OX App Suite Engineering Services Plugins Technical Documentation for
1.7.1

2022-01-28

Copyright notice

Contents

1 General Information

1.1 Warnings

⚠️ **Warning**
This preview delivery is not for productive usage and not affected by service-level agreements.

⚠️ **Warning**
Images included in following pages have been attached as a generic visual reference for the theme and should not be considered as the final aspect when installed on production environment. Actual aspect will change based on components/plugins enabled and their configuration.

⚠️ **Warning**
It is mandatory to restart the **open-xchange** service on all middleware nodes after performing the update.

⚠️ **Warning**
When updating only custom packages, it may be necessary to invalidate the browser cache to make the changes visible. An invalidation of the cache will be done automatically when updating OX core UI packages at the same time, but not if you are updating only custom UI plug-ins. In the latter case, please call the following command on all Apache nodes with the same value for <timestamp> :

```
/opt/open-xchange/sbin/touch-appsuite --timestamp=<timestamp>
```

⚠️ **Warning**
UI packages with themes need to generate CSS after installation. This will be done automatically when the service is restarted but if you wish to not perform a service restart, you must call the following command on each node:

```
/opt/open-xchange/appsuite/share/update-themes.sh
```

⚠️ **Warning**
Custom configuration or template files are potentially not updated automatically. After the update, please always check for files with a **.dpkg-new** or **.rpmnew** suffix and merge the changes manually. Configuration file changes are listed in their own respective section below but don't include changes to template files. For details about all the configuration files and templates shipped as part of this delivery, please read the relevant section of each package.

1.2 Delivery Comment

This delivery was requested with following comment:

Plugins 1.7.1 Preview Delivery

1.3 Install Package Repository

This delivery is part of a restricted preview software repository:

https://software.open-xchange.com/components/plugins/preview/1.7.1/DebianStretch
https://software.open-xchange.com/components/plugins/preview/1.7.1/DebianBuster
https://software.open-xchange.com/components/plugins/preview/1.7.1/RHEL7

1.4 Build Dependencies

This delivery was build with following dependencies:

6

```
AppSuite:node-10,frontend-7.10.6-rev5,backend-7.10.6-rev6
```

1.5 Notice

ⓘ Info

Some configurations can be changed without restarting the service, please call following command for getting a list of supported settings.

```
/opt/open-xchange/sbin/listreloadables
```

Please use following command to enable capable and changed configurations on a running system.

```
/opt/open-xchange/sbin/reloadconfiguration
```

1.6 Release Announcements

We created a dedicated mailing list for on-prem customers using the OX App Suite Engineering Services Plugins. You should subscribe to this mailing list here (https://lists.open-xchange.com/mailman/listinfo/plugins-announce) if you are using one of those plugins in your installation and want to get relevant updates.

2 Alternative Login Screen

Package(s)	open-xchange-appsuite-alternative-login-screen, open-xchange-appsuite-alternative-login-screen-static
Available since	1.6.1-rev3

2.1 Description

The current core implementation of an alternative login screen implemented in 7.10.4 still contain some missing features/customizations. This plugin implements these missing features:

- Background image.
- Button "Learn More".
- Rename "User name" field to "Email".

In the future, the background image should be hosted somewhere without installing it via a package. The other features should be fixed in the core implementation.

From 1.6.5-rev2, a new feature has been added to this plugin to enrich to "Forgot your password?" link with the current value of the User name field in the login form. It should only be active it the parameter enhancedPasswordLink in configured to `true` in `as-config.yml` (A sample configuration for this feature below)

2.2 Configuration

Most of the login screen is configured via `as-config.yml` as described in Login Page Customization. This plugin only adds a single setting `loginPage/emailLabel` to add translations for the "Email" label. Translations for `de_DE`, `en_US`, `en_GB`, `es_ES`, `es_MX`, `fr_CA`, `fr_FR` and `it_IT` are already included in the plugin and don't need to be provided (except to change them).

A full configuration example is provided below. The only potentially necessary change is adding more translations, depending on the installed/supported languages. The `informationMessage` translations differ only in the text inside the `<p></p>` tags, the text before the `</a>` closing tag, and the URLs. The only special character inside the translations is the apostrophe ('), which needs to be doubled. Line breaks and any following indentation get converted to single spaces, so too long texts can be split into multiple lines.

```
1   ---
2   default:
3       host: all
4       loginPage:
5           backgroundImage: '
6               url(apps/io.ox.alt-login/background.png) left/50% no-repeat,
7               radial-gradient(at 33% 50%, #3b6aad, #1f3f6b)
8               !important'
9           loginBox: right
10          emailLabel:
11              de_AT: E-Mail
12              de_CH: E-Mail
13          informationMessage:
14              de_DE: '
15                  <p>Haben Sie Fragen zu OX App Suite?</p>
16                  <a rel="noopener" target="_blank"
17                      class="btn btn-primary form-control"
18                      href="https://oxappsuite.io/de">Mehr erfahren…</a>'
19              en_US: '
20                  <p>Do you have questions about OX App Suite?</p>
21                  <a rel="noopener" target="_blank"
22                      class="btn btn-primary form-control"
23                      href="https://oxappsuite.io/en">Learn More…</a>'
24              es_ES: '
25                  <p>¿Tienes alguna pregunta sobre OX App Suite?</p>
26                  <a rel="noopener" target="_blank"
27                      class="btn btn-primary form-control"
28                      href="https://oxappsuite.io/es">Más información…</a>'
29              es_MX: '
30                  <p>¿Tienes alguna pregunta sobre OX App Suite?</p>
31                  <a rel="noopener" target="_blank"
32                      class="btn btn-primary form-control"
33                      href="https://oxappsuite.io/es">Más información…</a>'
34              fr_CA: '
35                  <p>Avez-vous des questions sur OX App Suite?</p>
36                  <a rel="noopener" target="_blank"
37                      class="btn btn-primary form-control"
38                      href="https://oxappsuite.io/fr">Plus d''informations …</a>'
39              fr_FR: '
40                  <p>Avez-vous des questions sur OX App Suite?</p>
41                  <a rel="noopener" target="_blank"
42                      class="btn btn-primary form-control"
43                      href="https://oxappsuite.io/fr">Plus d''informations …</a>'
44              it_IT: '
45                  <p>Hai domande su OX App Suite?</p>
46                  <a rel="noopener" target="_blank"
47                      class="btn btn-primary form-control"
48                      href="https://oxappsuite.io/it">Per saperne di più…</a>'
49          customCss: '#io-ox-information-message {
50                  align-items: center;
51                  flex-direction: column;
52                  position: relative;
53                  top: 20px;
54              }
55              #io-ox-information-message a {
56                  margin: 20px 0;
57                  width: 175px;
58              }'
59          footer:
60              sorting: "$spacer,$copyright,Version: $version,$spacer"
```

2.3   Configuration for enriched "Forgot your password?" link feature

This feature is enabled when a settings `enhancedPasswordLink` is set to `true` in `as-config.yml` file.
It checks if there's a placeholder `%email%` in configured `forgotPassword` url in `as-config` file:

- if placeholder exists, it will be replaced with value from email field whenever it changed
- if no placeholder found, it will append a parameter `user={value from email field}` at the
  end of `forgotPassword` url, whenever the email field value changes

On start (when email field is empty), if a placeholder exists, it will be replaced with empty string:

2.3.1   Example as-config.yml entry

```
1  default:
2      enhancedPasswordLink: true
3      forgotPassword: "http://www.example.com/forgot-password?user=%email%"
```

3   Anti Phishing Framework

Bundle Identifier	com.openexchange.plugins.antiphishing, com.openexchange.plugins.antiphishing.json, com.openexchange.plugins.antiphishing.connector.vadesecure
Package(s)	open-xchange-plugins-antiphishing, open-xchange-plugins-antiphishing-vadesecure
Required capabilities	none
Available since	1.6.4-rev2

The anti-phishing implementations supports a "connector" framework. Using this model, any number of custom anti-phishing connector implementations can register with the connector framework. The decision on which implementation to use is determined at runtime via a connector identifier and config-cascade. As such, the connector implementation can be configured on the Global, Brand, Context or User level. However, brand will be the most likely scenario.

The base package `open-xchange-plugins-antiphishing` provides the **AntiPhishingInterface** service which acts as a container for all registered **AntiPhishingConnector** services and as an adapter between the **PluginsAntiPhishingActionfactory** servlet and each individual AntiPhishingConnector instance. During bundle activation a ServiceTracker is registered to track, collect and map all registered AntiPhishingConnector service instances by brand. When invoked, the **AntiPhishingInterface** looks up an appropriate **AntiPhishingConnector**, if one exists, the request is forwarded to the specific connector.

3.1   Framework Configuration

The configuration needs to be done within `plugins-antiphishing.properties`.

```
1   # Setting to control the used connector for a specific user
2   # This setting is config-cascade aware to support different implementations for each user.
3   # Default is <none> which means that the feature is disabled for a user
4   # To enable vade secure com.openexchange.plugins.antiphishing.connector=
        plugins_antiphishing_vadesecure
5   com.openexchange.plugins.antiphishing.connector=
6
7   # Setting to enable/disable the antiphishing capability
8   # This setting is config-cascade aware to support different implementations for each user.
9   # Default is false which means that the feature is disabled for a user
10  com.openexchange.plugins.antiphishing.enabled=false
11
12  # Setting to enable/disable the antiphishing mta_capability
13  # If true, the user has the ability to choose antiphishing at the MTA level
14  # This setting is config-cascade aware to support different implementations for each user.
15  # Default is false which means that the feature is disabled for a user
16  com.openexchange.plugins.antiphishing.mta_capability=false
17
18  # Setting to enable/disable the antiphishing at the mta level
19  # If true, an antiphishing check will take place at the MTA level
20  # This setting is config-cascade aware to support different implementations for each user.
21  # Additionally, this property can be set by the user in the UI
22  # Default is false which means that the feature is disabled for a user
```

```
23  com.openexchange.plugins.antiphishing.mta_antiphishing=false
```

3.2 Anti Phishing API

The Anti-phishing servlet is registered at http://localhost/api/plugins/antiphishing and supports following actions:

Action	Description
`config`	Returns a boolean result telling whether MTA level anti-phishing is supported or not. If it is supported, the UI makes a followup request to determine the configured status of the MTA level anti-phishing.
`get`	Returns true if MTA level anti-phishing is enabled for a given user, false if not.
`update`	Enables/disables the MTA level anti-phishing, returns the new status.
`linkcheck`	Calls the connector framework to make the anti-phishing call on a list of one or more URIs and/or mailto addresses. Returns SUCESS or ERROR with an appropriate message.

3.2.1 Example Config Request

```
1  curl 'http://localhost/appsuite/api/plugins/antiphishing?action=config&session=
       df33d98d72914f1c96b26d6827deee3e'
```

Example Config Response

```
1  {"data":{"STATUS":"OK","mta_capability":true}}
```

3.2.2 Example Get Request

```
1  curl 'http://localhost/appsuite/api/plugins/antiphishing?action=get&session=
       df33d98d72914f1c96b26d6827deee3e'
```

Example Get Response

```
1  {"data":{"STATUS":"OK","mta":false}}
```

3.2.3 Example Update Request

```
1  curl 'http://localhost/appsuite/api/plugins/antiphishing?action=update&session=
       df33d98d72914f1c96b26d6827deee3e' -X 'PUT' --data-binary '{"mta":true}'
```

Example Update Response

```
1  {"data":{"STATUS":"OK","mta":true}}
```

3.2.4 Example Linkcheck Request

```
1  curl 'http://localhost/appsuite/api/plugins/antiphishing?action=linkcheck&session=
       df33d98d72914f1c96b26d6827deee3e' -X 'PUT' --data-binary '{"mta":true}'
```

Example Linkcheck Response

```
1  {"data":{"STATUS":"PHISHING"}}
```

3.3 The Anti Phishing Connectors

The anti-phishing framework requires an anti-phishing connector implementation.

3.3.1 The VadeSecure Connector

The package `open-xchange-plugins-antiphishing-vadesecure` provides the concrete implementation of a **VadeSecureAntiPhishingConnector** and registers it as a **AntiPhishingConnector** service and comes with a `plugins-antiphishing-vadesecure.properties`

```
1   # The customer name as provided by VadeSecure; required to access Phishing API
2   # Default: NONE
3   # Config-cascade aware: true
4   # Lean: false
5   com.openexchange.plugins.antiphishing.vadesecure.name.passcrypt=<Customer name provided by
        VadeSecure>
6
7   # The customer license provided by VadeSecure; required to access Phishing API
8   # Default: NONE
9   # Config-cascade aware: true
10  # Lean: false
11  com.openexchange.plugins.antiphishing.vadesecure.license.passcrypt=<Customer license
        provided by VadeSecure>
12
13  # Setting to change the VadeSecure IsItPhishing API URL
14  # Default: https://iip.eu.vadesecure.com/api/v2/url
15  # Config-cascade aware: true
16  # Lean: true
17  com.openexchange.plugins.antiphishing.vadesecure.phishing_url=https://iip.eu.vadesecure.
        com/api/v2/url
18
19  # Setting to change the VadeSecure connector identifier referenced in plugins-antiphishing
        .properties / com.openexchange.plugins.antiphishing.connector
20  # Default: "plugins_antiphishing_vadesecure"
21  # Config-cascade aware: true
22  # Lean: true
23  com.openexchange.plugins.antiphishing.vadesecure.identifier=
        plugins_antiphishing_vadesecure
24
25  # If set to true, the URL will always be crawled and analyzed, even if it can trigger
        collateral damages (such as unsubscribing a user, canceling an order, etc.).
26  # If set to false, the service checks whether the URL may cause collateral damage to the
        end user (unsubscribe, order confirmation, etc.). If so, the URL is not crawled and
        NOT_EXPLORED is returned in the response.
27  # Default: false
28  # Config-cascade aware: true
29  # Lean: true
30  com.openexchange.plugins.antiphishing.vadesecure.force=false
31
32  # Vade Secure IsItPhishing Smart mode enables URL anonymization. Typically, this is meant
        to
33  # replace any unique-ID like tokens in a URL by random characters, to prevent side effects
         when crawling certain URLs, which if visited, could trigger unwanted actions:
        unsubscription, cancelation, etc.
34  # Set to true to enable the smart mode. If set to false, URLs will be crawled in the way
        they were originally provided. If argument randomization fails, the URL is not crawled
         and NOT_EXPLORED is returned.# Default: "plugins_antiphishing_vadesecure"
35  # NOTE: Vade Secure strongly recommends enabling the smart parameter to true, so that the
        API can trigger token anonymization, to try and prevent any collateral damages.
36  # Default: false
37  # Config-cascade aware: true
38  # Lean: true
39  com.openexchange.plugins.antiphishing.vadesecure.smart=true
40
```

```
41  # Timeout in milliseconds, with a minimum value of 1000. Once timeout is reached, TIMEOUT
        response is returned.
42  # Default: 3000
43  # Config-cascade aware: true
44  # Lean: true
45  com.openexchange.plugins.antiphishing.vadesecure.timeout=3000
```

3.3.1.1 Custom OXaaS LDAP Extension The cloud-plugins component provides a `open-xchange-cloudplugins-antiphishing-vadesecure-ldap` package to extent the VadeSecure connector with customized OXaaS LDAP support. Please check the external documentation for further details.

4 Anti Phishing UI

Package(s)	`open-xchange-appsuite-antiphishing`
Available since	1.6.4-rev2

4.1 Prerequisites

- Requires provider service to validate URLs for phishing attempts (e.g. Vade's isitphishing.ai).

4.2 Description

Phishing attempts are common in email as an attempt to deceive users. Services exist to validate URLs as a means of determining if a URL is "safe" to visit for a user. This plugin utilizes such a service upon link clicking in an email to protect users from following mal-intended links, and warning them if a URL is considered suspicious. If an anti-phishing service is configured at the incoming MTA level, this plugin is not needed as its functionality would be redundant. This is an appsuite-only solution which can be installed and used when no other option is available.
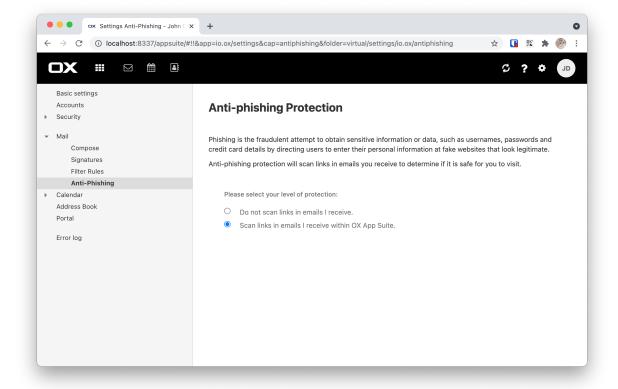
Figure 1: anti phishing settings
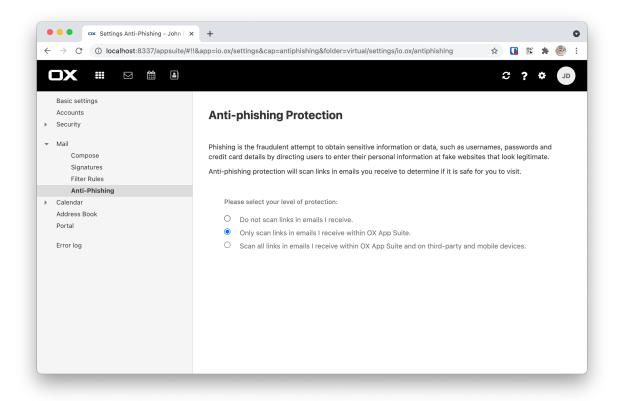
Figure 2: anti phishing settings with mobile
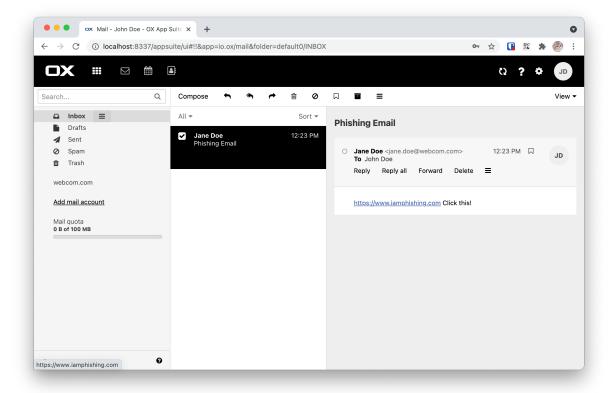
Figure 3: phishing example email
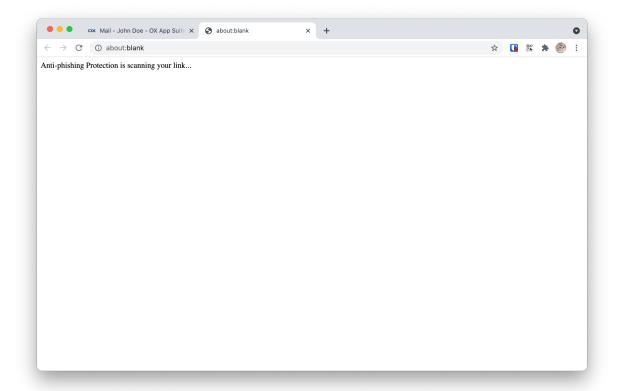
Figure 4: opening phishing link

If checked link is found to be insecure then dialog below is presented to user

Figure 5: insecure link found

If url to be checked is syntactically incorrect (browser is not able to follow it) then dialog below is presented to user

Figure 6: bad link found

4.3   Anti Phishing Providers

The only current implementation supports Vade's isitphishing.ai API. However, the Middleware service is constructed so that another adapter could be used instead.. The open-xchange-plugins-

antiphishing-vadesecure package contains all vendor-specific code for the adapter and serves as a reference implementation for another adapter.

4.4 Configuration

antiphishing.properties

```
1   # Middleware endpoint API location for use by the UI
2   io.ox/antiphishing//apiModule = plugins/antiphishing
3   io.ox/antiphishing//mode =
```

antiphishing.yml

```
1   io.ox/antiphishing//mode:
2     protected: false
```

4.5 Internationalization Support

Supported languages: `cs_CZ, de_DE, es_MX, fr_FR, ja_JP, ro_RO, sv_SE, zh_TW, da_DK, en_GB, fi_FI, hu_HU, lv_LV, pl_PL, ru_RU, tr_TR, de_DE, es_ES, fr_CA, it_IT, nl_NL, pt_BR, sk_SK, zh_CN`

5 Appcontrol Dropdown Links

Package(s)	open-xchange-appsuite-appcontrol-dropdown-links
Required capabilities	com.openexchange.capability.io-ox-appcontrol-dropdown-links=true
Available since	1.4.3-rev1

The package allows to add new links in appcontrol dropdown of App Suite. The settings dropdown has changed from 7.10.4 to 7.10.5. This dropdown was splitted to three dropdowns: `account`, `settings` and `help`. To identify to which dropdown the link should be added, a new configuration should be provided for each link with the name **ext_point**. Possible values for this settings are:

- `io.ox/core/appcontrol/right/account` for account drodown
- `io.ox/core/appcontrol/right/settings` for settings dropdown
- `io.ox/core/appcontrol/right/help` for help dropdown

 Info

The dropdown will stay working as for 7.10.4, If no **ext_point** configuration is provided, the configuration will be considered for 7.10.4, and thus, the link will be added to dropdown settings.

5.1 Trusted Identity Enrichment

In conjunction with Trusted Identity Link plugin, external links configured with trustedidentity will be enriched with a token generated using Trusted Identity plugin. The token is appended at the end of the URL in format `&token=token` value. If an error occurred in token creation, a notification error is shown to the user.

5.2 Configuration

The links to add are defined by configuration in the `io-ox-appcontrol-dropdown-links.properties` file.

```
1   #### Sample with External Link
2   ## Enabled link
3   # io.ox.appcontrol.dropdown//links/link1/enabled = false
4   # io.ox.appcontrol.dropdown//links/link1/ext_point = io.ox/core/appcontrol/right/help
5   ## Required capability (defaults to none)
6   # io.ox.appcontrol.dropdown//links/link1/capability =
7   ## Default text
8   # io.ox.appcontrol.dropdown//links/link1/text/default = Privacy policy
9   ## Text for en_EN
10  # io.ox.appcontrol.dropdown//links/link1/text/en_EN = Privacy policy
11  ## Text for de_DE
12  # io.ox.appcontrol.dropdown//links/link1/text/de_DE = Datenschutzerklärung
13  ## Link action : external_link, ox_application
14  # io.ox.appcontrol.dropdown//links/link1/action_type = external_link
15  ## Default link for external link
16  # io.ox.appcontrol.dropdown//links/link1/href/default = blank.html
17  ## en_EN link for external link
18  # io.ox.appcontrol.dropdown//links/link1/href/en_EN = blank.html?LANG=en
19  ## de_DE link for external link
20  # io.ox.appcontrol.dropdown//links/link1/href/de_DE = blank.html?LANG=de
21  ## Extension point index of the link (default to last)
22  # io.ox.appcontrol.dropdown//links/link1/index = 500
23  ## Show a divider before
24  # io.ox.appcontrol.dropdown//links/link1/divider_before = true
25  ## Show a divider after
26  # io.ox.appcontrol.dropdown//links/link1/divider_after = false
27
28  #### Sample with OX application
29  # io.ox.appcontrol.dropdown//links/link2/enabled = false
30  # io.ox.appcontrol.dropdown//links/link2/ext_point = io.ox/core/appcontrol/right/settings
31  # io.ox.appcontrol.dropdown//links/link2/capability =
32  # io.ox.appcontrol.dropdown//links/link2/text/default = Settings
33  # io.ox.appcontrol.dropdown//links/link2/text/en_EN = Settings
34  # io.ox.appcontrol.dropdown//links/link2/text/de_DE = Einstellungen
35  # io.ox.appcontrol.dropdown//links/link2/action_type = ox_application
36  # io.ox.appcontrol.dropdown//links/link2/href = io.ox/settings/main
37  # io.ox.appcontrol.dropdown//links/link2/index = 200
38  # io.ox.appcontrol.dropdown//links/link2/divider_before = true
39  # io.ox.appcontrol.dropdown//links/link2/divider_after = false
40
41  ## Sample trusted identity link
42  #io.ox.appcontrol.dropdown//links/link4/enabled = true
43  #io.ox.appcontrol.dropdown//links/link4/trustedidentity= true
44  #io.ox.appcontrol.dropdown//links/link4/text/default = My Profile
45  #io.ox.appcontrol.dropdown//links/link4/ext_point = io.ox/core/appcontrol/right/settings
46  #io.ox.appcontrol.dropdown//links/link4/action_type = external_link
47  #io.ox.appcontrol.dropdown//links/link4/href/default = blank.html?token=
```

6   Block Allow List Middleware

Bundle Identifier	com.openexchange.plugins.blackwhitelist, com.openexchange.plugins.blackwhitelist.connector.sieve, com.openexchange.plugins.blackwhitelist.clt, com.openexchange.plugins.blackwhitelist.json
Package(s)	open-xchange-plugins-blackwhitelist, open-xchange-plugins-blackwhitelist-sieve
Required capabilities	none
Available since	1.2.1-rev2

The middleware component consists of a registry and possible available plugins that are registered and can be assigned to a user. The registry can be installed with the package open-xchange-plugins-blackwhitelist. This package holds the JSON layer and also computes the available capabilities for the user.

6.1 Connectors

6.1.1 Sieve Connector

The package `open-xchange-plugins-blackwhitelist-sieve` povides a middleware component that is responsible for the blackwhitelist handling on a sieve level. The configuration can be set on a config-cascade aware level for better control. Even though the name is blackwhitelist, the package only supports the blacklist part of the interface. This connector can be configured via the `plugins-blacklist-sieve.properties` file.

```
1   # Identifier of this blackwhitelist connector: plugins_blackwhitelist_sieve
2   # Setting to control the rulename to be set and checked as a antispam value inside the
        sieve rules
3   # Default: Blacklist
4   # Config-cascade aware: true
5   # Lean: true
6   com.openexchange.plugins.blackwhitelist.connector.sieve.rulename=Blacklist
7
8   # Setting to control wether the blacklisted mails should be moved to SPAM or deleted
        directly
9   # If set to true, mails are moved to SPAM
10  # If set to false, mails are deleted
11  # Default: true
12  # Config-cascade aware: true
13  # Lean: true
14  com.openexchange.plugins.blackwhitelist.connector.sieve.moveToSpam=true
15
16  # Setting to check if memory backed test System should be started
17  # This connector is identified by plugins_blwl_test
18  # Default: false
19  com.openexchange.plugins.blackwhitelist.connector.sieve.test=false
```

6.1.2 LDAP Connector

This connector is part of the **cloud-plugins** component and shipped via the package `open-xchange-cloudplugins-blackwhitelist-ldap`.

6.2 Commandline Tools

The following commandline tools are available:

Tools	Description
`listblackwhitelist`	List black and whitelist entries of a user
`searchblackwhitelist`	Search for black and whitelist entries of a user
`deleteblackwhitelist`	Delete entries for black and whitelist of user
`addblackwhitelist`	Add entries for black and whitelist of user

Please use the `--help` parameter to see further details like e.g.:

```
1   ./addblackwhitelist --help
2   usage: addblackwhitelist
3    -A,--adminuser <arg>        Admin username
4    -c,--context <arg>          A valid context identifier
5    -e,--entry <arg>            The entry to be added to the list.
6    -h,--help                   Prints a help text
7    -i,--userid <arg>           A valid user identifier
8    -P,--adminpass <arg>        Admin password
9    -p,--port <arg>             The optional RMI port (default:1099)
10      --responsetimeout <arg>  The optional response timeout in seconds
11                               when reading data from server (default: 0s;
12                               infinite)
13   -s,--server <arg>           The optional RMI server (default: localhost)
14   -t,--type <arg>             The type, can either be blacklist or
```

```
15                                      whitelist.
```

6.3   Configuration

Possible connectors to be used in `com.openexchange.plugins.blackwhitelist.connector` are:

Identifier	Description
`plugins_blackwhitelist_sieve`	The sieve connector is shipped by the **plugins** package `open-xchange-plugins-blackwhitelist-sieve.`
`cloudplugins_blackwhitelist_ldap`	The customized OXaaS LDAP connected shipped by the **cloud-plugins** package `open-xchange-cloudplugins-blackwhitelist-ldap.`

This plugin needs to be configured via the `plugins-blackwhitelist.properties` file:

```
1   # Setting to control the used connector for a specific user
2   # This setting is config-cascade aware to support different implementations for each user.
3   # Default is <none> which means that the feature is disabled for a user
4   com.openexchange.plugins.blackwhitelist.connector=
5
6   # Setting to check if memory backed test System should be started
7   # This connector is identified by plugins_blwl_test
8   # Default: false
9   com.openexchange.plugins.blackwhitelist.test=false
```

7   Block Allow List UI

Package(s)	`open-xchange-appsuite-blackwhitelist`
Required capabilities	`com.openexchange.capability.blacklist=true` `com.openexchange.capability.whitelist=true`
Additionally capabiliies for domain support	`com.openexchange.capability.blacklist-domain=true` `com.openexchange.capability.whitelist-domain=true`
Available since	1.2.1-rev2

The UI plugin will provide the user with additional links the context menu, in the mail toolbar and in mail details to put mail addresses or domains on their **Blocklist** or **Allowlist**. These links will have a low priority and will be displayed in the context menu, in the burger menus of the mail toolbar and mail details. Once the user clicks on one of the links, a dialog will open where the user has to confirm that the addresses or the domain(s) of the selected mails are supposed to be put on the according list.
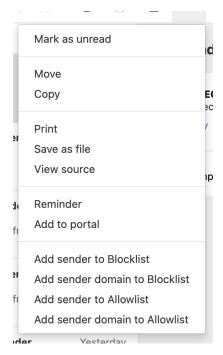
Figure 7: menu additions
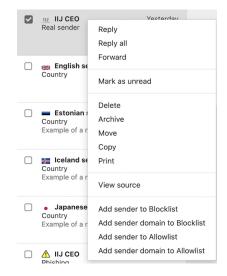
Figure 8: context-menu additions
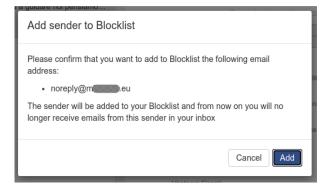
Figure 9: menu confirmation

19

Figure 10: menu confirmation
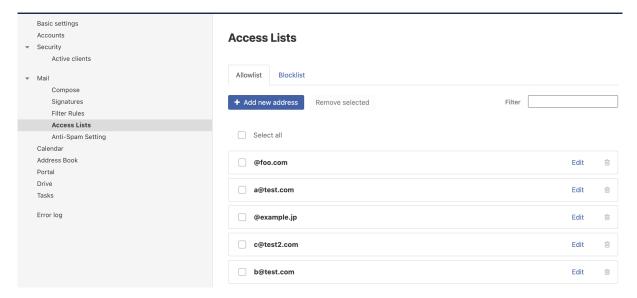
Figure 11: access lists settings

The user's own address cannot be put on either list and an error will be thrown if the user tries to add it. Other errors might occur if the user tries to add a duplicate to the given list (if configured to not allow duplicates), if the maximum number of addresses is reached or of any of the addresses is already on the other list if black- and whitelist are enabled. A domain to block or to allow should be provided **@domain.tld** format.

