



SailPoint IdentityIQ

Version: 8.4.0.6000

File Access Manager v8.4 Service Pack 6 Deployment Guide



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IMPORTANT

Please read this Service Pack Guide carefully as this is a unique Service Pack and requires special considerations.

This service pack requires FAM 8.4 SP5 and .NET 8.

This 8.4 Service Pack 6 is NOT applicable for versions prior to 8.4 of FAM. You will need to update to 8.4 SP5 and only then can be applied.

Microsoft's SQL Server 2012 and 2014 are no longer supported, make sure to upgrade to a supported version before applying this Service Pack.

Chapter 1: Planning Your Service Pack Deployment

What is a Service Pack?

Service Packs are cumulative packages containing all released E-Fixes to date since the last Major or Patch release. Service Packs allow customers to stay up to date with the latest bug fixes and performance enhancements, with minimal down time and without the need to upgrade. Service Packs only update the File Access Manager components for which bug fixes or performance enhancements were issued, while the rest of the system remains untouched.

Service Packs Deployment Process

Starting from version 6.1, SecurityIQ (FAM) Service Packs deployment is done automatically. Service Packs are deployed by the File Access Manager update deployment mechanism. By simply uploading a Service Package through the Administrative Client, and pressing a button to initiate the deployment, the Service Pack will be deployed and will automatically update all relevant File Access Manager components.

All File Access Manager components, including Web Sites, Administrative Clients, Core Services, Activity Monitors, Permission Collection and Data Classification Engine and Collectors, Watchdogs and the File Access Manager Database, will be updated – provided that the service pack contains update for the specific component.

The only exception to that is the File Access Manager Collector Manager – used to deploy Collectors and Activity Monitoring Agents – which is a standalone application, and will need to be updated manually, if an update is available.

Version Numbers

The current version number is displayed on the bottom right corner of the Administrative Client screen.

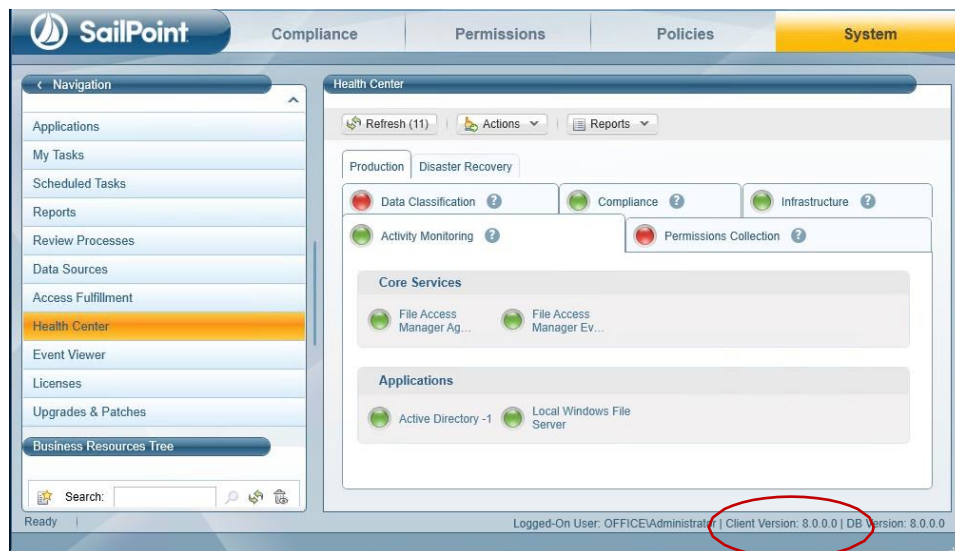


Figure 1 Application Monitors Screen



File Access Manager version numbers are represented by a four-section number, e.g., 8.4.0.6000.

The first two sections represent major releases. File Access Manager 8 GA release number is 8.0.0.0. whereas File Access Manager 8.4 release will be represented by the number 8.4.0.0.

The next section represents Patch Releases, e.g., File Access Manager 8.0P1 version number is 8.0.1.0.

