Installation Guide

Axiom Software

Version 2018.2

KaufmanHall

axiom software

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Introduction

Axiom Software is an enterprise planning solution that combines the full benefits of spreadsheet-based modeling with the latest enterprise software technologies. Axiom Software can be used to perform the full range of enterprise performance management functions, including budgeting, forecasting, strategic planning, capital planning, consolidations, and financial reporting.

This guide contains information on how to:

- Prepare your environment for installation of Axiom Software
- Install Axiom Software server and client components
- Configure required and optional system settings

Installation of Axiom Software is typically managed by your organization's Information Technology department. This guide assumes that your organization has internal expertise on network, server, and database administration. Kaufman Hall Software Support and your implementation consultant are available to assist you with the installation.

This guide references the Axiom Software Help file for additional information on certain topics. You can access Axiom Software Help from within the Axiom Software Client, and also directly from the Axiom Software launch page.

NOTE: This guide only applies to customers who are installing Axiom Software on premise. If you are a cloud service customer, see the separate *Cloud Service Technical Guide* for information on installing software for use with cloud services.

Installation Checklist

The following installation checklist applies to new installations. The checklist is provided to give you a quick step-by-step overview of the installation process. Detailed information is provided in the referenced sections.

If you are upgrading an existing installation, see Upgrading Axiom Software before performing any installation steps.

	Step	More Information
☐	Plan the installation and server configuration	Planning the Installation
☐	Prepare the database server	Microsoft SQL Server
☐	Prepare the Axiom Software database: • Create/restore the database • Upgrade the database	Preparing the Axiom Software database
☐	Prepare the application server: • Install IIS • Install .NET	Microsoft IIS Microsoft .NET Framework
☐	Install the Axiom Application Server and the Axiom Update Service	Installing the Axiom Application Server Installing Axiom Update Service
☐	Prepare the Scheduler server(s): • Install VSTO • Install .NET	Microsoft VSTO Microsoft .NET Framework
☐	Install the Axiom Scheduler Server and the Axiom Update Service	Installing Axiom Scheduler Service Installing Axiom Update Service
☐	Prepare the client workstations and/or the shared client server • Install .NET • Install Excel (for Excel Client only) • Install VSTO (for Excel Client only)	Microsoft .NET Framework Microsoft Excel Microsoft VSTO

	Step	More Information
☐	Install the Axiom Desktop Client: • On individual workstations AND/OR • On a shared client server (Citrix or Terminal Server)	Installing the Axiom Software Client on client workstations Installing the Axiom Software Client on a shared client server
☐	Configure Axiom Software: • Complete the system configuration settings • Set up Scheduler • Set up users in Security	Configuring Axiom Software

Planning the Installation

This section provides the information you need to understand the deployment options, technical requirements, and prerequisites for Axiom Software. Before installing Axiom Software, you should prepare the server and client environments as needed.

Technical requirements

Before installing Axiom Software, make sure that you understand the supported software versions and minimum hardware requirements. For more information, see the separate documents *Server Technical Requirements* and *Client Technical Requirements*. These documents are maintained separately so that we can provide you with the most up-to-date technical requirements. Copies of the documents are included with the installation package, or you can contact Kaufman Hall Software Support to obtain copies.

Component overview

Axiom Software consists of the following server and client components.

Server components

Axiom Software has the following server components:

Component	Description
Application Server	The Axiom Application Server controls server-side operations for Axiom Software, including web services for the Web Client. It operates as a Microsoft IIS application.
Scheduler Service	The Axiom Scheduler Service processes Axiom Software tasks on a server instead of the individual client machines. Tasks can be scheduled for processing or run on demand. The application server install includes installation of a System Scheduler on the application server to handle system tasks. To handle user-scheduled tasks, you must manually install the service on one or more Scheduler servers.

Component	Description
Database	Axiom Software uses Microsoft SQL Server to store all data and files for the Axiom Software application. Users interact with these managed files using the Axiom Software virtual file system, which simulates a familiar Windows Explorer file system for accessing documents. Each Axiom Software system consists of two databases: an application database that holds all files, tables, and other data for the system, and a corresponding audit database to track changes made to that system. By default the audit database is a separate, standalone database, but if necessary the database can be configured so that the audit tables are embedded within the application database. However, this embedded-database configuration is typically only used for Axiom cloud service systems.
Update Service	The Axiom Update Service is used to download and apply updates to the Axiom server software. When using the service, upgrades can be performed from the Web Client rather than requiring direct access to the servers.

Once the application server has been installed and the Axiom Software database has been configured, you can access the Axiom Software launch page to install the Desktop Client and perform certain administrative functions. For more information on this web page, see Installing the Axiom Software Client on client workstations.

Client components

Users interact with Axiom Software using the following clients:

Client Name	Description
Excel Client	The Excel Client provides access to all Axiom Software features within a Microsoft Excel interface.
Windows Client	The Windows Client emulates the spreadsheet environment without requiring Microsoft Excel. It provides full access to Axiom Software features, but certain spreadsheet features are limited.
Web Client	The Web Client provides browser-based access to Axiom Software, limited to certain web-enabled features. The Web Client does not provide any spreadsheet functionality. For end users, the Web Client can provide access to web-based input forms, reports, and dashboards. This includes using pre-configured Axiom forms, and using the Report Builder to create and view web reports. For administrators, the Web Client provides access to certain administration features, such as system auditing.

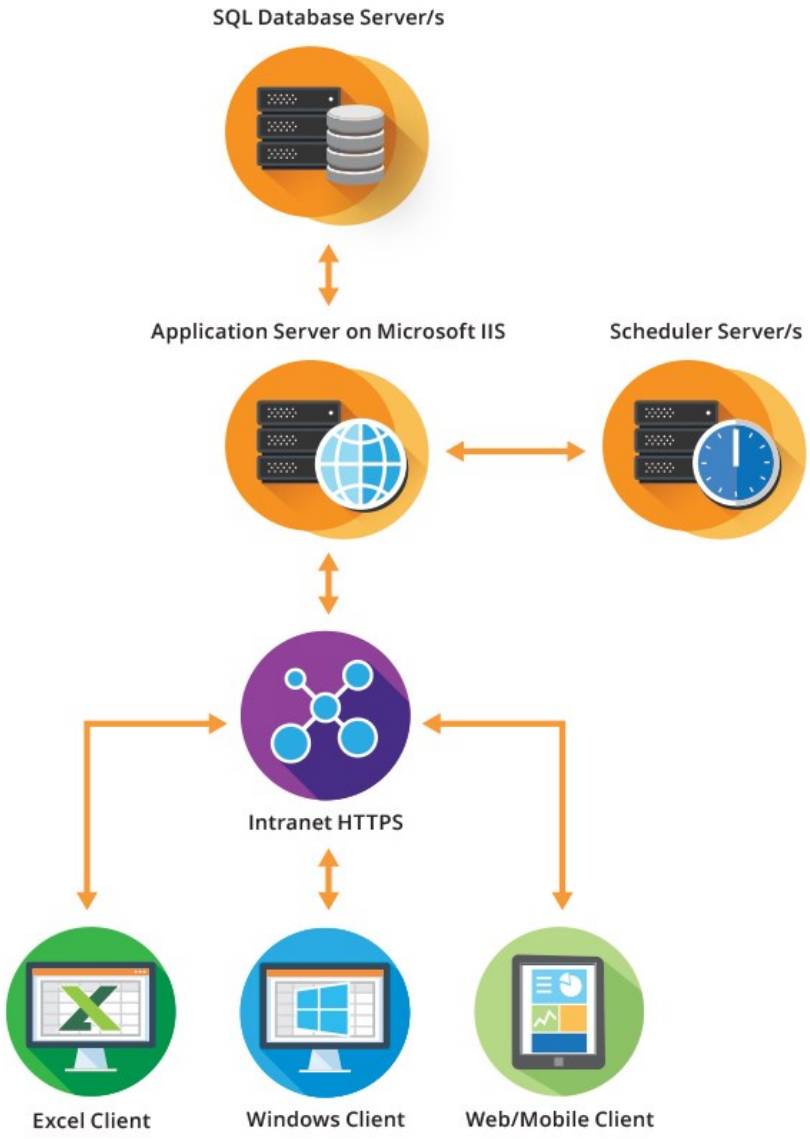
Administrators (also known as Master System Users) can choose to use either the Excel Client or the Windows Client. End users can use any client, depending on your organization's deployment preferences and template/report design. The Excel Client and Windows Client require installation on the client machine via ClickOnce; whereas the Web Client is accessible within a browser and does not require separate installation.

Because the Windows Client does not use Microsoft Excel, it has some limitations in regard to spreadsheet functionality. For more information, see Axiom Software Help: **File setup > Additional design considerations > Windows Client design considerations for Axiom files** (or search for AX2289).

Server configurations

Axiom Software can be deployed in a number of server configurations, depending on factors such as the size of your user base, the number of active plan files, and anticipated Scheduler activity.

For detailed information on server configurations, including specific hardware requirements, see the separate *Server Technical Requirements* document. Server information is summarized here for reference.



For medium, large, and enterprise deployments, server components must be hosted on separate servers for optimal performance. Additionally, for larger deployments, we recommend multiple Scheduler servers.

- The medium footprint assumes 25-50 concurrent users, fewer than 500 plan files, and moderate Scheduler activity. In this scenario, one Scheduler server should be sufficient.
- The large footprint assumes more than 50 concurrent users, more than 500 plan files, and heavy Scheduler activity. We recommend two load-balanced Scheduler servers to support this configuration.
- The enterprise footprint assumes 500-1000 concurrent users, more than 500 plan files, and heavy Scheduler activity. We recommend four load-balanced Scheduler servers to support this configuration.

Account and file permissions

User rights

Users do not require any special file permissions on your organization's network in order to work with Axiom Software. All Axiom Software managed files are stored within the Axiom Software database, and access to those files is controlled within the system. All users must be set up within Axiom Software Security, and the number of allowed users is subject to your licensing agreement with Kaufman Hall.

Application Server—Service account rights

When setting up imports in Axiom Software, the import source files must be accessible to either the Network Service account or Computer account used by the Axiom Application Server. By default, the application server runs using the Network Service account.

If you are importing from a network share that is local to the application server, the share and security permissions must be configured to grant the Network Service account at least read permission. If you are importing from a network share that is not local to the application server, the share and security permissions must be configured to grant the application server Computer account at least read permission.

This applies when the import file location is fixed, or when the import is run via Scheduler. If users are running imports interactively, you can use the file prompt option to import any file, regardless of whether the application server account can access it directly.

Scheduler Server(s)—Service account rights

Scheduler supports certain tasks that can save files to specified folder locations, or process files at specified folder locations. These folder locations must be accessible to the user account for the Scheduler service.

By default, the Scheduler service runs using the local system account. If you want Scheduler to be able to access file shares on other network servers, then you must change this so the Scheduler service runs using a domain service account, and then grant this account read/write share and security permissions to the desired folders.

Software prerequisites

The following software prerequisites are required for Axiom Software:

Prerequisite	Database Server	Application Server	Scheduler Service	Client Workstations (Excel)	Client Workstations (Windows)
Microsoft SQL Server	X				
Microsoft IIS		X			
Microsoft .NET		X	X	X	X
Microsoft Excel				X	
Microsoft Visual Studio Tools for Office (VSTO)				X	
Web browser (Microsoft Internet Explorer and others)				X	X

Microsoft SQL Server

Axiom Software does not require any special settings for the SQL Server installation. If you are doing a new installation, you can use the default settings. Note the following:

- For **Feature Selections** to install, make sure that the following components are selected: **Database Engine Services**, **Client Tools Connectivity**, and **Management Tools - Complete**.
- For the **Service Account**, select **Use the built-in System account**.
- For **Authentication Mode**, select **Mixed Mode**. The sa password can be anything that meets your organization's requirements.

After installing SQL Server, make sure to install the latest service pack for the release.

Microsoft IIS

Microsoft Internet Information Services (IIS) is required to be installed on the Windows Server that will host the Axiom Software Application Server.

For IIS 8, the following IIS features are required:

- Under **Web Server > Common HTTP Features**, select **Default Document** and **Static Content**.
- Under **Web Server > Performance**, select **Static Content Compression** and **Dynamic Content Compression**.
- Under **Web Server > Application Development**, select **.NET Extensibility 4.5** and **ASP.NET 4.5**.

- Under **Web Server > Management Tools**, select **IIS Management Console**.
- Under **.NET Framework 4.5 Features**, select **.NET Framework 4.5**, **ASP.NET 4.5** and **WCF Services > HTTP Activation**.

For IIS 10, the following IIS features are required:

- Under **Web Server > Common HTTP Features**, select **Default Document** and **Static Content**.
- Under **Web Server > Performance**, select **Static Content Compression** and **Dynamic Content Compression**.
- Under **Web Server > Application Development**, select **.NET Extensibility 4.6** and **ASP.NET 4.6**.
- Under **Web Server > Management Tools**, select **IIS Management Console**.
- Under **.NET Framework 4.6 Features**, select **.NET Framework 4.6**, **ASP.NET 4.6** and **WCF Services > HTTP Activation**.

Microsoft .NET Framework

Microsoft .NET Framework is required on all Axiom Software servers and client workstations (except for computers and devices that will only use the Axiom Web Client).

Axiom Software requires .NET 4.5 or higher, as well as any other .NET versions required by the computer's operating system. After installing IIS, run Windows Update on the server, and then select **Custom** to access the full list of updates. Select every available update that is related to .NET. Make sure to check the **Software, Optional** section in addition to the **High Priority** section.

If .NET 4.5 or higher is not already present on client machines, it can be installed from Microsoft's website, or from the Axiom Software launch page after the application server has been installed.

Microsoft Excel

A supported version of Microsoft Excel is required to be installed on all client workstations that will use the Axiom Excel Client. Please see the separate document *Client Technical Requirements* for a full list of supported Excel versions. Either 32-bit or 64-bit versions can be used where applicable.

When installing Excel, the Visual Basic for Applications component must be included. After installing, make sure to install the latest service pack for the release.

Microsoft VSTO

Microsoft Visual Studio Tools for Office (VSTO) is required to be installed on all client workstations that will use the Axiom Excel Client. You can install this program from the Axiom Software launch page after the application server has been installed.

Web browser

Use of the Excel Client or the Windows Client requires Microsoft Edge or Internet Explorer 11 or above. This browser is required to install and launch the client using ClickOnce. Other browsers may have ClickOnce add-ins that can be used, but no particular add-in is officially supported.

Use of the Web Client requires a current version of an HTML5-compliant browser. Various browsers are supported, based on the platform where the Web Client will be viewed. For full details on supported browsers, see the separate document *Client Technical Requirements*.

If you will be using Axiom forms exclusively within the Excel Client or Windows Client (meaning users will not open forms in a separate browser), then the embedded browser within the application provides native support for form functionality. There are no additional browser requirements for Axiom forms used within the Desktop Client environment.

Authentication methods

Axiom Software supports several different ways to perform user authentication into Axiom Software. Axiom Software can be the sole method of authentication, or you can integrate with other methods of authentication used at your organization. Axiom Software supports the following authentication options:

- Axiom Prompt Authentication
- Windows Authentication
- LDAP Authentication
- OpenID Authentication

Axiom Prompt Authentication is always available and does not need to be explicitly enabled. All other authentication options must be enabled during the Axiom Application Server installation if you want to use them. You can also modify authentication options post-installation using the Axiom Software Manager: **Installation Manager > Configure Authentication Methods**.

When you set up users in Axiom Software security, you specify which method of authentication should be used for each user. If an integrated authentication option is enabled for your system, that method is the default method.

Axiom Prompt Authentication

When using Axiom Prompt Authentication, users are authenticated based on their Axiom Software credentials. When the Axiom Software login screen displays, users must type their Axiom user name and password. In Axiom Software security, users must be assigned to the **Axiom Prompt** authentication type.

Axiom Prompt Authentication is always available and applies to all components of Axiom Software. You can use Axiom Prompt Authentication as the primary authentication method for your installation (meaning no other authentication method is enabled), or you can use it in conjunction with another

authentication method. If you are also using another authentication method, then the Axiom Prompt behavior is as follows:

- If LDAP Authentication or Windows Authentication is enabled, Axiom Prompt users simply enter their Axiom Software user name and password at the Axiom Software login prompt. If the login screen is configured to show the domain selector, Axiom Prompt users must select **Axiom Named User**.
- If OpenID Authentication is enabled, Axiom Prompt users must go to a special area of the web site in order to log in. For example:

  `https://ServerName/Axiom/Home/Login`

Windows Authentication

When using Windows Authentication, users are authenticated based on their Windows credentials. When the Axiom Software login screen displays, users must enter their Windows user name, domain, and password. If the current domain is an allowed domain and the Windows user name matches a user name in Axiom Software, then the credentials are passed to Windows for authentication into Axiom Software. Windows Authentication applies to all components of Axiom Software.

Users must be set up in Axiom Software security using their Windows user names and assigned to the **Windows User** authentication type. This can be done manually, or you can optionally import and synchronize users from Active Directory using a Scheduler task.

Windows Authentication is enabled during the Axiom Application Server installation. When enabling Windows Authentication, you must specify allowed domains for authentication. You can modify this configuration later as needed using the Axiom Software Manager, or by using a Save Type 4 utility to the system configuration table.

If the Windows Authentication configuration only allows one domain, then that domain is assumed for authentication and users do not need to specify it when logging in. If multiple domains are allowed, then the domain must be specified in one of the following ways:

- The user must include the domain with their user name, such as: *DomainName**UserName*.
- The user must specify the appropriate domain using the **Domain** selection list on the login screen. This is an optional setting that can be enabled for your installation. For more information, see Domain prompt.

Users must enter their credentials each time they log in, unless they select **Remember me** to store their credentials for future login. For more information, see Remember me.

The Cloud Integration Service is required when using Windows Authentication in Axiom cloud service systems. For more information, see the *Cloud Service Installation Guide*.

LDAP Authentication

When using LDAP Authentication, users are authenticated based on their LDAP credentials. When the Axiom Software login screen displays, users must enter their LDAP user name (with or without the suffix) and their LDAP password. If the LDAP user name matches a user name in Axiom Software, then the credentials are passed to LDAP for authentication into Axiom Software. LDAP Authentication applies to all components of Axiom Software.

Users must be set up in Axiom Software security using their LDAP user names and assigned to the **LDAP Prompt** authentication type. The user name can contain the LDAP suffix or not as desired. Note that the user name must include the suffix if there is a user name conflict with another user that is configured with a different authentication type (or with a different LDAP suffix). For example, if you have an Axiom Prompt user jdoe, and you have an LDAP user jdoe, then the LDAP user must include the suffix on their user name to differentiate the two users.

LDAP Authentication is enabled during the Axiom Application Server installation. When enabling LDAP you must specify the connection information to the LDAP server, as well as the allowed LDAP suffixes. You can modify this configuration later as needed using the Axiom Software Manager, or by using a Save Type 4 utility to the system configuration table.

