



Open-Xchange™

OX6

Provisioning

Open-Xchange™ OX6 : Provisioning

Publication date Wednesday, 26 August 2009 v6.12.1

Copyright © 2006-2009 OPEN-XCHANGE Inc. , This document is the intellectual property of Open-Xchange Inc., Tarrytown, NY, USA , The document may be copied in whole or in part, provided that each copy contains this copyright notice. The information contained in this book was compiled with the utmost care. Nevertheless, erroneous statements cannot be excluded altogether. Open-Xchange Inc., the authors and the translators are not liable for possible errors and their consequences. The names of software and hardware used in this book may be registered trademarks; they are used without guarantee of free usability. Open-Xchange Inc. generally follows the spelling conventions of the manufacturers. The reproduction of brand names, trade names, logos etc. in this book (even without special marking) does not justify the assumption that such names can be considered free (for the purposes of trademark and brand name regulations)Please direct any recommendations or comments to documentation@open-xchange.com

Table of Contents

Open-Xchange™ Hosted Edition Command Line Tools	1
1 Command line Tools (CLTs)	1
2 Environment variables	1
1 Context management	2
1.1 createcontext	2
1.2 deletecontext	3
1.3 listcontext	4
1.4 disablecontext	5
1.5 disableallcontexts	5
1.6 enablecontext	6
1.7 enableallcontexts	7
1.8 changecontext	8
2 User management	10
2.1 createuser	10
2.2 deleteuser	16
2.3 listuser	16
2.4 changeuser	18
3 Group management	23
3.1 creategroup	23
3.2 deletegroup	24
3.3 listgroup	24
3.4 changegroup	25
4 Resource management	27
4.1 createresource	27
4.2 deleteresource	28
4.3 listresource	28
4.4 changeresource	29
5 Data management	31
5.1 deleteinvisible	31
Software License Agreement	33

Open-Xchange™ Hosted Edition Command Line Tools

1. Command line Tools (CLTs)

This manual describes how Open-Xchange objects can be created, changed or deleted on the command line. The command line tools generate Java RMI calls directly to the administration daemon and automatically make all necessary database operations. The commands need to run on the machine where the admin daemon is installed and properly configured. Whenever a command line tool fails, all operations are rolled back and it is on the caller to run the tool again with corrected options. The command line tools provide a complete interface to the Open-Xchange Java RMI API:

`/opt/open-xchange/doc/oxadmin/`

Command line tools are:

- `[create,delete,list,disable[all],enable[all],changequota]context`
- `[create,delete,list,change]user`
- `[create,delete,list,change]group`
- `[create,delete,list,change]resource`
- `getaccesscombinationnameforcontext`
- `getmoduleaccessforcontext`
- `getaccesscombinationnameforuser`

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

2. Environment variables

Following environment variables and their default values change the behavior of all CLTs that have RMI as back-end:

variable	default value	description
ADMIN_PASSWORD	<NOT SET>	Setting the context or master admin password
NEW_USER_PASSWORD	<NOT SET>	Passing a user's password
RMI_HOSTNAME	rmi://[host][:port]/	URL for the Open-Xchange admin daemon
COMMANDLINE_DATEFORMAT	yyyy-MM-dd	string as documented for java SimpleDateFormat
COMMANDLINE_TIMEZONE	GMT	timezone string as documented for java TimeZone

The Format strings change the behavior of the CLT output as well as for the expected time strings given as parameters.

Chapter 1. Context management

1.1. createcontext

`createcontext` is the tool to create new contexts. A context is an independent instance within the `createcontext` Open-Xchange system and holds users, groups and resources and all their objects. Data from one context is not visible to other contexts. Module access (calendar, tasks, email) can be set via predefined "access combination names". These names can be configured on the server side. All users which are created during later use of the "createuser" tool will inherit the module access rights from the context. If you do not specify any access rights on `createcontext` minimal access rights will be granted. Currently, these are Webmail and Contacts access rights.

1.1.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (\n) from output
<code>-c,--contextid <integer></code>	The id of the context, when starting with 0, 0 is deleted
<code>-q,--quota <integer></code>	Context wide filestore quota in MB
<code>-u,--username <string></code>	Username for the new context Admin user
<code>-d,--displayname <string></code>	Displayname for the new context Admin user
<code>-g,--givenname <string></code>	Given name for the new context Admin user
<code>-s,--surname <string></code>	Surname/last name for the new context Admin user
<code>-p,--password <string></code>	Password for the new context Admin user
<code>-e,--email <string></code>	Primary E-Mail address for the new context Admin user
<code>-l,--lang <lang></code>	Language for the new context Admin user
<code>-t,--timezone <timezone></code>	Timezone for the new context Admin user
<code>-N,--contextname <string></code>	Context name
<code>-L,--addmapping <string></code>	Add login mappings separated by ","
<code>--access-combination-name <access-combination-name></code>	Access combination name

1.1.2. Extra parameters when authentication is enabled

<code>-A,--adminuser <string></code>	Master Admin user name
<code>-P,--adminpass <string></code>	Master Admin password

1.1.3. Return value

0 on success
 >0 on failure

1.1.4. Mandatory parameters

`contextid {adminuser adminpass} quota username displayname givenname surname password email`

1.1.5. Command output

On success:

```
context <contextid> created
```

On failure:

```
context <contextid> could not be created: <reason from server>
```

1.1.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/createcontext -c 123 -q 1000 -N CompanyA -u "admin" -d "Admin of CompanyA" -g John -s Example -p newpw -e john@example.com
```

```
context 123 created
```

1.2. deletecontext

deletecontext is the tool to delete contexts and all data stored that belong to it. This includes all database entries and files in the infostore but no E-Mail components.

1.2.1. Parameters

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

1.2.2. Extra parameters when authentication is enabled

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

1.2.3. Return value

0 on success

>0 on failure

1.2.4. Mandatory parameters

```
(contextid or contextname) {adminuser adminpass}
```

1.2.5. Command output

On success:

```
context <contextid> deleted
```

On failure:

context <contextid> could not be deleted: <reason from server>

1.2.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/deletecontext -c 123
```

```
context 123 deleted
```

1.3. listcontext

`listcontext` is the tool to list and search for contexts.

