

# Altair License Server 14.0 Release Notes and Highlights

## Introduction

Altair License Server 14.0 is based on X-Formation's LM-X and includes several bug fixes. The installer supports upgrading a previous (11.0+) installation by migrating data or creating a new installation. Simply start the installer and answer the questions.

**PLEASE READ THESE RELEASE NOTES BEFORE RUNNING THE INSTALLER.**

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### Installer

The installer can either create a fresh installation or upgrade a previous (11.0+) installation. If the installer detects a running or installed server, it will try to use that configuration. That is the best approach, as you can only have one running server on a machine. By not properly upgrading a running server you may cause issues in the configuration. **If upgrading an installation, you should allow the installer to create a new directory and copy over your configuration and license files. Please see the section titled "Known Issues and Additional Information" for important upgrade information.**

Running the installer is straightforward. Simply execute the appropriate installer package and follow the instructions. The command line options to the installer are listed below:

-DNO\_ROOT=t will allow you to install as a non-admin user. It will NOT however install the needed scripts and/or services for automatic startup, or update current ones.

If you wish or need to install the server without having root or admin privileges add -DNO\_ROOT=t to the command line. Using this option will not install the service on Windows or startup scripts on Linux/Unix that launches the server on boot.

**Please see the section on Windows Specific Issues regarding changes in how to install the license server as a service on Windows.**

-DPROXYCHECK=0 will prevent the installer from checking the URT proxy settings and assume there is no proxy needed. This was added for some systems that are not connected to the Internet causing long delays during the install. If set to '0' then the check is not done, and the config file is written such that it assumes there is no proxy. The user/admin may have to modify the alus.conf to get reporting functioning correctly.

-i console The installer supports both GUI and console installs. The default mode is GUI. If you wish to run in console mode, run the installer with following option: -i console. On some platforms you may receive an error when running the installer in console mode about X11 graphics libraries etc. If this happens you need to unset the environment variable DISPLAY in your shell before invoking the installer.

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## almutil and almutilGUI

There are several new options available for almutil. There is also a new graphical version of almutil, almutilGUI (or almutil\_gui). The most commonly requested options are related to doing a license status. You can now run almutil -licstat with many different options to provide different outputs. Please see almutil -help for more info.

### **A new tab for remote status and some remote admin has been added to almutil\_gui.**

When using almutil for borrowed licenses, please use the version that was supplied with the clients you are using. There have been some occasional issues if you use a non-matching version. For HyperWorks installations you can find them on the client in HYPERWORKS\_HOME/security/bin/PLATFORM/

If you copy almutil GUI to another location, you will also need to copy liblmx-altair.dll (for Windows) Windows machines will also need to have the Microsoft Visual C++ 2010 Redistributable Package for X64 installed to run. The installer will try to check for it and install it as well. If it is not installed, you may see an error message that the file MSVCR100.DLL is missing. A link to this package is <https://www.microsoft.com/en-us/download/details.aspx?id=13523>

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## Transactional Log Files

There have been several new fields added at the end of the transactional log files since 11.0. One of the more useful ones is a field containing the name of the application that created the checkout. For example, you can look at HyperWorks or GlobalZone and also know which application it was from without having to find the matching tracking feature checkout. See the Full Installation guide for more information.

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## Server Configuration File

There are several new options available in the server config file since 11.0. This file is altair-serv.cfg by default. Please see that file, or sample\_config.cfg for more information.

One of the more useful options allows for automatic rotation of the server's log files by setting LOGFILE\_ROTATE\_INTERVAL to "day", "week", or "month". Look in either altair-serv.cfg (if a new install) or sample\_config.cfg for all available options.

There is now an option to limit the network interface(s) to bind to as well, using TCP\_BIND\_ADDRESS.

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## Automated Reporting

The URT tool now supports NTLM proxy authentication. See the file alus.conf for setting the variables needed to use this. While this support has been added, there still may be customer configurations that are not supported.