If only one LDAP suffix is allowed by the configuration, then that suffix will be used for all LDAP authentication. The user can include the suffix or not when logging in, and the Axiom user name can contain the suffix or not. Axiom will automatically append the suffix as needed when sending the credentials to LDAP for authentication. However, if multiple suffixes are allowed, then the suffix must be specified using any of the following approaches:

- The Domain selector must be enabled for login, and the user must select the appropriate suffix.
- The user must include the suffix as part of their user name when logging in.
- The user names in Axiom Software must include the appropriate suffix for each user.

Users must enter their credentials each time they log in, unless a user chooses to select **Remember me** to store their credentials for future login. For more information, see Remember me.

OpenID Authentication

When using OpenID Authentication, users are authenticated based on their credentials for the designated OpenID provider (such as Google OpenID Connect). OpenID Authentication is a web-based authentication method. Users access Axiom Software by going to the URL for the launch page for the Axiom Software installation, where they must enter their user name and password for their OpenID provider. Once a user is authenticated, if the user name matches a user name in Axiom Software, then the user can access the Axiom Web Client or install/launch the Axiom Excel Client or Windows Client from the web page.

Users must be set up in Axiom Software using their OpenID user names, and assigned to the **OpenID** authentication type. This user name must exactly match the OpenID user name, including the @suffix.

Users assigned to OpenID Authentication can only access Axiom Software from the web. The Excel Client and Windows Client cannot subsequently be launched using a shortcut on the user's computer; the user must continue to log into the Axiom Software launch page in order to start the desktop client. When using OpenID Authentication, you may want to configure the Axiom Application Server installation so that no shortcuts are placed on user computers during the client installation, since users will not be able to use these shortcuts.

OpenID Authentication is enabled during the Axiom Application Server installation. When enabling OpenID Authentication, you must specify the Client ID and Client Secret for the OpenID provider. You can modify this configuration later as needed by performing a Repair on the installation.

OpenID Authentication may require additional configuration steps for IIS, the Axiom Application Server, and the OpenID provider. These steps may vary depending on your particular environment. At minimum, you must configure the OpenID provider with the redirect URI to the Axiom Software login page (such as `<URLtoAxiom>/openid/login`). Please contact Kaufman Hall Software Support for assistance if you are interested in enabling OpenID Authentication.

NOTE: OpenID Authentication is not supported for use with the iPad app.

Logging in as an Axiom Prompt user when OpenID Authentication is enabled

You can set up **Axiom Prompt** users when OpenID Authentication is enabled, such as to allow Kaufman Hall Software Support to access the system without using OpenID credentials. These users must go a special area of the web site in order to log in:

`https://ServerName/Axiom/Home/Login`

Where *ServerName* is the name of your Axiom Application Server and Axiom is the name of the virtual directory.

Login behavior

This section details some options for the Axiom Software login behavior. These options apply to all authentication types except OpenID.

Domain prompt

When a user logs in, Axiom Software looks for a matching user name within Axiom security and applies the specified authentication type for that user. For LDAP Authentication and Windows Authentication, if only one allowed domain or suffix is specified, that information can be assumed and the user does not need to include it when logging in. If multiple domains or suffixes are specified, then the user must include that information as part of their user name. For example: *DomainName**UserName* for Windows Authentication.

Alternatively, you can configure your system so that all users must specify their authentication type / domain when logging into Axiom Software, using the **Domain** selection list. The Domain selection list displays the following:

- **Axiom Named User** (for Axiom Prompt login)
- Each allowed Windows Authentication domain (if Windows Authentication is enabled for the installation)
- Each allowed LDAP suffix (if LDAP Authentication is enabled for the installation)

When the Domain selection list is enabled, the user must make the appropriate selection in order to log in. For example, a Windows Authentication user must select their Windows domain name. Because it is specified separately, the domain or suffix does not need to be added to the user name, even when there are multiple allowed domains or suffixes.

The following screenshot shows an example of the Domain selection list. In this example, the installation has enabled Windows Authentication with two allowed domains. The two domain names display on the selection list as well as the choice to log in as an Axiom Named User.

The Domain selection list can be enabled or disabled using the **AuthenticationDomainSelectionListRequired** system configuration setting. By default this is set to False, which means the Domain selection list only displays if your system contains duplicate user names that require the domain to be specified to differentiate those users. If you set this to True, then the Domain selection list displays at all times.

If the Domain selection list is enabled, and if Windows Authentication is enabled for the installation, then by default the user's current domain will be selected in the list (if that domain is one of the allowed domains). Otherwise, the first option in the list is selected by default. Options are ordered as follows: LDAP suffixes, Windows domains, Axiom Named User.

Remember me

Users can optionally select **Remember me** at the login screen to store their Axiom Software authentication for future use. This information is encrypted and only applies to the current user for the current machine. The next time the user starts Axiom Software on the current machine, they will not be prompted to log in.

Although all Axiom Software clients have a Remember Me check box on the login screen, note that the remembered status is stored separately for access to the Web Client versus the Desktop Client. For example, a user can choose Remember Me when logging into the Excel Client, and then that user will not be prompted when subsequently accessing either the Excel Client or the Windows Client. However, if the user attempts to access the Web Client, they will be prompted for credentials (and can then choose to be separately remembered for the Web Client).

NOTE: Logging out of a client will clear the remembered status for that client type. Although the Excel Client and Windows Client do not have an explicit log out feature, logging out of the Word or PowerPoint add-in will clear the remembered status for the Desktop Client (but only if you are not also currently logged into another instance of the Desktop Client).

If you do not want users to have access to the Remember Me option, so that they must log in each time, then you can disable the feature by setting the system configuration setting **ShowRememberMe** to **False**. This will hide the option from the various login screens. Keep in mind that if a user has already used the Remember Me option, hiding the setting will not clear the user's stored credentials. The user will continue to be remembered until they log out and cause their credentials to be cleared.

Using SSL

You can set up the Axiom Application Server to use Secure Socket Layer (SSL) security, assuming that you have provided a certificate and configured IIS appropriately to support it.

When installing the application server, specify the URI as HTTPS if you will be using SSL. Additionally, if you want the site to require SSL, you can select the **Require SSL** option for the application server. Please see Installing the Axiom Application Server for more information, and contact Kaufman Hall Software Support if you need assistance configuring SSL for your Axiom Software implementation.

Installing Axiom Software Server Components

This section discusses the installation process for the Axiom Software server components, including:

- Creating or restoring the Axiom Software database
- Installing the Axiom Software Application Server
- Installing the Axiom Scheduler Service
- Installing the Axiom Update Service

IMPORTANT: This process is for new installations. If you are upgrading an existing installation, see Upgrading Axiom Software before performing any installation steps.

Before you install

Before beginning the server installation process, make sure the following prerequisites have been completed:

- Microsoft SQL Server is installed on the database server. See Microsoft SQL Server.
- Microsoft IIS is installed on the application server. See Microsoft IIS.
- Microsoft .NET updates have been performed on all servers that will host an Axiom Software server component. See Microsoft .NET Framework.

Axiom Software Manager

The Axiom Software Manager is used to install and configure all Axiom Software server components and the Axiom Software database. This package must be copied to any server where you plan to install Axiom Software.

As a first step to installing Axiom Software on any server, you should:

- Create a folder named `C:\AxiomFiles` on the server.
- Extract the contents of the Axiom installation package into a sub-folder named `\Axiom_v2018_2`.

NOTE: You can name these folders whatever you like. The example names above are used in this document.

The Software Manager package is named `AxiomSoftwareManager.exe` and is located in the `C:\AxiomFiles\Axiom_2018_2` folder (assuming the contents of the installation package were extracted using the example folder names). We recommend keeping the installation package on the server after the installation is complete, since the Software Manager can also be used to view installation details, configure the database, and uninstall the software if needed.

NOTE: The Software Manager must be run as administrator when installing software or when configuring the application server.

Example Axiom Software Manager

Preparing the Axiom Software database

Use the Axiom Software Manager to create or restore the Axiom Software database. For more information on the Software Manager, see Axiom Software Manager.

For this purpose, you can run the Software Manager from any location that can connect to the database server (however, it may be easiest to run the Software Manager from the application server). When you perform an action that requires a database connection, you must enter database administrator credentials. The credentials only need to be entered once per session for each database that you try to connect to.

NOTE: If you need to clear the stored database administrator credentials so that you can re-enter them, click **Action > Clear DBA Credentials**.

Creating or restoring the database

You can create a new blank Axiom Software database, or you can restore a copy of an existing Axiom Software database. For new customers, eventually you will be restoring a database provided by your implementation consultant, but the blank database can be used for installation in the meantime.

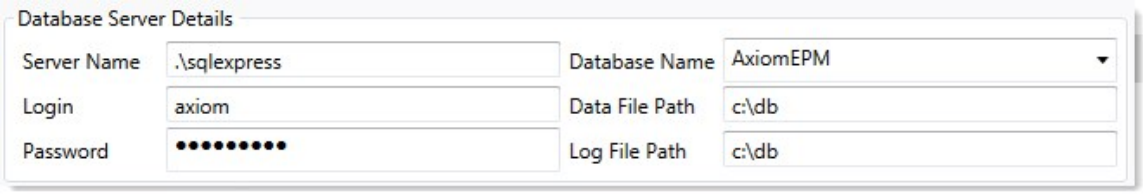
NOTE: The blank database contains one admin user (user name: admin, password: admin) that you can use to log into the Axiom Software system. You should change the password of this user after logging in. Once real users have been set up for your implementation, you can delete this user.

If you are restoring a database, the backup file must first be placed on the database server. The restore file path is local to the database server.

To create or restore the Axiom Software database:

1. In the Software Manager, click **Database Manager > Restore Databases**. (You can also click **Create/Restore** from the home screen.)
2. Complete the **Database Server Details** section with the information necessary to connect to the database server and create the Axiom Software database.

Item	Description
Server Name	The server name of the SQL database server. If you are not using the default instance, append the instance name with a backward slash (Server\Instance).
Login Password	The login name and password for the database. If you are creating a new database, you can set the name and password as necessary to meet your organization's requirements. If you are restoring an existing database, the name and password must match the existing name and password on the database.
Database Name	The name of the database.
Data File Path Log File Path	The location to place the data files and the log files on the database server. Paths are relative to the database server.



Example Database Server Details

3. In the **Restore System** section, select the check box for **Application Database**, and then select one of the following:
   - **Create New**: Create a system starting with an entirely blank database.
   - **Restore**: Create a system from a backup copy of an existing database.

   All paths are local to the database server.

Example Restore System database

4. By default, when you select the Application Database, the **Audit Database** is also selected. In most cases you want to leave this selected and use **Create New - Standalone** to create a separate audit database for the system. Alternatively, the **Create New - Embedded** option will create the audit database tables within the application database. This embedded configuration is intended for use with Axiom cloud service systems.

   IMPORTANT: Do not select the embedded database option unless you are instructed to do so by Kaufman Hall Software Support.

   The **Restore** option for the audit database is typically only used when restoring an entire system from backup in a production environment, and only when the audit database is a standalone database. If the audit database is embedded within the application database, then it will be restored when the application database is restored.

5. When all database settings are complete, click **Restore** at the bottom of the screen.
6. If you have not previously entered database administrator credentials, you are prompted to enter them. Enter the credentials (or use Trusted Authentication if you have database administrator rights) and then click **OK**.

A confirmation message displays when the process is complete. When you click **OK** to dismiss the confirmation message, the Software Manager automatically opens the **Upgrade Databases** screen. In all

cases, you must upgrade the database after creating a new database or restoring an existing database. See the following section for more details.

Upgrading the database

After creating or restoring the database, it must be upgraded to the current Axiom Software version. The **Upgrade Databases** screen will automatically open after using the **Restore Databases** screen to create or restore a database, with the information for the database pre-populated. In most cases you can simply click **Upgrade** on this screen. However, the full instructions are provided below in case you ever need to manually perform this action.

To upgrade the database:

1. In the Software Manager, click **Database Manager > Upgrade Databases**.
2. In the **Database Server Details** section, complete the following:
   - **Server Name**: Enter the database server name. If you are not using the default instance, append the instance name with a backward slash (Server\Instance).
   - **Database Name**: Enter the database name.

   Once a database server and name have been specified, the details display in the **System Database Details** section. Note that the Axiom user name for the database is the login name as currently specified on the **Restore Databases** screen. If you have come to the Upgrade Databases screen directly and you need to specify a different user name for the database that you want to upgrade, you can enter the correct user name into the **Axiom User Login** field.
3. Click **Upgrade** to upgrade the specified database.

A confirmation message box displays when the upgrade is complete.

Installing the Axiom Application Server

The logged in user must have administrator rights on the server to run the installation. In order to perform the installation, you will need a valid Axiom Software license file and the connection information for the Axiom Software database. The installation cannot be completed without this information.

NOTE: Once you enter the installation screens, there is no Cancel button. To cancel an installation, move to a different location within the Axiom Software Manager, or close the Software Manager.

To install the Axiom Application Server:

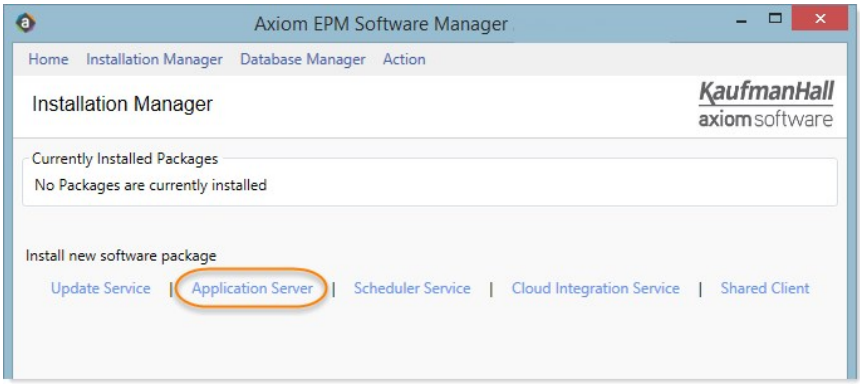
1. Navigate to `C:\AxiomFiles\Axiom_2018_2` and then double-click `AxiomSoftwareManager.exe`.

   This assumes that you have already extracted the Axiom Software installation package to the server. For more information, see Axiom Software Manager.

2. From the **Home** screen of the Software Manager, click **Manage Software**.

   TIP: You can also click **Installation Manager > Manage Software Packages** on the menu bar.

3. On the **Installation Manager** screen, under **Install new software package**, click **Application Server**.



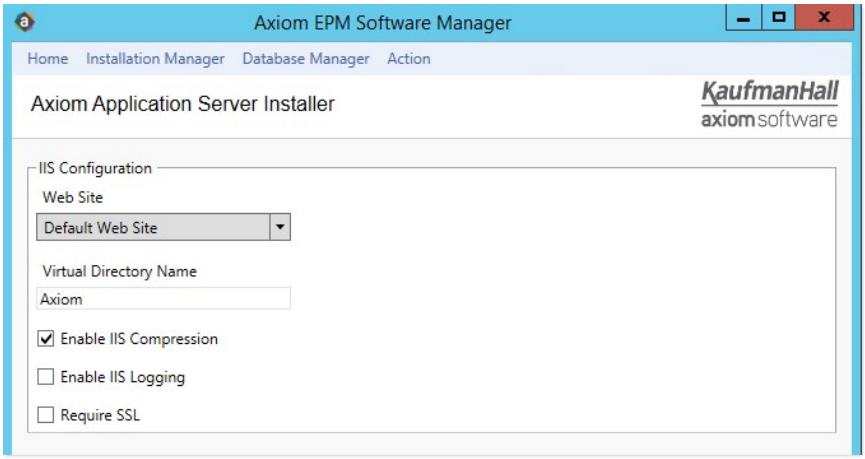
   The Axiom Application Server Installer begins. The installation is performed within the Software Manager—a separate installer program is not launched. While using the installer, do not use the menu to move to other locations in the Software Manager, unless you want to cancel the installation.

4. On the **License Agreement** screen, click **I accept** and then click **Next**.

5. On the **IIS Configuration** screen, complete the following settings and then click **Next**:

Item	Description
Web Site	By default, this is set to **Default Web Site**. This should not be changed.
Virtual Directory Name	By default, the virtual directory name is **Axiom**. You can change the name if desired. The virtual directory name defines how the system is accessed via the web. All examples in the documentation assume the default virtual directory name.
Enable IIS Compression	This option enables HTTP compression for the IIS application pool. This may improve performance, especially in environments where network bandwidth is an issue. If you do not want to enable compression, clear the check box. We recommend discussing the need for compression with Kaufman Hall Software Support before disabling the option.

Item	Description
Enable IIS Logging	This option enables IIS logging for the application. This is disabled by default because in most cases it is not necessary and does not provide useful information. However, it can be enabled if it is needed to help diagnose a particular issue.
Require SSL	This option configures the Axiom Software virtual directory to require SSL. You should select this option if you want all access to this web site to use SSL. Selecting this option will require the application server URI to be in HTTPS format. **NOTE:** This option does not configure the web site to require SSL; you must manually configure this for the specified web site within IIS. It simply configures the Axiom Software virtual directory as appropriate for environments where SSL is required. If you want to use a mixed mode for this web site, then do not select this check box. You can enable mixed mode by manually specifying an HTTPS address for the Axiom Application Server URI on the next installation screen.



6. On the **Installation Folder** screen, specify the location where the Axiom Software files will be installed, and then click **Next**.

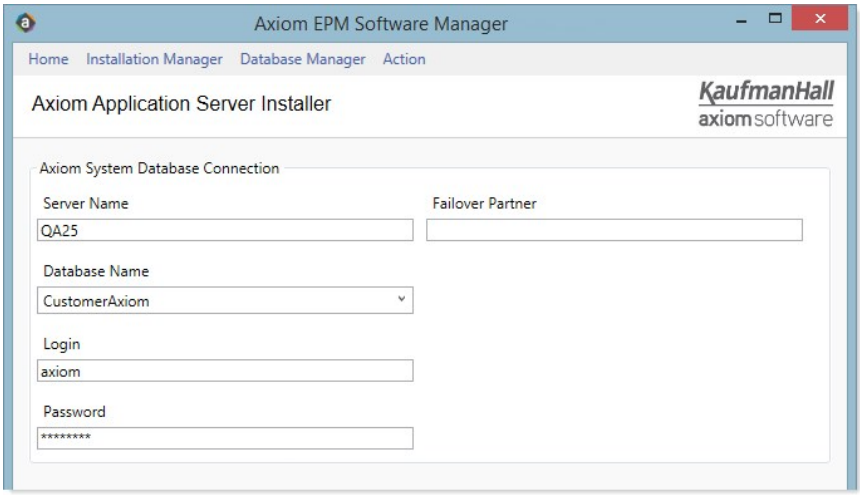
   By default, the installation location is `C:\Inetpub\wwwroot\Axiom` (where Axiom is the default virtual directory name). This location should not be changed (except to account for differences in the virtual directory name).

7. On the **System Database Connection** screen, configure the connection from the application server to the Axiom Software database, and then click **Next**.

