosted Edition is the most advanced Linux based Groupware solution for hosted environments.

Open-Xchange Server Hosted Edition is superior in the following areas:

- Open-Xchange Server offers the most comprehensive Groupware functionality based on modern user interface technologies and includes E-Mail, calendaring, contact management, intelligent document sharing, "smart linking" and much more.

- The architecture is designed specifically for deployment in the hosted market.

Due to the use of standard protocols and well documented interfaces, it is possible to integrate Open-Xchange Hosted Edition into existing E-Mail and Directory structures.

There are many reasons for deciding to integrate the Open-Xchange Server into an existing company wide directory service. Such an integration brings benefits from the reuse of existing user base and allows central administration and sharing of the same authentication data with other services. In addition it overcomes certain limitations inherent in the OpenLDAP server, like scalability and replication.

This whitepaper describes several ways to integrate Open-Xchange Hosted Edition into existing company directories.

This whitepaper is not meant as a complete How-To Guide with in depth documentation of configuration files or programming examples. This paper describes the concepts on an architectural level. Obviously a System Administrator requires knowledge of Open-Xchange Hosted Edition, Java and the Linux Operating System as well as of the existing company directory service in order to implement a successful integration.

2. Architecture Overview

This chapter gives a brief overview of the architecture of the Open-Xchange Hosted Edition.

In general the Open-Xchange Hosted Edition consists of the Open-Xchange Groupware Service and the Open-Xchange Administration Service.

All data is handled by back-end services, which are specially designed to store exactly these types of data.

Essentially, there are the following types of data storage:

- Database (SQL)
- E-Mail (IMAP/SMTP)
- File System

The Open-Xchange Administration Framework

This chapter shortly describes how to administer an Open-Xchange Hosted Edition when it is integrated in the back-end services.

In a standard setup, the Open-Xchange Server's Command Line Tools are used to administer all users/groups/resources etc. through the Open-Xchange Server.

The administrative command line tools communicate with the server through the JAVA-RMI interface which allows access to all administrative tasks. On the Open-Xchange Server there is a daemon running which will listen for RMI calls and which coordinates necessary actions with the relevant back-end services to respond to them. All functions of the command line tools are available as a Java-RMI Interface. So, programming own administration tools or even an UI is possible with JAVA skills.

In short this means that while data is stored by back-end services, calls to those services are handled by the Open-Xchange server itself.

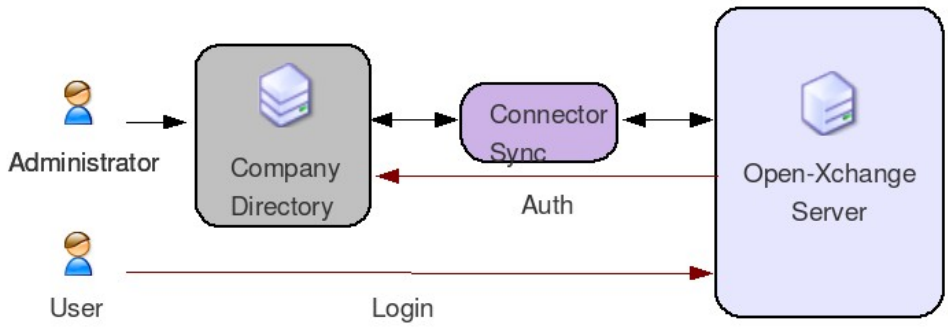
3. Directory Integration

This chapter presents a way to integrate the Open-Xchange Hosted Edition into existing Company Directory services.

Open-Xchange Hosted Edition has many interfaces which make it possible to integrate into a directory server. There are 2 required points of integration:

- Users should authenticate against the already running LDAP Server.

  - This means that already existing users login to the Open-Xchange server with their current username and password.
- The LDAP data of users/groups must be in sync with the Open-Xchange Database.



. **Authentication against LDAP via the Open-Xchange Authentication Plugin Mechanism.**

The Open-Xchange Hosted Edition has an Interface which can be implemented to use the current LDAP Server as the preferred authentication instance. To implement the Open-Xchange authentication mechanism, a simple JAVA program has to be written which binds to the current LDAP Server with data given from the Open-Xchange login mask. After a successful LDAP bind/search the JAVA program returns the user and the context in which the user resides in.

- The key advantage of this technology is that the users can keep their already assigned LDAP usernames and passwords and even if they change their LDAP password they can still login to the Open-Xchange Hosted Edition.
- This technique requires that all users are already imported to the Open-Xchange Database either via command line tools or via JAVA RMI Interfaces.

. **Synchronization of LDAP Data**

The Open-Xchange Server has its own database containing user and group information. So it is mandatory that these both data sources are in sync.

For example if a user was initially imported into the Open-Xchange Database via command line tools and has been married afterwards, his name has to be changed in the LDAP Server and the Open-Xchange Database. To achieve this synchronization Open-Xchange has tools and interfaces which can be used to update the user data easily. In our example we assume that the user will update his data in the LDAP Server through an already existing UI in case the user updates LDAP data which are also used or needed by the Open-Xchange Server. In this case the UI has to call the Open-Xchange System to also update the data in the Open-Xchange System. This can be done either via the already introduced simple command line tools or using JAVA RMI calls to the Open-Xchange Administration Service.

. **Detailed Information**

If you need more detailed information like Java examples for authenticating against LDAP Servers, do not hesitate to contact us.

URL: http://www.open-xchange.com

E-Mail: sales@open-xchange.com