**During installation the installer will try to configure and start the URT automatically. If successful, automatic reporting will be set up and no further action or notification is required or provided.** If the auto configuration fails, the installer may ask you for proxy information

and/or have you agree to manual usage reporting and/or setup. If you are having issues with the proxy or connection in general see the Installer section regarding `-DPROXY_CHECK`

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### **Transactional Log Parser**

The transactional log parser is now included with the distribution. The script to run it is in the bin directory of the install location (`parser.sh` or `parser.bat`). See the Parser User Documentation for more details. The parser parses the transactional log files and creates a csv file to use for analysis with Microsoft Excel or other tools.

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### **Invoking the License Server on the Command Line**

With the move to LM-X 4.4.9 there is an architectural change that server admins need to be aware of since ALM 11.0. In 11.0 the server executable was located in the bin directory of the installation and was named `lmx-serv-altair`. In this version it is still in the bin directory, but is renamed to `lmx-serv` (no `-altair`), and now also requires the shared library `liblmxvendor.so` (.dll etc.) to run. It is placed in the bin directory as well, but requires the proper environment variable to be set so that `lmx-serv` can find it. This is set automatically if you use the standard installer and use the Altair provided scripts. If the CWD (current working directory) is the bin directory the server will start without setting the variable. If the server errors on launch with the message similar to launch saying that "Library not loaded", you can fix this by doing the following: on Linux set `LD_LIBRARY_PATH`, on OS X set `DYLD_LIBRARY_PATH`. Once set, the arguments to `lmx-serv` are the same as they were for `lmx-serv-altair`.

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### **License Environment Variable Setting**

The environment variable `ALTAIR_LICENSE_PATH` is used to point a client application to the license file or server. This has changed from 10.0 and earlier (but is the same as 11 and greater).

`ALTAIR_LICENSE_PATH` must point to a valid local license file or to a network license server in the form of `port@hostname` (e.g. `ALTAIR_LICENSE_PATH=6200@licsrrver.domain.com`). This new configuration is NOT compatible with the older FLEXlm based licensing system used in HyperWorks 10.0 and prior.

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### **Compatibility**

The Altair License Server is compatible with HyperWorks 9.1, 10.1, 11.0, 12.0, 13.0, 14.0, 2017; as well as all other Altair and Partner Products that support 11.0 and above licensing.

**Officially Supported Platforms:**

Platform		Package Name
OS	Architecture	
Windows 7, 8.1, 10, Server 2008R2, 2012, 2016	x86_64	altair_licensing_14.0.0.win64_x64.exe
RHEL/CentOS 6, 7	x86_64	altair_licensing_14.0.0.linux_x64.bin
SLES 11, 12	x86_64	altair_licensing_14.0.0.linux_x64.bin
OS X 10.10, 10.11	x86_64	altair_licensing_14.0.0.darwin_universal.zip
macOS 10.12, 10.13	x86_64	altair_licensing_14.0.0.darwin_universal.zip

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## Resolved Issues and Enhancements

### Issues fixed in 14.0:

- Log parser, when using -single use initialization time of log file as start time instead of midnight
- License server, fixed an issue when using a DONGLE with a lowercase ID string, the server would exit after 10 minutes due to inconsistent case comparisons.
- Core LM-X, fixed an issue where in rare circumstances LM-X could crash while gathering hostids on macOS.
- Almutil, fixed an issue where temporary files would be left in %TEMP%\xf-dll on Windows
- URT, fixed an issue where on error the URT would fail to clean up the scratch directory
- Almutil GUI, when server installation is detected on Windows, add a new tab that displays some basic diagnostic information.
- Log parser, fixed issue where parser could throw out some borrow transactions in log files coming from the HHWU system

### Issues fixed in 13.3:

- Updated/added some decay files
- Fixed an issue where the server could say transaction not found on a failed checkout
- Officially Support Windows Server 2016

