Cloud Service Technical Guide

Axiom Software

Version 2018.2

KaufmanHall
axiom software

Contents

Introduction

Welcome to the Axiom Cloud Service! Your cloud system is hosted and maintained by Kaufman Hall in a dynamically scalable, secure, and geo-distributed Microsoft Azure datacenter. Before your users can get started with this system, there are a few minor setup and installation tasks that need to be performed by your organization.

Use of your cloud system requires the following:

- Installation of the Axiom Software Desktop Client and its prerequisites on user workstations. The Desktop Client is required in order to access and use your cloud system.

- Installation of the Axiom Cloud Integration Service on a Windows server at your organization. This service is used to facilitate certain secured data communications between your cloud system and servers in your organization's network, such as for data imports/exports and user authentication. Although this service is not absolutely required in order to use your cloud system, most customers choose to install it in order to gain access to the features it enables.

Axiom Software Client

Installation of the Axiom Software Desktop Client is required to access your cloud system. There are two versions of the desktop client:

- **Windows Client.** The Windows Client is typically used by standard Axiom Software end users. It does not require Microsoft Excel to be installed on the workstation.

- **Excel Client.** The Excel Client is typically used by Axiom Software administrators and report writers. It requires Microsoft Excel to be installed on the workstation.

Please review this section carefully to ensure that your organization's workstations meet the technical requirements and that all prerequisites are installed.

Axiom Software provides a third client, the Web Client, for browser-based access of certain web-enabled files and features. Use of the Web Client does not require any installation. Users who will access Axiom Software only via the Web Client can simply navigate to the appropriate URL using a supported browser.

Technical requirements

For information regarding the Axiom Software Client technical requirements and prerequisites, please see the separate document *Axiom Software Client Technical Requirements*.

Installing the Axiom Software Client

This section explains the installation of the Axiom Windows Client or Excel Client on individual client workstations.

Before you install

Before beginning the client installation process, make sure you have installed the necessary prerequisites for the particular Axiom Software Client you intend to use.

1. Log into your workstation as a local administrator.

2. Launch Microsoft Edge or Internet Explorer 11 (or higher).

3. Browse to the following URL: `https://<customer>.axiom.cloud`

   Where *<customer>* is your assigned name for the Axiom Software cloud service.

4. Click the **Download** link on the right-hand side of the page.

5. Install the necessary prerequisites for the Axiom Software Client that you intend to use.

   See the separate document *Axiom Software Client Technical Requirements* for more information on which prerequisites to install.

Install the Axiom Software Client

1. Log into your workstation as yourself.

2. Launch Microsoft Edge or Internet Explorer 11 (or higher).

3. Browse to the following URL: `https://<customername>.axiom.cloud/home/launchpage`

   Where *<customername>* is your assigned name for the Axiom Software cloud service.

4. In the **Install/Launch Application** section, click on one of the following icons to install that client:
   - **Windows Client**
   - **Excel Client**

Install / Launch Application

Web Client

Windows Client

Excel Client

SYSTEM NAME
Master Product Suite

› Download

› Axiom Software Info

› Installed Products

Tools & Add-ins

Desktop Help

Web Help

MS PowerPoint Add-in

MS Word Add-in

Forms

Table Manager

Data Explorer

Audit Manager

Example launch page to install the Axiom Software client

Client shortcuts

Depending on the selected user authentication method for your system, the Axiom Software Client installation may create shortcuts on your desktop and in your Start menu. If these shortcuts are present, then you can launch the Axiom Software Client directly via these shortcuts, without needing to access the Axiom Software web page. If you are using SAML or OpenID Authentication, then you must always go to the Axiom Software web page in order to launch the system.

User Authentication

Login credentials are required to access Axiom Software. The specific credentials depend on the user authentication method enabled for your system.

The Axiom Software Cloud Service supports the following authentication methods:

- **Axiom Prompt**: Users log in using a user name and password defined in Axiom Software.
- **Windows Authentication**: Users are authenticated by your Windows Active Directory.
- **SAML Authentication**: Users are authenticated by a designated SAML identity provider.
- **OpenID Authentication**: Users are authenticated by a designated OpenID provider.

Kaufman Hall Software Support will enable your organization's preferred authentication method in your cloud system. The following sections provide a brief overview of each method and the information needed from your organization to enable it.

