What's New in the Analytics Middle Tier

This section provides an overview of what's new in each release of the Analytics Middle Tier.

Version 4.0.0 (Latest)

Enhancements

Analytics Middle Tier v4.0 provides support for the ODS/API v6.1 version.

Version 3.1.0

Enhancements

The AMT 3.1 release provides some minor clean up on column data types by casting columns to be more appropriate and consistent data types. The data types are now more consistent across the SQL Server, postgres, and API driven AMT solutions. These changes were validated against the existing starter kit Power BI reports to make sure no significant errors or changes occur.

Version 3.0.0

Enhancements

The AMT 3.0 release will support new database versions (SQL Server 2019 and Postgres 13), provide Multi-Year support, and Multi-version support. AMT has been updated to support .NET 6. The 3.0 release also includes additional data elements for the EPP starter kit. Finally, the 3.0 release includes some bug fixes identified by comparing API results with the AMT results.

Version 2.9.2

Enhancements

Version 2.9.2 includes updates to the EPP starter kit collection. The updates improve the EPP starter kit security. Other updates include a move to .NET 6, fixed an optional address bug on SchoolDim, and added some workflow improvements to building and release of AMT. Note that version 2.9.1 release was a minor update to better support the AMT docker install and wasn't provided publicly.

Version 2.9.0

Enhancements

Version 2.9.0 includes the EPP starter kit collection. The changes move the EPP starter kit queries to the AMT core model from the community contribution repository. Note that version 2.8.0 was an internal release and wasn't provided publicly. The 2.8.0 release was focused on changes to the build and deployment steps related to Analytics Middle Tier.

Version 2.7.0

Enhancements

Version 2.7.0 has modifications to include:

- Support for ODS/API version 5.3
- Expanded and Updated unit tests
- We also updated our build processes during this release

Version 2.6.1

Enhancements

Version 2.6.1 has modifications to include:

- Expanded postgres testing
• corrected the formatting on the GradingPeriodKey
• Removed constraints on the assignment submission types
• Changed priority of the asmt_AssessmentFact
• Fixed the SessionKey in the SectionDim
• Updated the AcademicTimePeriodDim's SessionKey

Version 2.6.0
Enhancements

Version 2.6.0 has support for the Engage Online Learners starter kit. These changes include moving the
digital equity columns, updating StudentSectionDim to include StudentSchoolKey, and the Engage
Online Learners collection.

Version 2.5.1
Enhancements

Version 2.5.1 has a few minor updates.

• The Student Equity Collection supports the grading cohort view in addition to the previous
  cohort domain.
• Row level security supports a section permission
• The assessment collection has some bug fixes to improve assessment results

Version 2.5.0
Enhancements

Version 2.5.0 comes with a few changes to the Analytics Middle Tier:

1. AMT has a new Student Equity based collection which includes student discipline, feeder
   schools, student food service programs, and student history.
2. Made the following updates to core collections:
   a. Added birthdate to StudentSchoolDim
   b. Added postal code to ContactPersonDim
3. Minor performance improvements to the chronic absenteeism views

Version 2.4.0
Enhancements

Version 2.4.0 includes some additions to the Core library that better supports section information, staff
information, and program information. These new views also help to fill in information needed for the
new starter kit projects. This version also includes a fix to the assessment collection that no longer filters
out assessments when some data is absent.

Version 2.3.0
Enhancements

Version 2.3.0 comes with a few changes to the Analytics Middle Tier:

1. AMT has a new Assessment based collection. Which includes all the scores, performance
   levels, and learning standards across each assessment and any of its loaded assessment
   objectives.
2. Fixed a teacher union issue with the row-level security's UserStudentDataAuthorization view.

Version 2.2.0
Enhancements

Version 2.2.0 comes with a few changes to the Analytics Middle Tier:

1. AMT now has official support for postgres deployments. All tests have been run against the
   postgres implementation using sample data and match the output of the SQL Server counterpart
2. The chronic absenteeism view has been modified to clarify what data resides in the view.
   Instead of a naming convention that uses "isAbsent..." or "isPresent..." the modified naming
convention uses "reportedAsAbsent" and "reportedAsPresent". This is to clarify that the data contained within those columns are dependent on how the data was reported. Districts reporting positive attendance will typically use the "reportedAsPresent" columns while districts reporting negative attendance will typically use the "reportedAsAbsent" columns.

3. AMT now has a companion repository for community contributed collections. This companion repository can be found at https://github.com/Ed-Fi-Exchange-OSS/Analytics-Middle-Tier-Contrib. Documentation on usage and deployment can be found at Community Contribution Repository.

Version 2.1.1
Enhancements
The version 2.1.1 release of Analytics Middle contains a hotfix to add SectionKey to the ClassPeriodDim View. This was added to remove ambiguity and better support referencing ClassPeriodDim with the ODS.