### Issues fixed in 13.2:

- Fixed possible crash in server decay code
- Updated/added some decay files

### Issues fixed in 13.1:

- Add support for incorrectly named plist files to gui
- fix gui build on osx to use proper bundle prefix name
- bundle prefix of qt package on OSX is incorrect
- Add Denial info to almutil licstat output
- Server hangs for unknown reason
- Incorrect message in server hooks
- clear icon not showing up in server hostname entry for licstat
- lmx server on windows does not shut down in a timely manner. Causes error 1053 in Services Manager
- Add status display to remote admin tab
- Change default values for borrow in the GUI
- Fully support perpetual licenses (no end date)
- failed checkout rollback can result in "ERROR: Couldn't find previous record for writing transactional log"
- log client failing to retrieve logs from production HHWU

- Transaction logs print incorrect data for used and requested on error vs LMX\_SUCCESS
- Parser doesn't print units in use when LMX\_NOT\_ENOUGH happens
- When LMX LOGFILE\_ROTATE\_INTERVAL is set to WEEK it creates 2 logs instead of 1
- Print more information if: (Err: 10) HostID does not match license
- A partner would like a way to get effective license path
- Add status command to the altairlmd init script on linux

### Issues fixed in 13.0:

- Try to clarify almutil usage when using HHWU with proxies
- If netlibtoccheckin is called during a borrow then checkin failure shows up in server log
- Read token count to successful checkout in logs
- Server path missing from Error Description with multiple hosts in ALTAIR\_LICENSE\_PATH
- Parser incorrectly reads older logs (1.0.0)
- Support Dongles on 64bit Linux for server and clients
- Refactor ALSDK logging system
- LMX\_SetFeatureListOption will always return LMX\_FEATURE\_NOT\_FOUND when asked to apply to all features
- alm\_timet\_to\_yyyy\_mm\_dd\_hh\_mm\_tzoffset doesn't work on windows
- Add additional information in ALSDK Debug info
- Begin migration of LMX naming to ALM naming
- Windows lib loading/unloading mutex is invalid
- Add "Qlogic" as a whitelisted virtual adapter
- Users would like either the Server Name or at least the UUID in the confirmation email from the URT server
- There is a typo and an incorrect path in HHWU documentation.
- Print underlying system errors encountered during export/load of inner LMX DLL
- Clients using borrowed licenses do not honor the Version tag of the license for both LM-X and HHWU
- all non XML output from almutil -licstatxml should go to stderr
- HHWU xml export shows enddate of none
- For OSX 10.11 need to fix the launchctl plist to make sure it has a full path vs relative path
- single server in server list isn't saved to disk on Linux x64
- Add multi-select for feature filter in gui
- GlobalZone Feature and Hyperworks Feature mismatch
- Add ability for GUI to export XML version of currently displayed licstat
- add licstat xml output generation to almutil library
- Parser needs to understand new transaction log format with added extended version string
- Have HOSTID list fill in description fields
- Mismatch for ALTAIR\_LICENSE\_PATH values in error string vs what LMX actually used
- user@host string in licstat output (gui and cli) is the same even though two hosts were used.
- Make HHWU understand new extended version string
- make borrow hour box a little wider on windows
- During Installation, Proxy timeout take inordinately long time
- wrong decay item selected on delete/update
- addDecayConfiguration had a useless/ignored argument
- Change Timeout feature to log correct version number instead of version 1
- Add extended version strings and/or numbers.
- User Profile messages do not show up in the transaction log till a checkout/checkin is done
- Ability to resize portions of the licstat tab to make HOSTS sections bigger



**Issues fixed in 12.2:**

- Build date and time in vendor lib could be more natural looking
- Issue reading license files when mail somehow mangles line endings
- Add license expiration date in normal log file
- URT Client should gracefully exit if the config file path isn't set
- Add space to validateDirectory error message
- Possible issue when checking connection to https proxy
- Implement All the old decay types in HHWU
- Implement Node based decay in HHWU
- Implement Node based decay in LMX servers
- URT client should catch jersey exceptions and give a "friendly error"
- Wrong header added for https proxy server
- Nullpointer and arrayindex exceptions possible in HHWU
- Licensing misspelled in installer when blank license file is chosen
- Lack of newline causes decay sig check to fail
- Need to include the 2010 C++ Microsoft runtime redistributable package
- Transaction rollback for hhwu sets expire\_days to -1
- Incorrect version numbers in transaction logs
- Server description on Windows is still 12.1.0
- HHWU thinks decay is happening when it isn't
- Installer doesn't detect previous installs that use launchctl
- Installer claims it couldn't delete the shortcuts from previous install but actually did
- Remove AIX from supported platforms

