Release Notes
Axiom Software
Version 2019.3

KaufmanHall
AXIOM

Contents

Introduction

Kaufman Hall is pleased to announce the release of **Axiom Software Version 2019.3**. This release features enhancements to various areas of the software, such as:

- **File Collect**: Perform file collect using multipass processing, to dynamically iterate file collection and create report packages based on a specified dimension. Additionally, a new feature is available to consolidate multiple attachments into a single email.
- **File Groups**: New commands to open the Plan File Directory or Process Directory for a specified file group, to allow launching the web directories from task panes, ribbon tabs, and Axiom forms.
- **Imports**: Ability to import data into a table with an identity column, and either auto-generate new identity records or create records with specific identity values.
- **Performance optimizations**: Various enhancements can be leveraged to improve file performance, including the ability to batch Axiom queries across sheets, process multiple save-to-database blocks concurrently, and use a lightweight method to return related values in plan files.

Version 2019.3 was originally released on September 16, 2019.

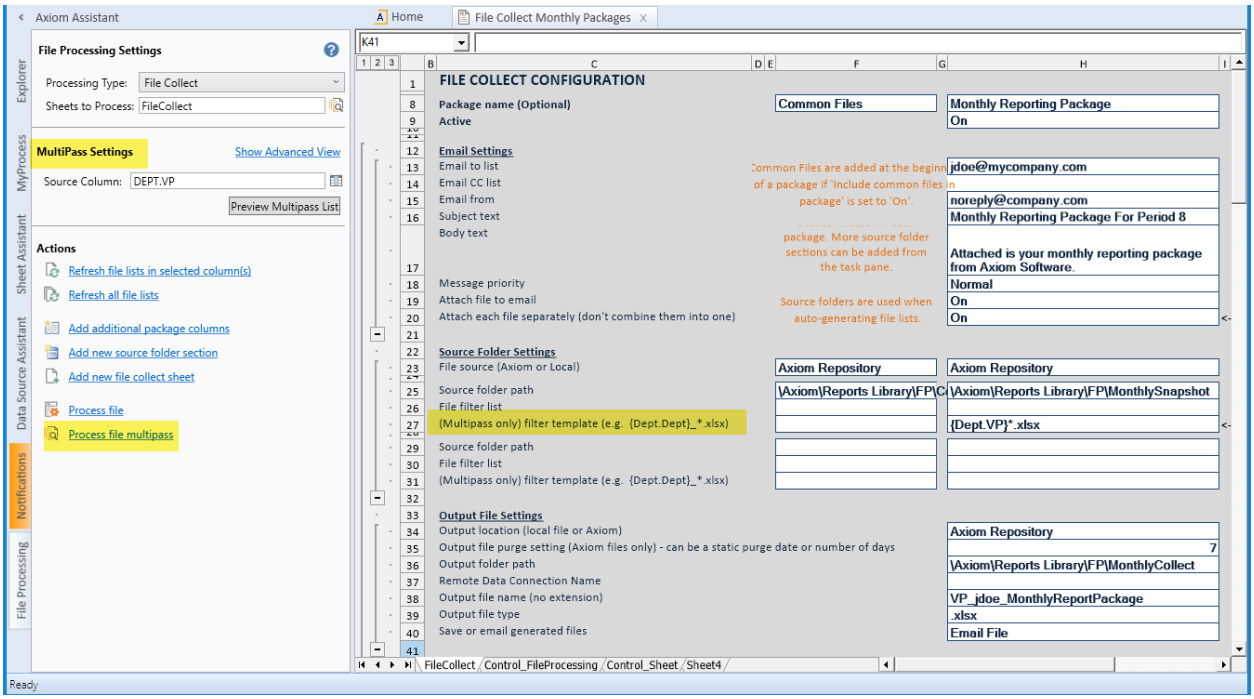
IMPORTANT: Although Kaufman Hall strives to maintain backward-compatibility with each release, any upgrade has the potential to interrupt system functionality. The Upgrade Considerations section details known impacts to existing functionality. However, other impacts may be unforeseen at the time of release, or may be particular to your specific system design and configuration. We strongly recommend performing the upgrade first on a test server and then testing system functionality to make sure all critical features are still working as expected.

