



Integrating Google Drive with File Access Manager

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Capabilities

This connector enables you to use IdentityIQ File Access Manager to access and analyze data stored in Google Drive and do the following:

- Analyze the structure of your stored data.
- Monitor user activity in the resources.
- Classify the data being stored.
- Verify user permissions on the resources, and compare them against requirements.

See the IdentityIQ File Access Manager documentation for a full description.

Connector Overview

IdentityIQ File Access Manager Connector for Google Drive uses the following Google APIs:

- Google Drive Activities API and Google Reports API for event monitoring
- Google Drive API for resource crawling and permissions collection
- Google Admin SDK (Directory API) for domain identities (users, groups, and so on)

Google APIs are accessed via a Service Account, defined within the scope of the customer's Google Apps Domain. The Service Account has Domain-wide delegation permission so that it can impersonate domain users and access their Google Drive activities and data.

How is Google Drive Mapping Converted to a Business Resources Tree?

- Google Drive represents files and folders in a graph (a.k.a. map) data structure so that every node may have multiple parent and children nodes. In a tree structure, however, every node can have only one parent. For example, a folder shared by two users actually has two different parents – one in each of the user's personal drives.
- To maintain a recognizable structure for Google Drive resources, IdentityIQ File Access Manager displays business resources in a tree, exactly as they are arranged from the user's perspective.
- When users share folders, flattening the graph structure into a tree results in duplicate resources, which are maintained to keep the structure recognizable.
- If external users (external to the company's Google Apps domain) share folders with domain users, a separate "External" tree root represents those resources.
- The following is a sample schematic of the IdentityIQ File Access Manager Google Drive resource tree:
 - External
 - private@gmail.com
 - sharedFolder1
 - Users
 - u1@my-company.com
 - Folder1
 - Folder2
 - u2@my-company.com
 - u3@my-company.com

Monitored Activities

Monitored Administrator audit events (Google Domain events) include:

- User Events and group events (USER_SETTINGS and GROUP_SETTINGS, respectively)

Permissions Collector Operation Principles

The IdentityIQ File Access Manager Google Drive Permissions Collector uses Google Drive API to retrieve information on collaboration and sharing.

IdentityIQ File Access Manager automatically creates a Google Drive Identity Collector (when the “Add New Application” wizard finishes) which collects the users and groups from the Google Apps Domain.

Prerequisites

Make sure your system fits the descriptions below before starting the installation.

Software Requirements

IdentityIQ File Access Manager requires the latest ASP.NET Core 3.1.x Hosting Bundle. This bundle consists of .NET Runtime and ASP .NET Core Runtime. You can download the latest 3.1.x Hosting Bundle version from [here](#).

Permissions

To enable IdentityIQ File Access Manager to interact with Google Apps, the high level steps are:

1. Enable Google SDKs (Google Drive API, Drive Activity API, Admin SDK API)
2. Create a service account and assign it domain-wide delegation
3. Delegate domain-wide authority to the service account. This is required to capture activities.

Enabling Google SDKs (Google Drive API, Drive Activity API, Admin SDK API)

Creating a project:

1. Go to your Google Apps developer console: <https://console.developers.google.com>
2. Make sure that you are using an administrator account for your Google Apps domain.
3. Click **Project** drop down from top bar (next to Google API logo), select "**New Project**".
4. Name the project (e.g., "FAM") and click "**Create**".
5. Wait for the project to be created and then click "**Select Project**" from the top right Notification bar.
6. Using the previous drop-down selector, ensure the new project is selected, otherwise you may default to the previous project.

Enabling Google APIs:

1. Top left, click three lines > APIs & services
2. In the new project click "**+Enable APIs**" from the top bar
3. Using the Search box, find and enable the following APIs:
 - a. Google Drive API
 - b. Drive Activity API
 - c. Admin SDK API

Creating a Service Account

and Assigning it Domain-wide Delegation

1. On the top left (menu button) choose APIs & Services > Credentials.

This is an important step, failure to do so will mean you will create Credentials just for the last API you were in.

