OX Guard
Release Notes for Release 2.4.0

March 31, 2016

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1 Shipped Product and Version

Open-Xchange Guard 2.4.0-rev7

Find more information about product versions and releases at `http://oxpedia.org/wiki/index.php?title=AppSuite:Versioning_and_Numbering`

2 General information

OX Guard v2.4 now uses the AppSuite OSGI stack, however it is still recommended to be deployed as a micro service, running as a separate logical instance. Core OSGI services such as configuration and database are now used. Upgrading from previous versions requires some manual steps as discussed below.

Summary of Changes

- Configuration Structure has changed to reflect the normal configuration of OX App Suite, including Templates, Translations, Properties files.
- Jetty is no longer used, and instead Grizzly is used to register servlets the same as OX App Suite
- Apache configuration requires modification due to the removal of Jetty and integration with OX App Suite
- Logging is now configured globally and logging now takes place to the same file as OX App Suite

A more detailed summary of all changes can be found at: `http://oxpedia.org/wiki/index.php?title=AppSuite:OX_Guard_Upgrade_OSGI`.

Upgrading from OX Guard 2.2 to 2.4
Due to the number of changes to the architecture of OX Guard, upgrading consists of more than just updating the packages; some manual configuration tasks will have to be performed. Please see `http://oxpedia.org/wiki/index.php?title=AppSuite:OX_Guard_Upgrade_OSGI` for details of the upgrade procedure to follow. Note to upgrade from versions of Guard previous to 2.2, please first upgrade to 2.2. Also OX App Suite v7.8.1 is required for OX Guard v2.4.0.

3 Bugs fixed with this Release

This section provides a summary of bugfixes and changes that have been applied subsequently to shipping Release 2.2.1. Some of the announced bugfixes may have already been fixed at the existing code-base via Patch Releases.

43210 Incorrect usage for master and sub-keys
OX Guard did not adhere to RFC4880 5.2.3.21, which describes certain flags for Public Key usage. Therefor, all keys were shown with the "Encrypt" flags even though just contained the "Sign" or "Authenticate" flag. This has been solved by considering `0x02`, `0x04` and `0x08` flags.

43461 Default Guest-Reader template shown if not specified by URL parameter
In case users chose to remove the `templid` parameter for the Guest Reader page, the default OX branded page was shown as a fallback. Now we're offering the `getDefaultTemplateID` (Default: `0`) parameter at `reader/config/config.js` to specify the template ID which shall be used as fallback.

43772 Missing line-breaks at images
With regards to attachments on auto-generated mails, OX Guard did not adhere to RFC 5322 2.1.1 which specifies a maximum line limit of 998 characters for mails. Some SMTP hosts rejected such

E-Mails, which led to non-delivery of OX Guard mails for Guests, for example. This has been solved by implementing a line break after 77 chars also for base64 encoded content.

43885 Password reset offered even when disabled
While having `com.openexchange.guard.noRecovery` set to `true`, the Guest Reader provides the option to reset a users password. Since it's blocked on OX Guard a error is raised when users tried to reset their password. To enable better user experience, this link is now gone if the corresponding parameter is set.

43934 Unable to request read-receipt for Guard mails
When composing Guard mails and enabling "Request read receipt" in App Suite, the expected Disposition-Notification-To header and attachments are missing. This has been fixed by considering the App Suite parameter `disp_notification_to` when creating encrypted and signed mail.

43962 Sending mail from IDN is not possible
Guard lacked support for IDN, which has been implemented.

43995 Guest password mail not sent when signing the initial mail failed
In case a user typed in a incorrect password to sign the mail while composing the initial mail to an external guest user, the guest user account got created but the corresponding password was not sent. This has been fixed by de-coupling the key-creation and password sending process. Now the initial password for the guest user is sent in any case.

43997 Deleting a guest user requires knowledge of E-Mail address
The support interface for Guard did allow to delete guest user accounts, but required the guests E-Mail address. Now it's also possible to delete a guest user by supplying the `user_id` and `cid` parameter on the `delete_user` call.

43999 Missing confirmation dialog when deleting a Public Key
Deleting a Public Key from the users list of keys did not require any confirmation. To avoid unintentional removal of Public Keys, we've added a confirmation dialog.

44007 External users with IDN were identified as invalid recipients
Guard lacked support for IDN, which has been implemented.

44010 Public Key list shown twice in contacts
On certain browsers the "PGP Public Key List" was shown twice after searching for a contact and inspecting that contacts details. This has been solved by avoid addition redraws.