1.3.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (\n) from output
<code>-s,--searchpattern <string></code>	Search/List pattern, default “*”
<code>--csv</code>	Command output as csv

1.3.2. Extra parameters when authentication is enabled

<code>-A,--adminuser <adminuser></code>	Master Admin user name
<code>-P,--adminpass <string></code>	Master Admin password

1.3.3. Return value

0 on success

>0 on failure

1.3.4. Mandatory parameters

{adminuser adminpass}

1.3.5. Command output

Standard output:

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

csv output:

```
id,filestore_id,filestore_name,enabled,max_quota,used_quota,name,lmappings
```

1.3.6. Example

```
root@oxhe:/opt/open-xchange/sbin# ./listcontexts
cid fid fname    enabled qmax qused name    lmappings
6 3 6_ctx_store true 1000 0 customerA 6,customerA,secondlogin
```

1.4. disablecontext

disablecontext is the tool to disable contexts. Whenever a customer tries to log into a disabled context, the login is denied.

1.4.1. Parameters

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

1.4.2. Extra parameters when authentication is enabled

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

1.4.3. Return value

0 on success

>0 on failure

1.4.4. Mandatory parameters

(contextid or contextname) {adminuser adminpass}

1.4.5. Command output

On success:

context <contextid> disabled

On failure:

context <contextid> could not be disabled: <reason from server>

1.4.6. Example

```
root@oxhe-# /opt/open-xchange/sbin/disablecontext -c 123
```

```
context 123 disabled
```

1.5. disableallcontexts

disableallcontexts is the tool to disable all contexts. Whenever a customer tries to login to a disabled context, the login is denied.

1.5.1. Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove all newlines (\n) from output

1.5.2. Extra parameters when authentication is enabled

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

1.5.3. Return value

0 on success

>0 on failure

1.5.4. Mandatory parameters

{adminuser adminpass}

1.5.5. Command output

On success:

all contexts disabled

On failure:

all contexts could not be disabled: <reason from server>

1.5.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/disableallcontexts
```

```
all contexts disabled
```

1.6. enablecontext

enablecontext is the tool to enable a disabled context.

1.6.1. Parameters

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

1.6.2. Extra parameters when authentication is enabled

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

1.6.3. Return value

0 on success

>0 on failure

1.6.4. Mandatory parameters

(contextid or contextname) {adminuser adminpass}

1.6.5. Command output

On success:

context <contextid> enabled

On failure:

context <contextid> could not be enabled: <reason from server>

1.6.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/enablecontext -c 123
```

```
context <contextid> enabled
```

1.7. enableallcontexts

`enableallcontexts` is the tool to enable all disabled contexts.

1.7.1. Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove all newlines (\n) from output

1.7.2. Extra parameters when authentication is enabled

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

1.7.3. Return value

0 on success

>0 on failure

1.7.4. Mandatory parameters

```
{adminuser adminpass}
```

1.7.5. Command output

On success:

```
all contexts enabled
```

On failure:

```
all contexts could not be enabled: <reason from server>
```

1.7.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/enableallcontexts
```

```
all contexts enabled
```

1.8. changecontext

`changecontext` is the tool to change the current quota for a given context. When the context has more `changecontext` space in use than the new quota allows, the customer is only able to delete files until the usage is below quota. Module access (calendar,tasks,email) can be set via predefined "access combination names". These names can be configured on the server side. All users which are created during later use of the "createuser" tool will inherit the module access rights from the context. If you do not specify any access rights on `createcontext` minimal access rights will be granted. Currently, these are Webmail and Contacts access rights.

There are some default combinations in the `ModuleAccessDefinitions.properties` file on the admin server, like:

```
webmail_plus=contacts,webmail
pim_plus=contacts,webmail,calendar,delegatetask,tasks
groupware_plus=contacts,webmail,calendar,delegatetask,tasks,editpublicfolders,infostore,readcreatesharedfolders
premium=contacts,webmail,calendar,delegatetask,tasks,editpublicfolders,infostore,readcreatesharedfolders,ical,vcard,webdav,webdavxml
all=calendar,contacts,delegatetask,editpublicfolders,forum,ical,infostore,pinboard-write,projects,readcreatesharedfolders,rssbookmarks,rssportal,syncml,tasks,vcard,webdav,webdavxml,webmail
```

When having changed the access rights of the context and its users with "changecontext" the "downgrade" command should be called on the admin server. All unnecessary data are removed from the data base via "groupware api". If e. g. the context 1 is changed from "pim_plus" to "webmail", the "downgrade" command has to be called for this context then. Then, all unnecessary folders for this context are removed from the data base.

1.8.1. Parameters

-h, -help	Prints a help text
--environment	Show info about commandline environment

--nonl	Remove all newlines (\n) from output
-c,- -contextid <integer>	The id of the context
-N,- -contextname <string>	The name of the context
-L,- -addmapping <string(s)>	Add login mappings. Separated by ","
-R,- -removemapping <string(s)>	Remove login mappings. Separated by ","
-q,- -quota <integer>	Quota for the context filestore in MB
--access-combination-name <access-combination-name>	Access combination name

1.8.2. Extra parameters when authentication is enabled

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

1.8.3. Return value

0 on success

>0 on failure

1.8.4. Mandatory parameters

(contextid or contextname) {adminuser adminpass} and at minimum one attribute to change

1.8.5. Command output

On success:

context <contextid> changed

On failure:

context <contextid> could not be changed: <reason from server>

1.8.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/changecontext -c 123 -q 500
```

```
context 123 changed
```

Chapter 2. User management

2.1. createuser

`createuser` is the tool to create new users in a given context. The displayname must be unique in one context.

