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Project «OpenOLAT WebDAV»

Fixing the broken WebDAV implementation

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1. State of affairs

The OpenOLAT WebDAV implementation is from the very early days of the OLAT development and thus is a bit outdated. It is based on the WebDAV servlet from an old tomcat and has never been updated to newer versions. Minor maintenance tweeks have been done in the meantime to improve compatibility and performance, however to fix the known issues that prevent users from using the WebDAV access we came to the conclusion that we have to replace the entire implementation.

2. Issues

There are several issues with the current WebDAV implementation in OpenOLAT, the biggest are:

- No support for native Windows Webfolders since Windows Vista or very unstable
- No native WebDAV versioning support
- WebDAV servlet is very old, buggy and difficult to maintain

The reason behind the Windows incompatibility have different roots. One of the biggest is that OpenOLAT implements only Basic-Authentication while Windows now requires Digest-Authentication and should not be run with SSL for reasons only Microsoft knows. This is difficult to change as we do not have the users clear-text password which is needed to switch the authentication method.

The WebDAV code was borrowed from the Tomcat code base. Unfortunately we can not just upgrade this code to make it more compliant. A much better solution would be to switch to a WebDAV library which is under active development and has solutions for all the issues we encounter in OpenOLAT.

3. Solution

Replace WebDAV library

The solution is to replace the OpenOLAT WebDAV servlet with the Milton library.[1] Milton has its root also in the Tomcat WebDAV servlet but is developed as a dedicated library. Using this library is the best possible solution in the Java open source world. All other usable libraries are not free to use.

Switch to Digest Authentication

To meet the Windows requirements we will implement a Digest Authentication mechanism. As we do not know the users password we migrate users on-the-fly when they log in the next time in OpenOLAT. This is the only moment we know the users password. For installations with dedicated WebDAV passwords (generated) we know the passwords and can generate the digested version in real-time.

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[1] http://milton.io

Implement the WebDAV file locking

To support collaborative editing process WebDAV locking should be implemented based on the locking we already have in the OpenOLAT virtual filesystem. WebDAV clients can lock files for editing. Locks are maintained if the lock-refresh command is executed in the required interval. If no lock-refresh is issued, the lock is released. The lock can also be released using the Web-GUI.

Support configuration of separate WebDAV URL

For full compatibility the WebDAV servlet must run as a root context or be url-rewritten to simulate the root context. It also has to be run on port 80. To accomplish this, it is mandatory that every OpenOLAT installation can be configured to have two domain names, one for the WebGUI and one for the WebDAV access. Example:

https://openolat.mydomain.com/openolat
http://webdav.openolat.mydomain.com

To make such a configuration possible, the configuration of the WebDAV URL and the WebDAV servlet context configurable. If compatibility with windows must not be guaranteed admins can sill configure the same URL and use SSL also for WebDAV.

4. Project costs and implementation

The full project costs have been estimated with 15'000 - 23'000 CHF. As soon as the funding for this development is cleared the implementation will be started. All code resulting from this project will be contributed to the OpenOLAT project under the Apache 2.0 license and is included to the next possible OpenOLAT release.

To help funding this project please use either the „Donate" button on the OpenOLAT website[2] with an appropriate subject or send an email to contact@frentix.com to ask for a formal contract and an invoice.

Funding partners will be listed as project sponsors on the OpenOLAT website unless not wanted by the funding partner.

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[2] http://www.openolat.org/contribute.html