

ILS Software Update

**Deployment of Software
Updates/Patches**

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Content

1	Preface	4
2	ILS Software Update	5
2.1	Delivered Files	5
2.2	Preparing for Update	6
2.3	Update ILS (Backend / Administration)	6
2.4	Update ILP (Learner and Manager Frontend)	7
2.4.1	Update ILP	7
2.4.2	Update Microservices (Navigation, Course Description, ...)	7
2.4.3	Update SOLR (Search Index)	8
2.5	Update Gamification Services	8
2.5.1	Update IGS (Gamification)	8
2.5.2	Update LRS (Learning Record Store)	9
2.5.3	Update PRS (Profile Record Store)	9
2.6	Finish Update	10
2.7	Initial Tests of the Application	10

1 Preface

The current document describes the execution for a bundled software update of the ILS (IMC Learning Suite) and the modules: backend / administration (ILS), learner and manager frontend (ILP), miscellaneous services (microservices), search index (SOLR) and gamification (IGS/PRS/LRS).

IMC's system solution historically known as CLIX as of version 2013 is officially termed ILS (IMC Learning Suite) instead. Some references to the "old" identifier may remain within this document, especially in the context of reproducing code snippets.

2 ILS Software Update

2.1 Delivered Files

Find on the SFTP-Server the delivered update package as an archive file:

```
ILS_<Customer><Patchversion>_<Revision>.zip
```

The archive file includes multiple files listed below:

```
APP-FILES:      clix.war
                 learningportal-<version>.war
                 microservices-<version>.war
                 gamificationService-<version>.war
                 lrStore-<version>.war
                 profileRecordStore-<version>.war
                 ils-solr-<version>.war
DATA-FILE:      data.zip
CONF-FILES:     ils_conf.zip (ils_conf <system>.zip)
                 ilp_conf.zip (ilp_conf <system>.zip)
                 igs_conf.zip (igs_conf <system>.zip)
                 lrs_conf.zip (lrs_conf <system>.zip)
                 prs_conf.zip (prs_conf <system>.zip)
                 solr_conf.zip
```

If there are packages provided for different systems the placeholder '`<system>`' is replaced by "stage", "prod" or "test" in your delivery - e.g. `ils_conf_stage.zip`, `ilp_conf_stage.zip`. Please follow the update advice below and take care of the target directories of your system(s). The zip file also includes additional files like `install.zip` and `docu.zip`, but those are meant for first time installation or for documentation.

If you are installing one of the above listed app files for the first time, please refer to the installation instruction instead.

Directories:

<<ILS_HOME>> base directory of the ILS installation (e.g. `c:/appserver`).

<<TOMCAT_HOME>> Tomcat installation directory (e.g. `c:/appserver/environment/tomcat`).

<<DATA_HOME>> refers to the root directory of the content folder (`/data`) of the ILS installation (e.g. `c:/appserver`).

2.2 Preparing for Update

- 1) Stop Tomcat service.
- 2) Save the corresponding database.
- 3) Save and delete all file in <<ILS_HOME>>/instance/logs.
- 4) Save and delete all file in <<TOMCAT_HOME>>/logs.
- 5) Delete all files and subfolders of <<TOMCAT_HOME>>/work.
(Please Note: Don't delete the "work" folder itself, just the contents).

2.3 Update ILS (Backend / Administration)

Applying CONF_FILE (ils_conf.zip)

- a. Save the current directory <<ILS_HOME>>/instance/ils as a copy or archive (e.g. ils_conf_<<DATE_TIME>>.zip).
- b. Delete all files in <<ILS_HOME>>/instance/ils.
- c. Extract the content of **ils_conf.zip** into <<ILS_HOME>>/instance/ils.

Applying DATA_FILE (data.zip)

- d. Save the current directory /data as a copy (no move or rename) or archive, if there is no regularly backup process established.
- e. Copy the data.zip into folder <<DATA_HOME>> (directory where /data folder is placed) and extract it there; allow overwriting of the existing files and folders.

Applying APP_FILE (clix.war)

- f. Save the current application directory "ils" located inside <<ILS_HOME>>/apps by renaming or moving to e.g. ils_app_<<DATE_TIME>>, so that a temporary backup exists.
- g. Move backup ils_app_<<DATE_TIME>> in a backup folder outside of <<ILS_HOME>>.
- h. Create a new folder "ils" in path <<ILS_HOME>>/apps/.
- i. Extract the content of clix.war into folder <<ILS_HOME>>/apps/ils.

2.4 Update ILP (Learner and Manager Frontend)

2.4.1 Update ILP

Applying CONF_FILE (ilp_conf.zip):

- a. Save the current directory <<ILS_HOME>>/instance/ilp as a copy or archive (e.g. ilp_conf_<<DATE_TIME>>.zip).
- b. Extract the content of ilp_conf.zip into <<ILS_HOME>>/instance/ilp with the option overwrite.

Applying APP_FILE (learningportal-<version>.war):

- c. Save the current application directory "ilp" located inside <<ILS_HOME>>/apps by renaming or moving to e.g. ilp_app_<<DATE_TIME>>, so that a temporary backup exists.
- d. Move backup ilp_app_<<DATE_TIME>> in a backup folder outside of <<ILS_HOME>>.
- e. Create a new folder "ilp" in path <<ILS_HOME>>/apps/.
- f. Extract the content of learningportal-<version>.war into folder <<ILS_HOME>>/apps/ilp.