**Issues fixed fixed in 12.1:**

- Query license parts (exec/libs) about what version it is
- Add where the license was checked out from into the license logs
- almutil allows HHWU proxy port to be set higher than TCP allows
- Change HHWU disconnected timeout to 30 minutes
- Add licstat functionality to almutil for HHWU
- Possible heartbeat thread issue fixed
- Issue with server keeping track of values when RESERVE is used in config file
- Reservations with checkouts that extend past expire seem to linger in logrolls
- LMX accounting logs are reporting themselves as coming from LMX 444



- Windows server hooks don't read decay files
- Convert server startup to use launchd on OS X instead of old rc scripts etc
- Buffer sometimes not big enough in GetUserGroup() and Getusername() in LMX
- Make server case independent for feature names
- Infrastructure - switch to events on Windows for thread signaling
- Server hooks encounter error checking processing directory on 32-bit Windows
- lic server can balloon in memory usage and licstats take long time or timeout
- Issue with server keeping track of values when LIMIT is used in config file
- Add a feature to almutil -licstat to only print totals
- Server crashed on startup when log file in data/processing
- Denials being reported that didn't happen
- Add printout of details in altair-serv.cfg
- Support dates past Jan of 2038 (64bit platforms only)
- LMX client hangs after being rejected from server
- Problem writing HHWU secure store on 32-bit Windows
- Add ability to specify HHWU or LMX or both for almutil -licstat
- Parser should say what exception happened when one occurs
- Invalid pending files aren't getting moved aside
- Log file readability enhancements

### **Issues fixed in 12.0.3:**

- RESERVE keyword in server config file not working correctly
- Increase max line length in server config file
- Actual number of features column in logs is zero for borrows
- Junk value in "units used at checkin" field for borrow normal return
- Missing hostname in documentation for trans logs
- Buffer sometimes not big enough in GetUserGroup() and Getusername() in LMX
- All remaining HAL peers "freeze" for a period when a peer goes down
- Init scripts kill lmx-serv generically, not just Altair's
- Parser should say what exception happened when one occurs
- Deal with possible bad characters in log files
- Parser can pick up the wrong log close date if there are multiples in the input file
- The parser reports the missing sig from a HHWU log as a failure when it should be n/a
- If the checksum is missing, the parser fails to print all the data (app name)
- Fixed several issues with parsed output

- Units used at check in should be -1 for certain cases

**Issues fixed in 12.0.2:**

- Decrease memory footprint of License Server
- Performance issue on OS-X slower than other platforms
- License Server seems to hang sometimes on start up on Windows
- Two shut down messages printed by lm-x server on exit
- Server hooks starting the urt client more than it should
- Answering no to 'do you have a license' question results in broken default license line
- Server crashes under heavy load (both HAL and Single Servers)
- Server seems to double some transaction log entries
- Some files not moved from pending directory during URT run

**Issues fixed in 12.0.1:**

- Possibility that there will be 2 items on 1 line in trans logs
- Fix lock file issue
- Incorrect documentation for message transactions
- The ALM\_PROJECT string is not included in the LMX logs if the transaction errored
- Missing fields in anon log with messages
- Server does not properly log carry over borrow transaction on server restart, it should
- When a borrow carries over at a midnight log roll, the borrow expire time becomes epoch
- Change error message when the server can't find the alus.com
- The signature field on each line of the trans log is the same on hpux no matter the content
- Borrow return leaves extra messages in the log
- Server may hang when URT runs
- When using units based decay, it counts the first bucket twice
- Some fields in the transaction log restart roll over are wrong
- The SN field in the transaction log is only intermittently written
- RC/RO records not being re-printed in accounting logs after log roll
- LMX server crashes if you try to override directories with environment variables
- Sometimes there are multiple checkouts for HyperWorks in a single 'checkout'
- Issue with Intel Virtual Network Adapters not being recognized as valid host ID
- Log parser must support reprints of RO records after log roll
- URT client overwrites zip file to be sent because of same names
- Log parser will leave reservations open because RE/RN not in transaction logs

