Open-Xchange OX6

Installation and Administration

Open-Xchange™ OX6 : Installation and Administration

Publication date Tuesday, 08 September 2009 v6.12.3

Table of Contents

Chapter 1. Open Xchange installation

This chapter describes the initial setup and configuration of the Open-Xchange services. Basically there are four types of machines which need to be installed/available as well as an additional service (more information can be found in the Architecture Whitepaper on the Open-Xchange website):

- Frontend Server that runs the Apache webserver and forwards the user requests to the application servers.

- Application Server which runs the Open-Xchange application itself

- Database Server that runs the MySQL database or databases

- Administration Server that is accessed through the RMI, SOAP or CLT interface for provisioning

- Filestore Service which holds the storage space for the FileStore that needs to be available on all machines

These services can be installed together on one machine, distributed over several machines or in high end environments, clustered over several clusters.
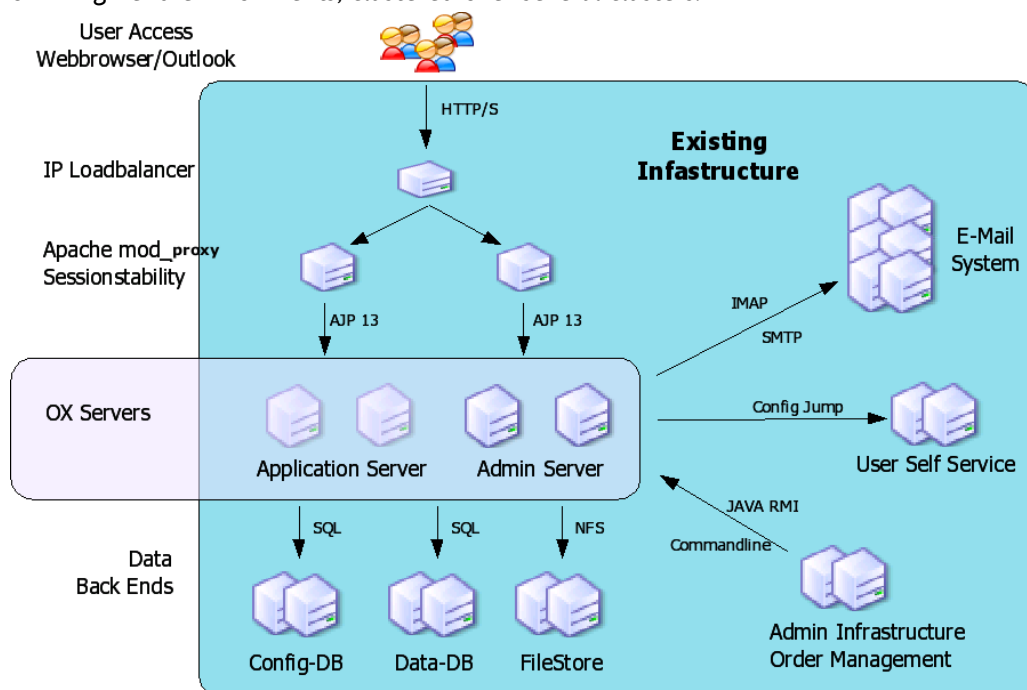
The basic procedure is to first install the Debian operating system on the servers including the necessary packages like Apache, mod_proxy, MySQL, depending on the type. Then, after installing the Open-Xchange packages, the basic configuration for Open-Xchange has to be done and the initial database schema has to be created. This enables the Open-Xchange application to access the necessary data on the relevant subsystems.

During the Debian installation, select the additional packages "Web Server and SQL Database". Additionally, you need to make sure that SUN Java 5 is installed on your systems. Depending on the version of Debian you can install Java through the inclusion of the "non-free" repository from the installation sources.

Detailed information about the setup of each machine type will be described in the next section.

1.1. Software Packages and Platform Installation

Following Open-Xchange packages are to be installed on the relevant machines. If one server will e. g. act as Frontend Server and as Application Server, all packages for both server types are needed.

1.1.1. Shared Packages

Shared packages contain common functions and libraries that are used by the Application and the Administration server. They need to be installed on all machines which are to serve one or both services. Of course all dependencies for the packages have to be resolved.

- **open-xchange-common_<version>_all.deb**

1.1.2. Groupware/Application Server

These Open-Xchange packages are needed on all machines which are to be used as Groupware/Application Server.

- **open-xchange-sessiond_<version>_all.deb**

- **open-xchange-i18n_<version>_all.deb**

- **open-xchange-management_<version>_all.deb**

- **open-xchange-server_<version>_all.deb**

- **open-xchange-configread_<version>_all.deb**

- **open-xchange_<version>_all.deb**

- **open-xchange-jcharset_<version>_all.deb**

- **open-xchange-monitoring_<version>_all.deb**

- **open-xchange-control_<version>_all.deb**

- **open-xchange-charset_<version>_all.deb**

- **open-xchange-global_<version>_all.deb**

- **open-xchange-cache_<version>_all.deb**

- **open-xchange-push-udp_<version>_all.deb**

- **open-xchange-smtp_<version>_all.deb**

- **open-xchange-settings-extensions_<version>_all.deb**

- **open-xchange-contactcollector_<version>_all.deb**

Plugins for the Groupware/Application Server

These plugins can be installed to get additional functionality for the application server. Services for authentication (e.g. open-xchange-authentication-database) and mailbackend (e.g. open-xchange-imap) are needed so that users can login and access their mailbox.

- **open-xchange-configjump-generic_<version>_all.deb**

  This plugin generates the link for customers when they click on the Extras link in the GUI settings tree

- **open-xchange-authentication-database_<version>_all.deb**

  This plugin does the user authentication against the password, stored in the open-xchange database

- **open-xchange-authentication-ldap_<version>_all.deb**

  This plugin does the user authentication against an external ldap server

- **open-xchange-authentication-imap_<version>_all.deb**

  This plugin does the user authentication against an external imap server

- **open-xchange-axis2_<version>_all.deb**

  This plugin provides the backend for the SOAP interface to the admin daemon RMI interface

- **open-xchange-admin-soap_<version>_all.deb**

  This plugin provides the SOAP interface to the admin daemon RMI interface

- **open-xchange-imap_<version>_all.deb**

  This plugin provides IMAP functionality so that users can access their IMAP mailbox

- **open-xchange-spamhandler-default_<version>_all.deb**

  This plugin provides basic spam functionality

- **open-xchange-spamhandler-spamassassin_<version>_all.deb**

  This plugin provides spam functionality for spamassassin is in use

- **open-xchange-mailfilter_<version>_all.deb**

  This plugin provides access to backends that talk managed sieve

- **open-xchange-group-managerequest_<version>_all.deb**

  This plugin adds functionality so users can manage groups within the GUI settings tree

- **open-xchange-resource-managerequest_<version>_all.deb**

This plugin adds functionality so users can manage resources within the GUI settings tree

- **open-xchange-commons-logging-log4j_<version>_all.deb**

This plugin adds support for log4j so that open-xchange does log through syslog, depends on package open-xchange-log4j

- **open-xchange-log4j_<version>_all.deb**

This plugin adds support for log4j so that open-xchange does log through syslog, depends on package open-xchange-commons-logging-log4j

- **open-xchange-passwordchange-database_<version>_all.deb**

This plugin adds functionality to the passwordchange servlet so that the password can be changed in the open-xchange database

- **open-xchange-passwordchange-servlet_<version>_all.deb**

This plugin adds functionality so that user can cache their password in the open-xchange settings menu

1.1.3. Administration Server

These Open-Xchange packages have to be installed on all machines which are to be used as Administration Server for administration and provisioning.

- **open-xchange-admin-client_<version>_all.deb**

- **open-xchange-admin-plugin-hosting_<version>_all.deb**

- **open-xchange-admin-plugin-hosting-doc_<version>_all.deb**

- **open-xchange-admin_<version>_all.deb**

- **open-xchange-admin-doc_<version>_all.deb**

- **open-xchange-admin-plugin-contextrestore_<version>_all.deb**

1.1.4. Frontend Server

The following packages need to be installed on machines which provide the AJAX GUI frontend to the users.

- **open-xchange-online-help-he-en_<version>_all.deb**

- **open-xchange-online-help-he-de_<version>_all.deb**

- **open-xchange-online-help-he-fr_<version>_all.deb**

- **open-xchange-gui_<version>_all.deb**

1.2. Software Installation

Below, you will find a summary of the necessary packages for each server type. For the initial installation and configuration, all available Open-Xchange™ packages need to be

installed on one single server. This is needed by the configuration scripts in order to set up the configuration files for all services. Later, this configuration can be distributed to the other peers in a clustered setup.

After the installation of the Open-Xchange packages, the administration and provisioning scripts are located in the directory **/opt/open-xchange/sbin/** and the configuration files in **/opt/open-xchange/etc/**.

1.2.1. Application Server

Packages to be installed on all Application Servers:

- **Groupware Service Packages**

- **Shared Packages**

- **MySQL 5 Client Packages**

- **Java 5 Packages**

- **Additional Plugins**

1.2.2. Administration Server

Packages to be installed on all Administration and Provisioning Servers:

- **Administration Service Packages**

- **Groupware Packages**

- **Shared Packages**

- **MySQL 5 Client Packages**

- **Java 5 Packages**

- **Additional Plugins**

1.2.3. Frontend Server

Packages to be installed on all Frontend Servers (more details about the configuration of Apache can be found in a separate chapter)

- **Ajax GUI Package**

- **Apache2**

- **mod_proxy**

1.2.4. Database Server

Packages to be installed on the database servers:

- **MySQL 5**

1.2.5. JAVA™ version

All Open-Xchange services are written in Java and depend on java™ version 1.5.0 patchlevel minimum 8.

JAVA™ needs to be installed on all types of machines, except pure frontend servers.

```
root@oxhet:~# java -version
java version "1.5.0_08"
Java(TM) 2 Runtime Environment, Standard Edition (build 1.5.0_08-b03)
Java HotSpot(TM) 64-Bit Server VM (build 1.5.0_08-b03, mixed mode)
```

1.2.6. Installing Open-Xchange Server Language Packages

Where to get the language packages?

The language packages can be found in the i18n subdirectory of the latest OX release on http://software.open-xchange.com. Unsupported languages are available in the Unsupported directory, e.g. SP5/i18n.

How to install?

Download the packages specific to your operating system and install them.

The open-xchange-lang-* packages contain translations for the open-xchange-server package.
The open-xchange-lang and open-xchange-gui-lang-* packages must be installed on a system where the open-xchange-gui package is installed.

How to get access to the supported packages?

You need to purchase a valid license to access these packages. To do so please first read *How to create an OXAccount and unlock Keys within the License Database*: http://sdb.open-xchange.com/node/65

1.3. Initial Setup

1.3.1. Requirements

Plain installed Debian GNU/Linux 4.0 (codename etch)
Configured network
Latest Open-Xchange packages

1.3.2. Preparations

Install the required packages through a debian package tool. The required packages are:

apache2
libapache2-mod-proxy (preferred) or libapache2-mod-jk
sun-java5-jre
mysql-server

mysql-client-5.0

Starting with this release, the apt repository is signed with the Open-Xchange buildkey and all rpm packages are also signed with this key. In order to install Debian packages, you need to import the key into the apt keyring. Please follow the instructions as documented in

http://www.open-xchange.com/wiki/index.php?title=Importing_OX_Buildkey

Install the packages by executing:

apt-get install apache2 sun-java5-jre mysql-server mysqlclient-5.0

Afterwards, start the mysql service:

/etc/init.d/mysql start

In a cluster setup the mysql server should be on a separate machine.

1.3.3. Initialize the configuration database

First, an initial configuration scheme will be created inside a database. This database will hold pointers to and about contexts, filestores, Open-Xchange servers, database pools for contexts and their relations. This scheme is typically called configdb which should not be changed. The **initconfigdb** command is used to set up this scheme in the database.

Ensure, that the database process itself is set up correctly, started without errors and listens on a TCP/IP socket before running this script. More details on how to configure the MySQL database can be found in Chapter 5, *MySQL Configuration*the MySQL chapter. The database connection can be tested by issuing the **mysql** command:

Testing the mysql connection

The values in the example have to be replaced to match the target environment. The command needs to be executed on the machines where the Open-Xchange services should run.

```
root@oxhe:~# mysql -h db1 -u openexchange -P 3306 -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 800 to server version: 5.0.22-Debian_0ubuntu6.06.3-log

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> create database testdbox;
Query OK, 1 row affected (0.00 sec)

mysql> drop database testdbox;
Query OK, 0 rows affected (0.00 sec)

mysql> exit
Bye
```

Open-Xchange connects to the database with the user passed to **--configdb-user**. The user can also be created with the **initconfigdb** command and the -a switch. This switch only works when the database runs locally on the system and root access is not disabled for the database. When the database runs on a remote host, the user has to be created manually before running the script. The user is used by the applications to access and create the

configuration database (configdb). It is important to also pass this user to the **oxinstaller** command later, to ensure that the credentials are written to the configuration files so that all applications are able to access this database schema. In the following examples, the user is named **openexchange**.

The machine passed to the parameter **--configdb-host** is the machine/cluster where the MySQL server dedicated for the configdb is installed.

More details about **initconfigdb** can be found in the CLT reference chapter.

Example 1.1. initconfigdb

Warning: the database schema given to the **initconfigdb** command (default configdb) will be deleted prior to its creation.

```
root@oxhe:~# /opt/open-xchange/sbin/initconfigdb --configdb-pass=secret
initializing configdb from scratch... done
```

1.3.4. Initial Configuration

The next step is to initially set up the Open-Xchange daemon. Before starting any service, all basic configuration files need to be set up correctly. Provide the appropriate parameters when running the **oxinstaller** command. Be sure to use a generic **--servername**, since all Open-Xchange servers must have the same name in a cluster setup. In detail i. e., **--servername** should not be a machine/DNS name as it is an OX internal name used to identify OX systems.

When authentication is not disabled, the "**master admin**" user is used to authenticate against the administration daemon to create, modify, and delete contexts. The default name of this admin is **oxadminmaster** and it is recommended not to change the name. The password for this user is set by the **--master-pass** option.

More details about oxinstaller can be found in the CLT reference chapter.

Example 1.2. oxinstaller

```
root@oxhe:/home/admin# /opt/open-xchange/sbin/oxinstaller --servername=oxapp \
--configdb-pass=secret --master-pass=mypw
setting up groupware configuration /opt/open-xchange/etc/groupware
......................................
setting up admin daemon configuration /opt/open-xchange/etc/admindaemon
..................
*** RMI authentication is enabled

using oxadminmaster as master account
groupware and admin configuration done
admin daemon must now be restarted if already running
```

1.3.5. Initial Registration of Objects in the Configuration Database

This chapter describes the initialization of the Open-Xchange data storages, databases and filestore. Additionally, all services will be registered and configured to work smoothly together. At the end of this chapter the OX applications will be up and running. After finishing these steps, some other services like Apache need to be configured as well to access the Open-Xchange Groupware as user.

Now the Open-Xchange administration daemon will be initially started and the application server (supplied as **servername** to the **oxinstaller** command) needs to be registered in the configuration database as well as the first filestore. This is necessary to allow all services to

find the right connections and the stored files on disk. The **registerserver** and the **registerfilestore** commands will perform these steps.

There are different possibilities to distribute the data from different customers into separated logical database schemas as well as into separated database clusters on separate hardware. This distribution is done automatically through the Administration Daemon when adding a new customer to the system. To allow the Administration Daemon to do this, those databases need to be registered in the system (configuration database). This is done with the command **registerdatabase**.

The examples in this documentation are based on the most trivial installation, where everything is installed on the same machine.

When these steps are done the groupware service is to be started and customer objects can be created.

configdb and contextdb can be deployed on the same machine to save hardware costs or can be installed on different clusters to achieve a higher scalability.

Example 1.3. Starting the Administration Daemon

root@oxhe:~# /etc/init.d/open-xchange-admin start
Starting Open-Xchange Admin Daemon: open-xchange-admin.

Example 1.4. registerserver

root@oxhe:~# /opt/open-xchange/sbin/registerserver -n oxapp -A oxadminmaster \
-P mypw
server 10 registered

Create a local directory that can be used as Open-Xchange filestore.

To do so execute

mkdir data/filestores/fs1

chown open-xchange:open-xchange /var/opt/open-xchange-filestore-1

Example 1.5. registerfilestore

The groupware application needs write access to the toplevel filestore directory. This directory needs to be mounted on all application servers and be accessible under the same path. The share needs to have at least one subdirectory. Please ensure, that the user who is running the application server has sufficient rights. Typically, this is the **open-xchange** user.

root@oxhe:~# /opt/open-xchange/sbin/registerfilestore -A oxadminmaster -P mypw \
 -t file:///var/opt/open-xchange-filestore-1/fs1 -s 10000 -x 50000
filestore 11 registered

Example 1.6. registerdatabase

--dbuser is the user which will be used by the groupware applications to access the created database. **--maxunit** gives the maximum number of contexts (customers) to insert into one database schema. When this limit is reached, the administration deamon tries to create the new customer on other registered databases. If there are none free, an error gets thrown.

```
root@oxhe:~# /opt/open-xchange/sbin/registerdatabase  -A oxadminmaster -P mypw \
-n "database22" -p secret -m true -l true -o 0 -a 10
database 12 registered
```

Example 1.7. Starting the Groupware Daemon

```
root@oxhe:~# /etc/init.d/open-xchange-groupware start
Starting Open-Xchange Groupware: open-xchange-groupware.
```

1.4. Network configuration

The Open-Xchange software relies on a w orking network setup and needs to have some special configuration.

1.4.1. hosts file:

The own host name must be added to /etc/hosts so that the Java RMI clients can connect to the server, e.g.:

10.0.0.1 app1 app1.example.com

> It is recommended to have a dns caching client installed or all servers added to local hosts files so that DNS problems do not affect the operation of the whole system.

1.4.2. routing:

Most open-xchange caches (*.ccf files) and the push service have an internal automatic configuration so they can find each other in clustered setups. This service is based on IP multicast. According to the configured multicast address, a route needs to be added to the linux kernel routing table, e.g.:

route add 224.0.0.0 netmask 240.0.0.0 dev eth0

1.4.3. port forwarding:

The Open-Xchange Oxtender (MS Outlook PlugIn) has PUSH functionality. For this feature to work, the PlugIn needs to be able to send and receive UDP packages directly to and from the configured port (default 44335) on the Groupware server. So if there are GUI servers or load balancers in front of the Groupware Server, those machines need to forward those packages to the groupware hosts. To make the Open-Xchange groupware process able to send UDP packages back with the IP of the frontends, this IP has to be added as virtual IP.

It is required to have no firewall between Open-Xchange servers in clustered setups.

1.5. Webserver Configuration

This chapter describes the webserver configuration the Open-Xchange™ services depend on. In order to get web access to the Open-Xchange system, the web server has to be set up.

1.5.1. Apache Modules

Additionally, it is strongly recommended to use the following Apache modules to make the communication as efficient as possible.

- **mod_deflate** is used to compress the data between the web browsers and the Open-Xchange front-end servers to minimize the transferred data.

- **mod_expires** is used to enforce strong caching in the browser to avoid unnecessary requests for already retrieved files. This is extremely important when using the Internet Explorer.

- **headers**

- **mod_ssl** is used to allow secure encrypted access to the system (https).

Those modules are activated by generating links from **mods-enabled** to the corresponding files in **mods-available**.

```
root@oxhe:/etc/apache2/mods-enabled# ls -l
total 0
[...] deflate.load -> /etc/apache2/mods-available/deflate.load
[...] expires.load -> /etc/apache2/mods-available/expires.load
[...] headers.load -> /etc/apache2/mods-available/headers.load
[...] ssl.conf -> /etc/apache2/mods-available/ssl.conf
[...] ssl.load -> /etc/apache2/mods-available/ssl.load
[...] proxy.load -> ../mods-available/proxy.load
[...] proxy_balancer.load -> ../mods-available/proxy_balancer.load
```

On a typical installation it is necessary to create the links for **deflate.load** and **expires.load**. The file **deflate.conf** should not be linked, as the configuration is done in another place.

1.5.2. Configuration Files

$apacheconfdir/conf.d/ox.conf

This file is provided as example in the Open-Xchange packages and needs to be adapted in some cases. If it is not available, make sure to create the file according to the following example. This example would require two open-xchange application server to run on hosts **ox1** and **ox2**.

```
<IfModule mod_proxy_ajp.c>
 <Proxy /ajax>
  AddDefaultCharset UTF-8
  Order allow,deny
```

```
    Allow from all
   </Proxy>
   <Proxy /servlet>
   AddDefaultCharset UTF-8
   Order allow,deny
   Allow from all
   </Proxy>
   <Proxy balancer://oxcluster>
   BalancerMember ajp://ox1:8009 smax=0 ttl=60 retry=5 loadfactor=50 route=OX-1
   BalancerMember ajp://ox2:8009 smax=0 ttl=60 retry=5 loadfactor=50 route=OX-2
   </Proxy>
   ProxyPass /ajax/ balancer://oxcluster/ajax/ stickysession=JSESSIONID
   ProxyPass /servlet/ balancer://oxcluster/servlet/ stickysession=JSESSIONID
</IfModule>


   <IfModule mod_deflate.c>
   # Logging
   DeflateFilterNote ratio
   LogFormat '"%r" %b (%{ratio}n) "%{User-agent}i"' deflate
   CustomLog /var/log/apache2/deflate.log deflate


   <Directory /var/www/ox6>
   AddOutputFilterByType DEFLATE text/html text/plain text/xml text/css \
   text/javascript application/x-javascript
   # Netscape 4.x has some problems...
   BrowserMatch ^Mozilla/4 gzip-only-text/html

   # Netscape 4.06-4.08 have some more problems
   BrowserMatch ^Mozilla/4\.0[678] no-gzip

   # MSIE masquerades as Netscape, but it is fine
   BrowserMatch \bMSI[E] !no-gzip !gzip-only-text/html

   # Make sure proxies don't deliver the wrong content
   #Header append Vary User-Agent env=!dont-vary

   AddDefaultCharset UTF-8
   AddCharset UTF-8 .js
   </Directory>
   </IfModule>
```

$apacheconfdir/sites-available/ox-he-ssl

The file must be enabled after creation using the command **a2ensite ox-he-ssl**

```
   NameVirtualHost *:443
      <VirtualHost *:443>
      ServerAdmin webmaster@localhost

      DocumentRoot /var/www/ox6
      DirectoryIndex index.html index.cgi index.pl index.php index.xhtml ox.html
      <Directory />
      Options FollowSymLinks
      AllowOverride None
      </Directory>
      <Directory /var/www/ox6>
      Options Indexes FollowSymLinks MultiViews
      AllowOverride None
      Order allow,deny
      allow from all
      # Uncomment this directive is you want to see apache2's
      # default start page (in /apache2-default) when you go to /
      #RedirectMatch ^/$ /apache2-default/
```

```
        </Directory>

        ScriptAlias /cgi-bin/ /usr/lib/cgi-bin/
        <Directory "/usr/lib/cgi-bin">
         AllowOverride None
         Options +ExecCGI -MultiViews +SymLinksIfOwnerMatch
         Order allow,deny
         Allow from all
        </Directory>

        #EXPIRE
        ExpiresActive On
        ExpiresByType image/gif "access plus 23 hours"
        ExpiresByType image/png "access plus 23 hours"
        ExpiresByType image/jpg "access plus 23 hours"
        ExpiresByType image/jpeg "access plus 23 hours"
        ExpiresByType text/javascript "access plus 23 hours"
        ExpiresByType text/css "access plus 23 hours"
        ExpiresByType text/html "access plus 23 hours"
        ExpiresByType application/x-javascript "acces plus 23 hours"

        <Files ~ "\.(js|css|gif|jpe?g|png)$">
         Header append Cache-Control "public"
        </Files>

        # SSL Protocol Adjustments
        # needs to be removed from mods-available/ssl.conf
        SetEnvIf User-Agent ".*MSIE [0-6]\..*" \
        nokeepalive ssl-unclean-shutdown \
        downgrade-1.0 force-response-1.0


        ErrorLog /var/log/apache2/error.log

        # Possible values include: debug, info, notice, warn, error, crit,
        # alert, emerg.
        LogLevel warn

        CustomLog /var/log/apache2/access.log combined
        ServerSignature On

        SSLEngine On
        SSLCertificateFile /etc/ssl/certs/yourcert.pem
        SSLCertificateKeyFile /etc/ssl/private/yourkey.pem

        </VirtualHost>
```

$apacheconfdir/mods-available/ssl.conf

Any SetEnvIf statement for MSIE needs to be removed if applicable. For this a new statement is added to the ssl vhost section above. This improves IE7 performance and IE6 performance when ssl is not in use.

Comment the following part in /etc/apache2/mods-enabled/proxy.conf

```
        #<Proxy *>
        # AddDefaultCharset off
        # Order deny,allow
        # Deny from all
        # Allow from .example.com
            #</Proxy>
```

1.6. Creating your first context and users

Now as the whole setup is complete and you already should get a login screen when opening the server IP in the browser, we now have to setup a context and a default user.

1.6.1. Create a context

```
/opt/open-xchange/sbin/createcontext -A oxadminmaster -P secret -c 1 -u oxadmin \
-d "Context Admin" -g Admin -s User -p secret -e oxadmin@example.com \
-q 1024 -L defaultcontext --access-combination-name=all
```

The mapping defaultcontext will allow you to set this context as default one of the entire system, so that users which will be created within this context can login into the groupware without specifying their domain in the login screen. Note that only one context can be the default context. The user that will be created with this call (oxadmin) is the default admin of this context. He will gather additional functions that are also described in the Administration manual. Also note that the context id has to be unique and numeric, otherwise the server will complain when you try to create a context.

1.6.2. Create a user

```
/opt/open-xchange/sbin/createuser -c 1 -A oxadmin -P secret -u testuser -d "Test User" \
-g Test -s User -p secret -e testuser@example.com
```

Now connect to the server with a browser and login with testuser / secret.

1.7. Imap and smtp server

The Open-Xchange server is designed to connect to the existing imap and smtp server. This configuration can be set up globally for all users in a configuration file or separately for each user. The configuration file "mail.properties" is described in detail in the Configuration Options chapter. In this file the needed behaviour can be set. Important configurations are:

- User setting for IMAP and SMTP is written to the database and set by the user functions through RMI or on the command line. The command line options for create/changeuser are:

```
--imapserver
    --imaplogin
    --smtpserver
```

- The "imapCredSrc" parameter specifies the credentials to be used for authentication against the SMTP and IMAP server:

```
"session" password and open-xchange username given on login
    "user.imapLogin" password from login and username from "--imaplogin"
```

1.8. Authentication

The "login implementation" is a plugin which is used for user authentication. This can be a self-developed plugin that authenticates against an existing authorisation or a shipped one. Open-Xchange deliveres packages for authentication against the Database, Ldap and

IMAP. Choose one from the section called "Plugins for the Groupware/Application Server". This plugin also controls which part of the login is the username or the contextname. It also controls the separator in between, default is "@".

Example 1.8. Plugin description

http://wiki.open-xchange.com/wiki/index.php?title=Authentication_Plugin_description

1.9. User self service

The "config jump" is a plugin that creates the URL which is opened in a separate window when a user clicks on "Extras" in the configuration tree of the user frontend. Choose the **open-xchange-configjump-generic_<version>_all.deb** plugin. If you do not choose this package there will be no link available in the groupware.

Chapter 2. OSGi

2.1. OSGi – an overview

OSGi is a dynamic module system for Java. The OSGi framework provides a plugin concept on top of a service-oriented architectures to enhance the Java technology to be more modular and dynamic. Dynamic means that components can be managed at runtime. Components in OSGi can provide a feature or function (service provider) or use other components and their services (service requester). To search and find services, OSGi provides a service registry.

A good analogy for a better understanding is this one: Java without OSGi behaves like Windows 95 where a change in the system requires a complete restart of the kernel (in the Java world so called Java VM). With OSGi it is more like the Linux kernel modules concept, modules can be added and removed at runtime. Modules in the OSGi world are called bundles. A bundle contains the service providers or requesters A bundle from the Java perspective is at least one class or interface with an additional information file called "MANIFEST.MF". A bundle is associated with several activities like installation, removal, update, starting and stopping.

Interesting to know is that each bundle describes dependencies to other bundles and the offered services. With OSGi it can be possible to run different versions of the same bundle providing the same services. This can be used for interesting scenarios if you think about backwards compatibility and legacy systems. At runtime, it is possible to explore the installed bundles and view details like version numbers and other useful information. In addition, it is possible to start and stop bundles at runtime if for example a newer version is available. This very interesting feature can also be used to replace a bundle at runtime with a special debug bundle, a testing bundle or even a downgrade bundle because an issue occurred in a specific function. Admins can decide which bundles fit best into their environment and start only those bundles.

In short here are some advantages of the OSGi technology:

Module boundaries	Clean and protected dependencies and declaration of service offerings
Service-oriented architecture	Start/stop bundles to provide features and functions in a live environment
Versioning	Same bundles can be started with different versions
Transparency	It is possible to list all available/installed bundles and view version and other useful information
Modularization/Flexibility	Start and run only those packages your system needs

Chapter 3. HTML Whitelist

An HTML Whitelist is a configuration file that defines allowed HTML tags and their attribute names or values. All tags and attributes that are not listed in this file have to be removed to filter dangerous HTML content.

3.1. HTML Whitelist Configuration

The HTML whitelist is defined in the 'whitelist.properties' configuration file. This file is divided in three sections:

HTML tags and attributes
CSS name/value pairs
CSS combi map

3.1.1. HTML Tags and Attributes

This section includes the allowed HTML tags and attributes. Each entry is preceded by „html.tag.", followed by the name of the allowed tag. The attributes form a comma-separated, quoted list. The attributes can be followed by their allowed values. The values are put in square brackets and separated by ':'. Example:

html.tag.area=",alt,coords,href,nohref[nohref],shape[:rect:circle:poly:default:],tabindex,target,"

This entry allows the „area" tag. The attributes are listed within the quoatation marks. The allowed values for the „shape" attribute are listed within the square brackets. If the attributes list contains empty brackets, only numeric values are allowed:

html.tag.pre=",width[],"

If the attributes list is empty, only the HTML tag without any attributes is allowed:

html.tag.span=""

3.1.2. CSS Name/Value Pairs

Analogous to the HTML tags and attributes, this section includes allowed CSS elements with their allowed values. Each entry is preceded by „html.style.", followed by the name of the CSS element. Allowed values are defined in a comma-separated, quoted list.

For the values it is possible to use wildcards that comprise certain value types:

c: Any CSS color value
u: An URL; e. g. url(http://www.somewhere.com/myimage.jpg);
n: Any CSS number value without '%'
N: Any CSS number value
*: Any value allowed
d: delete
t: time

Example:

html.style.background-color="c,transparent,"

This allows the CSS element „background-color". For this element any CSS clor values and the value „transparent" are allowed. Wildcards precede the list and are not comma-separated:

="uNc,scroll,fixed,..."