Version 2.1.0
Enhancements
The version 2.1.0 release of Analytics Middle has the following additions to the solution

* Added the chronic absenteeism use case collection.
* Validated support for Ed-Fi ODS/API Suite 3 version 5.0.0
* Included the class period name to the section Dim

Version 2.0.0
Enhancements
The version 2.0.0 release of Analytics Middle resolves several key architectural problems from the original releases, and introduces improvements that make the tool easier to maintain and easier for the community to make contributions. This release includes breaking changes from previous releases.

Highlights include:

* Supports Ed-Fi Data Standard v2.2, v3.1, and v3.2 (both 3.2a or 3.2b).
  Thus it supports Ed-Fi ODS/API versions 2.5.1, 2.6, 3.1.1, 3.2.0, 3.3.0, and 3.4.0.
* The names of "dimension views" have been trimmed to use the suffix "Dim" instead of "Dimension".
* All references to Student, Parent, and Staff tables in the Ed-Fi ODS database now utilize the "UniqueId" unique columns instead of the "USI" unique columns.
* A SchoolYear column has been added to several views, thus facilitating import of Analytics Middle Tier data from multiple year-specific databases into a single data mart.
* The old `StudentDimension` is now two views: `StudentSchoolDim` and `StudentLocalEducationAgencyDim`. These two views encapsulate the relationship of a student to an organization entity, including demographic information.
* Fully supports mapping descriptors (and, in Data Standard v2.2, Types) to constant values used by the views — thus removing the previous hard-coding of the views to the out-of-the-box Ed-Fi Descriptors (and types).
* There is a clearly defined set of core views that are always installed, and a mechanism for the optional install of use-case specific views. The original Early Warning System and Row-Level Security views have now become optional use-case collections.
* Program-related views were removed, but may be replaced in the future based on community needs.

For more information on these design changes, please see Version 2.0 Requirements and Design.

Bug Fixes
Some of the enhancements were in response to community-identified issues, which were never logged as bugs per se. They are listed below for completeness along with one community-reported bug.

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Installation

Brief instructions follow. For more detailed instructions, please see the AMT Deployment Guide.

1. Download the compiled application from GitHub, either:
   a. EdFi.AnalyticsMiddleTier-win10.x64.zip is fully compiled for execution in Windows 10 or Windows Server 2016/2019, with or without the .NET Core 3.1 runtime, or
   b. EdFi.AnalyticsMiddleTier.zip contains the compiled code without platform optimizations. Requires the .NET Core 3.1 runtime, which can be executed in any .NET Core support environment.
2. Unzip the downloaded files, open PowerShell, and navigate to the folder containing the application files.
3. Run the application with no arguments, carefully studying the help message for detailed instructions on the command line operation of this tool.
   a. For EdFi.AnalyticsMiddleTier-win10.x64.zip:
      
      ```
      cd EdFi.AnalyticsMiddleTier-win10.x64
      \EdFi.AnalyticsMiddleTier.Console.exe
      ```
   b. For EdFi.AnalyticsMiddleTier.zip:
      
      ```
      cd EdFi-Analytics-Middle-Tier\src
      dotnet EdFi.AnalyticsMiddleTier.Console.dll
      ```

Version 1.3.2

Bug Fixes

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View these issues in Jira

Version 1.3.1

Bug Fixes

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View these issues in Jira

Version 1.3.0

New Functionality

Now with support for Data Standard 3.1! (both ODS/API 3.1 and 3.2). The default installation parameters still correspond to Data Standard 2.x. To install with Data Standard 3.1, add flag `--dataStandard Ds31` to the command. For example:
Bug Fixes

Student enrollment now accepts students with future exit date as being enrolled, whereas before the views were erroneously excluding all students with an ExitDate regardless of when that date occurs.

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Version 1.2.0
New Functionality

- Added LetterGradeEarned column to StudentSectionGradeFact

Bug Fixes

- Resolve a naming conflict, internal to the views, that impacts ability to add the views directly to PowerBi (bypassing Tabular Data Model).
- Allow re-install after uninstall

Version 1.1.0

The installation process has changed slightly, to make it easier to introduce new optional domains. Now, to install the optional indexes, use argument -o Indexes instead of the old -i.

This release includes the EWS views created for the QuickSight starter kit.

StudentDataAuthorizationDimension has a breaking change in it, reporting on SectionId instead of SectionKey. There was previously an inconsistency with UserStudentDataAuthorization, which used the Section.Id instead of concatenating the natural key into a SectionKey. Since solutions that use this dimension are providing student-level authorization, not section-level, it was appropriate to (a) change for consistency and (b) not confuse people further by keeping the name SectionKey. Per normal SemVer rules this should have bumped the version number to 2.0.0, but we're breaking that rule since we're still very early in the rollout of this application.

In StudentSectionGradeFact, letter grades are now translated to numeric grades, with the help of a new table analytics_config.LetterGradeTranslation. Default values are provided. When a student has a numeric grade, the fact view will use the numeric value. If the numeric value is null, then the view attempts to use a translated letter instead.

Version 1.0.0

Initial release.