Overview of new features and enhancements

This section provides an executive summary of the features and enhancements in this release. For more information, please see the separate *What's New* document for 2019.3.

Multipass processing for file collect

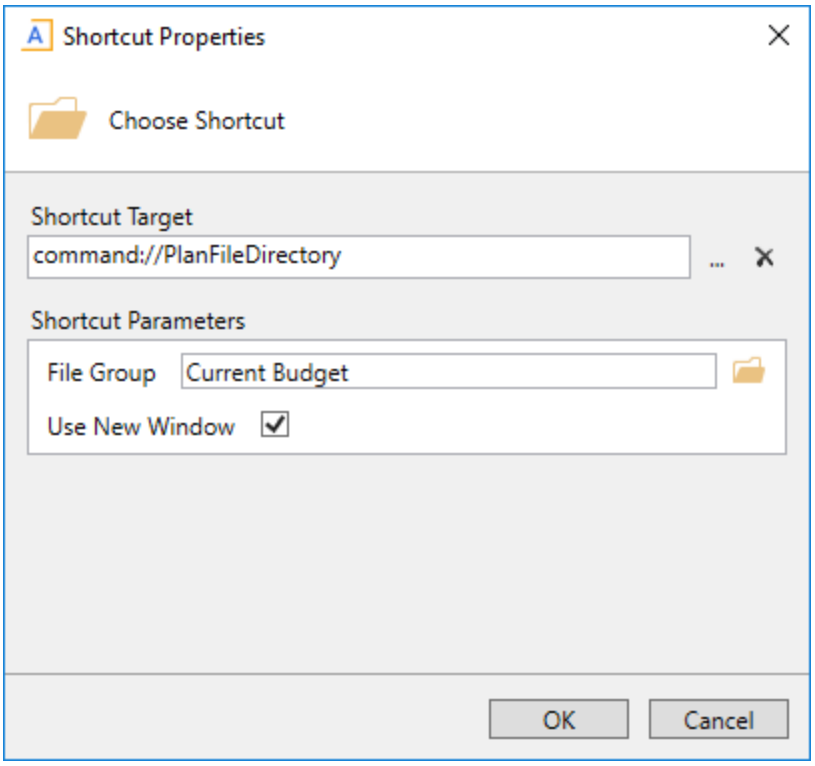
File collect can now use multipass processing to iteratively generate report packages over a designated dimension, such as by Facility, Region, or VP. This can streamline the setup and maintenance necessary to perform file collect. Instead of needing to define multiple file collect packages for different recipients, in many cases you can now define one file collect package and use multipass processing to dynamically adjust the package settings per pass. Additionally, a new feature is available to optionally attach multiple separate files to an email instead of combining the files into a single output file.