Figure 12: add new

Figure 13: example error
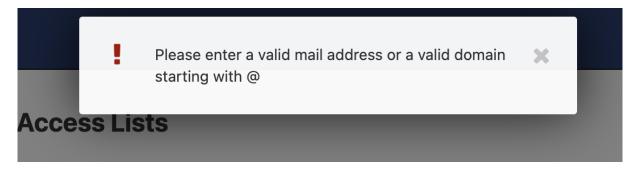
Figure 14: example error

7.1 Configuration

Following settings are available in the `/opt/open-xchange/etc/settings/blackwhitelist.properties` file:

```
1  ##
2  # Blackwhitelist settings
3  #
4  # Max number of addressed on the list
5  io.ox/mail//blackwhitelist/maxAddresses = 250
6  # Allow users to add duplicates
7  io.ox/mail//blackwhitelist/allowDuplicates = false
8  # Validate if only valid mail addresses are on the list
9  io.ox/mail//blackwhitelist/validateAddresses = false
10 # Show search box for blacklist
11 io.ox/mail//blackwhitelist/searchable = true
12 # Show delete selected button and checkboxes
13 io.ox/mail//blackwhitelist/showDeleteButton = true
```

Following settings are available in the `/opt/open-xchange/etc/meta/blackwhitelist.yml` file:

```
1  io.ox/mail//blackwhitelist/maxAddresses:
2      protected: false
3  io.ox/mail//blackwhitelist/allowDuplicates:
4      protected: false
5  io.ox/mail//blackwhitelist/validateAddresses:
6      protected: false
7  io.ox/mail//blackwhitelist/searchable:
8      protected: false
9  io.ox/mail//blackwhitelist/showDeleteButton:
10     protected: false
```

8 Contact Whitelist Sync

Bundle Identifier	com.openexchange.plugins.contacts.whitelist,
	com.openexchange.plugins.contacts.whitelist.migration,
	com.openexchange.plugins.contacts.whitelist.migration.clt,
	com.openexchange.plugins.contacts.whitelist.rdb

Package(s)	`open-xchange-plugins-contact-whitelist-sync`
Required capabilities	none
Available since	1.4.5-rev1

The plugin provides a pluggable solution to sync contacts into an external database. This is done by hooking into contact **create**/**update**/**delete** events and forwarding those into a registry of:

```
1   com.openexchange.plugins.contacts.whitelist.service.PluginsContactWhitelistConnector
```

Those Connectors are monitored and provide an identifier which can be configured on a config-cascade level to enable the plugin. The plugin is also able to ignore the contact-collect folder if that is configured to only sync contacts that are in any user folder, but not the contact-collect folder. In the current version a SQL connector is provided.

8.1   Configuration

To enable the plugin, an admin has to set the following property to a currently supported value:

```
1   com.openexchange.plugins.contacts.whitelist.connector
```

As of now, this is only `rdb`. In later versions, `ldap` or something else might be supported. All of the following `/opt/open-xchange/etc/plugins-contacts-whitelist.properties` properties are **config-cascade** aware:

```
1   # This setting enables or disables special handling for the ContactCollectionFolder
2   # If set to true, the contactCollectFolder is ignored and contacts in this folder
3   # are not added to the whitelist. Contacts moved to this folder are also removed from the
         whitelist
4   # If set to false, the contactCollectFolder is handled like any other folder.
5   # config-cascade aware
6   # Default: true
7   com.openexchange.plugins.contacts.whitelist.ignoreContactCollectFolder=true
8
9   # This setting is used to set the connector for the contact sync.
10  # Currently available options are:
11  #  <not-set> (this will disable the sync for the user)
12  #  rdb
13  # Default: <not-set>
14  com.openexchange.plugins.contacts.whitelist.connector=
```

The rdb component can also be configured on a **config-cascade** level. First, a pool has to be enabled. This is done by using the SQL Client Library which is also part of the plugins repository. In addition, the rdb layer supports two strategies, one beeing **normal** and **tombstone**.

Mode	Create contact event	Update contact event	Delete contact event
`normal`	New contact mails are written into the database table.	Contacts in the database are read, missing ones are removed, new mails are added.	All mails of that contactId are removed.
`tombstone`	New contact mails are written into the database table where the current timestamp is added to the `updatedAtColumnName`.	Contacts in the database are read. Missing ones are not removed but updated with the current timestamp in the `deletedAtColumnName`. All current mails are updated with the current timestamp in the `updatedAtColumnName`.	All mails of that contactId are read. All mails are updated with the current timestamp in the `deletedAtColumnName`.

Furthermore, an admin can define the different table and column names used by the plugin via `/opt/open-xchange/etc/plugins-contacts-whitelist-rdb.properties`:

```
1  # Pool to be used
2  com.openexchange.plugins.contacts.whitelist.rdb.pool=contact-whitelist-pool
3
4  # normal or tombstone
5  com.openexchange.plugins.contacts.whitelist.rdb.strategy=normal
6
7  # table name
8  com.openexchange.plugins.contacts.whitelist.rdb.tableName=senderwl
9
10 # Name of the column used for the primary mail
11 com.openexchange.plugins.contacts.whitelist.rdb.primaryAddressColumnName=rcpt
12
13 # Name of the column used for the contact mails
14 com.openexchange.plugins.contacts.whitelist.rdb.contactMailColumnName=sender
15
16 # Name of the column used for the individual contactIds
17 com.openexchange.plugins.contacts.whitelist.rdb.contactIdColumnName=contactid
18
19 # Name of the deleted_at column if tombstone is enabled
20 com.openexchange.plugins.contacts.whitelist.rdb.tombstone.deletedAtColumnName=deleted_at
21
22 # Name of the updated_at column if tombstone is enabled
23 com.openexchange.plugins.contacts.whitelist.rdb.tombstone.updatedAtColumnName=updated_at
```

It is further possible to define a migration strategy at login time which will be executed by a Login-Handler via `/opt/open-xchange/etc/plugins-contacts-whitelist-migration.properties`:

```
1  # Defines the strategy of the automatic migration
2  # Can be either
3  #    <not-set> which disables the automatic migration
4  #    once
5  #    time:<timeinmillis>
6  # Default: <not-set>
7  #
8  # Examples
9  # If sync should happen once a day:
10 # com.openexchange.plugins.contacts.whitelist.migration.strategy=time:86400000
11 # If sync should happen once a week
12 # com.openexchange.plugins.contacts.whitelist.migration.strategy=time:604800000
13 com.openexchange.plugins.contacts.whitelist.migration.strategy=
14
15 # Setting, if a warning should appear in the logs, if a user has more than configured
       contacts in one folder.
16 # Default: 10000
17 com.openexchange.plugins.contacts.whitelist.migration.warningSize=10000
```

9 Dumpster Trash Recovery

Package(s)	open-xchange-appsuite-dumpster
Required capabilities	com.openexchange.capability.dumpster=true
Available since	1.4.2-rev1

Dumpster is a UI component which utilizes the Lazy Expunge feature of Dovecot to allow a user to recover deleted and removed email items prior to their final disposal. As the behavior of the Lazy Expunge feature is not generally counted against a user's quota and is automatically flushed periodically, it is seen as a "last resort" for email recovery after a user has already moved an item to the "Trash" folder and then cleared the "Trash". Through this self-service approach, providers value the potential for fewer support calls after users have unintentionally deleted emails and wish to recover them.

9.1 Prerequisites

Requires an installed and fully-configured Lazy Expunge plugin for the Dovecot backend prior to installation and configuration.

9.2 Usage

Users can select **Recover Deleted Items** from the context menu of their **Trash** folder. A dialog will appear which contains recently-deleted emails (if any) which have been emptied from trash. From there, the user can select any mail or mails in the dialog and move them to the folder of their choice. Once moved, emails are no longer scheduled from deletion and appear in the folder chosen by the user.
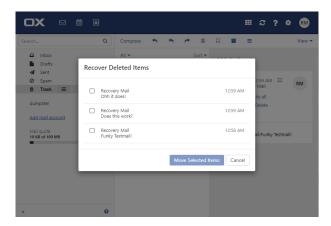
Figure 15: dumpster recover

9.3 Configuration

Following settings are available in the `/opt/open-xchange/etc/settings/dumpster.properties` file:

```
1  ##
2  # Dumpster Settings
3  #
4
5  # Folder in Dovecot desinated as the "Lazy Expunge" folder
6  io.ox/mail//dumpster/folder = default0/DUMPSTER
```

9.4 Changes to Core Functionality

In order to prevent the display of the hidden **DUMPSTER** folder, the folder tree display logic was forked from core to include a filter based on the folder names:

- `drawMyFolders` in `io.ox/core/folder/extensions`

9.5 Internationalization Support

Supported languages: `cs_CZ, da_DK, de_DE, en_GB, es_ES, es_MX, fi_FI, fr_CA, fr_FR, hu_HU, it_IT, ja_JP, lv_LV, nl_NL, pl_PL, pt_BR, ro_RO, ru_RU, sk_SK, sv_SE, tr_TR, zh_CN, zh_TW`

10 External Content Popup

Package(s)	open-xchange-appsuite-external-content-popup
Required capabilities	com.openexchange.capability.externalcontentpopup=true
Available since	1.3.8-rev1

The plugin provides an easy way to integrate external content into a popup displaying an iframe when the user logs in. Additionally, the customer has the option to define a introductory step (firstStep) that can display HTML configured on the server. The plugin uses a generation attempt to enable the customer to display new versions of the popup, with new content e.g., to the user and is configurable by user language.
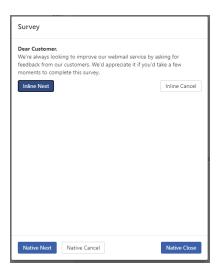
Figure 16: external content popup

10.1   First Step

The first step of the plugin can be defined if the customer wants to use some introductory text before displaying the iframe and it's context. The first step can use either native controls, which can be enabled / disabled via configuration, or can render it's own controls in the property:

```
1   io.ox/externalcontentpopup//popup/<OX_LANGUAGE>/firstStep/content
```

This property may contain any HTML construct and thus can be used to define custom controls. If this is done, please make sure that the provided controls have the data-action attributes defined as "next", "cancel" and "close-dialog" for the necessary action to be triggered.

10.2   Configuration

Following settings are available in the `/opt/open-xchange/etc/meta/externalcontentpopup.yml` file:

```
1   io.ox/externalcontentpopup//popup/en_US/hasSeen:
2     protected: false
```

Following settings are in the `/opt/open-xchange/etc/settings/externalcontentpopup.properties` file:

```
1    # Show popup to the user on every login, might be useful for urgent announcements, etc.
2    # Please be aware that this is a global setting that affects all users in all languages
3    io.ox/externalcontentpopup//popup/showOnEveryLogin = false
4
5    # Show the popup even on mobile devices. Disabled by default.
6    # This is a global setting that affects all users in all languages.
7    io.ox/externalcontentpopup//popup/showOnMobile = false
8
9    # Generation of the popup.
10   # Should start at 1 and increment when the user should see a new version again.
11   io.ox/externalcontentpopup//popup/en_US/generation = 1
12
13   # Content of the first step before iframe. Accepts HTML. If no first step is used, set to
```

```
        false
14  io.ox/externalcontentpopup//popup/en_US/firstStep/content = false
15
16  # Toggle if native dialog buttons should be used in the first step
17  # io.ox/externalcontentpopup//popup/en_US/firstStep/showNativeButtons = true
18
19  # Label for the (native) next button in the first step
20  # io.ox/externalcontentpopup//popup/en_US/firstStep/nextButtonLabel =
21
22  # Toggle if the user is allowed to skip the popup for the session. Popup will then be
        shown again upon next login.
23  # io.ox/externalcontentpopup//popup/en_US/firstStep/canCancel =
24
25  # Label for the (native) cancel button in the first step
26  # io.ox/externalcontentpopup//popup/en_US/firstStep/cancelButtonLabel = "Take survey later
        "
27
28  # Label for the (native) close button in the first step
29  # io.ox/externalcontentpopup//popup/en_US/firstStep/closeButtonLabel =
30
31  # Title of the popup
32  io.ox/externalcontentpopup//popup/en_US/title = Information
33
34  # Toggle whether or not to show the title
35  io.ox/externalcontentpopup//popup/en_US/showTitle = true
36
37  # Label for the close button below the iframe
38  io.ox/externalcontentpopup//popup/en_US/closeButtonLabel = Close
39
40  # Source of the iframe
41  io.ox/externalcontentpopup//popup/en_US/frame/source = index.html
42  # Optional width and height for the popup
43  #io.ox/externalcontentpopup//popup/en_US/popupWidth =
44  #io.ox/externalcontentpopup//popup/en_US/popupHeight =
```

11   GDPR Compliance

Package(s)	open-xchange-appsuite-gdpr
Required capabilities	none
Available since	1.3.5-rev3

On the 25th of May 2018 the new European privacy law call GDPR came into effect. This law makes it necessary to offer the user information about cookies used and offer an opt-in / opt-out mechanism for any cookie processing user data. The plugin consist of a settings panel as well as a little banner overlay that is shown at the bottom of App Suite's UI upon login until the user either visits the settings panel or presses a button on the overlay.

12   Group Contact Storage

Bundle Identifier	com.openexchange.plugins.contact.storage.group
Package(s)	open-xchange-plugins-contact-storage-group
Required capabilities	none
Available since	1.5.3-rev5

The Group Contact Storage enables virtual contact folders for members of internal user groups. Once installed and activated, the folders will be created dynamically for each group in a context. Via a permission entry for the represented group, these folders will be visible to those users who are themselves member of the corresponding group. Doing so, it is possible to categorize internal user contacts in structured views based on the group membership, especially in contexts with many users where the global addressbook would become too large, hence would better be hid-

den in clients. Possible use cases could be departments, offices or teams in large organizations or authorities, that can be represented as different user groups in the groupware.

12.1 Installation and Configuration

The group contact storage plugin is available through the package `open-xchange-plugins-contact-storage-group`. After installation, the storage still needs to be enabled explicitly for those contexts it should be used in by following setting the property to `true` via the config-cascade:

```
1  com.openexchange.plugins.contact.storage.group.enabled
```

Upon the next reload of the configuration, when the contact storage is first accessed in an enabled context, the group contact folders are dynamically created as needed for each group found in the context. For the system groups "All Users", "All Guests" and the "Standard Group", no folders are created of course. Additionally, it is possible to exclude further groups where no contact folder should be created for using the property:

```
1  com.openexchange.plugins.contact.storage.group.excludedGroups
```

It takes a comma-separated list of group identifiers and can also be defined through the config-cascade. Please see the `/opt/open-xchange/etc/plugins-contact-storage-group.properties` file which define those settings:

```
1   # Configures whether the group contact storage is enabled for a context or not.
2   # Default: false
3   com.openexchange.plugins.contact.storage.group.enabled=false
4
5   # Defines an optional list of those groups for which no group contact folder should
6   # be used, as a comma-separated string of the identifiers of those groups that should
7   # be excluded. The groups "All Users", "All Guests" and the "Standard Group" are
8   # always excluded.
9   # Default: <empty>
10  com.openexchange.plugins.contact.storage.group.excludedGroups=
11
12  # Defines if the display name of the groups should be used to create the folder
13  # names in the folder tree.
14  # If set to <true>, the displayname is used
15  # If set to <false>, the group name is used
16  # The Group Names are limited by the property CHECK_GROUP_UID_REGEXP
17  com.openexchange.plugins.contact.storage.group.useDisplayName=true
```

12.2 Group Folders

The group contact folders will be created below the system public folder (folder identifier 2), using the display names of the groups as folder name.

Info

If an equally named folder already exists at that location, it will be re-used implicitly, making its previous contents inaccessible as long as the plugin is enabled.

Groups with duplicate display names are skipped. The group contact folders will get two permission entries assigned: one administrative permission for the context admin, and one for the corresponding group entity, so that each member of the group will see the folder and all contained contacts, and is able to edit his "own" contact details. Fine-tuning of these inserted standard permissions can still be performed by the context administrator, however it is required that the group folder permission is not removed, otherwise it'll get re-inserted again automatically during the next initialization.

Any changes of groups within a context that has group contact folders enabled leads to a reinitialization of the mapped contact folders, so that the changes are reflected automatically. This includes new contact folders for newly created groups, updated folder names for updated group display

names, and deletions of folders when the corresponding group gets deleted. Changes of the group members will also directly lead to changes in the visibility of the corresponding group contact folder through the assigned group permission entry.

12.3 Global Address Book

Basically, it is still possible to use the default global addressbook folder in parallel. However, especially in scenarios with many users within a single context a huge global address book folder is not really useful, both from the end user's experience as well as performance-wise. Here, the group contact storage delivers an alternative solution where users rather see their peers in one or more group contact folders, e.g. representing the members of their department in a company or office location. Here, access to the global addressbook can be switched off by setting the corresponding module permission `globaladdressbookdisabled`.

Info

In order to disable the global address book for non-PIM users, a rather historic permission check needs to be disabled by setting `com.openexchange.admin.bypassAccessCombinationChecks` to `true`.

With the global address book disabled, users can still collaborate with other users in the context, even if a user contact does not appear within a visible group contact folder. E.g. it is still possible to share folders, check free/busy times or create meetings with all other users, independently of their group membership. Although not all user contacts will appear in addressbooks or during auto-complete operations, they can still be addressed directly by their mail address. The middleware will then take care and recognize that there's an internal user entity behind the mail address implicitly.

13 Imap Util Library

Bundle Identifier	`com.openexchange.util.imap`
Package(s)	`open-xchange-util-imap`
Required capabilities	none
Available since	1.3.0-rev3

This package provides a library for common IMAP operations that are not available or usable in the AppSuite middleware core. It currently only includes an IMAP authentication feature. As it is a library and can be used for many different projects, the names of the configuration properties are configurable, at least their prefix is.

13.1 Usage

A project that wants to use the library needs to register an instance of the service JavaMailImapAuthenticator with an optional OSGi property to inform the IMAP library of which property name prefix to use to look up its configuration, e.g. like this when using util-custom's ActivatorTemplate:

Example `ProjectActivator.java`

```
1
2   public final class ProjectActivator extends ActivatorTemplate {
3       @Override
4       protected void registerServices(final Registrar registrar) {
5           registrar
6           .service(JavaMailImapAuthenticator.class, properties(
7               ImapAuthenticator.CONFIG_PREFIX_PROPERTY, "com.openexchange.my.project.name.
                   imap"
8           ))
9           // ...
10      }
11  }
```

The OSGi property name to define is `ImapAuthenticator.CONFIG_PREFIX_PROPERTY`, or `config.prefix`, and defaults to `com.openexchange.imap.auth.` if not specified.

13.2 Configuration

The following configuration properties are supported:

Property	Description
`<prefix>host`	Hostname or IP address to connect to.
`<prefix>port`	Port to connect to, defaults to 143 (imap) or 993 (imaps), depending on the value of `com.openexchange.<customer>.imap.secure` being `false` or `true`, respectively.
`<prefix>secure`	Whether to use SSL/TLS (`true`) or not (`false`), defaults to `false`.
`<prefix>starttls`	Whether to use STARTTLS (when `true`, requires `com.openexchange.<customer>.imap.secure` to be set to `false`), defaults to `false`.
`<prefix>secure.protocols`	Which SSL/TLS protocols to use for the handshake, defaults to the protocols that supported by the JDK.
`<prefix>secure.ciphersuites`	Which SSL/TLS cipher suites to use for the handshake, defaults to the ones that are supported by the JDK.
`<prefix>connection.timeout.millis`	The timeout for connections to the IMAP server, in milliseconds, defaults to `4000` (4 seconds).
`<prefix>login.timeout.millis`	The timeout for logins to the IMAP server, in milliseconds, defaults to `4000` (4 seconds).

14 Ldap Client Library

Bundle Identifier	`com.openexchange.ldap.client`
Package(s)	`open-xchange-ldap-client`
Required capabilities	none
Available since	1.3.0-rev3

This package contains a library for easy, flexible and high-performance LDAP client operations. It contains and provides the open source UnboundID LDAP SDK and adds a YAML based configuration scheme on top, as well as managing pools of LDAP connections centrally for the AppSuite middleware. Bundles that need to perform LDAP operations can access the `LdapClientService` to retrieve a pool of LDAP connections by an identifier which is typically defined through a configuration property or hard-coded in the source.

The goals are:

- To have a central configuration in `/opt/open-xchange/etc/ldap-client.d/*.yaml` of all LDAP client connection pools
- To minimize the amount of code to implement in order to perform LDAP operations in custom bundles: `LdapClientService.getPoolFor("xyz").getReadPool().search(...)`
- To provide flexible configuration capabilities to accommodate most if not all scenarios (pools, read/write pools, round-robin, failover, ...)

It does not provide any API besides an internal one for other bundles and, as such, is to be understood as a service for other custom bundles. It can also be used standalone instead of in an OSGi container, for example for integration tests or for command-line tools, by using LdapClientConfig-

Parser with a YAML configuration that can come from a file, or be constructed into a string, and then invoke `.materialize()` on the resulting configuration object.

The included UnboundID LDAP SDK also contains a very useful in-memory LDAP server that can and is being used for integration tests.

14.1   Configuration

LDAP connection pools are defined in YAML files that have a filename ending in ".yml" or ".yaml" and are located under the directory `/opt/open-xchange/etc/ldap-client.d/` like e.g. `/opt/open-xchange/etc/ldap-client.d/customer-xyz.yaml`

The bundle will read all the files that are located under that directory on startup and will register for discovering changes and new files upon reload, automatically reconfiguring and replacing pools that are affected by the changes, which is why bundles that use this service should always use `LdapClientService.getPoolFor(...)` to perform LDAP operations, and not retrieve and hold an `LdapClientPool` indefinitely (at least not beyond the scope of a "transaction").

Note that configuration files may include placeholders, using the syntax `${placeholder}`, for example `${com.openexchange.customerxyz.brand}`, and those will be replaced with their corresponding property value using the `ConfigurationService`. This may be useful for usernames and passwords in the case of authenticated connection pools.

When using LDAP to authenticate using the "search-and-bind" approach (e.g. if the username is an email address that first needs to be resolved to a uid attribute to then perform a bind operation to verify the password), the best approach should be to use two connection pools: one with authenticated connections for the search (first operation), and then one with unauthenticated connections for the bind operations. The UnboundID library does provide an operation that binds and then guarantees the "un-bind" though (which is an operation that doesn't exist in LDAP and actually means performing another bind on a different user, or doing an anonymous bind (= bind on username=="" and password==""), so using a single pool for both operations is an option too.

`/opt/open-xchange/etc/ldap-client.d/ldap-client-pools.yaml.example`

```
1   # The top-level key is the identifier of the pool, which can be
2   # any string of text and is being used by the bundles and applications
3   # to access that pool configuration.
4   # Typically, those are fixed or need to be configured in the bundles
5   # that use this library.
6   #
7   # When Java Security Manager support is enabled, files that are referenced
8   # in these configuration files must be in a directory that is already
9   # whitelisted, or in a subdirectory thereof, such as
10  # /opt/open-xchange/etc/
11  #
12  # A good candidate would be something along the lines of
13  # /opt/open-xchange/etc/ldap-files/
14  #
15  # Otherwise, the filename or its directory must be put into a new .list
16  # file in the folder
17  # /opt/open-xchange/etc/security/
18  # with e.g. the following content:
19  #
20  # file:/etc/trust.jks
21  #
22  pool1:
23    trust-store:
24      # SSL: path to the JKS trust store file that contains the anchors
25      file: /etc/trust.jks
26      # SSL: indicates whether to reject certificates if the current time
27      # is outside the validity window for the certificate
28      validity: true
29    key-store:
30      # SSL: path to the JKS client key store file that contains the key
31      file: /etc/private.jks
32      # SSL: password to access the keystore and the key
```

```
33       password: foobar
34       # SSL: alias of the key to use
35       alias: key
36     # Configure a read/write pool with different settings for read operations
37     # and for write operations (i.e. different pools of LDAP servers).
38     # Here comes the part for the read operations:
39     read:
40       # Use a failover cluster of two nodes:
41       failover:
42         - ldap1.example.com
43         - ldap2.example.com
44       # Pool connection management
45       # -------------------------
46       # When creating a connection pool, you may specify an initial number of
47       # connections (pool-min) and a maximum number of connections (pool-max).
48       # The initial number of connections is the number of connections that should
49       # be immediately established and available for use when the pool is created.
50       # The maximum number of connections is the largest number of unused connections
51       # that may be available in the pool at any time.
52       # Whenever a connection is needed, whether by an attempt to check out a
53       # connection or to use one of the pool's methods to process an operation,
54       # the pool will first check to see if there is a connection that has already
55       # been established but is not currently in use, and if so then that connection
56       # will be used.
57       # If there aren't any unused connections that are already established, then
58       # the pool will determine if it has yet created the maximum number of
59       # connections, and if not then it will immediately create a new connection
60       # and use it.
61       # If the pool has already created the maximum number of connections, then the
62       # pool may wait for a period of time (as configured using 'maxWaitTimeMillis' below,
63       # which has a default value of zero to indicate that it should not wait at all)
64       # for an in-use connection to be released back to the pool.
65       # If no connection is available after the specified wait time (or there should
66       # not be any wait time), then the pool may automatically create a new connection
67       # to use if 'createIfNecessary' is true (which is the default).
68       # If it is able to successfully create a connection, then it will be used.
69       # If it cannot create a connection, or if 'createIfNecessary' is set to false,
70       # then an error will be thrown.
71       # Note that the maximum number of connections specified when creating a pool
72       # refers to the maximum number of connections that should be available for use
73       # at any given time.
74       # If 'createIfNecessary' is set to true, then there may temporarily be more
75       # active connections than the configured maximum number of connections.
76       # This can be useful during periods of heavy activity, because the pool will
77       # keep those connections established until the number of unused connections
78       # exceeds the configured maximum.
79       # If you wish to enforce a hard limit on the maximum number of connections so
80       # that there cannot be more than the configured maximum in use at any time,
81       # then set 'createIfNecessary' to false to indicate that the pool should not
82       # automatically create connections when one is needed but none are available,
83       # and you may also want to set 'maxWaitTimeMillis' to a maximum wait time to allow
84       # the pool to wait for a connection to become available rather than throwing
85       # an exception if no connections are immediately available.
86       pool-min: 10
87       pool-max: 50
88       maxConnectionAgeMillis: 30000
89       maxWaitTimeMillis: 500
90       createIfNecessary: true
91       # Specifies whether certain operations that should be retried on a newly-created
92       # connection if the initial attempt fails in a manner that indicates that the
93       # connection used to process the request may no longer be valid.
94       # Only a single retry will be attempted for any operation.
95       retryFailedOperations: true
96     # Here comes the part for the write operations:
97     write:
98       host: ldap0.example.com
99       pool-min: 1
100      pool-max: 10
101      maxConnectionAgeMillis: 60000
102      maxWaitTimeMillis: 1000
103      createIfNecessary: false
104      retryFailedOperations: false
```

```
105    # Specifies whether the pool should attempt to abandon any request for which
106    # no response is received in the maximum response timeout period:
107    abandonOnTimeout: true
108    # Specifies the maximum length of time in milliseconds that a connection attempt
109    # should be allowed to continue before giving up.
110    # A value of zero (default) indicates that there should be no connect timeout.
111    connectionTimeoutMillis: 3000
112    # Specifies the maximum length of time in milliseconds that an operation should
113    # be allowed to block while waiting for a response from the server.
114    # A value of zero indicates that there should be no timeout.
115    responseTimeoutMillis: 5000
116    # Specifies whether to use the SO_KEEPALIVE option for the underlying sockets
117    # used by associated connections.
118    keepAlive: true
119    # Specifies whether to use the TCP_NODELAY option for the underlying sockets.
120    tcpNoDelay: true
121    # Specifies whether to operate in synchronous mode, in which at most one
122    # operation may be in progress at any time on a given connection.
123    # When using asynchronous mode, a background thread takes care of multiplexing
124    # and dispatching all the operations on connections that are shared for
125    # multiple operations.
126    synchronousMode: true
127    # Specifies the length of time in milliseconds between periodic background
128    # health checks against the available connections in this pool.
129    healthCheckIntervalMillis: 120000
130    # Specifies whether associated connections should attempt to follow any
131    # referrals that they encounter.
132    followReferrals: true
133    # Specifies the maximum number of hops that a connection should take when
134    # trying to follow a referral, must be greater than zero when 'followReferrals'
135    # is true.
136    referralHopLimit: 1
137    # Specifies the maximum size in bytes for an LDAP message that a connection
138    # will attempt to read from the directory server.
139    # If it encounters an LDAP message that is larger than this size, then the
140    # connection will be terminated.
141    # Disabled when not specified or set to 0.
142    maxMessageSize: 1024
143
144  pool2:
145    # A failover pool that uses the same set of servers for read and for
146    # write operations.
147    failover:
148      - ldap0.example.com
149      - ldap1.example.com
150    pool-min: 5
151    pool-max: 20
152    trust-store:
153      file: /etc/trust.jks
154    key-store:
155      file: /etc/private.jks
156
157  pool3:
158    # A simple single-host setup
159    host: ldap.example.com
160    pool-min: 5
161    pool-max: 20
162
163  pool4:
164    # A load-balancing setup that will use a round-robin algorithm to
165    # select the server to which the connection should be established.
166    # Any number of servers may be included, and each request will
167    # attempt to retrieve a connection to the next server in the list,
168    # circling back to the beginning of the list as necessary.
169    # If a server is unavailable when an attempt is made to establish
170    # a connection to it, then the connection will be established to
171    # the next available server in the set.
172    round-robin:
173      - host: ldap1.example.com
174        port: 10389
175        responseTimeoutMillis: 5000
176      - host: ldap2.example.com
```

```
177          port: 10389
178          responseTimeoutMillis: 12000
179      pool-min: 10
180      pool-max: 50
181
182   pool5:
183      # A DNS RR setup handles the case in which a given hostname may
184      # resolve to multiplee IP addresses.
185      # Note that while a setup like this is typically referred to as
186      # "round-robin DNS", this option does not strictly require DNS (as names
187      # may be resolved through alternate mechanisms like a hosts file or an
188      # alternate name service), and it does not strictly require round-robin
189      # use of those addresses (as alternate ordering mechanisms like
190      # 'random' or 'failover' may be used).
191      dns-round-robin:
192        host: ldap.example.com
193        # The selection mode that should be used if the hostname resolves
194        # to multiple addresses.
195        # Possible values:
196        # - random: the order of addresses will be randomized for each attempt
197        # - failover: addresses will be consistently attempted in the order
198        #       they are retrieved from the name service.
199        # - round-robin: connection attempts will be made in a round-robin order
200        selection-mode: random
201        # Only use DNS if set to 'true'.
202        # If set to 'false' then the operating system's hostname resolution
203        # service will be used, which may include a hosts file.
204        only-dns: false
205        # The maximum length of time in milliseconds to cache addresses resolved
206        # from the provided hostname.
207        # Caching resolved addresses can result in better performance and can
208        # reduce the number of requests to the name service.
209        # A value that is less than or equal to zero indicates that no caching
210        # should be used.
211        cache-timeout: 1440000
212      pool-min: 5
213      pool-max: 20
214
215   pool6:
216      # A failover pool that uses the same set of servers for read and for
217      # write operations, as well as StartTLS
218      failover:
219        - ldap0.example.com
220        - ldap1.example.com
221      pool-min: 5
222      pool-max: 20
223      starttls: true
224      trust-store:
225        file: /etc/trust.jks
226      key-store:
227        file: /etc/private.jks
```