2. Click **"Create Credentials"**.
3. Select **"Service account"**.
4. Type in a name for the new service account in "Service account name" (e.g. "svc_fam").
5. Click **Create** then **Done**.
6. Verify that the new account is listed under within Credentials, under the **Service Accounts** heading
7. Click on newly created account, or click the Edit icon
8. Click the **Show Domain-wide Delegation** drop down menu
9. click **Enable G Suite Domain-wide Delegation**

If you get a message 'To change domain wide delegation, a product name for the OAuth consent screen must be configured....', follow the prompts and create the Consent as instructed.

10. Click Add Key > Create new key
11. Select "P12" under "Key type".
12. Choose Project Owner as the role for this service account.
13. Click **Create**.
14. A certificate file (".p12") is then downloaded to your computer, this file is required when creating the Google Drive application in [Adding a Google Drive Application](#) in File Access Manager.
15. A popup window appears showing the password to the .p12 file. Save this password for future use within the *Add New Application Wizard*.

This popup is displayed only once. Copy the password, or you will have to define a new service account

16. Copy the svc account email address <email>@<project_name>-123.iam.gserviceaccount.com this will be needed in the next step (authorizing the service account).
17. Click **Show Domain-wide delegation** and then **Enable G Suite Domain wide delegation**
18. Assign a Product Name as prompted (eg FAM).
19. Copy the Unique ID number (the Client ID) – this file will be needed in the next step (authorizing the service account)
20. Click **Save**.

Delegate Domain-wide Authority to the Service Account.

This is required in order to capture activities.

1. Go to Google administrative console at: <https://admin.google.com>
2. Click "**Security**". If it is not listed, click the "**More controls**" button at the bottom of the screen).
3. Click API Controls
4. Manage Domain Wide Delegation
5. Click "Add new"
6. Under "**Client ID**", paste the "Unique ID" (this is the same as the Client ID) of the service account you created in the previous step.
7. Under "**Oath scopes (comma-delimited)**", paste the following in its entirety:

<https://www.googleapis.com/auth/activity>, <https://www.googleapis.com/auth/admin.directory.group.member.readonly>, <https://www.googleapis.com/auth/admin.directory.group.readonly>,
<https://www.googleapis.com/auth/admin.directory.user.readonly>, <https://www.googleapis.com/auth/admin.reports.audit.readonly>, <https://www.googleapis.com/auth/drive.readonly>,
<https://www.googleapis.com/auth/drive.activity>

8. Click "**Authorize**"

Limiting IdentityIQ File Access Manager Permissions

During the Application setup, you must provide a Domain Admin User for IdentityIQ File Access Manager to collect data on the Google Drive domain.

You can provide the Super Admin, or create a dedicated IdentityIQ File Access Manager Google account with fewer permissions.

The IdentityIQ File Access Manager Google account requires the following permissions:

On the desired OU (Organizational Unit) level

Organizational Units -> Read

Users -> Read

Domain-wide

Groups -> Read

Reports

Note the following regarding crawling, permissions collections, and activities:

Crawling

The resource tree contains only OU users and folders for which a IdentityIQ File Access Manager user has permissions.

Permissions Collection

IdentityIQ File Access Manager only analyzes resources for permissions under scoped OUs.

Since groups are defined on a domain-wide basis, rather than by OU, IdentityIQ File Access Manager collects all domain groups.

Prerequisites

If users from OUs (for which a IdentityIQ File Access Manager user lacks permission) have permissions on resources under the analyzed OU, those users are considered IdentityIQ File Access Manager External Accounts, since IdentityIQ File Access Manager cannot collect information on those users.

Activities

IdentityIQ File Access Manager only collects activities for users for which a IdentityIQ File Access Manager user has permissions.

IdentityIQ File Access Manager collects administrator activities (such as changing users or passwords) on a domain-wide basis, rather than by user/OU.