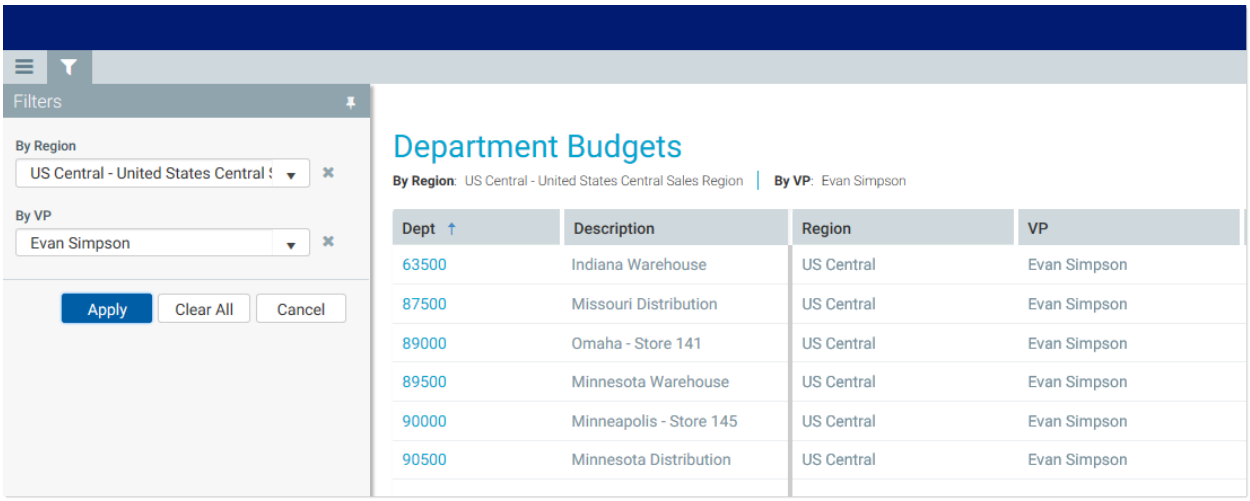
Example file collect configuration using multipass processing

Commands to launch file group directory pages

You can now open the Plan File Directory web page and the Process Directory web page using commands, to provide users with easy access to these pages. Using the commands, you can launch the directory from any task pane, ribbon tab, or Axiom form.



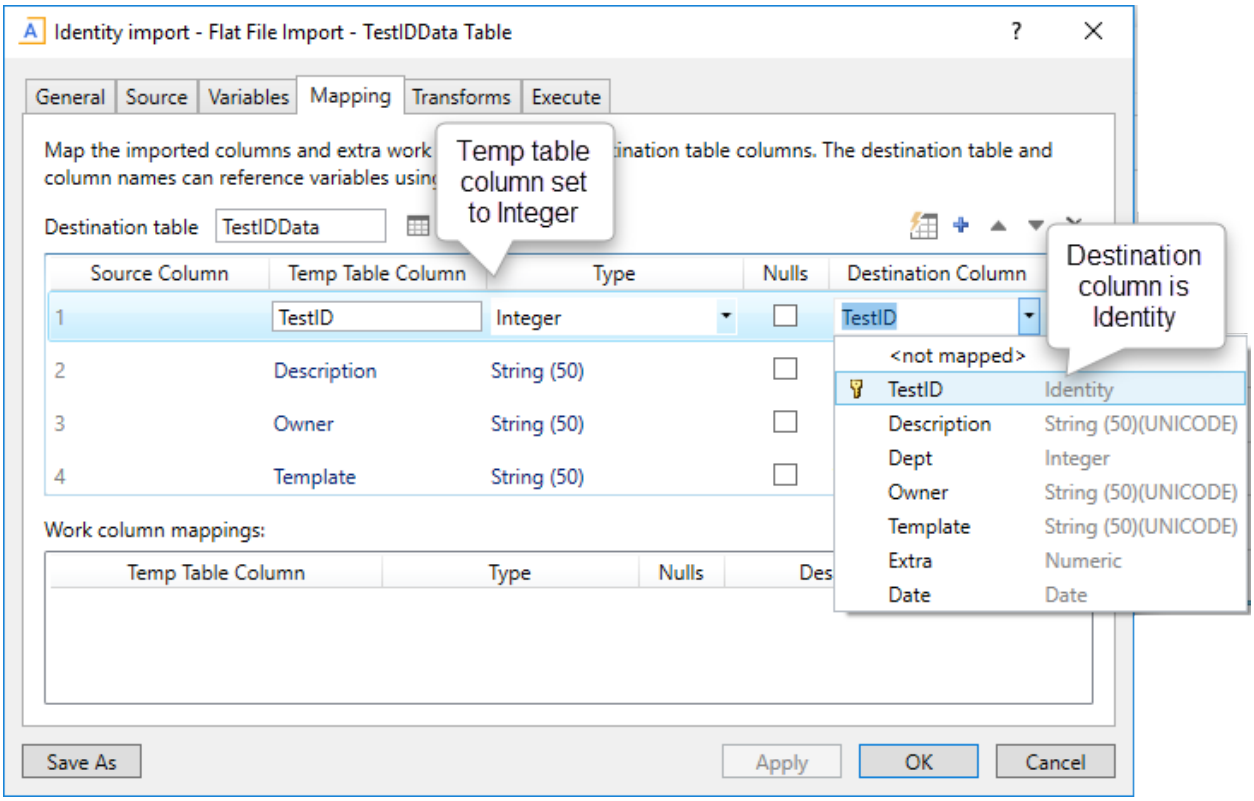
Example command to open the Plan File Directory