2.1.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (\n) from output
<code>--extendedoptions</code>	Set this if you want to see all options, use this instead of help option
<code>-c,--contextid <integer></code>	The id of the context
<code>-u,--username <string></code>	Username of the user
<code>-d,--displayname <string></code>	Display name of the user
<code>-g,--givenname <string></code>	Given name for the user
<code>-s,--surname <string></code>	Surname of the user
<code>-p,--password <string></code>	Password for the user
<code>-e,--email <string></code>	Primary mail address
<code>-l,--language <lang></code>	Language for the user (de_DE,en_US, fr_FR)
<code>-t,--timezone <timezone></code>	Timezone of the user (Europe/Berlin)
<code>-x,--department <string></code>	Department of the user
<code>-z,--company <string></code>	Company of the user
<code>-a,--aliases <string></code>	E-Mail aliases of the user, separated by ","
<code>--access-combination-name <access-combination-name></code>	Access combination name
<code>--addguipreferences <addguipreferences></code>	Add a GUI setting (key=value)

For the GUI preferences please also see http://www.open-xchange.com/wiki/index.php?title=Gui_path

2.1.2. Extended options

<code>--email1 <string></code>	Email1
<code>--birthday <datevalue></code>	Birthday
<code>--anniversary <datevalue></code>	Anniversary
<code>--branches <string></code>	Branches
<code>--business_category <string></code>	Business_category
<code>--postal_code_business <string></code>	Postal_code_business
<code>--state_business <string></code>	State_business
<code>--street_business <string></code>	Street_business
<code>--telephone_callback <string></code>	Telephone_callback
<code>--city_home <string></code>	City_home
<code>--commercial_register <string></code>	Commercial_register
<code>--country_home <string></code>	Country_home
<code>--email2 <string></code>	Email2

--email3 <string>	Email3
--employeetype <string>	EmployeeType
--fax_business <string>	Fax_business
--fax_home <string>	Fax_home
--fax_other <string>	Fax_other
--imapserver <string>	ImapServer
--imaplogin <string>	ImapLogin
--smtpserver <string>	SmtpServer
--instant_messenger1 <string>	Instant_messenger1
--instant_messenger2 <string>	Instant_messenger2
--telephone_ip <string>	Telephone_ip
--telephone_isdn <string>	Telephone_isdn
--mail_folder_drafts_name <string>	Mail_folder_drafts_name
--mail_folder_sent_name <string>	Mail_folder_sent_name
--mail_folder_spam_name <string>	Mail_folder_spam_name
--mail_folder_trash_name <string>	Mail_folder_trash_name
--manager_name <string>	Manager_name
--marital_status <string>	Marital_status
--cellular_telephone1 <string>	Cellular_telephone1
--cellular_telephone2 <string>	Cellular_telephone2
--info <string>	Info
--nickname <string>	Nickname
--number_of_children <string>	Number_of_children
--note <string>	Note
--number_of_employee <string>	Number_of_employee
--telephone_pager <string>	Telephone_pager
--password_expired <booleanvalue>	Password_expired
--telephone_assistant <string>	Telephone_assistant
--telephone_business1 <string>	Telephone_business1
--telephone_business2 <string>	Telephone_business2
--telephone_car <string>	Telephone_car
--telephone_company <string>	Telephone_company
--telephone_home1 <string>	Telephone_home1
--telephone_home2 <string>	Telephone_home2
--telephone_other <string>	Telephone_other
--postal_code_home <string>	Postal_code_home
--profession <string>	Profession
--telephone_radio <string>	Telephone_radio
--room_number <string>	Room_number
--sales_volume <string>	Sales_volume
--city_other <string>	City_other
--country_other <string>	Country_other
--middle_name <string>	Middle_name
--postal_code_other <string>	Postal_code_other
--state_other <string>	State_other
--street_other <string>	Street_other
--spouse_name <string>	Spouse_name
--state_home <string>	State_home
--street_home <string>	Street_home
--suffix <string>	Suffix