Service Pack updates are reflected in the last section, and so File Access Manager 8.4 Service Pack 6 version number is 8.4.0.6000.

The Database version number will be updated with every service pack. For File Access Manager 8.4 Service Pack 6, the database version number is 8.4.0.6000.

The Client version number will be updated if the service pack includes changes to the Administrative Client. For File Access Manager 8.4 Service Pack 6, the Client version number is 8.4.0.6000.

Infrastructure components, such as Elasticsearch and RabbitMQ will retain the same version number, unless an update to the actual infrastructure components is applied, in which case their version number will be updated as well. 8.4 Service Pack 6 does not include any updates to such infrastructure components.

Versions included in this release:

Table 2 File Access Manager Component Version Details

Component	Version
File Access Manager Database	8.4.0.6000
File Access Manager Elasticsearch	8.2.2
File Access Manager RabbitMQ	3.9.14
File Access Manager SCIM API	8.4.0.5000
File Access Manager REST API	8.4.0.5000
File Access Manager Business Website	8.4.0.5000
File Access Manager Administrative Client	8.4.0.6000
File Access Manager Data Classification	8.4.0.6000
File Access Manager Permission Collection	8.4.0.6000
File Access Manager Activity Analytics	8.4.0.5000
File Access Manager Agent Configuration Manager	8.4.0.6000
File Access Manager Collector Synchronizer	8.4.0.6000
File Access Manager Crowd Analyzer	8.4.0.5000
File Access Manager Event Manager	8.4.0.6000
File Access Manager Reporting Service	8.4.0.6000
File Access Manager Scheduled Task Handler	8.4.0.6000
File Access Manager User Interface	8.4.0.6000
File Access Manager Watchdog	8.4.0.6000
File Access Manager Workflow Service	8.4.0.5000
File Access Manager Activity Monitor	8.4.0.6000



Backup Measures

Backups are important. Having the original deliverable readily available will allow you to quickly and easily rollback changes if needed. One of the great things about Service Packs is that they allow for small surgical changes to be made to the system, by changing only what is necessary. For that reason, they are also easy to roll back, provided that backup measures have been taken.

Database

As a rule, we recommend that regular backups be performed on the IdentityIQ File Access Manager database.

Service Packs can occasionally require changes to the database, either in the form of content modification on specific tables or in the form of schema changes to the tables and objects in the database.

In the case of schema changes, we recommend that a copy of the original database object be taken. The simplest way of doing that is creating a backup object with a different name, using the script of the original object. In most cases, that would entail generating a Create script of the original object and renaming the object name in the script before execution.

You can consult your DBA on how to create such backup objects.

Other Components

The IdentityIQ File Access Manager updates' deployment mechanism creates a backup for every component updated by the service pack. Once the Service Pack package is loaded and its deployment started, before any changes are made, a backup copy of the updated component is taken and stored in the designated Backup folder. The Backup folder is located under the SailPoint home directory (set by the SAILPOINT_HOME environment variable and is by default at C:\Program Files\SailPoint\). A folder bearing the Service Pack name will be created in the main Backup folder, and a backup of each of the updated components will be created.

For SP6 the Backup folder would be `{%FILE_ACCESS_MANAGER_HOME%}\Backup\8.4.0.6000` (*the contents of the folder will be related to the pre-upgraded version*).

Chapter 2: Support Matrix

Table 3 IdentityIQ File Access Manager Server Support Details

System	Supported Versions
IdentityIQ File Access Manager Servers	Windows 2016/2019/2022
Workstation	Windows 8 and above
Browser	Edge, Firefox, Chrome, Safari
Database	MS SQL Server 2016(SP1)/2017/2019/2022

Chapter 3: Deploying Version 8.4 Service Pack 6

The deployment process consists of the following steps:

1. Downloading the Service Pack from this [Compass Location](#)
2. Read the Service Pack deployment guide thoroughly.
3. Pre-deployment steps: **FAM 8.4 SP5 and .NET 8 are a must for this version, make sure you come from that specific version. Please follow the Deployment Guide for 8.4 SP5.**
4. Service Pack Deployment
 - a. Upload the Service Pack through the Administrative Client
 - b. Kick-Off the Service Pack deployment
 - c. Verify successfully deployment
5. Post Deployment Steps

Pre-upgrade Steps

Install Service Pack 6 Prerequisites.