Data Classification

IdentityIQ File Access Manager only indexes and classifies resources collected during a crawl (only resources to which a IdentityIQ File Access Manager user has permissions).

To create, and grant permissions to, a IdentityIQ File Access Manager Google Administrator account perform the following steps:

1. Sign in to the Google Administrator console (admin.google.com) using the Super Admin account (or any account that can create and grant Administrator roles and create users).

2. Click **Users**

If you cannot see Users, click the More Controls bar at the bottom of the screen.

3. Choose an OU on which to create a IdentityIQ File Access Manager account by hovering over the plus (+) sign at the bottom right corner of the screen.
4. Click **Add User**.
5. Fill in a name and primary email address and password for the user, Ensure you note down the password for future reference.(for example, IdentityIQfam_reader).
6. Click **Create**.
7. Click **Admin Roles** on the Google Admin console.

To see the Admin Roles, click the More Controls bar at the bottom of the screen.

8. Click **Create a New Role**. (This will be the OU targeted role.)
9. Type a role name and description (for example, File Access Manager OU Reader).
10. Click **Create**.
11. Check the following checkboxes under the *Privileges* tab > *Admin Console Privileges*:
 - a. *Organizational Units > Read*
 - b. *Users > Read*
12. Click **Save**.
13. Select the newly created role, and click Assign Admins under the Admins tab.

Prerequisites

14. Select the desired OU from the drop-down list and type the name of the IdentityIQ File Access Manager account.
15. Click **Confirm Assignment**.

The role applies to the OU and all its descendants. You can assign the role to the same user on another OU later.
16. Click **Create a New Role**. (This will be a domain-wide role.)
17. Type a role name and description (for example, File Access Manager Domain Reader).
18. Click **Create**.
19. Check the Reports checkbox under the *Privileges* tab > *Admin Console Privileges*.
20. Check the *Groups* > **Read** checkbox under the *Privileges* tab > *Admin API Privileges*.
21. Click **Save**.
22. Select the newly created role, and click **Assign Admins** under the Admins tab.
23. Type the IdentityIQ File Access Manager account.
24. Click **Confirm Assignment**.

Communications Requirements

Requirement	Source	Destination	Port
IdentityIQ File Access Manager Message Broker	Permission Collector / Data Classification Collector	RabbitMQ	5671
IdentityIQ File Access Manager Access	Activity Monitor	IdentityIQ File Access Manager Servers	8000-8008
Permissions Collector /Data Classification Collector	Permissions Collector/Data Classification	Google APIs	https
Activity Monitoring	Activity Monitor	Google APIs	https

Connector Installation Flow Overview

To install the Google Drive connector:

1. Configure all the prerequisites.
2. Add a new Google Drive application in the Business Website.
3. Install the relevant services:
 - Activity Monitor
 - Permissions Collector
 - Data Classification Collector

Installing the permissions collector and data classification services is optional and should only be installed by someone with a full understanding of IdentityIQ File Access Manager deployment architecture. The IdentityIQ File Access Manager Administrator Guide has additional information on the architecture.

Collecting Data Stored in an External Application

Connector / Collector terminology:

Connector

The collection of features, components and capabilities that comprise IdentityIQ File Access Manager support for an endpoint.

Collector

The “Agent” component or service in a Data Classification and or Permission Collection architecture.

Engine

The core service counterpart of this architecture.

Identity Collector

A logical component used to fetch identities from an identity store and holds the configuration, settings for that identity store, and the relations between these identities.

The identity collector has no “physical” manifest.

- The actual work is done by the Collector Synchronizer.

The list below describes the high level installation process required to collect and analyze data from an external application. Most of these should already be set up in your IdentityIQ File Access Manager installation. See the server Installation guide for further details.

Install a Data Classification central engine

One or more central engines, installed using the server installer

Install a Permission Collection central engine

One or more central engines, installed using the server installer

Create an Application in File Access Manager

From the Business Website. The application is linked to central engines listed above.