--tax_id <string>	Tax_id
--telephone_telex <string>	Telephone_telex
--telephone_ttyddd <string>	Telephone_ttyddd
--url <string>	Url
--userfield01 <string>	Userfield01
--userfield02 <string>	Userfield02
--userfield03 <string>	Userfield03
--userfield04 <string>	Userfield04
--userfield05 <string>	Userfield05
--userfield06 <string>	Userfield06
--userfield07 <string>	Userfield07
--userfield08 <string>	Userfield08
--userfield09 <string>	Userfield09
--userfield10 <string>	Userfield10
--userfield11 <string>	Userfield11
--userfield12 <string>	Userfield12
--userfield13 <string>	Userfield13
--userfield14 <string>	Userfield14
--userfield15 <string>	Userfield15
--userfield16 <string>	Userfield16
--userfield17 <string>	Userfield17
--userfield18 <string>	Userfield18
--userfield19 <string>	Userfield19
--userfield20 <string>	Userfield20
--city_business <string>	City_business
--country_business <string>	Country_business
--assistant_name <string>	Assistant_name
--telephone_primary <string>	Telephone_primary
--categories <string>	Categories
--mail_folder_confirmed_ham_name <string>	Mail_folder_confirmed_ham_name
--mail_folder_confirmed_spam_name <string>	Mail_folder_confirmed_spam_name
--gui_spam_filter_capabilities_enabled <booleanvalue>	GUI_Spam_filter_capabilities_enabled
--mailenabled <true/false>	Mailenabled
--defaultsenderaddress <stringvalue>	DefaultSenderAddress
--title <string>	Title
--position <string>	Position
--access-calendar <on/off>	Calendar module (Default is off)
--access-contacts <on/off>	Contact module access (Default is on)
--access-delegate-tasks <on/off>	Delegate tasks access (Default is off)
--access-edit-public-folder <on/off>	Edit public folder access (Default is off)
--access-forum <on/off>	Forum module access (Default is off)
--access-ical <on/off>	Ical module access (Default is off)
--access-infostore <on/off>	Infostore module access (Default is off)
--access-pinboard-write <on/off>	Pinboard write access (Default is off)
--access-projects <on/off>	Project module access (Default is off)
--access-read-create-shared-Folders <on/off>	Read create shared folder access (Default is off)
--access-rss-bookmarks <on/off>	RSS bookmarks access (Default is off)

<code>--access-rss-portal <on/off></code>	RSS portal access (Default is off)
<code>--access-syncml <on/off></code>	Syncml access (Default is off)
<code>--access-active-sync <on/off></code>	Exchange Active Sync access (Default is off)
<code>--access-usm <on/off></code>	Universal Sync Module access (Default is off)
<code>--access-tasks <on/off></code>	Tasks access (Default is off)
<code>--access-vcard <on/off></code>	Vcard access (Default is off)
<code>--access-webdav <on/off></code>	Webdav access (Default is off)
<code>--access-webdav-xml <on/off></code>	Webdav-Xml access (Default is off)
<code>--access-webmail <on/off></code>	Webmail access (Default is on)
<code>--access-publication <on/off></code>	Publication permission (Default is on)
<code>--access-subscription <on/off></code>	Subscription permission (Default is on)
<code>--access-edit-group <on/off></code>	Edit group access (Default is off)
<code>--access-edit-resource <on/off></code>	Edit resource access (Default is off)
<code>--access-edit-password <on/off></code>	Edit password access (Default is off)
<code>--access-multiple-mail-accounts <on/off></code>	Use multiple mail account feature (Default is off)

2.1.3. Open-Xchange module access

With Open-Xchange it is possible to limit the access to the available modules per context i. e., all users in one context need to have the same access rights. Currently, following modules are implemented: access-calendar, access-contacts, access-delegate-tasks, access-edit-public-folder, access-ical, access-infostore, access-read-create-shared-Folders, access-tasks, access-vcard, access-webdav, access-webdav-xml, access-syncml and access-webmail. There are several combinations possible and four are supported (not mentioned modules need to be disabled). This limitation is needed because some modules depend on access to others. There are different Open-Xchange packages available for the customer: Webmail+, PIM+, Groupware+, Premium. These packages have to be configured per context i. e., all users in a context need to use the same package. Each package consists of a combination of modules that has to be set up appropriately. The following sections quickly introduce the packages and their module configuration. Open-Xchange also provides the possibility to use "access combination names" when creating and changing contexts/users. If you want to change the package access rights for a context, you can simply add the "access-combination-name" switch to the appropriate tool (createcontext,createuser,changecontext etc.).

Webmail+

If there are no access rights specified when creating a new user Webmail+ is used as default. Webmail+ is a base package that allows access to the webmail interface and a personal address book. To grant access to this package, the following modules have to be set to "on" for all users in a context:

- * access-contacts Access combination name: webmail_plus
- * access-webmail Access combination name: webmail_plus

PIM+

PIM+ is another base package that gives access to the webmailer, personal address book, calendar and tasks. Group appointments and delegating tasks are not supported. To grant access to this package, the following modules have to be set to "on" for all users in a context:

* access-contacts	Access combination name: pim_plus
* access-webmail	Access combination name: pim_plus
* access-calendar	Access combination name: pim_plus
* access-delegate-tasks	Access combination name: pim_plus
* access-tasks	Access combination name: pim_plus

Groupware+

Groupware+ is an upsell package that provides full groupware functionality: private, shared and public folders, conflict handling for appointments, team view. Furthermore, the InfoStore is available. To grant access to this package, the following modules have to be set to "on" for all users in a context:

* access-contacts	Access combination name: groupware_plus
* access-webmail	Access combination name: groupware_plus
* access-calendar	Access combination name: groupware_plus
* access-delegate-tasks	Access combination name: groupware_plus
* access-tasks	Access combination name: groupware_plus
* access-edit-public-folder	Access combination name: groupware_plus
* access-infostore	Access combination name: groupware_plus
* access-read-create-shared-Folders	Access combination name: groupware_plus

Premium

Premium is a desktop integration package. It provides the functionality of the "Groupware+" package and comes with interfaces to integrate with other software: The OXtender for MS Outlook and the WebDAV interface to integrate the InfoStore with desktops. To grant access to this package, the following modules have to be set to "on" for all users in a context:

* access-contacts	Access combination name: premium
* access-webmail	Access combination name: premium
* access-calendar	Access combination name: premium
* access-delegate-tasks	Access combination name: premium
* access-tasks	Access combination name: premium
* access-edit-public-folder	Access combination name: premium
* access-infostore	Access combination name: premium
* access-read-create-shared-Folders	Access combination name: premium
* access-ical	Access combination name: premium
* access-vcard	Access combination name: premium
* access-webdav	Access combination name: premium
* access-webdavxml	Access combination name: premium