Initially, Kaufman Hall Software Support will provide your system administrator with one or more Axiom Prompt Authentication accounts, so that you can access your system even if the setup for your primary authentication method has not yet been completed.

▶ Axiom Prompt Authentication

Axiom Prompt Authentication is fully defined and managed through Axiom Software. It is available to all systems, regardless of any other authentication method that may be used. No additional information is required in order to enable this option.

When using Axiom Prompt Authentication, you define a user name and password for each user within Axiom Software. To access Axiom Software, users log in with these user names and passwords. Users can change their own passwords as needed, and password rules can be enforced. A "remember me" option is available so that users do not have to enter their credentials every time they start Axiom Software.

Axiom Prompt accounts are also used by Kaufman Hall Software Support to gain access to cloud systems as needed.

▶ Windows Authentication

When using Windows Authentication, users are authenticated by your Windows Active Directory. To access Axiom Software, users log in with their Windows user names and passwords. A "remember me" option is available so that users do not have to enter their credentials every time they start Axiom Software.

The user names defined in Axiom Software must match the Windows user names in Active Directory. Users can be manually created in Axiom, or imported from Active Directory.

To enable this option for your cloud system, you must provide Kaufman Hall Software Support with the allowed domain names for authentication. Additionally, to facilitate the user authentication you must install the Axiom Cloud Integration Service in your environment, to enable secured communication between your cloud system and your network domain. For more information on this process, see Cloud Integration Service.

▶ SAML Authentication

SAML Authentication (Security Assertion Markup Language) is a web-based authentication method. Users are authenticated by a designated identity provider, such as Windows Active Directory Federation Services. To access Axiom Software, users go to the web page for your cloud service installation, where they must log in using their credentials for the identity provider. Once the user is authenticated, they can access the Axiom Web Client or install/launch the Windows Client or Excel Client.

The user names defined in Axiom Software must match the user names for the designated identity provider. Users must log in using the web each time they want to start Axiom Software—desktop shortcuts cannot be used to directly launch the Windows Client or Excel Client.

To enable this option for your cloud system, you must provide Kaufman Hall Software Support with the following information:

- The URL to your identity provider
- The metadata URL for your identity provider
- The URN attribute for the authenticated user name (as provided to Axiom Software from your identity provider)

Additionally, the following setup steps must be completed in your environment. Kaufman Hall Software Support is available to assist with these steps as needed.

- Add the metadata URL for your Axiom cloud system (provided by Support) to your identity provider so that it is recognized as a service provider. For example, in Active Directory Federation Services, the metadata URL must be added as a Relying Party Trust.
- For Active Directory Federation Services, add a Claim Rule to send the Active Directory **SAM-Account-Name** as the **Name-ID**.
- Other setup steps may be necessary, depending on your identity provider.

> **NOTE:** SAML Authentication is not supported for use with the iPad app.

▶ OpenID Authentication

OpenID Authentication is a web-based authentication method. Users are authenticated by a designated OpenID provider, such as Google OpenID Connect. To access Axiom Software, users go to the web page for your cloud service installation, where they must log in using their credentials for the OpenID provider. Once the user is authenticated, they can access the Axiom Web Client or install/launch the Windows Client or Excel Client.

The user names defined in Axiom Software must match the user names for the designated OpenID provider, including the @suffix. Users must log in using the web each time they want to start Axiom Software—desktop shortcuts cannot be used to directly launch the Windows Client or Excel Client.

To enable this option for your cloud system, you must provide Kaufman Hall Software Support with the following information:

- The client ID for your OpenID provider
- The client secret for your OpenID provider

Additionally, the following setup steps must be completed in your environment. Kaufman Hall Software Support is available to assist with these steps as needed.

- Configure the OpenID provider with the redirect URI to the Axiom Software login page (such as `https://CustomerSite.axiom.cloud/openid/login`).
- Other setup steps may be required, depending on your OpenID provider.

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

Upgrading the Axiom Software Client

Going forward, under normal circumstances you should not need to manually upgrade the Axiom Software Client. Your cloud system can be upgraded by Kaufman Hall Software Support at your organization's request. Once the cloud system is upgraded, your client installations will be automatically upgraded the next time a user attempts to log into Axiom Software on that workstation.