44077 Chrome asks to save users Private Key password
Google Chrome identified the input field when signing Mail as a valid field for autocomplete and asked to store the password. Storing Private Key information at the relatively weak browser storage shall be avoided, therefor we made modifications to avoid those password manager prompts.

44078 Custom translation files are not loaded
When adding additional translation files that overwrite the default translations, those were not correctly loaded. OX Guard will now load all `*-templates-<language>.po` files and overwrite default translations of the same language if additional templates for the specific language exist.

44079 Tour does not properly check capabilities
Even though certain OX Guard features like password recovery of OX Drive integration were disabled, the OX Guard tour did contain those features. This has been fixed by considering users capabilities within those tours.

44080 "Save encrypted to Drive" offered although disabled
In case a user did not have the OX Guard capability for OX Drive integration, the E-Mail dialog still offered to store attachments to Drive and encrypt them. This has been solved by considering OX Drive capabilities within mail compose. Note that saving encrypted attachments to OX Drive as

unencrypted files is still possible.

44081 Changing Private Key only works once per session
Some browsers cache and do not re-send GET requests that contain equal parameters, this also applied to the `makecurrent` API call of OX Guard. We've changed this call to include a unique attribute to ensure browsers send the request as expected.

42122 "Reset guard security password" doesn't ask for changing temporary password
After choosing "Reset guard security password" the user is able to use the current session to decrypt Guard mail and App Suite doesnt ask to change temp password. Only a relogin changed this behavior. Now, after password reset, trigger password change prompt when opening next email.

44125 Preview available for PGP signatures
Attached PGP signatures (typically `.asc` or `.pgp` files with content-type `application/pgp-signature`) have been offered to "View" in App Suite Preview. Since there is no intuitive way to preview signatures this has been changed to not offer this option anymore.

44126 Line-breaks for E-Mail addresses in public-key list
In case a E-Mail address contained a dash, depending on the size a word-wrap was triggered within the public-key list. This has been solved by controlling wrapping for dashes.

4 Changes relevant for Administrators

4.1 Changes of Configuration Files

Change #2900 Renamed and moved `guard.properties`
Renamed and moved `/opt/open-xchange/guard/etc/guard.properties` to `/opt/open-xchange/etc/guard-core.properties`. This change has been applied to avoid file name conflicts with OX App Suite configuration files.

Change #2902 Introduced `com.openexchange.guard.templatesDirectory` property
The newly added property `com.openexchange.guard.templatesDirectory` (Default: `/opt/open-xchange/templates/guard`) at `guard-core.properties` defines the path for the templates files.

Change #2907 Moved `oxguardpass` file to `/opt/open-xchange/etc`
With integration of OX Guard with OX App Suite the `/opt/open-xchange/guard/oxguardpass` file had to be moved to `/opt/open-xchange/etc/oxguardpass` so that the file can be read by the ConfigurationService. While the package scripts will make sure that the file gets moved properly, please double-check its existance and proper permission. It contains confidential information.

Change #2928 Remove configuration artifacts from `guard` configuration directory
Integrating OX Guard with OX App Suite made some configuration options redundant or superfluous. Parameters like `private_dns_key` or `public_dns_key` got removed in the process.

Change #2933 Remove obsolete init.d start/stop script
By integrating OX Guard with OX App Suite the dedicated start/stop script does not serve any purpose since OX Guard related services are started as part of the OX App Suite service. Therefor the script has been removed.

Change #2934 Changed the port from 8080 to 8009
With integration OX Guard to OX App Suite the Jetty component is no longer required. Instead, the OX App Suite servlet engine and HTTP connector (Grizzly) is used, which provides its services through port 8009. The port configuration at load balancers and proxies needs to be changed from 8080 to 8009 accordingly. Note that this task needs to be executed manually.

Change #2975 Removed obsolete properties from `guard-core.properties` file
Multiple configuration parameters have become obsolete my integrating OX Guard with OX App

Suite:

- com.openexchange.guard.useSSL
- com.openexchange.guard.SSLPort
- com.openexchange.guard.SSLKeyStore
- com.openexchange.guard.SSLKeyName
- com.openexchange.guard.SSLKeyPass
- com.openexchange.guard.storage.type
- com.openexchange.guard.storage.file.uploadDirectory
- com.openexchange.guard.configdbHostname
- com.openexchange.guard.configdbName
- com.openexchange.guard.logLevel
- com.openexchange.guard.jettyLogLevel
- com.openexchange.guard.jettyport

Those parameters have been removed from the `guard-core.properties` configuration file.

