Release Notes

Lavastorm Analytics Engine 6.1.3

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LAVASTORM ANALYTICS

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Table of contents

1. Welcome to Lavastorm Analytics Engine 6.1.3

Lavastorm Analytics Engine (LAE) is a visual analytics tool that enables enterprise customers to analyze large quantities of data to generate business value and insights.

This document provides an overview of the new features and enhancements provided by Lavastorm Analytics Engine in the 6.1.3 release. For more detailed information about these features, please see the Lavastorm Analytics Engine User Guide and the Lavastorm Analytics Engine Administration Guide. For information on updates to nodes, please see the Lavastorm Analytics Library (LAL) Release Notes.

1.1 Release overview

As part of our ongoing effort to make LAE more accessible to a wide array of users, and to help users to quickly increase their productivity, we have continued to enhance the LAE web application. The LAE web application, comprised of the LAE Directory and Lavastorm Explorer, enables users to collaborate and easily discover graphs that are available on their system, view graph runs and their data, edit run parameters and run and share graphs, without ever having to open BRE.

As part of our ongoing effort to improve the security of the Lavastorm offering, a number of security issues have been addressed in this release. LAE 6.1.3 also provides administrators the option to enable or disable alias dereferencing for LDAP imports. Also note that the previously deprecated nodes, Accum and LineMatcher, are no longer being shipped.

The LAE web application has been designed for, and tested on, desktop browsers (including Internet Explorer, Firefox, and Chrome), and now supports Windows 10 with the 6.1.3 release.

Logistics Manager and the LAE web application are accessible via the web UI and via RESTful APIs.

> **Note:** From LAE 6.1 onwards, the BRG version has been updated from version 5 to version 6. Graphs that are created in LAE 6.1 onwards with BRG version 6 are not backwards compatible and cannot be viewed in older versions of BRE which use version 5 of the BRG format.

1.2 Supported platforms

Desktop client

- Windows 7 32-bit and 64-bit
- Windows 10 32-bit and 64-bit

Server

- Windows Server 2008 SP2 64-bit
- Windows Server 2012 R2 64-bit
- Solaris SPARC 10 64-bit
- Solaris SPARC 11 64-bit
- Red Hat Enterprise 6 64-bit
- Red Hat Enterprise 7 64-bit
- SUSE Linux 11 SP3
- CentOS 7 64-bit

Logistics Manager and Web App Server

- Jetty 8.1.14
- Tomcat 7
- WebLogic 12c

Browsers

The following browsers are supported:

- Internet Explorer 11
- Chrome
- Firefox

Accessible databases

You can connect LAE to a number of databases. The following databases are supported:

- Oracle 11i
- Teradata 14.10
- MySQL
- MS SQL Server 11
- MongoDB 2.4.9
- Hadoop 2.6
- Hive 1.1.0

1.3 Product lifecycle policy

In order to balance the needs for support of existing software versions against the demand for new functionality delivered in new releases, Lavastorm employs a phased product lifecycle policy by which older versions and functions are retired as new versions are released. Customers are encouraged to upgrade their software regularly so that they receive the most current feature set and all stability improvements. The following policies will help you to manage software versions optimally.

Support life policy

All customers with a support agreement are entitled to new versions of our software, but the level of support that we provide depends on the version of software that you are running. Recent versions of our software receive full support. All other versions pass into the End of Support Phase. Lavastorm will make every effort to assist with versions in the End of Support Phase, but, as a general rule, will no longer provide fixes to the software. The official support life for our products encompasses the most recent two major versions, and within those, the most recent two minor versions. The following chart helps clarify which software versions are currently supported vs those in the End of Support Phase of their lifecycle.

Major version	Support status for minor versions
7	Targeted release 2016
6	6.0 and 6.1 minor versions fully supported
5	5.0 and 5.1 minor versions fully supported - End of Support Phase with version 7 release
4	All versions End of Support Phase - best effort support only*

* Enhanced support agreements are occasionally made available that provide software fixes to End of Support versions.