Package access configuration

This section provides a quick overview about the different packages that can be configured per context and the required access configuration:

Module	Webmail+	PIM+	Groupware+	Premium
-access-calendar	off	on	on	on
-access-contacts	on	on	on	on

-access-delegate-tasks	off	on	on	on
-access-edit-public-folder	off	off	on	on
-access-forum	off	off	off	off
-access-ical	off	off	off	on
-access-infostore	off	off	on	on
-access-pinboard-write	off	off	off	off
-access-projects	off	off	off	off
-access-read-create-shared-Folders	off	off	on	on
-access-rss-bookmarks	off	off	off	off
-access-rss-portal	off	off	off	off
-access-syncml	off	off	off	off
-access-tasks	off	on	on	on
-access-vcard	off	off	off	on
-access-webdav	off	off	off	on
-access-webdav-xml	off	off	off	on
-access-webmail	on	on	on	on

2.1.4. Extra parameters when authentication is enabled

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

2.1.5. Return value

0 on success

>0 on failure

2.1.6. Mandatory parameters

contextid {adminuser adminpass} username displayname givenname surname password email

2.1.7. Command output

On success:

user <userid> in context <contextid> created

On failure:

user in context <contextid> could not be created: <reason from server>

2.1.8. Example

```
root@oxhe~# /opt/open-xchange/sbin/createuser -c 123 -u jd -d "john doe" -g John -s Doe -p userpw -e
jd@example.com
```

```
user 3 in context 123 created
```

2.2. deleteuser

deleteuser is the tool to delete a user in a given context. If you delete a user the public folder entries of this user are transferred to the admin user. All other data are deleted.

2.2.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <integer></code>	The id of the context
<code>-i,--userid <integer></code>	Id of the user
<code>-u,--username <string></code>	Username of the user

2.2.2. Extra parameters when authentication is enabled

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

2.2.3. Return value

0 on success

>0 on failure

2.2.4. Mandatory parameters

`contextid {adminuser adminpass} (userid or username)`

2.2.5. Command output

On success:

user <userid> in context <contextid> deleted

On failure:

user <userid> in context <contextid> could not be deleted: <reason from server>

2.2.6. Example

```
root@oxhe~# /opt/open-xchange/deleteuser -c 123 -i 3
```

```
user 3 in context 123 deleted
```

2.3. listuser

listuser is the tool to list and search for users.

2.3.1. Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove all newlines (\n) from output
-c,--contextid <integer>	The id of the context
-s,--searchpattern <string>	Search/List pattern, default “*”
--csv	Command output as csv

2.3.2. Extra parameters when authentication is enabled

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

2.3.3. Return value

0 on success

>0 on failure

2.3.4. Mandatory parameters

contextid adminuser adminpass

2.3.5. Command output

Standard output (only a subset of available attributes are printed also only disabled modules):

```
id enabled imapServer smtpserver language Webdav WebdavXml
3 true localhost localhost en_US false false
```

csv output:

```
PasswordMech2String,Enabled,Username,PrimaryEmail,Sur_name,Given_name,Birthday,Anniversary,Branches,Business_category,Postal_code_business,State_business, Street_business,Telephone_callback,City_home,Commercial_register,Country_home,Company,Department,Display_name,Email2,Email3,EmployeeType,Fax_business,Fax_home,Fax_other,ImapServer, ImapLogin,SmtpServer,Instant_messenger1,Instant_messenger2,Telephone_ip,Telephone_isdn,Mail_folder_drafts_name,Mail_folder_sent_name,Mail_folder_spam_name,Mail_folder_trash_name, Manager_name,Marital_status,Cellular_telephone1,Cellular_telephone2,Nickname,Number_of_children>Note,Number_of_employee,Telephone_pager>Password_expired,Telephone_assistant, Telephone_business1,Telephone_business2,Telephone_car,Telephone_company,Telephone_home1,Telephone_home2,Telephone_other,Postal_code_home,Profession,Telephone_radio,Room_number, Sales_volume,City_other,Country_other,Middle_name,Postal_code_other,State_other,Street_other,Spouse_name,State_home,Street_home,Suffix,Tax_id,Telephone_telex,Timezone,Telephone_ttytd, Url,Userfield01,Userfield02,Userfield03,Userfield04,Userfield05,Userfield06,Userfield07,Userfield08,Userfield09,Userfield10,Userfield11,Userfield12,Userfield13,Userfield14,Userfield15, Userfield16,Userfield17,Userfield18,Userfield19,Userfield20,City_business,Country_business,Assistant_name,Telephone_primary,Email1>PasswordMech,Mail_folder_confirmed_ham_name,Mail_folder_confirmed_spam_name,Spam_filter_enabled,Id,Info,Title,Position>Password,Aliases,Categories,access-calendar,access-contacts,access-delegate-tasks,access-edit-public-folder, access-forum,access-ical,access-infos-
```

tore,access-pinboard-write,access-projects,access-read-create-shared-Folders,access-rss-
 bookmarks,access-rss-portal,access-syncml,access-tasks, access-vcard,access-webdav,access-
 webdav-xml,access-webmail

2.3.6. Example

```

root@oxhe:~# /opt/open-xchange/sbin/listuser -c 6
ld Name  Displayname Email
2 admin  admin    admin@example.com
3 holger Holger   holger@example.com
  
```

2.4. changeuser

The **changeuser** tool allows to modify attributes of an existing user in a given context. The displayname must be unique in one context.