- Servers crash and/or hang when using HAL

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## Known Issues and Additional Information

### IMPORTANT:

The license server's default configuration will write a log file named <installation>/logs/<hostname>.log. This log file is appended to when the server restarts, and is not overwritten. The system administrator should monitor this file as all platforms have file size limits that could cause the license server to be shut down due to the log file reaching these file size limitations. The log file should be 'rotated' to maintain a manageable size. See the section above about the new config file setting for automatic log file rotation to help with this.

The URT (Reporting mechanism) will also write and save files in <installation>/data/\* Those directories should also be monitored such that saved log files do not fill the systems disk.

### All Platforms:

There are several Altair specific changes to the lmx-serv. Please note the following:

1. Do not upgrade lmx-serv with a different version than the one distributed by Altair. This is NOT SUPPORTED and may cause instability and/or crashes.
2. Altair has disabled the Web/Java GUI that is normally available in LM-X. This was to mitigate security concerns involving some of the components.
3. When performing an upgrade, if you have changed/edited the urt.bat or urt.sh file to modify automatic reporting, the installer will overwrite your version with the standard one. You should make a backup of your version and/or reapply your changes to the new one.

### Windows Specific Issues:

With the upgrade and change in architecture of the base LM-X license server to the current version, there were also changes to lmxconfigtool. **This is WAS the GUI tool used to interact with the server in Windows. The management functionality was removed and it is no longer supported or distributed by Altair. If you don't use the Altair installer, you will have to configure Windows services via the command line.** The Altair installer will place a script in the 'scripts' directory named install\_service.bat. This script can be used to install the service, or as a reference on how to do it. You will have to delete the service with the following two commands: `sc stop "Altair License Server"` and then: `sc delete "Altair License Server"` Note that the configuration file (altair-serv.cfg) holds the paths for the log file and license file that you could previously specify in lmxconfigtool.

**If you installed a beta release of the 12.0 Licensing system on a license server that also was running an earlier (FLEXlm based) Altair Licensing system, it is important to make sure that the environment variable ALUS\_CONF\_FILE is NOT set in the systems environment. The value is now held in the registry and having this in the system's environment will cause the older license system to become confused on which configuration file to use.**

### Linux Specific Issues:

When trying to run the installer from the command line (or console) mode without graphics, the installer may fail. The installer may try to initialize the X window libraries. To work around this problem, make sure the environment variable DISPLAY is unset and provide the `"-i console"` argument on the command line.

### **Mac OS X specific issues:**

Once you download the installer .zip file, you should run it from finder. Start by double clicking on the .zip file to expand it and then double click the installer it created. There seems to be some issues if you try to unzip and run from a terminal window.

The installer only supports GUI mode.

The server is installed (by default) in /Applications/Altair/licensing14.0 and has been changed to use launchctl for starting and stopping of the license server. See the installation guide for more details.

In order to run the uninstaller, you will need to run it from the finder. The link for run\_uninstall does not work from a terminal. (cd /Applications/Altair/licensing14.0 by default) and run ./run\_uninstaller from the command line.

The installer is unsigned, due to changes in macOS by default you will need to disable gatekeeper in System Preferences or right click on the package and select Open, then select Open from the security prompt.

The version of Install Anywhere used still relies on Java6, you will be prompted to install Java6 when you launch the installer.

### **Transactional Log Information:**

A few record types have new fields added; see the full documentation for details. Application names have been added to records where the feature is unavailable to inform admins what feature was requested. Extended version numbers and application names have been added as well.