Example Plan File Directory

Import into tables with identity columns

You can now import data into tables with identity columns, to create new records or update existing records. When creating new records, the identity values can be automatically generated or saved as specific values.



Axiom file enhancements

The following enhancements were made to Axiom files to provide additional design options and performance improvements:

- You can now dynamically apply views on demand by double-clicking a cell, using the new function ReapplyCurrentViews. This feature can be used to simulate expanding and collapsing groupings in spreadsheet Axiom files, by dynamically hiding and showing rows or columns using view tags.
- Save-to-database processes are now run concurrently by default, instead of sequentially. This may improve file performance in files with many save-to-database processes, or when a handful of save-to-database processes save many records. The new behavior includes automatic exceptions for potential save dependencies.
- When using Axiom query batching, you can now optionally define and run cross-sheet batches instead of per sheet batches. This enables multiple Axiom queries on any sheet to be run concurrently as needed.
- In plan files, a new lightweight option is available to return related information from the plan code table, such as the plan code description. Values from the plan code table are now automatically loaded in document memory when a plan file is opened, and can be returned using GetPlanItemValue (either as an Axiom function or as a data lookup row).

- A new Axiom function, GetFileSystemInfo, provides a lightweight option to return information about a specified document—such as the document ID, document description, or the last modified date. This function should be used as the preferred alternative to querying the Axiom.FileSystemInfo table, for improved performance.

Upgrade considerations

Please review the considerations in this section before upgrading to version 2019.3. If you have any questions or if you need assistance with upgrading, please contact Axiom Support.

IMPORTANT: This document details the upgrade considerations when moving from the most recent Axiom Software release of 2019.2 to the new release of 2019.3. If you are upgrading from an earlier version, please also see the release notes for the interim versions for any additional upgrade considerations.

Advance notice: planned removal of deprecated Workflow feature

Description	The Workflow feature was replaced several years ago by *plan file processes* in Process Management. Workflow was deprecated and hidden in all systems, except in existing systems that were actively using it. Since that time, it has been supported for backward-compatibility only, to give clients time to migrate to the new feature. We are now giving advance notice that we plan to remove the deprecated Workflow feature as of version 2020.1. Removing deprecated features helps to simplify our development and testing efforts.
Testing and Review	In our understanding, most or all clients have already migrated to using plan file processes. However, if any clients are still using workflow, you should migrate the workflow to a plan file process at your earliest convenience. If you have any concerns about the planned removal of this deprecated feature, please contact Axiom Support.

Advance notice: planned removal of deprecated Data Explorer feature

Description

The Data Explorer feature has been deprecated in favor of the existing Web Reports feature and the developing Axiom Intelligence reporting feature. Since the introduction of the browser-based Report Builder in 2018.1, Data Explorer has been supported for backward-compatibility only.

We are now giving advance notice that we plan to remove the deprecated Data Explorer feature as of version 2020.1. Removing deprecated features helps to simplify our development and testing efforts.

Testing and Review

In our understanding, most clients have already discontinued use of Data Explorer. If you have any concerns about the planned removal of this deprecated feature, please contact Axiom Support.

Change to default save-to-database behavior

Description

The default behavior for processing save-to-database blocks in an Axiom file has been updated so that saves are now processed concurrently instead of sequentially. This change in behavior may improve file performance for files with many save blocks, or for files with multiple save blocks that handle many records.