Add an Activity Monitor

To collect activities for this application - run the Collector Installation Manager and add an application under Activity Monitoring.

Adding a Google Drive Application

In order to integrate with Google Drive, we must first create an application entry in IdentityIQ File Access Manager. This entry includes the identification, connection details, and other parameters necessary to create the link.

To add an application, use the **New Application Wizard**.

1. Navigate to *Admin > Applications*
2. Click **Add New** to open the wizard.

Select Wizard Type

1. Click **Standard Application**
2. Click **Next** to open the **General Details** page.

General Details

Application Type

Google Drive

Application Name

Logical name of the application

Description

Description of the application

Tags

Select tags for the application from the dropdown menu, and / or type a new name, and press **Enter** to create a new tag. The dropdown list of tags filters out matching tags as you type and displays up to 50 tags.

The **tags** replace the **Logical container** field that was used when creating applications in releases before 8.2

Event Manager Server

This option is available if there are more than one event manager servers configured in the system.

Select an event manager from the drop down menu

Click **Next** to open the Connection Details page.

General Details

Domain Admin User

The full user name of an admin user in your Google domain

Domain Name

Your Google primary domain name

Service Account

The full name of service account created in the [Prerequisites](#) section of this guide

Certificate File

The certificate file created during the Prerequisites section of this guide. Upload a certificate by dragging it onto the certificate field, or clicking to open a file manager dialogue

Certificate Password

The password for the certificate file created in the Prerequisites section of this guide

Click **Next**

Configuring and Scheduling the Permissions Collection


Permissions can be analyzed to determine the application permissions of an out-of-the-box application, provided you have defined an identity store for File Access Manager to use in its analysis, and you have run a crawl for the application.

The permission collector is a software component responsible for analyzing the permissions in an application.

The Central Permission Collector Service is responsible for running the Permission Collector and Crawler tasks.

If the “IdentityIQ FAM Central Permission Collector” wasn’t installed during the installation of the server, this configuration setting will be disabled.

To configure the Permission Collection

- Open the edit screen of the required application
 - a. Navigate to **Admin > Applications**
 - b. Scroll through the list, or use the filter to find the application
 - c. Click the edit icon  on the line of the application
- Press **Next** till you reach the **Crawler & Permissions Collection** settings page.

The actual entry fields vary according to the application type

When entering this page in edit mode, you can navigate between the various configuration windows using the **Next** and **Back** buttons.

Central Permissions Collection Service

Select a central permission collection service from the dropdown list. You can create permissions collection services as part of the service installation process. See section “Services Configuration” in the IdentityIQ File Access Manager Administrator Guide for further details.

Skip Identities Sync during Permission Collection

Skip identity synchronization before running permission collection tasks when the identity collector is common to different connectors.

This option is unchecked by default.

Scheduling a Task

Create a Schedule

Click on this option to view the schedule setting parameters.

Schedule Task Name

A name for this scheduling task

When creating a new schedule, the system generates a default name in the following format:

{appName} - {type} Scheduler

You can override or keep this name suggestion.

Schedule

Select a scheduling frequency from the dropdown menu.

- **Schedule Types and Intervals**

Once

Single execution task runs.

Run After

Create dependency of tasks. The task starts running only upon successful completion of the first task.

Hourly

Set the start time.

Daily

Set the start date and time.

Weekly

Set the day(s) of the week on which to run.

Monthly

The start date defines the day of the month on which to run a task.

Quarterly

A monthly schedule with an interval of 3 months.

Half Yearly

A monthly schedule with an interval of 6 months.

Yearly

A monthly schedule with an interval of 12 months.

Date and time fields

Fill in the scheduling times. These fields differ, depending upon the scheduling frequency selected.


Active check box

Check this to activate the schedule.

Click **Next**.

Configuring and Scheduling the Crawler

To set or edit the Crawler configuration and scheduling

- Open the edit screen of the required application
 - a. Navigate to **Admin > Applications**
 - b. Scroll through the list, or use the filter to find the application
 - c. Click the edit icon  on the line of the application
- Press **Next** till you reach the **Crawler & Permissions Collection** settings page.