Service Pack 6 **does not require** Prerequisites Scripts to be executed prior to the actual Service Pack installation (regardless of whether they were applied previously on any 8.4 Service Pack). Those prerequisites were required by FAM 8.4 SP5 so they are already included as part of SP5.

Install EXO PowerShell module.

For those who use Exchange Online Connector please follow the installation prerequisites section: [Chapter 4, SIQSUS-881 – Modernize EXO Connectivity v3.0.](#) , if not used, please continue.

Install .NET 8

IMPORTANT NOTE: .NET 8 should be already installed as part of FAM 8.4 SP5; if not, please refer to 8.4 SP5 Deployment Guide. Do not proceed until .NET 8 is installed.

IMPORTANT NOTE: DO NOT uninstall or remove any older version of .NET either before or during the upgrade process (including ALL FAM servers) as this could make your installation of FAM fail.

Note: .NET Core and .NET Framework 4.7.2 can be installed on the same server.

Verifying .NET Settings

Complete the following steps to verify the version of .NET Core:

1. Open a CMD window.
2. Execute the following command:

a.`dotnet --list-runtimes`

The output should consist of at **least** these two:

- Microsoft.AspNetCore.App 8.0.x
- Microsoft.NETCore.App 8.0.x

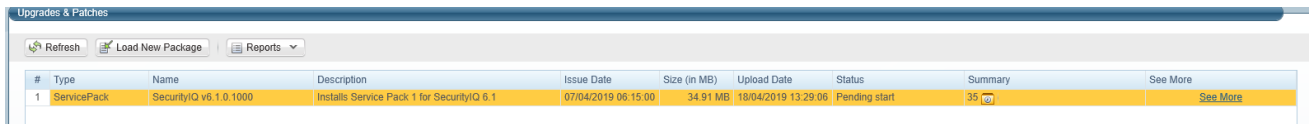
If the command did not execute or the two runtimes mentioned above are not in the output list, reinstall or repair the hosting bundle.

ElasticSearch JDK replacement

IMPORTANT NOTE: JDK at this point should be already replaced as part of FAM 8.4 SP5; if not, please refer to 8.4 SP5 Deployment Guide for further instructions.

Service Pack Deployment

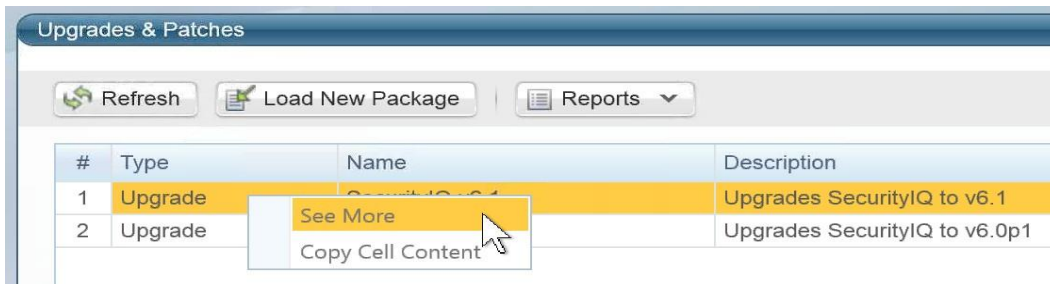
- **Ensure both .NET 8 and Elasticsearch Service have been installed.**
- Extract the “File Access Manager v8.4.0.6000.zip” installation package.
- Navigate to the “Service Pack 6” folder.
- Log into the IdentityIQ File Access Manager administrative client Client
- Click **System >> Upgrades & Patches >> Load New Package**
This will open the **Load Package** dialog.
- Press **Browse** and load the file “**File_Access_Manager_v8.4.0.6000.wbpxkg**” from the Service Pack folder.
- Press **Upload Package**.
The system will upload and validate the file. This might take a few minutes.
- Once it is validated, press **Save**. This will add the upgrade package to the upgrades page.