2.4.1. Parameters

-h,--help	Prints a help text
--environment	Show info about commandline environment
--nonl	Remove all newlines (\n) from output
--extendedoptions	Set this if you want to see all options, use this instead of help option
-c,--contextid <integer>	The id of the context
-i,--userid <integer>	Id of the user
-u,--username <string>	Username of the user
-d,--displayname <string>	Display name of the user
-g,--givenname <string>	Given name for the user
-s,--surname <string>	Surname of the user
-p,--password <string>	Password for the user
-e,--email <string>	Primary mail address
-l,--language <lang>	Language for the user (de_DE,en_US, fr_FR)
-t,--timezone <timezone>	Timezone of the user (Europe/Berlin)
-x,--department <string>	Department of the user
-z,--company <string>	Company of the user
-a,--aliases <string>	E-Mail aliases of the user, separated by ","
--access-combination-name <access-combination-name>	Access combination name
--addguipreferences <addguipreferences>	Add a GUI setting (key=value)
--removeguipreferences <removeguipreferences>	Remove a GUI setting

For the GUI preferences please also see http://www.open-xchange.com/wiki/index.php?title=Gui_path

2.4.2. Extended options

--email1 <string>	Email1
--mailenabled <booleanvalue >	Mailenabled
--birthday <datevalue>	Birthday
--anniversary <datevalue>	Anniversary

--branches <string>	Branches
--business_category <string>	Business_category
--postal_code_business <string>	Postal_code_business
--state_business <string>	State_business
--street_business <string>	Street_business
--telephone_callback <string>	Telephone_callback
--city_home <string>	City_home
--commercial_register <string>	Commercial_register
--country_home <string>	Country_home
--email2 <string>	Email2
--email3 <string>	Email3
--employeetype <string>	EmployeeType
--fax_business <string>	Fax_business
--fax_home <string>	Fax_home
--fax_other <string>	Fax_other
--imapservice <string>	ImapServer
--imaplogin <string>	ImapLogin
--smtpserver <string>	SmtptServer
--instant_messenger1 <string>	Instant_messenger1
--instant_messenger2 <string>	Instant_messenger2
--telephone_ip <string>	Telephone_ip
--telephone_isdn <string>	Telephone_isdn
--mail_folder_drafts_name <string>	Mail_folder_drafts_name
--mail_folder_sent_name <string>	Mail_folder_sent_name
--mail_folder_spam_name <string>	Mail_folder_spam_name
--mail_folder_trash_name <string>	Mail_folder_trash_name
--manager_name <string>	Manager_name
--marital_status <string>	Marital_status
--cellular_telephone1 <string>	Cellular_telephone1
--cellular_telephone2 <string>	Cellular_telephone2
--info <string>	Info
--nickname <string>	Nickname
--number_of_children <string>	Number_of_children
--note <string>	Note
--number_of_employee <string>	Number_of_employee
--telephone_pager <string>	Telephone_pager
--password_expired <booleanvalue>	Password_expired
--telephone_assistant <string>	Telephone_assistant
--telephone_business1 <string>	Telephone_business1
--telephone_business2 <string>	Telephone_business2
--telephone_car <string>	Telephone_car
--telephone_company <string>	Telephone_company
--telephone_home1 <string>	Telephone_home1
--telephone_home2 <string>	Telephone_home2
--telephone_other <string>	Telephone_other
--postal_code_home <string>	Postal_code_home
--profession <string>	Profession
--telephone_radio <string>	Telephone_radio
--room_number <string>	Room_number
--sales_volume <string>	Sales_volume

--city_other <string>	City_other
--country_other <string>	Country_other
--middle_name <string>	Middle_name
--postal_code_other <string>	Postal_code_other
--state_other <string>	State_other
--street_other <string>	Street_other
--spouse_name <string>	Spouse_name
--state_home <string>	State_home
--street_home <string>	Street_home
--suffix <string>	Suffix
--tax_id <string>	Tax_id
--telephone_telex <string>	Telephone_telex
--telephone_ttyddd <string>	Telephone_ttyddd
--url <string>	Url
--userfield01 <string>	Userfield01
--userfield02 <string>	Userfield02
--userfield03 <string>	Userfield03
--userfield04 <string>	Userfield04
--userfield05 <string>	Userfield05
--userfield06 <string>	Userfield06
--userfield07 <string>	Userfield07
--userfield08 <string>	Userfield08
--userfield09 <string>	Userfield09
--userfield10 <string>	Userfield10
--userfield11 <string>	Userfield11
--userfield12 <string>	Userfield12
--userfield13 <string>	Userfield13
--userfield14 <string>	Userfield14
--userfield15 <string>	Userfield15
--userfield16 <string>	Userfield16
--userfield17 <string>	Userfield17
--userfield18 <string>	Userfield18
--userfield19 <string>	Userfield19
--userfield20 <string>	Userfield20
--city_business <string>	City_business
--country_business <string>	Country_business
--assistant_name <string>	Assistant_name
--telephone_primary <string>	Telephone_primary
--categories <string>	Categories
--mail_folder_confirmed_ham_name <string>	Mail_folder_confirmed_ham_name
--mail_folder_confirmed_spam_name <string>	Mail_folder_confirmed_spam_name
--gui_spam_filter_capabilities_enabled <booleanvalue>	GUI_Spam_filter_capabilities_enabled
--defaultsenderaddress<string>	DefaultSenderAddress
--title <string>	Title
--position <string>	Position
--access-calendar <on/off>	Calendar module (Default is off)
--access-contacts <on/off>	Contact module access (Default is on)
--access-delegate-tasks <on/off>	Delegate tasks access (Default is off)