3.1.3. CSS Combi Map

The second section of CSS Name/Value Pairs allows entries with an empty value list:

html.style.border=""

Such entries refer to the CSS combi map i. e., the respective CSS element configuration is included in the CSS combi map:

html.style.combimap.border="Nc,transparent,none,hidden,dotted,dashed,solid,double,groove,ridge,inset,outset,separate,collapse,"

Entries in the combi map are preceded with „html.style.combimap.", followed by the respective CSS element. Analogous to the latter section, the element is followed by the value listing.

Chapter 4. Spam Handler

A spam handler is a dedicated service within the Open-Xchange Server's Osgi framework. Spam E-Mails are treated in a special way by this handler.

The spam handling is triggered whenever a user explicitly marks an E-Mail as spam. The ham handling is activated if the user marks an E-Mail in his spam E-Mail folder as 'No Spam'.

On the Open-Xchange Server there are several ways of implementing this service. For this purpose several spam handlers are registered with the OSGi framework under a special registration name. The registration name "NoSpamHandler" is reserved for an empty SpamHandler implementation that is used as a fallback.

4.1. Spam Handler Configuration

Every E-Mail implementation includes the registration name of the SpamHandler that is used in the E-Mail implementation. If no SpamHandler is used, "NoSpamHandler" is entered. The registration name configuration of a suitable spam handler depends on the respective E-Mail implementation. The IMAP implementation e. g. activates the spam handler via the 'com.openexchange.imap.spamHandler' entry in the 'imap.properties' properties file.

To make a Spam handler available for a special user the respective E-Mail implementation has to define a spam handler and the spam functionality explicitly has to be activated in the user's E-Mail settings.

Depending on the spam filter a dedicated spam handler has to be installed. The SpamAssassin spam filter e.g. wraps E-Mails that are recognized as spam in an extra created E-Mail i.e., the spam E-Mail comes as attachment.

Currently, two implementations are available:

DefaultSpamHandler	Assumes that the spam E-Mails are not wrapped and thus moves them without further action.
SpamAssassinSpamHandler	Assumes that the spam E-Mails are attached to the E-Mail. Thus the attachment is extracted and moved.

4.2. Phishing E-Mails

Phishing is an attempt to criminally acquire valuable user data, such as passwords, keys or other information. They often include official-looking logos from real organizations and other identifying information taken directly from legitimate Web sites.

Such E-Mails are different from typical Spam E-Mails as they appear to be legitimate and are thus difficult to recognize with normal Spam rules. An E-Mail's header and content needs to be checked thoroughly to find out if it is a phishing E-Mail.

Analogously to the Spam handling, certain header entries are used to mark the respective E-Mails as phishing E-Mail. Those header entries are called phishing header in the following paragraph.

4.2.1. Phishing Header Configuration

Which E-Mail header entries indicate a phishing header can be defined in the 'mail.properties' file. The respective property name is 'com.openexchange.mail.phishingHeader'. If there are multiple header identifiers, a comma separated list of header names can be used.

Those header names are made available to the front-end where further actions can be done.

If no header identifier is defined, no E-Mail header entries are seen as phishing header.

Chapter 5. MySQL Configuration

This chapter describes the requirements and the configuration needed to use the MySQL database as database back-end for the Open-Xchange™ application.

5.1. Software Packages

The following packages need to be installed on all Open-Xchange™ administration and groupware servers to access the database back-end:

* **mysql-client-5.0**

5.2. Recommended settings in my.cf

* **innodb_flush_log_at_trx_commit=1**

* **default-table-type=InnoDB**

* **query_cache_type=1**

* **innodb_flush_log_at_trx_commit=1**

The sql_mode must not be set to **ansi.**

5.3. Privileges for the Open-Xchange Database Users

It is possible to use different users for read connections and for write connections. Additionally, there can be different users for the **configdb** and for the groupware databases. In the examples a user called **openexchange** is used for both types of connections to the groupware database.

* Users for the write connections need the following permissions: **ALL**

* Users for the read connections need the following permissions: **SELECT**

Example 5.1. Grant User Access

The following GRANT statement was used for creating the **openexchange** user for the examples in this document:

```
oxhe:~# mysql
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 34
Server version: 5.0.32-Debian_7etch1-log Debian etch distribution

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.


mysql> GRANT  ALL PRIVILEGES ON *.* TO 'openexchange'@'%' IDENTIFIED BY 'secret';
Query OK, 0 rows affected (0.00 sec)

mysql>
```

Chapter 6. IMAP server requirements

This chapter lists requirements that an OX server needs to be fulfilled by an IMAP server.

6.1. IMAP server requirements

The requirements are related and actually bound to an IMAP server's capabilities i.e., the response of the special IMAP command "CAPABILITY": a listing of capabilities that the server supports.

6.1.1. IMAP4 / IMAP4rev1

At least the IMAP server must support the IMAP4/IMAP4rev1 capability in order to allow access and manipulation of E-Mails and remote E-Mail folders, called "mailboxes", as per RFC 2060.

This extension is required by the OX server.

6.1.2. QUOTA

The QUOTA extension (RFC 2087) permits administrative limits on resource usage (quotas) to being set and manipulated through the IMAP protocol.

This extension is required by the OX Server.

6.1.3. NAMESPACE

The NAMESPACE extension (RFC 2342) allows a client to discover the prefixes of namespaces used by a server for personal mailboxes, other users' mailboxes, and shared mailboxes.

This extension is required by the OX Server in order to support public and shared folders to let the E-Mail folders fit into existing OX folder capabilities. Sharing of E-Mail folders is related to following ACL capability.

6.1.4. SORT

The SORT extension defines sorting performed on the IMAP server and is intended to improve performance for IMAP clients which offer sorted views.

This capability is not needed by the OX Server since it is able to sort E-Mails itself. Actually, server-based sorting is the recommended (and faster) way. Unless it is required that E-Mails can be sorted by their (thread) reference, this extension is required by the OX Server. Furthermore, an extended SORT extension must be supported by the IMAP server. The extension is called "THREAD=REFERENCES" in the capability list.

If "THREAD=REFERENCES" is not required, IMAP property "imapSort" must be set to false to let the server do the sorting.

6.1.5. ACL

The ACL extension (RFC 2086) permits access control lists. An access control list is a set of <identifier,rights> pairs. The identifier is a US-ASCII string naming the entity, and rights is a

string listing a (possibly empty) set of alphanumeric characters, each character listing an allowed set of operations.

Some IMAP servers even support a newer ACL extension as per RFC 4314 which defines some more rights and has a different view on the set of operations allowed by the single characters.

Currently, the OX server is designed to work with the older RFC extension but is also able to handle the newer one. Depending on the log level several warnings appear in the log file if a right violation has been detected caused by the newer ACL extension.

This extension is not required by the OX Server and can be completely disabled via IMAP configuration through the property "supportsACL". In consequence to disabling ACL support sharing of folders is not possible any more.

6.1.6. UIDPLUS

The UIDPLUS extension (RFC 2359) provides a set of features intended to reduce the amount of time and resources used by some client operations.

Since corresponding RFC 2359 provides (slower) fall-back approaches to take when the UIDPLUS extension is not supported, the OX Server does not require this extension.

6.2. Tested IMAP servers

A listing of IMAP servers tested against the OX Server.

1. 1.Cyrus IMAP4 v2.2.13

2. 1.Courier 4.1.1.20060828 (0.53.3)

3. 1.Dovecot 1.0.rc15

Chapter 7. Contacts LDAP (GAL)

7.1. Introduction

This document contains descriptions about the contacts-ldap (global address list) server OSGI bundle. This bundle includes contacts from an ldap server (OpenLDAP, Active Directory), as a global address book inside the Open-Xchange folder tree.

7.1.1. Architecture

The contacts-ldap bundle is designed as a bundle for the groupware server and gets installed as a service within the OSGi environment.

7.2. Deliverables

7.2.1. Package description

The package contains the bundle itself and the corresponding example configuration files. The bundle will get installed as a directory below /opt/open-xchange/bundles. The example configuration file can be found in:

/opt/open-xchange/etc/groupware/contacts-ldap/

In detail it consist of the following files:

/opt/open-xchange/etc/groupware/contacts-ldap/111/LDAPglobal1.properties.example
/opt/open-xchange/etc/groupware/contacts-ldap/ldap/111/LDAPglobal.properties.example
/opt/open-xchange/etc/groupware/contacts-ldap/ldap/mapping.openldap.properties.example
/opt/open-xchange/etc/groupware/contacts-ldap/ldap/mapping.ads.properties.example

7.3. Limitations and specials

- The global LDAP folder can be deleted by the administrator of the context, in contrast to the other public folder which cannot. If the folder is deleted the folder will be re-created if the ldap bundle is restarted.
- At the moment the bundle is only able to work with one context, or to be more precise the folder IDs for the LDAP folder must be unique, due to restrictions in the groupware core.
- Exception messages are not internationalized at the moment
- Only simple bind is possible
- LDAP sort is not tested
- LDAP multiple-values not tested with Active Directory
- Only the first value of multiple-values attributes will be used
- Folder names are not internationalized
- Automatic configuration reload on property change is not supported, for a reload the bundle has to be restarted
- LDAP structures from OX5 containing date information (e. g., date of birth) can not be used.

7.4. Installation

The package has to be installed with the package management tool of the distribution. Afterwards the bundle automatically starts during a groupware restart. The settings in the configuration files need to be done before. Wrong settings do cause the bundle to shutdown itself and the reason is to be found in the groupware log file.

7.5. Configuration

As written in the package description section, the bundle has some example configuration files which reside in the /opt/open-xchange/etc/groupware/contacts-ldap. In this section all are explained in more detail. The bundle has no main configuration file, all needed information is gathered from the directory structure. So all directories starting with digits can have to contain a property in the structure written below. The digits itself represent the corresponding context number. So a directory 111 will contain configuration files for the context with id 111.

In this directory the configuration files for the different global LDAP folder per context are stored. The name of the configuration files in not relevant, but it has to be used in the property key as well. The key property therefore matches the following scheme:

com.openexchange.contacts.ldap.context<contextid (number of directory)>.<name of property file without extension>.<property>

So for a scenario were the property file is named test.properties and which resides in the directory 111 the key for the uri property would be:

com.openexchange.contacts.ldap.context111.test.uri

For your configuration files you can just copy over the example files delivered with this bundle and adjust the property file name part in the keys and the context id.

In this example files all properties are documented, so this text will only shed some light on a few more interesting things.

One of them is the mapping file. Two examples for OpenLDAP and Active Directory are included in the package:

/opt/open-xchange/etc/groupware/contacts-ldap/mapping.openldap.properties.example
/opt/open-xchange/etc/groupware/contacts-ldap/mapping.ads.properties.example

The corresponding mapping file to a folder can be selected with the property com.openexchange.contacts.ldap.context<id>.<name of property file>.mappingfile here you only need to give the real filename without any path, the bundle will then search the right one. If you use the example files, please pay attention that you remove the .example extension beforehand.

The mapping file describes how the attributes of a contact in Open-Xchange are mapped to the attributes in the LDAP server. A special attribute is com.openexchange.contacts. ldap.<name of mapping file>.uniqueid. This property can specify an attribute which needs to be unique for all objects in the specified part of the LDAP tree. This is shortly connected to the property com.openexchange.contacts.ldap.context<id>.<name of property file>.memorymapping in the corresponding configuration file. The two are related in the following way:

If there is an attribute in the LDAP that is unique and an integer value in the range $0 - 2^{32}$ then this value can directly be used with Open-Xchange, and the same ids which are in the LDAP directory are used in Open-Xchange for object identification. In this case memorymapping

can be set to false, because there is no need to hold a memorymap between the object identifiers in Open-Xchange and in LDAP. But if the value is an integer out of that range or if it is a unique string, you will have to turn memorymapping on. This way the bundle will create own ids for the contact object by a mapping table which is stored in-memory. The downside of this is that the links in the groupware won't work because the ids will change after a restart of the groupware. Currently this applies to Active Directory, because there seems to be no attribute which fulfills the range requirement.

7.5.1. Configuring distribution lists

The configuration allows to switch between normal contacts, distributionlists or both. This setting is done in com.openexchange.contacts.ldap.context<contextid (number of directory)>.contactTypes.

If distributionlists are enabled by either setting both or distributionlists here, a check of the distributionlists settings (searchfilter_distributionlist, searchScope_distributionlist, baseDN_distributionlist) for correctness must also be made. Special attention should be paid to the searchfilter_distributionlist setting, as this defines what types of objects are distributionslists.

Note: If both, distribution lists and contacts, are enabled they share the same unique ids i. e., the ids have to be unique across distribution lists and contacts. This is independent of the memorymapping setting.

7.5.2. Outlook Support

The Outlook support of the contacts-ldap bundle depends on the underlying LDAP directory server. If ADS is used, it depends on the individual setup whether memory mapping has to be used for generating unique ids (see section below). If memory mapping has to be used the ids will change after a server restart, which will confuse Outlook and lead to duplicates in some scenarios. To omit this, a property com.openexchange.contacts.ldap.context<contextid (number of directory)>.outlook_support can be used to configure outlook_support. If the property is missing or set to false, the support will be disabled and Outlook will only show an empty folder. If set to true the folder will contain the contacts.

Deletion detection

To detect deleted objects in Outlook the directory server must deliver what has been deleted since a timestamp. This information is not available on normal LDAP servers, but on ADS. If an ADS server is used, then and only then the configuration

com.openexchange.contacts.ldap.context<contextid (number of directory)>.ADS_deletion_support

can be enabled.

This will allow Outlook to detect deleted objects. But note that even if this option is enabled the ADS will not provide this information for ever, it is only kept for the following lifetimes:

60 days for forests initially built using Windows 2003 and Windows Server 2003
180 days for forests that were initially built with Windows Server 2003 SP1

So if one Outlook client performs a sync after these time frames it will not detect the object deleted before, because this information cannot be retrieved.

If ADS is used, Outlook will not remove contacts which are removed on the LDAP side, only new contacts are added. To get the actual list with contacts removed, Outlook must be restarted without OXtender and all contacts in the folder must be deleted. After a restart with OXtender a full sync is done, and deleted contacts will not appear any more.

7.5.3. Memorymapping and ADS

If an ADS is running, memorymapping can be disabled if the following precondition is met

Objects are only created on one DC and the objects are only read from this DC.

If this applies, the following settings can be changed in the mapping.ads.properties file:

com.openexchange.contacts.ldap.mapping.ads.uniqueid = sAMAccountName

can be changed to:

com.openexchange.contacts.ldap.mapping.ads.uniqueid = uSNCreated

and

com.openexchange.contacts.ldap.mapping.ads.distributionuid = sAMAccountName

can be changed to:

com.openexchange.contacts.ldap.mapping.ads.distributionuid = uSNCreated

Chapter 8. Session Migration

8.1. Introduction

Sessions are typically initiated by users via the Webinterface of the Open-Xchange Server, Outlook or mobile devices, every session is bound to one Open-Xchange server until it is terminated. In a clustered Open-Xchange environment, sessions are assigned to one server of the cluster by random algorithms. Since Open-Xchange uses caching via the network all data is available to every user on every server in the cluster. But sessions are still bound to one server and if that server is going to be shut down, users would encounter an error message and are kicked off the cluster. To solve this problem, sessions migration has been introduced with the OSGI implementation of Open-Xchange Server 6 SP4. This feature allows sessions to migrate to another server at the cluster without having any influence to the end user. Typical scenarios where sessions need to be migrated are hardware and software upgrades of the server as well as emergency shutdowns.

The implementation of the session migration is based on a cache which is filled with all sessions of a server if its "sessiond" bundle is shut down. Other groupware servers fetch the sessions from the cache and take over the migrated session. Therefore it is mandatory to shut down the sessiond bundle prior to the server shutdown. Note that it may take some time until all sessions are put to the cache. If a user request collides with the short time where sessions are put to the cache it is possible that the request will fail, but in most cases a user should not mention anything at all.

8.2. Preparation

To enable session migration, the session cache need to be configured, this needs to be done for all Open-Xchange server that should be capable to migrate sessions

```
$ vim /opt/open-xchange/etc/groupware/sessioncache.ccf
```

```
[...]
jcs.auxiliary.SessionLTCP.attributes.TcpListenerPort=58849
jcs.auxiliary.SessionLTCP.attributes.UdpDiscoveryAddr=224.0.0.1
jcs.auxiliary.SessionLTCP.attributes.UdpDiscoveryPort=6789
jcs.auxiliary.SessionLTCP.attributes.UdpDiscoveryEnabled=true
```

In this case Open-Xchange is listening on port 58849 for incoming sessions and discovers other Open-Xchange session caches via UDP multicast on port 6789. Shortly after server startup all servers should connect to the cache. This can be checked by running netstat, this is an example with two Open-Xchange Servers:

OX1:

```
$ netstat -tulpa
tcp6     0     0 *:58849            *:*                LISTEN     27449/java
tcp6     0     0 oxhegw01.open-xch:58849 oxhegw02.open-xch:55499 ESTABLISHED27449/java
```

OX2:

```
$ netstat -tulpa
tcp6     0     0 *:58849            *:*                LISTEN     11816/java
tcp6     0     0 oxhegw02.open-xch:55499 oxhegw01.open-xch:58849 ESTABLISHED11816/java
```

Both groupware servers have connected to each other and are ready to accept sessions

8.3. Migration

First, shutdown the sessiond bundle

$ /opt/open-xchange/sbin/stopbundle com.openexchange.sessiond

Wait some seconds until all sessions are put to the cache, then shutdown the groupware

$ /etc/init.d/open-xchange-groupware stop

This is what happens to a users session at the webinterface:

GET http://server.ox/ajax/calendar?action=all&columns=1%2C20%2C207&end=1215043200000&folder=25&session=6e3be7938169670c47fa
Cookie: JSESSIONID=41165f534d652a3e662d9c44b0b6efd439f310ad.OX-2

OX-2 is the identifier for the second Open-Xchange server at the cluster, now this server is going to be shut down and the user triggers another request

In some cases, requests and session migration collide, an error message is shown but the next request will succeed and does not terminate the user's session:

The required service com.openexchange.sessiond.SessiondService is temporary
not available. Please try again later. (SRV-0001,-1021469715-4)

The next request triggered by the user is answered by an Open-Xchange server that has taken over the session.

GET http://server.ox/ajax/calendar?action=all&columns=1%2C20%2C207&end=1215216000000&folder=25&session=6e3be7938169670c47fa
Cookie: JSESSIONID=9235ba164ca5ac3119cee006a92e4a574e31c32b.OX-1

The identifier of the server has been set to OX-1 and the user is able to continue working at this server without any interruption.

Chapter 9. Open Xchange CLT reference

This chapter describes the administration tools available in Open-Xchange. Some command line tools start a java vm and generate RMI calls directly to the administration daemon that will make all necessary database operations, others are shell scripts.

9.1. Shell scripts

- **generatempasswd**

- **initconfigdb**

- **open-xchange-admindaemon**

- **open-xchange-groupware**

- **oxinstaller**

Command path is "**/opt/open-xchange/sbin/**"

9.1.1. Shell scripts

generatempasswd

generatempasswd writes a username and a crypted password to the mpasswd file. Against this file the context Context Admin authentication is done by the groupware server.

Parameters

-h,--help	Prints a help text
-A,--adminuser <adminuser>	Context Admin username
-P,--adminpass <adminpass>	Context Admin password
-f,--mpasswdfile <mpasswd file>	Path and name of the mpasswd file

Return value

0 on success

>0 on failure

Mandatory parameters

This tool has no mandatory parameters. When no **--adminpass** parameter is given, the password will be read from the command line. Defaults are:

-A,--adminuser	oxadminmaster
-f,--file	/opt/open-xchange/etc/admindaemon/mpasswd

Command output

On success:

<adminuser> succesfully added to the mpasswd file <file>

On failure:

update/creation of file <file> failed. Error: <reason>

Example 9.1. generatempasswd

```
root@oxhe:~# /opt/open-xchange/sbin/generatempasswd
Enter oxadminmaster password:
oxadminmaster succesfully added to mpasswd file /opt/open-xchange/etc/admindaem
on/mpasswd
root@oxhe:~#
```

initconfigdb

initconfigdb is the tool to initially set up the Open-Xchange configuration database. This database is needed and accessed from all Open-Xchange services and servers.

Parameters

-h,--help	Prints a help text
--configdb-user	Database user for the Open-Xchange service
--configdb-pass	Password for the Open-Xchange database user
--configdb-host	Hostname or IP address of the Database
--configdb-port	Database port
--configdb-dbname	Database schema name for the Open-Xchange configuration database

Return value

0 on success

>0 on failure

Mandatory parameters

Mandatory is **--configdb-pass** because for those parameters, no default exists. Defaults are:

--configdb-user	openexchange
--configdb-host	localhost
--configdb-port	3306
--configdb-dbname	configdb

Command output

On success:

initializing Open-Xchange configuration database <configdb-dbname>… database generated

On failure:

initializing Open-Xchange configuration database <configdb-dbname>… error: <reason>

Example 9.2. configdb

root@oxhe:~# **/opt/open-xchange/sbin/initconfigdb --configdb-pass=secret**
initializing Open-Xchange configuration database configdb... database
generated
root@oxhe:~#

open-xchange-admindaemon

open-xchange-admindaemon is the start script for the Open-Xchange Admindaemon and is
executed from the runlevel script **/etc/init.d/open-xchange-admin**

open-xchange-groupware

open-xchange-groupware is the start script for the Open-Xchange Groupware and is executed
from the runlevel script **/etc/init.d/open-xchange-admin-groupware**

oxinstaller

oxinstaller is the script to initially set up the Open-Xchange configuration files. This basic
configuration can then be used to fine tune the installation.

Parameters

-h,--help	Prints a help text
--servername	Open-Xchange internal server name
--imapserver	Mail (IMAP) server in case **imaplogintype** is **config** or **global**
--imapserver	Transport (SMTP) serverin case **imaplogintype** is **config** or **global**
--imaplogintype	Used login implementation. Needs to be **user**, **config**, **global** is for debugging purposes
--configdb-user	Database user for the Open-Xchange service
--configdb-pass	Password for the Open-Xchange database user
--configdb-readhost	Hostname or IP address of the Slave Database
--configdb-writehost	Hostname or IP address of the Master Database
--configdb-dbname	Database schema name for the Open-Xchange configuration database
--servermemory	Memory for the groupware daemon
--adminmemory	Memory for the admin daemon
--clt-memory	Memory for the admin command line tools
--configdb-readport	Port number of the Slave Database
--configdb-writeport	Port of the Master Database
--tmpdir-path	Path and directory for temporary files
--master-pass	Context admin master password, needed when context-auth is true
--master-user	Context admin master name, needed when context-auth is true
--jkroute	mod_jk routing name configured in jk configuration
--ajp-bind-port	Port where the groupware listens for incomming jk requests
--imap-credentials	Where to get the imap credentials from
--object-link-hostname	Link that is used in server generated emails (directlink in notifications)

--extras-link	Link which is opened in a new window if a users clicks on Extras in the GUI
--cache-udp-disc-addr	UDP address for the caches and push service auto configuration
--cache-udp-disc-port	UDP port for the caches auto configuration
--groupware-cache-port	Port where the groupware cache accept invalidation messages from other caches
--admin-cache-port	Port where the admin daemon cache accept invalidation messages from other caches
--gwsession-cache-port	Port where the groupware session cache accept invalidation messages from other caches
--ip-of-oxcluster	IP for which customers can access the groupware
--push-udp-disc-port	UDP port for the oxtender push service auto configuration
--push-outlook-port	UDP port where the oxtender registers for the push service
--SesssionContTimeout	Timeout for session containers
--NRSessionContainers	Number of session containers
--maxSession	Maximum numbers of session, 0 for unlimited
--DoubleLoginPerm	Allow Users to have more sessions than one at the same time
--sessionDefLifeTime	Default session life time
--disableauth	Switch to turn off context authentication

Return value

0 on success

>0 on failure

Mandatory parameters

Mandatory are **--servername --configdb-pass** because for this parameter, no default exists. Defaults are:

--imapserver	localhost
--imaplogintype	user
--configdb-user	openexchange
--configdb-readhost	localhost
--configdb-writehost	localhost
--configdb-dbname	configdb
--servermemory	50
--configdb-readport	3306
--configdb-writeport	3306
--tmpdir-path	/tmp
--context-auth	false

Command output

On success:

setting up groupware configuration /opt/open-xchange/etc/groupware
....
groupware daemon must now be restarted if already running
setting up admin daemon configuration /opt/open-xchange/etc/admindaemon
....
*** RMI authentication is disabled
admin daemon must now be restarted if already running

On failure:

Setting up Open-Xchange configuration failed. Error: <reason>

Example 9.3. setting up groupware configuration

root@oxhe:~# **/opt/open-xchange/sbin/oxinstaller --disableauth --servername=oxapp --configdb-pass=secret**
setting up groupware configuration /opt/open-xchange/etc/groupware
....
groupware daemon must now be restarted if already running
setting up admin daemon configuration /opt/open-xchange/etc/admindaemon
....
*** RMI authentication is disabled
admin daemon must now be restarted if already running

9.2. RMI calls

- **[update, uninstall, stop, start, refresh, list, listall, listservices, shutdown, install]bundle**

- **[register,unregister,list,listcontextsby,moveconetxt,change]filestore**

- **[register,unregister,list,listcontextsby,movecontext,change]database**

- **[register,unregister,list]server**

- **checkconsistency**

- **jobcontrol**

- **contextrestore**

Command path is "**/opt/open-xchange/sbin/**"

9.2.1. Bundle handling scripts

Each script support parameters -h <jmx host> -p <jmx port> for defining the host the server is running on and the port it is listening on. Both are by default localhost and 9999.

installbundle

A new bundle can be installed with this script into the running server.

installbundle (-h <jmx host> -p <jmx port>) location

The location must be file URL with complete path:

file:/opt/openexchange/bundles/com.openexchange.control.jar

listbundle

List the installed bundles and their states.

listbundles (-h <jmx host> -p <jmx port>)

listservices

Lists the services provided and used by bundles.

listservices (-h <jmx host> -p <jmx port>)

refreshbundles

Restarts depending bundles if some bundle has been updated.

refreshbundles (-h <jmx host> -p <jmx port>)

shutdown

Starts the OSGi shutdown sequence. Every bundle is stopped and finally the OSGi runtime.

shutdown (-h <jmx host> -p <jmx port>)

startbundle

Start a single bundle.

startbundle (-h <jmx host>) bundle name

The bundle name must be the unique bundle identifier:

com.openexchange.mail.filter

stopbundle

Stops a single bundle.

stopbundle (-h <jmx host> -p <jmx port>) bundle name

The bundle name must be the unique bundle identifier:

com.openexchange.mail.filter

uninstallbundle

Removes a bundle from the running server.

uninstallbundle (-h <jmx host> -p <jmx port>) bundle name

The bundle name must be the unique bundle identifier.

updatebundle

Updates a single bundle.

updatebundle (-h <jmx host> -p <jmx port>) bundlename (autorefresh (true | false) default value is false)

The bundlename must be the unique bundle identifier. If autorefresh is given as true, depending bundles will be restarted.

9.2.2. Filestore management

registerfilestore

registerfilestore is the tool to make a filestore known to the Open-Xchange system. The filestore directory needs to only be accessible when the storage behind is present. It must not be possible to write to the directory when the storage subsystem is not mounted.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-t,--storepath <string>	Path to store filestore contents in URI format. Example: file:///tmp/filestore
-s,--storesize <integer>	The maximum size of the filestore in MB, default is 1000
-x,--maxcontexts <integer>	The maximum number of contexts that can use this filestore. Default is 5000

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} storepath

Command output

On success:

filestore <fsid> registered

On failure:

filestore could not be registered: <reason from server>

Example 9.4. Mandatory parameters

root@oxhe~# **/opt/open-xchange/sbin/registerfilestore -A oxadminmaster -P secret**
-t file:///tmp/
filestore 34 registered

unregisterfilestore

unregisterfilestore is the tool to remove a filestore from the Open-Xchange system. The filestore must not be used by any contexts for this operation.

Parameters

-h,--help   Prints a help text
-i,--id <integer>   The id of the filestore which should be removed

Extra parameters when authentication is enabled

-A,--adminuser <string>   Context Admin user name
-P,--adminpass <string>   Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} id

Command output

On success:

filestore <fsid> unregistered

On failure:

filestore <fsid> could not be unregistered: <reason from server>

Example 9.5. Mandatory parameters

root@oxhe~# /opt/open-xchange/sbin/unregisterfilestore -A oxadminmaster -P secret --id=5
filestore 5 unregistered

listfilestore

listfilestore is the tool to list all filestores known to the Open-Xchange system.

Parameters

-h,--help   Prints a help text
--environment   Show info about commandline environment
--nonl   Remove newlines (\n) from output
-s,--searchpattern <string> The search pattern which is used for listing
--csv   Format output as csv

Extra parameters when authentication is enabled

-A,--adminuser <string>   Context Admin user name
-P,--adminpass <string>   Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass}

Command output

On success:

id path size reserved used maxctx curctx
.. ..

On failure:

could not list filestores: <reason from server>

Example 9.6. filestore

```
root@oxhe~# /opt/open-xchange/sbin/listfilestore -A oxadminmaster -P secret
id path                       size reserved    used maxctx curctx
 6 /fsmount/fs6               1000     0      0   5000    0
 3 /fsmount/fs3            8388608   200      0   1000    1
```

listcontextsbyfilestore

listcontextsbyfilestore is the tool to list all contexts that remain on the given filestore.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
--csv	Format output as csv
-f,--filestore <filestore>	* Target filestore id

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} filestore

Command output

On success:

cid fid fname   enabled qmax qused name   lmappings

... ...