The actual entry fields vary according to the application type

Calculate Resources' Size

Determine when, or at what frequency, File Access Manager calculates the resources' size.

Select one of the following:

- Never
- Always
- Second crawl and on (This is the default)

Create a Schedule

Click to open the schedule panel. See [Scheduling a Task](#)


Setting the Crawl Scope

There are several options to set the crawl scope:

- Setting explicit list of resources to include and / or exclude from the scan.
- Creating a regex to define resources to exclude.

Including and Excluding Paths by List

To set the paths to include or exclude in the crawl process for an application

- Open the edit screen of the required application
 - a. Navigate to **Admin > Applications**
 - b. Scroll through the list, or use the filter to find the application
 - c. Click the edit icon  on the line of the application
- Press **Next** till you reach the **Crawler & Permissions Collection** settings page.


The actual entry fields vary according to the application type

1. Scroll down to the Crawl configuration settings.
2. Click **Advanced Crawl Scope Configuration** to open the scope configuration panel.
3. Click Include / Exclude Resources to open the input fields.
4. To add a resource to a list, type in the full path to include / exclude in the top field and click **+** to add it to the list.
5. To remove a resource from a list, find the resource from the list, and click the **x** icon on the resource row.

When creating exclusion lists, excludes take precedence over includes.

Excluding Paths by Regex for Google Drive

To set filters of paths to exclude in the crawl process for an application using regex

- Open the edit screen of the required application
 - a. Navigate to **Admin > Applications**
 - b. Scroll through the list, or use the filter to find the application
 - c. Click the edit icon  on the line of the application
- Press **Next** till you reach the **Crawler & Permissions Collection** settings page.

The actual entry fields vary according to the application type

1. Click **Exclude Paths by Regex** to open the configuration panel.
2. Type in the paths to exclude by Regex, See regex examples in the section below. Since the system does not collect BRs that match this Regex, it also does not analyze them for permissions. See the example below in section [Business Resource Structure](#) to better understand the business resource full path structure.

Crawler Regex Exclusion Examples

Exclude all drives that start with one or more user names:

Example: Starting with John.Doe

```
^Users\\John\.Doe@.*
```

Example: Starting with John.Doe or Jane.Doe

```
^Users\\(John|Jane)\.Doe@.*
```

Include **ONLY** drives that start with one or more user names

Example: Starting with John.Doe

```
^(?!Users\\John\.Doe@.*).*
```

Example: Starting with John.Doe or Jane.Doe

```
^(?!Users\\(John|Jane)\.Doe@.*).*
```

Excluding Top Level Resources

Use the top level exclusion screen to select top level roots to exclude from the crawl. This setting is done per application.

To exclude top level resources from the crawl process

1. Open the application screen

Admin > Applications

2. Find the application to configure and click the drop down menu on the application line. Select **Exclude Top Level Resources** to open the configuration panel.

3. **Run Task**

The Run Task button triggers a task that runs a short detection scan to detect the current top level resources.

Before running the task for the first time, the message above this button is:

"Note: Run task to detect the top-level resources"

If the top level resource list has changed in the application while you are on this screen, press this button to retrieve the updated structure.