The new behavior includes automatic exceptions for save blocks that may have dependencies—for example, when saving new records to a reference table and then referencing those new records in a subsequent save block, or when a save block triggers an Axiom query before saving. Because these dependent cases are automatically handled, no new save errors should occur as a result of this change.

Additionally, because save blocks are now processed concurrently, the point at which the save-to-database process stops due to error may be different. In previous releases, Axiom Software stopped processing save blocks after encountering the first error. Because multiple save blocks may already be in process when an error is encountered, those processes will continue. However, no new save blocks will begin processing after the error.

For more information, see *Run save-to-database processes concurrently* in the separate *What's New* document.

Testing and Review

We do not believe this change in behavior will have any adverse impact on existing customers. If you have existing Axiom files with known save dependencies, you can test these files after upgrading to ensure they still work as expected. If an edge case is identified that the new behavior does not handle, it is possible to disable the new behavior on a per file or system-wide basis:

- **Per File**: To disable the new behavior for a particular file, set **Enable Parallel Save Data** to **Off** on the Control Sheet. For existing files, you must upgrade your Control Sheet to gain access to this setting.
- **System-Wide**: To disable the new behavior for an entire system, set the system configuration setting **ParallelSaveEnabled** to FALSE. For information on how to modify the system configuration settings, see the following topic in Axiom Software Help: *System configuration settings* (AX2015).

Behavior change for virtual spreadsheet plan files

Description

When using virtual plan files, the file itself is never saved—only data can be saved. If a user opens a virtual spreadsheet plan file in the Desktop Client, the file is now flagged as "R/O" on the file tab if the user cannot save data for any reason. This is meant to provide a signal to the user that they cannot save any changes to the plan file.

Additionally, if a user has Read/Write access to the virtual spreadsheet plan file, Axiom Software now locks the plan file when the user opens it with the ability to save data, in order to prevent other users from saving data in the file at the same time. When process management elevates user permissions, it grants Read/Write access with Allow Save Data, so the new behavior will automatically apply to step owners. However, if you want some users to have edit permissions at all times (not just when they are the step owner), then it is recommended to grant those users Read/Write with Allow Save Data to the virtual plan files instead of just Read-Only with Allow Save Data.

NOTE: This new behavior does not apply to virtual form-enabled plan files. File locking does not apply to Axiom forms, and Axiom forms are not flagged as read-only. If you want to control data saves in form-enabled plan files, the existing save locking feature for Axiom forms can be used. The behavior of virtual form-enabled plan files is unchanged.

Testing and Review

This change only affects customers who have implemented virtual spreadsheet plan files. This is an uncommon configuration, as most virtual plan files are form-enabled plan files. If you are using virtual spreadsheet plan files, you should review your security configuration for the file group to ensure that any users whom you want to have full access at all times (not just when they are step owners) are granted Read/Write access instead of Read-Only.

Behavior change to allow null values in validated columns

Description

It is now allowed to store null values in a validated column, meaning that the column can contain valid values from the assigned lookup column and null (blank) values. If you want to allow null values in a validated column, the default value of the column must be null. Generally speaking, this should only be done when the null values have a specific understood meaning for your data, such as unassigned or inapplicable.

Although Axiom Software used to require the default value of a validated column to be a valid lookup value when you first assigned the lookup column, it was possible to later edit the validated column to change the default value to null. So this behavior change could potentially affect existing columns, though the situation should be rare. In previous versions there would have been no reason to change the default value to null, because null would not have been allowed when saving and would have caused an error.

If you have an existing validated column with a null default value, and the column is omitted from the save when creating new records, or if it is included in the save but left blank (for non-string columns), the save now uses the default value of null instead of causing an error due to an invalid lookup value.

NOTE: As in previous versions, we do not recommend using a null default value with a string column, whether it is validated or not. The behavior of string validated columns when using a null default value is inconsistent (due to the inability to differentiate between null and empty string in a spreadsheet), and should be avoided.

