

Release Notes for Analytics for Learn

Analytics for Learn Data Integration Building Block

- **Version:** v.4.3.3
- **Dependencies:** Blackboard Learn 9.1 Service Pack 13 or later and other items
- **Release Date:** March 2016

The Release Notes provide System Administrators with information about the changes from the previous version to this most recent version of Analytics for Learn. These release notes cover version 4.3.3.

The enhancements below highlight the key updates made in this new release from new reporting capabilities to updated visualizations and reporting performance improvements. This release is recommended for all customers of Analytics for Learn.

The list below provides some highlights of changes that we believe will affect most usage scenarios. Always review the entire document and consider how the information listed below affects your specific usage patterns.

- **SSRS report redesign for lower resolution screens** – SSRS report visualizations have been adjusted to support lower screen resolutions. Tables with many columns have been redesigned to better fit the screen. Key identification columns on wide tables are frozen, allowing them to remain onscreen while the user scrolls through other columns.
- **New Learning Experience (NLE) rebranded sample reports** - SSRS and Pyramid reporting will now visually complement the new learning experience of the Blackboard suite of products. Sample SSRS and Pyramid reporting content is an optional upgrade feature. There is no requirement to convert existing custom reports (both SSRS and Pyramid) to the new theme as part of this upgrade.
- **SafeAssign** - Analytics for Learn now supports Learn SafeAssign data model changes released in Learn Service Pack 14.
- **Korean language support** – Analytics for Learn 4.3.3 includes support for the Korean language.

Prerequisites

- Analytics for Learn Version 4.3.2 – the upgrade will require version 4.3.2 of the A4L module to be installed and operational.
- Learn 9.1 must have Service Pack 13 or higher installed.

New features and enhancements

- SSRS Reports - Show message to indicate empty data set
- Performance issue with CURSOR in Stage.HelperSourceActivityAccumulator
- Add Instructor Last Course Access Date, and Days Since Last Access info to FactCourseSummary
- Clean up RS procedures from relics of sparklines
- Revise the code handling list of SSRS Languages in HEAdmin
- Activity Load Indicators
- Investigate the behavior of SSRS reports at managed hosting
- ETLHelperUpdateCourseItemAccessedIndicatorFact optimization
- Final.DimDateExtendedView performance issue caused by HEA.TranslateText
- Ignore post-timeout activity
- Analytics Last Course Access Date different from Learn
- SSRS reports design changes POC
- SSRS Performance - Course and Student At a Glance
- Redesign A4L reports for lower resolution
- Redesign Advising reports for lower resolution
- Redesign Mobile Learn reports for lower resolution
- Redesign Integrated reports for lower resolution
- Learn Use By College report display data different from its drill
- Custom styles not working properly in Integrated report Activity & Grade Scatter Plot
- SSIS - multiple Linked server checks
- Course availability check in Mobile Learn Course Use By College
- Do not show repeat student activity
- Invalid Colors in Activity Matrix Details Drill

Fixed bugs

- FactCourseItems - Populate DateCreated for all of item type categories
- Integrated Reports not displaying (specifically Learn Course at a Glance)
- iBBLA 4.3.2 - Activity Fact Source count diffs - Source Count View logic not in synch with transform view logic
- Source table truncation in the HEA.WebServiceExtractSource
- Replace varchar values with nvarchar in HEA.RSMobileLearnCourseUse and
- HEA.RSGradebookExceptionReport
- Logic flaw with DimCourse IsCourseOpenToStudentsIndicator
- Baseline DB missing Banner predicates for source table extracts
- Content activity measures incorrect
- Data duplication issue because of custom hyperlinks in SSRS 2012
- Hotfix for SafeAssign functionality A4L reports not showing colors in Firefox browser
- Arithmetic overflow in Stage.ViewFactStudentCourseSummary