2.4.2 Update Microservices (Navigation, Course Description, ...)

There is no separate configuration to be updated

Applying APP_FILE (microservices-<version>.war):

- a. Save the current application directory "microservices" located inside <<ILS_HOME>>/apps by renaming or moving to e.g. microservices_app_<<DATE_TIME>>, so that a temporary backup exists.
- b. Move backup microservices_app_<<DATE_TIME>> in a backup folder outside of <<ILS_HOME>>.
- c. Create a new folder "microservices" in path <<ILS_HOME>>/apps/.
- d. Extract the content of microservices-<version>.war into folder <<ILS_HOME>>/apps/microservices.

2.4.3 Update SOLR (Search Index)

Applying CONF_FILE (solr_conf.zip):

- a. Save the current directory <<ILS_HOME>>/instance/solr as a copy or archive (e.g. solr_conf_<<DATE_TIME>>.zip) in a backup directory outside the <<ILS_HOME>>/instance directory.
- b. Delete all files and folders in directory <<ILS_HOME>>/instance/solr.
- c. Extract the content of solr_conf.zip into <<ILS_HOME>>/instance/solr.
- d. Note: the catalog search index needs to be recreated after the system is running again. This is going to happen automatically after the configured time interval of “CreateSolrIndex” at businessprocess.xml or can be triggered manual by clicking on “Update search index” at the catalog manager of ILS.

Applying APP_FILE (ils-solr-<version>.war):

- a. Save the current application directory “solr” located inside <<ILS_HOME>>/apps by renaming or moving e.g. solr_app_<<DATE_TIME>>, so that a temporary backup exists.
- b. Move backup solr_app_<<DATE_TIME>> in a backup folder outside of <<ILS_HOME>>.
- c. Create a new folder “solr” in path <<ILS_HOME>>/apps/.
- d. Extract the content of ils-solr-<version>.war into folder <<ILS_HOME>>/apps/solr.

2.5 Update Gamification Services

2.5.1 Update IGS (Gamification)

Applying CONF_FILE (igs_conf.zip):

- a. Save the current directory <<ILS_HOME>>/instance/igs as a copy or archive (e.g. igs_conf_<<DATE_TIME>>.zip).
- b. Extract the content of igs_conf.zip into <<ILS_HOME>>/instance/igs with the option overwrite.

Applying APP_FILE (gamificationService-<version>.war):

- c. Save the current application directory “igs” located inside <<ILS_HOME>>/apps by renaming or moving to e.g. igs_app_<<DATE_TIME>>, so that a temporary backup exists.
- d. Move backup igs_app_<<DATE_TIME>> in a backup folder outside of <<ILS_HOME>>.
- e. Create a new folder “igs” in path <<ILS_HOME>>/apps/.
- f. Extract the content of gamificationService-<version>.war into folder <<ILS_HOME>>/apps/igs.

2.5.2 Update LRS (Learning Record Store)

Applying CONF_FILE (lrs_conf.zip):

- a. Save the current directory <<ILS_HOME>>/instance/lrs as a copy or archive (e.g. lrs_conf_<<DATE_TIME>>.zip).
- b. Extract the content of lrs_conf.zip into <<ILS_HOME>>/instance/lrs with the option overwrite.

Applying APP_FILE (lrStore-<version>.war):

- c. Save the current application directory “lrs” located inside <<ILS_HOME>>/apps by renaming or moving to e.g. lrs_app_<<DATE_TIME>>, so that a temporary backup exists.
- d. Move backup lrs_app_<<DATE_TIME>> in a backup folder outside of <<ILS_HOME>>.
- e. Create a new folder “lrs” in path <<ILS_HOME>>/apps/.
- f. Extract the content of lrStore-<version>.war into folder <<ILS_HOME>>/apps/lrs.

2.5.3 Update PRS (Profile Record Store)

Applying CONF_FILE (prs_conf.zip):

- a. Save the current directory <<ILS_HOME>>/instance/prs as a copy or archive (e.g. prs_conf_<<DATE_TIME>>.zip),
- b. Extract the content of prs_conf.zip into <<ILS_HOME>>/instance/prs with the option overwrite.

Applying APP_FILE (profileRecordStore-<version>.war)

- c. Save the current application directory “prs” located inside <<ILS_HOME>>/apps by renaming or moving to e.g. prs_app_<<DATE_TIME>>, so that a temporary backup exists.
- d. Move backup prs_app_<<DATE_TIME>> in a backup folder outside of <<ILS_HOME>>.
- e. Create a new folder “prs” in path <<ILS_HOME>>/apps/.
- f. Extract the content of profileRecordStore-<version>.war into folder <<ILS_HOME>>/apps/prs.

2.6 Finish Update

- a. Start Tomcat service.
- b. Check protocol file <<ILS_HOME>/instance/logs/clix.log during start up. Make sure no errors (ERROR, FATAL) are listed.
- c. Look for entries

```
...INFO [main] control.ClixInitializer --- CLIX STARTED ---
...INFO [main] control.ClixInitializer - ClixInitializer.initialize:
    exit
```

These entries indicate that the patch was successfully applied and ILS is available again.
- d. Check protocol file <<ILS_HOME>/instance/logs/learningportal.log during start up and make sure that the ILP is started without errors.
- e. Check protocol file <<ILS_HOME>/instance/logs/igs.log, lrs.log and prs.log during start up and make sure that the Gamification Services are started without errors.

2.7 Initial Tests of the Application

If the patch was successfully applied, please execute following tests:

- 1) Open the ILS application in a browser.
- 2) The ILS start page [http\(s\)://yoururl.com/<CONTEXT-PATH-FRONTEND>](http(s)://yoururl.com/<CONTEXT-PATH-FRONTEND>) is displayed in the correct design and no HTTP-error is triggered
- 3) Login as an administrator and as a learner
The user is directed to the personal area. The application is displayed without http-errors and shows a correct design.
- 4) Click on navigation items
No HTTP error occurs.