Functionality deprecation policy

As older implementations of functionality are replaced with improved versions, or some functionality is removed from the software, Lavastorm employs a deprecation mechanism to provide our customers with advanced notification of the forthcoming changes so they may plan accordingly. Deprecation is not itself the removal or replacement of functionality, but rather the signal that this use of the deprecated functionality should be limited and optimally transitioned to the newer alternative. Typically the deprecated functionality will no longer be available starting with the next major version of the software.

Deprecation notification for upcoming version

In version 6.1 of the software, the basic.brg and simple.brg libraries were deprecated. Though they will continue to function, they will not be available in the next major (7.0) version of the software. Customers should replace any nodes from this library with the equivalent nodes from the core.brg library.

2. What's new in LAE 6.1.3?

★ Nᴇᴡ   LDAP alias dereferencing

✓ Fɪx   Security improvements

✓ Fɪx   Core Lavastorm jars

✓ Fɪx   Encrypted username/password exchange

✓ Fɪx   Deprecated nodes

2.1 New features and enhancements

LDAP alias dereferencing

Feature

To maximize the accuracy of LDAP imports, optional alias dereferencing is now available.

In an LDAP system, an "alias entry" is a directory entry that points to another entry. By default, LAE does not set the behavior of alias dereferencing on LDAP imports, therefore the source LDAP system will follow its own alias dereferencing settings during an LDAP import. However, this behavior can now be modified by administrators, post installation, by configuring alias dereferencing within LAE.

Benefit

System administrators have increased control over LDAP imports. If alias dereferencing is enabled, users and groups that are referenced by an alias in the LDAP directory can now be imported and those users can subsequently log in to LAE.

2.2 Corrected issues

Issue summary	Issue number
Security improvements As part of our ongoing effort to improve the security of the Lavastorm offering, a number of security issues have been addressed in this release, including the following two items: **Core Lavastorm jars** With 6.1.3, the core Lavastorm jars have been updated with new versions. If you are upgrading and have a number of LXAs that you have previously been using, then you have two options, during the install update process there is an option to deploy legacy jars: • If you do not choose to deploy legacy jars during the update process, you will need to re-generate your LXA files using a 6.1.3 version of the BRE client. • If you choose to deploy legacy jars, all existing LXAs should continue to function. **Note:** We recommend that you do not deploy legacy jars due to a number of security vulnerabilities within the legacy jars, however you may decide to deploy them in order to preserve your pre-6.1.3 LXA files.	LAE-6283
Encrypted username/password exchange The username/password exchange between BRE and the LAE Server is now encrypted. **Note:** Only the latest version of BRE (6.1.3) can connect to the 6.1.3 version of the LAE Server. If you have an older version of BRE, you will need to update your client to be able to connect to the LAE Server.	LAE-6186
Deprecated nodes The previously deprecated nodes, Accum and LineMatcher, are no longer being shipped.	LAE-6284

3. What's new in LAE 6.1.2?

✔ F_{IX}   [Excel File node](#)

✔ F_{IX}   [HTTPS communication](#)

✔ F_{IX}   [Web application URL](#)

✔ F_{IX}   [DB Query node](#)

✔ F_{IX}   [LAE Server authentication](#)

✔ F_{IX}   [BRE password parameters](#)

✔ F_{IX}   [Logistics Manager](#)

✔ F_{IX}   [SSL library](#)

✔ F_{IX}   [Log files](#)

3.1 Corrected issues

Issue summary	Issue number
Excel File node Resolved misaligned invalid cell error message text. Added a new parameter to allow cell formatting to be ignored.	LAL-5232 LAL-1554
HTTPS communication Optionally enable HTTPS communication between the LAE Server and the web application.	LAE-5385
Web application URL Resolved URL issue where the session token was exposed.	LAE-5112
DB Query node Resolved error where EDW queries returned incorrect NULL values on some rows when run from the DB Query node over the CLI interface.	LAE-4912
LAE Server authentication Error handling has been fixed to resolve error during authentication with the LAE Server that resulted in "Unable to find printer for ERROR message".	LAE-4667 LAE-3708