Testing and Review

It should be rare for any existing validated columns to have a null default value, therefore most customers should be unaffected by this change. If you suspect that you may have a validated column that would be affected by this change, open the table editor and check the **Default Value** of the column in the column properties. If it is null and you do not want to allow null values in the column, change the default value.

Behavior change to imports affecting string columns with null default values

Description

As part of enhancements made to imports and column default values in this release, a behavior change was introduced in imports that affects the following extremely rare configuration:

- The source for the import is a database rather than a file
- One of the columns in the destination table for the import is a string column
- The default value for the string column is null (blank) rather than '' (empty string)

If the import creates new records or updates existing records with the mapped string column, and the import source data is null, the string column is now populated with null values instead of empty string values. This could potentially cause issues when querying the table data in Axiom Software, because null records and empty string records are not treated the same way. For example, a filter such as `Acct.Category <> ''` would filter out records with empty strings in the Category column, but not records with null values (that would require a filter of `Acct.Category is Null`).

The affected configuration is rare because having a null default value for a string column is discouraged in the application and documented as not recommended. By default, string columns use a default value of '' (empty string) unless this is explicitly changed. When saving data from a file, Axiom Software cannot distinguish between null and empty string, and therefore blank values are saved as empty string. Using the default value of empty string for string columns provides consistent treatment of blank values.

If you have a column that is affected by this change, the recommended solution is to edit the column properties to change the default value to empty string rather than null.

Testing and Review

This issue only affects customers with the described configuration, which should be extremely rare or non-existent. If you suspect that you may have a string column that would be affected by this change, open the table editor and check the **Default Value** of the column in the column properties. If the default value is null (blank), and there is no known reason why a null default value is being used, it should be safe to change the default value to empty string. Empty string is specified by entering two single quotation marks as `''` (not one double quotation mark). If you have any concerns about this change or need assistance, please contact Axiom Support.

Potential impacts on end users

This section summarizes the potential impacts to your end users when upgrading to version 2019.3. This list is provided to help you understand changes that you may need to communicate to end users. You may also need to update your internal documentation.

- If you are using virtual spreadsheet plan files, the plan file is now flagged as "R/O" if the user does not have the ability to save data in the plan file.

NOTE: "End users" refers to users who work with plan files and reports that have been built for them. These users do not perform any file setup activities or administration activities. It is assumed that Master System Users will fully review the release documents to understand changes that may affect them and other power users.

Installation and technical notes

- As of 2019.3, Kaufman Hall no longer supports self-signed certificates for on-premise installations. The Axiom Software code does not explicitly prevent these certificates from working, however, Axiom Support will no longer provide assistance for any issues arising from self-signed certificates. Additionally, the system configuration setting that was added in 2019.2 to allow support to temporarily bypass certificate errors for purposes of troubleshooting has been removed.
- The TLS 1.2 protocol is now fully supported by Axiom Software. Axiom Software can be operated in environments where TLS 1.0 and 1.1 are disabled.
- **Advance notice of .NET requirement**: Starting with version 2020.1, the minimum required version of Microsoft .NET Framework will be 4.8. This applies to all Axiom Software client and server applications.

Fixed issues

The following issues were fixed in version 2019.3.

Item	Description	
33310	Issue:	In the Windows Client, a locked cells error may occur when refreshing an unnamed DataLookup data source in a protected sheet.
	Status:	This error no longer occurs in this circumstance; the DataLookup can be refreshed as expected.
37705	Issue:	The Update Persistent Plan Files option of Process Plan Files is not copying formatting as expected when the action is Specific Address.
	Status:	Formats are now copied as expected from the Copy the Format cell.
37843	Issue:	The DefaultRemoteDataConnection variable is not resolved when using the "choose table" tool on an import to an external database.
	Status:	The variable is now resolved as expected.
37895	Issue:	A conversion error occurs when running an Axiom query that sums by the file group plan code and the ProcessStatus.StepNumber column.
	Status:	The query now runs without error in this configuration.
38145	Issue:	An error occurs executing an export utility to a SQL Server database, if the name of one of the export columns matches a SQL keyword.
	Status:	The column name is now automatically escaped to avoid causing an error.