Change #3085 Changes to OX Guard Guest Reader
Jetty has been removed as servlet-container and the Guard guest reader is now directly served by Apache, similar to OX App Suite UI. This uncouples the guest reader from OX Guard and allows more flexible installation handling of the Guest Reader while getting rid of a direct dependency. By default, the guest reader is installed under `guard/reader` within the web-server directory (for example `/var/www/guard/reader`). Configuration changes to the web-server may be done to enable access. The default value of the ReaderPath property `com.openexchange.guard.externalReaderPath` has been changed to `example.com/guard/reader/reader.html` in order to reflect the new location of the Guest Reader. The old Guard API endpoint for serving the Guest Reader is still valid (for accessing guest-emails using older links) but does now just perform a redirect (HTTP `301`) to the new reader location (set by `com.openexchange.guard.externalReaderPath`). In addition, the OX Guard location (by default `/appsuite/api`), must be specified in the Guest reader's configuration file at `/reader/config/config.js`.

Change #3087 config.js file for Guest Reader has been marked as config file
The Guest Reader may require some customization for clients. Therefor the /guard/reader/config/config.js file has been marked as a configuration file to avoid getting over-written by package managers when updating.

Change #3101 Enhanced config.js to have the default template id configurable
The Guest Reader now supports a configurable default template to allow more seamless customization. The default template ID can now be set at `/reader/config/config.js:getDefaultTemplateId()`.

Change #3105 Consolidated changes for new `guard-core.properties`
All existing OX Guard property names have been updated to reflect OX App Suite naming conventions. The paramters

- `com.openexchange.guard.defaultLanguage`
- `com.openexchange.guard.templatesDirectory`

have been added.

Change #3139 Configuration setting for product name
To allow easy and reliable customization, a configuration setting to alter the OX Guard product name has been provided via the `com.openexchange.guard.productName` parameter contained at

guard-core.properties.

Change #3076 Guard i18n files moved to OX App Suite i18n folder
Localization information for OX Guard has been moved to /opt/open-xchange/i18n/ and renamed to match the OX App Suite naming conventions.

4.2 Changes of Database Schema

Change #3078 New table 'replicationMonitor' in all Guard schemas
When integrating OX Guard with OX App Suite, the mechanism to monitor database replication of Guard schemas is being adapted. Therefor an additional table replicationMonitor has been created to be able to monitor the replication state of OX Guard schemas.

4.3 Changes of Command Line Tools

Change #3083 Changed behaviour of the guard command-line tool
The guard command-line tool now calls the GuardMaintenanceMBean MBean. The database initialisation trigger, which was part of the command-line tool init has been removed and incorporated into the OX Guard backend. The init parameter is still there, slightly changed to --init and is only used to generate the master keys of the server. One extra flag was introduced (-d) which is used in conjunction with the --init flag. That flag specifies the directory in which the oxguardpass will be stored. Furthermore, the command-line tool now provides the ability to use JMX authentication.

4.4 Changes of Behaviour

Change #3079 New Jolokia based monitoring data for connection pooling
A new Munin graph to monitor OX Guard connection pooling has been introduced. The following parameter will be shown:

- PoolCount Amount of available connections
- PoolActive Amount of active connections
- PoolWaiting Amount of pending connections waiting to be processed

That monitoring data is only available when using Jolokia monitoring.

Change #3081 Complete refactoring of the database handling
When integrating OX Guard with OX App Suite the database handling has been rewritten and adapted to OX App Suite concepts.

Database bootstrapping
The OX Guard databases will be created within the first server start after installation of guard based on your configuration made within the guard-core.properties file. Please set all database related values carefully! After the configuration has been set and the server was started the first time all database relevant configurations from guard-core.properties shouldn't get changed anymore to prevent inconsistency and undesired behaviours.
If not yet existing, OX guard will create all relevant schemas (OX Guard schema, OX Guard shard schema) and tables (on OX App Suite user schema) while server startup. This happens based on the config set for com.openexchange.guard.dbSchemaBaseName. Never change this setting after OX Guard has been put into production! To create/update schemas on the fly, the configured database user (via com.openexchange.guard.databaseUsername) should have appropriate permissions/grants to create schemas.
If you configured a master-slave setup for OX Guard (by setting values for e.g. com.openexchange.guard.oxguardDatabaseHostname and com.openexchange.guard.oxguardDatabaseRead for the OX Guard schema and/or com.openexchange.guard.oxguardShardDatabase and com.openexchange.guard.oxguardShardRead for all OX Guard shard schemas) make sure the hosts are available. Based on that change no explicit /opt/open-xchange/guard/sbin/guard init or /opt/open-xchange/sbin/guard init call is required anymore. Have a look at the log output while server startup to ensure

everything worked fine!