--access-edit-public-folder <on/off>	Edit public folder access (Default is off)
--access-forum <on/off>	Forum module access (Default is off)
--access-ical <on/off>	Ical module access (Default is off)
--access-infostore <on/off>	Infostore module access (Default is off)
--access-pinboard-write <on/off>	Pinboard write access (Default is off)
--access-projects <on/off>	Project module access (Default is off)
--access-read-create-shared-Folders <on/off>	Read create shared folder access (Default is off)
--access-rss-bookmarks <on/off>	RSS bookmarks access (Default is off)
--access-rss-portal <on/off>	RSS portal access (Default is off)
--access-syncml <on/off>	Syncml access (Default is off)
--access-tasks <on/off>	Tasks access (Default is off)
--access-vcard <on/off>	Vcard access (Default is off)
--access-webdav <on/off>	Webdav access (Default is off)
--access-webdav-xml <on/off>	Webdav-Xml access (Default is off)
--access-webmail <on/off>	Webmail access (Default is on)

2.4.3. Access changes for existing users

Changes to module access must be done for all users in a given context. On downgrade i. e., to revoke former given access, the data for objects will still be present in the database and on the filestore but is not visible to the customer any more. Please note that only the specified modules are changed. That is why it is required to explicitly turn modules off. A list of packages and the required module configuration is provided in the section called "Package access configuration".

2.4.4. Extra parameters when authentication is enabled

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

2.4.5. Return value

0 on success

>0 on failure

2.4.6. Mandatory parameters

contextid {adminuser adminpass} (userid or username) and at minimum one attribute to change

primaryMail, Email1 and defaultSenderAddress must be present in set of aliases i. e., whenever you want to change one of

```
--email
--email1
--defaultsenderaddress
```

you MUST take care, that the address you want to set is already contained in the aliases of the user.

So when user has aliases: foo, bar and you want to change email to anotheraddr, you must add anotheraddr to the aliases, first.

If needed, this can be done with one commandline call, e.g.:

```
/changeuser -A oxadmin -P secret -c 666 -i 4 -e anotheraddr -a foo,bar,anotheraddr
```

2.4.7. Command output

On success:

```
user <userid> in <contextid> changed
```

On failure:

```
user <userid> in <contextid> could not be changed: <reason from server>
```

2.4.8. Example

```
root@oxhe~# changeuser -c 123 -i 3 -p newpwd
```

```
user 3 in context 123 changed
```

Chapter 3. Group management

3.1. creategroup

`creategroup` is the tool to create a new group in a given context. Groups are created with no group members when no `userid(s)` are supplied with the parameter `-a`.

3.1.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <integer></code>	The id of the contex
<code>-n,--name <string></code>	The group name
<code>-d,--displayname <string></code>	The displayname for the group
<code>-a,--addmembers <userid(s)></code>	List of members to add to the group separated by ","

3.1.2. Extra parameters when authentication is enabled

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

3.1.3. Return value

0 on success
>0 on failure

3.1.4. Mandatory parameters

`contextid {adminuser adminpass} name displayname`

3.1.5. Command output

On success:

`group <groupid> in context <contextid> created`

On failure:

`group in context <contextid> could not be created: <reason from server>`

3.1.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/creategroup -c 123 -n "sales" -d "Sales Department"
```

```
group 4 in context 123 created
```

3.2. deletegroup

deletegroup is the tool to delete a group in a given context. There is no need to remove the group members before.

3.2.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-i,--groupid <groupid></code>	The id or the name of the group
<code>-n,--name <name></code>	The group name

3.2.2. Extra parameters when authentication is enabled

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

3.2.3. Return value

0 on success

>0 on failure

3.2.4. Mandatory parameters

`contextid {adminuser adminpass} (groupid or name)`

3.2.5. Command output

On success:

`group <groupid> in context <contextid> deleted`

On failure:

`group <groupid> in context <contextid> could not be deleted: <reason from server>`

3.2.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/deletegroup -c 123 -n sales
```

```
group 4 in context 123 deleted
```

3.3. listgroup

listgroup is the tool to list and search for groups in a given context

3.3.1. Parameters

<code>-h,--help</code>	Prints a help text
------------------------	--------------------

<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <integer></code>	The id of the context
<code>-s,--searchpattern <string></code>	Search/List pattern, default “*”
<code>--csv</code>	command output as csv

3.3.2. Extra parameters when authentication is enabled

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

3.3.3. Return value

0 on success

>0 on failure

3.3.4. Mandatory parameters

`contextid {adminuser adminpass}`

3.3.5. Command output

Standard output:

```
id name displayname members
3 users "all users" "2,4,5,8"
```

csv output:

```
id,name,displayname,email,members
```

3.3.6. Example

```
root@oxhe~# listgroup -c 123
```

```
id name displayname members
3 users "all users" "2,4,5,8"
```

3.4. changegroup

`changegroup` is the tool to change a group in a given context.