On failure:

contexts for filestore could not be listed: <reason from server>

Example 9.7. list context for filestore

root@oxhe:**/opt/open-xchange/sbin# ./listcontextsbyfilestore** –f 3
cid fid fname   enabled qmax qused name   lmappings
 6   3 6_ctx_store true   1000   0 contextname example.de

movecontextfilestore

movecontextfilestore is the tool to move a given context from its current to another filestore

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-c,--contextid <string>	The id of the context to be moved
-f,--filestore <integer>	Target filestore id

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} contextid filestore

Command output

On success:

context <contextid> moved to filestore <fsid>

On failure:

context <contextid> could not be moved to filestore <fsid>: <reason from server>

Example 9.8. movefilestorecontext

root@oxhe~# **/opt/open-xchange/sbin/movefilestorecontext -A oxadminmaster -P secret**
-f 9 -c 4711
context 4711 moved to filestore 9

changefilestore

changefilestore is the tool to change attributes of registered filestores.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-i,--id <integer>	The id of the filestore which should be changed
-t,--storepath <string>	Path to store filestore contents in URI format. Example: file:///tmp/filestore
-s,--storesize <integer>	The maximum size of the filestore in MB
-x,--maxcontexts <integer>	The maximum number of contexts that can use this filestore

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} id and at least one parameter to change

Command output

On success:

filestore <fsid> changed

On failure:

filestore <fsid> could not be changed: <reason from server>

Example 9.9. changefilestore

root@oxhe~# **/opt/open-xchange/sbin/changefilestore -A oxadminmaster -P secret --id=35 -s 100000**
filestore 35 changed

9.2.3. Database registration management

registerdatabase

> **registerdatabase** is the tool to make a database known to the Open-Xchange system. For all databases, you can define one write (master) and one read (slave) connection. It is also possible to have multiple slaves behind a IP load balancer.
>
> "dbweight" is used to configure the distribution of contexts over all DBMS. For example, a value of 60 would lead to 60% of all contexts to be stored in the DBMS (if the sum of all values is 100). It is also recommended that --OX DB POOL INIT is always set to 0. Be sure the --OX DB POOL MAX does not exceed the max connections configuration option of the MySQL server.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-n,--name <name>	Name of the database
-H,--hostname <hostname>	Hostname of the server
-u,--dbuser <dbuser>	Name of the user for the database
-d,--dbdriver <dbdriver>	The driver to be used for the database.
-p,--dbpasswd <dbpasswd>	Password for the database
-m,--master <true/false>	Set this if the registered database is the master
-M,--masterid <masterid>	If this database is not the master enter the master id here
-w,--dbweight <dbweight>	The db weight for this database.
-x,--maxunit <maxunit>	The maximum number of contexts in this database.
-l,--poolhardlimit <true/false>	Db pool hardlimit.
-o,--poolinitial <poolinitial>	Db pool initial.
-a,--poolmax <poolmax>	Db pool max.

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} name dbpasswd master

Command output

On success:

database <dbid> registered

On failure:

database <dbid> could not be registered: <reason from server>

Example 9.10. Example

root@oxhe~# **/opt/open-xchange/sbin/registerdatabase -n db1 -p secret -m true**
database 12 registered

unregisterdatabase

unregisterdatabase is the tool to remove a database from the Open-Xchange system. If present, the slaves must be unregistered prior to the master.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-i,--id <id>	The id of the database.
-n,--name <name>	Name of the database

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} (id or name)

Command output

On success:

database <dbid> unregistered

On failure:

database <dbid> could not be unregistered: <reason from server>

Example 9.11. unregisterdatabase

root@oxhe~# **/opt/open-xchange/sbin/unregisterdatabase --id=13**
database 13 unregistered

listdatabase

listdatabase is the tool to list all databases registered in the Open-Xchange system.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-s,--searchpattern <searchpattern>	Search/List pattern!
--csv	Format output to csv

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass}

Command output

On success:

```
id name          hostname  master mid weight maxctx curctx hlimit max inital
.. ...           ...       ...    ..  ...    ...    ...    ...    ...  ...
```

On failure:

```
databases could not be listed: <reason from server>
```

Example 9.12. listdatabases

```
root@oxhe~# /opt/open-xchange/sbin/listdatabases
id name          hostname  master mid weight maxctx curctx hlimit max inital
 1 DB1           db1       true   0   100    1000   843 true 100    0
 2 DB2           db2       true   0   100    1000   843 true 100    0
 3 DB3           db3       true   0   100    1000   843 true 100    0
 4 DB4           db4       true   0   100    1000   843 true 100    0
```

listcontextsbydatabase

listcontextsbydatabase is the tool to list all contexts that remain on a schema in the given database.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
--csv	Format output as csv
-d,--database <database>	The id of the database.
-n,--name <name>	Name of the database

Extra parameters when authentication is enabled

-A,--adminuser <string>   Context Admin user name
-P,--adminpass <string>   Context Admin password

Return value

0 On success

>0 On failure

Mandatory parameters

{adminuser adminpass} (database or name)

Command output

On success:

cid fid fname   enabled qmax qused name   lmappings
... ...

On failure:

contexts for filestore could not be listed: <reason from server>

Example 9.13. listcontextsbydatabase

```
root@oxhe:/opt/open-xchange/sbin# ./listcontextsbydatabase --name db1
cid fid fname      enabled qmax qused name       lmappings
 6   3 6_ctx_store true    1000     0 contextname example.de
```

movedatabasecontext

movedatabasecontext is the tool to move a given context from its current to another database

Parameters

-h,--help   Prints a help text
--environment   Show info about commandline environment
--nonl   Remove newlines (\n) from output
-c,--contextid <contextid>   The id of the context
-N,--contextname <contextname>   Context name
-d,--database <database>   The id of the database.
-n,--name <name>   Name of the database

Extra parameters when authentication is enabled

-A,--adminuser <string>   Context Admin user name
-P,--adminpass <string>   Context Admin password

Return value

0 on success

>0 On failure

Mandatory parameters

{adminuser adminpass} (contextid or contextname) (database or name)

Command output

On success:

context <contextid> moved to database <dbid>

on failure:

context <contextid> could not be moved to database <dbid>: <reason from server>

Example 9.14. movedatabasecontext

```
root@oxhe~# /opt/open-xchange/sbin/movedatabasecontext -A oxadminmaster -P secret
-d 3 -c 4711
context 4711 moved to database 3
```

changedatabase

changedatabase is the tool to change attributes of a registered database.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-i,--id <id>	The id of the database.
-n,--name <name>	Name of the database
-H,--hostname <hostname>	Hostname of the server
-u,--dbuser <dbuser>	Name of the user for the database
-d,--dbdriver <dbdriver>	The driver to be used for the database
-p,--dbpasswd <dbpasswd>	Password for the database
-w,--dbweight <dbweight>	The db weight for this database
-x,--maxunit <maxunit>	The maximum number of contexts in this database
-l,--poolhardlimit <true/false>	Db pool hardlimit
-o,--poolinitial <poolinitial>	Db pool initial
-a,--poolmax <poolmax>	Db pool max

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} (id or name) and at least one parameter to change

Command output

On success:

database <dbid> changed

On failure:

database <dbid> could not be changed: <reason from server>

Example 9.15. changedatabase

root@oxhe~# **/opt/open-xchange/sbin/changedatabase --id=5 -x 100000**
database 5 changed

9.2.4. Server registration management

registerserver

registerserver is the tool to make a new Open-Xchange application server known to the Open-Xchange system.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-H,--hostname <servername>	Open-Xchange internal server name (normally the host name)

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} hostname

Command output

On success:

server <id> registered

On failure:

server <servername> could not be registered: <reason from server>

Example 9.16. registerserver

root@oxhe~# **/opt/open-xchange/sbin/registerserver -A oxadminmaster -P secret**
-h ox1
server 4 registered

unregisterserver

unregisterserver is the tool to remove a server from the Open-Xchange system. A server can only be removed when no context is bound to it any more.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-i,--id <id>	The id of the server which should be removed
-H,--hostname <servername>	Open-Xchange internal server name (usually the host name)

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass} (id or hostname)

Command output

On success:

server <id> unregistered

On failure:

server <id> could not be unregistered: <reason from server>

Example 9.17. unregisterserver

root@oxhe~# **/opt/open-xchange/sbin/unregisterserver --id=5**
server 5 unregistered

listserver

listserver is the tool to list all servers registered in the Open-Xchange configuration database.

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-s,--searchpattern <string>	The search pattern which is used for listing
--csv	Format output as csv

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass}

Command output

On success:

Id Name
.. ...

On failure:

could not list filestores: <reason from server>

Example 9.18. listservers

root@oxhe~# **/opt/open-xchange/sbin/listservers -A oxadminmaster -P secret**Id Name
 2 app1

9.2.5. Consistency tool

The Consistency Tool serves the purpose to detect and fix inconsistencies between file storage and data base.

The following paragraphs describe possible inconsistencies and how to fix them and explain where to store context file data or meta data, and finally the consistency tool's usage is introduced.

Attachments to Infostore objects and files are stored on the hard drive, their meta data (title, description, file name, file size etc) are stored in the MySQL data base. The file's path on the hard drive is also stored in the MySQL data base. Problems arise if both systems are out of sync, e.g if an attachment or InfoStore entry points to a file that no longer exists on the hard drive (subsequently called "missing" files). And vice versa, if there is a file on the hard drive without attachment or InfoStore entry (subsequently called "orphaned" or "unassigned").The Consistency Tool can trace and list both kinds of inconsistency.

There are different ways to fix such inconsistencies. If the file to a data base entry (Info item or attachment) is missing, you can either delete the data base entry or create a dummy file. Respectively, an unassigned file can either be deleted or an infostore entry is created that belongs to the context admin which the orphaned file is assigned to. The consistency tool can resolve the inconsistencies using the above described methods.

An OX:HE installation normally includes several contexts. The contexts are distributed to several data base schemas. Contexts 1 to 5 are e. g. located in the data base scheme ox_db1, 6 and 7 in ox_db2, and 8 bis 10 in ox_db3. Likewise the file data of a context are distributed to several file storages. A file storage is a directory with subdirectores for contexts. Depending on the presumed storage space needed for a context, the contexts are assigned to the single file storages. Context 1 to 3 could thus be located in file storage 1, context 4 to 9 in file storage 2 and context 10 in file storage 3. Why does one need all that knowledge to use the consistency tool? The consistency tool can search for inconsistencies within a context, in all contexts within a scheme or in all contexts that store their data in a file store.

How to use the consistency tool?

Common way to start the consistency tool:

(action) (where to search) (how to resolve the inconsistency)

Possible actions are either "list missing" to list missing files, "list unassigned" to list unassigned files or "repair" to resolve inconsistencies. You can either search a context (context 1), a file storage (filestore 23), or a data base (database 12). How to resolve inconsistencies with "repair" is explained below. Some examples:

1. List missing files

   If you want to list all missing files in a context (1) use the command:

   checkconsistency list missing context 1

   You can add some noise words to make the command more intelligible (to be able to still understand the script in a few years time). Following commands do the same:

   checkconsistency list missing in context 1

   checkconsistency list missing files in context 1

   This command lists all file storage paths that, in the data base, are assigned to an attachment or InfoStore entry which files no longer exist though.

   It is also possible to search all files of a file storage:

   checkconsistency list missing in filestore 2

   or all files that belong to a data base:

   checkconsistency list missing in database 3

   or simply all missing files:

   checkconsistency list missing files everywhere

2. List unassigned files:

Likewise the command for unassigned files. You just have to replace the word "missing" with "unassigned":

checkconsistency list unassigned context 1

checkconsistency list unassigned in context 1

checkconsistency list unassigned files in context 1

checkconsistency list unassigned files in filestore 2

checkconsistency list unassigned files everywhere

3. Repair

To resolve inconsistencies use the "repair" command instead of "list unassigned" or "list missing" as action. Additionally, state how to handle the errors (more later):

check_consistecy repair context 1 (policies)

or

checkconsistency repair errors in context 1 with policies (policies)

checkconsistency repair errors in filestore 2 with policies (policies)

checkconsistency repair errors in database 3 with policies (policies)

The policies are divided in condition and action:

condition : action

The conditions are:

missing_file_for_infoitem	If a file is missing that points to an Infoitem
missing_file_for_attachment	If a file is missing that points to an attachment
missing_entry_for_file	
If a file exists that neither points to an attachment nor to an Infoitem.	

Actions are:

delete	
Deletes the DBEntry or the file	
create_dummy	
Creates a dummy file (valid for missing_file_for_infoitem and missing_file_for_attachment)	
create_admin_infoitem	
Creates an Infoitem with the unassigned file in the Contextadmin Infostore.	

If there is no action set for a condition the respective inconsistencies are ignored. Here are some examples:

checkconsistency repair errors in context 1 missing_file_for_infoitem : delete missing_file_for_attachment : create_dummy missing_entry_for_file : delete

Deletes all versions of Infoitems that point nowhere (only the versions, not the Infoitem itself), deletes all files with no assignment and creates dummy files for all attachments that point nowhere.

checkconsistency repair errors in database 3 missing_file_for_infoitem : create_dummy missing_entry_for_file : create_admin_infoitem

Repairs all contexts in data base 3, creates dummy files for Infoitems that point nowhere and creates Infoitems in the context admin's Infostore, for files that have no assignment in the data base. Attachments are not handled.

checkconsistency

checkconsistency is the tool to make sure that filestore and database meta data is consistent.

Parameters

-h,--help Prints a help text

Extra parameters when authentication is enabled

-A,--adminuser <string> Context Admin user name
-P,--adminpass <string> Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass}

Command output

On success:

filestore <fsid> registered

On failure:

filestore <fsid> could not be registered: <reason from server>

Example 9.19. registerfilestore

root@oxhe~# **/opt/open-xchange/sbin/registerfilestore**

9.2.6. jobcontrol

jobcontrol

jobcontrol is the tool to list and control the job queue within the Open-Xchange admin daemon. Jobs in the queue are generated by **movecontextdatabase** and **movecontextfilestore**

Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove newlines (\n) from output
-l,--list list the jobs of this open-xchange server	
-d,--delete <id>	delete the given job id
-t,--details <id>	show details for the given job
-f,--flush flush all finished jobs from the queue	

Extra parameters when authentication is enabled

-A,--adminuser <string>	Context Admin user name
-P,--adminpass <string>	Context Admin password

Return value

0 on success

>0 on failure

Mandatory parameters

{adminuser adminpass}

Command output

on success --delete:

job <jobid> deleted

on success --details:

job

on success --flush:

job

on success --list:

job

on failure:

could not (list jobs|delete <jobid>| print details of <jobid>| | flush jobs): <reason from server>

Example 9.20. jobcontrol

root@oxhe~# **/opt/open-xchange/sbin/jobcontrol**

9.2.7. contextrestore

contextrestore

The contextrestore bundle is a solution for restoring one single context out of a mysql dump from a complete database. In a distributed setup, it is possible to use several files containing the dumps of different databases. The tool described within this document does fetch the needed information out of these files.

The context restore bundle is designed as an admin bundle so it has to be installed into the OSGi environment of the OX admin daemon.

The package open-xchange-admin-plugin-contextrestore contains the bundle itself and the corresponding configuration files. The bundle will get installed as a directory below /opt/open-xchange/bundles. The configuration file can be found in:

/opt/open-xchange/etc/admindaemon/plugin/contextrestore.properties.

For the restore process, the tool requires some information to be available in the database. One is the availability of the old database pool id. The tool will dig out the pool id the context used before from the mysql dump, and will try to get a connection to the corresponding database through this pool id. If the pool id does not exist any more, an error is thrown. The same applies to the filestore_id.

For correct operation it is required that the mysql dumps for this tool represent a consistent state of the whole database setup. Furthermore this consistent state should also include the backup of the filestore.

The Debian package has to be installed with the Debian management tool dpkg . Afterwards a new shell script named contextrestore is to be found under /opt/open-xchange/sbin. The admin daemon needs to be restarted to make the new functionality available. The functionality is accessible via RMI, CLT and SOAP.

A complete database backup has to be done before the new function can be used. The Tool described within this document requires a full SQL dump of the databases involved. This can be done by executing the command **mysqldump ---all-databases ---single-transaction**, on all database machines registered in Open-Xchange as well as the configuration Database. These two parameters are very important. The first one lets the dump contain every database on the specified database host, and the second is used for a consistent backup. Instead of **---all-databases** you can also use **---database** with the right database(s), if none of the switches are given as direct argument then mysql will left out essential data in the dump. For a full backup the switch **--all-databases** is recommended.

The usage of the command line tool is self-explanatory as it confirms to the standard unix behavior. --help will show a short help with the available parameters. The main arguments of the tool are different database dumps (from the configdb and the distributed user data databases). On success the tool returns the path to the filestore of the given context. The files below this path have to be restored afterwards in a separate process which is not part of the Open-Xchange system. An example of a restore would look like this:

Example 9.21. restore

contextrestore -A <username> -P <password> -c 7777 -f <complete path to configdb dump>,<complete path to first user data database dump>

file:///tmp/filestore2/7777_ctx_store

Note that the parts in <> have to be replaced by the parameters for your setup

Parameters

  -h,--help   Prints a help text

Example 9.22. contextrestore

root@oxhe~# **/opt/open-xchange/sbin/contextrestore**

Chapter 10. Tuning the Open-Xchange Server

This chapter describes all possible configuration options and their values.

10.1. Configuration Options Groupware and Admin

A directory for configuration files is introduced that carries files common for administration daemon and groupware server. This directory will be given on start to configread bundle to fetch the properties located in this new directory. Moving of that configuration file should be documented in the release notes and in administration documentation. There are no possible side effects.

Configuration directory /opt/open-xchange/etc/common

10.1.1. foldercache.properties

ENABLE_DB_GROUPING	Define where to perform folder grouping. This filters the database results for duplicate folders in the 'where' clause of the db statement or afterwards in the application. Possible values: TRUE / FALSE.
ENABLE_FOLDER_CACHE	Enable or disable folder caching. Possible values: TRUE / FALSE.
IGNORE_SHARED_ADDRESSBOOK	Determine whether to ignore 'shared addressbook' folder or not. Possible values: TRUE / FALSE.
ENABLE_INTERNAL_USER_EDIT	Define if users are allowed to edit their own contact object contained in folder 'Global Address Book' aka 'Internal Users'. Switching this parameter only has an effect for newly created contexts.

10.2. Configuration Options Groupware

Configuration directory /opt/open-xchange/etc/groupware.

NOTE: All time values in the configuration files are in milliseconds.

10.2.1. system.properties

SERVER_NAME	Server name registered by registerserver in the configuration database can be read with listservers

10.2.2. attachment.properties

MAX_UPLOAD_SIZE	If the sum of all uploaded files in one request is larger than this value, the upload will be rejected. If this value is not set or 0, the more general MAX_UPLOAD_SIZE configured in server.properties will be used. If that value is also 0 or not set, uploads will be unrestricted. The size is in bytes.

10.2.3. calendar.properties

CACHED_ITERATOR_FAST_FETCH	The option CACHED_ITERATOR_FAST_FETCH defines the numbers of pre-fetched results with the parameter MAX_PRE_FETCH.
com.openexchange.calendar.seriescon-flictlimit	This boolean option switches on/off the conflict search limitation for a series to 1 year in the future i. e., a new/changed series will not conflict with appointments scheduled later than one year after the creation/change of the appointment. Default value: true
com.openexchange.calendar.undefined-statusconflict	This boolean option switches on/off an appointment conflict when not having accepted or denied the appointment yet. Default value: true
MAX_PRE_FETCH	MAX_PRE_FETCH results are gathered in one SQL query instead of MAX_PRE_FETCH single SQL queries. Normally, higher values result in higher performance if this option is enabled.
CHECK_AND_REMOVE_PAST_RE-MINDERS	If this option is enabled no event is triggered and no mail will be sent if the reminder is before the start date.
CHECK_AND_AVOID_SOLO_RE-MINDER_TRIGGER_EVENTS	This option prevents triggering and sending an E-Mail notification if only a reminder has been changed. If a notification should be sent in any case this option should be disabled.
defaultStatusPrivate	This option holds the confirm status for newly created private appointments. Default is 0 ("none" or rather "waiting"). This does not affect the status for appointments created by the user as those appointments are always set to "accepted".
defaultStatusPublic	This option holds the confirm status for newly created public appointments. Default is 0 ("none" or rather "waiting"). This does not affect the status for appointments created by the user as those appointments are always set to "accepted".

10.2.4. configjump.properties

URL	URL to the config interface. %c is replaced with context login information. %u is replaced with user login information. %p is replaced with user password. URL=http://localhost/?cid=%c<login=%u>pass=%p (This URL can be reached by clicking on Extras in the folder tree) This option has only affect if the plugin configjump-generic is installed.

10.2.5. configdb.properties

useSeparateWrite	false, use read URL for both read and write true, different URLs are used for read and write
read*	Specifies the connection settings for the read database
write*	Specifies the connection settings for the write database (only used when useSeparateWrite is set to true)
cleanerInterval	Time interval of cleaner thread in milliseconds. This thread removes idle timed out database connections and removes

	not used database connection pools after each cleanerInterval.
minIdle	Number of connections to keep open although they are not used. This value is overwritten for OX databases from configdb. Sould be 0 so that no unnecessary connections are kept in the memory.
maxIdle	Number of maximum idle connections. If the maximum exceeds, no more connections are pooled but are closed instead. -1 stands for unlimited.
maxIdleTime	Maximum time in milliseconds a connection can be idle. If the maximum exceeds, the connection is closed.
maxActive	If exhaustedAction is set to BLOCK, no more than maxActive connections will be opened to the mysql database. This value is overwritten for OX databases from configdb.
maxWait	If exhaustedAction is set to BLOCK, a thread will not wait for more than maxWait milliseconds.
maxLifeTime	Maximum time in milliseconds a connection will be used. After this time the connection gets closed.
exhaustedAction	BLOCK: If maxActive number of connections is reached threads have to wait for a connection. FAIL: If maxActive number of connections is reached an exception is thrown. GROW: Open more connections even if maxActive is already reached. This value is overwritten for OX databases from configdb.
testOnActivate	Validate connections if they are activated. This is not necessary because the activation already includes a check if the connection is not closed.
testOnDeactivate	Check if connections can be reused after they are returned to the pool. .
testOnIdle	For test purposes. Should always be false
testThreads	If testThreads is set to true, more information is logged to the Open-Xchange log files about database connections. If this option is enabled the performance may degrade dramatically. The JVM has to generate then a lot of method call stack dumps.

10.2.6. imap.properties

variable	value
com.openexchange.imap.imapSort	Define where to sort emails: Value "imap" to let the IMAP Server sort (faster but less reliable). Leave blank or fill in value "application" to sort within application (slower but good quality). The sorting is done on IMAP server if a mailbox' size exceeds the mailFetchLimit as defined in mail.properties. NOTE: This value is going to be set to "application" if IMAP server capabilities do not contain string "SORT"
com.openexchange.imap.imapSearch	Define where to search for emails: Value "imap" to let the IMAP Server search. The search is done on IMAP server if

variable	value
	a mailbox' size exceeds the mailFetchLimit as defined in mail.properties. Leave blank or fill in value "application" to search within application.
com.openexchange.imap.imapFastFetch	This property determines whether a fast fetch is performed on large mail folders or not. Although the fetch is fast on IMAP side, a lot of data is transfered during reading response which cause a temporary memory peak. If disabled only the necessary fields are used as command arguments, which is slower but needs less memory. NOTE: See property "imapMessageFetchLimit" to know which mail folders are treated as large mail folders
com.openexchange.imap.imapSupport-sACL	Define if IMAP server supports ACLs. Possible values: true/false/auto NOTE: Value "auto" means to use server-defined ACL support as indicated through response to IMAP command "CAPABILITY"
com.openexchange.imap.imapTimeout	Define the socket I/O timeout value in milliseconds. A value less than or equal to zero is infinite timeout. The IMAP timeout has to be smaller than the AJP timeout. See also mail.imap.timeout
com.openexchange.imap.imapConnec-tionTimeout	Define the socket connection timeout value in milliseconds. A value less or equal to zero is infinite timeout. The IMAP timeout has to be smaller than the AJP timeout. See also mail.imap.connectiontimeout
com.openexchange.imap.imapAuthEnc	Define the encoding for IMAP authentication
com.openexchange.imap.maxIMAPCon-nectionIdleTime	Define max. IMAP connection idle time in milliseconds or in other words how long an established IMAP connection is going to be kept alive while it's idle. NOTE: This is for future use and not yet implemented!
com.openexchange.imap.User2ACLImpl	Name of the class that implements User2ACL, their alias or "auto" to use auto-detection. Currently known aliases: Cyrus, Courier
com.openexchange.imap.mboxEnable	Enable/disable mbox format: A mail folder can only either hold subfolders or hold messages. Furthermore the folder type on creation is determined by the folder name. If folder name ends with the server-defined folder separator character its type is HOLDS-FOLDERS; otherwise its type is HOLDS-MESSAGES. Note that there's currently an unresolved problem concerning deletion of mail folders. Since the trash folder is created to hold only messages, no backup of the deleted folder can be copied to trash folder; meaning the folder in question (including messages, its subfolders, and subfolders' contents) is irretrievably lost.
com.openexchange.imap.blockSize	IMAP operations which shall be applied to a number of messages which exceeds the block size are performed in blocks. Example: A folder containing thousands of messages shall be cleared. To avoid the risk of an IMAP timeout when trying to delete all messages at once, the messages are deleted in block size portions.
com.openexchange.imap.spamHandler	Define the osgi registration name of the appropriate spam handler to use

10.2.7. mail.properties

This file contains the general mail configuration. Specific implementations get configured in the used mail plugin for example imap.properties for imap.

Variable	Value
com.openexchange.mail.loginSource	Set the login source; meaning which source is taken to determine a user's login for mailing system. If 'login' is set, then user's individual mail login as defined in user storage is taken. If 'mail' is set, then user's individual primary email address is taken. If 'name' is set, then user's individual system's user name is taken. Currently known values: login, mail, and name
com.openexchange.mail.password-Source	Set the password source; meaning which source is taken to determine a user's password to login into mailing system. If 'session' is set, then user's individual system's password is taken. If 'global' is set, then the value specified through property 'com.openexchange.mail.masterPassword' is taken. Currently known values: session and global
com.openexchange.mail.mailServer-Source	Set the mail server source; meaning which source is taken to determine the mail server into which the user wants to login to access mails. Set to 'global' to take the value specified through property "com.openexchange.mail.mailServer". Set to 'user' to take user's individual mail server settings as specified in storage. Currently known values: user and global
com.openexchange.mail.transportServer-Source	Set the transport server source; meaning which source is taken to determine the transport server into which the user wants to login to transport mails. Set to 'global' to take the value specified through property "com.openexchange.mail.transportServer". Set to 'user' to take user's individual transport server settings as specified in storage. Currently known values: user and global
com.openexchange.mail.masterPass-word	The master password for the mail server. Only takes effect when property "com.openexchange.mail.loginType" is set to "global"
com.openexchange.mail.mailServer	Mail server: e.g. 192.168.178.32:8143 or imap://192.168.178.32:7143 Only takes effect when property "com.openexchange.mail.mailServerSource" is set to "global"
com.openexchange.mail.transportServer	Mail transport server: e.g. 192.168.178.32:125 or smtp://192.168.178.32:225 Only takes effect when property "com.openexchange.mail.transportServerSource" is set to "global"
mail.mime.charset	Define the default MIME charset used for character encoding. This parameter takes effect for the complete mail module where no charset is given.
com.openexchange.mail.maxNumOfCon-nections	Specify max number of mail connections that can exist at the same time per user. 0 stands for unlimited.
com.openexchange.mail.mailFetchLimit	Define the max. fetch limit; meaning all mails whose count is less than or equal to this value are going to be fetched

Variable	Value
	with all attributes set. Thus these mails can be put into message cache for subsequent list requests.
com.openexchange.mail.attachmentDisplaySizeLimit	maximum size of email text attachments that will be displayed inline (in bytes)
com.openexchange.mail.quoteLineColors	Comma-separated hex values of colors for displaying quoted text emails. Default #a14044,#917722,#599351,#516193,#666666
com.openexchange.mail.userFlagsEnabled	Enable/disable user defined flags
com.openexchange.mail.partModifierImpl	The default com.openexchange.mail.partmodifier.DummyPartModifier needs to be kept.
com.openexchange.mail.allowNestedDefaultFolderOnAltNamespace	This property defines if the default folders of an user (Draft, Sent, Spam & Trash) are going to be placed right below folder "INBOX" even if feature "altNamespace" is enabled. NOTE: This property requires that subfolders are still permitted below initial folder "INBOX" even though "altNamespace" is enabled.
com.openexchange.mail.ignoreSubscription	Defines if folder subscription is ignored when listing mail folders If set to 'true', all folders - regardless of their subscription status - are going to be listed
com.openexchange.mail.supportSubscription	Define if underlying store should support subscription
com.openexchange.mail.defaultSeparator	Define the separator within folder full names if not available from mail server
com.openexchange.mail.watcherEnabled	The watcher checks after watcherFrequency for mail connection used for more than watcherTime milliseconds and logs this mail connection. If watcherShallClose is set to true those connections will be closed.
com.openexchange.mail.watcherFrequency	Define watcher's frequency in milliseconds
com.openexchange.mail.watcherTime	Define exceeding time in milliseconds for mail connections. If use time of an mail connection exceeds this value it is logged. Thus unclosed connections can be detected.
com.openexchange.mail.watcherShallClose	Define if watcher is allowed to close exceeded mail connections
com.openexchange.mail.JavaMailProperties	JavaMail Properties. The default should not be changed.
com.openexchange.mail.phishingHeader	A comma-separated list of headers which identifies phishing headers; e.g. X-Phishing1,X-Phishing2,etc. Leave empty for no phishing header.
autoSearch	The automatic search of users in the recipients dialog can be de/activated. Default is true.
com.openexchange.mail.mailAccessCacheShrinkerSeconds	Defines the interval seconds of the mail access cache's shrinker thread
com.openexchange.mail.mailAccessCacheIdleSeconds	Defines the idle seconds a mail access may reside in mail access cache before it is removed by shrinker thread

10.2.8. smtp.properties

This file contains the configuration for the smtp server

Variable	Value
com.openexchange.smtp.smtpLocalhost	The default is set to InetAddress.getLocalHost().getHost-Name() but if either JDK or name service are not configured properly, this routine fails and the HELO or EHLO command is sent without a name which leads to an error: "501 HELO requires domain address" The value "null" falls back to InetAddress.getLocalHost().getHostName() which works in most cases.
com.openexchange.smtp.smtpAuthEnc	Define the encoding for SMTP authentication
Enable/disable SMTP Authentication	Enable/disable SMTP Authentication
com.openexchange.smtp.setSMTPEnvelopeFrom	Defines if SMTP header ENVELOPE-FROM should be explicitely set to user's primary email address or not
com.openexchange.smtp.smtpTimeout	Define the socket I/O timeout value in milliseconds. A value less than or equal to zero is infinite timeout. See also mail.smtp.timeout
com.openexchange.smtp.smtpConnectionTimeout	Define the socket connection timeout value in milliseconds. A value less or equal to zero is infinite timeout. See also mail.smtp.connectiontimeout

10.2.9. ajp.properties

This file contains the configuration for the OX server "ajp 13 protocol" implementation. The communication between apache jk and the Open-Xchange application server can be fine-tuned here.