Using of Liquibase for database migration
The mechanism described above is based on the Liquibase framework used and provided by OX App Suite middleware. To handle the current status Liquibase creates two new tables for on each schema: `DATABASECHANGELOG` and `DATABASECHANGELOGLOCK`. Check out the documentation for a more detailed description of Liquibases usage in the OX App Suite middleware: `https://oxpedia.org/wiki/index.php?title=AppSuite:DBMigration`.

Using the update task mechanism to update OX user schema
Besides handling OX Guard specific schemas the OX Guard tables that should be available on OX App Suite user schemas will be created based on the OX App Suite middlewares CreateTable and UpdateTask mechanisms.

Registration of the guard schemas in ConfigDB
Each schema created based on the new bootstrapping mechanism will be registered within the config database. If master-slave setup is configured the slave (and its parameters like URL) will also be registered to associated entry. With that all connections are lying under the control of the middleware. Requested read connections will be routed to the slave and write connections to the master.

Change #3084 Integrating OX Guard with OX App Suite
With OX Guard 2.4.0 the first step was made and the product was moved into the OSGi stack of OX App Suite. Although OX Guard now has a tighter integration with the core that does not mean that it lost its micro-service character. OX Guard still relies on the support API to accomplish its tasks; tasks like capability check, HTML sanitising and mail address resolving. The database calls however were completely eliminated (along with their support API) and now the core's OSGi services are used for that purpose. The same applies to the configuration. Consult the documentation for new installation, configuration and migration from 2.2 to 2.4.

Change #3193 Considering size limitations for email and email attachments
OX Guard now checks common size limitations (`uploadFileSizeLimitPerFile`, `uploadFileSizeLimit`, and `MAX_UPLOAD_SIZE`) as configured within OX App Suite before encrypting E-mails and E-mail attachments. For regular users, OX Guard checks that the complete size of an E-Mail does not exceed the `uploadFileSizeLimit` value configured for the user, where `0` means infinity and a negative value leads to a fallback to `MAX_UPLOAD_SIZE` as defined in `server.properties`. OX Guard checks that the size of each attachment does not exceed the `uploadFileSizeLimitPerFile` value configured for the user, where `0` or a negative value means infinity. For guest users, OX Guard does check the `MAX_UPLOAD_SIZE` defined at `server.proerties`.

4.5 Changes of Packaging

Change #3080 New package `open-xchange-guard-munin-scripts-jolokia`
This new package provides jolokia based monitoring for OX Guard in combination with OX App Suite.

Change #3082 Filestore implementation split to separate bundles
Filestore implementations have been split to two packages to reflect different deployment scenarios. The conventional `open-xchange-guard-file-storage` package and the `open-xchange-guard-s3-storage` for S3 compatible object storages. When deploying or updating OX Guard, one of those storage implementation packages MUST be installed in order to have a fully functional OX Guard backend.

5 Changes relevant for Developers

5.1 Changes of the Java API

Change #3077 Removed obsolete 3rd party libraries
Commonly used libraries have become obsolete by integrating OX Guard with OX App Suite.

- commons-codec-1.8.jar
- commons-fileupload-1.3.jar
- commons-io-2.4.jar
- commons-lang-20030203.000129.jar
- commons-lang3-3.3.2.jar
- commons-logging-1.1.3.jar
- commons-net-3.3.jar
- mysql-connector-java-5.1.27.jar
- httpclient-4.3.3.jar
- httpcore-4.3.3.jar
- httpcore-ab-4.3.3.jar
- httpcore-nio-4.3.3.jar
- httpmime-4.3.3.jar

Those libraries have been removed.

6 Tests

Not all defects that got resolved could be reproduced within the OX QA lab. Therefore, we advise guided and close monitoring of the reported defect when deploying to a staging or production environment. Defects which have not been fully verified, are marked as such.

To avoid side effects, the shipped packages have gone through automated regression test on both, a Continuous Integration System and a dedicated server setup for system and integration testing.

All changes have been checked for potential side-effects and effect on behavior. Unless explicitly stated within this document, we do not expect any side-effects.

7 Fixed Bugs

43210, 43461, 43772, 43885, 43934, 43962, 43995, 43997, 43999, 44007, 44010, 44077, 44078, 44079, 44080, 44081, 42122, 44125, 44126,