15   Login Page Footer Links

Package(s)	open-xchange-appsuite-login-links
Required capabilities	com.openexchange.capability.io-ox-login-custom-links=true
Available since	1.4.3-rev1

The package allows to add new links in login page footer between languages switcher and copyright.
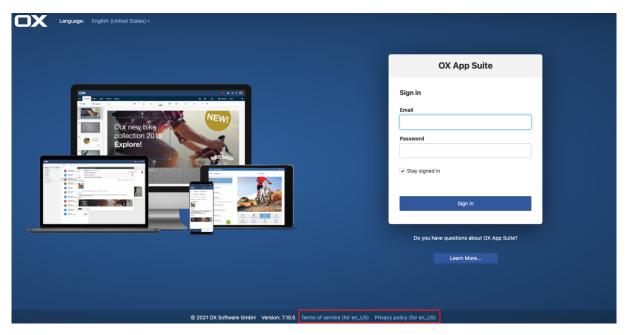
Figure 17: login links en_Us

15.1 Configuration

The links to add are defined by configuration in server configuration via `/opt/open-xchange/etc/as-config.yml` file:

```
loginLinks:
    # if 'linkColor' is not defined serverConfig 'footer.linkColor' will be used in
        loginPage.
    # if 'footer.linkColor' is not defined, the default '#94c1ec' will be used for '
        linkColor'.
    linkColor: '#cc2121'
    link1:
        text:
            default: Terms of service
            en_US: Terms of service EN
            de_DE: Terms of service DE
        href:
            default: http://www.open-xchange.com
            en_US: http://www.open-xchange.com?LANG=en
            de_DE: http://wwww.open-xchange.com?LANG=de
    link2:
        text:
            default: Privacy policy
            en_US: Privacy policy EN
            de_DE: Privacy policy DE
        href:
            default: http://www.open-xchange2.com
            en_US: http://www.open-xchange2.com?LANG=en
            de_DE: http://www.open-xchange2.com?LANG=de
```

16 Main Authentication Password

Bundle Identifier	com.openexchange.authentication.masterpassword
Package(s)	open-xchange-authentication-masterpassword
Required capabilities	none
Available since	1.3.0-rev3

⚠️ **Warning**
DO NOT USE THIS IN PRODUCTION!

This package provides an authentication implementation that verifies user passwords against a globally configured password. This implementation is only meant for migration scenarios.

16.1 Configuration

`/opt/open-xchange/etc/masterpassword-authentication.properties`

```
1   # Configuration file for the master password authentication plugin
2   #
3   # DO NOT USE IN PRODUCTION !
4   #
5
6   # The clear text password to authenticate all users.
7   # Mandatory.
8   # Example:
9   # com.openexchange.authentication.masterpassword.password=supersecret
10  com.openexchange.authentication.masterpassword.password=
11
12  # The default value for the context when it is not specified.
13  # Optional and defaults to using the "defaultcontext" mapping.
14  #com.openexchange.authentication.masterpassword.default.context=
15
16  # Whether the username portion of the login should be lowercased
17  # before being looked up in the user database.
18  # Optional and defaults to false
19  #com.openexchange.authentication.masterpassword.lowercase=false
20
21  # Whether the context name portion of the login should be lowercased
22  # before being looked up in the context database.
23  # Optional and defaults to false
24  #com.openexchange.authentication.masterpassword.lowercase.context=false
25
26  # Whether to use the complete login string as the username,
27  # e.g. login "foo@bar.com" -> user name "foo@bar.com" and
28  # context name "bar.com"
29  # Optional and defaults to false
30  #com.openexchange.authentication.masterpassword.use.full.login.info=false
31
32  # Whether to use the complete login string for the context name,
33  # e.g. login "foo@bar.com" -> context name "foo@bar.com"
34  # Optional and defaults to false
35  #com.openexchange.authentication.masterpassword.use.full.login.info.for.context=false
```

17   Mandatory Wizard

Package(s)	open-xchange-appsuite-mandatory-wizard, open-xchange-appsuite-mandatory-wizard-static
Required capabilities	com.openexchange.capability.mandatory_wizard=true
Available since	1.5.1-rev3

The plugin offers a new mandatory wizard with 6 visual steps that give a quick introduction into App Suite, include a video and offer some tutorial links. All this content is configurable for each step and language. The new wizard does not offer steps for the user's first and last name and timezone. The implementation is based on the extension point based mandatory wizard core offers since App Suite 7.10.3. Thus a customer could still use the well-known extension point framework to re-enable the name and timezone step, disable the new steps and add more steps to the wizard. When enabled, this plugin will replace the mandatory wizard implemented in the core packages.

⚠️ **Warning**
The wizard does not ask for the user's first and last name anymore, so please only enable it, if these

fields are set during provisioning.

⚠️ **Warning**

The top bar images can be only aligned to a specific core UI version. Since plugins supports multiple core versions we aligned those images only for the most recent version and introduced lower dependency limits to avoid unintended changes in the field. Please check the documentation of older versions to identify the supported release for this package.
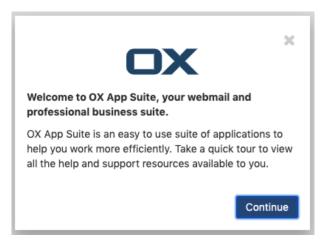
Figure 18: step 1

Figure 19: step 2
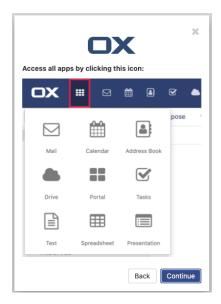
Figure 20: step 3
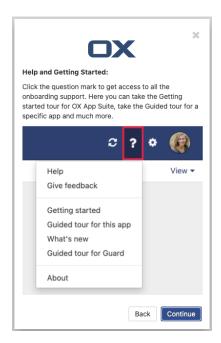
Figure 21: step 4
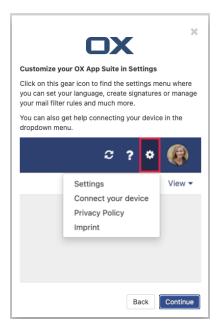
Figure 22: step 5
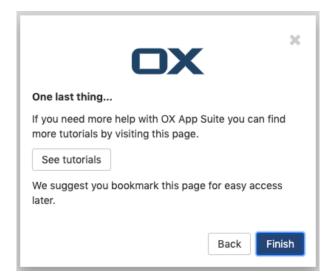
Figure 23: step 6

17.1   Configuration

`/opt/open-xchange/etc/meta/mandatorywizard.yml`

```
1   io.ox/mandatorywizard//wizardVideo:
2       protected: false
3   io.ox/mandatorywizard//step3Image:
4       protected: false
5   io.ox/mandatorywizard//step4Image:
6       protected: false
7   io.ox/mandatorywizard//step5Image:
8       protected: false
9   io.ox/mandatorywizard//step6TutorialLink:
10      protected: false
```

`/opt/open-xchange/etc/settings/mandatorywizard.properties`

```
1   # NOTE: This is ONLY a sample config for local environments.
2   # Please adjust according to your needs
3   io.ox/mandatorywizard//logo = "apps/themes/io.ox.mandatorywizard/static/ox_logo_blue.svg"
4   io.ox/mandatorywizard//wizardVideo/en_US = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-english.mp4"
5   io.ox/mandatorywizard//wizardVideo/de_DE = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-German.mp4"
6   io.ox/mandatorywizard//wizardVideo/it_IT = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-italian.mp4"
7   io.ox/mandatorywizard//wizardVideo/fr_FR = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-french.mp4"
8   io.ox/mandatorywizard//wizardVideo/es_ES = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-spanish.mp4"
9   io.ox/mandatorywizard//step3Image/en_US = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_EN.png"
10  io.ox/mandatorywizard//step3Image/de_DE = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_GER.png"
11  io.ox/mandatorywizard//step3Image/it_IT = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_IT.png"
12  io.ox/mandatorywizard//step3Image/fr_FR = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_FR.png"
13  io.ox/mandatorywizard//step3Image/es_ES = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_ES.png"
14  io.ox/mandatorywizard//step4Image/en_US = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_EN.png"
15  io.ox/mandatorywizard//step4Image/de_DE = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_GER.png"
16  io.ox/mandatorywizard//step4Image/it_IT = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_IT.png"
17  io.ox/mandatorywizard//step4Image/fr_FR = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_FR.png"
18  io.ox/mandatorywizard//step4Image/es_ES = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_ES.png"
19  io.ox/mandatorywizard//step5Image/en_US = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_EN.png"
20  io.ox/mandatorywizard//step5Image/it_IT = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_IT.png"
21  io.ox/mandatorywizard//step5Image/fr_FR = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_FR.png"
22  io.ox/mandatorywizard//step5Image/es_ES = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_ES.png"
23  io.ox/mandatorywizard//step5Image/de_DE = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_GER.png"
24  io.ox/mandatorywizard//step6TutorialLink/en_US = "https://oxappsuite.io/en/tutorials"
25  io.ox/mandatorywizard//step6TutorialLink/de_DE = "https://oxappsuite.io/de/tutorials"
26  io.ox/mandatorywizard//step6TutorialLink/fr_FR = "https://oxappsuite.io/fr/tutorials"
27  io.ox/mandatorywizard//step6TutorialLink/it_IT = "https://oxappsuite.io/it/tutorials"
28  io.ox/mandatorywizard//step6TutorialLink/es_ES = "https://oxappsuite.io/es/tutorials"
```

17.2   Internationalization Support

Supported languages: `de_DE`, `es_ES`, `fr_FR`, `it_IT`

18   Minimal API for user data

18.1   Minimal API Framework

Bundle Identifier	com.openexchange.plugins.minimal.api, openexchange.plugins.minimal.api.consent.rdb, com.openexchange.plugins.minimal.api.consent.clt, com.openexchange.plugins.minimal.api.json, com.openexchange.plugins.minimal.api.ws.security, com.openexchange.plugins.minimal.api.auth.jwt, com.openexchange.plugins.minimal.api.ws.mail, com.openexchange.plugins.minimal.api.ws.calendar

Package(s)	`open-xchange-minimal-api`, `open-xchange-minimal-api-jwt`, `open-xchange-minimal-api-mail`, `open-xchange-minimal-api-calendar`
Required capabilities	none
Available since	1.3.7-rev2

The so called minimal API is meant for a temporary access to a limited dataset of the user. Temporary, because the token is only active as long as the user session is not removed from the cluster. The API is not open by default and always needs user consent to be accessed, which is tracked by date and client name. Furthermore, the API is meant to only provide readable data. The main focus is to provide data to external clients that show this data to the user while limiting the fetched fields. A widget on a second tab/iframe could be a use-case. Using a full session for this type of access would give the external client to much control over the user data which we can't track and are not able to control afterwards. By giving the user and the admin the control over the consent status, we can always restrict access again.

18.1.1   Concept

- The access is be token based.
- The API is designed for external clients.
- These tokens are only allowed to access a specific set of data via scopes/claims.
- These tokens are bound to existing OX Sessions and are invalidated as soon as the session is not in use / is removed.
- Endpoints are Restfull whenever possible.
- Either the user or the admin are able to set consent on the token handling.

Therefore so called **claims** are introduced, which represents a defined number of endpoints:

Claim	Description
`readMail`	Enables the client to read basic mail data
`readCalendar`	Enables the client to read basic calendar data

18.1.2   Security Layer

The package `open-xchange-minimal-api-jwt` contains the security layer based on signed **JWT (JSON Web Token)**. The security handling is based on a key which is saved inside the session and put into the SessionStorage. Upon security validation, the Session is fetched from the SessionStorage and the key is validated. This package also contains a Rate limiter which limits the access to the API.

18.1.3   Authentication

For authentication tokens are required which need to be fetched by the Get Token JSON endpoint like e.g:

```
1  GET http://{server}/appsuite/api/minimal?session={sessionId}&client={clientName}&action=
      token
```

The example JSON **GET token** response for `sessionId` **03a6bd595320422288e1767222603bce** and `clientName` **example** looks like:

```
1  {"data":{"token":"eyJhbGciOiJIUzI1NiJ9.eyJzdWIiOiIwM2E2Y...LCJyZWFkTWFpbCI6dHJ1ZX0.9
      xQ6_YXDxZIZsZWAZzxLFRqgTptYERl_-Qma8OUsWY"}}
```

This example **tokenResponse** translates into the following **JWT (JSON Web Token)**:

```
1  HEADER:ALGORITHM & TOKEN TYPE
2  {
3    "alg": "HS256"
4  }
5
6  PAYLOAD:DATA
7  {
8    "sub": "03a6bd595320422288e1767222603bce",
9    "client": "example",
10   "readMail": true
11 }
12
13 VERIFY SIGNATURE
14 HMACSHA256(
15   base64UrlEncode(header) + "." +
16   base64UrlEncode(payload),
17
18 ) secret base64 encoded
```

Please see in the example JSON Web Token `PAYLOAD`:

- The `sub` key contains the initial `sessionId`.
- The `client` key contains the used `clientName`.
- The claim is shown as `readMail` provided as key.

18.1.4 User Consent

As the API enables external clients(widgets) to fetch data, access to user data without consent is forbidden by default. The consent should be done for an individual claim and a client combination. It must be possible to decline this combination again. It is possible to track such changes individually.

18.1.5 Database

The user consent state is saved in 2 Database tables, which are automatically created on the user db.

18.1.6 JSON API for Client, Consent and Token Handling

Parameter	Description
`server`	Hostname or IP of the server.
`sessionId`	The session id of the user.
`clientName`	The client name configured for the user.
`claims`	Comma separated list of claims to be set. A provided claim will be written to the database as `true`. A not set claim will be written to the database as `false`. If not set at all, the default claims of the client are used and saved as `true`. If send as ""(empty string) all claims are written to the database as `false`.

18.1.6.1 Parameter   Please use the URL prefix below for following actions:

```
1  GET http://{server}/appsuite/api/minimal?session={sessionId}&action=
```

Action URL Suffix	Descripton
`token&client={clientName}`	Request a token for a configured client.
`set&client={clientName}&claims={claims}`	Set consent for a configured client.
`getDefaultConsent&client={clientName}`	Get default consent for a configured client.

Action URL Suffix	Descripton
`get`	Get all clients.
`getByName&client={clientName}`	Get a specific client.
`reset&client={clientName}`	Reset a specific client.

Please note, resetting a specific client requires following config file setting, otherwise the request will return just a 403 error:

`/opt/open-xchange/etc/minimal-api.properties`

```
1   com.openexchange.plugins.minimal.api.{clientName}.resetallowed=true
```

18.1.6.1.1 Example Default Consent Response

```
1  {
2    "data": {
3      "client": "example",
4      "defaultConsent": true // or false
5    }
6  }
```

18.1.6.1.2 Example Client Response

```
1  {
2    "data": [
3      {
4        "client": "example",
5        "name": "Special Example Client",
6        "configuredClaims": [
7          "readMail"
8        ],
9        "configuredClaimsButNotInStorage": [
10       ],
11       "configuredAndActiveClaims": [
12         "readMail"
13       ],
14       "configuredAndDisabledClaims": [
15       ]
16     }
17   ]
18  }
```

Error Code	Description
`MIN_API-0003`	A SQL error occurred.
`MIN_API-0004`	The client is not configured.
`MIN_API-0005`	The client is not allowed because the user has not yet decided to allow access.
`MIN_API-0006`	The client is not allowed due to not allowed claims.
`MIN_API-0007`	No session found for sessionid / No key found for sessionid.
`MIN_API-0008`	The token is missing.

18.1.6.2 JSON Error Codes

18.1.7 Accessing User Data via REST API

With the base path `/minimal/` with the token of the user as an authorization header. This header needs to be send with every request:

```
1   Authorization: Bearer {token}
```

Parameter	Description
`amount`	The amount from `1` to `100`.
`folder`	The folder name as string.

18.1.7.1 Parameter

18.1.7.2 General Handling
When the underlying session is removed from the session storage, the token will not be able to access any data and also be considered invalid and an `MIN_API-0007` exception will be thrown.

18.1.7.3 Claim `readMail`
This claim is part of the `open-xchange-minimal-api-mail` package and provides following `GET` functionality:

Path	Description
`/mail/v1/quota`	Info about the current mail quota.
`/mail/v1/info`	Info about the current mail of the user which internally is handled.
`/mail/v1/stats`	Status of total and unread count in inbox.
`/mail/v1/stats/{folder}`	Status of total and unread count in `folder`.
`/mail/v1/inbox`	Details about the last 5 by date emails in `INBOX`.
`/mail/v1/inbox/{amount}`	Details about the `amount` of mails by date emails in `INBOX`.
`/mail/v1/mails/{folder}`	Details about the last 5 by date emails in `folder`.
`/mail/v1/mails/{folder}/{amount}`	Details about the last `amount` of emails in the `folder` by date.

18.1.7.3.1 Example Quota Info Response

```
1    {
2      "storageQuota": {
3        "used": -1,
4        "limit": -1
5      },
6      "messageQuota": {
7        "used": -1,
8        "limit": -1
9      }
10   }
```

18.1.7.3.2 Example Current Mail Info Response

```
1    {
2      "mail" : "string",
3      "displayName" : "string"
4    }
```

18.1.7.3.3 Example Status of Mail Folder Response

```
1    {
2      "total" : 10,
3      "unread" : 5
4    }
```

18.1.7.3.4 Example E-Mail Details Response

```
1   {
2       "amount" : 5 // the number of returned mails
3       "mails" :[
4         {
5           "id": "string",
6           "subject": "string",
7           "from": "string",
8           "seen": true,
9           "arrival": 0
10        },...
11      ]
12  }
```

18.1.7.4   Claim `readCalendar`   This claim is part of the `open-xchange-minimal-api-calendar` package and provides following `GET` functionality:

Path	Description
`/calendar/v1/events`	Details about the next 10 calendar events.
`/calendar/v1/events/{amount}`	Details about the next `amount` of calendar events.

18.1.7.4.1 Example Calendar Events Response

```
1   [
2       {
3           "location": "The Doctor Office",
4           "created": 1581457892837,
5           "description": "Need to get my ears checked.",
6           "attendees": [
7               {
8                   "uri": "mailto:john.doe@ox.com",
9                   "cn": "Doe, John",
10                  "email": "john.doe@ox.com",
11                  "entity": 3,
12                  "cuType": "INDIVIDUAL",
13                  "partStat": "ACCEPTED",
14                  "folder": "31"
15              }
16          ],
17          "modifiedBy": {
18              "uri": "mailto:john.doe@ox.com",
19              "cn": "Doe, John",
20              "email": "john.doe@ox.com",
21              "entity": 3
22          },
23          "attendeePrivileges": "DEFAULT",
24          "transp": "OPAQUE",
25          "createdBy": {
26              "uri": "mailto:john.doe@ox.com",
27              "cn": "Doe, John",
28              "email": "john.doe@ox.com",
29              "entity": 3
30          },
31          "folder": "cal://0/31",
32          "summary": "Doctor",
33          "startDate": {
34              "tzid": "Europe/Berlin",
35              "value": "20200213T210000"
36          },
37          "organizer": {
38              "uri": "mailto:john.doe@ox.com",
39              "cn": "Doe, John",
40              "email": "john.doe@ox.com",
41              "entity": 3
42          },
43          "class": "PUBLIC",
44          "lastModified": 1581542567786,
```

```
45       "uid": "88f822e7-2f98-4c8c-8ff0-96c2f6aaf265",
46       "timestamp": 1581542567786,
47       "endDate": {
48           "tzid": "Europe/Berlin",
49           "value": "20200213T213000"
50       },
51       "calendarUser": {
52           "uri": "mailto:john.doe@ox.com",
53           "cn": "Doe, John",
54           "email": "john.doe@ox.com",
55           "entity": 3
56       },
57       "id": "3",
58       "sequence": 1,
59       "flags": [
60           "organizer",
61           "accepted"
62       ]
63   }
64 ]
```

Response	Description
200	The request was successful.
400	The amount is not in range from 1 to 100.
403	The token is not alllowed to access the mail component.

18.1.7.5 HTTP Response Codes

18.1.8 Command Line Tool for Fetching the History

The package `open-xchange-minimal-api` provides the `listminimalconsenthistory` command line tool:

```
1  usage: listminimalconsenthistory
2   -A,--adminuser <arg>         Admin username
3   -c,--context <arg>           A valid context identifier
4   -e,--end-time <arg>          End time in seconds since 1970-01-01
5                                00:00:00 UTC. Only consent given before this
6                                time is shown. If not set, all feedback
7                                since -s is shown.
8   -h,--help                    Prints a help text
9   -i,--userid <arg>            A valid user identifier
10  -n,--client-name <arg>       A valid (and used) client identifier. If not
11                               set, all clients are returned
12  -p,--port <arg>              The optional RMI port (default:1099)
13  -P,--adminpass <arg>         Admin password
14     --responsetimeout <arg>   The optional response timeout in seconds
15                               when reading data from server (default: 0s;
16                               infinite)
17  -s,--server <arg>            The optional RMI server (default: localhost)
18  The command-line tool to list given consent of a user for the minimal api
```

With this tool, the admininstrator is able to fetch the given consent for a user like e.g.:

```
1  /opt/open-xchange/sbin/listminimalconsenthistory -c 1 -i 4
2  user has the following entries:
3      -Claim [client=example, claim=readMail, consent=false, time=1551883129884]
4      -Claim [client=example, claim=readMail, consent=true, time=1551883134048]
```

18.1.9 Configuration

`/opt/open-xchange/etc/minimal-api.properties`

```
1  # The capability to control whether or not the user is allowed to access the API
2  # at all
3  #
4  # Optional, default value: false
5  #
6  # Example:
7  # com.openexchange.capability.minimalapi=true
8  com.openexchange.capability.minimalapi=false
9
10 # The clients names enabled for a user
11 # Must be provided as a comma separated list
12 #
13 # Optional, default value: ""
14 #
15 # Must be provided as a comma separated list
16 #
17 # Example:
18 # com.openexchange.plugins.minimal.api.clients=exampleClient,exampleClient2
19 com.openexchange.plugins.minimal.api.clients=
20
21 # The user-friendly name of a client
22 #
23 # Optional, default value: ""
24 #
25 # If not set, the client identifier is returned.
26 #
27 # Example:
28 # com.openexchange.plugins.minimal.api.exampleClient.name=Example Preview
29 com.openexchange.plugins.minimal.api.[client].name=
30
31 # The claims assigned to a client
32 #
33 # Optional, default value: ""
34 #
35 # Must be provided as a comma separated list
36 #
37 # Example:
38 # com.openexchange.plugins.minimal.api.exampleClient.claims=readMail
39 com.openexchange.plugins.minimal.api.[client].claims=
40
41 # Default consent if user has not yet decided on first access
42 # WARNING: It might be required by law to enforce user consent
43 #
44 # Optional, default value: false
45 #
46 # Example:
47 # com.openexchange.plugins.minimal.api.exampleClient.defaultconsent=true
48 com.openexchange.plugins.minimal.api.[client].defaultconsent=false
49
50 # Maximum amount of requests per second per source IP address if the token could not be
       validated from cache
51 # May be a decimal number.
52 #
53 # Optional, default value: 1.0
54 # Optional, default for client: 5.0
55 #
56 # Example:
57 # com.openexchange.plugins.minimal.api.ratelimit.requestsPerSecond=10.0
58 # com.openexchange.plugins.minimal.api.ratelimit.exampleClient.maxRequestsPerSecond=10.0
59 com.openexchange.plugins.minimal.api.ratelimit.requestsPerSecond=1.0
60
61 # Maximal time window, in milliseconds: after a given source IP address has not accessed
62 # the minimal API, its number of requests per second rate is reset.
63 #
64 # Optional, default value: 300000
65 # Optional, default for client: 300000
66 #
67 # Example:
68 # com.openexchange.plugins.minimal.api.ratelimit.maxRateTimeWindow=60000
69 # com.openexchange.plugins.minimal.api.ratelimit.exampleClient.maxRateTimeWindow=60000
70 com.openexchange.plugins.minimal.api.ratelimit.maxRateTimeWindow=300000
```

```
71
72  # Strategy to use for reacting to the inability to access the API for a given source
73  # IP address due to surpassing the maxRequestsPerSecond rate.
74  #
75  # Format: it must be one of:
76  # * fail-fast
77  # * block
78  # * timeout:...
79  #
80  # fail-fast
81  #   if the rate limit is exceeded, the API will respond with a 401 Unauthorized
82  # block
83  #   if the rate limit is exceeded, the API will block infinitely until the rate limit
84  #   allows for another request to be performed
85  # timeout:...
86  #   block until the specified timeout is reached, after which the API responds with a
87  #   401 Unauthorized
88  #   if the timeout does not allow to get a new token in time, a 401 Unauthorized is
89  #   returned
90  #   The value after "timeout:" consists of a number followed by a time unit, examples:
91  #   - timeout:400s ---> 400 seconds
92  #   - timeout:1m ------>  1 minute
93  #   - timeout:2000ms -> 2000 milliseconds
94  #
95  # If the token could be validated and is correct, the API will not return a
96  # 401 Unauthorized but a 429 Too Many Requests instead.
97  #
98  # Optional, default value: timeout:250ms
99  # Optional, default for client: timeout:500ms
100 #
101 # Example:
102 # com.openexchange.plugins.minimal.api.ratelimit.strategy=timeout:1s
103 # com.openexchange.plugins.minimal.api.ratelimit.exampleClient.strategy=timeout:5s
104 com.openexchange.plugins.minimal.api.ratelimit.strategy=timeout:250ms
```

18.2   Minimal API App

Package(s)	`open-xchange-appsuite-minimal-api-app`
Required capabilities	`com.openexchange.capability.minimalapi=true`
Available since	1.3.7-rev2

This plugin allow to define one or more 'generic' applications which appear in app launcher and provide an iframe in which a configured url is loaded. It is possible to customize url, title and if consent is required. Please see for more details the comments within the config file.