Variable	Value
AJP_PORT	tcp port where the groupware server listens for incoming AJP requests
SERVLET_POOL_SIZE	Initial number of instances held in memory for each available single threaded servlet (single threaded servlets are deprecated and are not used by the Open-Xchange Server)
AJP_SERVER_THREAD_SIZE	Number of AJP server threads which create a client socket on an incoming request. This is the number of threads processing newly opened AJP sockets. AJP sockets are kept alive by default therefore only one thread is recommended.
AJP_LISTENER_POOL_SIZE	number of initially created AJP listeners for processing incoming AJP requests This pool does grow dynamically but does not go below.
AJP_LISTENER_READ_TIMEOUT	The amount of time in milliseconds a listener is going to wait (or block) while waiting to read the initial bytes from the web server from the input stream. 0 stands for unlimited and should not be changed because if the server closes connections here the sticky sessions would break.
AJP_MOD_JK	This property defines whether mod_jk is used or not, since some mod_jk implementations force the servlet container not to close connections. If set to TRUE the property AJP_MAX_NUM_OF_SOCKETS will be ignored to avoid closing connections by the servlet container.
AJP_MAX_NUM_OF_SOCKETS	Defines the maximum number of open sockets. Any socket opened beyond will be closed automatically if AJP_MOD_JK is set to FALSE.

Variable	Value
AJP_CONNECTION_POOL	Defines whether to use AJP connection pool or not. The pool holds instances of AJP connection objects. This saves the time to create new objects.
AJP_CONNECTION_POOL_SIZE	The ajp connection pool size. This property only takes effect if AJP_CONNECTION_POOL is set to TRUE and defines the number of instances held in the pool.
AJP_REQUEST_HANDLER_POOL	Defines whether to use AJP request handler pool or not. The pool holds instances of AJP request handlers. This saves time to create new objects.
AJP_REQUEST_HANDLER_POOL_SIZE	The AJP request handler pool size. This property only takes effect if AJP_REQUEST_HANDLER_POOL is set to TRUE and defines the number of held instances.
AJP_WATCHER_ENABLED	Enable/Disable AJP watcher. The watcher is a thread that checks every AJP_WATCHER_FREQUENCY if AJP requests take longer than AJP_WATCHER_MAX_RUNNING_TIME. If AJP_WATCHER_PERMISSION is true, those requests will be terminated or otherwise logged into the groupware log.
AJP_WATCHER_PERMISSION	If true, the AJP watcher has the permission to stop & re-init system.
AJP_WATCHER_MAX_RUNNING_TIME	defines max AJP listener running time in milliseconds
AJP_WATCHER_FREQUENCY	defines the max AJP watcher frequency in milliseconds
AJP_JVM_ROUTE	SET HOST'S UNIQUE JVM ROUTE IMPORTANT FOR LOAD BALANCING. This value is added to the cookie JSESSIONID so that mod_jk knows which server to route the requests to. This is needed to bind a session to one specific Open–Xchange server in a cluster.
JP_CHECK_MAGIC_BYTES_STRICT	Define if the mandatory first two bytes of an incoming AJP package (magic bytes) have to exactly match the sequence 0x12 0x34 or if just one byte has to match at # the proper position. It is recommended to leave that true.
AJP_SERVLET_CONFIG_DIR	Defines the path for the servlet configuration; null stands for "oxgroupwaresysconfdir@/servletConfig"
AJP_BIND_ADDR	Defines the address to which the opened AJP server socket will be bound to. A socket to all available interfaces will be bound if set to "*".
AJP_LOG_FORWARD_REQUEST	Logs corresponding AJP forward request if an unexpected empty body request is detected.
AJP_JSESSIONID_TTL	This parameter determines after which time outdated HTTP sessions are removed. HTTP sessions are remembered through the JSESSIONID cookie. Not removing those outdated HTTP sessions causes a memory leak. The parameter configures the time those sessions are kept in milliseconds.

10.2.10. push.properties

This file contains the configuration of the MS Outlook UDP connectivity subsystem.

Variable	Value
.pushEnabled	Defines if server push port gets opened or not.
.registerTimeout	Time in milliseconds a client registration is kept.
.registerPort	Port where the clients send the push registration request to.

Variable	Value
.registerDistributionEnabled	Only one of registerDistribution or eventDistribution can be enabled at the same time. If set to true, registrations are distributed to all OX Servers.
.eventDistributionEnabled	Only one of registerDistribution or eventDistribution can be enabled at the same time. If set to true, events will be distributed to all Open–Xchange Servers.
.outputQueueDelay	Time in milliseconds before queued "push" packages are sent to clients.
.hostname	If empty, the output of the java function getHostName will be used. This name is used for internal communication.
.senderAddress	Address used as the sender address when UDP packages are sent to the clients (should be the IP address of the load balancer in front of the Open–Xchange Server farm).
.multicastEnabled	true/false; send register or event information per multicast
.multicastAddress	IP multicast address
.multicastPort	Multicast port

10.2.11. sessiond.properties

Variable	Value
.isServerSocketEnabled	Start a sessiond socket (not used for OXHE)
.isServerObjectStreamSocketEnabled	Start a sessiond object stream socket (not used for OXHE)
.serverPort	sessiond socket on this port (not used for OXHE)
.serverBindAddress	Accept only sockets from this address (not used for OXHE)
.isDoubleLoginPermitted	Allow users to be logged in multiple times.
serverObjectStreamPort	sessiond socket on this object stream port (not used for OXHE)
isTcpClientSocketEnabled	Enable communication between client and server over tcp (not used for OXHE).
.sessionContainerTimeout	Session container timeout in milliseconds. After the timeout the session containers will rotate, i. e. the oldest one will be destroyed and a new one will be created.
.numberOfSessionContainers	Number of session containers.
maxSession	Maximum number of concurrent sessions, 0 stands for unlimited.
sessionDefaultLifeTime	Maximum lifetime of idle sessions in milliseconds.

10.2.12. cache.ccf sessioncache.ccf mailcache.ccf

Configuration for the used JCS implementation. Open–Xchange servers use JCS to cache frequently used objects and to keep these cached objects caches in sync on all machines in the cluster. It is used for cache invalidation only. The defaults for the pre-defined cache regions should be kept. The caches commnunicate through TCP/IP and find each other via multicast. In some situations those values need to be changed for the local network infrastructure in the auxiliary section.

Variable	Value
GlobalFolderCache	Cache region for configuring the cache.
UserFolderCache	Cache region for configuring the cache.
.TcpServers	This line must be commented to make auto configuration via udp possible.

Variable	Value
.TcpListenerPort	The port where the caches listen for invalidation messages.
.UdpDiscoveryAddr	Multicast address where the caches send broadcasts to in order to find each other.
.UdpDiscoveryPort	Port number for the multicast setup.
.UdpDiscoveryEnabled	true/false needs to be true to make Udb discovery work.

For more in-depth information consult the project documentation of Apache JCS at http://jakarta.apache.org/jcs/ The groupware and admin caches must listen on the same multicast address and port. Same applies for the sessioncaches. The maicache is only local and the default do not need to be changed.

10.2.13. infostore.properties

MAX_UPLOAD_SIZE	If the sum of all uploaded files in one request is larger than this value, the upload will be rejected. This value can be overridden on a per-user basis by setting the upload_quota in the mail configuration of this user. If this value is not set or 0, the more general MAX_UPLOAD_SIZE configured in server.properties will be used. If that value is also 0 or not set, uploads will be unrestricted. The size is in Bytes.

10.2.14. notification.properties

notify_participants_on_delete	If true, participants of appointments get a notification E-Mail when the appointment gets deleted.
object_link	url in notification E-Mails [hostname] is replaced with the hostname of your machine. [module], [object] and [folder] are replaced with the relevant IDs to generate the direct link. "http://<HOSTNAME>/#m=[module]&i=[object]&f=[folder]" HOSTNAME must be replaced by the hostname of the frontend server.

10.2.15. ox-scriptconf.sh

JAVA_XTRAOPTS	This property sets the java options given to the groupware during launch time.
NRFILES	Maximun number of files the groupware is allowed to open (set through ulimit on startup)
UMASK	Specify the umask of file permissions to be created by ox, e.g. in the filestore, UMASK=066

10.2.16. participant.properties

ShowWithoutEmail	If true, a search for appointment participants also shows contacts without E-Mail addresses. Those addresses are grayed out and not selectable because an E-Mail address is needed for appointments.
autoSearch	The automatic search of users in the participants dialog can be de/activated. Default is true.

10.2.17. server.properties

PrefetchEnabled	**Enable or disable SearchIterator prefetch. If prefetch is enabled the underlying ResultSet data is completely stored and all related resources are released immediately when creating a SearchIterator. Possible values: TRUE / FALSE.**
UPLOAD_DIRECTORY	Upload Parameter. All uploads that are done by a client are temporarily saved in that directory.
MAX_UPLOAD_SIZE	If the sum of all uploaded files in one request is greater than this value, the upload will be rejected. This value can be overridden on a per-module basis by setting the MAX_UPLOAD_SIZE parameter in the module's config file (attachment.properties or infostore.properties). Or it can be overriden on a per-user basis by setting the upload_quota in the E-Mail configuration of this user. If this value is set to 0 and not overridden by the module config or user config uploads will be unrestricted. The size is in bytes.
MAX_UPLOAD_IDLE_TIME_MILLIS	The maximum idle time in milliseconds for an uploaded file temporarily stored in the upload directory.
DefaultEncoding	The encoding has to match the webservers default encoding. Default is UTF-8.
JMXPort	Define the port which is then applied to the JMX-based agent.
JMXLogin	Define the JMX login for authentication. Leaving this property empty means not to use authentication and a non-root user can stop the complete server.
JMXPassword	Define the JMX password in SHA hashed version This property only has effect if previous property "JMXLogin" is set. The following perl command can be used to generate such a password: perl -M'Digest::SHA1 qw(sha1_base64)' -e 'print sha1_base64("YOURSECRET")."=\n";' that requires to install the Digest::SHA1 perl module, of course.
JMXBindAddress	Define the bind address for the JMX monitor agent Use the value "*" to let the JMX monitor bind to all interfaces: JMXBindAddress=*
minimumSearchCharacters	Defines the minimum number of characters for a search. Default is 0. In large contexts it is recommended to set the minimum to 3.
PUBLISH_REVOKE	Contact address for the server administrator in case a publication needs to be revoked.
IPCheck	On session validation of every request the client IP address is compared with the client IP address used for the login request. If this configuration parameter is set to "true" and the client IP addresses do not match, the request will be denied and the denied request is logged with level info. Setting this parameter to "false" will only log the different client IP addresses with debug level. WARNING! This should be only set to "false" if you know what you are doing and if all requests are secure - requests are always encrypted by using HTTPS.com.openexchange.IPCheck=true

10.2.18. contact.properties

contact_first_letter_field	**First Letter Field, the field you sort in when you click on one of the start letters.** **field02 Last name** **field03 First name**
validate_contact_email	Check the entered E-Mail address from a new contact for correctness (syntactic check user@domain.tld)
scale_images	Scale Images for contacts down to the given ratio
scale_image_width	Maximum width a contact image will be scaled to.
scale_image_height	Maximum height a contact image will be scaled to.
max_image_size	The maximum size in bytes for the upload of contact images.
quickSelect	Activates or deactivates the contact view's quick selection. Possible values: true/false

10.2.19. event.properties

This file contains the configuration of the event handling in OX6. Event handling is a core function and should never be turned off. For instance, when deleting a contact with attachments, the contact will be deleted immediately and an event is created to delete the attachment at a later time.

Variable	Value
.isEventQueueEnabled	This option enables or disables the complete event handling for OX. The event handling is an essential Open-Xchange component which needs to always run.
.eventQueueDelay	This parameter sets the delay in milliseconds when events are sent to the subscribed services. Events e. g. are triggered when deleting an appointment with attachment. The event then is for deleting the attachment.

10.2.20. file-logging.properties

This file contains the configuration for error and information logging.

Variable	Value
.level	Default logging level, should be INFO in productive environments. Other possible values are ALL INFO DEBUG.

10.2.21. mailfilter.properties

This file contains the configuration for the mailfilter plugin.

Variable	Value
SIEVE_LOGIN_TYPE	Specify which sieve server should be used. Two options are allowed here: user : use the setting stored for the user in the database

Variable	Value
	global : use the sieve server given in this config file for all users
SIEVE_CREDSRC	Specify which sieve credentials should be use. Three options are allowed here: "session" : login name and password are used from the current session "imapLogin" : the login name is taken from the database (imapLogin) of user, the password is taken from the current session "mail" : use the primary mail address of the user and the password from the session
SIEVE_SERVER	Sieve server
SIEVE_PORT	Sieve port
SCRIPT_NAME	If you want the script to be generated with another script name change it here. Note that the mail filter bundle will then leave the old script with the old script name behind, and doesn't delete it.

10.2.22. settings/themes.properties

This file contains the configuration for available themes. More information about that and how to create themese can be found here: http://www.open-xchange.com/wiki/index.php?title=Gui_Theming_Description

10.2.23. servletmappings/servletmapping.properties

The request path to servlet class mapping. Wildcards are allowed as long as '*' character is the last character in specified servlet path.

10.2.24. updatetask.cfg

If updatetasks.cfg is missing all update tasks are executed. If that file exists only the tasks configured in that file are executed.

10.2.25. transport.properties

Variable	Value
com.openexchange.mail.transport.refer-encedPartLimit	Define the limit in bytes for keeping an internal copy of a referenced MIME message's part when sending a mail. If a part exceeds this limit a temporary file is created holding part's copy.
com.openexchange.mail.defaultTrans-portProvider	The transport provider fallback if an URL does not contain/define a protocol

10.2.26. crawler.properties

Contains the path to the yaml files that contain the configuration for the single services like Xing, linkedIN etc. The yaml files reside in the subdirectory "crawlers". The yaml files can be replaced if there are changes or updates. This can even be done between releases.

10.3. Configuration for the Admin Daemon

10.3.1. system.properties

SERVER_NAME	Server name registered by registerserver in the configuration database can be read with listservers.

10.3.2. plugin/hosting.properties

Variable	Value
AVERAGE_CONTEXT_SIZE	The average MB space a context is expected to use on the disk in the filestore.
CONTEXTS_PER_SCHEMA	Maximum amount of contexts that will be stored in a single mysql schema.
CREATE_CONTEXT_USE_UNIT	Must be set to context.
CHECK_CONTEXT_LOGIN_MAPPING_REGEXP	Pattern of allowed characters in login mapping (context) names.
JMX_PORT	Port number for JMX
JMX_BIND_ADDRESS	The port where the java JMX monitoring service is listening on.
NEW_CONTEXT_DEFAULT_ACCESS_COMBINATION_NAME	Default access combination template name for newly created contexts. See also "ModuleAccessDefinitions" file for details. If the name is NOT defined in "ModuleAccessDefinitions" file , the fallback will be used.

10.3.3. AdminDaemon.properties

Variable	Value
SERVER_NAME	Server name set and registered during initial install.
MASTER_AUTHENTICATION_DISABLED	Disabling authentication for system calls like context/server etc. creation.
CONTEXT_AUTHENTICATION_DISABLED	Disabling authentication for context calls like user/group etc. creation. This also disables authentication for calls which a "normal" user can make like changing his own data or getting his own data.
CONCURRENT_JOBS	Number of jobs to be be executed concurrently

10.3.4. Group.properties

variable	value
CHECK_GROUP_UID_FOR_NOT_ALLOWED_CHARS	true/false: enable check for allowed characters in group names on creation.
CHECK_GROUP_UID_REGEXP	Regexp for allowed chars
AUTO_TO_LOWERCASE_UID	This will lowercase the uid

variable	value
DEFAULT_CONTEXT_GROUP_<locale>	When creating a new context, this is the default group name for the <locale>.

10.3.5. Resource.properties

Variable	Value
CHECK_RES_UID_FOR_NOT_AL-LOWED_CHARS	true/false: enable check for allowed characters in resource names on creation.
CHECK_RES_UID_REGEXP	Regexp for allowed characters.
AUTO_TO_LOWERCASE_UID	this will lowercase the uid

10.3.6. User.properties

Variable	Value
DEFAULT_PASSWORD_MECHANISM	Specify the default password mechanism to use. Possible values: CRYPT / SHA
CHECK_USER_UID_FOR_NOT_AL-LOWED_CHARS	true/false: enable check for allowed characters in user names on creation.
CHECK_USER_UID_REGEXP	Regexp for allowed characters.
AUTO_TO_LOWERCASE_UID	This will lowercase the uid
USERNAME_CHANGEABLE	WARNING: Changing the username might have impact on external systems like imap server that allows acls to be set. Imap ACLS usually use symbolic names so when changing the user name without changing the ACL breaks the ACL. open-xchange-admin will NOT change those ACLS, so DO NOT CHANGE THIS SETTING ON OX Express
PRIMARY_MAIL_UNCHANGEABLE	If true, it is possible to change primary E-Mail address (this breaks outlook oxtender support)
DISPLAYNAME_UNIQUE	Should the displayname be unique or not? This adds further checks while dealing with users.
SENT_MAILFOLDER_<locale>	Default Sent Mail folder name for <locale> when not set per RMI.
TRASH_MAILFOLDER_<locale>	Default Trash folder name for <locale> when not set per RMI.
DRAFTS_MAILFOLDER_<locale>	Default Drafts folder name for <locale> when not set per RMI.
SPAM_MAILFOLDER_<locale>	Default SPAM folder name for <locale> when not set per RMI

10.3.7. configdb.properties

Same as the groupware configdb.properties above. useSeparateWrite has to be false. When true, the admin deamon cannot read its newly written changes from the configdb slave because of database replication times. readURL and writeURL have to point to the Master.

With SP5 groupware's and admindaemon's connection to the ConfigDB should be configured in the same way except the last parameter in the file.

If you have a MySQL master/slave setup, configure useSeparateWrite=true for both applications. The read connection must read from the slave; while the write connection has to connect to the master. All parameters to configure both connections start with the keywords

read or write. If your ConfigDB is only a single database server configure useSeparateWrite=false let read and write connection both connect to your single database server.

All remaining parameters in this file configure the pooling of the database connections and it is suggested to not change them. If you need more connections to ConfigDB it is recommended to increase the maxActive parameter.

The last parameter writeOnly must be configured to false for the groupware and to true for the admindaemon.

10.3.8. RMI.properties

RMI_PORT	Port number the Admin Daemon listens on to accept RMI calls from remote machines.

10.3.9. cache.ccf

Same as the cache.ccf above for groupware. The .TcpListenerPort has to be different from the groupware when running on the same host.

10.3.10. file-logging.properties

Same as the groupware file-logging.properties above.

10.3.11. ModuleAccessDefinitions.properties

This configuration file holds the module access masks for creating users. Information about available modules und tested configurations is available directly in it

Chapter 11. Logging and Exception Handling

In case of errors, all error messages generated by the application have an exception ID included. This exception ID is unique and written to log files with additional information as well as shown to the customer at the frontend.

The Open-Xchange Server processes, per default write all log messages into the files:

GW Process:

/var/log/open-xchange/open-xchange.log*

/var/log/open-xchange/open-xchange-console.log

Admin Process:

/var/log/open-xchange/open-xchange-admin.log*

/var/log/open-xchange/open-xchange-admin-console.log

All messages written on std out are redirected to the "*-console.log" files. This, for example, means errors from the java virtual machine. The other files contain messages directly from the application.

The log level as well as filenames and file sizes can be tuned in the configuration file file-logging.properties under the admin and groupware configuration directories.

Possible log levels are:

* SEVERE (highest value)
* WARNING
* INFO (for production)
* CONFIG
* FINE
* FINER
* FINEST (lowest value)

For clustered setups Open-Xchanges recommends to log via syslog to a dedicated log host. For this the log4j bundles, as described in chapter (??), need to be installed. The default then is the groupware to log with facility local2 and admin with facility local5, directly to syslog. The syslogd must run with the additional switch "-r" so that remote messages get accepted (on debian to be configured in /etc/default/syslogd). The log4j configuration file log4j.xml is located under the admin and groupware configuration directories. Log level, facility, messages and SyslogHost can be set there.

Possible log4j log levels are:

* DEBUG (lowest value)
* INFO (for production)
* WARN
* ERROR
* FATAL (highest value)

Chapter 12. Error codes

Component Name	Component Name	Category Code	Category String	Sequence No	Message	Description	Exception Class
		1	USER_IN-PUT	1	Bad value %1$s in parameter %2$s	TODO	com.openexchange.ajax.helper.Param-ContainerException
		1	USER_IN-PUT	1	Object not found. %s	TODO	com.openexchange.api.OXObjectNot-FoundException
		1	USER_IN-PUT	1	Unable to convert task status %1$s.	TODO	com.openexchange.data.conversion.ical.Conver-sionWarning
		1	USER_IN-PUT	2	Unable to convert task priority %d.	TODO	com.openexchange.data.conversion.ical.Conver-sionWarning
		1	USER_IN-PUT	5	Request rejected because its size (%1$s) exceeds the maximum configured size of %2$s	TODO	com.openexchange.groupware.upload.impl.UploadException
		1	USER_IN-PUT	8	An uploaded file referenced by %1$s could not be found	TODO	com.openexchange.groupware.upload.impl.UploadException
		1	USER_IN-PUT	9	Parsing error parsing ical: %s	TODO	com.openexchange.data.conversion.ical.Conver-sionWarning
		1	USER_IN-PUT	10	Unknown Class: %1$s	TODO	com.openexchange.data.conversion.ical.Conver-sionWarning
		1	USER_IN-PUT	11	Cowardly refusing to convert confidential classified objects.	TODO	com.openexchange.data.conversion.ical.Conver-sionWarning
		1	USER_IN-PUT	12	Missing DT-START	TODO	com.openexchange.data.conversion.ical.Conver-sionWarning
		1	USER_IN-PUT	14	Private Appointments can not have attendees. Remov-	TODO	com.openexchange.data.conversion.ical.Conver-sionWarning

			ing atten-dees and ac-cepting ap-pointment anyway.		
1	USER_IN-PUT	15	Not support-ed recur-rence pat-tern: BY-MONTH	TODO	com.openexchange.da-ta.conversion.ical.Conver-sionWarning
1	USER_IN-PUT	1008	Invalid email address %1$s	TODO	com.openex-change.mail.mime.MIMEMailEx-ception
1	USER_IN-PUT	1009	Wrong mes-sage header: %1$s	TODO	com.openex-change.mail.mime.MIMEMailEx-ception
1	USER_IN-PUT	1013	Message could not be sent to the following re-cipients: %1$s	TODO	com.openex-change.mail.mime.MIMEMailEx-ception
3	PERMIS-SION	1000	There was an issue in authenticat-ing your E-Mail pass-word. This may be be-cause of a recent pass-word change. To continue please lo-gout now and then log back in with your most current pass-word. (serv-er=%1$s \| user=%2$s)	TODO	com.openex-change.mail.mime.MIMEMailEx-ception
3	PERMIS-SION	1001	Wrong or missing lo-gin data to access serv-er %1$s.	TODO	com.openex-change.mail.mime.MIMEMailEx-ception
3	PERMIS-SION	1010	An attempt was made to open a read-only folder with read-write: %1$s	TODO	com.openex-change.mail.mime.MIMEMailEx-ception

	4	TRY_AGAIN	1017	Connection was reset. Please try again.	TODO	com.openexchange.mail.mime.MIMEMailException
	5	SUBSYSTEM_OR_SERVICE_DOWN	5	Cannot get database connection.	TODO	com.openexchange.groupware.ldap.LdapException
	5	SUBSYSTEM_OR_SERVICE_DOWN	1016	Connection was refused or timed out while attempting to connect to remote server %1$s for user %2$s	TODO	com.openexchange.mail.mime.MIMEMailException
	5	SUBSYSTEM_OR_SERVICE_DOWN	1018	No route to host: server (%1$s) cannot be reached	TODO	com.openexchange.mail.mime.MIMEMailException
	5	SUBSYSTEM_OR_SERVICE_DOWN	1019	Port %1$s was unreachable on remote server	TODO	com.openexchange.mail.mime.MIMEMailException
	5	SUBSYSTEM_OR_SERVICE_DOWN	1020	Connection is broken due to a socket exception on remote server: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
	5	SUBSYSTEM_OR_SERVICE_DOWN	1022	The IP address of host %1$s could not be determined	TODO	com.openexchange.mail.mime.MIMEMailException
	6	SOCKET_CONNECTION	2			
%4$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception				
	6	SOCKET_CONNECTION	3	Socket closed by web server. Wait for input data of package #%1$d took %2$dmsec.	TODO	com.openexchange.ajp13.exception.AJPv13Exception

	6	SOCK-ET_CON-NECTION	4	No data provided from web server: input stream returned -1 while reading AJP magic bytes in package #%1$d. Wait for input data took %2$dmsec.	TODO	com.openexchange.ajp13.exception.AJPv13Exception
	6	SOCK-ET_CON-NECTION	6	Problem writing to stream.	TODO	com.openexchange.data.conversion.ical.ConversionWarning
	6	SOCK-ET_CON-NECTION	7	Unknown Request Prefix Code: %1$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
	6	SOCK-ET_CON-NECTION	8	Missing payload data in client's body chunk package	TODO	com.openexchange.ajp13.exception.AJPv13Exception
	6	SOCK-ET_CON-NECTION	12	Unparseable header field %1$s in forward request package	TODO	com.openexchange.ajp13.exception.AJPv13Exception
	6	SOCK-ET_CON-NECTION	13	String parse exception: No ending 0x00 found	TODO	com.openexchange.ajp13.exception.AJPv13Exception
	6	SOCK-ET_CON-NECTION	16	An I/O error occurred: %1$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
	6	SOCK-ET_CON-NECTION	19	Cookie JSESSIONID contains non-matching JVM route: %1$s not equal to %2$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
	6	SOCK-ET_CON-NECTION	20			
%3$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception				

6	SOCK-ET_CON-NECTION	21	AJP server socket could not be bound to port %1$d. Probably another process is already listening on this port.	TODO	com.openex-change.ajp13.exception.AJPv13Exception
7	INTER-NAL_ER-ROR	1		TODO	com.openex-change.ajp13.exception.AJPv13Exception
7	INTER-NAL_ER-ROR	1	File upload failed: %1$s	TODO	com.openex-change.groupware.up-load.impl.UploadException
7	INTER-NAL_ER-ROR	4	Cache %s could not be initialized due to following error: %s	TODO	com.openex-change.cache.OX-CachingException
7	INTER-NAL_ER-ROR	1012	Message could not be sent because it is too large	TODO	com.openex-change.mail.mime.MIMEMailEx-ception
8	CODE_ER-ROR	1	Put into cache failed.	TODO	com.openex-change.cache.OX-CachingException
8	CODE_ER-ROR	1	Sessiond Exception	TODO	com.openexchange.ses-siond.exception.Session-dException
8	CODE_ER-ROR	1	An SQL error occurred: %1$s	TODO	com.openex-change.tools.itera-tor.SearchIteratorExcep-tion
8	CODE_ER-ROR	1	Push UDP Exception	TODO	com.openex-change.push.udp.PushUD-PException
8	CODE_ER-ROR	2	The default element attributes could not be retrieved	TODO	com.openex-change.cache.OX-CachingException
8	CODE_ER-ROR	2	Max Session size reached	TODO	com.openexchange.ses-siond.exception.Session-dException
8	CODE_ER-ROR	2	Missing parameter %1$s	TODO	com.openex-change.ajax.helper.Param-ContainerException

8	CODE_ER-ROR	2	Cannot build distinguished name from %s.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	2		TODO	com.openexchange.groupware.settings.SettingException
8	CODE_ER-ROR	2	Missing affiliation id	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	2	A DBPool error occurred: 1$%s	TODO	com.openexchange.tools.iterator.SearchIteratorException
8	CODE_ER-ROR	3	Remove on cache failed	TODO	com.openexchange.cache.OX-CachingException
8	CODE_ER-ROR	3	Sessiond Config Exception	TODO	com.openexchange.sessiond.exception.SessiondException
8	CODE_ER-ROR	3	Can not create recurrence rule: %s	TODO	com.openexchange.data.conversion.ical.ConversionWarning
8	CODE_ER-ROR	3	Unknown action value: %1$s	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	3	Operation not allowed on a closed SearchIterator	TODO	com.openexchange.tools.iterator.SearchIteratorException
8	CODE_ER-ROR	4	Invalid session given to implementation %1$s.	TODO	com.openexchange.data.conversion.ical.ConversionWarning
8	CODE_ER-ROR	4	Header content-type does not indicate multipart content	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	4	Mapping for %1$d not implemented	TODO	com.openexchange.tools.iterator.SearchIteratorException
8	CODE_ER-ROR	5	Unknown event topic %s	TODO	com.openexchange.sessiond.exception.SessiondException

8	CODE_ER-ROR	5	AJP connection is not set to status ASSIGNED	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	5	Can not generate uid.	TODO	com.openexchange.data.conversion.ical.ConversionWarning
8	CODE_ER-ROR	5	FreeBusyResults calculation problem with oid: %1$d	TODO	com.openexchange.tools.iterator.SearchIteratorException
8	CODE_ER-ROR	6	Password could not be changed	TODO	com.openexchange.sessiond.exception.SessiondException
8	CODE_ER-ROR	6	Response package exceeds max package size value of 8192k: %1$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	6	SQL Problem: %s	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	6	Missing parameter %1$s	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	6	Invalid constructor argument. Instance of %1$s not supported	TODO	com.openexchange.tools.iterator.SearchIteratorException
8	CODE_ER-ROR	7	Max. session size for user %1$s in context %2$s exceeded	TODO	com.openexchange.sessiond.exception.SessiondException
8	CODE_ER-ROR	7	Validation of calendar failed.	TODO	com.openexchange.data.conversion.ical.ConversionWarning
8	CODE_ER-ROR	7	Problem putting/removing an object into/from the cache.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	7	Unknown module: %1$d	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	7	No such element.	TODO	com.openexchange.tools.itera-

					tor.SearchIteratorException
8	CODE_ER-ROR	8	Can not resolve user: %d	TODO	com.openexchange.data.conversion.ical.ConversionWarning
8	CODE_ER-ROR	8	Hash algorithm %s isn't found.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	9	Empty SEND_BODY_CHUNK package MUST NOT be sent	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	9	Encoding %s cannot be used.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	9	Invalid action value: %1$s	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	10	Integer value exceeds max allowed value (65535): %1$d	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	10	Cannot find resource group with identifier %d.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	10	Upload file with id %1$s could not be found	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	11	Invalid content-type header value: %1$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	11	Found resource groups with same identifier %d.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	11	Upload file's content type %1$s does not fit to given file filter %2$s	TODO	com.openexchange.groupware.upload.impl.UploadException
8	CODE_ER-ROR	12	Cannot find resource with identifier %d.	TODO	com.openexchange.groupware.ldap.LdapException

8	CODE_ER-ROR	13	Can not resolve resource: %1$s	TODO	com.openexchange.data.conversion.ical.ConversionWarning
8	CODE_ER-ROR	13	Found resources with same identifier %d.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	14	Unsupported encoding: %1$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	14	Cannot find user with email %s.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	15	No attribute name could be found for code: %1$d	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	15	Cannot find user with identifier %1$s in context %2$d.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	16	Found two user with same identifier %1$s in context %2$d.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	17	A messaging error occurred: %1$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	17	Cannot find group with identifier %1$s in context %2$d.	TODO	com.openexchange.groupware.ldap.LdapException
8	CODE_ER-ROR	22	File %1$s could not be found.	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	23	Invalid cookie header value: %1$s	TODO	com.openexchange.ajp13.exception.AJPv13Exception
8	CODE_ER-ROR	1002	Mail folder could not be found: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1003	Folder is closed: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1004	Illegal write attempt: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException

8	CODE_ER-ROR	1005	Invalid method on an expunged message: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1006	Method not supported: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1007	Session attempts to instantiate a provider that doesn't exist: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1011	Invalid search expression: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1014	Store already closed: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1021	A socket error occurred: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
8	CODE_ER-ROR	1023	Messaging error: %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
9	CONCUR-RENT_MOD-IFICATION	1	The object has been changed in the meantime.	TODO	com.openexchange.api2.OXConcurrentModificationException
10	SETUP_ER-ROR	1	Cannot find property %s.	TODO	com.openexchange.groupware.ldap.LdapException
10	SETUP_ER-ROR	3	Class %s cannot be loaded.	TODO	com.openexchange.groupware.ldap.LdapException
10	SETUP_ER-ROR	4	Missing property '%s'	TODO	com.openexchange.sessiond.exception.SessiondException
10	SETUP_ER-ROR	4	Cannot instantiate class %s.	TODO	com.openexchange.groupware.ldap.LdapException
10	SETUP_ER-ROR	18	Missing property AJP_MM_ROUTE in file ajp.properties	TODO	com.openexchange.ajp13.exception.AJPv13Exception

		10	SETUP_ER-ROR	1015	Could not bind connection to local port %1$s	TODO	com.openexchange.mail.mime.MIMEMailException
		11	EXTER-NAL_RE-SOURCE_FULL	1024	Mail server's quota is exceeded	TODO	com.openexchange.mail.mime.MIMEMailException
ACL	ACL_ER-ROR	5	SUBSYS-TEM_OR_SER-VICE_DOWN	2	An I/O error occurred while creating the socket connection to IMAP server (%1$s): %2$s	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
ACL	ACL_ER-ROR	5	SUBSYS-TEM_OR_SER-VICE_DOWN	4	An I/O error occurred: %1$s	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
ACL	ACL_ER-ROR	8	CODE_ER-ROR	1	Implementing class could not be found	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
ACL	ACL_ER-ROR	8	CODE_ER-ROR	3	Instantiating the class failed.	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
ACL	ACL_ER-ROR	8	CODE_ER-ROR	6	Unknown IMAP server: %1$s	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
ACL	ACL_ER-ROR	8	CODE_ER-ROR	7	Missing IMAP server arguments to resolve IMAP login to a user	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
ACL	ACL_ER-ROR	8	CODE_ER-ROR	8	IMAP login %1$s could not be resolved to a user	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
ACL	ACL_ER-ROR	10	SETUP_ER-ROR	5	Missing property %1$s in imap.properties.	TODO	com.openexchange.imap.entity2acl.Entity2ACLException
APP	AP-POINT-MENT	1	USER_IN-PUT	8	Mandatory field mail address for external participants	TODO	com.openexchange.groupware.calendar.OXCalendarException

APP	AP-POINT-MENT	1	USER_IN-PUT	10	Folder type SHARED is not allowed in this situation.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	20	End date is before start date	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	21	ERROR: Un-supported label value %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	22	ERROR: Pri-vate flag is only allowed inside of a private fold-er.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	23	ERROR: Pri-vate flag and partici-pants are not support-ed.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	24	ERROR: Un-supported private flag value %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	25	ERROR:: Un-supported shown as value %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	26	Required value Start Date was not sup-plied.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	27	Required value End Date was not sup-plied.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	28	Required value Title was not sup-plied.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	29	Unable to create excep-tion, recur-ring position can not be calculated !	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion

APP	AP-POINT-MENT	1	USER_IN-PUT	31	Error: Got an UserPar-ticipant ob-ject with a private fold-er id < 1 : Identifier = %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	32	Error: Got an UserPar-ticipant ob-ject with a private fold-er id in a public folder : Identifier = %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	40	Fatal error. (DAILY) Missing or wrong Inter-val value: %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	41	Fatal error. (WEEKLY) Missing or wrong Inter-val value: %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	42	Fatal error. (MONTHLY) Missing or wrong value DayInMonth : %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	43	Fatal error. (MONTHLY) Missing or wrong value Month : %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	44	Fatal error. (MONTH-LY2) Missing or wrong Day value: %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	45	Fatal error. (MONTH-LY2) Missing or wrong DayInMonth value: %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	46	Fatal error. (YEARLY) Missing or wrong value	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion

					DayInMonth : %d		
APP	AP-POINT-MENT	1	USER_IN-PUT	47	Fatal error. (YEARLY2) Missing or wrong value day : %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	48	Fatal error. (YEARLY2) Missing or wrong day_or_type : %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	49	Fatal error. (YEARLY2) Missing or wrong Inter-val value: %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	51	Unable to remove par-ticipant be-cause this participant is the last one	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	54	Folder is not of type Cal-endar	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	55	The re-quired value interval is missing or wrong	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	56	The re-quired value days is miss-ing or wrong	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	57	Moving ap-pointment to a public folder flaged as private is not allowed!	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	64	Fatal error. (YEARLY) Missing or wrong Month val-ue: %d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	65	Fatal error. You are try-ing to create a new recur-	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion

					ring from an exception!		
APP	AP-POINT-MENT	1	USER_IN-PUT	66	You can not move one element of a recurring appointment into another folder.	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	68	Move not allowed to a shared folders if the private flag is set	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	69	You can not use different private flags for one element of a recurring appointment	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	70	You can not use the private flags in a non private folder	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	71	Bad character in field %1$s. Error: %2$s	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	74	Recurrence position %1$s does not exist	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	75	One or more exception dates are not contained in recurring appointment	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	78	Value %1$d exceeds max. supported value of %2$d.	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	1	USER_IN-PUT	82	Changing recurrence type of a change exception denied	TODO	com.openexchange.groupware.calendar.OXCalendarException

APP	AP-POINT-MENT	1	USER_IN-PUT	83	Changing re-currence po-sition of a change ex-ception de-nied.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	86	Until is be-fore start date	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	87	Incomplete recurring in-formations: Missing inter-val.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	88	Incomplete recurring in-formations: Missing until date or number of occurrences.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	89	Incomplete recurring in-formations: Missing weekday.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	90	Incomplete recurring in-formations: Missing day in month.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	91	Incomplete recurring in-formations: Missing month.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	1	USER_IN-PUT	92	Incomplete recurring in-formations: Missing re-currence type.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	13	You do not have the necessary permissions	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	36	Insufficient rights to at-tach/detach an attach-ment to this folder!	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion

APP	AP-POINT-MENT	3	PERMIS-SION	37	Insufficient read rights for this folder!	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	58	You do not have the ap-propriate permissions to modify this object.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	59	Got the wrong fold-er identifica-tion. You do not have the appropriate permissions to modify this object.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	60	Got the wrong shared fold-er identifica-tion. You do not have the appropriate permissions to modify this object.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	61	You do not have the ap-propriate permissions to move this object.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	62	You do not have the ap-propriate permissions to read this object	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	63	You do not have the ap-propriate permissions to create an object	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	3	PERMIS-SION	76	Appoint-ment's own-er must not be removed from partici-pants	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion

APP	AP-POINT-MENT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	5	Unexpected SQL Error!	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	7	INTER-NAL_ER-ROR	7	Unexpected exception %d!	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	7	INTER-NAL_ER-ROR	11	Unexpected state for deleting a virtual ap-pointment (exception). uid:oid:posi-tion %d:%d:%d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	7	INTER-NAL_ER-ROR	30	Error: Got an UserPar-ticipant ob-ject with an identifier < 1 Identifi-er:Fold-er_Type = %d:%d	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	7	INTER-NAL_ER-ROR	38	FATAL:: Can not resolve recurrence position be-cause we got neither the recur-ring position nor a recur-ring date po-sition	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	7	INTER-NAL_ER-ROR	67	Fatal error. An database update ex-ception oc-curred.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	7	INTER-NAL_ER-ROR	80	The recur-rence pat-tern is too complex. Giving up.	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	7	INTER-NAL_ER-ROR	85	Some call-backs threw exceptions: %s	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
APP	AP-POINT-MENT	8	CODE_ER-ROR	1	FATAL: Cal-endarFolder-	TODO	com.openex-change.groupware.calen-

					Object not initialized!		dar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	2	Not yet sup-ported!	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	3	Shared folder owner not given !	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	4	Folder type unresolvable !	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	6	clientLast-Modified IS NULL. Abort action!	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	9	FATAL: Would cre-ate an ob-ject without participants	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	12	SessionOb-ject not ini-tialized	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	14	Insert ex-pected but the object id is already given. Abort-ing action...	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	15	Update ex-pected but no object id is given. Aborting ac-tion...	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	16	Invalid re-quest. Fold-er is shared!	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	17	Invalid re-quest. Fold-er is shared!	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	18	Invalid re-quest. Fold-er is shared!	TODO	com.openexchange.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	19	Unsupport-ed type de-tected : %d	TODO	com.openexchange.groupware.calen-

APP	AP-POINT-MENT	8	CODE_ER-ROR	33	Move not supported: Source:Destination %d:%d	TODO	dar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	34	Move not allowed from shared folders	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	35	Calendar operation: Context not set.	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	39	Missing start date, unable to calculate recurring!	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	50	Unable to remove participant %d	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	52	Action type not supported : %d	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	53	SearchIterator NULL	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	73	Calendar calculation requires a proper defined time zone.	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	77	An event error occurred: %1$s	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	79	Unable to calculate first occurrence.	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	81	Unknown name-value-pair in recurrence string: %1$s=%2$s	TODO	com.openex-change.groupware.calendar.OXCalendarException
APP	AP-POINT-MENT	8	CODE_ER-ROR	84	User changing the appointment is missing.	TODO	com.openex-change.groupware.calendar.OXCalendarException

APP	AP-POINT-MENT	12	TRUNCAT-ED	72	Some data exceeds a field limit. Please shorten the input(s) for affected field(s).	TODO	com.openex-change.groupware.calen-dar.OXCalendarExcep-tion
ATT	ATTACH-MENT	1	USER_IN-PUT	401	Attachments must contain a file.	An Attach-ment must contain a file, otherwise it's invalid.	
ATT	ATTACH-MENT	1	USER_IN-PUT	405	The attachment you requested no longer exists. Please refresh the view.	An attachment with the given ID does not exist, so it cannot be downloaded.	
ATT	ATTACH-MENT	1	USER_IN-PUT	413	The attachment you requested no longer exists. Please refresh the view.	The Attachment does not exist (anymore). Reloading the view will propably help.	
ATT	ATTACH-MENT	1	USER_IN-PUT	418	Validation failed: %s		
ATT	ATTACH-MENT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	400	Could not save file to	The file could	

							the file store.	not be saved in the file store. This probably means that the file store is not reachable.
ATT	ATTACH-MENT	5		SUBSYS-TEM_OR_SER-VICE_DOWN	404	Could not retrieve file: %s	A file could not be loaded from the file store. This means either that the file does not exist (and your database is inconsistent), or that the file store is not reachable.
ATT	ATTACH-MENT	5		SUBSYS-TEM_OR_SER-VICE_DOWN	415	Could not delete file from file store. Filestore: %s Context: %s	A file could not be removed from

						the file store. This can lead to inconsistencies if the change could not be undone. Keep your eyes peeled for messages indicating an inconsistency between DB and file store.
ATT	ATTACHMENT	7	INTERNAL_ERROR	407	Could not delete attachment.	An error occurred while retrieving the attachments that should be deleted.
ATT	ATTACHMENT	7	INTERNAL_ERROR	408	Could not find an attachment with the file_id %s. Either the file is orphaned	Didn't find an attachment with the

					or belongs to another module.	given file_id, so the file is propably orphaned or does not belong to the Attachments.
ATT	ATTACH-MENT	7	INTER-NAL_ER-ROR	416	Could not delete files from file-store. Context: %d.	Could not delete files from file-store. Context: %d.
ATT	ATTACH-MENT	7	INTER-NAL_ER-ROR	600	Changes done to the object this attachment was added to could not be undone. Your database is probably in-consistent, run the con-sistency tool.	Changes done to the object this at-tach-ment was added to could not be un-done. Your database is proba-bly in-consis-tent, run the consis-tency tool.
ATT	ATTACH-MENT	7	INTER-NAL_ER-ROR	600	Changes were made to the ob-	Changes done to the

						ject of this attachment and cannot be undone. Your database is probably inconsistent, run the consistency tool.	object this attachment was added to could not be undone. Your database is probably inconsistent, run the consistency tool.
ATT	ATTACH-MENT	7	INTER-NAL_ER-ROR	601		An error occurred attaching to the given object.	An error occurred attaching to the given object.
ATT	ATTACH-MENT	7	INTER-NAL_ER-ROR	601		An error occurred attaching to the given object.	An error occurred attaching to the given object.
ATT	ATTACH-MENT	7	INTER-NAL_ER-ROR	602		The Object could not be detached because the update to an underlying object failed.	The Object could not be detached because the update to an under-

					lying object failed.	
ATT	ATTACH-MENT	7	INTER-NAL_ER-ROR	602	The object could not be detached because the update to an underlying object failed.	The object could not be de-tached be-cause the up-date to an under-lying object failed.
ATT	ATTACH-MENT	8	CODE_ER-ROR	100	Invalid SQL Query: %s	An in-valid SQL Query was sent to the Serv-er. This can only be fixed in R&D.
ATT	ATTACH-MENT	8	CODE_ER-ROR	101	Invalid SQL Query: %s	An in-valid SQL Query was sent to the Serv-er. This can only be fixed in R&D.
ATT	ATTACH-MENT	8	CODE_ER-ROR	200	Invalid SQL query: %s	An in-valid SQL

							query was sent to the Server. This can only be fixed in R&D.
ATT	ATTACH-MENT	8		CODE_ER-ROR	201	Invalid SQL query: %s	An invalid SQL query was sent to the Server. This can only be fixed in R&D.
ATT	ATTACH-MENT	8		CODE_ER-ROR	300	Invalid SQL Query: %s	An invalid SQL Query was sent to the Server. This can only be fixed in R&D.
ATT	ATTACH-MENT	8		CODE_ER-ROR	301	Invalid SQL Query: %s	An invalid SQL Query was sent to the Server.

							This can only be fixed in R&D.
ATT	ATTACH-MENT	8		CODE_ER-ROR	402	Cannot gen-erate ID for new attach-ment: %s	An SQL Error oc-curred while trying to gener-ate an id for the new attach-ment.
ATT	ATTACH-MENT	8		CODE_ER-ROR	403	Invalid SQL query: %s	An in-valid SQL query was sent to the server
ATT	ATTACH-MENT	8		CODE_ER-ROR	406	Invalid SQL query: %s	An in-valid SQL query was sent to the database.
ATT	ATTACH-MENT	8		CODE_ER-ROR	409	Invalid SQL query: %s	An in-valid SQL query was sent to the database.
ATT	ATTACH-MENT	8		CODE_ER-ROR	410	Invalid SQL query: %s	An in-valid SQL query was sent to the database

ATT	ATTACH-MENT	8	CODE_ER-ROR	411	Invalid SQL query: %s	An in-valid SQL query was sent to the database.	
ATT	ATTACH-MENT	8	CODE_ER-ROR	412	Invalid SQL query: %s	An in-valid SQL query was sent to the database.	
ATT	ATTACH-MENT	8	CODE_ER-ROR	414	Invalid SQL query: %s	An in-valid SQL query was snet to the database.	
ATT	ATTACH-MENT	8	CODE_ER-ROR	417	Could not remove at-tachments from database. Context: %d.	Could not re-move attach-ments from database. Con-text: %d.	
ATT	ATTACH-MENT	8	CODE_ER-ROR	701	Invalid pa-rameter sent in request. Parameter '%s' was '%s' which does not look like a number		
ATT	ATTACH-MENT	8	CODE_ER-ROR	801	Invalid pa-rameter sent in request. Parameter '%s' was '%s' which does not look like a number		
CAC	CACHE	8	CODE_ER-ROR	1	A cache er-ror oc-curred: %1$s	TODO	com.openex-change.caching.CacheEx-ception

CAC	CACHE	8	CODE_ER-ROR	3	An I/O error occurred: %1$s	TODO	com.openex-change.caching.CacheEx-ception
CAC	CACHE	8	CODE_ER-ROR	5	The default element at-tributes could not be retrieved	TODO	com.openex-change.caching.CacheEx-ception
CAC	CACHE	8	CODE_ER-ROR	5	The default element at-tributes could not be assigned	TODO	com.openex-change.caching.CacheEx-ception
CAC	CACHE	8	CODE_ER-ROR	6	Put into cache failed.	TODO	com.openex-change.caching.CacheEx-ception
CAC	CACHE	8	CODE_ER-ROR	7	Safe put in-to cache failed. An object bound to given key al-ready exists.	TODO	com.openex-change.caching.CacheEx-ception
CAC	CACHE	8	CODE_ER-ROR	8	Remove on cache failed	TODO	com.openex-change.caching.CacheEx-ception
CAC	CACHE	10	SETUP_ER-ROR	2	Missing cache config file at loca-tion: %1$s	TODO	com.openex-change.caching.CacheEx-ception
CAC	CACHE	10	SETUP_ER-ROR	4	Missing con-figuration property: %1$s	TODO	com.openex-change.caching.CacheEx-ception
CFG	CONFI-GURA-TION	8	CODE_ER-ROR	8	Property %1$s is not an integer	TODO	com.openexchange.con-figuration.Configura-tionException
CFG	CONFI-GURA-TION	8	CODE_ER-ROR	9	An I/O error occurred: %1$s	TODO	com.openexchange.con-figuration.Configura-tionException
CFG	CONFI-GURA-TION	10	SETUP_ER-ROR	1	Filename for property file is not de-fined.	TODO	com.openexchange.con-figuration.Configura-tionException
CFG	CONFI-GURA-TION	10	SETUP_ER-ROR	2	File %1$s does not ex-ist.	TODO	com.openexchange.con-figuration.Configura-tionException
CFG	CONFI-GURA-TION	10	SETUP_ER-ROR	3	File %1$s is not read-able.	TODO	com.openexchange.con-figuration.Configura-tionException
CFG	CONFI-GURA-TION	10	SETUP_ER-ROR	4	Cannot read file %1$s.	TODO	com.openexchange.con-figuration.Configura-tionException

CFG	CONFI-GURA-TION	10	SETUP_ER-ROR	5	Property %1$s is not defined.	TODO	com.openexchange.con-figuration.Configura-tionException
CFG	CONFI-GURA-TION	10	SETUP_ER-ROR	6	Cannot load class %1$s.	TODO	com.openexchange.con-figuration.Configura-tionException
CFG	CONFI-GURA-TION	10	SETUP_ER-ROR	7	Invalid confi-guration: %1$s	TODO	com.openexchange.con-figuration.Configura-tionException
CSTY	CONSIS-TENCY	7	INTER-NAL_ER-ROR	201	Could not register Con-sistency MBean. Inter-nal Error: %s		
CSTY	CONSIS-TENCY	7	INTER-NAL_ER-ROR	202	Could not unregister Consistency MBean. Inter-nal Error: %s		
CSTY	CONSIS-TENCY	7	INTER-NAL_ER-ROR	301	Error com-municating with mbean in server: %s		
CON	CON-TACT	1	USER_IN-PUT	100	The applica-tion was un-able to vali-date a given email ad-dress from this contact: %s	0	
CON	CON-TACT	1	USER_IN-PUT	101	Unable to scale this contact im-age. Either the file type is not sup-ported or the image is too large. Your mime type is %1$s and your im-age size is %2$d. The max. al-lowed image size is %3$d.	1	
CON	CON-TACT	1	USER_IN-PUT	102	This gif im-age is too large. It can not be scaled and	2	

					will not be accepted		
CON	CON-TACT	1	USER_IN-PUT	122	No changes found. No update re-quiered. Context %1$d Object %2$d	22	
CON	CON-TACT	1	USER_IN-PUT	136	Unable to save contact image. The image ap-pears to be broken.	36	
CON	CON-TACT	1	USER_IN-PUT	138	Unable to update con-tact image. The image appears to be broken.	38	
CON	CON-TACT	1	USER_IN-PUT	156	One or more fields contain too much infor-mation. Field: %1$d Character Limit: %2$d Sent %3$d	56	
CON	CON-TACT	1	USER_IN-PUT	168	Bad charac-ter in field %2$s. Error: %1$s	68	
CON	CON-TACT	1	USER_IN-PUT	170	Mime type is null	70	
CON	CON-TACT	1	USER_IN-PUT	171	A contact with private flag cannot be stored in a public folder. Fold-er: %1$d context %2$d user %3$d	71	
CON	CON-TACT	1	USER_IN-PUT	172	Image size too large. Image size: %1$d. Max. size: %2$d.	72	
CON	CON-TACT	1	USER_IN-PUT	400	Number of documents attached to		

					this contact is below zero. You can not remove any more attachments.	
CON	CONTACT	3	PERMISSION	103	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	3
CON	CONTACT	3	PERMISSION	104	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	4
CON	CONTACT	3	PERMISSION	105	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	5
CON	CONTACT	3	PERMISSION	110	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	10
CON	CONTACT	3	PERMISSION	111	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	11

CON	CON-TACT	3	PERMIS-SION	112	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	12
CON	CON-TACT	3	PERMIS-SION	113	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	13
CON	CON-TACT	3	PERMIS-SION	114	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	14
CON	CON-TACT	3	PERMIS-SION	115	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	15
CON	CON-TACT	3	PERMIS-SION	117	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	17
CON	CON-TACT	3	PERMIS-SION	118	You are not allowed to mark this contact as private contact: Context %1$d Object %2$d	18

CON	CON-TACT	3	PERMIS-SION	119	Edit Conflict. Your change cannot be completed because somebody else has made a con-flicting change to the same item. Please refresh or synchronize and try again.	19
CON	CON-TACT	3	PERMIS-SION	142	You do not have permis-sion to delete ob-jects from folder %1$d in context %2$d with user %3$d	42
CON	CON-TACT	3	PERMIS-SION	147	Unable to delete Con-tacts from this user. Context %1$d User %2$d	47
CON	CON-TACT	3	PERMIS-SION	152	Unable to delete con-tacts from user be-cause this is a non-con-tact folder. Context %1$d Folder %2$d User %3$d	52
CON	CON-TACT	3	PERMIS-SION	157	Unable to trigger ob-ject Events: Context %1$d User %2$d	57
CON	CON-TACT	3	PERMIS-SION	165	Unable to move this contact be-cause it is marked as	65

CON	CON-TACT	3	PERMIS-SION	169	You do not have permission to delete objects from folder %1$d in context %2$d with user %3$d	69
					private: Context %1$d Object %2$d	
CON	CON-TACT	3	PERMIS-SION	173	Primary email address in system contact must not be edited: Context %1$d Object %2$d User %3$d	73
CON	CON-TACT	3	PERMIS-SION	174	The contact %1$d is not located in folder %2$s (%3$d)	74
CON	CON-TACT	3	PERMIS-SION	202	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	2
CON	CON-TACT	3	PERMIS-SION	204	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	4
CON	CON-TACT	3	PERMIS-SION	205	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	5

CON	CON-TACT	3	PERMIS-SION	209	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	9
CON	CON-TACT	3	PERMIS-SION	210	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	10
CON	CON-TACT	3	PERMIS-SION	215	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	15
CON	CON-TACT	3	PERMIS-SION	216	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	16
CON	CON-TACT	3	PERMIS-SION	222	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	22
CON	CON-TACT	3	PERMIS-SION	223	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	23

CON	CON-TACT	3	PERMIS-SION	228	You do not have permission to read objects in folder %1$d in context %2$d with user %3$d	28
CON	CON-TACT	3	PERMIS-SION	232	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	32
CON	CON-TACT	3	PERMIS-SION	242	You do not have permission to delete objects from folder %1$d in context %2$d with user %3$d	42
CON	CON-TACT	3	PERMIS-SION	246	You do not have permission to delete objects from folder %1$d in context %2$d with user %3$d	46
CON	CON-TACT	3	PERMIS-SION	258	You do not have permission to delete objects from folder %1$d in context %2$d with user %3$d	58
CON	CON-TACT	3	PERMIS-SION	401	Insufficient write rights for this folder. Unable to attach document. Context %4$d Folder %1$d Object	

					%2$d User %3$d	
CON	CON-TACT	3	PERMIS-SION	402	Insufficient write rights for this fold-er. Unable to attach document. Context %4$d Folder %1$d Object %2$d User %3$d	
CON	CON-TACT	4	TRY_AGAIN	158	The image you tried to attach is not a valid pic-ture. It may be broken or is not a valid file.	58
CON	CON-TACT	4	TRY_AGAIN	159	The image you tried to attach is not a valid pic-ture. It may be broken or is not a valid file.	59
CON	CON-TACT	4	TRY_AGAIN	162	Mandatory field last name is not set.	62
CON	CON-TACT	4	TRY_AGAIN	163	Mandatory field last name is not set.	63
CON	CON-TACT	4	TRY_AGAIN	166	Unable to compare contacts for update. Make sure you have en-tered a valid display name. Con-text %1$d Object %2$d	66
CON	CON-TACT	4	TRY_AGAIN	167	The name you entered is not avail-able. Choose another dis-play name.	67

					Context %1$d Object %2$d		
CON	CON-TACT	4	TRY_AGAIN	226	The object you request-ed can not be found. Try again. Context %1$d Folder %2$d User %3$d Object %4$d	26	
CON	CON-TACT	4	TRY_AGAIN	240	Edit Conflict. Your change cannot be completed because somebody else has made a con-flicting change to the same item. Please refresh or synchronize and try again. Con-text %1$d Folder %2$d User %3$d Object %4$d	40	
CON	CON-TACT	4	TRY_AGAIN	259	The contact you request-ed is not valid.	59	
CON	CON-TACT	6	SOCK-ET_CON-NECTION	203	Unable to pick up a connection from the DBPool	3	
CON	CON-TACT	6	SOCK-ET_CON-NECTION	207	Unable to pick up a connection from the DBPool	7	
CON	CON-TACT	6	SOCK-ET_CON-NECTION	213	Unable to pick up a connection from the DBPool	13	

CON	CON-TACT	6	SOCK-ET_CON-NECTION	219	Unable to pick up a connection from the DBPool	19
CON	CON-TACT	6	SOCK-ET_CON-NECTION	220	Unable to pick up a connection from the DBPool	20
CON	CON-TACT	6	SOCK-ET_CON-NECTION	229	Unable to pick up a connection from the DBPool	29
CON	CON-TACT	6	SOCK-ET_CON-NECTION	230	Unable to pick up a connection from the DBPool	30
CON	CON-TACT	6	SOCK-ET_CON-NECTION	236	Unable to pick up a connection from the DBPool	36
CON	CON-TACT	6	SOCK-ET_CON-NECTION	243	Unable to pick up a connection from the DBPool	43
CON	CON-TACT	6	SOCK-ET_CON-NECTION	245	Unable to pick up a connection from the DBPool	45
CON	CON-TACT	6	SOCK-ET_CON-NECTION	247	Unable to pick up a connection from the DBPool	47
CON	CON-TACT	8	CODE_ER-ROR	106	Unable to insert con-tacts! Con-text: %d	6
CON	CON-TACT	8	CODE_ER-ROR	107	Got a -1 ID from IDGen-erator	7
CON	CON-TACT	8	CODE_ER-ROR	108	Unable to scale image down.	8
CON	CON-TACT	8	CODE_ER-ROR	109	Unable to insert Con-tact. Con-text: %d	9

CON	CON-TACT	8	CODE_ER-ROR	116	Unable to synchronize the old contact with the new changes: Context %1$d Object %2$d	16
CON	CON-TACT	8	CODE_ER-ROR	120	Unable to update contact. Context %1$d Object %2$d	20
CON	CON-TACT	8	CODE_ER-ROR	121	An error occurred: Object id is -1	21
CON	CON-TACT	8	CODE_ER-ROR	123	Unable to scale image down.	23
CON	CON-TACT	8	CODE_ER-ROR	124	Unable to update contact. Context %1$d Object %2$d	24
CON	CON-TACT	8	CODE_ER-ROR	125	Contact not found! Context %1$d	25
CON	CON-TACT	8	CODE_ER-ROR	126	Unable to load contact: Context %1$d	26
CON	CON-TACT	8	CODE_ER-ROR	127	Unable to delete Contact: Context %1$d Contact %2$d	27
CON	CON-TACT	8	CODE_ER-ROR	128	Unable to load distributionlist: Context %1$d Contact %2$d	28
CON	CON-TACT	8	CODE_ER-ROR	129	Unable to save distributionlist: Context %1$d Contact %2$d	29
CON	CON-TACT	8	CODE_ER-ROR	130	Unable to update distributionlist : Context	30

					%1$d Contact %2$d	
CON	CONTACT	8	CODE_ERROR	131	Unable to delete dristribution-list by id : Context %1$d Contact %2$d	31
CON	CONTACT	8	CODE_ERROR	132	Unable to load linked contacts : Context %1$d Contact %2$d	32
CON	CONTACT	8	CODE_ERROR	133	Unable to save Linking between Contacts : Context %1$d Contact %2$d	33
CON	CONTACT	8	CODE_ERROR	134	Unable to delete linking between contacts : Context %1$d Contact %2$d	34
CON	CONTACT	8	CODE_ERROR	135	Unable to load contact image: Context %1$d Contact %2$d	35
CON	CONTACT	8	CODE_ERROR	137	Unable to save contact Image: Context %1$d Contact %2$d	37
CON	CONTACT	8	CODE_ERROR	139	Unable to update contact image: Context %1$d Contact %2$d	39
CON	CONTACT	8	CODE_ERROR	140	Unable to perform contact folder check for readable content: Context	40