To configure the connection string, complete the following settings:

Item	Description
Server Name	The server name of the SQL database server that hosts the Axiom Software database.
Failover Partner	Optional. The server name of the database server to be used in failover situations. This only applies to cloud service systems; otherwise it should be left blank.
Database Name	The name of the database for Axiom Software.
Login	The login name for the Axiom Software database.
Password	The password for the Axiom Software database. **NOTE:** The last-entered password will be remembered when using the one-click upgrade, but the password must be typed in when performing new installations or repairs of existing installations.

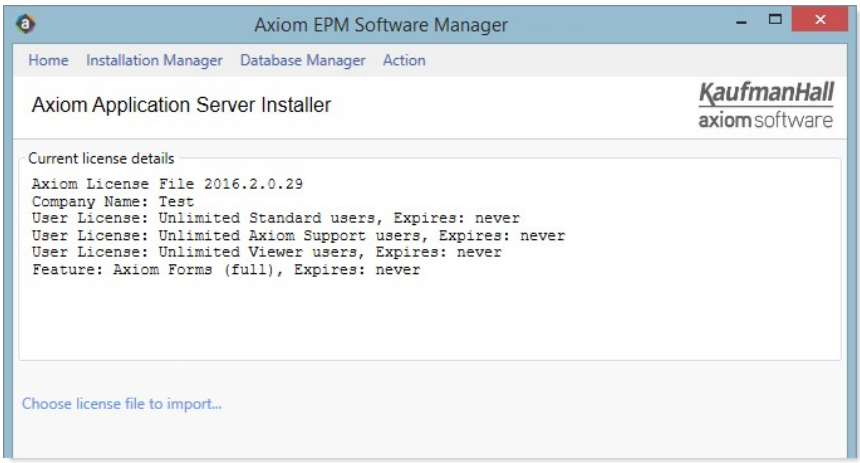
This is the same database information that was used when creating or restoring the Axiom Software database (Creating or restoring the database).



This information must be provided in order to continue with the install. The connection information can be changed later by using the **Configure Connections** page of the Software Manager.

8. On the **License File** screen, upload your Axiom Software license file, and then click **Next**.

   Click **Choose license file to import**, then navigate to the location where you have saved the license file provided by Axiom Software. Once you have uploaded the file, the license details display on this screen, as shown in the following screenshot.

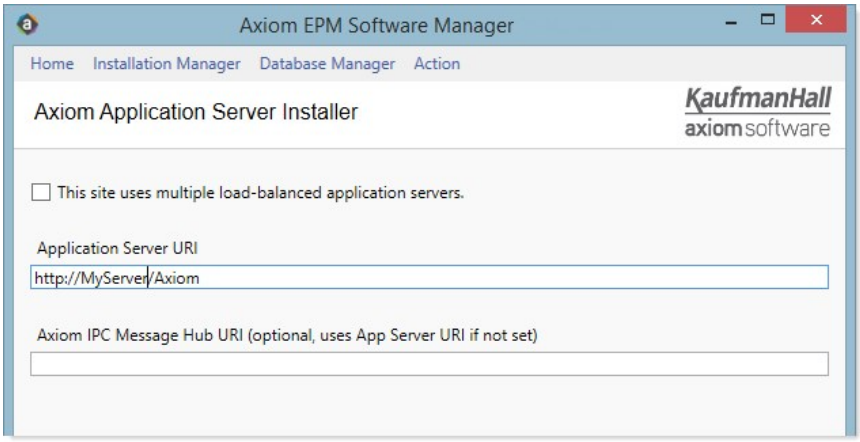


   A valid license file must be provided in order to continue with the install. The license file can be updated later by using the **License Manager** page of the Software Manager. You can also update your license using the administration features of the Axiom Web Client.

9. On the **Application Server URI** screen, specify the URI to the application server, and then click **Next**.

   By default, the **Application Server URI** is `http://<servername>/Axiom`. If you changed the web site or the virtual directory name in the prior screen, then you must update this URI to match.

   In most cases you will leave the **Axiom IPC Message Hub URI** blank, so that it uses the default URI (the application server URI).



Example Application Server URI screen

NOTE: The option **This site uses multiple load-balanced application servers** is provided for legacy configurations. You should not enable this option unless instructed to by Kaufman Hall Software Support.

Configuring SSL

If you selected **Require SSL** on the previous installation screen, then the URI is in HTTPS format by default. If you want to use SSL for the Axiom Software virtual directory but not require SSL for the web site, then you can manually change the URI to use HTTPS. This will configure the virtual directory to support SSL in a mixed-mode environment.

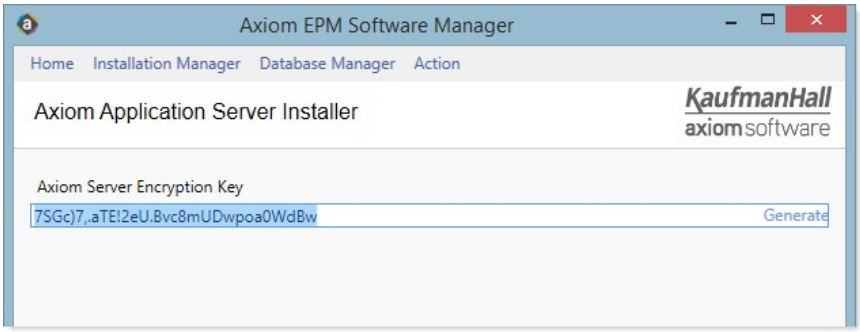
10. On the **Axiom Server Encryption Key** screen, enter an encryption key and then click **Next**.

    The encryption key is for security purposes. It is used by the Axiom Application Server to authenticate requests from the Axiom Scheduler Service. There are two options to specify the key:

    - Click **Generate** to randomly generate an encryption key. If you generate a key, be sure to copy and paste the key to a temporary location so that you can use it when you subsequently install the Axiom Scheduler Service. Once you have used the key in your application server installation and your Scheduler service installation, it will be remembered by the installer so you have no further need to save the key.

      NOTE: If you move your cursor out of the encryption key field, the key will become masked (meaning it displays as asterisks). You can place your cursor back in the field to read the key.

    - Alternatively, you can type in your own key. Axiom Software does not enforce any rules on the key string. If you choose to use your own key, it is your responsibility to ensure that the key is of an adequate strength for your organization's security requirements.

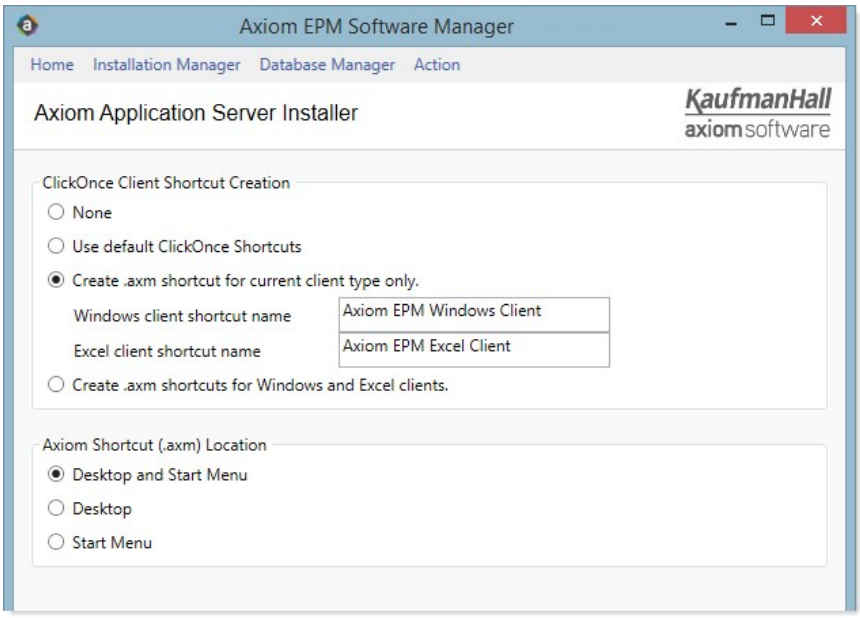


11. On the **ClickOnce Client Shortcut** screen, complete the following settings and then click **Next**.

    These settings determine whether and where shortcuts will be created on client workstations when using the ClickOnce installer to install the Axiom Windows Client and Axiom Excel Client.

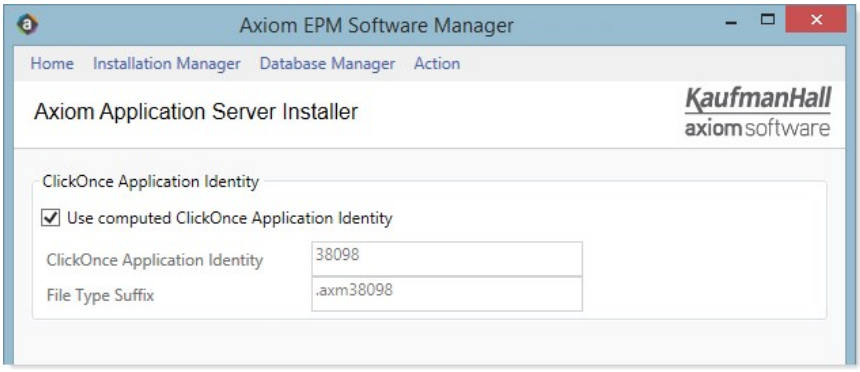
Item	Description
ClickOnce Client Shortcut Creation	Select one of the following: • **None**: No shortcuts will be created on client workstations. • **Use default ClickOnce Shortcuts**: One shortcut will be created on the client workstation, which launches the last-launched client version (Excel Client or Windows Client). If a user wants to launch the other client version, they must use the launch page to switch back and forth. • **Create .axm shortcut for current client type only** (Default): An AXM shortcut will be created when you install/launch a particular client type (Excel Client or Windows Client). Users who only use one client type will only see the shortcut for that type. The other shortcut will only be created if you launch the other client type. If desired, you can change the default name for each shortcut. • **Create .axm shortcuts for Windows and Excel clients**: AXM shortcuts will be created for both client types when a user installs the Axiom Software client. If desired, you can change the default name for each shortcut.
Axiom Shortcut Location	If the prior option is set to anything other than **None**, then select one of the following options to specify where the client shortcuts will be created: • **Desktop and Start Menu** (Default) • **Desktop** • **Start Menu** In very controlled IT environments, users may not have permission to create desktop shortcuts, therefore causing the installation to fail. In these environments you can select **Start Menu** so that users are able to complete the installation and still have access to a shortcut.

NOTE: AXM shortcuts are special Axiom Software files that can be used to launch specific client versions using the ClickOnce protocol. From a user's perspective the shortcut is the same, except that AXM shortcuts are not automatically removed if the client program is uninstalled. ClickOnce shortcuts are automatically removed when the client is uninstalled.



12. On the **ClickOnce Application Identity** screen, specify the identity code for this particular Axiom Software installation, and then click **Next**.

    The ClickOnce Application Identity is used to uniquely identify this particular Axiom Software installation for purposes of future client updates and for launching this installation via AXM shortcut. You can leave the default settings to use the automatically-computed number for the identity (recommended), or you can clear the check box and enter a number. (If you manually enter a number, you should put the same number on the file type suffix.) You can also choose to disable use of the identity, but this is not recommended.



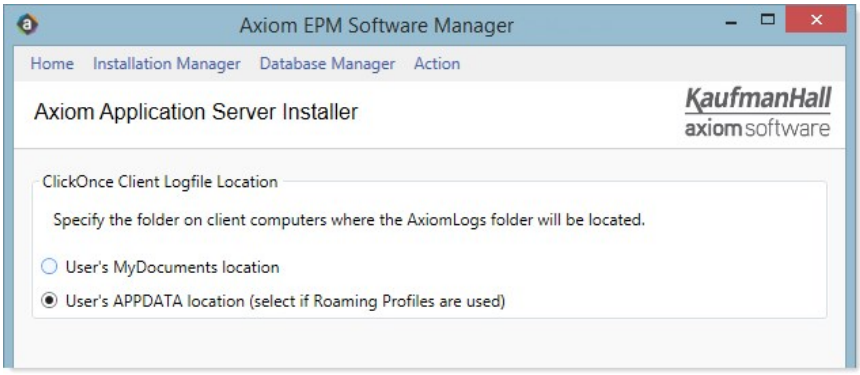
13. On the **Default Proxy Configuration** screen, specify whether to allow use of the default proxy when accessing the Axiom Application Server, and then click **Next**.

    If **Disable use of the default proxy for application server access** is selected (the default behavior), then users cannot use the default proxy to access the application server. In most environments this will improve performance.

    However, in some environments disabling proxy access may prevent clients from being able to access the application server. For these environments, the check box should be cleared to allow use of the default proxy.

14. On the **ClickOnce Client Logfile Location** screen, specify the location where the AxiomLogs folder will be created on client machines, and then click **Next**.

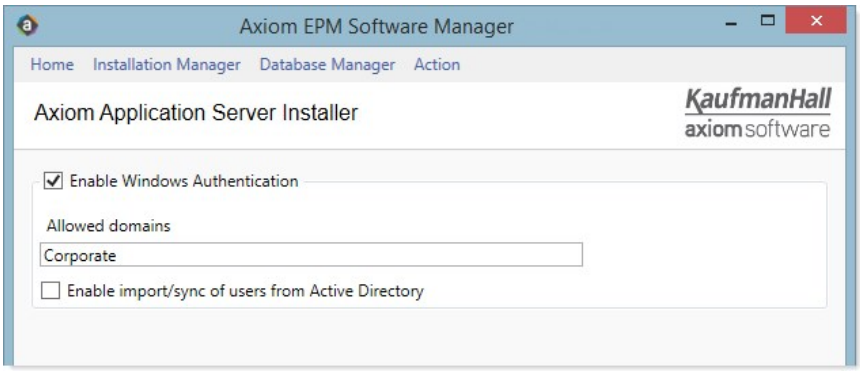
    By default, the folder is created in the user's APPDATA folder. If desired, you can change the location to the user's My Documents folder.



15. On the **Enable Windows Authentication** screen, choose whether to enable Windows Authentication, and then click **Next**.

    If you want to use Windows Authentication, then leave the **Enable Windows Authentication** option checked and complete the following settings. If you do not want to use Windows Authentication, then clear the check box. For more information, see Authentication methods.

Item	Description
Allowed domains	The recognized domains for Windows Authentication. Enter one or more domain names. Separate multiple domain names with commas. Users will be authenticated against the specified domains.
Enable import/sync of users from Active Directory	If selected, then the installation will allow use of the Active Directory Import Scheduler task to import and synchronize Active Directory users into Axiom Software security. Selecting this option simply enables the ability to use the Scheduler task. You must set up the Scheduler task within a system and schedule it for execution in order to import and synchronize users. If this option is not selected, then the Scheduler task can be configured but it will not execute.



NOTE: You can change these settings for the installation later by using **Installation Manager > Configure Authentication Methods**.

16. On the **Enable LDAP Authentication** screen, choose whether to enable LDAP Authentication, and then click **Next**.

    If you want to use LDAP Authentication, select **Enable LDAP Authentication** and then complete the following settings. For more information, see Authentication methods.

Item	Description
LDAP server connection string	The connection string for the LDAP directory that you want to authenticate users against.
LDAP connection user name	The user identity under which the application server will access the LDAP directory, for the purposes of passing user credentials for authentication.
LDAP connection password	The password for the designated user name.
Allowed suffixes	Recognized suffixes for use with LDAP authentication, such as: `@mydomain.local`. Including the @ sign in the suffix is optional (if it is omitted, it will be automatically included when submitting credentials for authentication). If needed, separate multiple suffixes with commas.

    NOTE: You can change these settings for the installation later by using **Installation Manager > Configure Authentication Methods**.

17. On the **SAML Authentication** screen, click **Next**.

    SAML Authentication is not supported for use with on-premise installations. It is only present in the installer for legacy installations.

18. On the **OpenID Authentication** screen, choose whether to enable OpenID Authentication, and then click **Next**.

    If you want to use OpenID Authentication, select **Use OpenID for user authentication** and then complete the following settings.

Item	Description
OpenID provider API client ID	The client ID for the OpenID provider.
OpenID provider API client secret	The client secret for the OpenID provider.

    For example, if using Google OpenID Connect, the client ID and client secret can be obtained from the Google Developers Console, within the project you are using for authentication.

NOTE: Additional setup is required to fully enable the OpenID Authentication. For more information, see Authentication methods and contact Kaufman Hall Software Support for assistance as needed.

19. On the **Ready to install** screen, click **Install** to begin the installation.

A status bar displays the progress of the installation. When the installation is complete, click **Done** to exit the installer. You are returned to the **Installation Manager** screen, where you can see the details of the newly installed application server.

Post-installation steps

While you are on the server that is hosting the application server, you should also install the Axiom Software Update Service to enable future software updates. For more information, see Installing Axiom Update Service.

Installing Axiom Scheduler Service

Perform the Axiom Scheduler Service installation on each server that you want to use for Scheduler task processing. Larger installations may need multiple dedicated Scheduler servers. The logged in user must have administrator rights on the server to run the installation.

NOTES:

- Scheduler does not direct task traffic to other machines, it performs processing on the machines where it is installed.
- Once you enter the installation screens, there is no Cancel button. To cancel an installation, move to a different location within the Axiom Software Manager, or close the Software Manager.

To install the Axiom Scheduler Service:

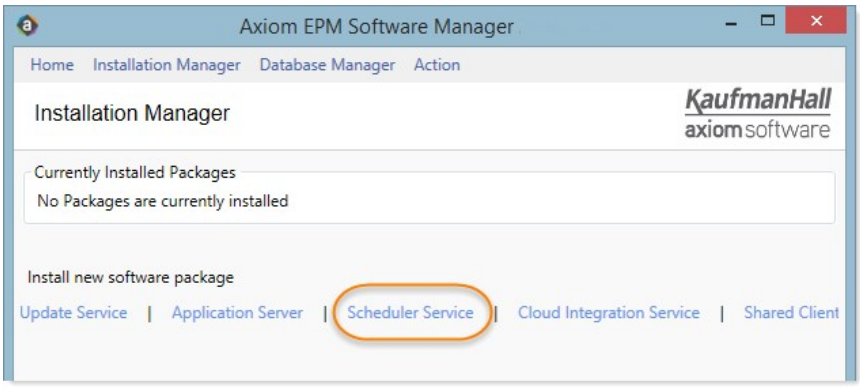
1. Navigate to `C:\AxiomFiles\Axiom_2018_2`, and then double-click `AxiomSoftwareManager.exe`.

   This assumes that you have already extracted the Axiom Software installation package to the server. For more information, see Axiom Software Manager.

2. From the **Home** screen of the software manager, click **Manage Software**.

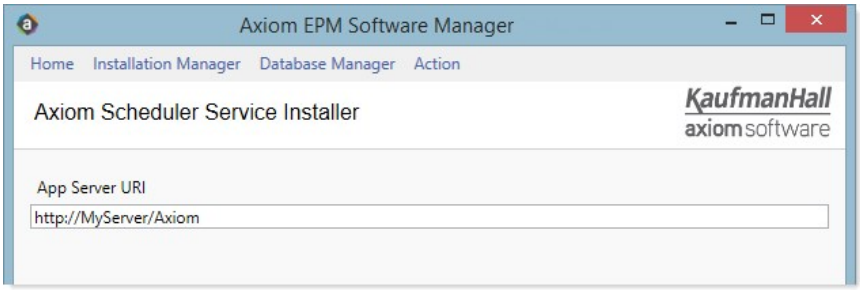
   TIP: You can also click **Installation Manager > Manage Software Packages** on the menu bar.