18.2.1   Configuration

/opt/open-xchange/etc/settings/minimalapiapp.properties

```
1   ##
2   # minimal-api-app Settings
3   #
4   # generic format is following
5   #   io.ox/minimalapiapp//iframes=[{<config app 1>},{<config app 2>},{<config app3 >}, ]
6   #
7   # each configuration object must have some attributes: "id", "icon", "source", "title", "
        needsToken" explained below
8   #
9   # "id"
10  #    used to create unique name and avoid confusion. If more apps are defined their ids
        must be different
11  #
12  # "icon"
13  #    used to specify the fontawesome icon to use for application (https://fontawesome.com/
        v4.7.0/icons/)
```

```
14  #     if not specified "bullseye" is used
15  #
16  # "source"
17  #     contains url to use as source and which will be loaded inside iframe created by app.
18  #     It is possible to use predefined placeholders surrounded by {{ }} which will be
19  #     replaced at app execution time with current values.
20  #
21  #     defined placeholders are the following:
22  #     {{LANGUAGE}} -> expanded to current language in lowercase as got from locale (es: 'en
        ' or 'de' or 'it')
23  #     {{USERMAIL}} -> expanded to emailaddress NOT urlencoded (es: myaddress@myprovider.my)
24  #     {{USERMAIL:ENC}} -> as above but urlencoded (es: myaddress%40myprovider.my)
25  #     {{FIRSTNAME}} -> expanded to first name of current user
26  #     {{FIRSTNAME:ENC}} -> as above but urlencoded
27  #     {{LASTNAME}} -> expanded to last name of current user
28  #     {{LASTNAME:ENC}} -> as above but urlencoded
29  #
30  #
31  # "title"
32  #     is name to use when displaying application in launcher. Can be either a simple string
33  #     or an object
34  #
35  #     - if 'title' is a simple string, then application will use that name for each
        language, so
36  #     changing language does not change name of application
37  #
38  #     - 'title' may be configured as an object and in that case it may contain translations
        for different
39  #     languages, using language code as key (see examples below)
40  #     If there is no defined translation for current language, en_US will be used or if not
        present
41  #     hardcoded value 'Application'
42  #
43  #
44  # "needsToken"
45  #     can be either true or false and specify if before calling url, user has to gather a
        token calling
46  #     appropriate api and allow consent via ui dialog. Token will then be appended to url
47
48
49  # some examples: only one can be active at any time
50
51  # example config for placeholders:
52  #
53  # io.ox/minimalapiapp//iframes=[{id: "test1", source: "https://mywebserver.org/{{LANGUAGE
        }}/?email={{USERMAIL:ENC}}", title: "Minimal API App", "needsToken": false}]
54
55
56  # example config for simple title:
57  #
58  # io.ox/minimalapiapp//iframes=[{id: "test2", source: "https://mywebserver.org/", title: "
        Minimal API App", "needsToken": false}]
59
60  # example config for complex title:
61  #
62  # io.ox/minimalapiapp//iframes=[{id: "test3", source: "https://mywebserver.org/", title:{
        en_US:"My US app", de_DE:"My DE app", it_IT:"My IT app"}, "needsToken": false}]
63
64  # example config for multiple apps:
65  #
66  # io.ox/minimalapiapp//iframes=[{id: "test4", icon:"external-link", source: "https://
        mywebserver.org/{{LANGUAGE}}/?email={{USERMAIL:ENC}}", title:{ en_US:"My US app",
        de_DE:"My DE app", it_IT:"My IT app"}, "needsToken": false}, {id: "test5", source: "
        https://mysecondwebserver.org/?userlast={{LASTNAME:ENC}}", title:{ en_US:"My second US
         app", de_DE:"My second DE app", it_IT:"My second IT app"}, "needsToken": false}]
```

18.3   Minimal API Consent UI

Package(s)	open-xchange-appsuite-minimal-api-consent
Required capabilities	com.openexchange.capability.minimalapi=true

Available since	1.3.7-rev2

This module implements the UI consent part for the minimal API middleware component. Asking users for consent when using their data through the minimal API is a legal requirement. The module implements a popup that the user is presented with when he enters an app for the first time requesting consent for the minimal API as well as a settings panel where the user can reassess the given consent and set or withdraw it on App Suite app level. For this version we only support one client which has to be configured via `io.ox/minimalapiconsent//client=example`

18.3.1 Configuration

`/opt/open-xchange/etc/meta/minimalapi.yml`

```
1  io.ox/minimalapiconsent//client:
2      protected: false
```

`/opt/open-xchange/etc/settings/minimalapi.properties`

```
1  io.ox/minimalapiconsent//client=example
```

19 MX SPF Record Checker

19.1 MX SPF Record Checker Framework

Bundle Identifier	`com.openexchange.plugins.mx.checker,`
	`com.openexchange.plugins.mx.checker.json`
Package(s)	`open-xchange-plugins-mx-checker`
Required capabilities	none
Available since	1.6.3-rev4

This package contains an adapter framework designed to support multiple MX Checker connector implementations. Once the package is installed and configured, and app node is started, the plugins will be registered with the platform. It provides a json HTTP interface for MX Checker, and is registered at `plugins/mx-checker` and supports the action get.

- A connector is selected based on `com.openexchange.plugins.mx.checker.connector` config-cascade property.
- If a connector is found, mx checker logic is executed based on the incoming JSON request data. An appropriate HTTP response code, provided by the connector, will be returned to the web-browser.
- If a connector can't be found, a `501` HTTP response will be returned.

The package also provides a `MXCheckerConnector` service tracker which acts as the abstraction layer between the json API and each concrete connector service implementation.

19.1.1 Configuration

`/opt/open-xchange/etc/plugins-mx-checker.properties`

```
1  # Determines which connector will be used for a user
2  # This setting is config-cascade aware to support different implementations for each user.
3  # Default is <none> which means that the feature is disabled for a user
4  com.openexchange.plugins.mx.checker.connector=
```

19.2 MX SPF Record Checker Validation Banner

Bundle Identifier	`com.openexchange.plugins.mx.checker,`
	`com.openexchange.plugins.mx.checker.json`
Package(s)	`open-xchange-appsuite-mx-checker`
Required capabilities	`com.openexchange.capability.mx-checker=true`
Available since	1.6.3-rev4

A strategy to combat users contacting support due to no mail showing in their webmail experience is to validate the customer's MX records are set to the expected values to ensure inbound mail will be successful and to validate that the customer has a valid SPF record to ensure outbound has the highest likelihood of successful delivery.

Inform customers of their DNS state within App Suite with a banner above their mail display when things are incorrect, and provide a static link (configurable) to assist the user in correcting this.

This banner support 5 states:

1. **Bad MX & Bad SPF**: Display a message stating the customer may see issues with Sending and Receiving mail with an optional link to remediate.
2. **Bad MX & Good SPF**: Display a message stating the customer may see issues with Receiving mail with an optional link to remediate.
3. **Good MX & Bad SPF**: Display a message stating the customer may see issues with Sending mail with an optional link to remediate.
4. **Settings Propagating**: New accounts and accounts on certain TLDs sometimes take additional time to ensure DNS is consistent across the globe, display a message stating the customer settings are still taking effect and all mail functionality is expected within TBD hours.
5. **All settings correct**: no banner should be shown if none of the previous conditions.

By default, if the action link that takes user to a page showing how to fix his configuration issues, is not returned by the API, the banner from cases 1,2 and 3 above is not shown to the user. This behavior can be changed via setting **ignoreEmptyActionUrl** to true, in this case the banner will be shown to the user without the fix link.

To support customers from different domains, we've created a connector pattern to apply the "MX Check" based on the connector.

This package does not actually validate MX/SPF records, but relies on custom connectors.

The user has the option to hide the warning message displayed in the UI. If they click the "X" in the upper-right corner of the warning box, they will be prompted with a choice to ignore for ever, or "remind me later" (default). Choosing to ignore forever results in the error never being shown to the user again. Consequently the mx-checker script will never contact the API if the user has disabled the warning, to save bandwidth and API load. If the user chooses to "remind me later", the same behavior as above applies, except on a temporary basis. This temporary basis is defined in the configuration as the number of days to suppress the activity and message, defined by the `suppressDays` config parameter.
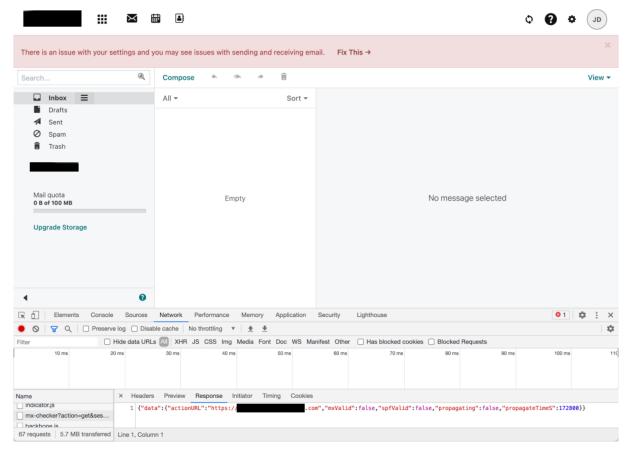
Figure 24: issue with email settings
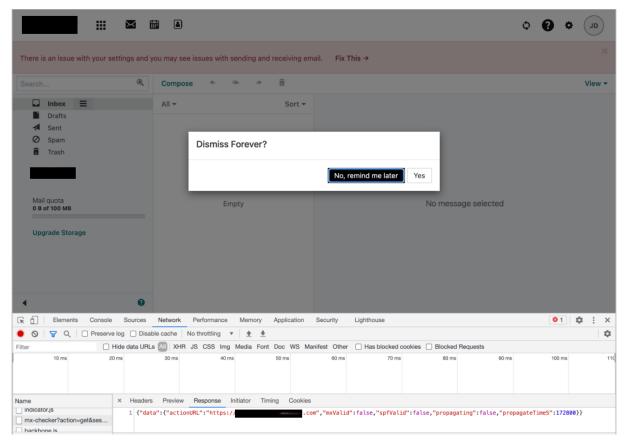
Figure 25: dialog
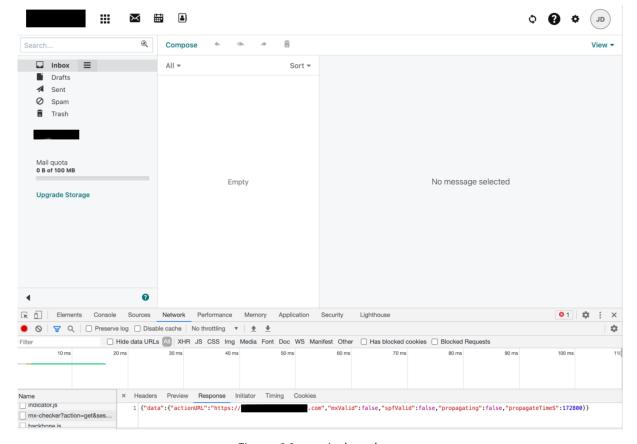
Figure 26: remind me later

19.2.1   Configuration

`/opt/open-xchange/etc/meta/mx-checker.yml`

```
1  io.ox/mx-checker//suppress:
2    protected: false
```

`/opt/open-xchange/etc/settings/mx-checker.properties`

```
1  # Module name endpoint in the middleware
2  io.ox/mx-checker//apiModule = plugins/mx-checker
3
4  # When the user actively closes and temporarily suppresses the notification, number of
       days before showing it again.
5  io.ox/mx-checker//suppressDays = 1
6
7  # Whether or not to suppress the notification to the user. `false` to show the
       notification, `true` to hide it permanently, or a timestamp indicating when it was
       temporarily hidden. User-configurable.
8  io.ox/mx-checker//suppress = false
9
10 # Ignore empty Action Url and show banner message without fix link.
11 io.ox/mx-checker//ignoreEmptyActionUrl = false
```

19.3   Internationalization Support

Supported languages: ar_AE, da_DK, de_DE, el_GR, en_US, es_ES, es_MX, fi_FI, fr_CA, fr_FR, hi_IN, id_ID, it_IT, ja_JP, ko_KR, nb_NO, nl_NL, pl_PL, pt_BR, pt_PT, ru_RU, sv_SE, th_TH, tr_TR, uk_UA, vi_VN, zh_CN, zh_TW

20   Onboarding Wizard Change Login Details

Bundle Identifier	`com.openexchange.plugins.onboarding.maillogin`
Package(s)	`open-xchange-plugins-onboarding-maillogin`
Required capabilities	none
Available since	1.3.3-rev2

This package enables the App Suite core onboarding wizard to show a different login name. The onboarding wizard displays information for users in order to configure their applications and/or devices. It essentially displays the login and protocol specific URI to use to connect. In some cases, there is a need to override the **Username** that is used by default by the wizard. For instance, if the "`<user id>@<context id>`" format is used as login attribute, the wizard will show this incorrectly as login name which is not what users can use in order to actually login.
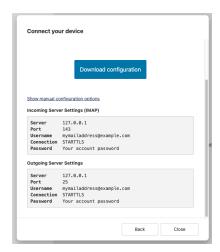
Figure 27: example wizard

This package can be configured to use various other attributes as the string of text to display as the login. Most prominently, and what is probably used in most if not all such setups, the so-called *defaultSenderAddress* (the default email address of the user).

20.0.1 Configuration (Middleware)

The configuration settings are config cascade aware and can hence be set on a per-brand, per-context or even per-user level (the latter probably not making much sense though). The plugin covers the four different onboarding protocols that are supported by core:

- CalDAV
- CardDAV
- IMAP
- SMTP

/opt/open-xchange/etc/client-onboarding-maillogin.properties

```
1   # Default value for overriding the login information displayed
2   # in the client onboarding.
3   #
4   # Possible values:
5   # email
6   #   uses the user's defaultSenderAddress
7   # attr:<name>
8   #   uses the user's attribute <name>
9   # login
10  #   uses the user's login, which is the same as if the
11  #   onboarding login was not overridden by this plugin
12  # login_name
13  #   uses the loginName attribute when possible, which is only the case
14  #   for session based logins (IMAP, SMTP) and for protocols that do not
15  #   create a session (CalDAV, CardDAV, EAS), it falls back on the login
16  #   instead
17  #
18  # This property is config cascade aware and must be set globally
19  # (in this file), and can then be overridden by context and/or by
20  # user.
21  #
22  # Note that for this feature to be enabled, one is also required
23  # to set one or more the following properties, depending on the
24  # client onboarding dialogs that need the login information to
25  # be overridden by this plugin:
26  # com.openexchange.client.onboarding.caldav.login.customsource=true
27  # com.openexchange.client.onboarding.carddav.login.customsource=true
28  # com.openexchange.client.onboarding.mail.imap.login.customsource=true
29  # com.openexchange.client.onboarding.mail.smtp.login.customsource=true
30  #
```

```
31    com.openexchange.plugins.onboarding.login=login
```

21 Send SMS via Twilio

Bundle Identifier	`com.openexchange.sms.twilio`
Package(s)	`open-xchange-sms-twilio`
Required capabilities	none
Available since	1.2.0-rev4

This package is needed to send SMS messages via twilio.

⚠️ **Warning**

The `open-xchange-sms-sipgate` package must **not** be installed.

21.1 Requirements

- An active Twilio account (`https://www.twilio.com/`).
- A suitable number of pre-provisioned Twilio long-codes and/or short-codes.

21.2 Configuration

`/opt/open-xchange/etc/twilio.properties`

```
1    # Twilio accountSID
2    com.openexchange.plugins.sms.twilio.accountSID.secret=ACCOUNT_SID
3
4    # Twilio auth token
5    com.openexchange.plugins.sms.twilio.authtoken.secret=AUTH_TOKEN
6
7    # Twilio Message Service SID
8    com.openexchange.plugins.sms.twilio.messageservicesid.secret=SERVICE_SID
9
10   # Max message length. 1600 characters is Twilio's maximum
11   com.openexchange.plugins.sms.twilio.maxlength=1600
```

22 Server Metrics

22.1 Metrics for HTTP

Bundle Identifier	`com.openexchange.metrics.http`
Package(s)	`open-xchange-metrics-http`
Required capabilities	none
Available since	1.3.6-rev1

This package contains metrics for any HTTP requests that are sent to the middleware. It is highly configurable and uses the core framework `com.openexchange.metrics`.

It supports the following features:

- Configure which information is used to construct metrics (request headers, request parameters, sessions, logins, request paths, context identifier, ...).
- Blacklist or whitelist of URL paths for which to collect metrics.
- Optional aggregation of metrics.
- Optional additional metrics for specific users.
- Never collects metrics for the Jolokia servlet (reads out the Jolokia servlet URI and keeps it from collecting metrics).

Metrics are made available through JMX and Jolokia (when enabled) to be collected by various monitoring systems. They are available under the object name:

```
1   com.openexchange.metrics;type=http
```
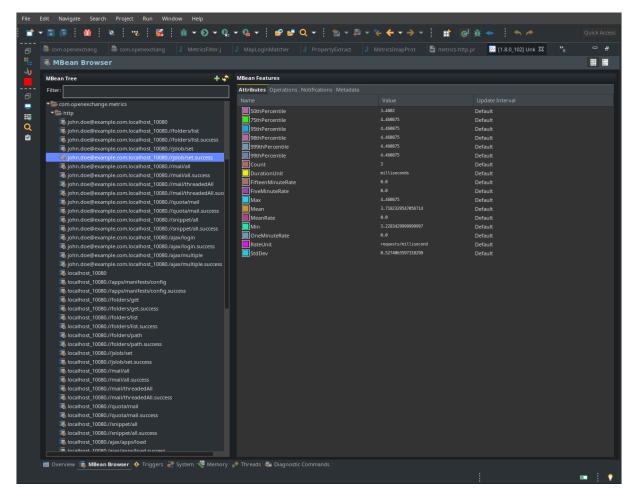

Figure 28: metrics for http

It is disabled by default for performance reasons, and must be enabled explicitly by modifying the configuration file. All configuration changes can be applied through configuration reloading, there is no need to restart.

22.1.1 Configuration

/opt/open-xchange/etc/metrics-http.properties

```
1   #
2   # The following property defines the various elements to use to compose the names of
3   # the metrics, to determine how to group them and what to see.
4   #
5   # The elements are separated by dots (".") and parsed individually, then replaced by
6   # their respective value for each inbound HTTP request to determine the name of
7   # the metric to update.
8   #
9   # Note that not all elements necessarily always result in a value as some are only
10  # present for specific types of HTTP requests, and others are optional (for example
11  # all the user information related ones that are only available when the HTTP request
12  # is authenticated or used in the context of an established Open-Xchange session).
13  # Values that are not available are skipped in the resulting name of the metric.
```

```
14  #
15  # For each component, here are the possible values to specify in this property:
16  # status
17  # ======
18  # Will be replaced by "success" or "error" depending on the result, for example:
19  # /api/rest/x/y/z -> success
20  #
21  # path
22  # ====
23  # If the HTTP is an AJAX API call, it will be replaced by "//module/action", and if not
24  # (e.g. accessing a servlet instead), it will be replaced with the servlet path.
25  #
26  # Examples:
27  # /ajax/folders?action=get&id=1,2,4 -> //folders/get
28  # /rest/api/x/y/z -------------------> /rest/api/x/y/z
29  #
30  # info
31  # ====
32  # Will be replaced with the servlet path info, i.e. the part of the URL that is behind
33  # the servlet path.
34  #
35  # Examples:
36  # /rest/api/users/john.doe@example.com -> john.doe@example.com
37  #
38  # session
39  # =======
40  # The value "session", "session_id" or "sessionid" will be replaced by the Open-Xchange
       session
41  # identifier, if applicable.
42  # For HTTP operations that are not authenticated, it will be left out.
43  #
44  # context_id
45  # ==========
46  # The value "context_id" or "cid" will be replaced by the numeric context identifier of
       the
47  # user, if applicable.
48  # For HTTP operations that are not authenticated, it will be left out.
49  #
50  # user_id
51  # =======
52  # The value "user_id" or "cid" will be replaced by the numeric user identifier of the
53  # user within the context, if applicable.
54  # For HTTP operations that are not authenticated, it will be left out.
55  #
56  # login
57  # =====
58  # The value "login" will be replaced by the login the user entered to authenticate or the
59  # user identifier provided by an SSO mechanism, if applicable.
60  # For HTTP operations that are not authenticated, it will be left out.
61  #
62  # property(module)
63  # ================
64  # Will be replaced by the AJAX API module, if applicable.
65  #
66  # property(action)
67  # ================
68  # Will be replaced by the AJAX API module action, if applicable.
69  #
70  # header(...)
71  # ===========
72  # Will be replaced by the value of an HTTP request header, the name of the header
73  # being specified between the parentheses.
74  # Note that header names are case sensitive.
75  #
76  # Example:
77  # header(Host).path -> appsuite01.example.com.//folders/list
78  #
79  # parameter(...)
80  # ==============
81  # Will be replaced by the value of an HTTP request parameter, the name of the
82  # parameter being specified between the parentheses.
83  #
```

```
 84    # Example:
 85    # header(Host).parameter(app).path -> appsuite01.example.com.io.ox/mail.//folders/list
 86    #
 87    # cookie(...)
 88    # ==========
 89    # Will be replaced by the value of a cookie present in the HTTP request, the name of the
 90    # cookie being specified between the parentheses.
 91    #
 92    # session(...)
 93    # ============
 94    # Will be replaced by the value of a parameter present in the user's Open-Xchange session,
 95    # the name of the session parameter being specified between the parentheses.
 96    #
 97    # text(...)
 98    # =========
 99    # Specifies text that will be used as-is.
100    #
101    com.openexchange.metrics.http.elements=path.status
102
103    # When aggregation is enabled (by setting this value to true), each element as configured
104    # by the property com.openexchange.metrics.http.elements will be a metric in its own right
            ,
105    # and aggregated accordingly to its path.
106    # Without aggregation, each metric is "flat".
107    #
108    # For example, with the following configuration
109    #    com.openexchange.metrics.http.elements=header(Host).path.status
110    #    com.openexchange.metrics.http.aggregation=true
111    # each element will be a metric, namely:
112    # 1. header(Host)
113    # 2. header(Host).path
114    # 3. header(Host).path.status
115    #
116    # Specifically, results will look along the lines of the following, each being a metric:
117    # - appsuite01.example.com
118    # - appsuite01.example.com.//folders/list
119    # - appsuite01.example.com.//folders/list.success
120    #
121    # Each of those metrics except for the last one will be aggregating the measurements
122    # of their parent metrics.
123    #
124    com.openexchange.metrics.http.aggregation=false
125
126    # List of logins for which to create specific metrics.
127    # In order to be able to track and aggregate the metrics of specific users, the
128    # following property can be set to a (full) login name as entered by the user when
129    # authenticating or as provided by an SSO system if applicable.
130    #
131    # For each of the logins specified through this property, an additional set
132    # of metrics will be created, prefixing the elements that are defined in
133    # com.openexchange.metrics.http.elements
134    # with the login value.
135    #
136    # For example, the following configuration
137    #    com.openexchange.metrics.http.elements=header(host).path.status
138    #    com.openexchange.metrics.http.aggregation=true
139    #    com.openexchange.metrics.http.logins=jdoe@example.com
140    # will result in the following list of metrics:
141    # 1. header(Host)
142    # 2. header(Host).path
143    # 3. header(Host).path.status
144    # 4. login
145    # 5. login.header(Host)
146    # 6. login.header(Host).path
147    # 7. login.header(Host).path.status
148    #
149    # Specifically, results will look along the lines of the following, each being a metric:
150    # - appsuite01.example.com
151    # - appsuite01.example.com.//folders/list
152    # - appsuite01.example.com.//folders/list.success
153    # - jdoe@example.com
154    # - jdoe@example.com.appsuite01.example.com
```

```
155   # - jdoe@example.com.appsuite01.example.com.//folders/list
156   # - jdoe@example.com.appsuite01.example.com.//folders/list.success
157   #
158   # Without aggregation, the following configuration
159   #    com.openexchange.metrics.http.elements=header(host).path.status
160   #    com.openexchange.metrics.http.aggregation=false
161   #    com.openexchange.metrics.http.logins=jdoe@example.com
162   # will result in this list of metrics instead:
163   # 1. header(Host).path.status
164   # 2. login.header(Host).path.status
165   #
166   # Note that if this property is commented out (not set) or left empty,
167   # no such additional per-login metrics will be created, which is the default
168   # behavior.
169   #
170   # Multiple logins may be specified, either by separating them with whitespaces
171   # and/or commas, e.g.:
172   # com.openexchange.metrics.http.logins=john.doe@example.com, jane.doe@example.com
173   # or by specifying multiple properties as follows:
174   # com.openexchange.metrics.http.logins.1=john.doe@example.com
175   # com.openexchange.metrics.http.logins.2=jane.doe@example.com
176   # (both may also be combined).
177   #
178   # Furthermore, it is possible to use regular expressions and wildcards:
179   # - if a login contains * or ?, it is understood to be a wildcard
180   # - if a login is enclosed in /.../ or /.../i (case insensitive), it is understood
181   #    to be a regular expression
182   # Examples:
183   # com.openexchange.metrics.http.logins=*@example.com, /^j(ohn|ane)\.doe@example\.cm$/
184   #
185   # Being a wildcard, the following value would match all logins:
186   # com.openexchange.metrics.http.logins=*
187   #
188   com.openexchange.metrics.http.logins=
189
190   # List of paths and path patterns for which to maintain metrics.
191   #
192   # The following property specifies discrete paths, path wildcard patterns, or
193   # regular expressions that will be matched against the HTTP request paths, and
194   # only those that match will have metrics.
195   #
196   # If the property value contains * or ?, it will be understood as a wildcard pattern.
197   # If it starts with / and ends with / or /i (cae insensitive), it will be understood
198   # as a regular expression.
199   # If it is neither of those, it will be interpreted as an exact (string comparison) value.
200   #
201   # To enable metric collection for all URLs, use the following value:
202   # com.openexchange.metrics.http.path=*
203   #
204   # If the value is not defined or empty, no metrics will be collected:
205   # com.openexchange.metrics.http.path=
206   #
207   # Example:
208   # com.openexchange.metrics.http.path.1=/^/appsuite/.+/(boot|precore)\.js$/
209   # com.openexchange.metrics.http.path.2=/appsuite/api/apps/manifests
210   # com.openexchange.metrics.http.path.3=/appsuite/api/mail
211   #
212   com.openexchange.metrics.http.path=
213
214   # The behavior of the path matching above can be configured with the following property.
215   # Possible values:
216   # - whitelist: any URL path that matches one of the URL patterns configured
217   #    using com.openexchange.metrics.http.path will be measured with metrics;
218   #    any URL path that does not, will not be measured with metrics
219   # - blacklist: any URL path that does not matches one of the URL patterns configured
220   #    using com.openexchange.metrics.http.path will be measured with metrics
221   #
222   # When omitted, left empty or invalid, the default mode is whitelist
223   #
224   # Example:
225   # com.openexchange.metrics.http.path.mode=blacklist
226   #
```

```
227   com.openexchange.metrics.http.path.mode=whitelist
```

22.2   Metrics for IMAP

Bundle Identifier	com.openexchange.metrics.imap
Package(s)	open-xchange-metrics-imap
Required capabilities	none
Available since	1.3.6-rev1

This package contains metrics for all IMAP operations that are performed by the middleware. It uses the core framework `com.openexchange.metrics`.

Metrics are published through JMX and Jolokia (when enabled) with a metric object for each operation, as it makes little sense to compare LIST with FETCH, for example. They are available under the object name:

```
1   com.openexchange.metrics;type=imap
```
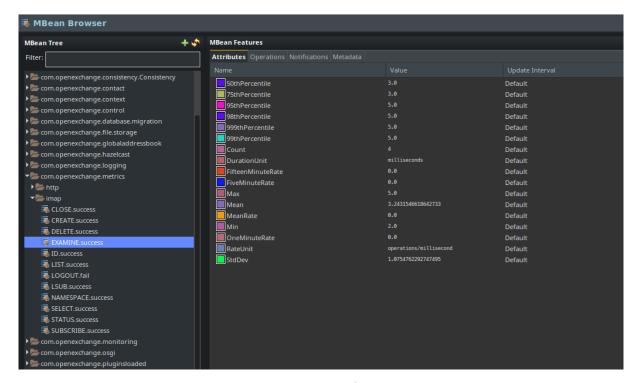

Figure 29: metrics for imap

It is disabled by default for performance reasons, and must be enabled explicitly by modifying the configuration file. To avoid slowing down all IMAP operations performed by the middleware, metrics are computed and updated asynchronously. The number of worker threads in charge of doing so is configurable. All configuration changes can be applied through configuration reloading, there is no need to restart.

22.2.1   Configuration

`/opt/open-xchange/etc/metrics-imap.properties`

```
1   # Configure whether to enable metrics for IMAP operations.
2   # When this property is omitted (commented out) or set to false, or empty,
```

```
3   # IMAP metrics will not be collected.
4   com.openexchange.metrics.imap.enable=false
5
6   # The number of threads to use to process IMAP operation results,
7   # updating metrics.
8   com.openexchange.metrics.imap.threads=2
```

23 Sql Client Library

Bundle Identifier	`com.openexchange.sql.client`
Package(s)	`open-xchange-sql-client`
Required capabilities	none
Available since	plugins-1.4.5-rev3

This package provides SQL pools to any component using them in the middleware. It is not config-cascade aware, but it doesn't need to be. By default, all `*.yaml` or `*.yml` files are read and interpreted within `/opt/open-xchange/etc/sql-client.d`. Internally, the HikariCP is used to manage those pools.