Once triggered, you can see the task status in

Settings > Task Management > Tasks

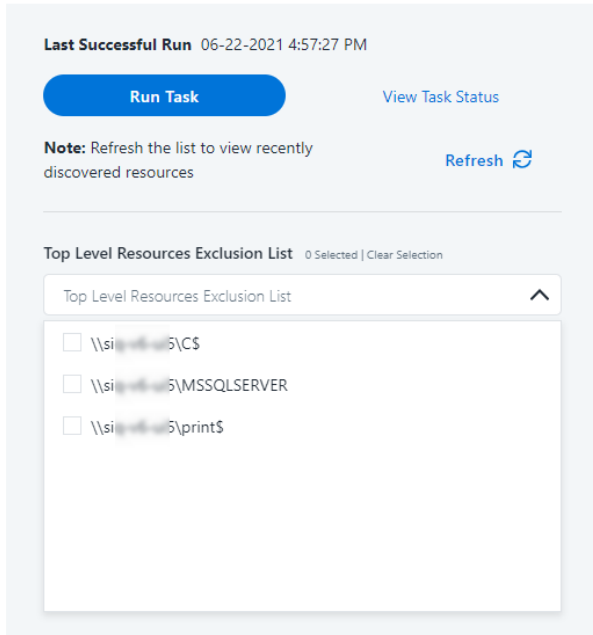
This will only work if the user has access to the task page

When the task has completed, press **Refresh** to update the page with the list of top level resources.

4. Click the top level resource list, and select top level resources to exclude.
5. Click **Save** to save the change.
6. To refresh the list of top level resources, run the task again. Running the task will not clear the list of top level resources to exclude.

Top Level Resources Exclusion

WFS-DC testing



Special Consideration for Long File Paths in Crawl

If you need to support long file paths above 4,000 characters for the crawl, set the flag

`excludeVeryLongResourcePaths`

in the Permission Collection Engine App.config file to true.

By default this value will be commented out and set to false.

This key ensures, when enabled, that paths longer than 4000 characters are excluded from the applications' resource discovery (Crawl), to avoid issues while storing them in the SQLServer database.

When enabled, business resources with full paths longer than 4000 characters, and everything included in the hierarchical structure below them, will be excluded from the crawl, and will not be collected by File Access Manager. This scenario is extremely rare.

You should not enable exclusion of long paths, unless you experience an issue.

Background

File Access Manager uses a hashing mechanism to create a unique identifier for each business resource stored in the File Access Manager database. The hashing mechanism in SQLServer versions 2014 and earlier, is unable to process (hash) values with 4,000 or more characters.

Though resources with paths of 4000 characters or longer are extremely rare, File Access Manager is designed to handle that limitation.

Identifying the Problem

When using an SQL Server database version 2014 and earlier

The following error message in the Permission Collection Engine log file:

```
System.Data.SqlClient.SqlException (0x80131904): String or binary data would be truncated.
```

In all other cases, this feature should not be enabled.

Setting the Long Resource Path Key


The Permission Collection Engine App.config file is `RoleAnalyticsServiceHost.exe.config`, and can be found in the folder

```
%SailPoint_Home%\FileAccessManager\[Permission Collection instance]\
```

Search for the key **excludeVeryLongResourcePaths** and correct it as described above.

Selecting and Scheduling the Data Classification Settings

To associate an application with a data classification service, and set the schedule

- Open the edit screen of the required application
 - a. Navigate to **Admin > Applications**
 - b. Scroll through the list, or use the filter to find the application
 - c. Click the edit icon  on the line of the application
- Press **Next** till you reach the **Data Classification** settings page.

The actual entry fields vary according to the application type

Central Data Classification Service

Associate the application with a Central Data Classification Service. This service is responsible for running the Data Classification tasks.

If the “Central Data Classification” wasn’t installed during the installation of the server, this field is disabled.

Disabling Data Classification

To disable data classification, delete the entry from the central data classification field.

Disabling data classification can also be achieved by setting the scheduler to be inactive (which is the default setting for data classification).

Create a Schedule

This option is enabled only if a central data classification service is selected.

See [Scheduling a Task](#)

See the chapter “Data Classification” in the IdentityIQ File Access Manager Administrator Guide for more information

Click **Next** or **Finish**.

Configuring Activity Monitoring

Configure the activity monitoring process frequency.

Polling Interval (sec)

Activity fetching interval [in seconds]. Default is set to 60 seconds,

Report Interval (sec)

Activity Monitor Health reporting interval [in seconds]. Default is set to 60 seconds.