#	Type	Name	Description	Issue Date	Size (in MB)	Upload Date	Status	Summary	See More
1	ServicePack	SecurityIQ v6.1.0.1000	Installs Service Pack 1 for SecurityIQ 6.1	07/04/2019 06:15:00	34.91 MB	18/04/2019 13:29:06	Pending start	35	See More

Figure 2: Upgrades & Patches table

- Right click the upgrade package and select **See More** from the menu.

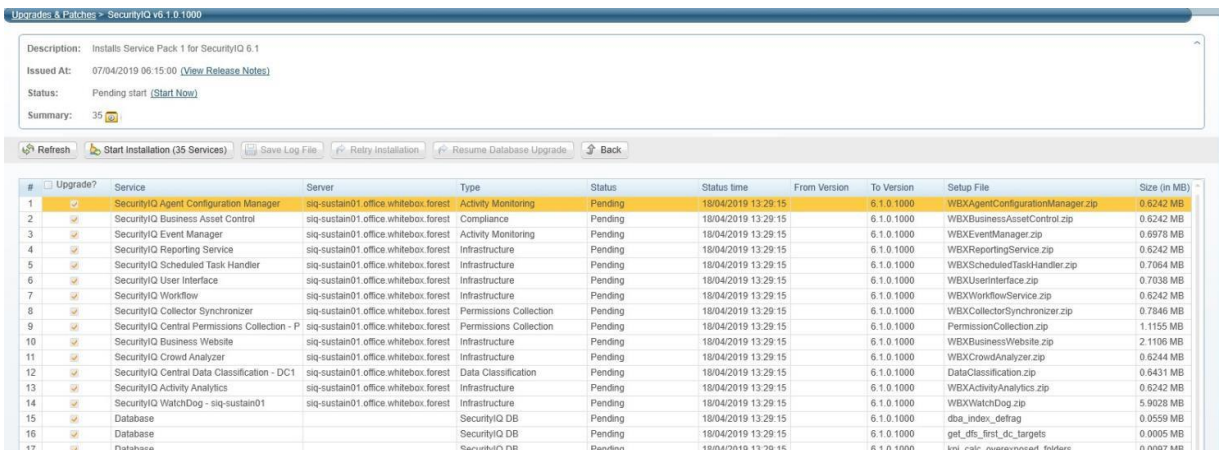


#	Type	Name	Description
1	Upgrade	SecurityIQ v6.1	Upgrades SecurityIQ to v6.1
2	Upgrade	SecurityIQ v6.0p1	Upgrades SecurityIQ to v6.0p1

Figure 3: Expand Service Pack package - Details

This will open the upgrade detail panel, showing a list of the upgrade steps included in this package.

Each installation line is listed in “Pending” state when it is added to the upgrade/installation list.