23.1 Configuration

```
1    # Comma seperated list of drivers to read into the system
2    # As the sql-client is very early, it may happen that the excpected driver is not yet
         registered.
3    # To work around this issue, the following list of drivers will be read before any
         connection is
4    # created.
5    #
6    # Default: com.mysql.jdbc.Driver
7    com.openexchange.sql.client.drivers=com.mysql.jdbc.Driver
8
9    # The sql-client.d folder can be changed via
10   # openexchange.sql.client.dir=
```

23.2 Sample Configuration

`/opt/open-xchange/etc/sql-client.d/sql-client-pools.yaml.example`

```
1    # The top-level key is the identifier of the pool, which can be
2    # any string of text and is being used by the bundles and applications
3    # to access that pool configuration.
4    # Typically, those are fixed or need to be configured in the bundles
5    # that use this library.
6    #
7    # When Java Security Manager support is enabled, files that are referenced
8    # in these configuration files must be in a directory that is already
9    # whitelisted, or in a subdirectory thereof, such as
10   # /opt/open-xchange/etc/
11   #
12   # A good candidate would be something along the lines of
13   # /opt/open-xchange/etc/sql-files/
14   #
15   # Otherwise, the filename or its directory must be put into a new .list
16   # file in the folder
17   # /opt/open-xchange/etc/security/
18   # with e.g. the following content:
19   #
20   # file:/etc/trust.jks
21   #
22   # For a complete list of property values, read https://github.com/brettwooldridge/HikariCP
23   pool1:
```

```
24    # This is the name of the DataSource class provided by the JDBC driver.
25    # Consult the documentation for your specific JDBC driver to get this class name, or see
            the table below.
26    # Note XA data sources are not supported. XA requires a real transaction manager like
            bitronix.
27    # Note that you do not need this property if you are using jdbcUrl for "old-school"
            DriverManager-based JDBC driver configuration.
28    # Default: none
29    dataSourceClassName: com.mysql.jdbc.jdbc2.optional.MysqlDataSource
30    # This property directs HikariCP to use "DriverManager-based" configuration.
31    # We feel that DataSource-based configuration (above) is superior for a variety of
            reasons (see below), but for many deployments there is little significant difference
            .
32    # When using this property with "old" drivers, you may also need to set the
            driverClassName property, but try it first without.
33    # Note that if this property is used, you may still use DataSource properties to
            configure your driver and is in fact recommended over driver parameters specified in
            the URL itself.
34    # Default: none
35    jdbcUrl: jdbc:mysql://mysql.example.com
36    # This property sets the default authentication username used when obtaining Connections
            from the underlying driver.
37    # Note that for DataSources this works in a very deterministic fashion by calling
            DataSource.getConnection(*username*, password) on the underlying DataSource.
38    # However, for Driver-based configurations, every driver is different.
39    # In the case of Driver-based, HikariCP will use this username property to set a user
            property in the Properties passed to the driver's DriverManager.getConnection(
            jdbcUrl, props) call.
40    # If this is not what you need, skip this method entirely and call addDataSourceProperty
            ("username", ...), for example.
41    # Default: none
42    username: user
43    # sets the password of the connection
44    password: secret
45
46  pool2:
47    jdbcUrl: jdbc:mysql://mysql.example.com
48    # This property controls the maximum number of milliseconds that a client (that's you)
            will wait for a connection from the pool.
49    # If this time is exceeded without a connection becoming available, a SQLException will
            be thrown.
50    # Lowest acceptable connection timeout is 250 ms.
51    # Default: 30000 (30 seconds)
52    connectionTimeout: 30000
53    # This property controls the maximum amount of time that a connection is allowed to sit
            idle in the pool.
54    # This setting only applies when minimumIdle is defined to be less than maximumPoolSize.
            Idle connections will not be retired once the pool reaches minimumIdle connections.
55    # Whether a connection is retired as idle or not is subject to a maximum variation of
            +30 seconds, and average variation of +15 seconds.
56    # A connection will never be retired as idle before this timeout.
57    # A value of 0 means that idle connections are never removed from the pool.
58    # The minimum allowed value is 10000ms (10 seconds).
59    # Default: 600000 (10 minutes)
60    idleTimeout: 600000
61    # This property controls the maximum lifetime of a connection in the pool. An in-use
            connection will never be retired, only when it is closed will it then be removed.
62    # On a connection-by-connection basis, minor negative attenuation is applied to avoid
            mass-extinction in the pool.
63    # We strongly recommend setting this value, and it should be several seconds shorter
            than any database or infrastructure imposed connection time limit.
64    # A value of 0 indicates no maximum lifetime (infinite lifetime), subject of course to
            the idleTimeout setting.
65    # Default: 1800000 (30 minutes)
66    maxLifetime: 1800000
67    # This property controls the minimum number of idle connections that HikariCP tries to
            maintain in the pool.
68    # If the idle connections dip below this value and total connections in the pool are
            less than maximumPoolSize, HikariCP will make a best effort to add additional
            connections quickly and efficiently.
69    # However, for maximum performance and responsiveness to spike demands, we recommend not
            setting this value and instead allowing HikariCP to act as a fixed size connection
```

```
         pool.
70    # Default: same as maximumPoolSize
71    minimumIdle: 0
72    # This property controls the maximum size that the pool is allowed to reach, including
         both idle and in-use connections.
73    # Basically this value will determine the maximum number of actual connections to the
         database backend. A reasonable value for this is best determined by your execution
         environment.
74    # When the pool reaches this size, and no idle connections are available, calls to
         getConnection() will block for up to connectionTimeout milliseconds before timing
         out.
75    # Default: 10
76    maximumPoolSize: 10
77
78  # The following example shows how to provide additional dataSource properties to the pool
       by using the dataSourceProperties key.
79  # The DataSource will be started with all key-value pairs added.
80  pool3:
81    jdbcUrl: jdbc:mysql://mysql.example.com
82    username: user
83    password: secret
84    dataSourceProperties:
85      useUnicode: true
86      characterEncoding: UTF-8
87      autoReconnect: false
88      useServerPrepStmts: false
89      useTimezone: true
90      serverTimezone: UTC
91      connectTimeout: 15000
92      socketTimeout: 15000
93      useSSL: false
94      requireSSL: false
95      verifyServerCertificate: false
96      enabledTLSProtocols: TLSv1,TLSv1.1,TLSv1.2
```

24   Survey Dialog

Package(s)	open-xchange-appsuite-survey,
	open-xchange-appsuite-survey-static
Required capabilities	com.openexchange.capability.survey=true
Available since	1.6.5-rev2

This plugin allows to show a dialog to the user for taking a survey. The dialog it self doesn't show the survey, but a link to the survey page.

The dialog contains:

- A configurable logo.
- An introduction, configurable per language.
- A button to the survey page. Both button label and link to survey page are configurable per language. When clicked the version seen by the user is set to current version (generation).
- A button to show the dialog later (in next Appsuite reload). This will close current dialog. The button label is configurable per language.
- An action link to dismiss the survey dialog. The dialog is closed and not shown again for the current version (the version seen by the user is set to current survey version). the label of the link is configurable per language.
- A a privacy description, configurable per language.

Any missing setting for a language will fallback to use en_US defined one.
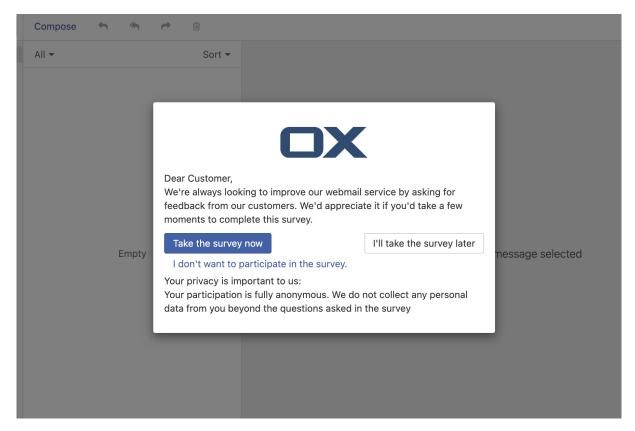
Figure 30: survey dialog

24.1 Configuration

24.1.1 Versioning

Survey dialogs are versioned using a setting named **generation**.The survey dialog is shown only when the stored version seen by the user (**hasSeen**) is either undefined or less than current configured version. The survey version can be either a single value shared for all languages or language specific:

- If the survey has the same version for all languages, the configuration of the version could be done using only en_US as language. In this case any language will use the **generation** defined for en_US and **hasSeen** version is set also for en_US. **hasSeen** doesn't need to be specified in configuration and will be set by default to 0.

- If the survey dialogs will have different versions for some languages, then for each of those languages, the settings should define both **generation** and **hasSeen** values. Additionally, the **hasSeen** property should be added to meta configuration as not protected (see example below). All other languages that don't have specific version settings will fallback to en_US one.

24.1.2 Samples

`/opt/open-xchange/etc/settings/survey.properties`

```
1  io.ox.survey//logo = apps/themes/io.ox.survey/static/ox_logo_blue.svg
2  io.ox.survey//survey/en_US/generation = 1
3
4  # "hasSeen" needs to be specified only if you have different versions (generation) of the
       survey per language
5  # In this case it should also be added to meta config as not protected
6  # io.ox.survey//survey/en_US/hasSeen = 0
7  # io.ox.survey//survey/de_DE/hasSeen = 0
8
```

```
 9  io.ox.survey//survey/en_US/intro = "<span class=\'salutation\'>Dear Customer,</span><br/>
        We\'re always looking to improve our webmail service by asking for feedback from our
        customers. We\'d appreciate it if you\'d take a few moments to complete this survey."
10  io.ox.survey//survey/en_US/privacy = "<span>Your privacy is important to us:</span><br/>
        Your participation is fully anonymous. We do not collect any personal data from you
        beyond the questions asked in the survey"
11  io.ox.survey//survey/en_US/link = blank.html?take-survey=true
12  io.ox.survey//survey/en_US/takeSurveyNow = "Take the survey now",
13  io.ox.survey//survey/en_US/takeSurveyLater = "I\'ll take the survey later",
14  io.ox.survey//survey/en_US/dontTakeSurvey = "I don\'t want to participate in the survey."
```

/opt/open-xchange/etc/meta/survey.yml

```
1  # Needed only if specific versioning required for a language
2  # io.ox.survey//survey/en_US/hasSeen:
3  #     protected: false
4  # io.ox.survey//survey/de_DE/hasSeen:
5  #     protected: false
```

25 Trusted Identity for external systems

25.1 Trusted Identity Provider

Bundle Identifier	com.openexchange.plugins.trustedidentity
Package(s)	open-xchange-plugins-trusted-identity
Required capabilities	none
Available since	1.6.4-rev2

This package extends the OX HTTP API for the creation of encrypted or signed JSON Web Tokens (JWT) containing authenticated user details. With those tokens the browser can link out to a external system while providing authenticated user details in a secure manner. For the cryptography we choose ECDSA keys because it is currently the most fitting standard. The external system must be able to validate the request by using standard protocols.

ⓘ **Info**
Note that there is an additional package in Cloud-Plugins that provides support for storing signature keys in LDAP instead of on the filesystem.

25.1.1 JSON Web Token

Signed JSON Web Tokens contain a number of key-value pairs in their header part, as defined by RFC 7517. We include the following headers:

Attribute	Meaning	Description
kid	Key ID	References the public key to use to verify the signature of the JWS, in a textual form that has no particular convention, but is supposed to help the peer implementation to pick the correct public key to verify the signature.
typ	JWS Type	Always "JWT", mandatory as of the specification.
alg	Algorithm	As specified in JSON Web Signature and Encryption Algorithms. We currently support ES256, ES384 and ES512.
x5t#S256	SHA-256 thumbprint	Thumbprint of the public key: *base64url-encoded SHA-256 thumbprint (a.k.a. digest) of the DER encoding of an X.509 certificate RFC5280*.

```
1  {
```

```
2    "x5t#S256": "BzyJzPOeUJcJH2Csu1fy7ZrLDvSOIbCukwmhgMtIKws",
3    "kid": "key01",
4    "typ": "JWT",
5    "alg": "ES256"
6  }
```

The payload inside the JWT is JSON and contains "claims" (keys and values) that are either well-defined (in bold) or custom (not in bold):

Attribute	Meaning	Description
sub	subject	The login the user used to authenticate the session.
iss	issuer	A configured string of text, e.g. Open-Xchange (configurable, see below: `com.openexchange.plugins.trustedidentity.issuer`).
`contextId`		The numeric context identifier of the user.
`userId`		The numeric user identifier of the user.
exp	expiry timestamp	Instant in time after which the token should be discarded (configurable, see below: `com.openexchange.plugins.trustedidentity.expiration`).
iat	issued at timestamp	Instant in time at which the token was generated by the middleware.

```
1   {
2     "sub": "three@fourfivesix.example.com",
3     "iss": "the issuer",
4     "contextId": 456,
5     "upsell": ["guard","storage"],
6     "source": "upgrade_to_pro_plus",
7     "exp": 1617260650,
8     "iat": 1617260350,
9     "userId": 3
10  }
```

When the token is signed and encrypted (using the EC-256 algorithm which performs a ECDH to derive a symmetric key that is then used to encrypt with AES key wrap (A256GCM: AES in Galois/-Counter Mode (NIST-800-38D)), hence using a 256-bit key) like e.g.:

```
1   eyJlcGsiOnsia3R5IjoiRUMiLCJjcnYiOiJQLTI1NiIsIngiOiJpSWF1NU5xRlo3V3JyN1ZnT1JYelZFUH [...]
2   [...] TkJl-2TygzF8lXMafSqaqy64Cq6n52X_ePZgt3UfZ9WS1nmFx0OO9sbsyb2J.tKZ_5b5LP2YnUr_h2gi6Cw
```

When the tocken is just signed (without encryption) using the EC-256 algorithm which performs a SHA-256 hash like e.g.:

```
1   eyJ0eXAiOiJKV1QiLCJhbGciOiJFUzI1NiJ9 [...]
2   [...] n9Sed-CAawcs-t4qTxL8UKZS5hnKFEjb8Fiet27nJwvTfEQdaxAm6SvSiNc3oUBd1PCORpAEEl_ZTVF8A
```

25.1.2 HTTP API

Parameter	Description
`server`	Hostname or IP of the server.
`sessionId`	The session id of the user.
`data`	A JSON Object with key-value pairs that are included as-is in the token response.

Please use the URL prefix below for following actions:

```
1   PUT http://{server}/appsuite/api/trust?session={sessionId}&
```

Action URL Suffix	Descripton
`action=sign&data={data}`	Create base64url encoded signed JWT.
`action=encrypt&data={data}`	Create base64url encoded signed and encrypted JWT.

25.1.2.1   Example Sign UI Usage for Upsell

```
1   require(['io.ox/core/http']).then(function (http) { http.PUT({module: 'trust', params: {
        action: 'sign'}, data: {upsell:['guard'], source: 'test'}}).then(function (resp) {
        console.log(resp.token) }) });
```

25.1.2.2   Example Encryt UI Usage for Upsell

```
1   require(['io.ox/core/http']).then(function (http) { http.PUT({module: 'trust', params: {
        action: 'encrypt'}, data: {upsell:['guard'], source: 'test'}}).then(function (resp) {
        console.log(resp.token) }) });
```

25.1.3   Configuration

`/opt/open-xchange/etc/trustedidentity.properties`

```
1    # URI to the private and public key resource to use to sign JWTs.
2    #
3    # The format of the URi epends on the scheme and driver.
4    # The "file" scheme is always supported.
5    #
6    # Format: file:<algorithm>:<path>[#<keyid>]
7    #
8    # Algorithm may either be "auto" in which case the signing algorithm will be inferred
9    # from the EC curve OID within the encoded private key part in the file, or be explicitly
10   # one of the supported values:
11   # - ES256: ECDSA using P-256 curve and SHA-256 hash algorithm
12   # - ES384: ECDSA using P-384 curve and SHA-384 hash algorithm
13   # - ES512: ECDSA using P-521 curve and SHA-512 hash algorithm
14   #
15   # Note that for the time being, only ECDSA keys are supported.
16   #
17   # The key id may be set as the fragment part of the URI: if set, will be stored as a kid (
         key id)
18   # claim in the JWT header, which identifies the key in some form that is understandable
         for consumers
19   # of the JWT token.
20   # Optional, does not set the kid claim when absent.
21   #
22   # The path is a fully qualified filesystem path to the private key PEM file to use for
         signing.
23   # It should also contain the certificate (public key part) in order to include the
24   # x5t#S256 (X.509 certificate SHA-256 thumbprint) in the signed token.
25   #
26   # Content of the file:
27   # -----BEGIN EC PRIVATE KEY-----
28   # MIGHAgEAMBMGByqGSM49AgEGCCqGSM49AwEHBGOwawIBAQQgyGdEuJcaHla0CDtX
29   # ...
30   # Jvb9wIBomkOsFr++dEnvM97Sm3G+c8wkqLO+WFBRwTw79sQioT3VOMVV
31   # -----END EC PRIVATE KEY-----
32   # -----BEGIN EC PUBLIC KEY-----
33   # MFkwEwYHKoZIzj0CAQYIKoZIzj0DAQcDQgAEqxHR/v8D3NktT/EfE5Mq2dvlIZ6H
34   # QCb2/cCAaJpDrBa/vnRJ7zPe0ptxvnPMJKi9PlhQUcE8O/bEIqE91TjFVQ==
35   # -----END EC PUBLIC KEY-----
36   #
37   # The type (specified after BEGIN and END) in the PEM headers must be one of:
38   # - for the mandatory private key: PRIVATE KEY, EC PRIVATE KEY
39   # - for the optional public key: CERTIFICATE, PUBLIC KEY, EC PUBLIC KEY
40   #
41   # Examples:
42   # com.openexchange.plugins.trustedidentity.key=file:auto:/opt/open-xchange/etc/
         trustedidentity.pem#ox-trust-key-2021-1
```

```
 43   # com.openexchange.plugins.trustedidentity.key=file:ES256:/opt/open-xchange/etc/
          trustedidentity.pem
 44   #
 45   # Mandatory, there is no default value.
 46   com.openexchange.plugins.trustedidentity.key=
 47
 48   # The issuer (iss) string to include in the signed JWT.
 49   # Describes this App Suite instance in its role as an authority.
 50   #
 51   # Mandatory, has no default value.
 52   #
 53   # Example:
 54   # com.openexchange.plugins.trustedidentity.issuer=Open-Xchange
 55   com.openexchange.plugins.trustedidentity.issuer=
 56
 57   # Expiration duration: the signed JWT contains a standard claim field
 58   # "exp" that defines when the validity of the JWT should expire.
 59   # The following configuration property configures how long that expiration
 60   # time frame should be, always in addition to the current timestamp as
 61   # of the system clock.
 62   # e.g. "5m" will produce an expiration timestamp that is 5m in the future
 63   #
 64   # Format: <duration>[h|m|s|ms]
 65   #
 66   # Example:
 67   # com.openexchange.plugins.trustedidentity.expiration=30m
 68   #
 69   # Optional, the default value is "5m" (5 minutes)
 70   #
 71   com.openexchange.plugins.trustedidentity.expiration=5m
 72
 73   # Public key file (PEM) location on disk.
 74   #
 75   # This is the public key to use for encrypting JWTs. That public key must be
 76   # provided to us by the peer or customer that will receive the encrypted
 77   # JWT, as they will be able to decrypt it using their private key part.
 78   #
 79   # Note tha this property is config-cascade aware.
 80   #
 81   # Example:
 82   # com.openexchange.plugins.trustedidentity.peer.publicKeyFile=/opt/open-xchange/keys/
          customer1-pubkey1.pem
 83   #
 84   # This configuration setting is mandatory and has no default value.
 85   # When left empty, it disables encryption.
 86   com.openexchange.plugins.trustedidentity.peer.publicKeyFile=
 87
 88   # Algorithm to use to encrypt the JWT.
 89   #
 90   # The supported algorithms depend on the type of the public key.
 91   #
 92   # For an EC key:
 93   #
 94   # - ECDH-ES: Elliptic Curve Diffie-Hellman Ephemeral Static (RFC 6090) key agreement using
          the
 95   #            Concat KDF, as defined in section 5.8.1 of NIST.800-56A, with the agreed-upon
          key
 96   #            being used directly as the Content Encryption Key (CEK) (rather than being
          used to
 97   #            wrap the CEK).
 98   #
 99   # - ECDH-ES+A128KW: Elliptic Curve Diffie-Hellman Ephemeral Static key agreement per "ECDH
          -ES",
100   #            but where the agreed-upon key is used to wrap the Content Encryption Key (CEK
          ) with
101   #            the "A128KW" function (rather than being used directly as the CEK).
102   #
103   # - ECDH-ES+A192KW: Elliptic Curve Diffie-Hellman Ephemeral Static key agreement per "ECDH
          -ES",
104   #            but where the agreed-upon key is used to wrap the Content Encryption Key (CEK
          ) with
105   #            the "A192KW" function (rather than being used directly as the CEK).
```

```
106  #
107  # - ECDH-ES+A256KW: Elliptic Curve Diffie-Hellman Ephemeral Static key agreement per "ECDH
         -ES",
108  #            but where the agreed-upon key is used to wrap the Content Encryption Key (CEK
         ) with
109  #            the "A256KW" function (rather than being used directly as the CEK).
110  #
111  # For an RSA key:
112  #
113  # - RSA-OAEP-256: RSAES using Optimal Asymmetric Encryption Padding (OAEP) (RFC 3447),
         with the
114  #            SHA-256 hash function and the MGF1 with SHA-256 mask generation function.
115  #
116  # Note tha this property is config-cascade aware.
117  #
118  # Example:
119  # com.openexchange.plugins.trustedidentity.peer.algorithm=ECDH-ES+A256KW
120  #
121  # The property is optional and defaults to either ECDH-ES for EC keys, or
122  # to RSA-OAEP-256 for RSA keys.
123  com.openexchange.plugins.trustedidentity.peer.algorithm=
124
125  # Encryption Method to use to encrypt the JWT.
126  #
127  # The supported methods are as follows:
128  #
129  # - A128GCM: AES in Galois/Counter Mode (GCM) (NIST.800-38D) using a 128 bit key
130  # - A192GCM: AES in Galois/Counter Mode (GCM) (NIST.800-38D) using a 192 bit key
131  # - A256GCM: AES in Galois/Counter Mode (GCM) (NIST.800-38D) using a 256 bit key
132  #
133  # Note tha this property is config-cascade aware.
134  #
135  # Example:
136  # com.openexchange.plugins.trustedidentity.peer.encryptionMethod=A256GCM
137  #
138  # The property is optional and defaults to A256GCM
139  com.openexchange.plugins.trustedidentity.peer.encryptionMethod=
140
141  # Peer public key time-to-live in cache.
142  #
143  # Public keys are loaded from PEM files on-demand and are then cached for a configurable
144  # amount of time before being loaded again.
145  #
146  # Format: <duration>[w|d|h|m|s|ms]
147  #
148  # Example:
149  # com.openexchange.plugins.trustedidentity.peer.publicKeyCacheTtl=5d
150  #
151  # The property is optional and defaults to 1d (1 day)
152  com.openexchange.plugins.trustedidentity.peer.publicKeyCacheTtl=
```

25.1.3.1 **Example Key Configuration** For a configuration that retrieves the signing key from disk:

- **Filename**: /opt/open-xchange/etc/trust.pem
- **Public Key ID**: ox-trust-example-2021

The file contains both the public key and the private key in PEM (PKCS#8) format, for example this EC key for ES256 like e.g.:

trust.pem

```
1  -----BEGIN PRIVATE KEY-----
2  MIGHAgEAMBMGByqGSM49AgEGCCqGSM49AwEHBG0wawIBAQQgyGdEuJcaHlaOCDtX
3  XN3PQq7EN9lxhgUm2D8MlAjiOrWhRANCAASrEdH+/wPc2S1P8R8TkyrZ2+UhnodA
4  Jvb9wIBomkOsFr++dEnvM97Sm3G+c8wkqLO+WFBRwTw79sQioT3VOMVV
5  -----END PRIVATE KEY-----
6  -----BEGIN PUBLIC KEY-----
7  MFkwEwYHKoZIzj0CAQYIKoZIzj0DAQcDQgAEqxHR/v8D3NktT/EfE5Mq2dvlIZ6H
```

```
8   QCb2/cCAaJpDrBa/vnRJ7zPe0ptxvnPMJKi9PlhQUcE8O/bEIqE91TjFVQ==
9   -----END PUBLIC KEY-----
```

The peer public key for encryption is stored on disk, in /opt/open-xchange/etc/peer-pub.pem e.g.:

peer-pub.pem

```
1   -----BEGIN PUBLIC KEY-----
2   MFkwEwYHKoZIzj0CAQYIKoZIzj0DAQcDQgAEh8VpMpNkE15pYX3K0NPsDX2r5MQJ
3   Ejuj11ALv4WJswjf8t2A4xb7slnPPxGOkCO3Le8wnuRO5Mi3vRKDH3WqQA==
4   -----END PUBLIC KEY-----
```

The corresponding settings in `/opt/open-xchange/etc/trustedidentity.properties` should look like e.g.:

```
1   com.openexchange.plugins.trustedidentity.key=file:auto:/opt/open-xchange/etc/trust.pem#ox-
        trust-example-2021
2   com.openexchange.plugins.trustedidentity.issuer=Open-Xchange Cloud
3
4   com.openexchange.plugins.trustedidentity.peer.publicKeyFile=/opt/open-xchange/etc/peer-pub
        .pem
```

25.1.4 Caching

The key information that is in the private key file on disk is kept in memory once it has been read on startup (as referenced by `com.openexchange.plugins.trustedidentity.key`). The same applies to the public keys for encrypting. To apply changes, either reference a different file or, change the content of the same file, but in either case a `reloadconfiguration` is necessary.

25.2 Trusted Identity Link

Package(s)	open-xchange-appsuite-trustedidentity-link
Required capabilities	com.openexchange.capability.trustedidentity-link=true
Available since	1.6.4-rev2

The "Trusted Identiy Link" plugin checks external links in Appcontrol dropdowns (help, settings and account) having CSS class "io-ox-trustedidentity" and enrich the urls opened by those links with an identity token provided by `open-xchange-plugins-trustedidentity` package. The token is appended at the end of the URL in format `&token=token` value. If an error occurred in token creation, a notification error is shown to the user.

This plugin doesn't create links by it self. This could be done either via a custom plugin or using Appcontrol dropdown links plugin with trusted identify configuration like e.g.:

/opt/open-xchange/etc/settings/io-ox-appcontrol-dropdown-links.properties

```
1   ## Sample trusted identity link
2   io.ox.appcontrol.dropdown//links/link4/enabled = true
3   io.ox.appcontrol.dropdown//links/link4/trustedidentity= true
4   io.ox.appcontrol.dropdown//links/link4/text/default = My Profile
5   io.ox.appcontrol.dropdown//links/link4/ext_point = io.ox/core/appcontrol/right/settings
6   io.ox.appcontrol.dropdown//links/link4/action_type = external_link
7   io.ox.appcontrol.dropdown//links/link4/href/default = blank.html?token=
```

25.3 Trusted Identity Upsell

Package(s)	open-xchange-appsuite-trustedidentity-upsell

Required capabilities	com.openexchange.capability.upsell=true,
	com.openexchange.capability.trustedidentity-upsell=true
Available since	1.6.4-rev2

This package allows to replace in upsell URLs, user data (email, userId, contextId, missing capabilities and upsell source) with a token created using API provided by the `open-xchange-plugins-trustedidentity` package. The token is appended at the end of the URL in format `&token=token` value. If an error occurred in token creation, a notification error is shown to the user.

25.3.1 Configuration

`/opt/open-xchange/etc/settings/trustedidentity-upsell.properties`

```
1  ##
2  # Trusted Identity Upsell Settings
3  #
4
5  # URL to use on upsell links click when simple-wizard not enabled
6  # io.ox/trustedidentity-upsell//upsell_url=blank.html?token=
```

Please note, upsell links can be configured either as iframe in Appsuite upsell wizard or as a new browser tab.

25.3.1.1 Sample configuration for upsell url in wizard iframe

```
1  #### Sample with Portal upsell widget
2  io.ox/core//features/upsell/portal-widget/enabled=true
3  io.ox/core//features/upsell/portal-widget/requires=plugins_upsell_portal
4  io.ox/core//features/upsell/portal-widget/imageURL=http://127.0.0.1:10080/appsuite/apps/io
       .ox.alt-login/background.png
5
6  ## Upsell URL where where token will be appended
7  plugins/upsell/simple-wizard//url=blank.html?token=
```

Please note, the capability `com.openexchange.capability.simple-wizard=true` is required in addition:

25.3.1.2 Sample configuration for upsell url opening in a new browser tab

```
1  #### Sample with Portal upsell widget
2  io.ox/core//features/upsell/portal-widget/enabled=true
3  io.ox/core//features/upsell/portal-widget/requires=plugins_upsell_portal
4  io.ox/core//features/upsell/portal-widget/imageURL=http://127.0.0.1:10080/appsuite/apps/io
       .ox.alt-login/background.png
5
6  ## Upsell URL where where token will be appended
7  io.ox/trustedidentity-upsell//upsell_url=blank.html?token=
```

26 Unsubscribe Mailing Lists

26.1 Unsubscribe Mailing Lists Framework

Bundle Identifier	com.openexchange.plugins.unsubscribe,
	com.openexchange.plugins.unsubscribe.json,
	com.openexchange.plugins.unsubscribe.connector.vadesecure
Package(s)	open-xchange-plugins-unsubscribe,
	open-xchange-plugins-unsubscribe-vadesecure
Required capabilities	none
Available since	1.5.2-rev7

Frequently, users subscribe (or are added) to a mailing list and do not wish to receive messages from that mailing list anymore. Many users often report the messages as "spam" in their mail client, training anti-spam services that a legitimately-received email is spam when it is not. The more responsible and effective course of action is instead for the user to unsubscribe from the list. Currently, only Vade Safe-Unsubscribe exists as a supported provider. However, the Middleware service is constructed so that another adapter could be used instead.

26.1.1 Prerequisites

A MTA service must be configured to receive unsubscribe requests (via API or direct email) in order to process unsubscribe requests. The MTA must also insert an unsubscribe URL or mailto:email address in a header of the mail message.

26.1.2 Safe mode

If an unsubscribe service provider is properly configured, the plugin enters "safe" mode. This enables the `safe-unsubscribe` capability in the config-cascade and exposes a middleware endpoint at `/plugins/unsubscribe` which will relay unsubscribe requests to the provider API.

26.1.3 Unsafe mode

Without a provider configured, the plugin is considered running in "unsafe" mode. The user experience is the same, but instead of relaying unsubscribe requests through the middleware API, a mail is crafted and sent to any `mailto:` address in the List-Unsubscribe header. Non-mail unsubscribe URLs are ignored in this mode.