3. On the **Installation Manager** screen, under **Install new software package**, click **Scheduler Service**.



The Axiom Scheduler Service Installer begins. The installation is performed within the Software Manager—a separate installer program is not launched. While using the installer, do not use the menu to move to other locations in the Software Manager, unless you want to cancel the installation.

4. On the **License Agreement** screen, click **I accept** and then click **Next**.
5. On the **App Server URI** screen, specify the URI to the Axiom Application Server, and then click **Next**.



This is the URI that the Scheduler service will use to access the Axiom Application Server. By default, this is `http://<APPSERVER>/Axiom`. You must edit the URI to specify the name of the server where the application server component was installed. If you changed the name of the virtual directory for the application server, then you must edit that too.

6. On the **Installation Folder** screen, specify the installation location for the Scheduler program files, and then
click **Next**.

   You can accept the default installation location, or click Browse to select a different location. By default, the location is:

   `C:\Program Files (x86)\Axiom EPM\Axiom EPM Scheduler Service\`

7. On the **Service Name** screen, specify the name of the Scheduler service, and then click **Next**.

The default name is **Axiom EPM Scheduler Service**. We recommend leaving the default name unless you will be installing multiple versions of the service on this machine and you need to be able to differentiate them.

8. On the **Axiom Server Encryption Key** screen, enter the encryption key that was used in the Axiom Application Server installation, and then click **Next**.

   The key must match the key used by the application server. The key is used to encrypt traffic between the Scheduler service and the application server.

   > **TIP:** If you do not know the encryption key that was used for the Axiom Application Server installation, then you can find out the encryption key by going to **Installation Manager > Configure Service Encryption**. Place your cursor in the field to read the encryption key. Keep in mind that leaving the installation screens will cancel the installation, so you will need to start over once you get the key.

9. On the **Application server** screen, specify whether to use the embedded application server, and then click **Next**.

   By default, the Scheduler installation includes an embedded application server instance that can be used to poll for queued Scheduler jobs, service requests as a result of job processing, and report the status of the Scheduler service to the system.

   It is recommended for most configurations to leave **Use embedded application server** enabled, for improved system performance. However, in some situations you may wish to disable this option. For example, if a firewall prevents direct contact between the Scheduler server and the database server, then you should disable this option.

   The second option on this screen, **Install EdiDev runtime components**, only applies to Contract Management installations. This option must be left unchecked unless you are instructed to enable it as part of a Contract Management implementation.

10. On the **Ready to Install** screen, click **Install** to begin the installation.

A status bar displays the progress of the installation. When the installation is complete, click **Done** to exit the installer. You are returned to the **Installation Manager** screen, where you can see the details of the newly installed package.

Post-installation steps

Axiom Software will attempt to automatically start the Scheduler service after the installation. If you discover that the service is not running, you can start it manually as follows:

1. In Windows **Administrative Tools**, go to **Services**.
2. Right-click **Axiom EPM Scheduler Service** and then select **Start**.

Also, while you are on the server that is hosting the Scheduler service, you should also install the Axiom Software Update Service to enable future software updates. For more information, see Installing Axiom Update Service.

Installing Axiom Update Service

Perform the Axiom Update Service installation on each server where either of the following components is installed: Axiom Application Server or Axiom Scheduler Service.

The Update Service is not required in order to operate the Axiom Software application. However, it is required if you want to perform future upgrades to the software using the Software Updates tool.

NOTE: Once you enter the installation screens, there is no Cancel button. To cancel an installation, move to a different location within the Axiom Software Manager, or close the Software Manager.

To install the Axiom Update Service:

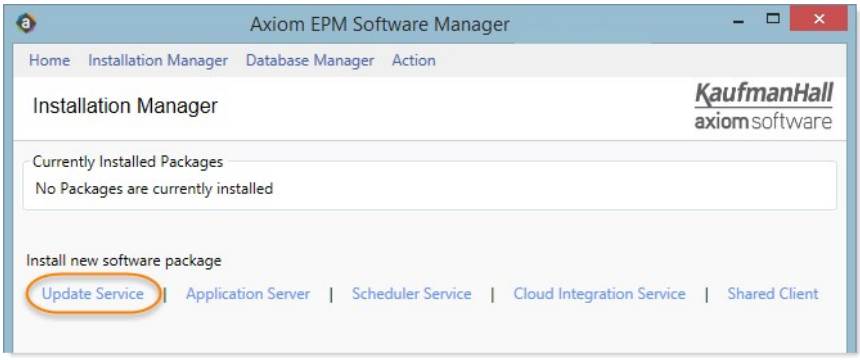
1. Navigate to `C:\AxiomFiles\Axiom_2018_2`, and then double-click `AxiomSoftwareManager.exe`.

   This assumes that you have already extracted the Axiom Software installation package to the server. For more information, see Axiom Software Manager.

2. From the **Home** screen of the software manager, click **Manage Software**.

   TIP: You can also click **Installation Manager > Manage Software Packages** on the menu bar.

3. On the **Installation Manager** screen, under **Install new software package**, click **Update Service**.



   The Axiom Update Service Installer begins. The installation is performed within the Software Manager—a separate installer program is not launched. While using the installer, do not use the menu to move to other locations in the Software Manager, unless you want to cancel the installation.

4. On the **License Agreement** screen, click **I accept** and then click **Next**.

5. On the **Installation Folder** screen, specify the installation location for the Update Service program files, and then click **Next**.

   You can accept the default installation location, or click Browse to select a different location. By default, the location is:

   `C:\Program Files (x86)\Axiom EPM\Axiom EPM Update Service\`

6. On the **Service Name** screen, specify the name of the update service, and then click **Next**.

   The default name is **Axiom EPM Update Service**. We recommend leaving the default name unless you will be installing multiple versions of the service on this machine and you need to be able to differentiate them.

7. On the **Ready to Install** screen, click **Install** to begin the installation.

A status bar displays the progress of the installation. When the installation is complete, click **Done** to exit the installer. You are returned to the **Installation Manager** screen, where you can see the details of the newly installed package.

Uninstalling server components

The Axiom Software server components can be uninstalled by using the Axiom Software Manager.

NOTE: These server components do not display in the Windows program manager and cannot be uninstalled from that location.

To uninstall a server component:

1. On the server where you want to uninstall a component, navigate to the location where you saved the Software Manager, and then double-click `AxiomSoftwareManager.exe`. For example: `C:\AxiomFiles\Axiom_2018_2`. For more information on the Software Manager, see Axiom Software Manager.

   If you did not save a copy of the Software Manager on the server, then you will need to obtain a copy in order to perform the uninstall. You can download Axiom Software installation packages from the Kaufman Hall Support site. In order to uninstall a component, you can use the same version that is currently installed or a higher version. If you need assistance obtaining a copy of the Software Manager, contact Kaufman Hall Software Support.

2. From the **Home** screen of the Software Manager, click **Manage Software**.
3. In the **Installation Manager** screen, in the **Currently Installed Packages** section, locate the component that you want to uninstall, and then click **Uninstall**.
4. At the first uninstall confirmation screen, click **Next** to continue.
5. At the **Local Content** screen, specify whether to preserve locally modified files, or delete all

package files, and then click **Next**.

By default, **Preserve locally modified files and logs** is selected. This means that any file that was modified after installation, such as log files and .config files, will not be deleted as part of the uninstall. If later you want to reinstall to this same folder location, you will need to manually delete these files and the installation folder.

If you know that you do not need these files, you can select **Remove package folder and all files**. In this case the entire installation folder will be deleted.

6. Click **Uninstall**.

Repairing or modifying server components

You can repair and modify server components using the Software Manager. When you repair a component, the component is basically reinstalled. You can change any of the installation options.

During the repair process, all configuration files are replaced with the deployment versions, even if they have been locally modified. This is different than the upgrade process, which preserves locally modified configuration files.

To repair or modify a server component:

1. On the server where you want to repair a component, navigate to the location where you saved the Software Manager, and then double-click `AxiomSoftwareManager.exe`. For example: `C:\AxiomFiles\Axiom_2018_2`. For more information on the Software Manager, see Axiom Software Manager.

   If you did not save a copy of the Software Manager on the server, then you will need to obtain a copy in order to perform the repair. You can download Axiom Software installation packages from the Kaufman Hall Support site. In order to repair a component, you must use the same version that is currently installed (if you use a higher version, the component will be upgraded as part of the repair). If you need assistance obtaining a copy of the Software Manager, contact Kaufman Hall Software Support.

2. From the **Home** screen of the Software Manager, click **Manage Software**.
3. In the **Installation Manager** screen, in the **Currently Installed Packages** section, locate the component that you want to repair, and then click **Repair**.

Progress through the installation screens and modify any options as desired.

Installing the Axiom Software Client

This section discusses the installation process for the Axiom Excel Client and Axiom Windows Client, including:

- ClickOnce deployment on individual client workstations
- Deploying on a shared client server

Both the Excel Client and the Windows Client are installed using the same installer. Once the installer has been run, either client can be launched on the machine. The term *Desktop Client* is often used to refer to both of these clients.

The Axiom Web Client operates within a browser and does not require any installation. The only requirement is a browser that meets the technical requirements. For information on these requirements, see the separate document *Client Technical Requirements*.

NOTE: Certain system configuration settings should be completed before the client is deployed to end users. However, at least one client installation must occur before you can set up users in Security and finish configuring the default system Scheduler jobs. You may also want to deploy the client to a handful of users for system testing before finalizing the configuration settings. For more information on configuration, see Configuring Axiom Software.

Before you install

Before beginning the client installation process, make sure the following prerequisites have been completed on the client workstations and/or the shared client server:

- Microsoft Edge or Internet Explorer 11 (or above) is installed. See Web browser.
- Microsoft .NET Framework 4.5 or higher is installed. See Microsoft .NET Framework.
- Microsoft Excel is installed on any machine where you want to use the Excel Client. See Microsoft Excel.
- Microsoft VSTO is installed on any machine where you want to use the Excel Client. See Microsoft VSTO.

The only installer prerequisite is .NET. If .NET 4.5 or higher is not present, the installer displays a message about the missing requirement and cancels the installation. If the other prerequisites are not present,

then the client program will still be installed on the machine, but it may not be able to be launched until the remaining prerequisites are installed.

Installing the Axiom Software Client on client workstations

This section explains the installation of the Axiom Software Client on individual client workstations using ClickOnce.

Use of ClickOnce for client installations

Axiom Software takes advantage of the Microsoft ClickOnce technology that is included with the Microsoft .NET Framework. This technology allows for the installation and launch of the Axiom Software Excel Client or Windows Client software with minimal interaction from the user.

The IT department, which is responsible for the implementation of Axiom Software along with the maintenance of the servers that Axiom Software resides on, benefits from the ClickOnce technology in three major ways:

- **The Axiom Software Client is easy to update.** When upgrading to a new version of Axiom Software, the upgrade software is only run on the Axiom Software server components (and, if applicable, the Citrix/Terminal Services server). When a user launches the Axiom Software Client, the software immediately recognizes that a new version has been installed, prompts the user to install it, downloads and installs the update, and then launches the application.
- **Minimal impact to user computers and other installed applications.** Traditional applications are installed using Windows Installer deployment and often rely on shared components, which can create potential versioning conflicts. By utilizing the ClickOnce deployment technology, the Axiom Software Client is completely self-contained and does not interfere with other applications.
- **No changes to end user permissions.** Applications deployed using Windows Installer often require “local administrator” permissions, which can present problems when users do not have such access. Non-administrative users can install and launch the Axiom Software Client without elevated permissions.

Performing the client installation

The Axiom Software launch page contains all necessary links to install and launch the Axiom Software Desktop Client. To connect to the launch page, go to:

`http://<servername>/Axiom`

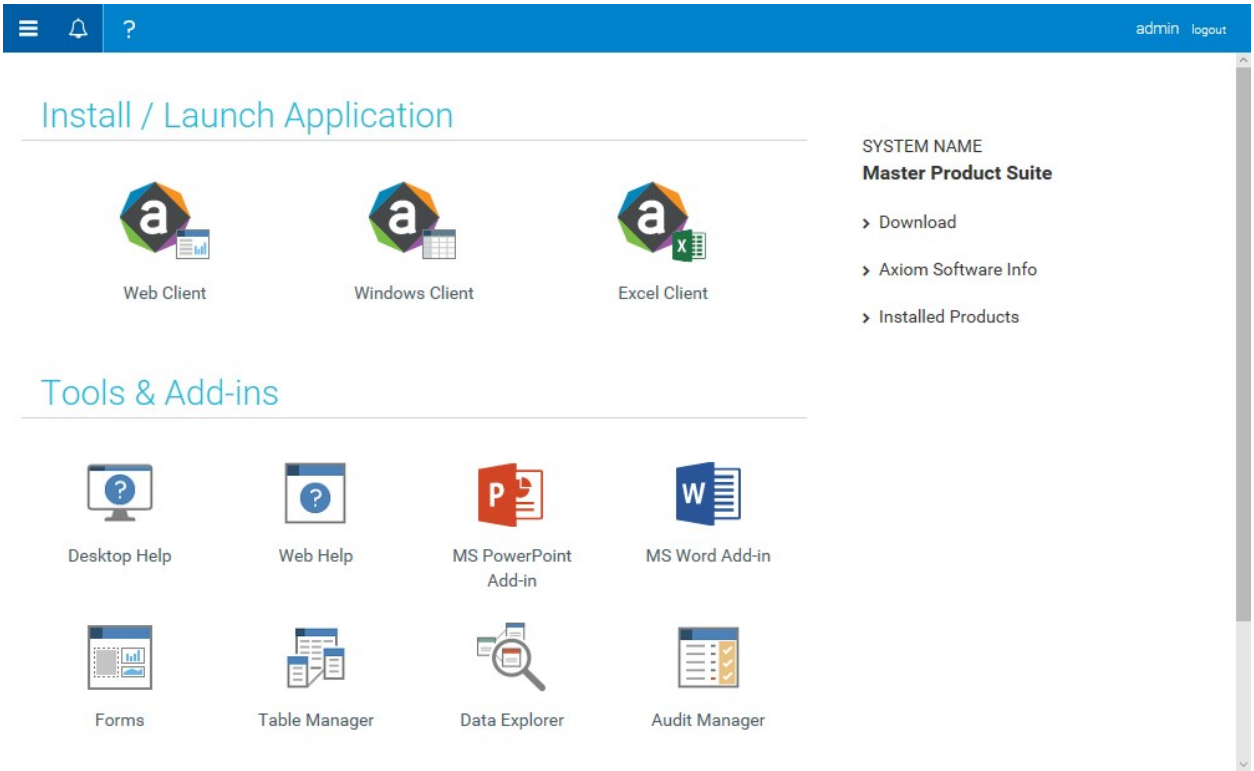
Where *<servername>* is the name of the application server and Axiom is the default name of the virtual directory. If you specified a different virtual directory name during the application server installation, you must use that.

> **NOTE:** If your Axiom Home file is a form-enabled file with the Web Client container enabled, then the Home page will display instead of the launch page when you go to the root URL for your installation. To access the launch page, click the menu button in the toolbar to open the Navigation panel, then click **Axiom Launch Page** at the bottom of the panel. You can also navigate directly to: `http://<servername>/Axiom/home/launchpage`.

Users must log in to Axiom Software in order to access the launch page. Anonymous access is not allowed. Users cannot install the client and then obtain login credentials later.

To install the Axiom Software Desktop Client, click on one of the following icons at the top of the page, in the **Install / Launch Application** section:

- **Windows Client**
- **Excel Client**



The first time that a user clicks on the icon from a specific workstation, the following occurs:

1. The installer verifies that required prerequisites are present. As previously noted, the installer only checks for .NET 4.5 or higher. The absence of other prerequisites does not stop the installation.
2. The installer downloads the client installation package and installs both clients (Excel and Windows).
3. When the installation is finished, the client type (Excel or Windows) that was specified in the link is launched.

Each subsequent time the user launches Axiom Software from a specific workstation, the following occurs:

1. The installer checks the application server for any system updates. If any updates are found, they are downloaded and installed. Otherwise, no installation activity occurs on subsequent visits.
2. The client type (Excel or Windows) that was specified in the link or shortcut is launched.

For example, if a user first clicks on the link to install/launch the Excel Client, it will install the client program and then launch the Excel Client. If the user subsequently clicks on the link to install/launch the Windows Client, then the program does not need to be installed again, and the link will simply launch the Windows Client.

If a user does not have the necessary prerequisites to install the Axiom Software Desktop Client, these prerequisites can be installed from the launch page as needed. Generally, installation of prerequisites requires administration privileges on the client machine.

To access the prerequisites page, click the **Download** link on the right-hand side of the launch page. From the prerequisites page, you can download and install any prerequisite for the Excel Client and the Windows Client.

NOTE: If your end users will be using the Windows Client exclusively, you can optionally hide the Excel Client icon from the launch page. To do this, set the system configuration setting **AllowShowExcel** to **False**. If you have a handful of users who need to install the Excel Client, those users can install it before you hide the icon, or you can use an installation URL to directly install/launch the Excel Client (see the following section).

Installation URLs

If desired, you can provide users with a link to install and launch the appropriate client version, instead of directing them to the launch page. The following are some common launch URLs:

Launch Action	URL
Excel Client	`http://<servername>/Axiom/c1/Axiom.UI.Start.application?client=Excel`

Launch Action	URL
Windows Client	`http://<servername>/Axiom/c1/Axiom.UI.Start.application?client=Windows`
Use a language override	`http://<servername>/Axiom/c1/Axiom.UI.Start.application?client=Excel&lang=FR-fr` Substitute the desired client and language code.

Contact Kaufman Hall Software Support if you need assistance determining the correct URL to provide to your users for direct install/launch.

Client shortcuts

Shortcut creation for the Axiom Software Client depends on the selections initially made during the application server installation. These shortcut options can be changed later by using Repair on the application server installation, or by modifying the system configuration settings.

The default behavior is to create shortcuts on both the desktop and the Start menu as needed—meaning, when a particular client version is launched (Excel Client or Windows Client), a shortcut is created for that specific version. For example, if a user only ever launches the Excel Client, then they will only have a shortcut to the Excel Client. If a user launches both clients, then they will have separate shortcuts for each client.

There are several shortcut options for the ClickOnce deployment, including placing shortcuts for both clients by default, or placing no shortcuts, or using the default ClickOnce shortcut that always launches the last-launched client. You can also specify whether shortcuts are created on the desktop, the Start menu, or both. For more details on the available options, see Installing the Axiom Application Server.

NOTE: Some authentication methods, such as OpenID, do not support launching the Axiom Software Client via shortcut.