- Student Class Level not Calculating Correctly Activity Matrix & Activity Matrix Details Drill reports returns 0 for all recordwith activity type "Course Accesses"
- Create new version of hotfix and include latest changes
- FactSubmission.SubmissionDate datatype inconsistency Inconsistency in Grade Center Total Score calculation
- Duplicity issue in DimGradeCenterColumn caused by ETLHelperExtractGradeCenter
- Exclude elapsed time of login access from course access minutes
- Custom styles of some objects in Activity Matrix are not working
- Access minutes with too low values
- Duplicity issue in DimGradeCenterColumn
- Performance issue of translations in Stage.HelperStudentAttributeByDateExtract
- RSCourseFilter for InstructorCourses returns incorrect data set
- Custom styles of some objects in Activity Matrix Details Drill are not working
- SSRS report Learn Course Use Drill ignores Course Status parameter
- Update of AcademicStandingCode in Stage.HelperSISStudentAttributeByDateExtract is based on non-deterministic results
- Ignore activities with invalid content relationship
- Incorrect graded_attempt_date calculation
- Activity of user who is marked for removal is not removed during processing of historical activity
- Duplicate values in Stage.ViewDimCourseRoleTransform
- FactStudentCourseSummary.LastAccessDateKey doesn't correspond to COURSE_USERS.LAST_ACCESS_DATE
- Hotfix 123 won't update HEA.RSLearnCourseUseCourseLevel stored procedure
- Source.Term has incorrect definition of column pk1
- Hotfix 114: Incorrect NULL value handling and different system collation handling in Stage.ETLHelperUpdateCourseItemAccessedIndicatorFact
- FactForumSubmissions - Missing DateModified in DQF duplicate check
- Incorrect description for x-bb-lesson content item type
- Indicate course item access only if exists access within session
- Stage.SourceCourseTool support for datetime2 to avoid out-of-range failure
- Handle Content Type for Activities on Contents Removed from Learn
- Custom styles not working properly in Integrated report Activity & Grade Scatter Plot
- Learn Use By College report display data different from its drill - implementation
- Course availability check in Mobile Learn Course Use By College
- Repeat student activity in Activity Matrix fix
- Invalid Colors in Activity Matrix Details Drill

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

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.

TECHNOLOGY	SUPPORTED CONFIGURATION
Supported Operating Systems	<ul style="list-style-type: none">• Microsoft Windows 2008 32-bit*• Microsoft Windows 2008 64-bit*• Microsoft Windows 2008 R2 32-bit*• Microsoft Windows 2008 R2 64-bit*• Microsoft Windows 2012 64-bit* <p>* with latest service pack</p>
Supported SQL Server Version	<ul style="list-style-type: none">• Microsoft SQL Server 2008 R2 Enterprise Edition (32 or 64-bit)*+• Microsoft SQL Server 2012 BI Edition (32 or 64-bit)*• Microsoft SQL Server 2012 Enterprise Edition (32 or 64-bit)* <p>* with latest service pack applied to all installed SQL Server components + Standard Edition is not supported</p>
Additional SQL Server Components and Install Options	<ul style="list-style-type: none">• Analysis Services*• Integration Services• Reporting Services (optional)• SQL Server Management Studio• Business Intelligence Development Studio• SQL Server Default Collation: SQL_Latin1_General_CP1_CI_AS• Server Authentication: SQL Server and Windows Authentication mode <p>* In SQL Server 2012, Analysis Services must run in Multidimensional mode</p>

TECHNOLOGY	SUPPORTED CONFIGURATION
Application Server Requirements	<ul style="list-style-type: none"> • IIS 7.x or later • IIS Options: ASP.NET, Basic Authentication, Windows Authentication • .NET Framework 4.0
For Institutions with Oracle-based ERP Source databases	<ul style="list-style-type: none"> • Oracle Provider for OLE DB 32-bit** • Oracle Provider for OLE DB 64-bit** • Connectivity back to the Oracle database with an account having SELECT-only access <p>* Provider addressing architecture (32 or 64-bit) must match that of SQL Server + Provider can be downloaded from Oracle as part of Oracle Data Access Components Pack (ODAC)</p>
Optional Reporting Tools for Included Sample Reports to be installed on Application Server	<ul style="list-style-type: none"> • Microsoft SharePoint 2010 Enterprise Server* • BbAnalytics will install ProClarity Analytics Server 6.3 SP3+ • Pyramid Analytics bioXL & bioPoint <p>* Standard Edition is not supported + Requires IIS Options: ASP, Server-side Includes</p>

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 Intelligence 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.