26.1.4 Configuration

`/opt/open-xchange/etc/plugins-unsubscribe.properties`

```
1   # Setting to control the used connector for a specific user
2   # This setting is config-cascade aware to support different implementations for each user.
3   # Default is <none> which means that the feature is disabled for a user
4   # To enable vade secure com.openexchange.plugins.unsubscribe.connector=
         plugins_unsubscribe_vadesecure
5   com.openexchange.plugins.unsubscribe.connector=
6
7   # Setting to enable safe_mode capability via config-cascade
8   # This setting is config-cascade aware to support different implementations for each user.
9   # Default is false which means that the feature is disabled for a user
10  com.openexchange.plugins.unsubscribe.safemode=false
```

26.1.5 Vade Connector

The `open-xchange-plugins-unsubscribe-vadesecure` package contains all vendor-specific code for the adapter and serves as a reference implementation for another adapter. Once the package is installed and configured, and app node is started, the plugin will be registered with the platform and discovered by the unsubscribe connector framework. The VadeSecure `UnsubsubscribeConnector` service needs to be registered with the connector identifier within framework and also to enable the `safe_unsubscribe` UI capability:

`/opt/open-xchange/etc/plugins-unsubscribe.properties`

```
1   com.openexchange.plugins.unsubscribe.connector=plugins_unsubscribe_vadesecure
2   com.openexchange.plugins.unsubscribe.safemode=true
```

The request payload should be in one of the following JSON Formats, where "`mail`" is optional and the `unsubscribeUrl` may contain either a single unsubscribe url/ mailto link, or a JSONArray containing multiple unsubscribe locations:

26.1.5.1 Example 1

```
1  [{"mail":["First Last","first.last@example.com"],"unsubscribeUrl":"http://www.example.com
       "}]
```

26.1.5.2 Example 2

```
1  [{"mail":["First Last","first.last@example.com"],"unsubscribeUrl":["http://www.example.com
       ", "mailto:yourlist@example.com?subject=remove"]}]
```

This connector performs following steps:

- The user's aliases are looked up based on the uid/cid contained in the ServerSession.
- If the optional "`mail`" key is included in the JSON data, the email address is compared against existing user aliases, if found the unsubscribe request is sent to the VadeSecure unsubscribe API. If the mail is not found, a `400` error is returned to the client.
- If the optional "`mail`" key is not included in the JSON data, all aliases are sent to the VadeSecure unsubscribe API. If the VadeSecure API responds with a failure for any alias, a `400` response is returned to the client.
- When multiple unsubscribe urls and/or mailto links are included in the middleware request, it is possible for one or more unsubscribe scenarios succeed and one or more to fail. Additionally, mailto links are never processed immediately, and always return a `PENDING` result initially. In the case where a single unsubscribe scenario succeeds with either `SUCCESS` or `PENDING`, the request is considered successful.

`/opt/open-xchange/etc/plugins-unsubscribe-vadesecure.properties`

```
1   # The customer license provided by VadeSecure; required to access unsubscribe API
2   # Default: The OX customer license
3   # Config-cascade aware: true
4   # Lean: true
5   com.openexchange.plugins.unsubscribe.vadesecure.license.passcrypt=<Customer license
        provided by VadeSecure>
6
7   # Setting to change the VadeSecure unsubscribe API URL
8   # Default: https://ws.vaderetro-unsubscribe.com/
9   # Config-cascade aware: true
10  # Lean: true
11  com.openexchange.plugins.unsubscribe.vadesecure.unsubscribe_url=https://ws.vaderetro-
        safeunsubscribe.com/
12
13  # Setting to change the VadeSecure connector identifier referenced in plugins-unsubscribe.
        properties / com.openexchange.plugins.unsubscribe.connector
14  # Default: "plugins_unsubscribe_vadesecure"
15  # Config-cascade aware: true
16  # Lean: true
17  com.openexchange.plugins.unsubscribe.vadesecure.identifier=plugins_unsubscribe_vadesecure
```

26.2 Unsubscribe Mailing Lists UI

Package(s)	`open-xchange-appsuite-unsubscribe`
Required capabilities	`com.openexchange.capability.unsubscribe=true,`
	`com.openexchange.capability.spam=true`
Available since	1.5.2-rev7

This plugin will warn the user if a message they mark as "spam" came from a mailing list, and offer to unsubscribe them from the list instead of marking it as spam. It then sends the unsubscribe information to the provider of the subscription service (if configured), or sends an email to an unsubscribe address (if present) to process the unsubscribe request.

Several scenarios are possible when clicking on Mark as spam based on number of newsletters in

selection

Figure 31: mark as spam

The only selected mail is a newsletter: ask if report as spam or unsubscribe
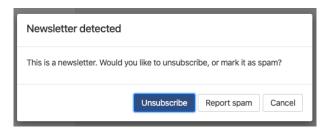
Figure 32: newsletter detected

Multiple mails selected is a mix of newsletters and not: allow to report as spam only those which are not newsletters

Figure 33: newsletter detected in selection

Multiple mails selected, all of them are newsletters: we do not let mark as spam

Figure 34: all newsletter detected in selection
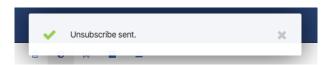
Figure 35: unsubscribe sent

26.2.1 Configuration

`/opt/open-xchange/etc/settings/unsubscribe.properties`

```
1   # If API is being used, App Suite Middleware endpoint to use. Middleware then contacts
        external API to send unsubscribe request.
2   io.ox/unsubscribe//apiModule = plugins/unsubscribe
3
4   # Header name to check for unsubscribe information. Industry standard is the default below
        .
5   io.ox/unsubscribe//headerName = List-Unsubscribe
6
7   # Folder to move a message to after it is unsubscribed; if not set, message will not be
        moved.
8   io.ox/unsubscribe//moveToFolder = default0/Trash
9
10  # Header field to use for getting the mail's "to" address. Ex for alternate value: '
        headers.Delivered-To'
11  io.ox/unsubscribe//mailToField = to
```

27 Shipped Packages and Version

27.1 Package open-xchange-appsuite-alternative-login-screen

Login screen tweaks for OX Cloud
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite (<<7.10.7)
open-xchange-appsuite (>=7.10.6)
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.1.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-alternative-login-screen
```

Install on Apache nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-alternative-login-screen-static
```

27.2 Package open-xchange-appsuite-antiphishing

UI module for phishing checks in App Suite.
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.2.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-antiphishing
```

27.2.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/meta/antiphishing.yml (page 86)
/opt/open-xchange/etc/settings/antiphishing.properties (page 86)

27.3 Package open-xchange-appsuite-appcontrol-dropdown-links

UI plugin to add links to appcontrol dropdown by configuration
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.3.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-appcontrol-dropdown-links
```

27.3.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/settings/io-ox-appcontrol-dropdown-links.properties (page 87)

27.4 Package open-xchange-appsuite-blackwhitelist

Black/Whitelist plugin for App Suite
Version: 1.7.1-1
Type: OX Frontend Plugin with Themes
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.4.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-blackwhitelist
```

27.4.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/meta/blackwhitelist.yml (page 87)
/opt/open-xchange/etc/settings/blackwhitelist.properties (page 87)

27.5 Package open-xchange-appsuite-dumpster

Dumpster OX App Suite Plugin
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.5.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-dumpster
```

27.5.2   Configuration

For details, please see appendix A
/opt/open-xchange/etc/settings/dumpster.properties (page 87)

27.6   Package open-xchange-appsuite-external-content-popup

This package offers a popup to display external content to the users
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.6.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-external-content-popup
```

27.6.2   Configuration

For details, please see appendix A
/opt/open-xchange/etc/meta/externalcontentpopup.yml (page 88)
/opt/open-xchange/etc/settings/externalcontentpopup.properties (page 88)

27.7   Package open-xchange-appsuite-gdpr

GDPR-compliant opt-in for metrics and advertisement
Version: 1.7.1-1
Type: OX Frontend Plugin with Themes
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.7.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-gdpr
```

27.8   Package open-xchange-appsuite-login-links

UI plugin to add custom links to login page footer
Version: 1.7.1-1

Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.8.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-login-links
```

27.9 Package open-xchange-appsuite-mandatory-wizard

Enhanced first start wizard
Version: 1.7.1-1
Type: OX Frontend Plugin with Themes
Depends on:

```
open-xchange-appsuite (<<7.10.7)
open-xchange-appsuite (>=7.10.6)
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.9.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-mandatory-wizard
```

Install on Apache nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-mandatory-wizard-static
```

27.9.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/meta/mandatorywizard.yml (page 89)
/opt/open-xchange/etc/settings/mandatorywizard.properties (page 89)

27.10 Package open-xchange-appsuite-minimal-api-app

Provides an easy way to add iframe apps via configuration. With and without access to the minimal API
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
open-xchange-appsuite-minimal-api-consent (<<1.7.2)
open-xchange-appsuite-minimal-api-consent (>=1.7.1)
```

27.10.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-minimal-api-app
```

27.10.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/settings/minimalapiapp.properties (page 91)

27.11 Package open-xchange-appsuite-minimal-api-consent

Consent UI plugin for App Suite minimal API
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.11.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-minimal-api-consent
```

27.11.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/meta/minimalapi.yml (page 91)
/opt/open-xchange/etc/settings/minimalapi.properties (page 91)

27.12 Package open-xchange-appsuite-mx-checker

UI module for phishing checks in App Suite.
Version: 1.7.1-1
Type: OX Frontend Plugin with Themes
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.12.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-mx-checker
```

27.12.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/meta/mx-checker.yml (page 91)
/opt/open-xchange/etc/settings/mx-checker.properties (page 91)

27.13 Package open-xchange-appsuite-survey

UI module for survey dialog
Version: 1.7.1-1
Type: OX Frontend Plugin with Themes
Depends on:

```
open-xchange-appsuite (<<7.10.7)
open-xchange-appsuite (>=7.10.6)
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.13.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-survey
```

Install on Apache nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-survey-static
```

27.13.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/settings/survey.properties (page 92)

27.14   Package open-xchange-appsuite-trustedidentity-link

UI plugin to add a trusted identity token to appcontrol dropdown links requiring trusted indentity
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.14.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-trustedidentity-link
```


27.15   Package open-xchange-appsuite-trustedidentity-upsell

UI plugin to add a token to upsell links that replaces user data
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

27.15.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-trustedidentity-upsell
```

27.15.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/settings/trustedidentity-upsell.properties (page 92)

27.16   Package open-xchange-appsuite-unsubscribe

UI module for safe unsubscribe in App Suite.
Version: 1.7.1-1
Type: OX Frontend Plugin
Depends on:

```
open-xchange-appsuite-manifest (<<7.10.7)
open-xchange-appsuite-manifest (>=7.10.6)
```

Conflicts with:
```
open-xchange-appsuite-safeunsubscribe
```

27.16.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-appsuite-unsubscribe
```

27.16.2   Configuration

For details, please see appendix A
/opt/open-xchange/etc/settings/unsubscribe.properties (page 92)

27.17   Package open-xchange-authentication-masterpassword

Authentication implementation that uses a global password for all users – DO NOT USE IN PRODUC-
TION This package provides an authentication implementation that verifies user passwords against
a globally configured password. DO NOT USE THIS IN PRODUCTION ! This implementation is only
meant for testing and migration scenarios.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

Conflicts with:
```
open-xchange-authentication-database
open-xchange-authentication-ldap
```

27.17.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-authentication-masterpassword
```

27.17.2   Configuration

For details, please see appendix A
/opt/open-xchange/etc/masterpassword-authentication.properties (page 93)

27.18   Package open-xchange-ldap-client

This package provides an advanced LDAP client library that is used by other Open-Xchange bundles.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.18.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-ldap-client
```

27.18.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/ldap-client.d/ldap-client-pools.yaml.example (page 96)

27.19 Package open-xchange-ldap-client-test

REST API to test open-xchange-ldap-client (NOT FOR PRODUCTION) Exposes a REST API to test whether the open-xchange-ldap-client feature functions properly. This package is only meant for testing - DO NOT INSTALL IN PRODUCTION.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.5)
open-xchange-ldap-client
```

27.19.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-ldap-client-test
```

27.20 Package open-xchange-metrics-http

Metrics for HTTP requests This package provides a highly configurable set of metrics around HTTP requests.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.20.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-metrics-http
```

27.20.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/metrics-http.properties (page 99)

27.21   Package open-xchange-metrics-imap

Metrics for IMAP operations This package provides a set of metrics around IMAP operations.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.21.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-metrics-imap
```

27.21.2   Configuration

For details, please see appendix A
/opt/open-xchange/etc/metrics-imap.properties (page 99)

27.22   Package open-xchange-minimal-api

This package provides the base Minimal API
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-rest (<<7.10.7)
open-xchange-rest (>=7.10.6)
```

27.22.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-minimal-api
```

27.22.2   Configuration

For details, please see appendix A
/opt/open-xchange/etc/minimal-api.properties (page 101)

27.23   Package open-xchange-minimal-api-calendar

This package provides the calendar endpoints for the Minimal API
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-minimal-api (<<1.7.2)
open-xchange-minimal-api (>=1.7.1)
open-xchange-minimal-api-security
```

27.23.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-minimal-api-calendar
```

27.24   Package open-xchange-minimal-api-jwt

This package provides the security handling for the Minimal API
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-minimal-api (<<1.7.2)
open-xchange-minimal-api (>=1.7.1)
open-xchange-sessionstorage-hazelcast (<<7.10.7)
open-xchange-sessionstorage-hazelcast (>=7.10.6)
```

27.24.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-minimal-api-jwt
```

27.25   Package open-xchange-minimal-api-mail

This package provides the mail endpoints for the Minimal API
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-minimal-api (<<1.7.2)
open-xchange-minimal-api (>=1.7.1)
open-xchange-minimal-api-security
```

27.25.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-minimal-api-mail
```

27.26   Package open-xchange-plugins-antiphishing

Plugins abstraction layer for AntiPhishing API connectors
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.26.1   Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-antiphishing
```

27.26.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-antiphishing.properties (page 101)

27.27 Package open-xchange-plugins-antiphishing-vadesecure

This package installs the OSGi bundles needed to access the VadeSecure antiphishing plugin
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-plugins-antiphishing (<<1.7.2)
open-xchange-plugins-antiphishing (>=1.7.1)
```

27.27.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-antiphishing-vadesecure
```

27.27.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-antiphishing-vadesecure.properties (page 102)

27.28 Package open-xchange-plugins-blackwhitelist

Plugins abstraction layer for blacklist/whitelist connectors
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.28.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-blackwhitelist
```

27.28.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-blackwhitelist.properties (page 103)

27.29 Package open-xchange-plugins-blackwhitelist-sieve

This package installs the OSGi bundles needed to access the blacklist for plugins within Sieve
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-mailfilter (<<7.10.7)
open-xchange-mailfilter (>=7.10.6)
open-xchange-plugins-blackwhitelist (<<1.7.2)
open-xchange-plugins-blackwhitelist (>=1.7.1)
```

27.29.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-blackwhitelist-sieve
```

27.29.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-blacklist-sieve.properties (page 103)

27.30 Package open-xchange-plugins-contact-storage-group

Plugins contact storage that creates group folders
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-admin (<<7.10.7)
open-xchange-admin (>=7.10.6)
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.30.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-contact-storage-group
```

27.30.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-contact-storage-group.properties (page 103)

27.31 Package open-xchange-plugins-contact-whitelist-sync

Plugins abstraction layer for whitelist contact connectors
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-ldap-client (<<1.7.2)
open-xchange-ldap-client (>=1.7.1)
open-xchange-sql-client (<<1.7.2)
open-xchange-sql-client (>=1.7.1)
```

27.31.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-contact-whitelist-sync
```

27.31.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-contacts-whitelist.properties (page 104)
/opt/open-xchange/etc/plugins-contacts-whitelist-migration.properties (page 104)
/opt/open-xchange/etc/plugins-contacts-whitelist-rdb.properties (page 104)
/opt/open-xchange/etc/sql-client.d/sql-plugins-whitelist.yaml.example (page 105)

27.32 Package open-xchange-plugins-mx-checker

Plugins abstraction layer for MX Checker connectors
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.32.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-mx-checker
```

27.32.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-mx-checker.properties (page 105)

27.33 Package open-xchange-plugins-onboarding-maillogin

Plugin that enables the overriding of the login information that is shown to users during onboarding.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-client-onboarding (<<7.10.7)
open-xchange-client-onboarding (>=7.10.6)
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.33.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-onboarding-maillogin
```

27.33.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/client-onboarding-maillogin.properties (page 106)

27.34 Package open-xchange-plugins-trustedidentity

Enables Trusted Identity API Support.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.34.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-trustedidentity
```

27.34.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/trustedidentity.properties (page 108)

27.35 Package open-xchange-plugins-unsubscribe

Plugins abstraction layer for unsubscribe API connectors
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

Conflicts with:

```
open-xchange-plugins-safeunsubscribe
```

27.35.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-unsubscribe
```

27.35.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-unsubscribe.properties (page 109)

27.36 Package open-xchange-plugins-unsubscribe-vadesecure

This package installs the OSGi bundles needed to access the VadeSecure unsubscribe plugin
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
open-xchange-plugins-unsubscribe (<<1.7.2)
open-xchange-plugins-unsubscribe (>=1.7.1)
```

Conflicts with:

```
open-xchange-plugins-safeunsubscribe-vadesecure
```

27.36.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-plugins-unsubscribe-vadesecure
```

27.36.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/plugins-unsubscribe-vadesecure.properties (page 109)

27.37 Package open-xchange-sms-twilio

This package installs the OSGi bundles needed to send SMS messages via twilio
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.37.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-sms-twilio
```

27.37.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/twilio.properties (page 109)

27.38 Package open-xchange-sql-client

This package provides an advanced SQL client library that is used by other Open-Xchange bundles.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.38.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-sql-client
```

27.38.2 Configuration

For details, please see appendix A
/opt/open-xchange/etc/sql-client.d/sql-client-pools.yaml.example (page 111)
/opt/open-xchange/etc/sql-client.properties (page 111)

27.39 Package open-xchange-util-imap

This package is a library that provides various utilities for IMAP.
Version: 1.7.1-1
Type: OX Middleware Plugin
Depends on:

```
open-xchange-core (<<7.10.7)
open-xchange-core (>=7.10.6)
```

27.39.1 Installation

Install on OX middleware nodes with package installer **apt-get** or **yum**:

```
<package installer> install open-xchange-util-imap
```

A Configuration Files

File 1 /opt/open-xchange/etc/meta/antiphishing.yml

```
1  io.ox/antiphishing//mode:
2    protected: false
```

File 2 /opt/open-xchange/etc/settings/antiphishing.properties

```
1  io.ox/antiphishing//apiModule = plugins/antiphishing
2  io.ox/antiphishing//mode =
```

File 3 /opt/open-xchange/etc/settings/io-ox-appcontrol-dropdown-links.properties

```
1   #### Sample with External Link
2   ## Enabled link
3   # io.ox.appcontrol.dropdown//links/link1/enabled = false
4   # io.ox.appcontrol.dropdown//links/link1/ext_point = io.ox/core/appcontrol/right/help
5   ## Required capability (defaults to none)
6   # io.ox.appcontrol.dropdown//links/link1/capability =
7   ## Default text
8   # io.ox.appcontrol.dropdown//links/link1/text/default = Privacy policy
9   ## Text for en_EN
10  # io.ox.appcontrol.dropdown//links/link1/text/en_EN = Privacy policy
11  ## Text for de_DE
12  # io.ox.appcontrol.dropdown//links/link1/text/de_DE = Datenschutzerklärung
13  ## Link action : external_link, ox_application
14  # io.ox.appcontrol.dropdown//links/link1/action_type = external_link
15  ## Default link for external link
16  # io.ox.appcontrol.dropdown//links/link1/href/default = blank.html
17  ## en_EN link for external link
18  # io.ox.appcontrol.dropdown//links/link1/href/en_EN = blank.html?LANG=en
19  ## de_DE link for external link
20  # io.ox.appcontrol.dropdown//links/link1/href/de_DE = blank.html?LANG=de
21  ## Extension point index of the link (default to last)
22  # io.ox.appcontrol.dropdown//links/link1/index = 500
23  ## Show a divider before
24  # io.ox.appcontrol.dropdown//links/link1/divider_before = true
25  ## Show a divider after
26  # io.ox.appcontrol.dropdown//links/link1/divider_after = false
27
28  #### Sample with OX application
29  # io.ox.appcontrol.dropdown//links/link2/enabled = false
```

```
30  # io.ox.appcontrol.dropdown//links/link2/ext_point = io.ox/core/appcontrol/right/settings
31  # io.ox.appcontrol.dropdown//links/link2/capability =
32  # io.ox.appcontrol.dropdown//links/link2/text/default = Settings
33  # io.ox.appcontrol.dropdown//links/link2/text/en_EN = Settings
34  # io.ox.appcontrol.dropdown//links/link2/text/de_DE = Einstellungen
35  # io.ox.appcontrol.dropdown//links/link2/action_type = ox_application
36  # io.ox.appcontrol.dropdown//links/link2/href = io.ox/settings/main
37  # io.ox.appcontrol.dropdown//links/link2/index = 200
38  # io.ox.appcontrol.dropdown//links/link2/divider_before = true
39  # io.ox.appcontrol.dropdown//links/link2/divider_after = false
40
41  ## Sample trusted identity link
42  #io.ox.appcontrol.dropdown//links/link4/enabled = true
43  #io.ox.appcontrol.dropdown//links/link4/trustedidentity= true
44  #io.ox.appcontrol.dropdown//links/link4/text/default = My Profile
45  #io.ox.appcontrol.dropdown//links/link4/ext_point = io.ox/core/appcontrol/right/settings
46  #io.ox.appcontrol.dropdown//links/link4/action_type = external_link
47  #io.ox.appcontrol.dropdown//links/link4/href/default = blank.html?token=
```

File 4   /opt/open-xchange/etc/meta/blackwhitelist.yml

```
1   io.ox/mail//blackwhitelist/maxAddresses:
2       protected: false
3   io.ox/mail//blackwhitelist/allowDuplicates:
4       protected: false
5   io.ox/mail//blackwhitelist/validateAddresses:
6       protected: false
7   io.ox/mail//blackwhitelist/searchable:
8       protected: false
9   io.ox/mail//blackwhitelist/showDeleteButton:
10      protected: false
11  io.ox/mail//blackwhitelist/supportDomains:
12      protected: false
```

File 5   /opt/open-xchange/etc/settings/blackwhitelist.properties

```
1   ##
2   # Blackwhitelist settings
3   #
4   # Max number of addressed on the list
5   io.ox/mail//blackwhitelist/maxAddresses = 250
6   # Allow users to add duplicates
7   io.ox/mail//blackwhitelist/allowDuplicates = false
8   # Validate if only valid mail addresses are on the list
9   io.ox/mail//blackwhitelist/validateAddresses = false
10  # Show search box for blacklist
11  io.ox/mail//blackwhitelist/searchable = true
12  # Show delete selected button and checkboxes
13  io.ox/mail//blackwhitelist/showDeleteButton = true
14  io.ox/mail//blackwhitelist/supportDomains = true
```

File 6   /opt/open-xchange/etc/settings/dumpster.properties

```
1   ##
2   # Dumpster Settings
3   #
4
5   # Folder in Dovecot desinated as the "Lazy Expunge" folder
6   io.ox/mail//dumpster/folder = default0/DUMPSTER
```

File 7   /opt/open-xchange/etc/meta/externalcontentpopup.yml

```
1  io.ox/externalcontentpopup//popup/en_US/hasSeen:
2      protected: false
```

File 8   /opt/open-xchange/etc/settings/externalcontentpopup.properties

```
1  # Show popup to the user on every login, might be useful for urgent announcements, etc.
2  # Please be aware that this is a global setting that affects all users in all languages
3  io.ox/externalcontentpopup//popup/showOnEveryLogin = false
4
5  # Show the popup even on mobile devices. Disabled by default.
6  # This is a global setting that affects all users in all languages.
7  io.ox/externalcontentpopup//popup/showOnMobile = false
8
9  # Generation of the popup.
10 # Should start at 1 and increment when the user should see a new version again.
11 io.ox/externalcontentpopup//popup/en_US/generation = 1
12
13 # Content of the first step before iframe. Accepts HTML. If no first step is used, set to
        false
14 io.ox/externalcontentpopup//popup/en_US/firstStep/content = false
15
16 # Toggle if native dialog buttons should be used in the first step
17 # io.ox/externalcontentpopup//popup/en_US/firstStep/showNativeButtons = true
18
19 # Label for the (native) next button in the first step
20 # io.ox/externalcontentpopup//popup/en_US/firstStep/nextButtonLabel =
21
22 # Toggle if the user is allowed to skip the popup for the session. Popup will then be
        shown again upon next login.
23 # io.ox/externalcontentpopup//popup/en_US/firstStep/canCancel =
24
25 # Label for the (native) cancel button in the first step
26 # io.ox/externalcontentpopup//popup/en_US/firstStep/cancelButtonLabel = "Take survey later
        "
27
28 # Label for the (native) close button in the first step
29 # io.ox/externalcontentpopup//popup/en_US/firstStep/closeButtonLabel =
30
31 # Title of the popup
32 io.ox/externalcontentpopup//popup/en_US/title = Information
33
34 # Toggle whether or not to show the title
35 io.ox/externalcontentpopup//popup/en_US/showTitle = true
36
37 # Label for the close button below the iframe
38 io.ox/externalcontentpopup//popup/en_US/closeButtonLabel = Close
39
40 # Source of the iframe
41 io.ox/externalcontentpopup//popup/en_US/frame/source = index.html
42 # Optional width and height for the popup
43 #io.ox/externalcontentpopup//popup/en_US/popupWidth =
44 #io.ox/externalcontentpopup//popup/en_US/popupHeight =
```

File 9   /opt/open-xchange/etc/meta/mandatorywizard.yml

```
1  io.ox/mandatorywizard//wizardVideo:
2      protected: false
3  io.ox/mandatorywizard//step3Image:
4      protected: false
5  io.ox/mandatorywizard//step4Image:
6      protected: false
```

```
7   io.ox/mandatorywizard//step5Image:
8       protected: false
9   io.ox/mandatorywizard//step6TutorialLink:
10      protected: false
```

File 10   /opt/open-xchange/etc/settings/mandatorywizard.properties

```
1   # NOTE: This is ONLY a sample config for local environments.
2   # Please adjust according to your needs
3   io.ox/mandatorywizard//logo = "apps/themes/io.ox.mandatorywizard/static/ox_logo_blue.svg"
4   io.ox/mandatorywizard//wizardVideo/en_US = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-english.mp4"
5   io.ox/mandatorywizard//wizardVideo/de_DE = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-German.mp4"
6   io.ox/mandatorywizard//wizardVideo/it_IT = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-italian.mp4"
7   io.ox/mandatorywizard//wizardVideo/fr_FR = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-french.mp4"
8   io.ox/mandatorywizard//wizardVideo/es_ES = "https://oxappsuite.io/_share/IN-Product-OX-App
        -Suite-Welcome-tour-spanish.mp4"
9   io.ox/mandatorywizard//step3Image/en_US = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_EN.png"
10  io.ox/mandatorywizard//step3Image/de_DE = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_GER.png"
11  io.ox/mandatorywizard//step3Image/it_IT = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_IT.png"
12  io.ox/mandatorywizard//step3Image/fr_FR = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_FR.png"
13  io.ox/mandatorywizard//step3Image/es_ES = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_1_ES.png"
14  io.ox/mandatorywizard//step4Image/en_US = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_EN.png"
15  io.ox/mandatorywizard//step4Image/de_DE = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_GER.png"
16  io.ox/mandatorywizard//step4Image/it_IT = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_IT.png"
17  io.ox/mandatorywizard//step4Image/fr_FR = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_FR.png"
18  io.ox/mandatorywizard//step4Image/es_ES = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_2_ES.png"
19  io.ox/mandatorywizard//step5Image/en_US = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_EN.png"
20  io.ox/mandatorywizard//step5Image/it_IT = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_IT.png"
21  io.ox/mandatorywizard//step5Image/fr_FR = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_FR.png"
22  io.ox/mandatorywizard//step5Image/es_ES = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_ES.png"
23  io.ox/mandatorywizard//step5Image/de_DE = "apps/themes/io.ox.mandatorywizard/static/
        welcome_tour_screen_3_GER.png"
24  io.ox/mandatorywizard//step6TutorialLink/en_US = "https://oxappsuite.io/en/tutorials"
25  io.ox/mandatorywizard//step6TutorialLink/de_DE = "https://oxappsuite.io/de/tutorials"
26  io.ox/mandatorywizard//step6TutorialLink/fr_FR = "https://oxappsuite.io/fr/tutorials"
27  io.ox/mandatorywizard//step6TutorialLink/it_IT = "https://oxappsuite.io/it/tutorials"
28  io.ox/mandatorywizard//step6TutorialLink/es_ES = "https://oxappsuite.io/es/tutorials"
```

File 11   /opt/open-xchange/etc/settings/minimalapiapp.properties

```
1   ##
2   # minimal-api-app Settings
3   #
4   # generic format is following
5   #   io.ox/minimalapiapp//iframes=[{<config app 1>},{<config app 2>},{<config app3 >}, ]
```