Installing the Axiom Software Client on a shared client server

The Axiom Software Client can be installed on a shared client server (Citrix or Terminal Server). In this case, the client cannot be installed by using the ClickOnce installer. Instead, you can install the shared client by using the Axiom Software Manager.

When running the Axiom Software Shared Client installer, you can accept all default settings. The only user input required is the URI to the Axiom Application Server.

The logged in user must have administrator rights on the server to run the installation.

NOTE: Once you enter the installation screens, there is no Cancel button. To cancel an installation, move to a different location within the Axiom Software Manager, or close the Software Manager.

To install the Axiom Software Shared Client:

1. Navigate to `C:\AxiomFiles\Axiom_2018_2`, and then double-click `AxiomSoftwareManager.exe`.

   This assumes that you have already extracted the Axiom Software installation package to the server. For more information, see Axiom Software Manager.

2. From the **Home** screen of the Software Manager, click **Manage Software**.

3. On the **Installation Manager** screen, under **Install new software package**, click **Shared Client**.

   The Axiom Software Shared Client Installer begins. The installation is performed within the Software Manager—a separate installer program is not launched. While using the installer, do not use the menu to move to other locations in the Software Manager, unless you want to cancel the installation.

4. On the **License Agreement** screen, click **I accept** and then click **Next**.

5. On the **App Server URI** screen, specify the URI to the Axiom Software Application Server, and then click **Next**.

   This is the URI that the client will use to access the Axiom Software Application Server. By default, this is `http://<APPSERVER>/Axiom`. You must edit the URI to specify the name of the server where the application server component was installed. If you changed the name of the virtual directory for the application server, then you must edit that too.

6. On the **Installation Folder** screen, specify the installation location for the client program files, and then click **Next**.

   You can accept the default installation location, or click **Browse** to select a different location. By default, the location is:

   ```
   C:\Program Files (x86)\Axiom EPM\Axiom EPM Shared Client\
   ```

7. On the **Client Logfile Location** screen, specify the location of the AxiomLogs folder.

   By default, the folder is created in the user's My Documents folder. If desired, you can change the location to the user's AppData folder. You may want to do this in environments where the My Documents folder is redirected to a location other than the current machine.

8. On the **Ready to Install** screen, click **Install** to begin the installation.

A status bar displays the progress of the installation. When the installation is complete, click **Done** to exit the installer. You are returned to the **Installation Manager** screen, where you can see the details of the newly installed package.

The installation places shortcuts for the **Axiom EPM Excel Client** and **Axiom EPM Windows Client** on the **Start** menu.

Uninstalling client components

The uninstall process depends on whether the client was installed via ClickOnce (for individual workstations) or via the Axiom Software Manager (for shared client servers).

The uninstall process does not remove any files that have been modified after installation, such as log files. You can manually delete these files in the user's Windows document directory after uninstalling.

Uninstalling the ClickOnce Client

The Axiom Software ClickOnce Client can be uninstalled by using the program manager in the Windows Control Panel (**Uninstall or change a program**). Select **Axiom EPM Client**, and then select **Remove** or **Uninstall**. At the prompt, select **Remove the application from this computer**.

NOTE: If you used either of the AXM shortcut options for the ClickOnce installation, then those shortcuts will not be automatically removed from the desktop and/or the Start menu when the client is uninstalled. You must manually remove these shortcuts.

Uninstalling the Shared Client

The Axiom Software Shared Client can be uninstalled by using the Axiom Software Manager.

NOTE: The Shared Client does not display in the Windows program manager and cannot be uninstalled from that location.

1. On the server where you want to uninstall the Shared Client, navigate to the location where you saved the Software Manager, and then double-click `AxiomSoftwareManager.exe`. For example: `C:\AxiomFiles\Axiom_2018_2`. For more information on the Software Manager, see Axiom Software Manager.

   If you did not save a copy of the Software Manager on the server, then you will need to obtain a copy in order to perform the uninstall. You can download Axiom Software installation packages from the Kaufman Hall Support site. In order to uninstall a component, you can use the same version that is currently installed or a higher version. If you need assistance obtaining a copy of the Software Manager, contact Kaufman Hall Software Support.

2. From the **Home** screen of the software manager, click **Manage Software**.
3. In the **Installation Manager** screen, in the **Currently Installed Packages** section, locate the Axiom Shared Client component, and then click **Uninstall**.
4. At the first uninstall confirmation screen, click **Next** to continue.
5. At the **Local Content** screen, specify whether to preserve locally modified files, or delete all package files, and then click **Next**.

By default, **Preserve locally modified files and logs** is selected. This means that any file that was modified after installation, such as log files and .config files, will not be deleted as part of the uninstall. If later you want to reinstall to this same folder location, you will need to manually delete these files and the installation folder.

If you know that you do not need these files, you can select **Remove package folder and all files**. In this case the entire installation folder will be deleted.

6. Click **Uninstall**.

Repairing or modifying client components

Repairing the ClickOnce Client

The Axiom Software ClickOnce Client can be repaired by using the program manager in the Windows Control Panel (**Uninstall or change a program**). Select **Axiom EPM Client**, and then select **Remove** or **Uninstall**. At the prompt, select **Restore the application to its previous state**.

Repairing the Shared Client

You can repair and modify the Axiom Software Shared Client using the Software Manager. When you repair a component, the component is basically reinstalled. You can change any of the installation options.

During the repair process, all configuration files are replaced with the deployment versions, even if they have been locally modified. This is different than the upgrade process, which preserves locally modified configuration files.

To repair or modify the Shared Client:

1. On the server where you want to repair a component, navigate to the location where you saved the Software Manager, and then double-click `AxiomSoftwareManager.exe`. For example: `C:\AxiomFiles\Axiom_2018_2`. For more information on the Software Manager, see Axiom Software Manager.

   If you did not save a copy of the Software Manager on the server, then you will need to obtain a copy in order to perform the repair. You can download Axiom Software installation packages from the Kaufman Hall Support site. In order to repair a component, you must use the same version that is currently installed (if you use a higher version, the component will be upgraded as part of the repair). If you need assistance obtaining a copy of the Software Manager, contact Kaufman Hall Software Support.

2. From the **Home** screen of the Software Manager, click **Manage Software**.
3. In the **Installation Manager** screen, in the **Currently Installed Packages** section, locate the component that you want to repair, and then click **Repair**.

Progress through the installation screens and modify any options as desired.

Configuring Axiom Software

This section provides information on the initial Axiom Software system setup and configuration.

Editing system configuration settings

Axiom Software has a number of configuration settings that can be set on a per system basis. These settings are managed by using the Software Manager.

For the purposes of editing system configuration settings, the Software Manager must be run on the Axiom Application Server. For more information, see Axiom Software Manager.

NOTE: The system configuration settings can also be edited within Axiom Software itself, if desired. To do this, you must set up an Axiom file to use Save Type 4. For more information, see Axiom Software Help: **System administration > System configuration > Updating system configuration settings using Save Type 4**.

To edit system configuration settings:

1. In the Software Manager, click **Installation Manager > Configure System Properties**.
2. If necessary, from the **Application Server** list, select the application server installation.

   In most cases, only one instance of the Axiom Application Server is present on the machine, and you do not need to change anything. This option is for situations where multiple application servers may be installed on the same machine.
3. Edit any of the configuration settings as desired. For more information on the available configuration settings, see System Configuration Settings. For example, you may wish to edit the following:
   - For the **Scheduler_FromEmailAddress** property, enter an email address to use for the "From" address for Axiom email notifications. By default, this is set to `noreply@axiomepm.com`. This address will be used in all cases where a separate "From" address is not specified.
4. Click **OK**.

Resetting the application server cache

The edited configuration settings will not be recognized until the application server cache is reset. The Software Manager will attempt to reset the cache automatically when you save changes to the system configuration settings. (Using Save Type 4 in the software will also automatically reset the cache as part of the save process.)

However, if you ever need to reset the cache manually, you can do so as follows:

1. In the Software Manager, click **Installation Manager > Reset Server Cache**.
2. If necessary, from the **Application Server** list, select the application server installation.

   In most cases, only one instance of the Axiom Software Application Server is present on the machine, and you do not need to change anything. This option is for situations where multiple application servers may be installed on the same machine.
3. Click **Reset**.

TIP: You can also reset the application server cache using the administration features of the Axiom Software Web Client.

Setting up Scheduler

Axiom Software's Scheduler services manage certain system tasks and can also be used to automate user-defined tasks. After Axiom Software is installed, you must complete the Scheduler setup.

This setup is performed using the **Scheduler** dialog in the Axiom Software Client. You must have installed at least one client instance in order to perform these setup steps.

To access the Scheduler dialog:

1. Launch the Axiom Excel Client or the Windows Client. You must log in as a user that has system administrator rights.

   If you started with a new blank database, you can log into the system using the built-in admin user (user name: admin, password: admin). You should change the password of this user after logging in. Once real users have been set up for your implementation, you can delete this user.
2. On the **Axiom** tab, in the **Administration** group, click **Manage > Scheduler**.

   NOTE: If you are using an Axiom packaged product, you can access this feature from the **Admin** tab. In the **System Management** group, click **Scheduler**.

Enabling Scheduler services

Each system has a system Scheduler service that runs on the Axiom Application Server, and one or more manually installed Scheduler services.

The system Scheduler service is installed and activated automatically as part of the Axiom Application Server installation. No special setup steps apply. This service is only used to process system jobs.

The manually-installed Scheduler services must be explicitly enabled within the Scheduler dialog. Even though the service itself is started as part of the Scheduler services installation, these services must be enabled in Scheduler in order to begin processing tasks.

To enable Scheduler services:

1. In the **Scheduler** dialog, on the **Service** tab, click **Servers**.

   You should see at least two entries in the **Servers** tab:

   - *<AppServerName>*-System: This is the system Scheduler service.
   - *<SchedulerServerName>*: This is a manually installed Scheduler service. You will have an entry for each server where you manually installed Scheduler.

2. For each manually-installed Scheduler service, select the service in the list. In the **Configuration details** section, select the **Processing Enabled** check box, and then click **Update**.

   NOTE: The **Configuration details** section also contains several configuration settings for the Scheduler service. We recommend leaving the default settings unless you are instructed to change them by Kaufman Hall Software Support. For more information, see Axiom Software Help: **System Admin > Scheduler > Scheduler administration > Managing Scheduler servers** (or search for AX2542).

These Scheduler servers are now available to process Scheduler jobs.

Configuring Scheduler system jobs

Scheduler provides several system jobs that should be configured as part of your system setup activities. These jobs are created automatically by the Scheduler service when it is started. These jobs control email notifications for Scheduler and other system processes, and cleanup processes for the database.

NOTE: The SMTP Message Delivery job must be configured in order to enable email notifications for Axiom Software. If this job is not configured, then email notifications will be created and saved in the database, but they will not be sent.

To configure the Scheduler system jobs:

1. In the **Scheduler** dialog, on the **Service** tab, click **Scheduled Jobs**.

   You should see the following scheduled jobs where the name starts with **System**:

   - **System.SMTPMessageDelivery**
   - **System.ProcessNotification**
   - **System.SystemDataPurge**

- **System.IndexMaintenance**

2. Double-click a job to open it for editing.
   - In the **Tasks** section of the job, select the task name to access the task settings, and then edit the **Task Details** as necessary. See the following sections for more details on the specific task settings.
   - In the **Notifications** section of the job, configure the email notifications for the job as desired. By default, the jobs are configured to send notifications on error, however, you must specify a valid email address to receive these notifications.
3. **Save** the modified job. The changes will apply the next time the job is processed.

System job overview

The following list provides a brief description of the purpose of each job and its task settings.

SMTPMessageDelivery

Description This job enables email notifications for Scheduler jobs and other system processes, such as process management notifications. Email notifications are stored in the database until the SMTP Message Delivery task picks them up and sends them.

Configuration This task is not operational until you specify the name of a valid SMTP server in your environment. Once you have completed the SMTP server settings, make sure to disable **Test Mode** so that email notifications will be sent. For more details on the task settings, see SMTP Message Delivery task.

Schedule By default, the job is set to execute continuously (once per minute). We recommend leaving it at this frequency to ensure timely delivery of notifications, however, you can set the job to any desired frequency.

ProcessNotification

Description This job enables reminder notifications for process management. These are notifications to remind users of upcoming due dates and overdue tasks.

Configuration This task does not have any editable settings.

Schedule By default, this job is set to execute once per hour. You should not change the frequency of this job.

SystemDataPurge

Description This job purges old data from the system, such as old Scheduler job results, old email notifications, old temp table data, and old audit data. This task should be run regularly to help keep old and unnecessary data from impacting system performance.

Configuration This task is configured to delete items that are older than a specified number of days (by default, 15 days). You can change the default settings for this task if desired. For more details on the task settings, see Purge System Data task.

Schedule By default, this job is set to run every ten minutes from midnight to 4:00 AM. The task is operational as soon as it is created by the Scheduler service, using the default settings.

IndexMaintenance

Description This job maintains the indexes on your Axiom databases (system database and audit database). It reports the current index fragmentation and then reorganizes or rebuilds the indexes as needed, depending on the current level of fragmentation. It also updates table statistics.

Configuration Any changes made to the SQL statements in this system job should only be made with the guidance of Kaufman Hall Software Support and/or your SQL database administrator.

Schedule By default, this task is set to run once per day, at 5:15 AM. The task is operational as soon as it is created by the Scheduler service, using the default settings.

Email notifications for system jobs

By default, most system jobs are configured to send notifications on error, however, you must edit the job to specify a valid email address for the notifications (such as the email address of a system administrator). In the **Notifications** section for the job, edit the email notification settings as desired. The default setting of `{CurrentUser.EmailAddress}` cannot be used because the job is run by the system and therefore does not resolve to a user email address.

NOTE: It is recommended to leave the SMTPMessageDelivery job at the default notification behavior of None. If this job experiences an issue attempting to send email, it likely will be unable to send you an email notification about this error.

Setting up security

This section provides an overview to security setup considerations for Axiom Software.

Creating users in Axiom Software

All users must be set up in Axiom Software security in order to access the system. User setup is performed within the Axiom Software Client.

To access the Security Management dialog:

1. Launch the Axiom Excel Client or the Windows Client. You must log in as a user that has system administrator rights.

   If you started with a new blank database, you can log into the system using the built-in admin user (user name: admin, password: admin). You should change the password of this user after logging in. Once real users have been set up for your implementation, you can delete this user.

2. On the **Axiom** tab, in the **Administration** group, click **Manage > Security > Security Manager**.

   NOTE: If you are using an Axiom packaged product, you can access this feature from the **Admin** tab. In the **System Management** group, click **Security > Security Manager**.

You must have installed at least one client instance in order to perform these setup steps. For more information on how Axiom Software security works, and details on specific security settings, see Axiom Software Help: **System Admin > Security**.

Configuring security options for the installation

Enabling or changing authentication methods

During the application server installation, you had the option to enable various authentication options for use with Axiom Software. If you did not enable these options during the installation but you would like to do so later, or if you need to change any of the configuration settings for these options, you can do so in the Software Manager using **Installation Manager > Configure Authentication Methods**. You can also modify the system configuration settings directly, by using the Software Manager or a Save Type 4 report. For more information on the available authentication settings, see Authentication methods.

Configuring a user lockout threshold

If desired, you can configure a user lockout threshold for Axiom Software, so that user accounts are locked out of the system if they exceed a specified number of failed login attempts. By default, no lockout threshold is defined (unlimited attempts). You can define a user lockout threshold using the **MaxLoginAttempts** system configuration setting. For information on editing system configuration settings, see Editing system configuration settings.

Resetting a user password

You can reset a user's password from within the Software Manager. You might use this functionality if the user has been locked out or has forgotten their password, and you cannot access the Axiom

Software Client to change the password using the Security Management dialog.

To change a user's password, select **Installation Manager > Reset Axiom User Password**. When specifying the user name, you must preface it with the domain name if applicable (for example: domain\username). Changing the user's password using this method also clears the user lockout, if applicable.

Updating your license file

When you first installed Axiom Software, you imported a license file into your system database. You can update this license file using the Software Manager or using the administration features of the Axiom Web Client. For example, you may need to update your license file if you purchase additional licensed users, or if your current license file is about to expire.

As long as your license has not yet expired, you can update it from the Axiom Web Client:

1. In a web browser, navigate to the web page for your Axiom Software installation, to the license update page. For example:

   `http://servername/Axiom/admin/license`

   Where *servername* is the name of your Axiom Application Server, and Axiom is the default virtual directory name.

   You can also reach this area from the Axiom launch page, by clicking **Application Server Administration**, and then **Update Axiom Licenses**. This page is only accessible to system administrators.

   TIP: You can also access this web page from within the Axiom Excel Client or Axiom Windows Client. From the **Axiom** or **Admin** tab, click **Help > About Axiom Software**, and then click the **Update License** link at the top of the dialog.

2. On the Update Axiom Licenses page, click **Choose license file to import**.
3. Navigate to the license file, and then click **Open**.

The new license has been imported into your system. You can see the license details listed on the page.

You can also update your license file from the Software Manager, using **Installation Manager > License Manager**. You must use this method if your license file has expired, because in that case you will not be able to log into the Web Client.

Configuring the service encryption key

Each installation has a service encryption key which was defined as part of the Axiom Application Server installation. If desired, you can change this encryption key later using the **Configure Service Encryption** screen.

1. In the Software Manager, click **Installation Manager > Configure Service Encryption**.
2. If necessary, from the **Application Server** list, select the application server installation.

   In most cases, only one instance of the Axiom Software Application Server is present on the machine, and you do not need to change anything. This option is for situations where multiple application servers may be installed on the same machine.
3. In the **Axiom Server Encryption Key** field, do one of the following:
   - Click **Generate** to generate a new random encryption key. This is the recommended approach.
   - Type your own key. Axiom Software does not enforce any rules on the key string. If you choose to use your own key, it is your responsibility to ensure that the key is of an adequate strength for your organization's security requirements.
4. Click **Update**.

The encryption key is changed for the installation.

TIP: You can use this screen to find out the encryption key if you need it for an installation but you did not retain a record of it. For example, if you installed the Axiom Application Server but forgot to record the key for use in the Axiom Scheduler Service installation. You can come to this screen and place your cursor in the field to read the encryption key.

Reloading system documents

Axiom Software has a number of system documents and templates that are added automatically to new blank systems the first time the new database is upgraded. This includes control sheets for various features, the new report template, the default home file, standard task panes and ribbon tabs, and other documents.

Subsequent document updates are handled as follows:

- The following documents are always updated when a database is upgraded: control sheets, sample task panes and ribbon tabs, and support utilities.
- All other documents can be manually updated as desired using the **Reload System Documents** screen.

To reload system documents:

1. In the Software Manager, click **Installation Manager > Reload System Documents**.
2. If necessary, from the **Application Server** list, select the application server installation.

   In most cases, only one instance of the Axiom Software Application Server is present on the machine, and you do not need to change anything. This option is for situations where multiple application servers may be installed on the same machine.

3. Select the documents that you want to update. When the update is processed, the selected documents will be added to the target system, replacing any existing version of the document.
4. Click **Update**.