Local Buffer Size (MB)

Local buffer size for activities [in MB]. Default is set to 200MB.

This cyclic buffer is used to store activities on the Application Monitor's machine in case of network errors that prevent the activities from being sent.

Configuring Data Enrichment Connectors

The Data Enrichment Connectors (DEC) configuration enables us to select data enrichment sources. These can be used to add information from other sources about identities.

An enrichment source could be a local HR database that is used to combine users' job descriptions or departments to the information stored in the identity store.

Select the data enrichment connectors to enrich monitored activities from the Available DECs text box.

Use the > or >> arrows to move the selected DECs to the Current DECs text box.

The user can select multiple DECs. Simply select each desired DEC.

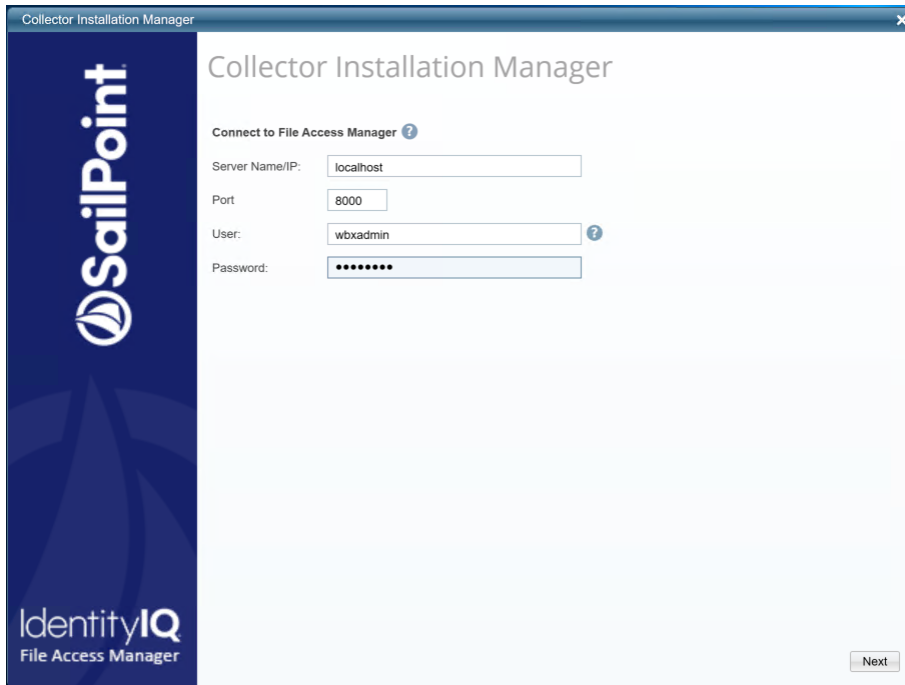
You can create a new DEC in the Administrative Client (*Applications > Configuration > Activity Monitoring > Data Enrichment Connectors*). After creating a new DEC, Click **Refresh** to refresh the dropdown list.

The chapter **Connectors** of the IdentityIQ File Access Manager Administrator Guide provides more information on Data Enrichment Connectors, including what they are, how to configure them, and how they fit in the Activity Flow.