Issue summary	Issue number
BRE password parameters Resolved issue where BRE password parameters were being exposed.	LAE-4475
Logistics Manager It is possible to optionally disable the ability to download BRS/LXS files. To disable the ability to download add 'ls.lae.automation.disableStateDownload=true' to your site.prop file.	LAE-4453
SSL library SSL library has been upgraded from 1.0.1c to 1.0.1s.	LAE-5797
Log files Resolved issue of disappearing log files.	LAE-4774 LAE-4421

4. What's new in LAE 6.1.1?

★ NEW   New features and enhancements

★ NEW   Advanced LDAP/AD filtering

★ NEW   LDAP/AD paging limit

★ NEW   Secure LDAP/AD authentication

★ NEW   Import LDAP/AD usernames as lower case

★ NEW   Assign roles to groups

★ NEW   Removal of the default admin user

★ NEW   Safely store the LDAP/AD import binding user password

✔ FIX   LAE Directory UI

✔ FIX   Lavastorm Explorer data pins

✔ FIX   BRE stat function

✔ FIX   LAL 64bit installer

✔ FIX   Web application contexts for login

✔ FIX   Multi-line fields show more text

4.1 New features and enhancements

LDAP/AD authentication setup

Feature

The LDAP/AD information window that is displayed during installation has been updated and now requests all LDAP/AD authentication settings.

Benefit

System administrators can complete the setup of LDAP/AD authentication during installation.

Advanced LDAP/AD filtering

Feature

Administrators can apply an advanced LDAP/AD filter to limit the import of users and/or groups to only those that match specific filter criteria.

Benefit

Allows administrators to ensure that the LAE web application is not flooded with users and groups that do not require access.

LDAP/AD paging limit

Feature

Administrators can specify a paging limit when importing LDAP/AD users and/or groups.

Benefit

Large numbers of users and/or groups can be imported to the LAE Directory without causing the source system to crash.

Secure LDAP/AD authentication

Feature

Administrators can set up a secure connection between the source LDAP/AD system and LAE.

Benefit

The secure connection provides assurance that raw user credentials will not be exposed.

Import LDAP/AD usernames as lower case

Feature

When integrating with an LDAP/AD system that performs case insensitive authentication, administrators have the option to import usernames as lower case.

Benefit

Users are able to enter their login username in lower case and access LAE. For example, if a username is set as "aUser" in Active Directory, if the administrator selects the option to import usernames as lower case, then the user can access LAE by entering their login username as "auser".

Assign roles to groups

Feature

In addition to assigning roles to users, administrators can now also assign roles to groups.

Benefit

Users receive the LAE web application features that are available for both their user role and the group role. For example, a user with the role of "End User" who is also a member of a group with the role of "Administrator" would receive both the "End User" and "Administrator" features.

Removal of the default admin user

Feature

A default administrator exists in the LAE web application for first time log in and setup. When another user with the role of administrator has been created (either locally in the web application or via LDAP/AD), they can log in and remove the default administrator from the system. If all users with the role of administrator are removed, when the web application server is re-started, then the default administrator is re-created to ensure that the system always has an administrator.

Benefit

All local users can now be removed from LAE, meaning that all users of LAE can be authenticated via LDAP/AD.

Safely store the LDAP/AD import binding user password

Feature

When a user performs an LDAP/AD import (known as the binding user), their user credentials are saved securely in a new security store. The security store is setup during installation, and is password protected.

Benefit

The security store allows LAE to safely store encrypted values, such as the LDAP/AD import binding user password. After performing an LDAP/AD import, the binding user can perform an LDAP/AD synchronization task without having to re-enter their password.