The selected documents are updated.

Editing the connection string to the Axiom Software database

The connection string to the Axiom Software database must be defined during the Axiom Software Application Server installation. If necessary, you can modify the connection string later using the **Configure Connections** screen.

For the purposes of editing the connection string, the Software Manager must be run on the Application Server. For more information, see Axiom Software Manager.

NOTE: The Configure Connections screen can only be used to modify application servers that are at the same version as the Software Manager.

To edit the connection string:

1. In the Software Manager, click **Installation Manager > Configure Connections**.
2. If necessary, from the **Application Server** list, select the application server installation.

   In most cases, only one instance of the Axiom Software Application Server is present on the machine, and you do not need to change anything. This option is for situations where multiple application servers may be installed on the same machine.

3. Edit the **Database Server Details** as appropriate:

Item	Description
Server Name	The server name of the database server that hosts the Axiom Software database.
Failover Partner	Optional. The server name of the database server to be used in failover situations. This only applies to cloud service systems; otherwise it should be left blank.
Database Name	The name of the database for Axiom Software.
Login	The login name for the Axiom Software database.
Password	The password for the Axiom Software database.
Update Database user and password	Select this option if you want to change the login name and password to what you have entered in this screen. Otherwise, you must enter the login name and password as they were originally defined.

4. Click **Update**.

Backing up and restoring the Axiom Software database

The Axiom Software database should be backed up regularly using SQL Server backup functionality. Your IT department and/or database administrator should manage this backup as part of their regular backup processes. In addition to regular backups, you should make sure to take a backup before performing any system activity that may result in major database or system changes, such as before upgrading the installation.

The Axiom Software Manager can also be used to take a backup of the database, but the Software Manager's backup feature is only for "one-off" backups, not for regular ongoing backups.

Both related Axiom Software databases—the application database and its corresponding audit database (if standalone)—must be backed up as a set so that they remain in sync.

Managed files are stored in the Axiom Software application database. As long as all Axiom files are managed, then there is no need for any additional network folder or file backups in order to back up Axiom Software systems. If users are saving report files as non-managed files to their local drives or to a network share, these files should be backed up according to your normal file system backup processes.

If you need to restore the database, make sure to restore both related databases from the same backup “set.” The only time that you should restore only an application database is when directed to do so by Kaufman Hall Software Support, to troubleshoot or resolve a specific issue, or when the audit database is embedded in the application database. If the audit database is a standalone database, both database components should be restored together.

You can use standard SQL Server functionality to restore an existing database, or you can use the Axiom Software Manager. The only time that you *must* use the Software Manager to restore a database is when you are creating a new installation or a new system.

After restoring a database, you must always perform a database upgrade (even if you are restoring a database that was using the latest database version). If you restored the database using the Software Manager, the System.SMTPMessageDelivery Scheduler job is automatically set to test mode, so that the newly-restored system does not instantly start sending email notifications. To restore email functionality, you must edit the job in Scheduler and turn off test mode.

Backing up a database using the Software Manager

1. Open the Software Manager on the Axiom Application Server.
2. Click **Database Manager > Backup Databases**. (You can also click **Backup** from the home screen.)
3. In the **Database Server Details** section, complete the following settings:

Item	Description
Database Server	The server name of the database server. If you are not using the default instance, append the instance name with a backward slash (Server\Instance).
Database Name	The name of the database.

4. In the **Options** section, complete the following settings:

Item	Description
Backup Folder	Specify the location for the backup. Paths are relative to the database server. **NOTE:** The Browse button does not apply unless the application server is also the database server.
Include Audit Database	Select this check box if you want to back up the corresponding audit databases for the selected system databases.

5. Click **Create Backup**.

The backup files are saved to the location specified in the backup settings. The backup process creates a SQL backup (.BAK) that is the same as a manual backup using SQL Management Studio.

Restoring a database using the Software Manager

For details on using the Axiom Software Manager to restore a database from backup, see Creating or restoring the database.

Enabling in-memory tables

Axiom Software supports in-memory tables. In-memory tables are stored in the main memory of the database server versus on disk (a "backup" version of the table is stored on disk for recovery purposes). Reading data from memory and writing data to memory can result in significant performance gains over disk-based table access.

Currently, this feature is limited to document reference tables (driver tables and other tables created using Save Type 3). Storing document reference tables in-memory may improve performance for systems with large document reference tables. Systems with smaller document reference tables are less likely to realize any noticeable performance benefit, as these smaller tables are cached on the client by default regardless.

The in-memory table feature has the following requirements and limitations:

- Use of in-memory tables requires SQL Server Enterprise 2014.
- In-memory tables are not audited. If the in-memory feature is enabled, auditing is disabled for document reference tables.

To enable in-memory tables:

1. In the Software Manager, click **Database Manager > Advanced Options**.
2. In the **Database Server Details**, verify that the **Server Name** and the **Database Name** are correct for the Axiom Software database that you want to configure. If not, enter the appropriate information.

   NOTE: You may be prompted to enter credentials for the specified database server, if those credentials have not already been stored in the Software Manager.

3. Select the check box for **Enable In-Memory Tables**.
4. Click **Apply**.

Enabling this option causes the following changes to be made to your database server:

- The Axiom Software database is enabled for Memory Optimized Data.
- A portion of the database server's memory is dedicated for use of in-memory tables. Currently this percentage is set at 3%.

After enabling the feature in the Software Manager, you must recycle the Axiom application pool so that the Axiom Software system recognizes the change. This is done on the Axiom Application Server, using the IIS Manager.

Document reference tables will be created in-memory the next time they are saved after enabling the feature.

Viewing system logs

Axiom Software maintains several logs that can be used to troubleshoot technical issues.

Component	Log file (default location)
Application Server	`C:\Inetpub\wwwroot\Axiom\logs` General application server activity is logged in AxiomServer.log, and Axiom form activity is logged in AxiomWebClient.log. These logs can also be accessed using the Axiom Software Web Client, in the **Application Server Administration > Logging** section.
Scheduler Service	`C:\Program Files(x86)\Axiom EPM\Axiom EPM Scheduler Service\logs` AND `C:\Inetpub\wwwroot\Axiom\scheduler\logs` (for the system Scheduler service)
Client Integration Service	`C:\Program Files (x86)\Axiom EPM\Axiom EPM Cloud Integration Service\logs`
Update Service	`C:\Program Files (x86)\Axiom EPM\Axiom EPM Update Service\logs`

Client	`C:\<WindowsUserDirectory>\<UserName>\AppData\Local\AxiomLogs`
	
	OR
	
	`C:\<WindowsUserDirectory>\<UserName>\My Documents\AxiomLogs`
	
	The client log can also be accessed from within the Axiom Software Client, from the **Help** menu.

Scheduler warnings

The application server checks the Scheduler schedule periodically, and logs any warning conditions to the event log for the application server machine. This logging is intended to warn about events that may indicate that one or more Scheduler servers are not running, or that a job has gotten "stuck." You can monitor for these events using any event log monitoring tool. The event source is Axiom Software.

Changing the logging level

You can temporarily change the logging level for the Axiom Application Server or the Axiom Software Client. You may want to change the logging level to help troubleshoot a specific issue. For assistance in determining the appropriate level of logging to troubleshoot your issue, please contact Kaufman Hall Software Support.

Changing the logging level for the Axiom Application Server

You can change the logging level for the application server using the Axiom Web Client.

1. In a web browser, navigate to the web page for your Axiom Software installation, to the logging. For example:

   `http://<servername>/Axiom/admin/logging`

   Where *<servername>* is the name of the server hosting Axiom Software, and Axiom is the default virtual directory name.

   You can also reach this area from the Axiom launch page, by clicking **Application Server Administration**, and then **Logging**. This page is only accessible to system administrators.

2. On the Logging page, select the check box to **Enable verbose logging for application server**. You can also enable verbose logging for the web client from this location.

Changing the logging level for the Axiom Software Client

You can change the logging level for the Axiom Excel Client or the Axiom Windows Client using the Log Analyzer tool.

1. On the **Axiom** tab, in the **Help** group, click the arrow underneath the Help icon, and then select **Log File Analyzer**.

   NOTE: If you are using an Axiom packaged product, you can access this feature from the **Admin** tab.

2. In the **Log Analyzer** window, click **Log Level** and then select the desired logging level.

Alternatively, the function AxLoggingLevel can also be used to temporarily change the logging level of the Axiom Software Client. To change the logging level, start the client and then type the following function into any file within the client:

`=AxLoggingLevel("LogLevel")`

The client log will return to the default setting the next time that you start the client.

Upgrading Axiom Software

This section details upgrade considerations and the upgrade process for Axiom Software.

Upgrade considerations

Please review the considerations in this section before upgrading to version 2018.2. If you have any questions or if you need assistance with upgrading, please contact Kaufman Hall Software Support.

IMPORTANT: This document details the upgrade considerations when moving from the most recent Axiom Software release of 2018.1 to the new release of 2018.2. If you are upgrading from an earlier version, please also see the release notes for the interim versions for any additional upgrade considerations.

Backward-compatibility considerations

The following backward-compatibility considerations apply when upgrading to version 2018.2.

Updated System Index Maintenance job

The System Index Maintenance job in Scheduler has been updated. The System Index Maintenance job runs regularly to update table indexes and perform other necessary database maintenance tasks.

The existing job in your system will be replaced with the new job during the upgrade. This means that any existing customizations that you have made to the scheduling rules or the notifications will be lost.

Testing and Review Notes

Before upgrading, you can go to Scheduler and review your existing System.IndexMaintenance job for customizations.

- **Notifications**: By default, the job is set to send a notification only on error, to `{CurrentUser.EmailAddress}`.
- **Scheduling Rules**: By default, the job is set to run nightly at 5:15.

If the settings in your job are different than this, make a note of the changes so that you can remake the customizations in the new job after upgrading.

Deprecation of File Watcher feature

The File Watcher feature for scheduling imports has been deprecated. The feature will no longer display in new systems, or in existing systems where it is not already configured. The File Watcher feature was intended to "watch" a designated network folder for updated import files, and then automatically trigger the import. However, issues with the Windows file system functionality made it difficult to configure and maintain successfully.

If your system currently has a defined File Watcher folder in Scheduler, then the File Watcher feature will continue to be available in your system after upgrade and will work as before. However, we urge any customers who are still using this feature to migrate to a different solution.

Testing and Review Notes

If you are using File Watcher, you can verify that the feature is still available after upgrade by opening Scheduler and viewing the File Watchers tab.

Behavior change when displaying lists of column values

This change applies to the GetDataElement function, Grid/ComboBox/RadioButton refresh variables that use a table column, and combo boxes in Axiom forms that use a table column. These features all present lists of column values, either in drop-down lists or selection dialogs.

In previous releases, if you specified the value column using a multi-level lookup, the list of values would be sourced from the lookup table instead of the starting table. For example, if you specified `GL2018.Dept.VP`, the list would display all VPs in the lookup Dept table, instead of just the VPs from the departments listed in the GL2018 starting table. Going forward, the list is now filtered by the starting table, which is the expected behavior for multi-level lookups.

Additionally, these features were optimized to always include the description column by default if the value column is a key column (and no additional columns are specified).

As part of this change, optimizations were made to the process used to read additional columns and filters for these features. In the vast majority of cases, existing entries will continue to work as expected. In rare cases, you may have an additional column or filter that uses invalid syntax and now must be corrected to avoid causing an error.

Testing and Review Notes

In most cases, if a customer does notice this behavior change in an Axiom file, the effect will be positive. Lists that were previously not filtered as expected will be, and description columns will display. In rare cases you may need to correct a value column that was specified incorrectly, or correct invalid syntax in additional columns or a filter. If you know you have files that use these features heavily, you can review them after upgrade to verify the contents of the list.

Names of calculated columns for Data Grids must be unique

Although it was intended and documented that calculated columns in Data Grid components must have unique names, this requirement was not being enforced in Axiom forms. The grid now errors if duplicate calculated column names are detected. The duplicate names must be corrected in order to render the grid.

This is not an issue in the Report Builder, because the column name is handled internally in that environment and is always unique.

Testing and Review Notes

If you have set up any Data Grid components in Axiom forms, you can review them to ensure that all calculated columns have unique names in the `[ColumnName]` field.

Tab display change for file group files in Web Client

File groups have the ability to configure the tab text for files in a file group, by configuring the **Tab Prefix** and the **Tab Column** in the file group settings. However, in previous versions, form-enabled plan files (and other file group files) were not honoring these settings when the forms were opened in the Web Client browser. Instead, the tab text used either the plain file name, or the form title.

Going forward, the Web Client browser now determines the tab text for file group files as follows:

- If a form Title is defined on the Form Control Sheet, this is used.
- Otherwise, the Tab Prefix and Tab Column settings are honored.

This means that as long as no form title is defined, the tab text is now consistent in all clients.

Testing and Review Notes

In most cases, there is nothing to test or review for this item. However, if the tab text for file group files is still different in the Web Client after upgrading, this means that a form title is defined. You can open the affected file as a spreadsheet, go to the Form Control Sheet, and clear the **Title** field at the top of the sheet. For plan files, remember that this change should be made in the template (and will not apply to plan files until they are rebuilt, unless the file group uses virtual plan files). Note that you may need to reset the Axiom Application Server server in order to see the effects of any tab text changes in the Web Client.

Styling change for titles in Axiom2018 skin

The following items in the Axiom2018 skin have been updated to use a dark gray color (style: S1) instead of blue:

- Title bar text (for any component that uses a title bar)
- Title styles for Label components (**page-title** and **page-subtitle**)

This change applies automatically to any Axiom form that uses the Axiom2018 skin. Legacy skins are unaffected and continue to use the blue title color.

Testing and Review Notes

There is nothing to test or review for this item; it is a display change only. For title bars, this is now the standard title text color in the Axiom2018 skin and it cannot be changed. For Label components, if you do not want the new color you can opt to remove the title styles and instead manually apply color and size styles.

Potential impacts on end users

This section summarizes the potential impacts to your end users when upgrading to version 2018.2. 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.

- The basic navigation and toolbars for the Web Client have been updated. If end users are using the Web Client to access web-enabled plan files and reports, the user interface looks slightly different, and a few features have changed location. For more information, see the section on the *Web Client User Interface* in the separate *What's New* document.

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.

Known issues

The new rejection behavior **Return to the previous Edit step** for plan file processes does not work as expected in the release build, and should not be used until it is fixed in an upcoming patch.

Before you upgrade

Certain steps should always be performed before proceeding with any Axiom Software upgrade.

- **Review the release notes.** Make sure you understand the changes in the current release and any documented upgrade considerations. If you are upgrading from an older version, make sure to review the release notes for each interim version as well.

  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 of the release notes 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.

- **Perform the database pre-upgrade check.** The Axiom Software Manager provides a tool to check your database for potential backwards-compatibility issues before upgrade. If issues are found, they must be addressed before performing the upgrade.

  NOTE: This check is performed automatically as part of the Software Updates tool. You do not need to separately perform the check if you are using this automated upgrade process. However, you can perform it manually if you want to proactively check for upgrade issues before actually performing the upgrade.

- **Back up your database.** It is always a good idea to make a backup before performing any major system changes, such as an upgrade. For more information, see Backing up and restoring the Axiom Software database.
- **Make sure users are logged out of the system.** All users should be logged out of the system before performing the upgrade. You can communicate the planned upgrade time to users, and you can also use the System Access feature in the Windows Client or Excel Client to lock out non-admin users.

Performing the database pre-upgrade check

The Pre-Upgrade Check scans your database for known upgrade issues. Keep in mind that this check is not all-encompassing and does not guarantee that no backward-compatibility issues will exist in your system. It tests for known critical issues that can be detected in the database. Other issues may not be detectable with this kind of test or may not be known at this time.

1. In the version 2018.2 Software Manager, click the **Upgrade** icon on the home screen.
2. Confirm the **Database Server Details** at the top of the upgrade screen.
3. Click **Pre-Upgrade Check**.

If the check finishes successfully, then you can continue with the upgrade process. If the check detects any issues, these issues should be addressed before proceeding with the upgrade. Please contact Kaufman Hall Software Support as needed for assistance in resolving these issues.

Upgrading an existing Axiom Software installation

This section explains the process of upgrading an existing Axiom Software installation to version 2018.2.

NOTE: If you are running version 8.2 or earlier, then contact Kaufman Hall Software Support for assistance with the upgrade. Older systems may require special upgrade steps.

Upgrade notes

- In order to upgrade to version 2018.2, your Axiom Software database must be at version 2017.1 or higher. If your database is 2016.4 or earlier, then you must first use a 2017.x Software Manager to upgrade your database to that version. After that, you can use the 2018.2 Software Manager to complete the database and software upgrade.
- If you are upgrading from version 2017.1 or higher, then you can use the Software Updates tool to perform an automated upgrade.

Performing an automated upgrade

If you are upgrading from version 2017.1 or higher, then you can use the Software Updates tool to perform an automated upgrade of the following server components:

- Axiom Software Database
- Axiom Application Server
- Axiom Scheduler Service

NOTE: Access to the Software Updates tool is limited to Axiom Software administrators and to users with the **Administer Updates** security permission. Users do not need to have admin rights to the servers they are upgrading in order to apply updates using the Update Service.

To perform an upgrade using the Software Updates tool:

1. In a web browser, navigate to the web page for your Axiom Software installation, to the update history page. For example:

   `http://ServerName/Axiom/updates/history`

   Where *ServerName* is the name of the Axiom Application Server, and Axiom is the default name of the virtual directory.

   Administrators can also access this area from the Axiom Software launch page, by clicking **Application Server Administration** and then **Software Updates**.

   TIP: You can also access this page from within the Axiom Excel Client or Axiom Windows Client. From the **Axiom** tab, in the **Administration** group, click **Manage > Software Updates**. However, once you launch the page from this location, you should close the desktop client before performing any software upgrades.

   The **Software Updates** page opens. This page lists the details of updates you have applied in the past, and enables installing new updates. If you have not yet installed any updates using the Update Service, then this page will not have any history.

2. On the Software Updates page, click **Check for platform updates**.

> **NOTE:** This discussion only covers installing Axiom Software platform updates. If you have licensed a packaged product that uses the Axiom Software platform and you want to update it, please see the instructions provided with that product. The **Check for product updates** option only displays if you have licensed such a product.

The **Platform Update Manager** page opens. From here you can see your current Axiom Software platform version, download new updates, and apply staged updates.

3. When the Platform Update Manager page is opened, it automatically checks for any new platform updates. If an update is found, it is listed under **Stage a platform update with one of the following versions from the portal**.

   From here, you can do the following:

   - To view the changes in the update, click **[release notes]**. This opens the PDF release notes document. If the update is a patch release, the items fixed in this patch are listed in an appendix at the end of the document.
   - To download the update and make it available for installation, click **Download and Stage**.
   - If you have a copy of an update stored locally—for example, if you manually downloaded an installation package from the Kaufman Hall Support site, or if Kaufman Hall Software Support sent you a package—then you can click **Browse for platform installer** to browse to that ZIP file and stage it for installation.

