Analytics for Learn Release Notes: 4.3.1

- **Building Block**: Analytics for Learn Data Integration Building Block v.4.3.1

- **Dependencies**: Blackboard Learn 9.1 Service Pack 13 or later and other items

These Release Notes provide System Administrators with information about the changes from the previous version to the most recent version, which is Analytics for Learn (A4L) 4.3.1.

The current release focuses on bug fixes. Always review the entire document and consider how the information listed below affects your specific usage patterns. Following are some of the highlights of this release:

- New Building Block version to support new Learn SaaS course status functionality

- The Named Queries for various dimensions and measure groups have been replaced with or modified to reference new views in the relational DB to make upgrades simpler

- Altered some data types to handle common size exceptions

Dependencies

- Blackboard Learn 9.1 Service Pack 13 or later

- Analytics for Learn Version 4.3.0: the upgrade will require version 4.3.0 of the A4L module to be installed and operational

- New Building Block version (4.1.0) must be installed in coordination with the 4.3.1 A4L upgrade

New features and enhancements

- Extend Activity Accumulator Extract

- Add version check between .NET Controller and Building Block

- Additional course status functionality for Learn SaaS customers

- Sync Analysis Services data source view with changes from A4L 4.3.0

- Correct duplicate errors in forum submissions

Fixed bugs

- "Course At A Glance" Reports did not apply "Compare To" logic correctly

- Login Exception Report sometimes returned incorrect results when using certain parameter combinations

- Duplicate insertion errors sometimes occurred when processing HelperSourceActivityAccumulator
- Fixed join logic in ForumSubmissions to correctly handle the existence or non-existence of data in CONFERENCE_OWNER
- Submission Exceptions Report sometimes counted submissions multiple times
- HelperFactGradeCenterFinal is setting the description of GradeCenterUsedDescription backwards
- Fixed business logic to populate SISStudentAdvisor for Banner implementations
- Invalid inner join in HelperFactGradeCenterStage causes non-SIS courses to be excluded
- Invalid plan selection criteria for Banner in HelperSISStudentAttributeByDateExtract
- File names of Integrated Reports must be in English – reverted previous changes that allowed Integrated Reports to have file names in other languages
- Scroll bars affecting the usability of Integrated Reports in Learn
- Activity data did not report minute values for most fact records
- SetCourseItemTypes row is not present in HEA.AdminFunction which causes the Course Attribute maintenance item to not appear in HEAdmin
- EventLoadCycleKey not populated for Build Clauses Completed events
- Logical error in HelperSourceActivityAccumulator for Earliest Activity Date Loaded causes it to go beyond the Historical Activity Cutoff Date which causes historical activity extracts to not load
- Student advisor role description is not populated for banner implementations
- Truncate Learn Source tables just before data is loaded to minimize the downtime of source table data
- Add attribute DisplayId to Dim User, Student, and Instructor
- Performance improvements for FactCourseItemActivity
- Performance improvements for HelperFactCourseActivityFinal and HelperFactCourseItemActivityFinal
- Enable Security Protocols for A4LWebService
- Fix duplicate insert error when attempting to insert to HelperActivityBySession
- Fix unhandled IOException in Extract.WaitForExtract causing the A4LWebService to fail
- Exclude activity with invalid SESSION_ID from processing in HelperArchiveACTIVITYACCUMULATOR to improve load performance
- Performance improvements for HEA.RSParameters and HEA.RSSISIntegrationHealth

Known issues

- [AFLN-708]: Missing rows in Source.SISCourseGrade for Datatel data where grades are not present**

- [AFLN-709]: Scheduler for GradebookLog PK extracts**

There are currently hotfixes available for these issues for affected customers.

Supported technologies

The following table describes the server and system prerequisites and optional components to be installed and configured prior to beginning the Blackboard Analytics installation process.

Server and software prerequisites

Optional Reporting Tools for Included Sample Reports to be installed on Application

TECHNOLOGY SUPPORTED	CONFIGURATION
Supported Operating Systems	- Microsoft Window - Microsoft Window - Microsoft Window - Microsoft Window - Microsoft Window *** with latest service pack***
Supported SQL Server Version	- Microsoft SQL Serv - Microsoft SQL Serv - Microsoft SQL Serv - Microsoft SQL Serv *** with latest service pack*** *** + Standard Edition is not***
Additional SQL Server Components and Install Options	- Analysis Services* - Integration Service

TECHNOLOGY SUPPORTED	CONFIGURATION
	• SQL Server Manag…
	• Business Intelligen…
	• SQL Server Defaul…
	• Server Authenticat…
	In SQL Server 2012, Ana…
Application Server Requirements	• IIS 7.x or later
	• IIS Options: ASP.N…
	• .NET Framework 4…
For Institutions with Oracle-based ERP Source databases	• Oracle Provider fo…
	• Oracle Provider fo…
	• Connectivity back t…
	Provider addressing arc…
	+ Provider can be downlo…
Optional Reporting Tools for Included Sample Reports to be installed on Application Server	• Pyramid Analytics

Configuration notes

- Operating System and Memory

    ◦ When choosing between the Standard and Enterprise Edition and the 32-bit or 64-bit version of the Windows operating system, be sure to understand the maximum amount of memory available under each configuration. The 64-bit version of the operating system is highly recommended, as is the 64-bit version of SQL Server.

- Server Virtualization

    ◦ While it is possible to run Blackboard Analytics modules in a virtual server environment, special consideration must be taken to effectively allocate server resources within the virtual environment to minimize contention with other servers in the shared environment.

    ◦ Many institutions host the reporting server in a virtual environment, with a virtual machine configuration typical of any web or application server.

- Institutions larger than 10,000+ FTE intending to virtualize the database server should plan on isolating server resources as described below for optimal performance
  - CPU – The ETL process is resource intensive and optimized to load as much data as possible in as little time as possible. All available CPU resources will be used to load as much in parallel as possible, so dedicating physical cores to the database server virtual machine is recommended. It is not uncommon for all available CPUs to run above 90-95% utilization during Analysis Services cube reprocessing, so adding the overhead of managing virtual cores will result in performance degradation.
  - Disk – During the ETL process, large amounts of data will be written, read and re-written to disk throughout the various ETL stages (e.g. source copy schema to staging schema to final reporting schema), so dedicated disk groups within the virtual environment are recommended to minimize disk contention with other virtual machines sharing the same disk subsystem. Please see the BbAnalytics Disk Configuration Considerations guide for more information on this topic.