					%1$d Folder %2$d	
CON	CON-TACT	8	CODE_ER-ROR	144	Critical Error occurred. This folder contains a contact with no id. Context %1$d Folder %2$d	44
CON	CON-TACT	8	CODE_ER-ROR	145	Unable to delete con-tacts from this folder. Context %1$d Folder %2$d	45
CON	CON-TACT	8	CODE_ER-ROR	146	Unable to trigger ob-ject Events: Context %1$d Folder %2$d	46
CON	CON-TACT	8	CODE_ER-ROR	148	Unable to delete dristribution-list by id : Context %1$d Con-tact %2$d	48
CON	CON-TACT	8	CODE_ER-ROR	149	Unable to pick up a connection from the DBPool	49
CON	CON-TACT	8	CODE_ER-ROR	150	Unable to pick up a connection from the DBPool	50
CON	CON-TACT	8	CODE_ER-ROR	151	Unable to pick up a connection from the DBPool	51
CON	CON-TACT	8	CODE_ER-ROR	153	Unable to pick up a connection from the DBPool	53
CON	CON-TACT	8	CODE_ER-ROR	155	Unable to pick up a connection	55

					from the DBPool		
CON	CON-TACT	8	CODE_ER-ROR	160	This contact has no fold-er id: Entry %1$d Con-text %2$d	60	
CON	CON-TACT	8	CODE_ER-ROR	161	This Contact has no FolderID: En-try %1$d Context %2$d	61	
CON	CON-TACT	8	CODE_ER-ROR	200	Unable to initialize Event queue	0	
CON	CON-TACT	8	CODE_ER-ROR	201	Unable to initialize Event queue	1	
CON	CON-TACT	8	CODE_ER-ROR	206	Unable fetch the number of elements in this Fold-er. Context %1$d Folder %2$d User %3$d	6	
CON	CON-TACT	8	CODE_ER-ROR	208	You are not allowed to store this contact in a non-contact folder: fold-er id %1$d in context %2$d with user %3$d	8	
CON	CON-TACT	8	CODE_ER-ROR	211	An error oc-curred dur-ing the load of folder ob-jects. Con-text %1$d Folder %2$d User %3$d	11	
CON	CON-TACT	8	CODE_ER-ROR	212	An error oc-curred dur-ing the load of folder ob-jects. Con-text %1$d Folder %2$d User %3$d	12	

CON	CON-TACT	8	CODE_ER-ROR	214	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	14
CON	CON-TACT	8	CODE_ER-ROR	217	An error occurred during the load of folder objects by an extended search. Context %1$d Folder %2$d User %3$d	17
CON	CON-TACT	8	CODE_ER-ROR	218	An error occurred during the load of folder objects by an extended search. Context %1$d Folder %2$d User %3$d	18
CON	CON-TACT	8	CODE_ER-ROR	221	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	21
CON	CON-TACT	8	CODE_ER-ROR	224	An error occurred during the load of folder objects by a simple search. Context %1$d Folder %2$d User %3$d	24
CON	CON-TACT	8	CODE_ER-ROR	225	An error occurred during the load of folder ob-	25

					jects by a simple search. Context %1$d Folder %2$d User %3$d	
CON	CONTACT	8	CODE_ERROR	227	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	27
CON	CONTACT	8	CODE_ERROR	231	You are not allowed to store this contact in a non-contact folder: folder id %1$d in context %2$d with user %3$d	31
CON	CONTACT	8	CODE_ERROR	233	You do not have permission to create objects in this folder %1$d in context %2$d with user %3$d	33
CON	CONTACT	8	CODE_ERROR	234	An error occurred during the load of modified objects from a folder. Context %1$d Folder %2$d User %3$d	34
CON	CONTACT	8	CODE_ERROR	235	An error occurred during the load of modified objects from a folder. Context %1$d Folder	35

					%2$d User %3$d	
CON	CON- TACT	8	CODE_ER- ROR	237	An error oc- curred dur- ing the load of deleted objects from a folder. Context %1$d Folder %2$d User %3$d	37
CON	CON- TACT	8	CODE_ER- ROR	238	An error oc- curred dur- ing the load of deleted objects from a folder. Context %1$d Folder %2$d User %3$d	38
CON	CON- TACT	8	CODE_ER- ROR	239	Unable to delete this contact. Ob- ject not found. Con- text %1$d Folder %2$d User %3$d Object %4$d	39
CON	CON- TACT	8	CODE_ER- ROR	241	You are not allowed to store this contact in a non-contact folder: fold- er id %1$d in context %2$d with user %3$d	41
CON	CON- TACT	8	CODE_ER- ROR	244	Unable to delete con- tact object. Context %1$d Folder %2$d User %3$d Object %4$d	44
CON	CON- TACT	8	CODE_ER- ROR	248	Unable to load objects. Context %1$d User %2$d	48

CON	CON-TACT	8	CODE_ER-ROR	249	Unable to load objects. Context %1$d User %2$d	49
CON	CON-TACT	8	CODE_ER-ROR	250	Unable to load objects. Context %1$d User %2$d	50
CON	CON-TACT	8	CODE_ER-ROR	251	Unable to load objects. Context %1$d User %2$d	51
CON	CON-TACT	8	CODE_ER-ROR	256	Unable to initialize Event queue	56
CON	CON-TACT	8	CODE_ER-ROR	500	Need at least a Con-tactObject and a value to set %s	
CON	CON-TACT	8	CODE_ER-ROR	600	Could not convert giv-en string %s to a date.	
CON	CON-TACT	8	CODE_ER-ROR	600	Could not convert giv-en object %s to a date when setting %s.	
CON	CON-TACT	8	CODE_ER-ROR	800	Need at least a Con-tactObject to get the value of %s	
CON	CON-TACT	8	CODE_ER-ROR	910	Unable to pick up a connection from the DBPool	10
CON	CON-TACT	8	CODE_ER-ROR	913	Unable to load this LDAP ad-dressbook: %1$s	13
CON	CON-TACT	10	SETUP_ER-ROR	900	Unablel to load this LDAP ad-dressbook. Check the configura-	0

					tion for this LDAP server: Folder %1$d Context %2$d		
CON	CON-TACT	10	SETUP_ER-ROR	901	Unablel to read this Object from this LDAP address-book. Check the configu-ration for this LDAP server: Ob-ject %1$d Folder %2$d Context %3$d	1	
CON	CON-TACT	10	SETUP_ER-ROR	902	Unablel to load this LDAP ad-dressbook. Check the configura-tion for this LDAP server: Folder %1$d Context %2$d	2	
CON	CON-TACT	10	SETUP_ER-ROR	903	This action is not sup-ported in this LDAP address-book: Folder %1$d Con-text %2$d	3	
CON	CON-TACT	10	SETUP_ER-ROR	904	This action is not sup-ported in this LDAP address-book: Folder %1$d Con-text %2$d	4	
CON	CON-TACT	10	SETUP_ER-ROR	905	Unablel to load this LDAP ad-dressbook. Check the configura-tion for this LDAP server:	5	

CON	CON-TACT	10	SETUP_ER-ROR	906	Unablel to load this LDAP ad-dressbook. Check the configura-tion for this LDAP server: Folder %1$d Context %2$d	6
					Folder %1$d Context %2$d	
CON	CON-TACT	10	SETUP_ER-ROR	907	This action is not sup-ported in this LDAP address-book: Folder %1$d Con-text %2$d	7
CON	CON-TACT	10	SETUP_ER-ROR	908	You are not allowed to see this ad-dressbook! Folder %1$d Context %1$d	8
CON	CON-TACT	10	SETUP_ER-ROR	909	You are not allowed to see this ad-dressbook! Folder %1$d Context %1$d	9
CON	CON-TACT	10	SETUP_ER-ROR	911	You are not allowed to see this ad-dressbook! Folder %1$d Context %1$d	11
CON	CON-TACT	10	SETUP_ER-ROR	912	You are not allowed to see this ad-dressbook! Folder %1$d Context %1$d	12
CON	CON-TACT	10	SETUP_ER-ROR	914	This action is not sup-ported in this LDAP	14

					address-book: Folder %1$d Context %2$d		
CON	CON-TACT	10	SETUP_ER-ROR	915	This action is not supported in this LDAP address-book: Folder %1$d Context %2$d	15	
CON	CON-TACT	10	SETUP_ER-ROR	916	This action is not supported in this LDAP address-book: Folder %1$d Context %2$d	16	
CON	CON-TACT	12	TRUNCAT-ED	154	Import failed. Some data entered exceed the database field limit. Please shorten following entries: %1$s Character Limit: %2$s Sent %3$s	54	
CTX	CON-TEXT	1	USER_IN-PUT	10	Cannot find context %s.	TODO	com.openex-change.groupware.con-texts.impl.ContextExcep-tion
CTX	CON-TEXT	4	TRY_AGAIN	7	Updating database ... Try again later.	TODO	com.openex-change.groupware.con-texts.impl.ContextExcep-tion
CTX	CON-TEXT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	5	Cannot get connection to database.	TODO	com.openex-change.groupware.con-texts.impl.ContextExcep-tion
CTX	CON-TEXT	7	INTER-NAL_ER-ROR	3	Cannot put object %s into cache.	TODO	com.openex-change.groupware.con-texts.impl.ContextExcep-tion
CTX	CON-TEXT	7	INTER-NAL_ER-ROR	9	Cannot re-move object %s from cache.	TODO	com.openex-change.groupware.con-texts.impl.ContextExcep-tion
CTX	CON-TEXT	8	CODE_ER-ROR	6	SQL prob-lem: %1$s.	TODO	com.openex-change.groupware.con-

							texts.impl.ContextException
CTX	CON-TEXT	10	SETUP_ER-ROR	1	Cannot resolve mailadmin for context %d.	TODO	com.openexchange.groupware.contexts.impl.ContextException
CTX	CON-TEXT	10	SETUP_ER-ROR	2	Cannot find context %d.	TODO	com.openexchange.groupware.contexts.impl.ContextException
CTX	CON-TEXT	10	SETUP_ER-ROR	8	Problem initializing the cache.	TODO	com.openexchange.groupware.contexts.impl.ContextException
DBP	DB_POOL-ING	5	SUBSYS-TEM_OR_SER-VICE_DOWN	1	Cannot get connection to config DB.	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	5	SUBSYS-TEM_OR_SER-VICE_DOWN	3	Cannot get connection to database %d.	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	5	SUBSYS-TEM_OR_SER-VICE_DOWN	12	Connection used for %1$d milliseconds.	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	6	SOCK-ET_CON-NECTION	4	Cannot set schema in database connection.	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	8	CODE_ER-ROR	2	Resolving database for context %1$d and server %2$d not possible!	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	8	CODE_ER-ROR	5	Null is returned to connection pool.	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	8	CODE_ER-ROR	6	Problem with executing SQL: %s	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	8	CODE_ER-ROR	7	Cannot get information for pool %d.	TODO	com.openexchange.server.impl.DBPoolingException
DBP	DB_POOL-ING	8	CODE_ER-ROR	9	Cannot return connection to pool %d.	TODO	com.openexchange.server.impl.DBPoolingException

DBP	DB_POOL-ING	8	CODE_ER-ROR	11	%s is not ini-tialized.	TODO	com.openexchange.serv-er.impl.DBPoolingExcep-tion
DBP	DB_POOL-ING	8	CODE_ER-ROR	13	%1$d state-ments aren't closed.	TODO	com.openexchange.serv-er.impl.DBPoolingExcep-tion
DBP	DB_POOL-ING	8	CODE_ER-ROR	14	Connection not reset to auto com-mit.	TODO	com.openexchange.serv-er.impl.DBPoolingExcep-tion
DBP	DB_POOL-ING	10	SETUP_ER-ROR	8	Driver class missing.	TODO	com.openexchange.serv-er.impl.DBPoolingExcep-tion
DBP	DB_POOL-ING	10	SETUP_ER-ROR	10	Server name is not de-fined.	TODO	com.openexchange.serv-er.impl.DBPoolingExcep-tion
DEL	DELETE_EVENT	8	CODE_ER-ROR	1	Unknown delete event type: %1$d	TODO	com.openex-change.group-ware.delete.Delete-FailedException
DEL	DELETE_EVENT	8	CODE_ER-ROR	2	A SQL error occurred: %1$s	TODO	com.openex-change.group-ware.delete.Delete-FailedException
DEL	DELETE_EVENT	8	CODE_ER-ROR	3	An error oc-curred: %1$s	TODO	com.openex-change.group-ware.delete.Delete-FailedException
DOW	DOWN-GRADE_EVENT	8	CODE_ER-ROR	1	A SQL error occurred: %1$s	TODO	com.openex-change.groupware.down-grade.Downgrade-FailedException
DOW	DOWN-GRADE_EVENT	8	CODE_ER-ROR	2	An error oc-curred: %1$s	TODO	com.openex-change.groupware.down-grade.Downgrade-FailedException
FLS	FILE-STORE	1	USER_IN-PUT	3	The file can-not be added to filestore. File size: %s Quo-ta: %s Used: %s	TODO	com.openex-change.tools.file.QuotaFileStor-ageException
FLS	FILE-STORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	3	An IO error occurred: %s	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	4	Couldn't reach the filestore: %s	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	13	Cannot re-move lock file.	TODO	com.openex-change.tools.file.FileStor-ageException

FLS	FILE-STORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	14	Cannot create lock file.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	15	Cannot create file %1$s.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	16	Eliminating the FileStorage failed.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	305	Can't access DBPool	No De-scrip-tion	
FLS	FILE-STORE	7	INTER-NAL_ER-ROR	4	A file storage error occurred on the server. Please try again later. Additional information: file storage id: %1$s, context id: %2$s, message from the low-level file storage class: %3$s	TODO	com.openex-change.tools.file.QuotaFileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	1	Invalid constructor parameter at %1$d with type %2$s.	TODO	com.openex-change.tools.file.QuotaFileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	2	An invalid SQL query was sent to the server.	TODO	com.openex-change.tools.file.QuotaFileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	5	Invalid constructor parameter at %1$d with type %2$s.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	7	'Depth' must be >= 1 but is %1$d.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	8	'Entries' must be >= 1 but is %1$d.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	9	Unsupported encoding.	TODO	com.openex-change.tools.file.FileStor-ageException

FLS	FILE-STORE	8	CODE_ER-ROR	10	Number parsing problem.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	12	'Depth' mis-match while computing next entry.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	8	CODE_ER-ROR	201	Wrong file-store %1$d for context %2$d need-ing filestore %3$d.		
FLS	FILE-STORE	8	CODE_ER-ROR	306	Got SQL Ex-ception	No De-scrip-tion	
FLS	FILE-STORE	10	SETUP_ER-ROR	1	Cannot find property %s.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	10	SETUP_ER-ROR	2	Class %s can not be load-ed.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	10	SETUP_ER-ROR	6	Cannot cre-ate directory %1$s for FileStorage.	TODO	com.openex-change.tools.file.FileStor-ageException
FLS	FILE-STORE	10	SETUP_ER-ROR	202	Problem with URI when creat-ing context specific file-store loca-tion.		
FLS	FILE-STORE	10	SETUP_ER-ROR	303	Cannot find filestore with id %1$d.		
FLS	FILE-STORE	10	SETUP_ER-ROR	304	Cannot cre-ate URI from %1$s.		
FLS	FILE-STORE	11	EXTER-NAL_RE-SOURCE_FULL	11	File storage is full.	TODO	com.openex-change.tools.file.FileStor-ageException
FLD	FOLDER	1	USER_IN-PUT	58	Bad value %1$s in pa-rameter %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	1	USER_IN-PUT	71	Owner %1$s of default folder %2$s must keep the folder admin per-mission	TODO	com.openex-change.tools.oxfolder.OX-FolderException

FLD	FOLDER	1	USER_IN-PUT	76	Folder contains invalid data: %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	1	USER_IN-PUT	77	Please enter another name to share the folder.	TODO	com.openex-change.tools.oxfold-er.OX-FolderEx-ception
FLD	FOLDER	1	USER_IN-PUT	78	Folder module cannot be updated since folder is not empty	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	2	US-ER_CONFI-GURA-TION	2	User %1$s has no access to module %2$s in context %3$s due to user configuration	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	2	US-ER_CONFI-GURA-TION	4	User %1$s has no access on shared folder %2$s in context %3$s due to user configuration	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	2	US-ER_CONFI-GURA-TION	5	User %1$s has no write access on public folder %2$s in context %3$s due to user configuration	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	2	US-ER_CONFI-GURA-TION	72	User %1$s is not allowed to share folder %2$s in context %3$s due to	TODO	com.openex-change.tools.oxfolder.OX-FolderException

					user configuration		
FLD	FOLDER	2	USER_CONFIGURATION	73	Defined permissions for folder %1$s in context %2$s are not applicable to user %3$s due to user configuration	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMISSION	3	Folder %1$s not visible to user %2$s in context %3$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMISSION	6	User %1$s has no create-subfolder permission on folder %2$s in context %3$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMISSION	10	User %1$s has no admin access to folder %2$s in context %3$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMISSION	11	Default folder %1$s cannot be renamed in context %2$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMISSION	12	A duplicate folder exists in parent folder %1$s in context %2$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMISSION	21	Not allowed to move default folder %1$s in context %2$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMISSION	22	Target folder %1$s contains a duplicate folder in context %2$s	TODO	com.openexchange.tools.oxfolder.OXFolderException

FLD	FOLDER	3	PERMIS-SION	23	Shared folder %1$s cannot be moved in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	24	Shared folder %1$s cannot be target of move operation in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	25	System folder %1$s cannot be moved in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	26	Private folder %1$s can only be moved to a private folder in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	27	Public folder %1$s can only be moved to a public folder in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	28	Target and source folder cannot be equal in context %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	29	User %1$s is not allowed to move all subfolders of folder %2$s in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	30	User %1$s is not allowed to delete shared folder %2$s in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException

FLD	FOLDER	3	PERMIS-SION	31	User %1$s is not allowed to delete default folder %2$s in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	32	User %1$s is not allowed to delete all contained objects in folder %2$s in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	49	A source folder of module %1$s must not be moved to a target folder of module %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	54	User %1$s has no write permission on folder %2$s in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	63	Shared folder %1$s MUST NOT be updated in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	69	No subfolder creation underneath shared folder %1$s in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	3	PERMIS-SION	70	User %1$s grants invalid permissions on shared folder %2$s in context %3$s. Only owner of parental shared folder %4$s may	TODO	com.openex-change.tools.oxfolder.OX-FolderException

FLD	FOLDER	3	PERMIS-SION	74	Folder %1$s in context %2$s contains a hidden subfolder. User %3$s has no delete rights for this subfolder and consequently cannot delete its parent folder.	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	3	PERMIS-SION	75	An infostore folder named %1$s already exists below folder %2$s (%3$s) in context %4$s. Please choose another display name.	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	7	INTER-NAL_ER-ROR	36	Folder %1$s could not be put into cache in context %2$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	7	INTER-NAL_ER-ROR	67	A runtime error occurred in context %1$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	8	CODE_ER-ROR	7	Missing field %1$s in folder %2$s in context %3$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	8	CODE_ER-ROR	8	Folder %1$s does not exist in context %2$s	TODO	com.openexchange.tools.oxfolder.OXFolderException
FLD	FOLDER	8	CODE_ER-ROR	13	Parent folder %1$s does not allow folder's type setting	TODO	com.openexchange.tools.oxfolder.OXFolderException

						%2$s in context %3$s	
FLD	FOLDER	8	CODE_ER-ROR	14	Parent fold-er %1$s does not al-low folder's module set-ting (%2$s) in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	15	Only one ad-min permis-sion is al-lowed on a private fold-er	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	16	A group must not hold admin permission on a private folder	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	17	Only folder owner may hold admin permission on a private folder	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	18	Administra-tion rights required. In the Rights tab add at least one us-er with ad-ministration rights.	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	19	Invalid ob-ject ID %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	20	Not allowed to change parent id of folder %1$s through an update call. Use move method in-stead	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	33	No admin user found in context %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException

FLD	FOLDER	8	CODE_ER-ROR	34	No default folder could be found in module %1$s for us-er %2$s in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	35	Folder %1$s could not be loaded in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	37	Effective permission of folder %1$s could not be deter-mined for user %2$s in context %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	38	An SQL er-ror occurred in context %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	39	An SQL er-ror occurred in context %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	41	Delivered se-quence id %1$s from database is less than al-lowed min. folder id of %2$s in con-text %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	42	Module %1$s is un-known in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	43	Folder %1$s could not be updated in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	44	Invalid enti-ty id %1$s detected in permissions of folder	TODO	com.openex-change.tools.oxfolder.OX-FolderException

					%2$s in context %3$s		
FLD	FOLDER	8	CODE_ER-ROR	45	Folder %1$s must not be moved to one of its subfolders in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	46	UNKNOWN EXCEPTION	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	47	A LDAP er-ror occurred in context %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	48	Attribute %1$s is not set in FolderOb-ject instance %2$s in con-text %3$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	50	Operation not exe-cutable on folder %1$s in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	51	Folder cache (region name = %1$s) could not be initial-ized due to following reason: %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	52	Folder cache has not been en-abled in config file %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	53	Folder %1$s could not be removed from folder cache	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	55	A JSON er-ror oc-curred: %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException

FLD	FOLDER	8	CODE_ER-ROR	56	Unknown parameter container type: %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	57	Missing pa-rameter %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	59	Unknown field: %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	60	Parameter %1$s does not match JSON key %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	61	Invalid per-mission val-ues: fp=%1$s orp=%2$s owp=%3$s odp=%4$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	62	Unknown action: %1$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	65	Unable to map OCL permission value %1$s to a JSON permission value	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	66	Folder exis-tence can-not be checked due to unsuffi-cient folder information)	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	8	CODE_ER-ROR	68	This method is not appli-cable to an IMAP permis-sion	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	9	CONCUR-RENT_MOD-IFICATION	9	Folder %1$s has been modified af-ter last sync timestamp in context %2$s	TODO	com.openex-change.tools.oxfolder.OX-FolderException
FLD	FOLDER	12	TRUNCAT-ED	64	The at-tribute %1$s contains too much charac-	TODO	com.openex-change.tools.oxfolder.OX-FolderException

					ters. Current length %3$d is more than allowed length of %2$d characters.		
GRP	GROUP	1	USER_IN-PUT	4	The manda-tory field %1$s is not defined.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	1	USER_IN-PUT	5	The simple name con-tains this not allowed characters: %1$s.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	1	USER_IN-PUT	6	Another group with same identifi-er name ex-ists: %1$d.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	1	USER_IN-PUT	7	Group con-tains a not existing member %1$d.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	1	USER_IN-PUT	8	Group con-tains invalid data: %1$s.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	1	USER_IN-PUT	13	Group %1$s can not be deleted.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	1	USER_IN-PUT	14	Group %1$s can not be changed.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	3	PERMIS-SION	9	You are not allowed to create groups.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	3	PERMIS-SION	11	You are not allowed to change groups.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	3	PERMIS-SION	12	You are not allowed to delete groups.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	5	SUBSYS-TEM_OR_SER-VICE_DOWN	1	Cannot get database connection.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	8	CODE_ER-ROR	2	SQL Prob-lem: %1$s	TODO	com.openex-change.group.GroupEx-ception

GRP	GROUP	8	CODE_ER-ROR	3	No group given.	TODO	com.openex-change.group.GroupEx-ception
GRP	GROUP	9	CONCUR-RENT_MOD-IFICATION	10	Edit Conflict. Your change cannot be completed because somebody else has made a con-flicting change to the same item. Please refresh or synchronize and try again.	TODO	com.openex-change.group.GroupEx-ception
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	202	User input error %s		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	302	User input error %s		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	502	User input error %s		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	503	Problem while read-ing ICal file: %s.		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	505	Broken file uploaded: %s		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	506	Cowardly re-fusing to im-port an en-try flagged as confiden-tial.		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	509	The element %s is not supported.		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	510	Couldn't convert ob-ject: %s		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	511	No ICal to import found.		
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	513	Failed im-porting ap-pointment due to hard		

					conflicting resource.
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	602	User input error %s
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	605	Could not recognize format of the following data: %s
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	608	No VCard to import found.
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	800	Can only import into one folder at a time.
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	804	Could not translate a single column title. Is this a valid CSV file?
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	805	Could not translate a single field of information, did not insert entry %s.
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	1000	Broken CSV file: Lines have different number of cells, line #1 has %d, line #%d has %d. Is this really a CSV file?
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	1200	Cannot translate id=%d to a constant from Types.
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	1201	Cannot translate id=%d to a constant from Folder-Object.
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	1300	Can only handle one file, not %s

I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	1301	Unknown format: %s
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	1302	Uploaded file is of type %s, cannot handle that
I_E	IM-PORT_EX-PORT	1	USER_IN-PUT	1303	Empty file uploaded.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	100	Could not export the folder %s in the format %s.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	200	Could not import into the folder %s.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	300	Could not import into the folder %s.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	500	Could not import into the folder %s.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	507	Module Calendar not enabled for user, cannot import appointments.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	508	Module Tasks not enabled for user, cannot import tasks.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	600	Could not import into the folder %s.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	607	Module Contacts is not enabled for this user, cannot store contacts contained in VCard.
I_E	IM-PORT_EX-PORT	3	PERMIS-SION	806	Module Contacts not enabled for

					user, cannot import contacts
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	101	Could not load folder %s
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	102	Could not load contacts
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	201	Could not import into folder %s
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	301	Could not import into folder %s
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	501	Subsystem down
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	601	Subsystem down
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	900	Could not load folder %s
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	1100	Cannot find an importer for format %s into folders %s
I_E	IM-PORT_EX-PORT	5	SUBSYS-TEM_OR_SER-VICE_DOWN	1101	Cannot find an exporter for folder %s to format %s
I_E	IM-PORT_EX-PORT	7	INTER-NAL_ER-ROR	104	Could not encode as UTF-8
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	103	Could not create folder id from string %s
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	203	Could not import into folder %s
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	204	Could not load folder %s
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	303	Could not import into folder %s
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	504	Could not load folder %s

I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	603	Program-ming error - folder %s	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	604	Could not load folder %s	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	606	Could not use UTF-8 encoding.	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	801	Cannot im-port this kind of data. Use method canImport() first.	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	802	Cannot read given Input-Stream.	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	901	Could not create fold-er id from string %s	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	902	Could not read Input-Stream as string	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	903	Missing abili-ty to encode or decode UTF-8 on server, can-not read file.	
I_E	IM-PORT_EX-PORT	8	CODE_ER-ROR	1001	Illegal state: Found data after pre-sumed last line.	
I_E	IM-PORT_EX-PORT	10	SETUP_ER-ROR	205	Could not find ICalEmitter service. Has the service been export-ed?	No De-scrip-tion
I_E	IM-PORT_EX-PORT	10	SETUP_ER-ROR	512	Could not find suitable ICalParser. Is an ICalPars-er exported as a service?	
I_E	IM-PORT_EX-PORT	12	TRUNCAT-ED	1500	The follow-ing field(s) are too long	

					to be imported: %s	
I_E	IM-PORT_EX-PORT	12	TRUNCAT-ED	1600	The following field(s) are too long to be imported: %s	
I_E	IM-PORT_EX-PORT	13	WARNING	514	Warning importing file: %s	
I_E	IM-PORT_EX-PORT	13	WARNING	803	Could not find the following fields %s	
IFO	INFOS-TORE	1	USER_IN-PUT	0	Validation failed: %s	
IFO	INFOS-TORE	1	USER_IN-PUT	300	The requested item does not exist.	The infoitem does not exist, so the permissions cannot be loaded.
IFO	INFOS-TORE	1	USER_IN-PUT	301	Could not load documents to check the permissions	To check permissions infoitems must be loaded to find their folderId and creator.
IFO	INFOS-TORE	1	USER_IN-PUT	400	You do not have sufficient read permissions.	The User does not have read permis-

							sions on the re-quest-ed In-foitem.
IFO	INFOS-TORE	1	USER_IN-PUT	401	You do not have suffi-cient read permissions.	The User does not have read per-mis-sions on the re-quest-ed In-foitem.
IFO	INFOS-TORE	1	USER_IN-PUT	402	You do not have suffi-cient permis-sions to cre-ate objects in this fold-er.	The user may not create ob-jects in the given folder.
IFO	INFOS-TORE	1	USER_IN-PUT	403	You are not allowed to update this item.	The user doesn't have the re-quired write per-mis-sions to up-date the in-foitem.
IFO	INFOS-TORE	1	USER_IN-PUT	404	You are not allowed to create ob-jects in the target fold-er.	The user isn't al-lowed to cre-ate ob-jects in the target

						folder when moving an infoitem.	
IFO	INFOS-TORE	1	USER_IN-PUT	406	You do not have sufficient permission to delete this version.	The user must be allowed to delete the object in order to delete a version of it.	
IFO	INFOS-TORE	1	USER_IN-PUT	407	You do not have sufficient permissions to read objects in this folder.	The user may not read objects in the given folder.	
IFO	INFOS-TORE	1	USER_IN-PUT	408	You do not have sufficient permissions to read objects in this folder.	The user may not read objects in the given folder.	
IFO	INFOS-TORE	1	USER_IN-PUT	409	You do not have sufficient permissions to read objects in this folder.	The user may not read objects in the given folder.	
IFO	INFOS-TORE	1	USER_IN-PUT	410	You do not have sufficient permis-	The user may	

						sions to read objects in this folder.	not read objects in the given folder.
IFO	INFOS-TORE	1	USER_IN-PUT	411		You do not have sufficient permissions to read objects in this folder.	The user may not read objects in the given folder.
IFO	INFOS-TORE	1	USER_IN-PUT	417		You need write permissions to unlock a document.	The user does not have sufficient write permissions to unlock this infoitem.
IFO	INFOS-TORE	1	USER_IN-PUT	418		You need write permissions to lock a document.	The user does not have sufficient write permissions to lock this infoitem.
IFO	INFOS-TORE	1	USER_IN-PUT	421		You are not allowed to delete objects in the source folder, so this document	Need delete permissions in origi-

IFO	INFOS-TORE	1	USER_IN-PUT	438	The document you requested doesn't exist.	The document could not be loaded because it doesn't exist.	
					cannot be mo Tved.	nal folder to move an item	
IFO	INFOS-TORE	1	USER_IN-PUT	441	Files attached to InfoStore items must have unique names. Filename: %s. The other document with this file name is %s.	To remain consistent in WebDAV no two current versions in a given folder may contain a file with the same filename. The user must either choose a different filename, or switch the other	

| IFO | INFOS-TORE | 1 | USER_IN-PUT | 1700 | This folder is a virtual folder. It cannot contain documents. | file to a version with a different filename. The folders to which this user has access, but that belong to other users, are collected in a virtual folder. This virtual folder cannot contain documents itself. |
| IFO | INFOS-TORE | 4 | TRY_AGAIN | 219 | Cannot prefetch results. | Thrown when a result cannot be prefetched. This indicates a problem with the |

						DB Connection. Have a look at the underlying SQLException
IFO	INFOS-TORE	4	TRY_AGAIN	221	Cannot prefetch results.	Thrown when a result cannot be prefetched. This indicates a problem with the DB Connection. Have a look at the underlying SQLException
IFO	INFOS-TORE	4	TRY_AGAIN	223	Cannot prefetch results.	Thrown when a result cannot be prefetched. This indicates a problem with the

						DB Connection. Have a look at the underlying SQLException
IFO	INFOSTORE	4	TRY_AGAIN	225	Cannot prefetch results.	Thrown when a result cannot be prefetched. This indicates a problem with the DB Connection. Have a look at the underlying SQLException
IFO	INFOSTORE	4	TRY_AGAIN	601	Cannot prefetch results.	Thrown when a result cannot be prefetched. This indicates a problem with the

						DB Connection. Have a look at the underlying SQLException
IFO	INFOS-TORE	4	TRY_AGAIN	1900	Could not fetch result from result set. Probably the database may be busy or not running. Please try again.	Could not fetch result from result set. Probably the database may be busy or not running. Please try again.
IFO	INFOS-TORE	4	TRY_AGAIN	1903	Could not fetch result from result set. Probably the database may be busy or not running. Please try again.	Could not fetch result from result set. Probably the database may be busy or not running. Please try again.

IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	203	Could not access file store.	This indicates a problem accessing the underlying filestorage. Look at the exceptions given as cause for this one.
IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	231	Could not remove file. %s	An error occurred while removing the file from the file storage.
IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	419	The file store could not be reached.	The file store couldn't be reached.
IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	435	Cannot reach the file store so I cannot remove the documents.	Cannot reach the file store so some documents were not

IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	436	Cannot re-move file. Database and file store are probably in-consistent. Please con-tact an ad-ministrator to run the recovery tool.	deleted. Can-not reach the file store so some docu-ments were not delet-ed. This propably means that file store and db are incon-sis-tent. Run the re-covery tool.
IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	437	Could not remove file from file store.	Could not re-move file from file store.
IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	439	The file store could not be reched	The file store couldn't be reached and is proba-bly down.
IFO	INFOS-TORE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	440	The file could not be retrieved.	The file could not be found in the

						file store. This means either that the file store was not available or that database and file store are inconsistent. Run the recovery tool.
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	230	Cannot find file store location.	A Context Exception occurred while trying to open the filestorage. Look at the Context Exception for further details
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	232	Could not remove file. %s	An error occurred while remov-

						ing the file from the file storage.
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	233	Could not remove file. %s	An error occurred while removing the file from the file storage.
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	413	Could not iterate result	The system couldn't iterate the result dataset. This can have numerous exciting causes.
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	414	Could not iterate result	The system couldn't iterate the result dataset. This can have numerous exciting

							caus-es.
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	420	Could not generate new ID.	The IDGen-erator threw an SQL Excep-tion look at that one to find out what's wrong.	
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	442	Could not determine number of versions for infoitem %s in context %s. Invalid Query: %s	The query to cound the ver-sions in a docu-ment failed.	
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	443	Could not it-erate result	The sys-tem couldn't iterate the re-sult dataset. This can have numer-ous excit-ing caus-es.	
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	444	Could not it-erate result	The sys-tem couldn't iterate the re-sult dataset. This	

						can have numerous exciting causes.
IFO	INFOS-TORE	7	INTER-NAL_ER-ROR	1902	Cannot close database connection	Cannot close database connection
IFO	INFOS-TORE	8	CODE_ER-ROR	200	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	201	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	202	Invalid SQL Query: %s	A faulty SQL Query was sent to the

IFO	INFOS-TORE	8	CODE_ER-ROR	204	Could not get file store location.	SQL server. This can only be fixed in R&D The con-text specif-ic data about a filestor-age could not be load-ed. Look at the under-lying excep-tions for a hint.
IFO	INFOS-TORE	8	CODE_ER-ROR	214	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	215	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL

						server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	216	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	217	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	218	Incorrect SQL Query: %s	Indi-cates a faulty SQL Query. Only R&D can fix this
IFO	INFOS-TORE	8	CODE_ER-ROR	220	Incorrect SQL Query: %s	Indi-cates a faulty

						SQL Query. Only R&D can fix this
IFO	INFOS-TORE	8	CODE_ER-ROR	222	Incorrect SQL Query: %s	Indi-cates a faulty SQL Query. Only R&D can fix this
IFO	INFOS-TORE	8	CODE_ER-ROR	224	Incorrect SQL Query.	Indi-cates a faulty SQL Query. Only R&D can fix this
IFO	INFOS-TORE	8	CODE_ER-ROR	226	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	227	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only

						be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	228	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	229	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	234	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server.
IFO	INFOS-TORE	8	CODE_ER-ROR	235	Invalid SQL Query: %s	A faulty SQL Query was sent to the SQL server. This

						can only be fixed in R&D
IFO	INFOS-TORE	8	CODE_ER-ROR	302	The folder %d is not an Infostore folder	The client tries to put an infoitem into a non infoitem folder.
IFO	INFOS-TORE	8	CODE_ER-ROR	500	Illegal argument: Document %d contains no file	A WebdavPath for a document without an attached file was requested. In Web-DAV only infoitems with files are visible. This points to a problem with the cola supply for the developer and can only

IFO	INFOS-TORE	8	CODE_ER-ROR	501	Folder %d has two sub-folders named %s. Your database is not consistent.	A fold-er con-tains two fold-ers with the same folder name. This points to an incon-sisten-cy in the database, as the sec-ond folder by the same name should not have been creat-ed. This will cer-tainly cause some headaches in R&D.
						be fixed by R&D.
IFO	INFOS-TORE	8	CODE_ER-ROR	502	Incorrect SQL Query: %s	A faulty SQL state-ment was sent to the DB.

						R&D must fix this.
IFO	INFOS-TORE	8	CODE_ER-ROR	600	Incorrect SQL Query: %s	Indicates a faulty SQL Query. Only R&D can fix this
IFO	INFOS-TORE	8	CODE_ER-ROR	800	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	801	Error in SQL Update	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything

					about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	802	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	803	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	804	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with

						the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	805	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	806	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.

IFO	INFOS-TORE	8	CODE_ER-ROR	807	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	900	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	901	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database.

						Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	902	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	903	Invalid SQL: '%s'	Indicates a faulty SQL query or a problem with the database. Ususally only R&D can do anything about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	904	Invalid SQL: '%s'	Indicates a

						faulty SQL query or a prob-lem with the database. Ususal-ly only R&D can do any-thing about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	905	Invalid SQL: '%s'	Indi-cates a faulty SQL query or a prob-lem with the database. Ususal-ly only R&D can do any-thing about this.
IFO	INFOS-TORE	8	CODE_ER-ROR	906	Invalid SQL: '%s'	Indi-cates a faulty SQL query or a prob-lem with the database. Ususal-ly only R&D

							can do any- thing about this.
IFO	INFOS- TORE	8	CODE_ER- ROR	1000	Invalid SQL query: %s	An in- valid SQL query was used sent to the SQL Serv- er. This can only be fixed by R&D	
IFO	INFOS- TORE	8	CODE_ER- ROR	1001	Invalid SQL query: %s	An in- valid SQL query was used sent to the SQL Serv- er. This can only be fixed by R&D	
IFO	INFOS- TORE	8	CODE_ER- ROR	1100	Invalid SQL Query : %s	An in- valid SQL Query was sent to the server	
IFO	INFOS- TORE	8	CODE_ER- ROR	1101	Invalid SQL Query : %s	An in- valid SQL Query	

							was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1200	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1201	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1300	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1301	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1400	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1401	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1500	Invalid SQL Query : %s	An in-valid

						SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1501	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1600	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1601	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	1901	Invalid SQL query: %s	An in-valid query was sent to the database.
IFO	INFOS-TORE	8	CODE_ER-ROR	2400	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	2401	Invalid SQL Query : %s	An in-valid SQL Query was sent to the server

IFO	INFOS-TORE	8	CODE_ER-ROR	2500	Invalid SQL Query : %s	An invalid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	2501	Invalid SQL Query : %s	An invalid SQL Query was sent to the server
IFO	INFOS-TORE	8	CODE_ER-ROR	2601	Invalid SQL Query : %s	An invalid SQL Query was sent to the server
IFO	INFOS-TORE	9	CONCUR-RENT_MOD-IFICATION	405	Could not delete all objects.	Not all infoitems in the given folder could be deleted. This may be due to the infoitems being modified since the last request, or the objects might not even exist

						anymore or the user doesn't have enough delete permissions on certain objects.
IFO	INFOSTORE	9	CONCURRENT_MODIFICATION	415	This document is locked.	The infoitem was locked by some other user. Only the user that locked the item (the one that modified the entry) can modify a locked infoitem.
IFO	INFOSTORE	9	CONCURRENT_MODIFICATION	416	You cannot unlock this document.	The infoitem was locked by some other user. Only the user that locked

						the item and the creator of the item can unlock a locked infoitem.
IFO	INFOS-TORE	9	CONCUR-RENT_MOD-IFICATION	700	Could not delete Docu-mentMetada-ta %d. Please try again.	The Docu-ment-Meta-data entry in the DB for the given re-source could not be creat-ed. This is mostly due to some-one else modi-fying the en-try. This can al-so mean, that the en-try has been delet-ed al-ready.
IFO	INFOS-TORE	9	CONCUR-RENT_MOD-IFICATION	1302	The docu-ment could not be up-	The docu-ment

					dated be-cause it was modified. Reload the view.	could not be updat-ed be-cause it was modi-fied.
IFO	INFOS-TORE	9	CONCUR-RENT_MOD-IFICATION	1303	The docu-ment was updated in between do and undo. The Database is now proba-bly inconsis-tent.	The docu-ment was updat-ed in be-tween do and undo. The Database is now probal-by in-consis-tent.
IFO	INFOS-TORE	9	CONCUR-RENT_MOD-IFICATION	1402	The docu-ment could not be up-dated be-cause it was modified. Reload the view.	The docu-ment could not be updat-ed be-cause it was modi-fied.
IFO	INFOS-TORE	9	CONCUR-RENT_MOD-IFICATION	1403	The docu-ment was updated in between do and undo. The Database is now probal-by inconsis-tent.	The docu-ment was updat-ed in be-tween do and undo. The Database is now proba-bly in-

						consis-tent.
IFO	INFOS-TORE	12	TRUNCAT-ED	100	Some fields have values, that are too long	The User en-tered values that are to long for the database schema.
LNK	LINKING	1	USER_IN-PUT	101	Unable to create a link between these two objects. This link already exists. 1. Object %1$d Folder %2$d 2. Object %3$d Folder %4$d Context %5$d	
LNK	LINKING	3	PERMIS-SION	100	Unable to create a link between these two objects. In-sufficient rights. 1. Object %1$d Folder %2$d 2. Object %3$d Folder %4$d Context %5$d	
LNK	LINKING	3	PERMIS-SION	105	Unable to create a link between these two objects. In-sufficient rights. 1. Object %1$d 2. Object %2$d Context %3$d	
LNK	LINKING	3	PERMIS-SION	106	Unable to create a link between	

					these two objects. Insufficient rights. 1. Object %1$d Folder %2$d 2. Object %3$d Folder %4$d Context %5$d
LNK	LINKING	3	PERMIS-SION	110	Unable to create a link between these two objects. Insufficient rights. Object %1$d Folder %2$d Context %3$d
LNK	LINKING	8	CODE_ER-ROR	102	Unable to pick up a connection from the DBPool
LNK	LINKING	8	CODE_ER-ROR	103	An error occurred. Unable to save this linking between those two objects. 1. Object %1$d Folder %2$d 2. Object %3$d Folder %4$d Context %5$d
LNK	LINKING	8	CODE_ER-ROR	104	An error occurred. Unable to save this linking between those two objects. 1. Object %1$d Folder %2$d 2. Object %3$d Folder %4$d Context %5$d
LNK	LINKING	8	CODE_ER-ROR	107	An error occurred. Un-

					able to load some links for this objects. 1. Object %1$d 2. Object %2$d Context %3$d		
LNK	LINKING	8	CODE_ER-ROR	109	Unable to load all links from this objects. Object %1$d Folder %2$d User %3$d Context %4$d		
LNK	LINKING	8	CODE_ER-ROR	111	An error occurred. Unable to delete some links from this objects. Object %1$d Folder %2$d Context %3$d		
LNK	LINKING	8	CODE_ER-ROR	112	Unable to delete all links from this objects. Object %1$d Context %2$d		
LNK	LINKING	8	CODE_ER-ROR	113	Unable to delete all links from folder. Folder %1$d Context %2$d		
LNK	LINKING	8	CODE_ER-ROR	114	Unable to load all links from this objects. Object %1$d User %2$d Context %3$d		
LGI	LOGIN	1	USER_IN-PUT	2	Too few (%d) login attributes.	TODO	com.openexchange.con-figjump.ConfigJumpEx-ception

LGI	LOGIN	5	SUBSYS-TEM_OR_SER-VICE_DOWN	3	Problem while communicating with external authorization.	TODO	com.openexchange.configjump.ConfigJumpException
LGI	LOGIN	8	CODE_ER-ROR	1	Unknown problem: %s.	TODO	com.openexchange.configjump.ConfigJumpException
LGI	LOGIN	8	CODE_ER-ROR	4	Instantiating the class failed.	TODO	com.openexchange.configjump.ConfigJumpException
LGI	LOGIN	8	CODE_ER-ROR	7	URL %s is malformed.	TODO	com.openexchange.configjump.ConfigJumpException
LGI	LOGIN	10	SETUP_ER-ROR	5	Class %1$s can not be found.	TODO	com.openexchange.configjump.ConfigJumpException
LGI	LOGIN	10	SETUP_ER-ROR	6	Missing property %1$s in system.properties.	TODO	com.openexchange.configjump.ConfigJumpException
LGI	LOGIN	10	SETUP_ER-ROR	8	Extras link is not implemented.	TODO	com.openexchange.configjump.ConfigJumpException
MSG	MAIL	1	USER_IN-PUT	24	No attachment was found with id %1$s in message	TODO	com.openexchange.mail.MailException
MSG	MAIL	1	USER_IN-PUT	25	Versit attachment could not be saved due to an unsupported MIME type: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	1	USER_IN-PUT	28	Upload quota (%1$s) exceeded for file %2$s (size=%3$s)	TODO	com.openexchange.mail.MailException
MSG	MAIL	1	USER_IN-PUT	29	Upload quota (%1$s) exceeded	TODO	com.openexchange.mail.MailException
MSG	MAIL	1	USER_IN-PUT	46	Bad value %1$s in parameter %2$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	1	USER_IN-PUT	47	No reply on multiple message possible	TODO	com.openexchange.mail.MailException

MSG	MAIL	1	USER_IN-PUT	56	The speci-fied email address %1$s is not covered by allowed email ad-dress aliases	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	3	PERMIS-SION	13	No mail module ac-cess permit-ted	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	3	PERMIS-SION	50	Folder %1$s does not hold mes-sages and is therefore not se-lectable	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	4	TRY_AGAIN	15	Process was interrupted while wait-ing for a free mail connection. Please try again.	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	7	INTER-NAL_ER-ROR	0	Unexpected error: %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	7	INTER-NAL_ER-ROR	7	A part's con-tent could not be read from mes-sage %1$s in mail folder %2$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	1	Missing pa-rameter %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	1	Missing pa-rameter %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	2	Invalid per-mission val-ues: fp=%1$s orp=%2$s owp=%3$s odp=%4$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	3	A JSON er-ror oc-curred: %1$s	TODO	com.openex-change.mail.MailExcep-tion

MSG	MAIL	8	CODE_ER-ROR	4	Missing parameter in user's mail config: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	6	Invalid multipart content. Number of enclosed contents is 0	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	8	An I/O error occurred %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	9	Invalid message path: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	10	Unknown color label: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	16	Unsupported charset-encoding: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	17	Header %1$s could not be properly parsed	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	18	Missing default %1$s folder in user mail settings	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	20	Invalid Content-Type value: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	21	Messaging error: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	22	Message field %1$s cannot be handled	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	23	Versit error: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	26	Invalid parameter name: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	27	Could not create a PartModifier instance	TODO	com.openexchange.mail.MailException

					from name %1$s		
MSG	MAIL	8	CODE_ER-ROR	31	Invalid integer value %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	32	Mail(s) %1$s could not be found in folder %2$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	33	Action %1$s is not sup-ported by %2$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	35	Message could not be sent	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	36	Unknown or unsupported action: %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	37	Missing field %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	38	Unsupport-ed MIME type %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	40	The message part with se-quence ID %1$s could not be found in message %2$s in fold-er %3$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	41	No content available in mail part	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	45	Protocol cannot be parsed: %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	48	Illegal sys-tem flag ar-gument %1$s. Flag must be to the power of 2	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	8	CODE_ER-ROR	49	Attachment %1$s not found inside mail %2$s of mail folder %3$s	TODO	com.openex-change.mail.MailExcep-tion

MSG	MAIL	8	CODE_ER-ROR	51	Insufficient folder attributes: Either existence status or fullname have to be present to determine if a mail folder create or update shall be performed	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	52	Root folder must not be modified or deleted	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	54	Missing mail folder fullname	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	55	Image attachment with Content-Id %1$s not found inside mail %2$s of mail folder %3$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	57	Checking default folders on connect failed: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	8	CODE_ER-ROR	58	The types of specified data source are not supported	TODO	com.openexchange.mail.MailException
MSG	MAIL	10	SETUP_ER-ROR	5	Configuration error: %1$s	TODO	com.openexchange.mail.MailException
MSG	MAIL	10	SETUP_ER-ROR	11	Cannot instantiate class %1$s.	TODO	com.openexchange.mail.MailException
MSG	MAIL	10	SETUP_ER-ROR	12	Cannot initialize mail module	TODO	com.openexchange.mail.MailException
MSG	MAIL	10	SETUP_ER-ROR	14	No mail account exists for admin user in context %1$s	TODO	com.openexchange.mail.MailException

MSG	MAIL	10	SETUP_ER-ROR	19	Spam handler initialization failed: %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	10	SETUP_ER-ROR	44	No provider could be found for proto-col/URL %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	10	SETUP_ER-ROR	53	No transport provider could be found for proto-col/URL %1$s	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	11	EXTER-NAL_RE-SOURCE_FULL	39	Mail could not be moved to trash folder. Quota ex-ceeded	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	11	EXTER-NAL_RE-SOURCE_FULL	42	Message has been suc-cessfully sent, but a copy could not be placed in your sent folder due to exceeded quota.	TODO	com.openex-change.mail.MailExcep-tion
MSG	MAIL	11	EXTER-NAL_RE-SOURCE_FULL	43	Message has been suc-cessfully sent, but a copy could not be placed in your sent folder.	TODO	com.openex-change.mail.MailExcep-tion
PER-MIS-SION	PERMIS-SION	1	USER_IN-PUT	1	No permis-sion for modul: %s.	TODO	com.openex-change.api.OXPermis-sionException
PER-MIS-SION	PERMIS-SION	3	PERMIS-SION	2	No folder permission.	TODO	com.openex-change.api.OXPermis-sionException
REM	RE-MINDER	8	CODE_ER-ROR	1	User is miss-ing for the reminder.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion

REM	RE-MINDER	8	CODE_ER-ROR	2	Identifier of the object is missing.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	3	Alarm date for the re-minder is missing.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	4	Unable to insert re-minder	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	5	Unable to update re-minder.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	6	Unable to delete re-minder	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	7	Unable to load re-minder	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	8	Unable to list reminder	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	9	Cannot find reminder (identifier %d). Context %d.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	10	Folder of the object is missing.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	11	Module type of the ob-ject is miss-ing.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	12	Updated too much re-minder.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
REM	RE-MINDER	8	CODE_ER-ROR	13	SQL Prob-lem: %s.	TODO	com.openex-change.groupware.re-minder.ReminderExcep-tion
RES	RE-SOURCE	1	USER_IN-PUT	11	Invalid re-source iden-tifier: %1$s	TODO	com.openexchange.re-source.ResourceExcep-tion

RES	RE-SOURCE	1	USER_IN-PUT	12	Invalid re-source email address: %1$s	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	3	PERMIS-SION	9	No permis-sion to mod-ify resources in context %1$s	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	1	Cannot get database connection.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	2	SQL Prob-lem: %1$s	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	3	Cannot find resource group with identifier %1$d.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	4	Found re-source groups with same identifi-er %1$d.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	5	Cannot find resource with identifi-er %1$d.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	6	Found re-source(s) with same identifier %1$s.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	7	No resource given.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	8	Missing mandatory field(s) in given re-source.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	8	CODE_ER-ROR	10	Found re-source(s) with same email ad-dress %1$s.	TODO	com.openexchange.re-source.ResourceExcep-tion
RES	RE-SOURCE	9	CONCUR-RENT_MOD-IFICATION	13	The re-source has been changed in the mean-time	TODO	com.openexchange.re-source.ResourceExcep-tion

SRV	SERVICE	4	TRY_AGAIN	1	The re-quired ser-vice %1$s is temporary not avail-able. Please try again lat-er.	TODO	com.openexchange.serv-er.ServiceException
SRV	SERVICE	8	CODE_ER-ROR	2	An I/O error occurred	TODO	com.openexchange.serv-er.ServiceException
SRV	SERVICE	8	CODE_ER-ROR	3	Service ini-tialization failed	TODO	com.openexchange.serv-er.ServiceException
SVL	SERVLET	1	USER_IN-PUT	5	Value %1$s of attribute %2$s con-tains non digit charac-ters.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	1	USER_IN-PUT	6	Too many digits within field %1$s.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	1	USER_IN-PUT	8	Invalid value %2$s in JSON at-tribute %1$s.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	4	TRY_AGAIN	3	Invalid cook-ie.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	7	INTER-NAL_ER-ROR	5	I/O error while writing to Writer object: %s	TODO	com.openex-change.tools.servlet.Ajax-Exception
SVL	SERVLET	8	CODE_ER-ROR	1	Unknown AJAX action: %s.	TODO	com.openex-change.tools.servlet.Ajax-Exception
SVL	SERVLET	8	CODE_ER-ROR	1	Exception while writing JSON.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	8	CODE_ER-ROR	2	Missing the following re-quest param-eter: %s	TODO	com.openex-change.tools.servlet.Ajax-Exception
SVL	SERVLET	8	CODE_ER-ROR	2	Exception while pars-ing JSON: %s.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	8	CODE_ER-ROR	3	Missing up-load image.	TODO	com.openex-change.tools.servlet.Ajax-Exception
SVL	SERVLET	8	CODE_ER-ROR	4	Invalid pa-rameter: %s	TODO	com.openex-change.tools.servlet.Ajax-Exception

SVL	SERVLET	8	CODE_ER-ROR	4	Exception while building JSON.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	8	CODE_ER-ROR	4	Servlet map-pings could not be load-ed due to following er-ror: %s	TODO	com.openex-change.tools.servlet.OXServle-tException
SVL	SERVLET	8	CODE_ER-ROR	6	Missing AJAX re-quest han-dler for module %s	TODO	com.openex-change.tools.servlet.Ajax-Exception
SVL	SERVLET	8	CODE_ER-ROR	7	Unknown module: %s.	TODO	com.openex-change.tools.servlet.Ajax-Exception
SVL	SERVLET	8	CODE_ER-ROR	7	Unable to parse value %1$s within field %2$s as a number.	TODO	com.openex-change.tools.servlet.OXJ-SONException
SVL	SERVLET	8	CODE_ER-ROR	7	SecurityEx-ception while load-ing servlet class %s	TODO	com.openex-change.tools.servlet.OXServle-tException
SVL	SERVLET	8	CODE_ER-ROR	8	Couldn't find servlet class %s	TODO	com.openex-change.tools.servlet.OXServle-tException
SVL	SERVLET	8	CODE_ER-ROR	9	No default constructor specified in servlet class %s	TODO	com.openex-change.tools.servlet.OXServle-tException
SVL	SERVLET	10	SETUP_ER-ROR	1	Missing property %s in 'sys-tem.proper-ties'	TODO	com.openex-change.tools.servlet.OXServle-tException
SVL	SERVLET	10	SETUP_ER-ROR	2	Servlet map-ping directo-ry does not exist: %s	TODO	com.openex-change.tools.servlet.OXServle-tException
SVL	SERVLET	10	SETUP_ER-ROR	3	File is not a directory: %s	TODO	com.openex-change.tools.servlet.OXServle-tException
SVL	SERVLET	10	SETUP_ER-ROR	5	No servlet class name found for key %s. Please check servlet map-pings.	TODO	com.openex-change.tools.servlet.OXServle-tException

SVL	SERVLET	10	SETUP_ER-ROR	6	Name %s already mapped to %s. Ignoring servlet class %s	TODO	com.openex-change.tools.servlet.OXServle-tException
SES	SESSION	3	PERMIS-SION	205	Wrong client IP address.	If a session exists every request is checked for its client IP address to match the one while creating the session.	
SES	SESSION	4	TRY_AGAIN	203	Your session %s expired. Please start a new browser session.	A session with the given identifier can not be found.	
SES	SESSION	4	TRY_AGAIN	204	Context is locked.		
SES	SESSION	8	CODE_ER-ROR	201	The session parameter is missing.	Every AJAX request must contain a parameter named session that	

					value con- tains the identi- fier of the ses- sion cook- ie.		
SES	SESSION	8	CODE_ER-ROR	202	The cookie with the ses-sion identifi-er is missing.	Your brows-er does not send the cookie for identi-fying your ses-sion.	
TSK	TASK	1	USER_IN-PUT	8	Cannot cre-ate private task in pub-lic/shared folder %1$d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	28	Private flagged tasks cannot be delegated.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	30	Percent is %d but must be between 0 and 100.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	31	For tasks which are not started the percent-age done must be 0 and not %d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	36	Unknown recurrence type %d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	37	Value for the recur-rence is missing: %d.	TODO	com.openex-change.group-ware.tasks.TaskException

TSK	TASK	1	USER_IN-PUT	38	For finished tasks the percentage must be 100 and not %d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	40	Start date %1$s must be before end date %2$s.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	43	Only the task creator is allowed to set private flag.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	44	Cannot add external par-ticipant without email ad-dress.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	1	USER_IN-PUT	47	Task con-tains invalid data: %1$s	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	6	Folder %1$s (%2$d) is not a task folder.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	14	You are not allowed to delete the task.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	23	You are not allowed to read the contents of folder %1$s (%2$d).	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	24	Tasks are disable for you (%d).	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	25	You are not allowed to create tasks in folder %1$s (%2$d).	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	26	You are not allowed to delegate tasks.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	33	You are not allowed to edit tasks in	TODO	com.openex-change.group-ware.tasks.TaskException

					folder %1$s (%2$d).		
TSK	TASK	3	PERMIS-SION	34	Moving items from or into shared fold-er %1$s (%2$d) is not allowed.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	42	Task with private flags cannot be moved to public folder %1$s (%2$d).	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	46	You are not allowed to see the task %1$d in folder %2$s (%3$d).	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	3	PERMIS-SION	48	The task %1$d is not stored in folder %2$s (%3$d).	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	5	SUBSYS-TEM_OR_SER-VICE_DOWN	2	Problem set-ting auto commit to true.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	5	SUBSYS-TEM_OR_SER-VICE_DOWN	3	Cannot get database connection.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	1	Error while inserting task: %s.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	4	This method is not imple-mented.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	5	SQL Prob-lem: %s.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	9	SQL prob-lem while updating task: %s.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	10	Counting tasks did not return a re-sult.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	11	SQL prob-lem while deleting task: %s.	TODO	com.openex-change.group-ware.tasks.TaskException

TSK	TASK	8	CODE_ER-ROR	12	Cannot find folder of task partici-pant %1$d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	13	SQL prob-lem while listing tasks: %s.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	15	Tried to delete %1$d folders but only %2$d were delet-ed.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	16	Tried to delete %1$d participants but only %2$d were deleted.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	18	Participant %d for task %d is not found.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	19	Cannot find task %d in context %d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	20	Unknown task at-tribute %d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	21	Date range in search must con-tain 2 and not %d val-ues.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	22	Cannot de-crease num-ber of at-tachments below zero.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	27	Missing fold-er id for cre-ating task.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	32	Cannot send event to event sys-tem.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	35	Missing fold-er mapping for task %1$d.	TODO	com.openex-change.group-ware.tasks.TaskException

TSK	TASK	8	CODE_ER-ROR	39	Invalid task state %d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	45	Problem with a thread.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	8	CODE_ER-ROR	49	Unknown participant type %1$d.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	9	CONCUR-RENT_MOD-IFICATION	7	Edit Conflict. Your change cannot be completed because somebody else has made a con-flicting change to the same item. Please refresh or synchronize and try again.	TODO	com.openex-change.group-ware.tasks.TaskException
TSK	TASK	12	TRUNCAT-ED	41	The task could not be saved. Please short-en the %1$s and try again. Cur-rent length %3$d is more than allowed length of %2$d charac-ters.	TODO	com.openex-change.group-ware.tasks.TaskException
TAX	TRANS-ACTION	5	SUBSYS-TEM_OR_SER-VICE_DOWN	100	Database cannot be reached.	The Database does not seem to be reach-able. This must be fixed by the sys-tem	

							admin-istra-tion
TAX	TRANS-ACTION	5	SUBSYS-TEM_OR_SER-VICE_DOWN	101	Database cannot be reached.		The Database does not seem to be reach-able. This must be fixed by the sys-tem admin-istra-tion
TAX	TRANS-ACTION	5	SUBSYS-TEM_OR_SER-VICE_DOWN	400	Cannot com-mit transac-tion to write DB		
TAX	TRANS-ACTION	5	SUBSYS-TEM_OR_SER-VICE_DOWN	401	Cannot roll-back transac-tion in write DB		
TAX	TRANS-ACTION	5	SUBSYS-TEM_OR_SER-VICE_DOWN	402	Cannot fin-ish transac-tion		
TAX	TRANS-ACTION	7	INTER-NAL_ER-ROR	201	This transac-tion could not be fully undone. Some com-ponents are probably not consis-tent any-more. Run the recovery tool!	This trans-action could not be fully un-done. Some com-po-nents are proba-bly not consis-tent any-more. Run the re-

						covery tool!
UPD	UPDATE	3	PERMIS-SION	108	Update con-flict detect-ed. Another process is currently up-dating schema %1$s.	
UPD	UPDATE	3	PERMIS-SION	112	Update con-flict detect-ed. Schema %1$s is not marked as LOCKED.	
UPD	UPDATE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	801	Cannot get database connection.	
UPD	UPDATE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	803	Cannot get database connection.	
UPD	UPDATE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	805	Cannot get database connection.	
UPD	UPDATE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	901	Cannot get database connection.	
UPD	UPDATE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	903	Cannot get database connection.	
UPD	UPDATE	5	SUBSYS-TEM_OR_SER-VICE_DOWN	908	Cannot get database connection.	
UPD	UPDATE	7	INTER-NAL_ER-ROR	107	Though ex-pected, SQL query re-turned no result.	
UPD	UPDATE	7	INTER-NAL_ER-ROR	109	Table up-date failed. Schema %1$s could not be locked.	
UPD	UPDATE	7	INTER-NAL_ER-ROR	111	Though ex-pected, SQL query re-turned no result.	
UPD	UPDATE	7	INTER-NAL_ER-ROR	113	Table up-date failed. Schema %1$s could	

					not be un-locked.	
UPD	UPDATE	8	CODE_ER-ROR	101	A SQL error occurred while read-ing schema version infor-mation: %1$s.	
UPD	UPDATE	8	CODE_ER-ROR	103	A SQL excep-tion oc-curred while checking for schema ver-sion table: %1$s.	Check-ing if a ta-ble ex-ist failed.
UPD	UPDATE	8	CODE_ER-ROR	106	A SQL error occurred while read-ing schema version infor-mation: %1$s.	
UPD	UPDATE	8	CODE_ER-ROR	110	A SQL error occurred while read-ing schema version infor-mation: %1$s.	
UPD	UPDATE	8	CODE_ER-ROR	114	A SQL error occurred while creat-ing table 'version': %1$s.	
UPD	UPDATE	8	CODE_ER-ROR	115	A database error oc-curred while creating ta-ble 'version': %1$s.	
UPD	UPDATE	8	CODE_ER-ROR	116	A database error oc-curred while reading schema ver-sion informa-tion: %1$s.	
UPD	UPDATE	8	CODE_ER-ROR	130	A SQL error occurred while creat-ing table	

						'version': %1$s.
UPD	UPDATE	8	CODE_ER-ROR	131	A database error occurred while creating table 'version': %1$s.
UPD	UPDATE	8	CODE_ER-ROR	601	Update process initialization failed: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	700	A SQL Error occurred while resolving folder name conflicts: %s
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred while performing task ClearLeft-overAttach-mentsUp-dateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred while performing task Con-tactsChanged-

						FromUpdate-Task: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	SQL error occurred while per-forming task Contacts-FieldSizeUp-dateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL er-ror occurred while per-forming task Contacts-FieldSizeUp-dateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL er-ror oc-curred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL er-ror oc-curred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL er-ror oc-curred: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL er-ror occurred while per-forming task Cre-ateTableVer-sion: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL er-ror occurred while per-forming task DelFold-erTreeTable-UpdateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	SQL error occurred while per-forming task FolderAd-dPerm-ColumnUp-dateTask: %1$s.