4. Once the update is downloaded, it will display as the **Staged Update** at the top of the page. To install the update, go to the **Apply the staged update** section at the bottom of the page, and then click **Install version *number***.

5. Axiom Software prompts you to confirm that you want to upgrade the platform. Click **OK**.

You are returned to the Software Updates page. This page updates periodically to show the latest status of the upgrade, however, in some cases you may need to manually refresh the page. Keep in mind that if you refresh the page while the application server is still being upgraded, you may see an error because the application server is currently down. If this occurs, wait a few minutes and then refresh the page again.

The database upgrade is performed first. This process includes performing the database Pre-Upgrade Check. If any issues are found by this check, then the upgrade will fail and the issues are noted in the log file. The update status details include a link to open this log file. Once these issues have been addressed, you can perform the upgrade again.

Once the upgrade is finished, be sure to check the status of all items to make sure everything completed successfully. If some portion of the upgrade did not complete successfully, then you may need to manually upgrade some or all components. Please contact Kaufman Hall Software Support with any questions.

Components that cannot be upgraded using the Software Updates tool

The Software Updates tool does not upgrade the Axiom Shared Client or the Axiom Update Service. If necessary, these components must be upgraded manually.

- If you are using the Axiom Shared Client, see Upgrading the Axiom Shared Client. This component must be upgraded.
- The Axiom Update Service is the server component that enables use of the Software Updates tool. Running the Update Service does not upgrade the Update Service itself. In most cases it is not necessary to upgrade this component when performing other server upgrades. However, if you want to upgrade the component, you can do this manually on each server where it is installed. See Installing or upgrading the Update Service.

Performing a manual upgrade

Systems running 2016.4 or older must perform a manual upgrade. Systems running 2017.1 or higher can optionally perform a manual upgrade instead of using the Update Service.

Upgrading the database to 2017.x

In order to upgrade to version 2018.2, your Axiom Software database must first be upgraded to any 2017.x version. You must obtain a copy of any 2017.x Software Manager and upgrade your database before proceeding with the 2018.2. If you need assistance obtaining this older version, please contact Kaufman Hall Software Support.

If your system is already running 2017.1 or higher, then you can skip this step and upgrade directly to 2018.2.

1. Extract the contents of the version 2017.x installation package to the application server. For example, if you have an existing `C:\AxiomFiles` folder on the server, place the installation files a sub-folder named `\Axiom_v2017`. Then go to `C:\AxiomFiles\Axiom_2017\` and run `AxiomSoftwareManager.exe`.
2. In the 2017.x Software Manager, click the **Upgrade** icon on the home screen.
3. Verify and complete the following properties on this screen:
    - Confirm that the **Database Type** and **Server Name** are correctly configured and pointing to the server where your Axiom Software application database is stored.
    - From the **Database Name** list, select the name of the application database to upgrade. If the server only has one Axiom Software application database, then that database will be selected by default.
4. Click **Upgrade**.

Once you have upgraded the database to 2017.x, you can move on to the 2018.1 Software Manager. It is not necessary to upgrade server or client components to 2017.x.

Upgrading the database to 2018.2

Before upgrading the Axiom Software server software, you must upgrade the database.

1. Extract the contents of the version 2018.2 installation package to the application server. For example, if you have an existing `C:\AxiomFiles` folder on the server, place the installation files a sub-folder named `\Axiom_v2018_2`. Then go to `C:\AxiomFiles\Axiom_2018_2` and run `AxiomSoftwareManager.exe`.
2. In the Software Manager, click the **Upgrade** icon on the home screen.
3. Verify and complete the following properties on this screen:
   - Confirm that the **Database Type** and **Server Name** are correctly configured and pointing to the server where your Axiom Software application database is stored.
   - From the **Database Name** list, select the name of the application database to upgrade. If the server only has one Axiom Software application database, then that database will be selected by default.
4. Click **Upgrade**.

When the upgrade is complete, a confirmation message displays.

Upgrading server components to 2018.2

Once the database has been upgraded to 2017.x, you can upgrade the Axiom Application Server and Scheduler Service to version 2018.2.

1. Upgrade the Application Server:
   - On the home page of the Software Manager, click **Manage Software**.
   - In the **Currently Installed Packages** section, locate the entry for the Application Server, and then click **Upgrade**.
   - On the Axiom Application Server Installer screen, click **Upgrade**.

   The upgrade process will remember your previous installation settings.
2. Upgrade the Scheduler Service:
   - If you have not already extracted the contents of the version 2018.2 installation package to the Scheduler server, do so. For example, if you have an existing `C:\AxiomFiles` folder on the server, place the installation files a sub-folder named `\Axiom_v2018_2`. Then go to `C:\AxiomFiles\Axiom_2018_2` and run `AxiomSoftwareManager.exe`.
   - On the home page of the Software Manager, click **Manage Software**.
   - In the **Currently Installed Packages** section, locate the entry for the Scheduler Service, and then click **Upgrade**.
   - On the Axiom Scheduler Service Installer screen, click **Upgrade**.

   The upgrade process will remember your previous installation settings.

   Perform this upgrade on each Axiom Scheduler Service installed in your environment.

Before proceeding with client installations and post-upgrade setup, verify that you can access the Axiom Software launch page. If you are not able to load this web page, contact Kaufman Hall Software Support for assistance.

Installing or upgrading the Update Service

If you have not already installed the Update Service, you can do this as part of manually upgrading your servers to 2018.2. Once installed, you can use this service to find, download, and install software updates. The Update Service must be installed on each server where either of the following components is installed: Axiom Application Server or Axiom Scheduler Service. For information on installing the Update Service, see Installing Axiom Update Service.

This service is not required for operation of Axiom Software, however, it is required if you want to perform subsequent upgrades using the Update Service. If you do not install this component, then you will not be able to use the service to check for new updates and to install those updates. You can still perform upgrades manually using the Software Manager if desired.

If the Update Service is already installed on your servers, it is not required to upgrade it to the latest version, although you can if desired. To upgrade the Update Service:

1. Extract the contents of the version 2018.2 installation package to each server where the Updated Service is installed. For example, if you have an existing `C:\AxiomFiles` folder on the server, place the installation files a sub-folder named `\Axiom_v2018_2`. Then go to `C:\AxiomFiles\Axiom_2018_2` and run `AxiomSoftwareManager.exe`.
2. On the home page of the Software Manager, click **Manage Software**.
3. In the **Currently Installed Packages** section, locate the entry for the Update Service, and then click **Upgrade**.
4. On the Axiom Update Service Installer screen, click **Upgrade**.

Upgrading individual client workstations

Individual client workstations will be upgraded automatically the next time the Axiom Software client is launched on that workstation. No special setup is required.

For more information on deployment using the ClickOnce installer, see Installing the Axiom Software Client on client workstations.

Upgrading the Axiom Shared Client

If you are deploying the Axiom Software Client via a shared client server (Citrix or Terminal Server), then you must upgrade your Shared Client installation to version 2018.2.

1. Extract the contents of the version 2018.2 installation package to the shared client server. For example, if you have an existing `C:\AxiomFiles` folder, place the installation files a sub-folder

named `\Axiom_v2018_2`. Then, go to `C:\AxiomFiles\Axiom_2018_2` and run `AxiomSoftwareManager.exe`.

2. On the home page of the Software Manager, click **Manage Software**.
3. In the **Currently Installed Packages** section, locate the entry for the Shared Client, and then click **Upgrade**.
4. On the Axiom Shared Client Installer screen, click **Upgrade**.

The upgrade occurs automatically with no further prompts. All installation settings are remembered from the original install.

Upgrading Axiom add-ins for PowerPoint and Word

The Axiom add-ins for Word and PowerPoint will be upgraded automatically when the Axiom Software client is upgraded.

System Configuration Settings

The Axiom Software database stores several system configuration settings that can be edited if needed. For more information on how to change these settings, see Editing system configuration settings.

The following system configuration settings are available:

ADONetBatchSize

Default True 100

Description Specifies the batch size for update statements. This should only be changed on the advice of Kaufman Hall Software Support.

AllowAmbiguousAlternateAggregationAndColumnFilterFieldDefinitions

Default value False

Description Specifies whether unsupported combinations of alternate aggregations and column filters can be run in an Axiom query. By default, this is False, which means that the Axiom query will error if an unsupported condition is found. The True case is only intended for situations where an existing report uses these unsupported combinations and the customer wants to continue to be able to run the report, understanding the limitation.

AllowBlanksToBeDataRowSeparators InAQDataUpdate

Default value True

Description Specifies whether blank rows cause duplicate records in an Axiom query data range to be treated as contiguous or not (True/False). This is for purposes of determining update behavior for duplicate records. By default, blank rows are treated as data separators and each duplicate row will be updated.

If disabled, then blank rows are ignored and the duplicate records are treated as contiguous, which means only the first row in the contiguous block will be updated.

AllowShowExcel

Default value True

Description Specifies whether the icon to install / launch the Axiom Excel Client shows on the Axiom Software launch page (True/False). By default the icon is available.

If disabled, the icon will be hidden and therefore users cannot launch the Excel Client from the launch page. Users can still launch the client via other means if it is installed (such as a desktop shortcut or a dedicated URL).

This setting can be modified using the System Configuration page in the Web Client.

AllowShowPowerPoint

Default value True

Description Specifies whether the icon to install / launch the PowerPoint Add-In shows on the Axiom Software launch page (True/False). By default the icon is available.

If disabled, the icon will be hidden and therefore users cannot install or launch the PowerPoint add-in from the launch page. Users can still install and launch the add-in via other means (such as by opening a PowerPoint file saved within the Axiom Software database).

This setting can be modified using the System Configuration page in the Web Client.

AllowShowWord

Default value True

Description Specifies whether the icon to install / launch the Word Add-In shows on the Axiom Software launch page (True/False). By default the icon is available.

If disabled, the icon will be hidden and therefore users cannot install or launch the Word add-in from the launch page. Users can still install and launch the add-in via other means (such as by opening a Word file saved within the Axiom Software database).

This setting can be modified using the System Configuration page in the Web Client.

AuthenticationDomainSelectionListRequired

Default value False

Description Specifies whether the authentication domain selection list always displays on the login screen (True/False). By default, the selection list only displays when it is necessary (meaning only when there are duplicate user names defined in Axiom that use different domains). If you want the domain selection list to always show, then set this to True.

AutoCastFloatColumnsDuringAggregation

Default value False

Description Specifies treatment of numeric columns when data is aggregated by a query to the database. This should only be changed on the advice of Kaufman Hall Software Support.

AutoUpdateProcessTaskPane

Default value True

Description Specifies whether the Process task pane automatically refreshes in response to process updates that affect the user (True/False). By default the task pane automatically refreshes.

If disabled, then the Process task pane does not automatically refresh. Instead, a message displays at the top of the task pane to inform the user that the process has updates and the user should refresh the task pane to see them. The user can click the message to refresh.

This setting should only be changed to False if system performance is being affected by the automatic process updates, which should be rare.

AxiomSignalRServerAddress

Default value <Blank>

Description The URI of the server used to control IPC traffic for Axiom Software. By default, when no value is specified here, the Axiom Application Server for the installation is used.

This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

ClickOnceClientNameExcel

Default value Axiom EPM Excel Client

Description The name of the shortcut for the Excel Client when using ClickOnce installations. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

ClickOnceClientNameWindows

Default value Axiom EPM Windows Client

Description The name of the shortcut for the Windows Client when using ClickOnce installations. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

ClickOnceShortcutLocation

Default value DesktopAndStartMenu

Description The location where Axiom shortcuts will be placed when using ClickOnce installations. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

Available options are: **DesktopAndStartMenu**, **DesktopOnly**, **StartMenuOnly**.

ClickOnceShortcutType

Default value CurrentClient

Description Specifies whether shortcuts are created when using ClickOnce installations, and if so what type. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

Available options are: **None**, **Generic**, **CurrentClient**, **Both**. See the *Installation Guide* for more information on what these options mean.

CreateKeyIndexesOnTemporaryTables

Default value True

Description Specifies whether indexes are created for key columns of temporary tables (True/False). This should only be disabled on the advice of Kaufman Hall Software Support.

> **NOTE:** By default, Axiom Software attempts to create columnstore indexes on temporary tables (attempting clustered first, then non-clustered). This setting is only honored if the system is not able to create the columnstore indexes.

CreateNonKeyIndexesOnTemporaryTables

Default value True

Description Specifies whether indexes are created for non-key columns of the import temptable. This should only be disabled on the advice of Kaufman Hall Software Support.

> **NOTE:** By default, Axiom Software attempts to create columnstore indexes on temporary tables (attempting clustered first, then non-clustered). This setting is only honored if the system is not able to create the columnstore indexes.

CriticalErrorRegularExpression

Default value Object reference not set

Description Defines error text to match on for purposes of flagging critical errors in server logs. By default, any error messages containing this text are considered critical. This should only be changed on the advice of Kaufman Hall Software Support.

DatabaseIsCaseSensitive

Default value False

Description Specifies whether case-sensitivity should be recognized for SQL Server databases. This should only be enabled if your SQL Server database collation is case-sensitive.

DefaultColumnValue_Boolean

Default value 0 (meaning False)

Description Defines the default value for Boolean columns. You can change this to 1 for True, or blank for null. It is not recommended to use null as the default for Boolean columns unless you have a particular use case that requires it.

If changed, the new value only applies to new columns created going forward. Existing columns will continue to use the default value that was set when they were created.

DefaultColumnValue_Date

Default value <Blank> (meaning null)

Description Defines the default value for Date columns. You can change this to any valid default value for Date columns.

If changed, the new value only applies to new columns created going forward. Existing columns will continue to use the default value that was set when they were created.

DefaultColumnValue_DateTime

Default value <Blank> (meaning null)

Description Defines the default value for DateTime columns. You can change this to any valid default value for DateTime columns.

If changed, the new value only applies to new columns created going forward. Existing columns will continue to use the default value that was set when they were created.

DefaultColumnValue_Number

Default value 0

Description Defines the default value for Integer columns (all types) and Numeric columns. You can change this to any valid default value, including blank for null. It is not recommended to use null as the default for number-based columns unless you have a particular use case that requires it.

If changed, the new value only applies to new columns created going forward. Existing columns will continue to use the default value that was set when they were created.

DefaultColumnValue_String

Default value ''

Description Defines the default value for String columns. You can change this to any valid string value. Single quote marks are required.

> **NOTE:** Although it is possible to set the String column default to blank for null, Axiom Software does not differentiate between null values and empty string values in String columns within the spreadsheet environment. Therefore it is recommended to leave the default of empty string if you want the default to be null (blank).

If changed, the new value only applies to new columns created going forward. Existing columns will continue to use the default value that was set when they were created.

DefaultEmailClientName

Default value Outlook

Description Specifies a custom name for the default email client, as displayed when using the **Email Workbook** feature.

If desired, you can change this name to a different email client used by your organization, or you can clear out the setting and leave it blank. If blank, then the text "Default E-Mail Client" will display in the dialog for this option.

The email client option is only available to users who are running the Axiom Desktop Client on their client machines, using the ClickOnce installation type. When using the shared client, emails must be sent using the Axiom server.

DefaultFilterType

Default value Includes

Description Specifies the default comparison method for filtering "simple view" pick lists, such as when using Choose Data Element. Available options are: **BeginsWith** or **Includes**.

DefaultGetDataNoValueErrorMessage

Default value <Blank>

Description Specifies the return value when the parameters of a GetData function use valid syntax but the function does not return any data. You can change this to any text that you want to display in this situation. This return value can be overridden within each individual GetData function.

DefaultGetDataSQLErrorMessage

Default value #ERR

Description Specifies the return value when the parameters of a GetData function use invalid syntax, resulting in a SQL error. You can change this to any text that you want to display in this situation. This return value can be overridden within each individual GetData function.

DisableHashBytesCheck

Default value False

Description Specifies whether the hashbytes check is disabled. This should only be changed on the advice of Kaufman Hall Software Support.

EnableFreeThreadingInUserFunctions

Default value True

Description Specifies locking behavior for Axiom functions. This should only be disabled on the advice of Kaufman Hall Software Support.

EnableLegacyAQMode

Default value False

Description Specifies whether to use the legacy method for creating database queries for Axiom queries (True/False). This is for backward-compatibility only and should never be manually enabled.

If enabled, then the database queries for Axiom queries are created using the rules in place prior to version 5.1. When you upgrade from a pre-5.1 system to the current version, your system will be automatically set to this mode if the upgrade script detects that your system has the potential for a certain type of query ambiguity (where a specified lookup column potentially exists on more than one lookup table). In order to disable legacy mode, you must modify any affected files to use fully qualified syntax to specify the intended lookup table. Please contact Kaufman Hall Software Support for more information.

EnableLegacyWorkflowEngine

Default value False

Description Specifies whether the legacy Workflow feature is visible in the system (True/False). By default, the Workflow feature is hidden and cannot be used. Plan file processes in Process Management should be used to manage plan files through a set of defined steps.

If enabled, then the Workflow feature is visible and can be used. This should only be enabled in older systems with existing workflows, where customers have not yet had the opportunity to convert to using plan file processes. When older systems are upgraded to version 2016.2 or later, this setting is automatically set to True if the system has existing workflows.

EnablePasswordPolicy

Default value True

Description Specifies whether password rules are enforced (True/False). By default, passwords must meet the rules defined in the PasswordRegularExpression setting. If disabled, then any password is valid.

NOTE: If enabled, password rules are only enforced when defining new passwords. If the system contains existing passwords that not meet the rules when this setting is enabled, these existing passwords will continue to be valid.

ETLMaxRows

Default value 500

Description Defines the maximum number of temp table rows that will be displayed to the user when running an import using the Allow Pauses option. This setting should only be changed on the recommendation of Kaufman Hall Software Support. The value cannot be higher than 5,000.

ExcelAddinStartupTimeout

Default value 00:01:00 (meaning one minute)

Description Defines the timeout value when starting up the Excel Client and the Windows Client. If the client does not start within this length of time, the startup routine is canceled and an error message displays to the user. This should only be changed on the advice of Kaufman Hall Software Support.

ExcelWorksheetPasswordProtectionEnabled

Default value True

Description Specifies whether or not worksheet protection is applied with a password (True/False). By default, when a sheet is designated as protected via the Control Sheet, the protection requires a password to remove it manually (Axiom-controlled features can be used to remove the protection without entering a password).

If disabled, then the sheet is still protected but the protection can be removed manually without a password.

ExtendedDBCommandTimeout

Default value 216000

Description Defines the timeout value, in seconds, before terminating an attempt to execute a SQL command. This should only be changed on the advice of Kaufman Hall Software Support.

FileProcessingSaveDataDefaultBatchSize

Default value 7000

Description Defines the number of records to process at a time when performing a save-to-database using file processing. This setting should only be changed on the advice of Kaufman Hall Software Support.

FileWatcherEnabled

Default value False

Description Specifies whether File Watcher features are available in the Scheduler dialog. This should only be set to True for backward-compatibility purposes, for customers who are actively using the feature and have not yet had a chance to implement a different solution. The feature is deprecated for new installations.