Item	Description	
38303	Issue:	An error occurs when creating a new calc method in a template if the sheet has the same name as the file.
	Status:	This error no longer occurs. Calc method libraries can now have the same name as the template file.
38435	Issue:	An index error occurs when running an Axiom query that has no field definitions and only returns a single record.
	Status:	The query now runs without error in this configuration.

Appendix: Version 2019.3 Patches

This section details the fixes and enhancements in patch releases for Axiom Software version 2019.3. For assistance with any patch, please contact Axiom Support at 888-543-6833 or support@kaufmanhall.com.

Axiom Software patches are cumulative. All fixes and enhancements included in prior patches are included in the current patch.

IMPORTANT: If you are currently using the OData API, it will become disabled when you first install patch 2019.3.27 or higher. To enable the OData API, you must change the new system configuration setting **EnableODataApi** to **True** and then reset your application server. For specific instructions, see AX1808 in Axiom Software Help.

Current patch: 2019.3.37

No platform-specific changes were made in this patch. See the separate product release notes for information on any product-specific changes.

Patch 2019.3.34 - 2019.3.36

No platform-specific changes were made in this patch. See the separate product release notes for information on any product-specific changes.

Patch 2019.3.33

The following issues were fixed in this patch:

- 43488: If a non-administrator user saves security changes in a system with Axiom Intelligence reporting, the data model is synchronized using the AI Table security permissions of that user, which may result in missing data within Axiom Intelligence reports. Subsystem administrators and users with the Administer Security permission can save security changes without being a full administrator.

Patch 2019.3.30 - 2019.3.32

No platform-specific changes were made in this patch. See the separate product release notes for information on any product-specific changes.

Patch 2019.3.29

The following issues were fixed in this patch:

- 41516: Process actions such as submitting a plan file may fail after running an Axiom query against

the Axiom.ProcessEvents table, within the same client session.

Patch 2019.3.28

The following issues were fixed in this patch:

- 41241: Axiom queries that use the segment feature error when attempting to preview the query data or when running in Axiom forms.

Patch 2019.3.27

The OData API is now enabled or disabled using a system configuration setting, so that it can be enabled on a targeted basis for clients that want to use it. By default, the OData API is disabled.

Patch 2019.3.26

This patch contains security updates.

Patch 2019.3.25

The following issues were fixed in this patch:

- 40389: If the Read Only shortcut parameter is enabled for a document in a task pane, users who could normally save data in the read-only document are prevented from doing so.
- 40517: An error occurs when using Open Plan Files on German systems running the latest release of Windows 10.

Patch 2019.3.24

The following issues were fixed in this patch:

- 39899: A SQL syntax error occurs when running an Axiom query that contains audit columns, and suppress zeros is enabled.
- 39965: In cloud systems, file processing activities cannot create new folders on local drives. NOTE: Your Axiom Cloud Integration Service must be updated to see this fix.
- 40048: An XML error may occur when upgrading the database to 2019.3.
- 40139: An error may occur using refresh variables if the source column for a variable uses multiple-level lookup syntax.
- 40154: An error may occur when creating a file group from prototype, if a calculated column is present in the file group display columns.

Additionally, translations were updated.

Patch 2019.3.23

The following issues were fixed in this patch:

- 39815: The File Group Rollover command may time out when copying security if the system has

many users.

Patch 2019.3.22

The following issues were fixed in this patch:

- 39360: Disabling batch processing for Axiom queries on Scheduler can cause issues if the queries are not already in the correct order.

Patch 2019.3.21

The following issues were fixed in this patch:

- 39292: When running batched Axiom queries, there is a small chance that sheet filters may not be read correctly.
- 39293: Parallel save behavior may cause an error if the file contains two save blocks to the same table, saving the same record.