Cloud Integration Service

The Axiom Cloud Integration Service is used to facilitate certain data communications between your cloud system and servers in your organization's network. Normally, the cloud system would not be able to communicate with these servers due to firewall restrictions and other security controls. The Cloud Integration Service provides a secure bridge between the cloud system and your organization's network.

The Cloud Integration Service uses 256-bit HTTPS for this communication, using a Shared Access Signature (SAS) authentication protocol involving a 256-bit primary cryptographic key in Base64 representation and a token generated using the HMAC-SHA256 of a resource string.

Although installation of the Cloud Integration Service is technically optional, it is required if you want to use any of the following features:

- **Windows Authentication.** In order to use Windows Authentication for login to Axiom Software, your cloud system needs to validate users against your organization's Windows domain. This validation is accomplished using the Cloud Integration Service.

- **Import/Export of local data.** If you want to be able to import data from a database hosted in your network or from a file residing on your network, your cloud system must be able to access the local database or local file. The same principles apply when exporting data from your cloud system to a local database or delimited file. This access is accomplished using the Cloud Integration Service.

- **File Processing to a local folder.** If you want to be able to generate snapshot or export files using file processing and then save the file output locally, your cloud system must be able to access the local folder location. This access is accomplished using the Cloud Integration Service.

Server technical requirements

The Axiom Cloud Integration Service must be installed on a Windows Server in your organization's network environment. The server technical requirements are as follows:

Requirement	Cloud Integration Service
CPU	Dual core 2.0Ghz or higher
RAM	2GB
Disk	150MB available disk

Requirement	Cloud Integration Service
OS	Windows Server 2016 or 2012 R2
Other Software	.NET Framework 4.5 or higher

Other requirements depend on the usage of the service:

- When used for Windows Authentication, the server must be able to access the Windows domain(s) used for authentication.
- When used for import of data from source files, or for file processing to a local folder location, the user identity of the service must have permission to the appropriate file shares and files.
- When used for import/export of data from a database, the server must be able to see the appropriate database server, so that the credentials in the import/export package can be used to access it.

You can install and use more than one Cloud Integration Service as needed. For example, one service could be used for authentication, while another service could be used for import/export.

Networking technical requirements

The Axiom Cloud Integration Service communicates with the Axiom Cloud Service using secure networking protocols. In order to enable secure transfers of large batches of data, the following networking requirements must be met:

- The Axiom Cloud Integration Server must be able to establish outbound connections on port 443 as well as port range 9350-9354.

  If this recommendation cannot be met, the minimum requirement is to allow outbound traffic for these ports to the Microsoft Azure Datacenter IP Range list for your geographic region, which is subject to change on a weekly basis.

- The Axiom Cloud Integration Server must be able to accept a validated SSL certificate from the following:

      *.axiom.cloud

      *.servicebus.windows.net

  Long-term customers may be using the legacy domain of `*.axiomepmcloud.com`, in which case the Cloud Integration Server must be able to accept a validated SSL certificate from that domain.

Installing the Axiom Cloud Integration Service

In order to perform the installation, you must have obtained a copy of the Axiom Software installation package (ZIP file) and extracted the contents of this package to the server where you want to install the Cloud Integration Service. The logged in user must have administrator rights on the server to run the installation.

> **IMPORTANT:** In order to complete the install, you must know the encryption key for your cloud service system. If you do not know this key, contact Kaufman Hall Software Support for assistance.
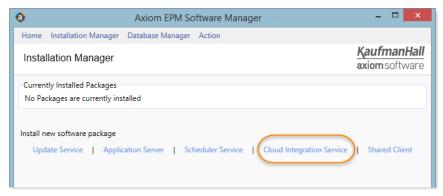
> **NOTE:** Once you enter the installation screens, there is no Cancel button. To cancel an installation, move to a different location within the Axiom Software Manager, or close the Software Manager.

To install the Axiom Cloud Integration Service:

1. Navigate to the location where you extracted the Axiom Software installation package, and then double-click `AxiomSoftwareManager.exe`.

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 **Cloud Integration Service**.

   The Axiom Cloud Integration Service 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 you use to access the web page for your cloud system.