ImportSaveBatchSize

Default value 1000000

Description Defines the number of rows to save in each batch when importing data. This setting applies when inserting or updating rows in the destination table. This setting should only be changed on the advice of Kaufman Hall Software Support.

IncludeNonKeysColumnsOnTemporaryTable Index

Default value True

Description Specifies whether non-key columns are included in the non-clustered index on temporary tables. This setting should only be changed on the advice of Kaufman Hall Software Support.

IntacctPageSize

Default value 500

Description Defines the number of records to be processed per batch when importing data from Intacct. The value can be set from 100 to 1000. This setting should only be changed on the advice of Kaufman Hall Software Support.

InvalidPasswordErrorMessage

Default value <Blank>

Description Defines the message to display when creating a new password if that password does not meet the rules. This should be left blank to use the default message which details the default password rules. If the rules have been customized with the assistance of Kaufman Hall Software Support, then you can define a custom message that details these rules.

IsPackageIntegrationServer

Default value False

Description This setting relates to an internal Axiom Software tool and is not for customer use.

LDAPAllowedSuffixes

Default value <Blank>

Description Defines the allowed suffixes for LDAP Authentication, used if LDAP Authentication is enabled. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

LDAPAuthEnabled

Default value False

Description Specifies whether LDAP Authentication is enabled for the system (True/False). If enabled, then the LDAPConnectionString must be specified. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

LDAPConnectionString

Default value <Blank>

Description Defines the connection string to the LDAP server, used if LDAP Authentication is enabled. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

LegacyWorkflowAdminMode

Default value False

Description Specifies whether admin are treated using pre-7.2 behavior for purposes of determining workflow stage owners when the assignment is through a role. This is for backward-compatibility only and should not be manually enabled.

By default, administrators are treated the same way as other users for this purpose. If enabled, then administrators will automatically be stage owners if they are members of the assigned role, regardless of whether they have a permission set with **Interacts with Process Management** enabled.

MapF9ToAxiom

Default value True

Description Specifies whether F9 performs an Axiom refresh in addition to calculating the workbook. By default, F9 will refresh all sheets in the workbook, and Shift+F9 will refresh the current sheet.

If disabled, then the native F9 behavior of the Microsoft Excel version or the Windows Client applies.

MaxAQRows

Default value 10000

Description Defines the maximum number of rows to return for an Axiom query. This setting is intended to prevent users from accidentally bringing in an extremely large number of rows, potentially resulting in excessive processing times or system errors. If the number of rows in the query exceeds the MaxAQRows setting, the user is warned of this and asked if they want to continue.

NOTES:

- The only user options are to cancel the query or continue with the full number of rows. This setting defines the threshold for the warning, it does not limit the query to the specified number of rows.
- The warning only applies when users manually refresh Axiom queries. If the query is processed by Scheduler, then processing will fail if the query exceeds the threshold.

This setting can be overridden on a per query basis, on the Control Sheet.

MaxChooseValueRows

Default value 1000

Description Defines the maximum number of rows that can be displayed in the Choose Value dialog. This dialog is used by several features to present a list of values for user selection, such as the GetDataElement function and refresh variables. The limit only applies when the dialog is showing the "full grid view"—meaning, the dialog shows more columns than just the key column and description.

MaxConsecutiveCutnPasteWithoutWaiting

Default value 50

Description Defines how many consecutive cut and paste actions can occur before the system stops and pauses for a second. This setting has to do with system-controlled cut and paste actions such as when creating snapshot copies. Too many consecutive actions may cause certain environments to experience memory quota errors. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaxExcelCellsToProcessInAQBatch

Default value 10000

Description Defines the maximum number of cells to process at a time when refreshing a vertical Axiom query. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaxExcelCellsToProcessInSingleArray

Default value 100000

Description Defines the number of cells in a workbook that are processed at a time when saving to the database. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaxFileAttachmentSizeKB

Default value 10000

Description Defines the maximum size for a single file attachment. This limit is enforced when users upload attachments for plan files.

When uploading multiple attachments at a time in the Web Client, the total size of all attachments must be less than 50MB. This can be configured separately if needed by using the maxRequestLength property in the web.config file for the Axiom Application Server.

MaxHierarchyRowSize

Default value 50000

Description Defines the maximum row size for a hierarchy. If a hierarchy is created for a table with greater than 50,000 rows, then the hierarchy name will display in the Filter Wizard and Quick Filter, but when expanded a message will display to the user explaining that the hierarchy has too many rows and therefore the individual elements cannot be displayed.

If needed you can change this setting to a larger row size, however, large numbers of rows in a hierarchy may cause out-of-memory errors on the client.

MaximumErrorsToReturnFromSaveOperations

Default value 10000

Description Defines the maximum number of errors to return when a save-to-database operation occurs. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaximumRowsAllowedThroughCopyTableData

Default value 250000

Description Defines the maximum number of rows that can be copied when using the Copy Table Data feature. Copying tables with larger numbers of rows may cause performance issues. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaxLoginAttempts

Default value 0 (meaning unlimited)

Description Defines the maximum number of login attempts before a user is locked out. By default, users have unlimited login attempts. You can change this to a set number of login attempts to comply with your organization's security policies.

MaxRecursionCount

Default value 10

Description Defines the maximum number of recursive calculations for GetData functions. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaxSaveDataRowsInClientMemory

Default value 34000

Description Defines the maximum number of save data rows that are stored in memory on the client. If the maximum is reached, the data rows are sent to the server and cleared from the client, and then the save process continues. The intent of this setting is to prevent out of memory errors on the client when saving very large sets of data. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaxSaveDataToOutputSheetRowsInClient Memory

Default value 250000

Description Defines the maximum number of save data rows that are stored in memory on the client, for purposes of placing them on an output sheet in the file. This setting only applies when using multipass file processing with the **Save to Output Sheet** option. If Axiom Software determines that the total number of rows for the process will exceed this limit, a message is presented to the user and the process is stopped. This setting should only be changed on the advice of Kaufman Hall Software Support.

MaxSystemCurrentPeriod

Default value 12

Description Defines the maximum number that the system current period can be set to. Individual tables can be set to higher current periods if necessary. For example, most tables may use 12 periods, but you may have a table with payroll data that uses 26 periods.

MaxTableColumnNameLength

Default value 0 (meaning use system default)

Description Defines the maximum length of table and column names. The system default is 50 characters. You can specify a different maximum size if needed. However, these names will be used in Axiom queries and Axiom functions to query data, so they should be descriptive and short.

MaxTableRowsToOpenInSpreadsheet

Default value 50000

Description Defines the maximum number of records to be returned within Open Table in Spreadsheet. This can be set to a larger number if desired, however, returning larger amounts may result in significant performance issues.

NeverDisableQueryAggregation

Default value True

Description Controls SQL query aggregation behavior in Axiom Software. This setting should only be changed on the advice of Kaufman Hall Software Support.

NumberOfPrincipalFiltersToValidateForBulkSave

Default value 5

Description Specifies the number of filters that are validated when saving user permissions in bulk via Open Security in Spreadsheet. This setting should only be changed on the advice of Kaufman Hall Software Support.

OpenIDAuthenticationEnabled

Default value <Blank>

Description Specifies whether OpenID Authentication is enabled for the system (True/False). This option is initially configured during the Axiom Application Server installation, and can be subsequently changed by repairing the installation.

PackageIntegrationServerURL

Default value 50000

Description This setting relates to an internal Axiom Software tool and is not for customer use.

PackageManagerDefaultValuesThreshold

Default value 0

Description This setting relates to an internal Axiom Software tool and is not for customer use.

PasswordRegularExpression

Default value <Custom string used to define default rules>

Description Defines the password rules to be enforced if **EnablePasswordPolicy** is set to **True**. The built-in rules are as follows:

- Must be at least 8 characters long
- Must contain at least 1 upper-case letter and at least 1 lower-case letter
- Must contain at least 1 non-alphabetic character (a number or a symbol)

Axiom Software does not provide functionality for customers to change these rules. If you need to enforce password rules and use different rules, please contact Kaufman Hall Software Support for assistance.

PlatformUpdateURL

Default value <URL to software support portal>

Description Defines the URL to check for platform updates. This value should not be manually changed except as directed by Kaufman Hall Software Support.

ProductUpdateURL

Default value <Blank>

Description Defines the URL to check for product updates. This value should not be manually changed except as directed by Kaufman Hall Software Support.

ReleaseJobLocksOnMIAScheduler

Default value True

Description Specifies whether Axiom Software can break a Scheduler Server's lock on a job if that server reports as MIA (True/False). This should only be disabled on the advice of Kaufman Hall Software Support.

RemoteDataConnectionBatchSize

Default value 10000

Description Defines the number of rows to be sent in each batch between the Axiom Application Server and the Axiom Cloud Integration Service. This setting should only be changed on the advice of Kaufman Hall Software Support.

RestrictSaveAsLocalForManagedDocs

Default value False

Description Specifies whether **Save As (Local)** is available for managed documents (True/False). By default, Save As (Local) is available for eligible documents.

If you want to remove this option for Axiom managed documents, change this setting to True. When a managed document is active, the Save As (Local) option will no longer appear on the **Save** menu of the Axiom ribbon, or when right-clicking the file tab in the navigation pane.

Administrators can still save a file locally by using the **Export** option in Axiom Explorer.

SAMLAuthenticationEnabled

Default value False

Description Specifies whether SAML Authentication is enabled for the system (True/False). If enabled, then the SAMLUserNameHeader must be specified. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed by repairing the installation.

SAMLUsernameHeader

Default value HTTP_EPPN

Description Specifies the user name header for SAML when SAML Authentication is enabled. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

SAMLUsernameSuffixPreserved

Default value False

Description Specifies whether user names defined in Axiom include an @suffix for the SAML identity provider (True/False). By default, it is assumed that Axiom user names do not include a suffix. Set this to True if Axiom user names include a suffix. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

SaveRetryCountOnDeadlock

Default value 3

Description Specifies how many times the system will attempt to save data to the database after encountering a deadlock error. This setting should only be changed on the advice of Kaufman Hall Software Support.

Scheduler_AutomationEngine

Default value WebPreferred

Description Specifies when the Web Engine should be used for Scheduler job processing:

- **WebAlways**: The Web Engine is always used for Scheduler job processing.
- **WebPreferred**: The Web Engine is the preferred spreadsheet processing engine, but Excel can optionally be chosen for specific tasks. The Web Engine will be selected for all spreadsheet tasks by default (except for those tasks which require Excel).
- **WebOptional**: Excel is the preferred spreadsheet engine, but the Web Engine can optionally be chosen for specific tasks. Excel will be selected for all spreadsheet tasks by default.

NOTE: Using Excel on the Scheduler server is no longer officially supported. This configuration setting refers to an obsolete feature.

Scheduler_FromEmailAddress

Default value noreply@axiomepm.com

Description Defines the "From" email address to use for any email notifications that do not have a separate specified "From" email address (for example, process management email notifications).

This email address must be specified in order to enable these email notifications. If no email address is specified, the SMTP Email Delivery task will experience an error when attempting to deliver the notifications.

NOTE: For installations that are using subsystems, the system variable `{Scheduler.FromEmailAddress}` may resolve to a subsystem administrator email address instead of the Scheduler "from" email address.

SchedulingBehaviorTimezone

Default value <Blank>

Description Specifies the time zone used when determining the next execution of a scheduled job. By default, if this setting is left blank, the local time zone is used. This setting is primarily for use in Axiom cloud service systems and will be configured by Kaufman Hall Software Support.

ShowRememberMe

Default value True

Description Specifies whether the Remember Me option is present on login screens (True/False). By default, this option is available. If disabled, then Remember Me will be hidden on login screens, meaning that users must enter their credentials each time they launch Axiom Software.

If you disable this option after users have already used Remember Me, their current settings will not be cleared. Each user's credentials will continue to be remembered until they clear the credentials by logging out. Credentials are stored separately for the Web Client versus the Desktop Client, so if a user has saved credentials for both environments then they must log out of both. For the Desktop Client, the only way to log out is to use the Word or PowerPoint add-in, because the Excel and Windows Clients do not have a log out feature.

This setting can be modified using the System Configuration page in the Web Client.

ShowWarningIfMissingAQTags

Default value True

Description Specifies whether missing `[aq#]` tags for active Axiom queries trigger a warning on refresh (True/False).

The False setting is intended for backward-compatibility only. If warnings are being triggered in many existing files, you can disable this setting until you are able to correct the Axiom query configuration within the affected files. If the [aq#] tag was deliberately hidden using a formula as a means of dynamically disabling a query, the file should be updated to instead use the Active setting for the query. Please contact Kaufman Hall Software Support for assistance as needed.

ShowWarningOnGetDataProcessingFailure

Default value True

Description Specifies whether the circular reference warning displays when Axiom Software detects a failure in processing GetData functions. If disabled, then no warning message displays. This setting should only be changed on the advice of Kaufman Hall Software Support.

SignalRClientInvalidationLagTime

Default value 1000

Description Specifies the time zone used when determining the next execution of a scheduled job. By default, if this setting is left blank, the local time zone is used. This setting is primarily for use in Axiom cloud service systems and will be configured by Kaufman Hall Software Support.

SubsystemsEnabled

Default value False

Description Specifies whether the security subsystem feature is enabled (True/False). By default, security subsystem features do not appear in the user interface, and subsystems cannot be created.

If enabled, then the security subsystem features become available in the user interface.

NOTE: If you set this option to True, create subsystems and make user assignments, and then set it back to False, the existing subsystem restrictions will still apply to assigned users. This option simply hides the feature in the user interface; it does not stop any existing subsystems from being enforced. If you do not want to use subsystems anymore, you should remove all user assignments and delete the subsystems before disabling the feature.

SuspendDrawingWhileScreenUpdatingOff

Default value False

Description This configuration setting is used to assist in troubleshooting screen drawing issues. This setting should only be changed on the advice of Kaufman Hall Software Support.

SystemCurrencySymbol

Default value <Blank>

Description Defines the currency symbol used by columns that are configured as Currency numeric type. If left blank, the currency symbol for the current locale is used.

The Numeric Type is defined in the column properties. Currently, this symbol is only used by file group display columns.

SystemCurrentPeriod

Default value 1

Description Defines the current period for the system. To change the current period, you can use the user interface in the software (**Administration > Tables > Table Administration > System Current Period / Year**).

SystemCurrentYear

Default value 1

Description Defines the current year for the system. To change the current year, you can use the user interface in the software (**Administration > Tables > Table Administration > System Current Period / Year**).

SystemName

Default value Axiom EPM

Description Defines the name of the system. You can change this name as desired.

This setting can be modified using the System Configuration page in the Web Client.

TableRepartitioningRowLimit

Default value 2000000

Description Specifies the row limit for repartitioning a table as part of saving the table properties. If the table data exceeds this row limit, then the table will not be repartitioned and instead you will be prompted to process the table repartitioning using Scheduler.

TiePlanFileSaveToWorkflowTaskSubmit

Default value True

Description Specifies whether users can complete tasks for plan file processes when saving plan files (True/False). By default, when a user saves a file for which they have an active process task, the user is given the option to complete the task as part of the save. The "complete on save" option only applies when the user opens the file as read/write.

If disabled, then no process prompt displays on save. This setting also applies to the legacy workflow feature.

TranslateFrenchKeyboardDecimalSeparator

Default value False

Description Specifies whether special decimal translation behavior applies to the Web Client and Windows Client (True/False). If enabled, then pressing the decimal key on a numeric keypad is interpreted as a comma when the following are true: the current locale's number format is comma, and the number format for the cell is one of Number, General, Percent, Scientific, or Currency. Note that the number format only applies to the Web Client; in the Windows Client, the behavior applies regardless of the number format.

UpdateStatisticsDuringSave

Default value False

Description Specifies whether statistics are rebuilt as part of save-to-database processes (True/False). This applies to both the temporary table (if saving more than 10,000 rows) and the destination table. This should only be enabled on the advice of Kaufman Hall Software Support.

UseLegacyColumnAggregation

Default value True

Description Specifies whether to use the legacy default aggregation behavior for Integer and Numeric columns in data queries. We recommend leaving the default setting and using the legacy behavior until the new behavior is finalized in an upcoming release. The new behavior leverages the column classification to determine the aggregation type for the column.

UseLegacySQLParser

Default value False

Description Specifies whether to use the legacy SQL parser (True/False). This should only be enabled on the advice of Kaufman Hall Software Support.

UseRestrictedWebModeForNonAdmins

Default value True

Description Specifies whether to use a special restricted mode in the Windows Client for non-admin users (True/False). If enabled, then certain file features are explicitly tied to read-write rights. For more information please contact Kaufman Hall Software Support.

This setting exists for backward-compatibility only and should not be manually enabled in systems where it is not already enabled.

UseStickSessionServerHash

Default value False

Description Specifies how sticky sessions are handled for Cloud Service systems. This setting should only be changed on the advice of Kaufman Hall Software Support.

VBA_RunMacroDisabled

Default value True

Description Specifies whether VBA custom solutions can be run while in the Axiom Excel Client (True/False). By default, the system does not check for VBA custom solutions, and AxiomVBA.xlam is not loaded when the system is run.

If set to False, then the system uses the designated event handlers to check for VBA custom solutions, and runs them if found. This setting should only be changed to False if your system is specifically designed to use VBA custom solutions. Enabling custom solutions may unnecessarily impact system performance for systems that do not use VBA.

WebClientSkin

Default value <Blank>

Description Specifies the default skin to be applied to Axiom forms. If the **Skin** property for a form is blank, the default skin defined here is used.

By default, this setting is blank, which means the default **Axiom** skin is used. If desired, you can specify any skin that is available to be selected for an Axiom form, including any custom skin defined for your organization. For the list of available skin names, check the **Skin** property on an Axiom form.

If you have defined a specific skin name and then want to return to using the default Axiom skin, clear this setting so that it is blank again.

WebPageTabItemBackground

Default value #FFFFFF

Description Specifies the background color of web tabs and form dialogs while the "loading" spinner displays. You can specify a different color using a hexadecimal code.

WindowsAuthAllowedDomains

Default value <Blank>

Description Specifies the allowed domains for Windows Authentication, if enabled. Separate multiple domain names with a comma. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

This setting can be modified using the System Configuration page in the Web Client.

WindowsAuthEnabled

Default value True

Description Specifies whether Windows Authentication is enabled for the system (True/False). By default this is enabled, which means that the allowed domains must be specified using WindowsAuthAllowedDomains. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

If disabled, then Windows Authentication is not used.

WindowsAuthUserSyncEnabled

Default value False

Description Specifies whether Active Directory Synchronization is enabled for the system (True/False), allowing users to be imported from and synchronized with Active Directory. This option is only applicable if Windows User Authentication is enabled for the system. This option is initially configured during the Axiom Application Server installation, and can be subsequently changed using the system configuration settings or by repairing the installation.

WorkflowChunkingSize

Default value 5000

Description Defines the number of workflow tasks and instances to be returned from the server to the client at a time. This data is chunked to avoid using up too much memory per request. This setting should only be changed on the advice of Kaufman Hall Software Support.

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