4.2 Corrected issues

Issue summary	Issue number
LAE Directory UI Resolved incorrect rendering of user interface in Internet Explorer.	LAE-4046 LAE-4033
Lavastorm Explorer data pins Resolved UI inconsistencies for nodes executed using streaming.	LAE-4045 LAE-4107
BRE stat function The "stat" function now returns long integers (64-bit) rather than 32-bit integers.	LAE-2622
LAL 64bit installer Resolved issue of LAL 64bit add-on installer being installed onto LAE 32 bit.	LAE-4496
Web application contexts for login The login path that is used by the LAE Server to authenticate against the web application is configurable to support different contexts.	LAE-4698
Multi-line fields show more text The default height of multi-line fields in the Lavastorm Explorer Properties panel has been increased to accommodate more text. Additionally, a horizontal scroll bar has been introduced, rather than wrapping text. The increased field height allows more text to be displayed at once, and the horizontal scroll bar improves the readability of scripts by allowing users to bring text into view that extends beyond the borders of the window.	LAE-4393

5. Known issues and limitations

5.1 Lavastorm Explorer and the LAE Directory

"Bad type" nodes

Lavastorm Explorer does not support graphs containing "bad type" nodes, that is, nodes that are not correctly defined. "Bad type" nodes can be fixed in BRE and can be identified by a red label. "Bad type" nodes are also reported by the compatibility scanner.

BRE values

When {{^CurrentDate^}} is used in BRE, this is displayed as 'value unavailable' in Lavastorm Explorer. Also, the use of {{??}} evaluation in BRE will not work correctly in Lavastorm Explorer if the referenced parameter itself contains a textual substitution.

Bypasses

Bypasses cannot be disabled in BRE; the enabled setting is not respected. The setting is respected in Lavastorm Explorer, which means that data which is visible on disabled bypass outputs in BRE will not be visible in the LAE web application user interface.

Data Viewer

A sample of up to the first 1000 records of node data can be displayed in the Data Viewer. Data sets that contain more than 100 columns may cause the browser to become slow and unresponsive. Lavastorm Explorer can operate with up to 2000 columns of data, but the data may load slowly and users may receive messages stating that some scripts have stopped responding.

Enabled parameter

When the Enabled parameter is set to reference a runtime parameter (directly or indirectly) then this can cause inconsistent results in Lavastorm Explorer.

Evaluated expressions

In BRE, when advanced parameters are used, they are displayed as unevaluated expressions, however, Lavastorm Explorer only displays evaluated expressions.

For example, when {{?Fieldname?}} is used in BRE, the unevaluated expression is displayed, {{?Fieldname?}}; however, in Lavastorm Explorer this expression is evaluated to True or False, depending on whether the Fieldname parameter has a value set.

Group membership

Additions and deletions of users in the LAE web application are automatically updated in the LAE Server and BRE, however, changes to groups and group membership are not. For such changes to take effect, the LAE Server must be restarted. Note that to administer the LAE Server, for example to apply a new license, the

administrator must be in the "admins" group in the LAE web application.

Negative coordinate values

It is possible that nodes and node pins may appear off the screen in BRE; this produces nodes with negative coordinate values. Negative coordinate values are not supported in Lavastorm Explorer.

Node graphics

For graphs that contain InFlow nodes, graphics or charts are not displayed when the graph is viewed in Lavastorm Explorer.

Re-run graphs

To re-run a graph that has been run in Logistics Manager in Lavastorm Explorer, the execution plan that is set in Logistics Manager must contain only one run definition and must be set to run manually.

Top level connections

Within older versions of BRE, it is possible to have connections at the top level of the library. Such connections are ignored when importing into the Lavastorm Explorer, so the inherited connections will not be present. This also means that data passing through bypasses on those connections does not appear in Lavastorm Explorer.

Uploading multiple libraries

Uploading multiple libraries when one of the libraries already exists in the system results in an error. To work around this issue, upload new libraries separately from libraries which you are updating.

Username change

If an administrator changes the username of a user who is logged in to LAE, the user's existing session will become unusable. If this occurs, the affected user should log out and delete all browser cookies, before logging in again with their new username.

5.2 Environment

Java heap size

Lavastorm Explorer is a memory intensive application, therefore it may be necessary to increase the Java heap size (default heap size: 25% of RAM or 1G, whichever is smaller).

LAE web application installation

The LAE server and the LAE web application must be deployed on the same machine to allow users to view the output data of the graph in Lavastorm Explorer.

5.3 Logistics Manager

Generating a graph link

As graphs increase in size and complexity, the time that it takes for the Generate Link process to complete increases.