6. On the **Installation Folder** screen, specify the installation location for the Cloud Integration 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:
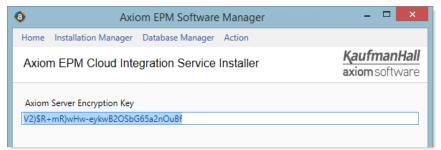
    ```
    C:\Program Files (x86)\Axiom EPM\Axiom EPM Cloud Integration Service\
    ```

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

    The default name is **Axiom EPM Cloud Integration Service**.

8. On the **Axiom Server Encryption Key** screen, specify the encryption key for your cloud system, and then click **Next**.

    This key is used by the cloud system to authenticate requests from the Cloud Integration Service. The key must match the key defined for your cloud system. If you do not know the key, contact Kaufman Hall Software Support for assistance.

9. Optional. On the **Accessible Folders** screen, specify the folders that the Cloud Integration Service can access, and then click **Next**.

    This setting can be used to limit the service to accessing a specific folder or folders in your organization's network. You can leave this blank to allow the service to access any folder (as permitted by the network file system permissions for the service), or you can list one or more specific folder paths. Separate multiple folder paths with semi-colons.

    If you list specific folders, you must use the same file path format used by the Axiom Software feature that you intend to run using the Cloud Integration Service. For example, if an import utility specifies the file as `\\Server\Folder\filename.xls`, then you must specify

`\\Server\Folder` in this setting. If instead you specify `N:\Sharename\Folder`, the service will not be able to access the file for the import.

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 Cloud Integration 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 Cloud Integration Service** and then select **Start**.

If you will be using the Cloud Integration Service to access files on your network, then the account used to run the service must have the appropriate network security permissions to access these files. Please contact Kaufman Hall Software Support for assistance in configuring this access for the service account as needed.

▶ Saving a copy of the Software Manager

It is recommended to leave the Software Manager file on the machine where you installed the Cloud Integration Service, so that it is available in case you later need to repair or uninstall the service. The Windows Control Panel cannot be used to perform these activities. If you have deleted the Software Manager file and you need to perform a repair or uninstall, you can obtain a copy of the installation package from the Axiom Software Product Portal.

Setting up the remote data connection

In order to use the Cloud Integration Service with Axiom Software features such as imports or user authentication, you must create a *remote data connection*. The remote data connection links the Cloud Integration Service with your cloud system.

Remote data connections are created in Scheduler, using the Axiom Excel Client or Windows Client. You must install the Desktop Client before you can perform this activity. For more information, see Axiom Software Client.

Once you have logged into the client, go to **Manage > Scheduler** on the Axiom tab. (If you are using an Axiom packaged product, you can access Scheduler from the **Admin** tab.)

NOTE: If you are using the Cloud Integration Service to enable Windows Authentication, this authentication protocol will not be available until after you have set up the remote data connection. This means that you must log into the system as an Axiom Prompt user in order to set up the connection. Kaufman Hall Software Support will provide you with the necessary credentials to perform this action.

Setting up the remote data connection is a three-part process:

1. Kaufman Hall Software Support must create a namespace for your cloud system and provide you with the connection string to this namespace. Make sure you have this information before proceeding with the steps in the following sections.

2. The Cloud Integration Service must be enabled in Scheduler so that it is available to process requests from the remote data connection.

3. The remote data connection must be created in Scheduler.

Steps 2 and 3 are discussed in the following sections.

Enabling the Cloud Integration Service

After the Axiom Cloud Integration Service is installed on a local server, you must enable this server for use in Scheduler.

To enable the Cloud Integration Service:

1. On the **Service** tab of the Scheduler dialog, click **Servers**.

2. In the list of servers, select the server hosting the Cloud Integration Service. The name of this server is *ServerName*-**CIS**.

3. At the bottom of the dialog, under **Configuration details**, select the check box for **Cloud Integration Service Enabled** and then click **Update**.

The server is now enabled and ready for use. You can refresh the page to see the updated server status.

Enabled cloud integration service

If you installed the Cloud Integration Service on multiple servers to use for different purposes, then you must enable each server separately.

Creating the remote data connection

In order to use the Axiom Cloud Integration Service with Axiom Software features, you must create a remote data connection in Scheduler.

The remote data connection links the Cloud Integration Service to the Application Server installation in the Axiom Cloud Service, using a namespace created specifically for this purpose by Kaufman Hall Software Support. You must have the connection string to this namespace in order to create the remote data connection.