Installing Services: Collector Installation

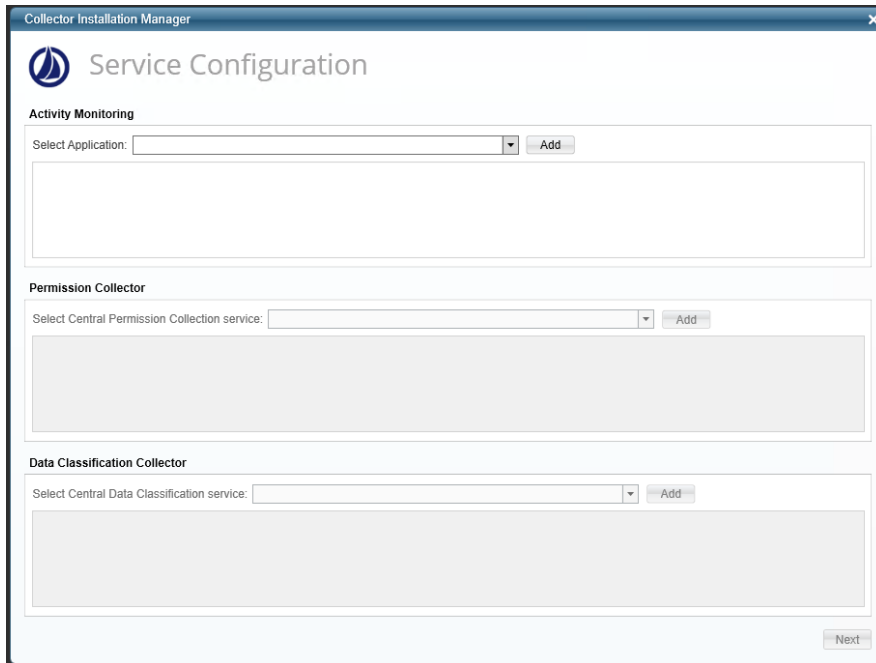
1. Run the **Collector Installation Manager** as an Administrator.
The installation files are in the installation package under the folder **Collectors**.

The Collector Installation Manager window displays.



2. Enter the credentials to connect to IdentityIQ File Access Manager.
 - a. ServerName/IP should be pointed to the Agent Configuration Manager service server.
 - b. An IdentityIQ File Access Manager user with Collector Manager permission (permission to install collectors). For Active Directory authentication, use the format domain\username.
3. Click **Next**.

The Service Configuration window displays.



4. If you are installing the Activity Monitoring collector, select the application, and click **Add**.

In some applications, additional credentials may be required to allow granting elevated permission for activity monitoring collection.

5. If you are installing the Permission Collector, select the Central Permission Collector to which to connect this service, and click **Add**
6. If you are installing the Data Classification, select the Central Classification Collector to which to connect this service, and click **Add**
7. Click **Next**.

The Installation Folder window displays.

If this is the first time you are installing collectors on this machine, you will be prompted to select an installation folder, in which all future collectors will also be installed.

8. Browse and select the location of the target folder for installation.
9. Browse and select the location of the folder for system logs.
10. Click **Next**.
11. The system begins installing the selected components.
12. Click **Finish**

The Finish button is displayed after all the selected components have been installed.

The *IdentityIQ File Access Manager Administrator Guide* provides more information on the collector services.

Verifying the Google Drive Connector Installation

Installed Services

Verify that the services installed for the connector are available and active. Using windows Service manager, or other tool, look for the IdentityIQ File Access Manager services, and see that they are running.

for example:

- File Access Manager Central Permissions Collection.
- File Access Manager Central Data Classification.
- File Access Manager Central Activity Monitor.

Log Files

Check the log files listed below for errors

- "%SAILPOINT_HOME_LOGS%\PermissionCollection_<Service_Name>.log"
- "%SAILPOINT_HOME_LOGS%\DataClassification_<Service_Name>.log"
- "%SAILPOINT_HOME_LOGS%\GDrive-<Application_Name>.log"
- **On the server which contains the central permissions collection service**
PermissionsCollection_[Service Name]
- **If a collector exists, then you can check the collector log**
PermissionsCollection_[Central Service Name] Collector [Running Number]

Monitored Activities

1. Simulate activities on Google Drive.
2. Wait a minute (approximately).
3. Verify that the activities display in the IdentityIQ File Access Manager website under
Forensics > Activities

Permissions Collection

1. Run the Crawler and Permissions Collector tasks (*Settings > Task Management > Scheduled Tasks*)
2. Verify that:
 - The tasks completed successfully
 - Business resources were created in the resource explorer (*Admin > Applications > [application column] > Manage Resources*)
 - Permissions display in the Permission Forensics page (*Forensics > Permissions*)