```
 6  #
 7  # each configuration object must have some attributes: "id", "icon", "source", "title", "
        needsToken" explained below
 8  #
 9  # "id"
10  #    used to create unique name and avoid confusion. If more apps are defined their ids
        must be different
11  #
12  # "icon"
13  #    used to specify the fontawesome icon to use for application (https://fontawesome.com/
        v4.7.0/icons/)
14  #    if not specified "bullseye" is used
15  #
16  # "source"
17  #    contains url to use as source and which will be loaded inside iframe created by app.
18  #    It is possible to use predefined placeholders surrounded by {{ }} which will be
19  #    replaced at app execution time with current values.
20  #
21  #    defined placeholders are the following:
22  #    {{LANGUAGE}} -> expanded to current language in lowercase as got from locale (es: 'en
        ' or 'de' or 'it')
23  #    {{USERMAIL}} -> expanded to emailaddress NOT urlencoded (es: myaddress@myprovider.my)
24  #    {{USERMAIL:ENC}} -> as above but urlencoded (es: myaddress%40myprovider.my)
25  #    {{FIRSTNAME}} -> expanded to first name of current user
26  #    {{FIRSTNAME:ENC}} -> as above but urlencoded
27  #    {{LASTNAME}} -> expanded to last name of current user
28  #    {{LASTNAME:ENC}} -> as above but urlencoded
29  #
30  #
31  # "title"
32  #    is name to use when displaying application in launcher. Can be either a simple string
33  #    or an object
34  #
35  #    - if 'title' is a simple string, then application will use that name for each
        language, so
36  #    changing language does not change name of application
37  #
38  #    - 'title' may be configured as an object and in that case it may contain translations
        for different
39  #    languages, using language code as key (see examples below)
40  #    If there is no defined translation for current language, en_US will be used or if not
        present
41  #    hardcoded value 'Application'
42  #
43  #
44  # "needsToken"
45  #    can be either true or false and specify if before calling url, user has to gather a
        token calling
46  #    appropriate api and allow consent via ui dialog. Token will then be appended to url
47
48
49  # some examples: only one can be active at any time
50
51  # example config for placeholders:
52  #
53  # io.ox/minimalapiapp//iframes=[{id: "test1", source: "https://mywebserver.org/{{LANGUAGE
        }}/?email={{USERMAIL:ENC}}", title: "Minimal API App", "needsToken": false}]
54
55
56  # example config for simple title:
57  #
58  # io.ox/minimalapiapp//iframes=[{id: "test2", source: "https://mywebserver.org/", title: "
        Minimal API App", "needsToken": false}]
59
60  # example config for complex title:
61  #
62  # io.ox/minimalapiapp//iframes=[{id: "test3", source: "https://mywebserver.org/", title:{
        en_US:"My US app", de_DE:"My DE app", it_IT:"My IT app"}, "needsToken": false}]
63
64  # example config for multiple apps:
65  #
66  # io.ox/minimalapiapp//iframes=[{id: "test4", icon:"external-link", source: "https://
```

```
    mywebserver.org/{{LANGUAGE}}/?email={{USERMAIL:ENC}}", title:{ en_US:"My US app",
    de_DE:"My DE app", it_IT:"My IT app"}, "needsToken": false}, {id: "test5", source: "
    https://mysecondwebserver.org/?userlast={{LASTNAME:ENC}}", title:{ en_US:"My second US
     app", de_DE:"My second DE app", it_IT:"My second IT app"}, "needsToken": false}]
```

File 12   /opt/open-xchange/etc/meta/minimalapi.yml

```
1  io.ox/minimalapiconsent//client:
2      protected: false
```

File 13   /opt/open-xchange/etc/settings/minimalapi.properties

```
1  io.ox/minimalapiconsent//client=example
```

File 14   /opt/open-xchange/etc/meta/mx-checker.yml

```
1  io.ox/mx-checker//suppress:
2    protected: false
```

File 15   /opt/open-xchange/etc/settings/mx-checker.properties

```
1   # Module name endpoint in the middleware
2   io.ox/mx-checker//apiModule = plugins/mx-checker
3
4   # When the user actively closes and temporarily suppresses the notification, number of
        days before showing it again.
5   io.ox/mx-checker//suppressDays = 1
6
7   # Whether or not to suppress the notification to the user. `false` to show the
        notification, `true` to hide it permanentlly, or a timestamp indicating when it was
        temporarily hidden. User-configurable.
8   io.ox/mx-checker//suppress = false
9
10  # Ignore empty Action Url and show error banner without fix link.
11  io.ox/mx-checker//ignoreEmptyActionUrl = false
```

File 16   /opt/open-xchange/etc/settings/survey.properties

```
1   # io.ox.survey//logo = apps/themes/io.ox.survey/static/ox_logo_blue.svg
2
3   # Only needed for en_US. If different languages contain different surveys,
4   # then "hasSeen" below needs to be explicitly configured too.
5   # io.ox.survey//survey/en_US/generation = 1
6
7   # "hasSeen" needs to be specified only if you have different versions (generation) of the
        survey per language
8   # In this case it should also be added to meta config as not protected
9   # io.ox.survey//survey/en_US/hasSeen = 0
10
11  # io.ox.survey//survey/en_US/intro = "<span class=\'salutation\'>Dear Customer,</span><br
```

```
       />We\'re always looking to improve our webmail service by asking for feedback from our
          customers. We\'d appreciate it if you\'d take a few moments to complete this survey."
12  # io.ox.survey//survey/en_US/privacy = "<span>Your privacy is important to us:</span><br/>
          Your participation is fully anonymous. We do not collect any personal data from you
          beyond the questions asked in the survey"
13  # io.ox.survey//survey/en_US/link = blank.html?take-survey=true
14  # io.ox.survey//survey/en_US/takeSurveyNow = "Take the survey now",
15  # io.ox.survey//survey/en_US/takeSurveyLater = "I\'ll take the survey later",
16  # io.ox.survey//survey/en_US/dontTakeSurvey = "I don\'t want to participate in the survey
          ."
```

File 17   /opt/open-xchange/etc/settings/trustedidentity-upsell.properties

```
1  ##
2  # Trusted Identity Upsell Settings
3  #
4
5  # URL to use on upsell links click when simple-wizard not enabled
6  # io.ox/trustedidentity-upsell//upsell_url=blank.html?token=
```

File 18   /opt/open-xchange/etc/settings/unsubscribe.properties

```
1   # If API is being used, App Suite Middleware endpoint to use. Middleware then contacts
         external API to send unsubscribe request.
2   io.ox/unsubscribe//apiModule = plugins/unsubscribe
3
4   # Header name to check for unsubscribe information. Industry standard is the default below
         .
5   io.ox/unsubscribe//headerName = List-Unsubscribe
6
7   # Folder to move a message to after it is unsubscribed; if not set, message will not be
         moved.
8   io.ox/unsubscribe//moveToFolder = default0/Trash
9
10  # Header field to use for getting the mail's "to" address. Ex for alternate value: '
         headers.Delivered-To'
11  io.ox/unsubscribe//mailToField = to
```

File 19   /opt/open-xchange/etc/masterpassword-authentication.properties

```
1   # Configuration file for the master password authentication plugin
2   #
3   # DO NOT USE IN PRODUCTION !
4   #
5
6   # The clear text password to authenticate all users.
7   # Mandatory.
8   # Example:
9   # com.openexchange.authentication.masterpassword.password=supersecret
10  com.openexchange.authentication.masterpassword.password=
11
12  # The default value for the context when it is not specified.
13  # Optional and defaults to using the "defaultcontext" mapping.
14  #com.openexchange.authentication.masterpassword.default.context=
15
16  # Whether the username portion of the login should be lowercased
17  # before being looked up in the user database.
18  # Optional and defaults to false
19  #com.openexchange.authentication.masterpassword.lowercase=false
```

```
20
21   # Whether the context name portion of the login should be lowercased
22   # before being looked up in the context database.
23   # Optional and defaults to false
24   #com.openexchange.authentication.masterpassword.lowercase.context=false
25
26   # Whether to use the complete login string as the username,
27   # e.g. login "foo@bar.com" -> user name "foo@bar.com" and
28   # context name "bar.com"
29   # Optional and defaults to false
30   #com.openexchange.authentication.masterpassword.use.full.login.info=false
31
32   # Whether to use the complete login string for the context name,
33   # e.g. login "foo@bar.com" -> context name "foo@bar.com"
34   # Optional and defaults to false
35   #com.openexchange.authentication.masterpassword.use.full.login.info.for.context=false
```

File 20   /opt/open-xchange/etc/ldap-client.d/ldap-client-pools.yaml.example

```
1    # The top-level key is the identifier of the pool, which can be
2    # any string of text and is being used by the bundles and applications
3    # to access that pool configuration.
4    # Typically, those are fixed or need to be configured in the bundles
5    # that use this library.
6    #
7    # When Java Security Manager support is enabled, files that are referenced
8    # in these configuration files must be in a directory that is already
9    # whitelisted, or in a subdirectory thereof, such as
10   # /opt/open-xchange/etc/
11   #
12   # A good candidate would be something along the lines of
13   # /opt/open-xchange/etc/ldap-files/
14   #
15   # Otherwise, the filename or its directory must be put into a new .list
16   # file in the folder
17   # /opt/open-xchange/etc/security/
18   # with e.g. the following content:
19   #
20   # file:/etc/trust.jks
21   #
22   pool1:
23     trust-store:
24       # SSL: path to the JKS trust store file that contains the anchors
25       file: /etc/trust.jks
26       # SSL: indicates whether to reject certificates if the current time
27       # is outside the validity window for the certificate
28       validity: true
29     key-store:
30       # SSL: path to the JKS client key store file that contains the key
31       file: /etc/private.jks
32       # SSL: password to access the keystore and the key
33       password: foobar
34       # SSL: alias of the key to use
35       alias: key
36     # Configure a read/write pool with different settings for read operations
37     # and for write operations (i.e. different pools of LDAP servers).
38     # Here comes the part for the read operations:
39     read:
40       # Use a failover cluster of two nodes:
41       failover:
42         - ldap1.example.com
43         - ldap2.example.com
44       # Pool connection management
45       # -------------------------
46       # When creating a connection pool, you may specify an initial number of
47       # connections (pool-min) and a maximum number of connections (pool-max).
48       # The initial number of connections is the number of connections that should
49       # be immediately established and available for use when the pool is created.
```

```
 50        # The maximum number of connections is the largest number of unused connections
 51        # that may be available in the pool at any time.
 52        # Whenever a connection is needed, whether by an attempt to check out a
 53        # connection or to use one of the pool's methods to process an operation,
 54        # the pool will first check to see if there is a connection that has already
 55        # been established but is not currently in use, and if so then that connection
 56        # will be used.
 57        # If there aren't any unused connections that are already established, then
 58        # the pool will determine if it has yet created the maximum number of
 59        # connections, and if not then it will immediately create a new connection
 60        # and use it.
 61        # If the pool has already created the maximum number of connections, then the
 62        # pool may wait for a period of time (as configured using 'maxWaitTimeMillis' below,
 63        # which has a default value of zero to indicate that it should not wait at all)
 64        # for an in-use connection to be released back to the pool.
 65        # If no connection is available after the specified wait time (or there should
 66        # not be any wait time), then the pool may automatically create a new connection
 67        # to use if 'createIfNecessary' is true (which is the default).
 68        # If it is able to successfully create a connection, then it will be used.
 69        # If it cannot create a connection, or if 'createIfNecessary' is set to false,
 70        # then an error will be thrown.
 71        # Note that the maximum number of connections specified when creating a pool
 72        # refers to the maximum number of connections that should be available for use
 73        # at any given time.
 74        # If 'createIfNecessary' is set to true, then there may temporarily be more
 75        # active connections than the configured maximum number of connections.
 76        # This can be useful during periods of heavy activity, because the pool will
 77        # keep those connections established until the number of unused connections
 78        # exceeds the configured maximum.
 79        # If you wish to enforce a hard limit on the maximum number of connections so
 80        # that there cannot be more than the configured maximum in use at any time,
 81        # then set 'createIfNecessary' to false to indicate that the pool should not
 82        # automatically create connections when one is needed but none are available,
 83        # and you may also want to set 'maxWaitTimeMillis' to a maximum wait time to allow
 84        # the pool to wait for a connection to become available rather than throwing
 85        # an exception if no connections are immediately available.
 86        pool-min: 10
 87        pool-max: 50
 88        maxConnectionAgeMillis: 30000
 89        maxWaitTimeMillis: 500
 90        createIfNecessary: true
 91        # Specifies whether certain operations that should be retried on a newly-created
 92        # connection if the initial attempt fails in a manner that indicates that the
 93        # connection used to process the request may no longer be valid.
 94        # Only a single retry will be attempted for any operation.
 95        retryFailedOperations: true
 96      # Here comes the part for the write operations:
 97      write:
 98        host: ldap0.example.com
 99        pool-min: 1
100        pool-max: 10
101        maxConnectionAgeMillis: 60000
102        maxWaitTimeMillis: 1000
103        createIfNecessary: false
104        retryFailedOperations: false
105      # Specifies whether the pool should attempt to abandon any request for which
106      # no response is received in the maximum response timeout period:
107      abandonOnTimeout: true
108      # Specifies the maximum length of time in milliseconds that a connection attempt
109      # should be allowed to continue before giving up.
110      # A value of zero (default) indicates that there should be no connect timeout.
111      connectionTimeoutMillis: 3000
112      # Specifies the maximum length of time in milliseconds that an operation should
113      # be allowed to block while waiting for a response from the server.
114      # A value of zero indicates that there should be no timeout.
115      responseTimeoutMillis: 5000
116      # Specifies whether to use the SO_KEEPALIVE option for the underlying sockets
117      # used by associated connections.
118      keepAlive: true
119      # Specifies whether to use the TCP_NODELAY option for the underlying sockets.
120      tcpNoDelay: true
121      # Specifies whether to operate in synchronous mode, in which at most one
```

```
122    # operation may be in progress at any time on a given connection.
123    # When using asynchronous mode, a background thread takes care of multiplexing
124    # and dispatching all the operations on connections that are shared for
125    # multiple operations.
126    synchronousMode: true
127    # Specifies the length of time in milliseconds between periodic background
128    # health checks against the available connections in this pool.
129    healthCheckIntervalMillis: 120000
130    # Specifies whether associated connections should attempt to follow any
131    # referrals that they encounter.
132    followReferrals: true
133    # Specifies the maximum number of hops that a connection should take when
134    # trying to follow a referral, must be greater than zero when 'followReferrals'
135    # is true.
136    referralHopLimit: 1
137    # Specifies the maximum size in bytes for an LDAP message that a connection
138    # will attempt to read from the directory server.
139    # If it encounters an LDAP message that is larger than this size, then the
140    # connection will be terminated.
141    # Disabled when not specified or set to 0.
142    maxMessageSize: 1024
143
144  pool2:
145    # A failover pool that uses the same set of servers for read and for
146    # write operations.
147    failover:
148      - ldap0.example.com
149      - ldap1.example.com
150    pool-min: 5
151    pool-max: 20
152    trust-store:
153      file: /etc/trust.jks
154    key-store:
155      file: /etc/private.jks
156
157  pool3:
158    # A simple single-host setup
159    host: ldap.example.com
160    pool-min: 5
161    pool-max: 20
162
163  pool4:
164    # A load-balancing setup that will use a round-robin algorithm to
165    # select the server to which the connection should be established.
166    # Any number of servers may be included, and each request will
167    # attempt to retrieve a connection to the next server in the list,
168    # circling back to the beginning of the list as necessary.
169    # If a server is unavailable when an attempt is made to establish
170    # a connection to it, then the connection will be established to
171    # the next available server in the set.
172    round-robin:
173      - host: ldap1.example.com
174        port: 10389
175        responseTimeoutMillis: 5000
176      - host: ldap2.example.com
177        port: 10389
178        responseTimeoutMillis: 12000
179    pool-min: 10
180    pool-max: 50
181
182  pool5:
183    # A DNS RR setup handles the case in which a given hostname may
184    # resolve to multiplee IP addresses.
185    # Note that while a setup like this is typically referred to as
186    # "round-robin DNS", this option does not strictly require DNS (as names
187    # may be resolved through alternate mechanisms like a hosts file or an
188    # alternate name service), and it does not strictly require round-robin
189    # use of those addresses (as alternate ordering mechanisms like
190    # 'random' or 'failover' may be used).
191    dns-round-robin:
192      host: ldap.example.com
193      # The selection mode that should be used if the hostname resolves
```

```
194        # to multiple addresses.
195        # Possible values:
196        # - random: the order of addresses will be randomized for each attempt
197        # - failover: addresses will be consistently attempted in the order
198        #       they are retrieved from the name service.
199        # - round-robin: connection attempts will be made in a round-robin order
200        selection-mode: random
201        # Only use DNS if set to 'true'.
202        # If set to 'false' then the operating system's hostname resolution
203        # service will be used, which may include a hosts file.
204        only-dns: false
205        # The maximum length of time in milliseconds to cache addresses resolved
206        # from the provided hostname.
207        # Caching resolved addresses can result in better performance and can
208        # reduce the number of requests to the name service.
209        # A value that is less than or equal to zero indicates that no caching
210        # should be used.
211        cache-timeout: 1440000
212      pool-min: 5
213      pool-max: 20
214
215  pool6:
216      # A failover pool that uses the same set of servers for read and for
217      # write operations, as well as StartTLS
218      failover:
219        - ldap0.example.com
220        - ldap1.example.com
221      pool-min: 5
222      pool-max: 20
223      starttls: true
224      trust-store:
225        file: /etc/trust.jks
226      key-store:
227        file: /etc/private.jks
```

File 21   /opt/open-xchange/etc/metrics-http.properties

```
1   #
2   # The following property defines the various elements to use to compose the names of
3   # the metrics, to determine how to group them and what to see.
4   #
5   # The elements are separated by dots (".") and parsed individually, then replaced by
6   # their respective value for each inbound HTTP request to determine the name of
7   # the metric to update.
8   #
9   # Note that not all elements necessarily always result in a value as some are only
10  # present for specific types of HTTP requests, and others are optional (for example
11  # all the user information related ones that are only available when the HTTP request
12  # is authenticated or used in the context of an established Open-Xchange session).
13  # Values that are not available are skipped in the resulting name of the metric.
14  #
15  # For each component, here are the possible values to specify in this property:
16  # status
17  # ======
18  # Will be replaced by "success" or "error" depending on the result, for example:
19  # /api/rest/x/y/z -> success
20  #
21  # path
22  # ====
23  # If the HTTP is an AJAX API call, it will be replaced by "//module/action", and if not
24  # (e.g. accessing a servlet instead), it will be replaced with the servlet path.
25  #
26  # Examples:
27  # /ajax/folders?action=get&id=1,2,4 -> //folders/get
28  # /rest/api/x/y/z -------------------> /rest/api/x/y/z
29  #
30  # info
31  # ====
```

```
32   # Will be replaced with the servlet path info, i.e. the part of the URL that is behind
33   # the servlet path.
34   #
35   # Examples:
36   # /rest/api/users/john.doe@example.com -> john.doe@example.com
37   #
38   # session
39   # =======
40   # The value "session", "session_id" or "sessionid" will be replaced by the Open-Xchange
         session
41   # identifier, if applicable.
42   # For HTTP operations that are not authenticated, it will be left out.
43   #
44   # context_id
45   # ==========
46   # The value "context_id" or "cid" will be replaced by the numeric context identifier of
         the
47   # user, if applicable.
48   # For HTTP operations that are not authenticated, it will be left out.
49   #
50   # user_id
51   # =======
52   # The value "user_id" or "cid" will be replaced by the numeric user identifier of the
53   # user within the context, if applicable.
54   # For HTTP operations that are not authenticated, it will be left out.
55   #
56   # login
57   # =====
58   # The value "login" will be replaced by the login the user entered to authenticate or the
59   # user identifier provided by an SSO mechanism, if applicable.
60   # For HTTP operations that are not authenticated, it will be left out.
61   #
62   # property(module)
63   # ================
64   # Will be replaced by the AJAX API module, if applicable.
65   #
66   # property(action)
67   # ================
68   # Will be replaced by the AJAX API module action, if applicable.
69   #
70   # header(...)
71   # ===========
72   # Will be replaced by the value of an HTTP request header, the name of the header
73   # being specified between the parentheses.
74   # Note that header names are case sensitive.
75   #
76   # Example:
77   # header(Host).path -> appsuite01.example.com.//folders/list
78   #
79   # parameter(...)
80   # ==============
81   # Will be replaced by the value of an HTTP request parameter, the name of the
82   # parameter being specified between the parentheses.
83   #
84   # Example:
85   # header(Host).parameter(app).path -> appsuite01.example.com.io.ox/mail.//folders/list
86   #
87   # cookie(...)
88   # ===========
89   # Will be replaced by the value of a cookie present in the HTTP request, the name of the
90   # cookie being specified between the parentheses.
91   #
92   # session(...)
93   # ============
94   # Will be replaced by the value of a parameter present in the user's Open-Xchange session,
95   # the name of the session parameter being specified between the parentheses.
96   #
97   # text(...)
98   # =========
99   # Specifies text that will be used as-is.
100  #
101  com.openexchange.metrics.http.elements=path.status
```

```
102
103   # When aggregation is enabled (by setting this value to true), each element as configured
104   # by the property com.openexchange.metrics.http.elements will be a metric in its own right
      ,
105   # and aggregated accordingly to its path.
106   # Without aggregation, each metric is "flat".
107   #
108   # For example, with the following configuration
109   #    com.openexchange.metrics.http.elements=header(Host).path.status
110   #    com.openexchange.metrics.http.aggregation=true
111   # each element will be a metric, namely:
112   # 1. header(Host)
113   # 2. header(Host).path
114   # 3. header(Host).path.status
115   #
116   # Specifically, results will look along the lines of the following, each being a metric:
117   # - appsuite01.example.com
118   # - appsuite01.example.com.//folders/list
119   # - appsuite01.example.com.//folders/list.success
120   #
121   # Each of those metrics except for the last one will be aggregating the measurements
122   # of their parent metrics.
123   #
124   com.openexchange.metrics.http.aggregation=false
125
126   # List of logins for which to create specific metrics.
127   # In order to be able to track and aggregate the metrics of specific users, the
128   # following property can be set to a (full) login name as entered by the user when
129   # authenticating or as provided by an SSO system if applicable.
130   #
131   # For each of the logins specified through this property, an additional set
132   # of metrics will be created, prefixing the elements that are defined in
133   # com.openexchange.metrics.http.elements
134   # with the login value.
135   #
136   # For example, the following configuration
137   #    com.openexchange.metrics.http.elements=header(host).path.status
138   #    com.openexchange.metrics.http.aggregation=true
139   #    com.openexchange.metrics.http.logins=jdoe@example.com
140   # will result in the following list of metrics:
141   # 1. header(Host)
142   # 2. header(Host).path
143   # 3. header(Host).path.status
144   # 4. login
145   # 5. login.header(Host)
146   # 6. login.header(Host).path
147   # 7. login.header(Host).path.status
148   #
149   # Specifically, results will look along the lines of the following, each being a metric:
150   # - appsuite01.example.com
151   # - appsuite01.example.com.//folders/list
152   # - appsuite01.example.com.//folders/list.success
153   # - jdoe@example.com
154   # - jdoe@example.com.appsuite01.example.com
155   # - jdoe@example.com.appsuite01.example.com.//folders/list
156   # - jdoe@example.com.appsuite01.example.com.//folders/list.success
157   #
158   # Without aggregation, the following configuration
159   #    com.openexchange.metrics.http.elements=header(host).path.status
160   #    com.openexchange.metrics.http.aggregation=false
161   #    com.openexchange.metrics.http.logins=jdoe@example.com
162   # will result in this list of metrics instead:
163   # 1. header(Host).path.status
164   # 2. login.header(Host).path.status
165   #
166   # Note that if this property is commented out (not set) or left empty,
167   # no such additional per-login metrics will be created, which is the default
168   # behavior.
169   #
170   # Multiple logins may be specified, either by separating them with whitespaces
171   # and/or commas, e.g.:
172   # com.openexchange.metrics.http.logins=john.doe@example.com, jane.doe@example.com
```

```
173  # or by specifying multiple properties as follows:
174  # com.openexchange.metrics.http.logins.1=john.doe@example.com
175  # com.openexchange.metrics.http.logins.2=jane.doe@example.com
176  # (both may also be combined).
177  #
178  # Furthermore, it is possible to use regular expressions and wildcards:
179  # - if a login contains * or ?, it is understood to be a wildcard
180  # - if a login is enclosed in /.../ or /.../i (case insensitive), it is understood
181  #   to be a regular expression
182  # Examples:
183  # com.openexchange.metrics.http.logins=*@example.com, /^j(ohn|ane)\.doe@example\.cm$/
184  #
185  # Being a wildcard, the following value would match all logins:
186  # com.openexchange.metrics.http.logins=*
187  #
188  com.openexchange.metrics.http.logins=
189
190  # List of paths and path patterns for which to maintain metrics.
191  #
192  # The following property specifies discrete paths, path wildcard patterns, or
193  # regular expressions that will be matched against the HTTP request paths, and
194  # only those that match will have metrics.
195  #
196  # If the property value contains * or ?, it will be understood as a wildcard pattern.
197  # If it starts with / and ends with / or /i (cae insensitive), it will be understood
198  # as a regular expression.
199  # If it is neither of those, it will be interpreted as an exact (string comparison) value.
200  #
201  # To enable metric collection for all URLs, use the following value:
202  # com.openexchange.metrics.http.path=*
203  #
204  # If the value is not defined or empty, no metrics will be collected:
205  # com.openexchange.metrics.http.path=
206  #
207  # Example:
208  # com.openexchange.metrics.http.path.1=/^/appsuite/.+/(boot|precore)\.js$/
209  # com.openexchange.metrics.http.path.2=/appsuite/api/apps/manifests
210  # com.openexchange.metrics.http.path.3=/appsuite/api/mail
211  #
212  com.openexchange.metrics.http.path=
213
214  # The behavior of the path matching above can be configured with the following property.
215  # Possible values:
216  # - whitelist: any URL path that matches one of the URL patterns configured
217  #   using com.openexchange.metrics.http.path will be measured with metrics;
218  #   any URL path that does not, will not be measured with metrics
219  # - blacklist: any URL path that does not matches one of the URL patterns configured
220  #   using com.openexchange.metrics.http.path will be measured with metrics
221  #
222  # When omitted, left empty or invalid, the default mode is whitelist
223  #
224  # Example:
225  # com.openexchange.metrics.http.path.mode=blacklist
226  #
227  com.openexchange.metrics.http.path.mode=whitelist
```

File 22   /opt/open-xchange/etc/metrics-imap.properties

```
1  # Configure whether to enable metrics for IMAP operations.
2  # When this property is omitted (commented out) or set to false, or empty,
3  # IMAP metrics will not be collected.
4  com.openexchange.metrics.imap.enable=false
5
6  # The number of threads to use to process IMAP operation results,
7  # updating metrics.
8  com.openexchange.metrics.imap.threads=2
```

File 23   /opt/open-xchange/etc/minimal-api.properties

```
1   # The capability to control whether or not the user is allowed to access the API
2   # at all
3   #
4   # Optional, default value: false
5   #
6   # Example:
7   # com.openexchange.capability.minimalapi=true
8   com.openexchange.capability.minimalapi=false
9
10  # The clients names enabled for a user
11  # Must be provided as a comma separated list
12  #
13  # Optional, default value: ""
14  #
15  # Must be provided as a comma separated list
16  #
17  # Example:
18  # com.openexchange.plugins.minimal.api.clients=exampleClient,exampleClient2
19  com.openexchange.plugins.minimal.api.clients=
20
21  # The user-friendly name of a client
22  #
23  # Optional, default value: ""
24  #
25  # If not set, the client identifier is returned.
26  #
27  # Example:
28  # com.openexchange.plugins.minimal.api.exampleClient.name=Example Preview
29  com.openexchange.plugins.minimal.api.[client].name=
30
31  # The claims assigned to a client
32  #
33  # Optional, default value: ""
34  #
35  # Must be provided as a comma separated list
36  #
37  # Example:
38  # com.openexchange.plugins.minimal.api.exampleClient.claims=readMail
39  com.openexchange.plugins.minimal.api.[client].claims=
40
41  # Default consent if user has not yet decided on first access
42  # WARNING: It might be required by law to enforce user consent
43  #
44  # Optional, default value: false
45  #
46  # Example:
47  # com.openexchange.plugins.minimal.api.exampleClient.defaultconsent=true
48  com.openexchange.plugins.minimal.api.[client].defaultconsent=false
49
50  # Maximum amount of requests per second per source IP address if the token could not be
        validated from cache
51  # May be a decimal number.
52  #
53  # Optional, default value: 1.0
54  # Optional, default for client: 5.0
55  #
56  # Example:
57  # com.openexchange.plugins.minimal.api.ratelimit.requestsPerSecond=10.0
58  # com.openexchange.plugins.minimal.api.ratelimit.exampleClient.maxRequestsPerSecond=10.0
59  com.openexchange.plugins.minimal.api.ratelimit.requestsPerSecond=1.0
60
61  # Maximal time window, in milliseconds: after a given source IP address has not accessed
62  # the minimal API, its number of requests per second rate is reset.
63  #
64  # Optional, default value: 300000
65  # Optional, default for client: 300000
66  #
67  # Example:
68  # com.openexchange.plugins.minimal.api.ratelimit.maxRateTimeWindow=60000
69  # com.openexchange.plugins.minimal.api.ratelimit.exampleClient.maxRateTimeWindow=60000
```

```
70   com.openexchange.plugins.minimal.api.ratelimit.maxRateTimeWindow=300000
71
72   # Strategy to use for reacting to the inability to access the API for a given source
73   # IP address due to surpassing the maxRequestsPerSecond rate.
74   #
75   # Format: it must be one of:
76   # * fail-fast
77   # * block
78   # * timeout:...
79   #
80   # fail-fast
81   #   if the rate limit is exceeded, the API will respond with a 401 Unauthorized
82   # block
83   #   if the rate limit is exceeded, the API will block infinitely until the rate limit
84   #   allows for another request to be performed
85   # timeout:...
86   #   block until the specified timeout is reached, after which the API responds with a
87   #   401 Unauthorized
88   #   if the timeout does not allow to get a new token in time, a 401 Unauthorized is
89   #   returned
90   #   The value after "timeout:" consists of a number followed by a time unit, examples:
91   #   - timeout:400s ---> 400 seconds
92   #   - timeout:1m ------>   1 minute
93   #   - timeout:2000ms -> 2000 milliseconds
94   #
95   # If the token could be validated and is correct, the API will not return a
96   # 401 Unauthorized but a 429 Too Many Requests instead.
97   #
98   # Optional, default value: timeout:250ms
99   # Optional, default for client: timeout:500ms
100  #
101  # Example:
102  # com.openexchange.plugins.minimal.api.ratelimit.strategy=timeout:1s
103  # com.openexchange.plugins.minimal.api.ratelimit.exampleClient.strategy=timeout:5s
104  com.openexchange.plugins.minimal.api.ratelimit.strategy=timeout:250ms
```

File 24   /opt/open-xchange/etc/plugins-antiphishing.properties