UPD	UPDATE	8	CODE_ER-ROR	701	Error in SQL Statement
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred while performing task MailUpload-QuotaUpdateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	A SQL error occurred while performing task NewInfostoreFolderTreeUpdateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred while performing task PasswordMechUpdateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred while performing task SpamUpdateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	A SQL error occurred while performing task SpellCheckUserDictTableTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	701	An SQL error occurred while performing task DelFolderTreeTableUpdateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	702	SQL error occurred while performing task ContactsFieldSizeUp-

					dateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	702	SQL error occurred while per-forming task FolderAd-dPerm-ColumnUp-dateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	702	An SQL er-ror occurred while per-forming task Password-MechUpdate-Task: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	702	An SQL er-ror occurred while per-forming task Password-MechUpdate-Task: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	703	SQL error occurred while per-forming task FolderAd-dPerm-ColumnUp-dateTask: %1$s.
UPD	UPDATE	8	CODE_ER-ROR	802	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	804	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	806	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	807	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	808	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	902	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	904	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	905	SQL Prob-lem: %s.
UPD	UPDATE	8	CODE_ER-ROR	906	SQL Prob-lem: %s.

UPD	UPDATE	8	CODE_ER-ROR	907	SQL Problem: %s.		
UPD	UPDATE	8	CODE_ER-ROR	909	SQL Problem: %s.		
UPD	UPDATE	8	CODE_ER-ROR	910	SQL Problem: %s.		
UPD	UPDATE	10	SETUP_ER-ROR	102	No row found in table update.		
UPD	UPDATE	10	SETUP_ER-ROR	104	Multiple rows found.		
UPD	UPDATE	10	SETUP_ER-ROR	105	Resolving schema for context %1$d failed.	Strange context identifier or a mapping is missing.	
UPD	UPDATE	10	SETUP_ER-ROR	301	Class %1$s can not be loaded.		
UPD	UPDATE	10	SETUP_ER-ROR	302	Cannot instantiate class %1$s.		
UPD	UPDATE	10	SETUP_ER-ROR	501	Cannot instantiate updater implementation %1$s.		
UPD	UPDATE	10	SETUP_ER-ROR	702	Can't resolve filestore.	No Description	
USR	USER	1	USER_IN-PUT	15	New password contains invalid characters	TODO	com.openexchange.groupware.ldap.UserException
USR	USER	3	PERMIS-SION	13	No permission to modify resources in context %1$s	TODO	com.openexchange.groupware.ldap.UserException
USR	USER	5	SUBSYS-TEM_OR_SER-VICE_DOWN	5	Cannot get database connection.	TODO	com.openexchange.groupware.ldap.UserException
USR	USER	8	CODE_ER-ROR	2	Cannot build distinguished name from %s.	TODO	com.openexchange.groupware.ldap.UserException

USR	USER	8	CODE_ER-ROR	6	Cannot clone object %1$s.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	8	CODE_ER-ROR	7	SQL Problem: %s.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	8	CODE_ER-ROR	8	Hash algorithm %s isn't found.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	8	CODE_ER-ROR	9	Encoding %s cannot be used.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	8	CODE_ER-ROR	10	Cannot find user with identifier %1$s in context %2$d.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	8	CODE_ER-ROR	11	Found two user with same identifier %1$s in context %2$d.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	8	CODE_ER-ROR	12	Problem putting/removing an object into/from the cache.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	8	CODE_ER-ROR	14	Missing or unknown password mechanism %1$s	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	10	SETUP_ER-ROR	1	Cannot find property %s.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	10	SETUP_ER-ROR	3	Class %s can not be loaded.	TODO	com.openexchange.group-ware.ldap.UserException
USR	USER	10	SETUP_ER-ROR	4	Cannot instantiate class %s.	TODO	com.openexchange.group-ware.ldap.UserException
USS	US-ER_SET-TING	1	USER_IN-PUT	9	Invalid value %s written to setting %s.	TODO	com.openexchange.groupware.set-tings.SettingException
USS	US-ER_SET-TING	3	PERMIS-SION	3	Writing the setting %1$s is not permitted.	TODO	com.openexchange.groupware.set-tings.SettingException
USS	US-ER_SET-TING	5	SUBSYS-TEM_OR_SER-VICE_DOWN	1	Cannot get connection to database.	TODO	com.openexchange.groupware.set-tings.SettingException

USS	US-ER_SET-TING	8	CODE_ER-ROR	1	A SQL error occurred: %1$s	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	2	A DBPooling error oc-curred	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	3	Configura-tion for user %1$s could not be found in context %2$d	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	4	Unknown setting path %1$s.	TODO	com.openex-change.groupware.set-tings.SettingException
USS	US-ER_SET-TING	8	CODE_ER-ROR	5	Setting %1$s is not a leaf one.	TODO	com.openex-change.groupware.set-tings.SettingException
USS	US-ER_SET-TING	8	CODE_ER-ROR	6	Exception while pars-ing JSON.	TODO	com.openex-change.groupware.set-tings.SettingException
USS	US-ER_SET-TING	8	CODE_ER-ROR	6	Instantiating the class failed.	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	7	Cache initial-ization failed. Re-gion: %1$s	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	8	Problem while initialis-ing configu-ration tree.	TODO	com.openex-change.groupware.set-tings.SettingException
USS	US-ER_SET-TING	8	CODE_ER-ROR	8	User configu-ration could not be put into cache: %1$s	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	9	User configu-ration cache could not be cleared: %1$s	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	9	User configu-ration could not be re-moved from cache: %1$s	TODO	com.openex-change.groupware.user-configuration.UserConfig-urationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	10	Found dupli-cate database	TODO	com.openex-change.groupware.set-tings.SettingException

					identifier %d. Not adding preferences item.		
USS	US-ER_SET-TING	8	CODE_ER-ROR	10	Mail settings for user %1$s could not be found in context %2$d	TODO	com.openexchange.groupware.user-configuration.UserConfigurationException
USS	US-ER_SET-TING	8	CODE_ER-ROR	11	Exception while writing JSON object.	TODO	com.openexchange.groupware.settings.SettingException
USS	US-ER_SET-TING	10	SETUP_ER-ROR	4	Missing property %1$s in system.properties.	TODO	com.openexchange.groupware.user-configuration.UserConfigurationException
USS	US-ER_SET-TING	10	SETUP_ER-ROR	5	Class %1$s can not be found.	TODO	com.openexchange.groupware.user-configuration.UserConfigurationException
IMAP	imap_imaps	1	USER_IN-PUT	25	Versit attachment could not be saved due to an unsupported MIME type: %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	1	USER_IN-PUT	2013	Mail folder cannot be created/renamed. Name must not contain character '%1$s'	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	1	USER_IN-PUT	2017	No administer permission specified for folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	1	USER_IN-PUT	2036	Message move aborted for user %1$s. Source and destination folder are equal: %2$s	TODO	com.openexchange.imap.IMAPException

IMAP	imap_imaps	1	USER_IN-PUT	2043	No attachment was found with id %1$s in message	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	2	US-ER_CONFI-GURA-TION	2003	User %1$s has no mail module access due to user configuration	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	50	Folder %1$s does not hold messages and is therefore not selectable	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	1010	An attempt was made to open a read-only folder with read-write: %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2003	No access to mail folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2004	No lookup access to mail folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2005	No read access to mail folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2006	No delete access to mail folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2007	No insert access to mail folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2008	No create access to mail folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2009	No administer access to mail folder %1$s	TODO	com.openexchange.imap.IMAPException
IMAP	imap_imaps	3	PERMIS-SION	2010	No write access to IMAP folder %1$s	TODO	com.openexchange.imap.IMAPException

IMAP	imap_imaps	3	PERMIS-SION	2011	No keep-seen access to mail fold-er %1$s	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2012	Folder %1$s does not al-low subfold-ers.	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2014	A folder named %1$s already ex-ists	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2016	The com-posed rights could not be applied to new folder %1$s due to missing ad-minister right in its initial rights specified by IMAP server. However, the folder has been created.	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2018	Default fold-er %1$s can-not be up-dated	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2023	Folder %1$s cannot be deleted	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2024	Default fold-er %1$s can-not be deleted	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2032	Mail folder %1$s must not be moved to subsequent folder %2$s	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	3	PERMIS-SION	2041	Not allowed to open folder %1$s due to miss-ing read ac-cess	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	5	SUBSYS-TEM_OR_SER-VICE_DOWN	1016	Connection was refused or timed out	TODO	com.openex-change.imap.IMAPExcep-tion

					while at-tempting to connect to remote serv-er %1$s for user %2$s		
IMAP	imap_imaps	5	SUBSYS-TEM_OR_SER-VICE_DOWN	2029	IMAP search failed due to following reason: %1$s. Switching to application-based search	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	5	SUBSYS-TEM_OR_SER-VICE_DOWN	2030	IMAP sort failed due to following reason: %1$s Switching to application-based sort-ing	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	7	INTER-NAL_ER-ROR	2025	Flag %1$s could not be changed due to fol-lowing rea-son: %2$s	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	7	INTER-NAL_ER-ROR	2039	Message(s) %1$s in fold-er %2$s could not be deleted due to following error: %3$s	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	7	INTER-NAL_ER-ROR	2047	A protocol exception occurred during exe-cution of an IMAP re-quest: %1$s	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	1	Missing pa-rameter %1$s	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2	Invalid per-mission val-ues: fp=%1$s orp=%2$s owp=%3$s odp=%4$s	TODO	com.openex-change.imap.IMAPExcep-tion

IMAP	imap_imaps	8	CODE_ER-ROR	3	A JSON error occurred: %1$s	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	4	Missing parameter in user's mail config: %1$s	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	8	An I/O error occurred %1$s	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	16	Unsupported charset-encoding: %1$s	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	22	Message field %1$s cannot be handled	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	1002	Mail folder could not be found: %1$s	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	2001	No connection available to access mailbox	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	2015	Mail folder %1$s could not be created (maybe due to insufficient permission on parent folder %2$s or due to an invalid folder name)	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	2019	Deletion of folder %1$s failed	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	2020	IMAP default folder %1$s could not be created	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	2021	Missing default %1$s folder in user mail settings	TODO	com.openex-change.imap.IMAPException
IMAP	imap_imaps	8	CODE_ER-ROR	2022	Update of folder %1$s failed	TODO	com.openex-change.imap.IMAPException

IMAP	imap_imaps	8	CODE_ER-ROR	2028	Number of search fields (%d) do not match number of search patterns (%d)	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2031	Unknown search field: %1$s	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2035	Missing %1$s folder in mail move operation	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2037	IMAP folder read-only check failed	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2038	Unknown folder open mode %d	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2042	The raw content's in-put stream of message %1$s in fold-er %2$s can-not be read	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2045	Versit object could not be saved	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2046	IMAP server does not support ca-pability THREAD=REF-ERENCES	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2048	Mailbox' root folder must not be source or the destina-tion full-name of a move opera-tion.	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2049	Sort field %1$s is not supported via IMAP SORT com-mand	TODO	com.openex-change.imap.IMAPExcep-tion
IMAP	imap_imaps	8	CODE_ER-ROR	2050	Missing per-sonal namespace	TODO	com.openex-change.imap.IMAPExcep-tion

IMAP	imap_imaps	11	EXTER-NAL_RE-SOURCE_FULL	2034	Message could not be moved to trash folder	TODO	com.openex-change.imap.IMAPExcep-tion
LGI	comopene-change.au-thentica-tion	3	PERMIS-SION	1	Account %s is locked.		
LGI	comopene-change.au-thentica-tion	4	TRY_AGAIN	2	Account %s is not ready yet.		
LGI	comopene-change.au-thentica-tion	8	CODE_ER-ROR	3	Unknown problem: %s.		
LGI	comopene-change.au-thentica-tion	5	SUBSYS-TEM_OR_SER-VICE_DOWN	5	Login not possible at the mo-ment. Please try again lat-er.		
LGI	comopene-change.au-thentica-tion	1	USER_IN-PUT	6	Invalid cre-dentials.		
LGI	comopene-change.au-thentica-tion	8	CODE_ER-ROR	7	Instantiating the class failed.		
LGI	comopene-change.au-thentica-tion	10	SETUP_ER-ROR	8	Class %1$s can not be found.		
LGI	comopene-change.au-thentica-tion	10	SETUP_ER-ROR	9	Missing property %1$s.		
LGI	comopene-change.au-thentica-tion	5	SUBSYS-TEM_OR_SER-VICE_DOWN	10	Database down.		
LGI	comopene-change.au-thentica-tion	3	PERMIS-SION	11	Your pass-word has ex-pired. In or-der to change it, please log in to %1$s.		
CNV	comopene-change.con-version	8	CODE_ER-ROR	1	The given type of %1$s is not sup-ported		

CNV	com.openex-change.conversion	8	CODE_ER-ROR	2	Missing argu-ment %1$s	
CNV	com.openex-change.conversion	8	CODE_ER-ROR	3	Invalid value for argu-ment %1$s: %2$s	
CNV	com.openex-change.conversion	8	CODE_ER-ROR	4	Unknown data source identifier: %1$s	
CNV	com.openex-change.conversion	8	CODE_ER-ROR	5	Unknown data handler identifier: %1$s	
CNV	com.openex-change.conversion	8	CODE_ER-ROR	6	No match-ing type could be found for data source %1$s and data handler %2$s	
CNV	com.openex-change.conversion	8	CODE_ER-ROR	7	An error oc-curred: %1$s	
CNV	com.openex-change.conversion	12	TRUNCAT-ED	8	The follow-ing field(s) are too long: %1$s	
I18N	com.openex-change.i18n	10	SETUP_ER-ROR	101	Unexpected token %s in .po file %s:%s. Expect-ed one of %s	Please check that the file is cor-rectly for-mat-ted.
I18N	com.openex-change.i18n	10	SETUP_ER-ROR	102	Unexpected token %s in .po file %s:%s. Expect-ed one of %s	Please check that the file is cor-rectly for-mat-ted.
I18N	com.openex-change.i18n	10	SETUP_ER-ROR	103	Got %s, but expected a number in	Please check that the

I18N	com.openex-change.i18n	10	SETUP_ER-ROR		Malformed token or a unsupported token. Got %s but ex-pected %s in .po file %s:%s.	Please check that the file is cor-rectly for-mat-ted.
					.po file %s:%s.	file is cor-rectly for-mat-ted.
I18N	com.openex-change.i18n	10	SETUP_ER-ROR	104	Malformed token or a unsupported token. Got %s but ex-pected %s in .po file %s:%s.	Please check that the file is cor-rectly for-mat-ted.
I18N	com.openex-change.i18n	10	SETUP_ER-ROR	105	An IOExcep-tion ocurred reading .po file %s.	Please make sure the file is read-able by the group-ware.

Table 12.1. Registry entries for themeability

Software License Agreement

BY CLICKING THE BUTTON I ACCEPT OR ENTERING YES WHEN ASKED TO ACCEPT THIS AGREEMENT, YOU ARE AGREEING ON YOUR OWN BEHALF AND ON BEHALF OF THE ENTITY THAT YOU ARE ACTING FOR (COLLECTIVELY "LICENSEE") THAT LICENSEE WILL BE BOUND BY AND IS MADE A PARTY TO THIS AGREEMENT. IF LICENSEE DOES NOT AGREE TO ALL OF THE TERMS OF THIS AGREEMENT, DO NOT CLICK THE I ACCEPT BUTTON OR ENTER YES WHEN ASKED TO ACCEPT THIS AGREEMENT AND DO NOT USE THE LICENSED PRODUCT. LICENSEE WILL NOT BE MADE A PARTY TO THIS AGREEMENT AND WILL NOT BE AUTHO-RIZED TO USE THE LICENSED PRODUCT UNLESS AND UNTIL LICENSEE HAS AGREED TO BE BOUND BY THESE TERMS. YOU MAY CONTACT US BY VISITING THE WEB SITE www.open-xchange.com.

This agreement entered into by and between Open-Xchange Inc., ("Licensor"), a Delaware corporation having its principal offices at 303 South Broadway, Tarrytown, New York 10951, USA and the Licensee determines the rights and licenses granted to Licensee in the Licensed Product (hereinafter defined) supplied by the Licensor.

1. Definitions. As used in this Agreement, the following definitions apply:

    a. "Licensed Product" means collectively the Licensed Software and the Licensed Docu-mentation.

    b. "Licensed Software" means the Licensor's proprietary software which is delivered in the form of executable code, scripts and configuration files as an add-on to the Open-Xchange Server as licensed under this Agreement. In particular the Licensed Software includes, but is not limited to, the Microsoft Outlook™ connector (called the Outlook OXtender), Palm™ connector (called the Palm OXtender), Administration interface software, migration tools, and/or installation tools.

    c. "Licensed Documentation" means all the documentation, in printed or electronic form, that is related to the Licensed Software.

    d. "Use", with regard to the Licensed Software, means Licensee may install, use, access, run, or otherwise read the Licensed Software into and out of memory in accordance with the documentation and the license grant from Licensor. With regard to the Li-censed Documentation, "Use" means Licensee may read, use, reproduce and otherwise employ the Licensed Documentation as needed to make use of the Licensed Software.

    e. "Effective Date" means the date of acceptance of this agreement by Licensee by clicking the I accept button or entering Yes when asked to accept this License Agree-ment.

    f. "Remote Access" means direct connection to the systems wherein the Software resides via the Internet, via high-speed, point-to-point network access between Licensee and Licensor.

    g. "Named User" means each person who is administered by the Administration Interface Software and is given a user name and password by Licensee.

2. License grant.

    a. Subject to the payment of the license fees and charges to Licensor, Licensor grants to Licensee a limited, non-exclusive, non-transferable license to Use the Licensed Product during the Agreement's term. Licensee agrees that it has no right, power or

authority to make any modifications to, or unauthorized copies of, the Licensed Product. Licensee must acquire one license for each "Named User" who Uses the Licensed Product.

b. Licensee may make one copy (in machine-readable form only) of the Licensed Software solely for backup or disaster recovery purposes. Licensee must reproduce the copy without modification, including all copyright and other proprietary notices that are on the original copy. The Licensed Documentation may be reproduced in print and electronic forms for use by the Licensee. Licensee may not modify the Licensed Documentation or distribute it to third parties in any form.

3. Delivery.

a. The Licensed Product shall be delivered via Licensor's website or Licensor's download service provider, and any applicable or required serial number(s) to activate the Licensed Software will be delivered via email as soon as practicable after the Effective Date. All Licensed Software delivered via download shall be deemed accepted upon delivery of the serial number(s).

b. If requested in writing by Licensee, Licensor shall deliver the Licensed Product via email to an email address that Licensee shall provide to Licensor. The Licensor shall email to Licensee a compressed file containing the Licensed Products in a common compression format or as a self-extracting executable in addition to any applicable serial number(s). Licensor and Licensee both warrant that their respective email servers can process, receive and store files or the type and memory size of the attached file. Licensor shall deliver the Licensed Product via email within three (3) days after Licensee provides the email address. Licensee shall provide the email address within three (3) days after the Effective Date. Licensee shall inform Licensor within ten (10) days after delivery if Licensee is unable to properly extract, decompress and install the Licensed Product from the file. Licensor shall take steps after such notification to either attempt another email delivery or to provide for physical delivery of the Licensed Product to Licensee.

4. Support services and updates.

a. Licensor shall provide Licensee with all corrections, revisions, patches, service packs, updates and subsequent releases of the Licensed Product made available by Licensor for the period of one (1) year from date of purchase.

5. License fees, charges and taxes.

a. Licensee shall pay Licensor's license fees and charges for the Licensed Product in effect at the time of Licensee's acceptance of the Agreement.

b. The license fees and charges, taxes and other applicable charges are due and payable within ten (10) days after Licensee's receipt of the applicable invoice unless such fees have already been paid on-line through the Licensor's web site or the Licensor's designated e-commerce service provider. Licensee shall pay a late payment charge of 1.5 percent per month, or the maximum rate permitted by applicable law, whichever is less, per whole or partial calendar month on the unpaid amount.

c. If permitted under applicable law Licensee shall pay all taxes based on or in any way measured by this Agreement or any related services (e.g. sales taxes, value added taxes), excluding taxes based on Licensor's net income, but including personal property taxes, if any. If Licensee challenges the applicability of any such tax, it shall pay the same to Licensor and Licensee may then seek a refund.

6. Term.

   a. The term shall commence on the Agreement's Effective Date and shall continue in perpetuity.

7. Prohibited Uses. Licensee shall not:

   a. Allow other persons than Named Users the use of and access to the Licensed Product.

   b. Modify, translate, reverse engineer, decompile, disassemble, reduce the Licensed Software to a humanly perceivable form, or create derivative works based upon the Licensed Product, or cause another to do so, except to the extent expressly permitted by applicable law despite this limitation;

   c. Remove any proprietary notices, labels, copyright marks, or trademarks on the Licensed Product;

   d. Modify, adapt, rent, lease, commercially host, sublicense, redistribute, or loan the Licensed Product.

8. Warranty.

   a. Licensor warrants that for one year from the date of purchase of the Licensed Product:

      i. Under normal Use and service, the media on which the Licensed Software is delivered shall be free from defects in material and workmanship, and

      ii. The Licensed Product will meet Licensor's published specifications for the Licensed Software that were current at time of purchase.

   b. If the Licensed Product fails to meet the media warranty of Paragraph 9(a)(1) and Licensee gives Licensor written notice thereof during the applicable warranty period, Licensor shall replace such media. If the Licensed Product fails to meet the warranty of Paragraph 9(a)(2) and Licensee gives Licensor written notice thereof during the applicable warranty period, Licensor's sole obligation shall be to provide technical services via email or phone or through Remote Access to attempt to correct the failure, provided that Licensee gives Licensor detailed information regarding the failure and Licensor is able to duplicate or view the same. Licensee acknowledges that the Licensed Product is complex, may not be error free, and that all errors, if any, may not be correctable or avoidable.

   c. EXCEPT AND TO THE EXTENT EXPRESSLY PROVIDED IN PARAGRAPH 8 AND IN LIEU OF ALL OTHER WARRANTIES, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY, INFORMATIONAL CONTENT, FITNESS FOR A PARTICULAR PURPOSE OR SYSTEM INTEGRATION, OR NON-INFRINGEMENT OR THIRD PARTY RIGHTS RELATING TO THE LICENSED PRODUCT. Some jurisdictions do not permit the exclusion of implied warranties or limitations on applicable statutory rights of the consumer, and, as such, some portion of the above limitation may not apply to Licensee. In such jurisdictions, Licensor's liability is limited to the greatest extent permitted by law.

   d. Licensee shall be solely responsible for the selection, use, efficiency, and suitability of the Licensed Product and Licensor shall have no liability therefore.

   e. The warranty provisions of this Paragraph 8 do not apply if the Licensed Product has been subject to modification by a party other than Licensor or in a manner not in accordance with Licensor's instruction, has not been installed, operated, repaired, or

maintained in accordance with instructions supplied by Licensor, is subject to accident or abuse, or is used in ultra hazardous activities.

9. Negation of proprietary rights indemnity.

   a. THERE IS NO WARRANTY AGAINST INTERFERENCE WITH LICENSEE´S QUIET ENJOY-MENT OF THE LICENSED PRODUCT OR AGAINST INFRINGEMENT, AND LICENSOR HAS NO LIABILITY TO LICENSEE FOR THE INFRINGEMENT OF PROPRIETARY RIGHTS BY THE LICENSED PRODUCT OR ANY PORTION THEREOF.

10. Limitation of liability.

    a. IN NO EVENT SHALL LICENSOR BE LIABLE TO LICENSEE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND, REGARDLESS OF THE FORM OF THE ACTION, ARISING OUT OF OR RELATED TO THIS LICENSE AGREEMENT OR THE PERFORMANCE OR BREACH THEREOF, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY THEREOF. LICENSOR´S LIABILITY TO LICENSEE HEREUNDER, IF ANY, SHALL IN NO EVENT EXCEED THE TOTAL OF THE LICENSE FEES PAID TO LICENSOR HEREUNDER BY LICENSEE. IN NO EVENT SHALL LICENSOR BE LIABLE TO LICENSEE FOR ANY DAMAGES RESULTING FROM OR RELATED TO ANY FAILURE OF THE LICENSE PRODUCT, INCLUDING, BUT NOT LIMITED TO, LOST DATA TIME, PROFITS, DELIVERY DELAY OR LICENSOR´S PERFORMANCE OF SERVICES UNDER THIS LICENSE AGREE-MENT. SOME JURISDICTIONS DO NOT ALLOW THE LIMITATION OF LIABILITY FOR PERSONAL INJURY, OR OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS LIMITATION MAY NOT APPLY TO LICENSEE. In such jurisdictions, Licensor's liability is limited to the greatest extent permitted by law.

11. Termination/Cancellation.

    a. Licensor may terminate/cancel this Agreement if Licensee is in default of any other provision hereof and such default has not been cured within thirty (30) days after Licensor gives Licensee written notice.

    b. In the event of any termination/ cancellation, Licensor may require, as an exclusive remedy, that Licensee cease any further use of the Licensed Product or any portion thereof and immediately destroy all copies of the Licensed Product and erase the Li-censed Software from any temporary RAM and permanent memory. Upon Licensor's request, an authorized representative of Licensee shall provide a written certification that warrants compliance with Paragraph 11(b).

12. General.

    a. Any claim arising out of or related to this Agreement must be brought no later than one (1) year after it has accrued.

    b. This Agreement is the sole agreement between the parties relating to the subject matter and supersedes all prior understandings, writings, proposals, representations, or communications, written or oral, of either party. Only a writing executed by the authorized representatives of both parties may amend this Agreement.

    c. This Agreement and the licenses granted hereunder may not be transferred or assigned by Licensee without the prior written consent of Licensor.

    d. Should any part of this Agreement be held invalid or unenforceable, that portion will be construed consistent with applicable law as nearly as possible to reflect the original intention of the parties and all other portions of this Agreement will remain in full

force and effect. In the event of any termination or cancellation of this Agreement, provisions that are intended to continue and survive shall do so.

e. Failure of either party to enforce any provision of this Agreement will not be deemed a waiver of the provision or the right to enforce that provision.

f. Licensee shall not export or re-export, or allow exporting or re-exporting of the Software or any copy, portion or direct product of the foregoing, in violation of any export laws, restrictions, national security controls or regulations of the United States or any other applicable foreign agency or authority. By accepting this Licensing Agreement, Licensee represents and warrants that it is not located in, under control of, or a national or resident in a United States embargoed country, or on the United States Treasury Department's List of Specially Designated Nationals or the United States Commerce Department's Denied Person's List or Entity List.

g. This Agreement shall be interpreted in accordance with the substantive law of the State of Delaware. The application of the Uniform Law on the International Sale of Goods and the Uniform Law on the Formation of Contracts for the International Sale of Goods - both dated July 17, 1973 – and of the UN agreement on the sale of goods of April 11, 1980 shall be excluded. In action arising out of or relating to this Agreement or the Licensed Product, both parties consent to the nonexclusive jurisdiction of the federal and state courts located in the County of New Castle, Delaware. The prevailing party of any dispute shall recover its reasonable attorneys' fees and costs incurred in litigating, arbitrating, or otherwise settling or resolving such dispute.

h. During the Agreement's term, Licensee agrees to regularly back-up its data derived from the Use of the Licensed Product onto a separate media. Licensee acknowledges that any failure to do so may significantly decrease its ability to mitigate any harm or damage arising from any problem or error in the Licensed Products or the provision of services under this Agreement.

i. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, IT IS SPECIFICALLY ACKNOWLEDGED AND AGREED THAT NO REPRESENTATION, WARRANTY OR OTHER ASSURANCE IS MADE, DIRECTLY OR INDIRECTLY, THAT (I) ALL OR ANY PORTION OF THE LICENSED PRODUCT COMPLIES WITH ANY FEDERAL, STATE OR LOCAL LAWS, RULES, REGULATIONS, OR ORDINANCES, AS THE SAME MAY BE CHANGED FROM TIME TO TIME, OR (II) LICENSEE´S USE OF THE LICENSED PRODUCT WILL RESULT IN LICENSEE´S COMPLIANCE WITH ANY FEDERAL, STATE OR LOCAL LAWS, RULES, REGULATIONS, OR ORDINANCES, AS THE SAME MAY BE CHANGED FROM TIME TO TIME.

j. Portions of the Licensed Products utilize or include third party software and other copyrighted material. Acknowledgements, licensing terms and disclaimers for such material are contained in separate agreements and Licensee's use of such material is governed by the related agreements terms.

Third party licenses and packages can be found at www.open-xchange.com/en/legal . Java, JavaMail, Java Activation Framework, JavaBeans and all their acronyms are trademarks of Sun Microsystems, Inc. The JavaMail library and the Java Activation Framework library are Copyright (c) Sun Microsystems Inc. and distributed unmodified and according to grants in their license; the licenses and the original files are included with the packages. The JDOM library is Copyright (C) 2000- 2004 by Jason Hunter & Brett McLaughlin. OPEN-XCHANGE is a trademark of OPEN-XCHANGE Inc., and all other brand and product names are or may be trademarks of, and are used to identify products or services of, their respective owners. Please make sure that third-party modules and libraries are used according to their respective licenses.Tarrytown, New York, March 2006