To create a remote data connection:

1. On the **Service** tab of the Scheduler dialog, click **Remote Data Connections**.

2. At the bottom of the dialog, click **New Connection**.

   A set of empty fields displays in the **Configuration details** section.

3. Complete the following settings:

Item	Description
Name	The name of the remote data connection. This is the name that you will select in import and export utilities to indicate that the utility should use the remote data connection.
Description	Optional. The description of the remote data connection.
Connection String (SAS)	The connection string to the namespace that was created by Kaufman Hall Software Support in the Microsoft Azure environment for your cloud system. If you do not have this connection string, contact Kaufman Hall Software Support.
Use for authentication service	Specifies whether the remote data connection is used for Windows Authentication. This only applies if Windows Authentication is enabled for your cloud system.
	If enabled, this remote data connection will also be used for any Active Directory Import tasks set up for your system.
Cloud Integration Server	The name of the Cloud Integration Service installed in the local network environment. The name of this server is *ServerName*-CIS.

4. Click **Save Connection**.

The connection now displays in the list of remote data connections.

Example remote data connection

If you later want to edit this connection you can come back to this screen, select the connection and make the necessary edits, then click **Save Connection** to save the changes. To delete a connection that you no longer need, use **Delete Connection**.

If you installed the Cloud Integration Service on multiple servers, you should create a remote data connection for each server. For example, you could set up one remote data connection for user authentication and another for import/export. For the import/export connection, you would disable the option **Use for authentication service**.

Using a remote data connection with Windows Authentication

In order to use Windows Authentication with the Axiom cloud service, you must have a remote data connection defined with the option **Use for authentication service** enabled (as discussed in the previous section). All other setup requirements for Windows Authentication still apply—see the Axiom Help files for more information.

When a user attempts to log into your cloud system using Windows Authentication, their credentials are verified by your Windows domain using the remote data connection. This means that the remote data connection configuration in Scheduler must remain intact, and the server hosting the Cloud Integration Service must remain up and running. If the remote data connection or the Cloud Integration Service are unavailable, users will be unable to log in.

It is recommended to maintain an admin-level Axiom Prompt Authentication user in your system, so that the administrator can still log into the system if Windows Authentication is unavailable.

If you are using the Active Directory Import task in Scheduler to synchronize users in Axiom Software with your Active Directory, this task will automatically use the remote data connection that is enabled for user authentication.

Using a remote data connection with other Axiom features

Once a remote data connection has been set up for your installation, you can use this connection with import and export utilities, and with export file processing. For more information on setting up these features, see Axiom Software Help.

▶ Import/Export utilities

When you set up the **Source** for an import or the **Destination** for an export, you have the option to specify a remote data connection. If a remote data connection is specified, then the import or export utility will use that connection to transfer data or a file between the cloud and your local network.

Example import source using a remote data connection

▶ File processing

When you select **Local File System** as the output location for snapshot or export file processing, you have the option to specify a remote data connection. This connection is required if you plan to perform the file processing via Scheduler.

> **NOTE:** When using Scheduler to perform snapshot file processing, the PDF option is not supported for Cloud Service systems, because it requires Excel processing on the server. PDF output can still be generated locally using the Excel Client.

Upgrading the Axiom Cloud Integration Service

If you are currently running version 2016.3 or earlier, then it is required to upgrade the Cloud Integration Service when your cloud system is upgraded to version 2018.2. For other versions, it is recommended to upgrade but not required.

In order to perform the upgrade, you must have obtained a copy of the Axiom Software installation package (ZIP file) and extracted the contents of this package to the server where the Cloud Integration Service is installed. You must have administrator rights on the server to run the installation.

To upgrade the Axiom Cloud Integration Service:

1. Navigate to the location where you extracted the Axiom Software installation package, and then double-click `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 Cloud Integration Service, and then click **Upgrade**.

4. On the Axiom Cloud Integration Service screen, click **Upgrade**.

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

> **NOTE:** Depending on the version that you are upgrading from, it may be necessary to perform a Repair to provide values for required settings that did not exist when you performed the original installation. For more information on these settings, see Installing the Axiom Cloud Integration Service and contact Axiom Software Support for assistance as needed.