```
1    # Setting to control the used connector for a specific user
2    # This setting is config-cascade aware to support different implementations for each user.
3    # Default is <none> which means that the feature is disabled for a user
4    # To enable vade secure com.openexchange.plugins.antiphishing.connector=
         plugins_antiphishing_vadesecure
5    com.openexchange.plugins.antiphishing.connector=
6
7    # Setting to enable/disable the antiphishing capability
8    # This setting is config-cascade aware to support different implementations for each user.
9    # Default is false which means that the feature is disabled for a user
10   com.openexchange.plugins.antiphishing.enabled=false
11
12   # Setting to enable/disable the antiphishing mta_capability
13   # If true, the user has the ability to choose antiphishing at the MTA level
14   # This setting is config-cascade aware to support different implementations for each user.
15   # Default is false which means that the feature is disabled for a user
16   com.openexchange.plugins.antiphishing.mta_capability=false
17
18   # Setting to enable/disable the antiphishing at the mta level
19   # If true, an antiphishing check will take place at the MTA level
20   # This setting is config-cascade aware to support different implementations for each user.
21   # Additionally, this property can be set by the user in the UI
22   # Default is false which means that the feature is disabled for a user
23   com.openexchange.plugins.antiphishing.mta_antiphishing=false
```

File 25   /opt/open-xchange/etc/plugins-antiphishing-vadesecure.properties

```
1   # The customer name as provided by VadeSecure; required to access Phishing API
2   # Default: NONE
3   # Config-cascade aware: true
4   # Lean: false
5   com.openexchange.plugins.antiphishing.vadesecure.name.passcrypt=<Customer name provided by
        VadeSecure>

6
7   # The customer license provided by VadeSecure; required to access Phishing API
8   # Default: NONE
9   # Config-cascade aware: true
10  # Lean: false
11  com.openexchange.plugins.antiphishing.vadesecure.license.passcrypt=<Customer license
        provided by VadeSecure>

12
13  # Setting to change the VadeSecure IsItPhishing API URL
14  # Default: https://iip.eu.vadesecure.com/api/v2/url
15  # Config-cascade aware: true
16  # Lean: true
17  com.openexchange.plugins.antiphishing.vadesecure.phishing_url=https://iip.eu.vadesecure.
        com/api/v2/url

18
19  # Setting to change the VadeSecure connector identifier referenced in plugins-antiphishing
        .properties / com.openexchange.plugins.antiphishing.connector
20  # Default: "plugins_antiphishing_vadesecure"
21  # Config-cascade aware: true
22  # Lean: true
23  com.openexchange.plugins.antiphishing.vadesecure.identifier=
        plugins_antiphishing_vadesecure

24
25  # If set to true, the URL will always be crawled and analyzed, even if it can trigger
        collateral damages (such as unsubscribing a user, canceling an order, etc.).
26  # If set to false, the service checks whether the URL may cause collateral damage to the
        end user (unsubscribe, order confirmation, etc.). If so, the URL is not crawled and
        NOT_EXPLORED is returned in the response.
27  # Default: false
28  # Config-cascade aware: true
29  # Lean: true
30  com.openexchange.plugins.antiphishing.vadesecure.force=false

31
32  # Vade Secure IsItPhishing Smart mode enables URL anonymization. Typically, this is meant
        to
33  # replace any unique-ID like tokens in a URL by random characters, to prevent side effects
         when crawling certain URLs, which if visited, could trigger unwanted actions:
        unsubscription, cancelation, etc.
34  # Set to true to enable the smart mode. If set to false, URLs will be crawled in the way
        they were originally provided. If argument randomization fails, the URL is not crawled
         and NOT_EXPLORED is returned.# Default: "plugins_antiphishing_vadesecure"
35  # NOTE: Vade Secure strongly recommends enabling the smart parameter to true, so that the
        API can trigger token anonymization, to try and prevent any collateral damages.
36  # Default: false
37  # Config-cascade aware: true
38  # Lean: true
39  com.openexchange.plugins.antiphishing.vadesecure.smart=true

40
41  # Timeout in milliseconds, with a minimum value of 1000. Once timeout is reached, TIMEOUT
        response is returned.
42  # Default: 3000
43  # Config-cascade aware: true
44  # Lean: true
45  com.openexchange.plugins.antiphishing.vadesecure.timeout=3000
```

File 26   /opt/open-xchange/etc/plugins-blackwhitelist.properties

```
1   # Setting to control the used connector for a specific user
2   # This setting is config-cascade aware to support different implementations for each user.
3   # Default is <none> which means that the feature is disabled for a user
4   com.openexchange.plugins.blackwhitelist.connector=
```

```
5
6   # Setting to check if memory backed test System should be started
7   # This connector is identified by plugins_blwl_test
8   # Default: false
9   com.openexchange.plugins.blackwhitelist.test=false
```

File 27   /opt/open-xchange/etc/plugins-blacklist-sieve.properties

```
1    # Identifier of this blackwhitelist connector: plugins_blackwhitelist_sieve
2    # Setting to control the rulename to be set and checked as a antispam value inside the
         sieve rules
3    # Default: Blacklist
4    # Config-cascade aware: true
5    # Lean: true
6    com.openexchange.plugins.blackwhitelist.connector.sieve.rulename=Blacklist
7
8    # Setting to control wether the blacklisted mails should be moved to SPAM or deleted
         directly
9    # If set to true, mails are moved to SPAM
10   # If set to false, mails are deleted
11   # Default: true
12   # Config-cascade aware: true
13   # Lean: true
14   com.openexchange.plugins.blackwhitelist.connector.sieve.moveToSpam=true
15
16   # Setting to check if memory backed test System should be started
17   # This connector is identified by plugins_blwl_test
18   # Default: false
19   com.openexchange.plugins.blackwhitelist.connector.sieve.test=false
```

File 28   /opt/open-xchange/etc/plugins-contact-storage-group.properties

```
1    # Configures whether the group contact storage is enabled for a context or not.
2    # Default: false
3    com.openexchange.plugins.contact.storage.group.enabled=false
4
5    # Defines an optional list of those groups for which no group contact folder should
6    # be used, as a comma-separated string of the identifiers of those groups that should
7    # be excluded. The groups "All Users", "All Guests" and the "Standard Group" are
8    # always excluded.
9    # Default: <empty>
10   com.openexchange.plugins.contact.storage.group.excludedGroups=
11
12   # Defines if the display name of the groups should be used to create the folder
13   # names in the folder tree.
14   # If set to <true>, the displayname is used
15   # If set to <false>, the group name is used
16   # The Group Names are limited by the property CHECK_GROUP_UID_REGEXP
17   com.openexchange.plugins.contact.storage.group.useDisplayName=true
```

File 29   /opt/open-xchange/etc/plugins-contacts-whitelist.properties

```
1    # This setting enables or disables special handling for the ContactCollectionFolder
2    # If set to true, the contactCollectFolder is ignored and contacts in this folder
3    # are not added to the whitelist. Contacts moved to this folder are also removed from the
         whitelist
4    # If set to false, the contactCollectFolder is handled like any other folder.
5    # config-cascade aware
6    # Default: true
```

```
7  com.openexchange.plugins.contacts.whitelist.ignoreContactCollectFolder=true
8
9  # This setting is used to set the connector for the contact sync.
10 # Currently available options are:
11 #  <not-set> (this will disable the sync for the user)
12 #  rdb
13 # Default: <not-set>
14 com.openexchange.plugins.contacts.whitelist.connector=
```

File 30   /opt/open-xchange/etc/plugins-contacts-whitelist-migration.properties

```
1  # Defines the strategy of the automatic migration
2  # Can be either
3  #     <not-set> which disables the automatic migration
4  #     once
5  #     time:<timeinmillis>
6  # Default: <not-set>
7  #
8  # Examples
9  # If sync should happen once a day:
10 # com.openexchange.plugins.contacts.whitelist.migration.strategy=time:86400000
11 # If sync should happen once a week
12 # com.openexchange.plugins.contacts.whitelist.migration.strategy=time:604800000
13 com.openexchange.plugins.contacts.whitelist.migration.strategy=
14
15 # Setting, if a warning should appear in the logs, if a user has more than configured
        contacts in one folder.
16 # Default: 10000
17 com.openexchange.plugins.contacts.whitelist.migration.warningSize=10000
```

File 31   /opt/open-xchange/etc/plugins-contacts-whitelist-rdb.properties

```
1  # Pool to be used
2  com.openexchange.plugins.contacts.whitelist.rdb.pool=contact-whitelist-pool
3
4  # normal or tombstone
5  com.openexchange.plugins.contacts.whitelist.rdb.strategy=normal
6
7  # table name
8  com.openexchange.plugins.contacts.whitelist.rdb.tableName=senderwl
9
10 # Name of the column used for the primary mail
11 com.openexchange.plugins.contacts.whitelist.rdb.primaryAddressColumnName=rcpt
12
13 # Name of the column used for the contact mails
14 com.openexchange.plugins.contacts.whitelist.rdb.contactMailColumnName=sender
15
16 # Name of the column used for the individual contactIds
17 com.openexchange.plugins.contacts.whitelist.rdb.contactIdColumnName=contactid
18
19 # Name of the deleted_at column if tombstone is enabled
20 com.openexchange.plugins.contacts.whitelist.rdb.tombstone.deletedAtColumnName=deleted_at
21
22 # Name of the updated_at column if tombstone is enabled
23 com.openexchange.plugins.contacts.whitelist.rdb.tombstone.updatedAtColumnName=updated_at
```

File 32   /opt/open-xchange/etc/sql-client.d/sql-plugins-whitelist.yaml.example

```
1  # The top-level key is the identifier of the pool, which can be
```

```
2   # any string of text and is being used by the bundles and applications
3   # to access that pool configuration.
4   # Typically, those are fixed or need to be configured in the bundles
5   # that use this library.
6   #
7   # When Java Security Manager support is enabled, files that are referenced
8   # in these configuration files must be in a directory that is already
9   # whitelisted, or in a subdirectory thereof, such as
10  # /opt/open-xchange/etc/
11  #
12  # A good candidate would be something along the lines of
13  # /opt/open-xchange/etc/sql-files/
14  #
15  # Otherwise, the filename or its directory must be put into a new .list
16  # file in the folder
17  # /opt/open-xchange/etc/security/
18  # with e.g. the following content:
19  #
20  # file:/etc/trust.jks
21  #
22  contact-whitelist-pool:
23    # This is the name of the DataSource class provided by the JDBC driver.
24    # Consult the documentation for your specific JDBC driver to get this class name, or see
            the table below.
25    # Note XA data sources are not supported. XA requires a real transaction manager like
          bitronix.
26    # Note that you do not need this property if you are using jdbcUrl for "old-school"
          DriverManager-based JDBC driver configuration.
27    # Default: none
28    dataSourceClassName: com.mysql.jdbc.jdbc2.optional.MysqlDataSource
29    # This property directs HikariCP to use "DriverManager-based" configuration.
30    # We feel that DataSource-based configuration (above) is superior for a variety of
          reasons (see below), but for many deployments there is little significant difference
          .
31    # When using this property with "old" drivers, you may also need to set the
          driverClassName property, but try it first without.
32    # Note that if this property is used, you may still use DataSource properties to
          configure your driver and is in fact recommended over driver parameters specified in
           the URL itself.
33    # Default: none
34    jdbcUrl: jdbc:mysql://mysql.example.com
35    # This property sets the default authentication username used when obtaining Connections
           from the underlying driver.
36    # Note that for DataSources this works in a very deterministic fashion by calling
          DataSource.getConnection(*username*, password) on the underlying DataSource.
37    # However, for Driver-based configurations, every driver is different.
38    # In the case of Driver-based, HikariCP will use this username property to set a user
          property in the Properties passed to the driver's DriverManager.getConnection(
          jdbcUrl, props) call.
39    # If this is not what you need, skip this method entirely and call addDataSourceProperty
          ("username", ...), for example.
40    # Default: none
41    username: user
42    # sets the password of the connection
43    password: secret
```

File 33   /opt/open-xchange/etc/plugins-mx-checker.properties

```
1   # Determines which connector will be used for a user
2   # This setting is config-cascade aware to support different implementations for each user.
3   # Default is <none> which means that the feature is disabled for a user
4   com.openexchange.plugins.mx.checker.connector=
```

File 34   /opt/open-xchange/etc/client-onboarding-maillogin.properties

```
1   # Default value for overriding the login information displayed
2   # in the client onboarding.
3   #
4   # Possible values:
5   # email
6   #   uses the user's defaultSenderAddress
7   # attr:<name>
8   #   uses the user's attribute <name>
9   # login
10  #   uses the user's login, which is the same as if the
11  #   onboarding login was not overriden by this plugin
12  # login_name
13  #   uses the loginName attribute when possible, which is only the case
14  #   for session based logins (IMAP, SMTP) and for protocols that do not
15  #   create a session (CalDAV, CardDAV, EAS), it falls back on the login
16  #   instead
17  #
18  # This property is config cascade aware and must be set globally
19  # (in this file), and can then be overriden by context and/or by
20  # user.
21  #
22  # Note that for this feature to be enabled, one is also required
23  # to set one or more the following properties, depending on the
24  # client onboaridng dialogs that need the login information to
25  # be overriden by this plugin:
26  # com.openexchange.client.onboarding.caldav.login.customsource=true
27  # com.openexchange.client.onboarding.carddav.login.customsource=true
28  # com.openexchange.client.onboarding.mail.imap.login.customsource=true
29  # com.openexchange.client.onboarding.mail.smtp.login.customsource=true
30  #
31  com.openexchange.plugins.onboarding.login=login
```

File 35   /opt/open-xchange/etc/trustedidentity.properties

```
1   # URI to the private and public key resource to use to sign JWTs.
2   #
3   # The format of the URi epends on the scheme and driver.
4   # The "file" scheme is always supported.
5   #
6   # Format: file:<algorithm>:<path>[#<keyid>]
7   #
8   # Algorithm may either be "auto" in which case the signing algorithm will be inferred
9   # from the EC curve OID within the encoded private key part in the file, or be explicitly
10  # one of the supported values:
11  # - ES256: ECDSA using P-256 curve and SHA-256 hash algorithm
12  # - ES384: ECDSA using P-384 curve and SHA-384 hash algorithm
13  # - ES512: ECDSA using P-521 curve and SHA-512 hash algorithm
14  #
15  # Note that for the time being, only ECDSA keys are supported.
16  #
17  # The key id may be set as the fragment part of the URI: if set, will be stored as a kid (
        key id)
18  # claim in the JWT header, which identifies the key in some form that is understandable
        for consumers
19  # of the JWT token.
20  # Optional, does not set the kid claim when absent.
21  #
22  # The path is a fully qualified filesystem path to the private key PEM file to use for
        signing.
23  # It should also contain the certificate (public key part) in order to include the
24  # x5t#S256 (X.509 certificate SHA-256 thumbprint) in the signed token.
25  #
26  # Content of the file:
27  # -----BEGIN EC PRIVATE KEY-----
28  # MIGHAgEAMBMGByqGSM49AgEGCCqGSM49AwEHBGOwawIBAQQgyGdEuJcaHla0CDtX
29  # ...
30  # Jvb9wIBomkOsFr++dEnvM97Sm3G+c8wkqL0+WFBRwTw79sQioT3VOMVV
```

```
31  # -----END EC PRIVATE KEY-----
32  # -----BEGIN EC PUBLIC KEY-----
33  # MFkwEwYHKoZIzj0CAQYIKoZIzj0DAQcDQgAEqxHR/v8D3NktT/EfE5Mq2dvlIZ6H
34  # QCb2/cCAaJpDrBa/vnRJ7zPe0ptxvnPMJKi9PlhQUcE8O/bEIqE91TjFVQ==
35  # -----END EC PUBLIC KEY-----
36  #
37  # The type (specified after BEGIN and END) in the PEM headers must be one of:
38  # - for the mandatory private key: PRIVATE KEY, EC PRIVATE KEY
39  # - for the optional public key: CERTIFICATE, PUBLIC KEY, EC PUBLIC KEY
40  #
41  # Examples:
42  # com.openexchange.plugins.trustedidentity.key=file:auto:/opt/open-xchange/etc/
        trustedidentity.pem#ox-trust-key-2021-1
43  # com.openexchange.plugins.trustedidentity.key=file:ES256:/opt/open-xchange/etc/
        trustedidentity.pem
44  #
45  # Mandatory, there is no default value.
46  com.openexchange.plugins.trustedidentity.key=
47
48  # The issuer (iss) string to include in the signed JWT.
49  # Describes this App Suite instance in its role as an authority.
50  #
51  # Mandatory, has no default value.
52  #
53  # Example:
54  # com.openexchange.plugins.trustedidentity.issuer=Open-Xchange
55  com.openexchange.plugins.trustedidentity.issuer=
56
57  # Expiration duration: the signed JWT contains a standard claim field
58  # "exp" that defines when the validity of the JWT should expire.
59  # The following configuration property configures how long that expiration
60  # time frame should be, always in addition to the current timestamp as
61  # of the system clock.
62  # e.g. "5m" will produce an expiration timestamp that is 5m in the future
63  #
64  # Format: <duration>[h|m|s|ms]
65  #
66  # Example:
67  # com.openexchange.plugins.trustedidentity.expiration=30m
68  #
69  # Optional, the default value is "5m" (5 minutes)
70  #
71  com.openexchange.plugins.trustedidentity.expiration=5m
72
73  # Public key file (PEM) location on disk.
74  #
75  # This is the public key to use for encrypting JWTs. That public key must be
76  # provided to us by the peer or customer that will receive the encrypted
77  # JWT, as they will be able to decrypt it using their private key part.
78  #
79  # Note tha this property is config-cascade aware.
80  #
81  # Example:
82  # com.openexchange.plugins.trustedidentity.peer.publicKeyFile=/opt/open-xchange/keys/
        customer1-pubkey1.pem
83  #
84  # This configuration setting is mandatory and has no default value.
85  # When left empty, it disables encryption.
86  com.openexchange.plugins.trustedidentity.peer.publicKeyFile=
87
88  # Algorithm to use to encrypt the JWT.
89  #
90  # The supported algorithms depend on the type of the public key.
91  #
92  # For an EC key:
93  #
94  # - ECDH-ES: Elliptic Curve Diffie-Hellman Ephemeral Static (RFC 6090) key agreement using
        the
95  #            Concat KDF, as defined in section 5.8.1 of NIST.800-56A, with the agreed-upon
        key
96  #            being used directly as the Content Encryption Key (CEK) (rather than being
        used to
```

```
 97  #          wrap the CEK).
 98  #
 99  # - ECDH-ES+A128KW: Elliptic Curve Diffie-Hellman Ephemeral Static key agreement per "ECDH
         -ES",
100  #          but where the agreed-upon key is used to wrap the Content Encryption Key (CEK
         ) with
101  #          the "A128KW" function (rather than being used directly as the CEK).
102  #
103  # - ECDH-ES+A192KW: Elliptic Curve Diffie-Hellman Ephemeral Static key agreement per "ECDH
         -ES",
104  #          but where the agreed-upon key is used to wrap the Content Encryption Key (CEK
         ) with
105  #          the "A192KW" function (rather than being used directly as the CEK).
106  #
107  # - ECDH-ES+A256KW: Elliptic Curve Diffie-Hellman Ephemeral Static key agreement per "ECDH
         -ES",
108  #          but where the agreed-upon key is used to wrap the Content Encryption Key (CEK
         ) with
109  #          the "A256KW" function (rather than being used directly as the CEK).
110  #
111  # For an RSA key:
112  #
113  # - RSA-OAEP-256: RSAES using Optimal Asymmetric Encryption Padding (OAEP) (RFC 3447),
         with the
114  #          SHA-256 hash function and the MGF1 with SHA-256 mask generation function.
115  #
116  # Note tha this property is config-cascade aware.
117  #
118  # Example:
119  # com.openexchange.plugins.trustedidentity.peer.algorithm=ECDH-ES+A256KW
120  #
121  # The property is optional and defaults to either ECDH-ES for EC keys, or
122  # to RSA-OAEP-256 for RSA keys.
123  com.openexchange.plugins.trustedidentity.peer.algorithm=
124
125  # Encryption Method to use to encrypt the JWT.
126  #
127  # The supported methods are as follows:
128  #
129  # - A128GCM: AES in Galois/Counter Mode (GCM) (NIST.800-38D) using a 128 bit key
130  # - A192GCM: AES in Galois/Counter Mode (GCM) (NIST.800-38D) using a 192 bit key
131  # - A256GCM: AES in Galois/Counter Mode (GCM) (NIST.800-38D) using a 256 bit key
132  #
133  # Note tha this property is config-cascade aware.
134  #
135  # Example:
136  # com.openexchange.plugins.trustedidentity.peer.encryptionMethod=A256GCM
137  #
138  # The property is optional and defaults to A256GCM
139  com.openexchange.plugins.trustedidentity.peer.encryptionMethod=
140
141  # Peer public key time-to-live in cache.
142  #
143  # Public keys are loaded from PEM files on-demand and are then cached for a configurable
144  # amount of time before being loaded again.
145  #
146  # Format: <duration>[w|d|h|m|s|ms]
147  #
148  # Example:
149  # com.openexchange.plugins.trustedidentity.peer.publicKeyCacheTtl=5d
150  #
151  # The property is optional and defaults to 1d (1 day)
152  com.openexchange.plugins.trustedidentity.peer.publicKeyCacheTtl=
```

File 36   /opt/open-xchange/etc/plugins-unsubscribe.properties

```
 1  # Setting to control the used connector for a specific user
 2  # This setting is config-cascade aware to support different implementations for each user.
```

```
3    # Default is <none> which means that the feature is disabled for a user
4    # To enable vade secure com.openexchange.plugins.unsubscribe.connector=
         plugins_unsubscribe_vadesecure
5    com.openexchange.plugins.unsubscribe.connector=
6
7    # Setting to enable safe_mode capability via config-cascade
8    # This setting is config-cascade aware to support different implementations for each user.
9    # Default is false which means that the feature is disabled for a user
10   com.openexchange.plugins.unsubscribe.safemode=false
```

File 37   /opt/open-xchange/etc/plugins-unsubscribe-vadesecure.properties

```
1    # The customer license provided by VadeSecure; required to access unsubscribe API
2    # Default: The OX customer license
3    # Config-cascade aware: true
4    # Lean: true
5    com.openexchange.plugins.unsubscribe.vadesecure.license.passcrypt=<Customer license
         provided by VadeSecure>
6
7    # Setting to change the VadeSecure unsubscribe API URL
8    # Default: https://ws.vaderetro-unsubscribe.com/
9    # Config-cascade aware: true
10   # Lean: true
11   com.openexchange.plugins.unsubscribe.vadesecure.unsubscribe_url=https://ws.vaderetro-
         safeunsubscribe.com/
12
13   # Setting to change the VadeSecure connector identifier referenced in plugins-unsubscribe.
         properties / com.openexchange.plugins.unsubscribe.connector
14   # Default: "plugins_unsubscribe_vadesecure"
15   # Config-cascade aware: true
16   # Lean: true
17   com.openexchange.plugins.unsubscribe.vadesecure.identifier=plugins_unsubscribe_vadesecure
```

File 38   /opt/open-xchange/etc/twilio.properties

```
1    # Twilio accountSID
2    com.openexchange.plugins.sms.twilio.accountSID.secret=ACCOUNT_SID
3
4    # Twilio auth token
5    com.openexchange.plugins.sms.twilio.authtoken.secret=AUTH_TOKEN
6
7    # Twilio Message Service SID
8    com.openexchange.plugins.sms.twilio.messageservicesid.secret=SERVICE_SID
9
10   # Max message length. 1600 characters is Twilio's maximum
11   com.openexchange.plugins.sms.twilio.maxlength=1600
```

File 39   /opt/open-xchange/etc/sql-client.d/sql-client-pools.yaml.example

```
1    # The top-level key is the identifier of the pool, which can be
2    # any string of text and is being used by the bundles and applications
3    # to access that pool configuration.
4    # Typically, those are fixed or need to be configured in the bundles
5    # that use this library.
6    #
7    # When Java Security Manager support is enabled, files that are referenced
8    # in these configuration files must be in a directory that is already
9    # whitelisted, or in a subdirectory thereof, such as
10   # /opt/open-xchange/etc/
```

```
11   #
12   # A good candidate would be something along the lines of
13   # /opt/open-xchange/etc/sql-files/
14   #
15   # Otherwise, the filename or its directory must be put into a new .list
16   # file in the folder
17   # /opt/open-xchange/etc/security/
18   # with e.g. the following content:
19   #
20   # file:/etc/trust.jks
21   #
22   # For a complete list of property values, read https://github.com/brettwooldridge/HikariCP
23   pool1:
24     # This is the name of the DataSource class provided by the JDBC driver.
25     # Consult the documentation for your specific JDBC driver to get this class name, or see
           the table below.
26     # Note XA data sources are not supported. XA requires a real transaction manager like
           bitronix.
27     # Note that you do not need this property if you are using jdbcUrl for "old-school"
           DriverManager-based JDBC driver configuration.
28     # Default: none
29     dataSourceClassName: com.mysql.jdbc.jdbc2.optional.MysqlDataSource
30     # This property directs HikariCP to use "DriverManager-based" configuration.
31     # We feel that DataSource-based configuration (above) is superior for a variety of
           reasons (see below), but for many deployments there is little significant difference
           .
32     # When using this property with "old" drivers, you may also need to set the
           driverClassName property, but try it first without.
33     # Note that if this property is used, you may still use DataSource properties to
           configure your driver and is in fact recommended over driver parameters specified in
            the URL itself.
34     # Default: none
35     jdbcUrl: jdbc:mysql://mysql.example.com
36     # This property sets the default authentication username used when obtaining Connections
            from the underlying driver.
37     # Note that for DataSources this works in a very deterministic fashion by calling
           DataSource.getConnection(*username*, password) on the underlying DataSource.
38     # However, for Driver-based configurations, every driver is different.
39     # In the case of Driver-based, HikariCP will use this username property to set a user
           property in the Properties passed to the driver's DriverManager.getConnection(
           jdbcUrl, props) call.
40     # If this is not what you need, skip this method entirely and call addDataSourceProperty
           ("username", ...), for example.
41     # Default: none
42     username: user
43     # sets the password of the connection
44     password: secret
45
46   pool2:
47     jdbcUrl: jdbc:mysql://mysql.example.com
48     # This property controls the maximum number of milliseconds that a client (that's you)
           will wait for a connection from the pool.
49     # If this time is exceeded without a connection becoming available, a SQLException will
           be thrown.
50     # Lowest acceptable connection timeout is 250 ms.
51     # Default: 30000 (30 seconds)
52     connectionTimeout: 30000
53     # This property controls the maximum amount of time that a connection is allowed to sit
           idle in the pool.
54     # This setting only applies when minimumIdle is defined to be less than maximumPoolSize.
            Idle connections will not be retired once the pool reaches minimumIdle connections.
55     # Whether a connection is retired as idle or not is subject to a maximum variation of
           +30 seconds, and average variation of +15 seconds.
56     # A connection will never be retired as idle before this timeout.
57     # A value of 0 means that idle connections are never removed from the pool.
58     # The minimum allowed value is 10000ms (10 seconds).
59     # Default: 600000 (10 minutes)
60     idleTimeout: 600000
61     # This property controls the maximum lifetime of a connection in the pool. An in-use
           connection will never be retired, only when it is closed will it then be removed.
62     # On a connection-by-connection basis, minor negative attenuation is applied to avoid
           mass-extinction in the pool.
```

```
63    # We strongly recommend setting this value, and it should be several seconds shorter
          than any database or infrastructure imposed connection time limit.
64    # A value of 0 indicates no maximum lifetime (infinite lifetime), subject of course to
          the idleTimeout setting.
65    # Default: 1800000 (30 minutes)
66    maxLifetime: 1800000
67    # This property controls the minimum number of idle connections that HikariCP tries to
          maintain in the pool.
68    # If the idle connections dip below this value and total connections in the pool are
          less than maximumPoolSize, HikariCP will make a best effort to add additional
          connections quickly and efficiently.
69    # However, for maximum performance and responsiveness to spike demands, we recommend not
           setting this value and instead allowing HikariCP to act as a fixed size connection
          pool.
70    # Default: same as maximumPoolSize
71    minimumIdle: 0
72    # This property controls the maximum size that the pool is allowed to reach, including
          both idle and in-use connections.
73    # Basically this value will determine the maximum number of actual connections to the
          database backend. A reasonable value for this is best determined by your execution
          environment.
74    # When the pool reaches this size, and no idle connections are available, calls to
          getConnection() will block for up to connectionTimeout milliseconds before timing
          out.
75    # Default: 10
76    maximumPoolSize: 10
77
78  # The following example shows how to provide additional dataSource properties to the pool
        by using the dataSourceProperties key.
79  # The DataSource will be started with all key-value pairs added.
80  pool3:
81    jdbcUrl: jdbc:mysql://mysql.example.com
82    username: user
83    password: secret
84    dataSourceProperties:
85      useUnicode: true
86      characterEncoding: UTF-8
87      autoReconnect: false
88      useServerPrepStmts: false
89      useTimezone: true
90      serverTimezone: UTC
91      connectTimeout: 15000
92      socketTimeout: 15000
93      useSSL: false
94      requireSSL: false
95      verifyServerCertificate: false
96      enabledTLSProtocols: TLSv1,TLSv1.1,TLSv1.2
```

File 40   /opt/open-xchange/etc/sql-client.properties

```
1  # Comma seperated list of drivers to read into the system
2  # As the sql-client is very early, it may happen that the excpected driver is not yet
       registered.
3  # To work around this issue, the following list of drivers will be read before any
       connection is
4  # created.
5  #
6  # Default: com.mysql.jdbc.Driver
7  com.openexchange.sql.client.drivers=com.mysql.jdbc.Driver
```