3.4.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <contextid></code>	The id of the context
<code>-i,--groupid <groupid></code>	The id or the name of the group
<code>-n,--name <string></code>	The group name

<code>-d,--displayname <string></code>	The displayname for the Group
<code>-a,--addmembers <userid(s)></code>	List of members to add to group, separated by ","
<code>-r,--removemembers <userid(s)></code>	List of members to be removed from group, separated by ","

3.4.2. Extra parameters when authentication is enabled

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

3.4.3. Return value

0 on success

>0 on failure

3.4.4. Mandatory parameters

`contextid {adminuser adminpass} (groupid or name) and at minimum one parameter for an attribute to change`

3.4.5. Command output

On success:

`group <groupid> in context <contextid> changed`

On failure:

`group <groupid> in context <contextid> could not be changed: <reason from server>`

3.4.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/changegroup -c 123 -i 5 -d "new groupname"
```

```
group 5 in context 123 changed
```

Chapter 4. Resource management

4.1. createresource

The `createresource` tool allows to create a new resource within a given context.

4.1.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <string></code>	The id of the context
<code>-n,--name <string></code>	The resource name
<code>-d,--displayname <string></code>	The resource display name
<code>-a,--available <true/false></code>	Toggle resource availability
<code>-D,--description <string></code>	Description of this resource
<code>-e,--email <string></code>	E-Mail of this resource

4.1.2. Extra parameters when authentication is enabled

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

4.1.3. Return value

0 on success

>0 on failure

4.1.4. Mandatory parameters

`contextid {adminuser adminpass} name displayname email`

4.1.5. Command output

On success:

`resource <resourceid> in context <contextid> created`

On failure:

`resource in context <contextid> could not be created: <reason from server>`

4.1.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/createresource -c 123 -n "laptop" -d "Super laptop" -D "laptop for rent" -e "laptop@example.com"
```

```
resource 6 in context 123 created
```

4.2. deleteresource

The `deleteresource` tool allows to delete a resource within a given context.

4.2.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <integer></code>	The id of the context
<code>-i,--resourceid <integer></code>	Id of this resource
<code>-n,--name <string></code>	The resource name

4.2.2. Extra parameters when authentication is enabled

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

4.2.3. Return value

0 on success

>0 on failure

4.2.4. Mandatory parameters

`contextid {adminuser adminpass} (name or resourceid)`

4.2.5. Command output

On success:

`resource <resourceid> in context <contextid> deleted`

On failure:

`resource <resourceid> in context <contextid> could not be deleted: <reason from server>`

4.2.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/deleteresource -c 123 -i 6
```

```
resource 6 in context 123 deleted
```

4.3. listresource

The `listresource` tool allows to list and search for resources within a given context.

4.3.1. Parameters

<code>-h,--help</code>	Prints a help text
------------------------	--------------------

<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <integer></code>	The id of the context
<code>--csv</code>	Format output as csv
<code>-s,--searchpattern <string></code>	The search pattern which is used for listing

4.3.2. Extra parameters when authentication is enabled

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

4.3.3. Return value

0 on success

>0 on failure

4.3.4. Mandatory parameters

`contextid {adminuser adminpass}`

4.3.5. Command output

Standard output:

```
id name displayname description email available
6 laptop "Super Laptop" "laptop for rent" laptop@example.com true
```

csv output:

```
id,name,displayname,email,available
```

4.3.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/listresource -c 123
```

```
id name displayname description email available
6 laptop "Super Laptop" "laptop for rent" laptop@example.com true
```

4.4. changeresource

The `changeresource` tool allows to change a resource within a given context.

4.4.1. Parameters

<code>-h,--help</code>	Prints a help text
<code>--environment</code>	Show info about commandline environment
<code>--nonl</code>	Remove all newlines (<code>\n</code>) from output
<code>-c,--contextid <integer></code>	The id of the context
<code>-i,--resourceid <integer></code>	Id of this resource
<code>-n,--name <string></code>	The resource name

-d,--displayname <string>	The resource display name
-a,--available <true/false>	Toggle resource availability
-D,--description <string>	Description of this resource
-e,--email <string>	Email of this resource

4.4.2. Extra parameters when authentication is enabled

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

4.4.3. Return value

0 on success

>0 on failure

4.4.4. Mandatory parameters

contextid {adminuser adminpass} (resourceid or name) and at least one attribute to change

4.4.5. Command output

On success:

resource <resourceid> in context <contextid> changed

On failure:

resource <resourceid> in context <contextid> could not be changed: <reason from server>

4.4.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/changeresource -c 123 -i 6 -D "old Laptop"
```

```
resource 6 in context 123 changed
```

Chapter 5. Data management

5.1. deleteinvisible

The `deleteinvisible` command line tool can be used to remove not visible data inside a context. Before calling this CLT the module access for all users in the context should be changed to the according permissions. This CLT uses the changed permissions to determine what data is not visible for the context users anymore. Changing permissions can be done by either changing the module access for every single user in the context through the CLT `changeuser` or by the CLT for changing the module access for an entire context. Be careful because the deleted data is lost completely and can not be restored anymore.

5.1.1. Parameters

<code>-h,--help</code>	Prints a help text for this CLT
<code>--environment</code>	Shows information about environment variables
<code>--nonl</code>	Removes all newlines (<code>\n</code>) from output
<code>-c,--contextid <contextid></code>	The unique identifier of the context that invisible data should be deleted.
<code>-N,--contextname <contextname></code>	A name that is assigned to the context.

Either the unique context identifier must be given or a name that is assigned to it.

5.1.2. Extra parameters

<code>-A,--adminuser <adminuser></code>	Master administrator user name that is defined for managing contexts.
<code>-P,--adminpass <adminpass></code>	Master administrator user password.

5.1.3. Return value

0 on success
>0 on failure

5.1.4. Mandatory parameters

`(contextid or contextname) {adminuser adminpass}`

5.1.5. Command output

On success:

context <contextid or contextname> invisible data deleted

On failure:

context <contextid or contextname> invisible data could not be deleted: <reason from server>

5.1.6. Example

```
root@oxhe~# /opt/open-xchange/sbin/deleteinvisible -N default
```

```
context default invisible data deleted
```

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 AUTHORIZED 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 Documentation.
- 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 Licensed 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 Agreement.
- 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 of 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 ENJOYMENT 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 AGREEMENT. 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 Licensed 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