#	Upgrade?	Service	Server	Type	Status	Status time	From Version	To Version	Setup File	Size (in MB)
1	<input checked="" type="checkbox"/>	SecurityIQ Agent Configuration Manager	siq-sustain01.office.whitebox.forest	Activity Monitoring	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXAgentConfigurationManager.zip	0.6242 MB
2	<input checked="" type="checkbox"/>	SecurityIQ Business Asset Control	siq-sustain01.office.whitebox.forest	Compliance	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXBusinessAssetControl.zip	0.6242 MB
3	<input checked="" type="checkbox"/>	SecurityIQ Event Manager	siq-sustain01.office.whitebox.forest	Activity Monitoring	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXEventManager.zip	0.6978 MB
4	<input checked="" type="checkbox"/>	SecurityIQ Reporting Service	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXReportingService.zip	0.6242 MB
5	<input checked="" type="checkbox"/>	SecurityIQ Scheduled Task Handler	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXSchedulerTaskHandler.zip	0.7964 MB
6	<input checked="" type="checkbox"/>	SecurityIQ User Interface	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXUserInterface.zip	0.7038 MB
7	<input checked="" type="checkbox"/>	SecurityIQ Workflow	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXWorkflowService.zip	0.6242 MB
8	<input checked="" type="checkbox"/>	SecurityIQ Collector Synchronizer	siq-sustain01.office.whitebox.forest	Permissions Collection	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXCollectorSynchronizer.zip	0.7846 MB
9	<input checked="" type="checkbox"/>	SecurityIQ Central Permissions Collection - P	siq-sustain01.office.whitebox.forest	Permissions Collection	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXPermissionsCollection.zip	1.1155 MB
10	<input checked="" type="checkbox"/>	SecurityIQ Business Website	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXBusinessWebsite.zip	2.1106 MB
11	<input checked="" type="checkbox"/>	SecurityIQ Crowd Analyzer	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXCrowdAnalyzer.zip	0.6244 MB
12	<input checked="" type="checkbox"/>	SecurityIQ Central Data Classification - DC1	siq-sustain01.office.whitebox.forest	Data Classification	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	DataClassification.zip	0.6431 MB
13	<input checked="" type="checkbox"/>	SecurityIQ Activity Analytics	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXActivityAnalytics.zip	0.6242 MB
14	<input checked="" type="checkbox"/>	SecurityIQ WatchDog - siq-sustain01	siq-sustain01.office.whitebox.forest	Infrastructure	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	WBXWatchDog.zip	5.9028 MB
15	<input checked="" type="checkbox"/>	Database	SecurityIQ DB	SecurityIQ DB	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	dba_index_defrag	0.0559 MB
16	<input checked="" type="checkbox"/>	Database	SecurityIQ DB	SecurityIQ DB	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	get_dfs_first_dc_targets	0.0005 MB
17	<input checked="" type="checkbox"/>	Database	SecurityIQ DB	SecurityIQ DB	Pending	18/04/2019 13:29:15	6.1.0.1000	6.1.0.1000	kpi_calc_overexposed_folders	0.0097 MB

Figure 4: Review Service Pack package - Details

- Click **Start Installation** and **Confirm** to start the installation process.

The Service Pack deployment process runs a series of prerequisites checks before the Database update begins. Then proceeds to perform the Database updates.

Following the Database updates, the first component to be updated will be the Watchdog Service, installed on the server hosting the User Interface core service.

Following that, all other components will be updated.

What if an update line fails?

If a script or a component update fails, right-click the failed line in the **System/Upgrade and**

Patches screen and click **Save** to save the log file. The system will download the log file where you can see error messages describing the issues.

After you fix the issue, right-click the failed line and click **Retry** to rerun the script and continue the upgrade process.

#	<input type="checkbox"/> Upgrade?	Service	Server	Type
1	<input type="checkbox"/>	Database		Data Update
2	<input checked="" type="checkbox"/>	SecurityIQ Agent Configuration		Activity Monitoring
3	<input checked="" type="checkbox"/>	Database		SecurityIQ DB
4	<input checked="" type="checkbox"/>	Database		SecurityIQ DB
5	<input checked="" type="checkbox"/>	Database		SecurityIQ DB




Figure 5: Retry installation line

- Wait until all services have **Completed** or are in a **“Pending Restart”** status.
- If one of the services is in a **“Pending Restart”** status, restart the server on which this service is installed.
The Service Pack update will continue automatically after restarting.
- Wait until all services are in **“Completed”** status after restarting.

Note: See *Chapter 5: Troubleshooting* for further suggestions and information.

Post Upgrade Actions

File Access Manager UI Upgrade (IISReset needed)

Due to recent UI changes and to avoid any cache conflicts, please run as an Administrator an *iisreset* command using either PowerShell or Command Prompt window (this can also be made using the IIS administration window):

iisreset /restart

IdentityIQ File Access Manager Client Upgrade

Please close and re-open all File Access Manager Administrative Client applications.

On the first run of the IdentityIQ File Access Manager administrative client after an update, a popup message displays, requesting that you update the client. During the update, you will be required to reenter the server on which the User Interface Service is installed.

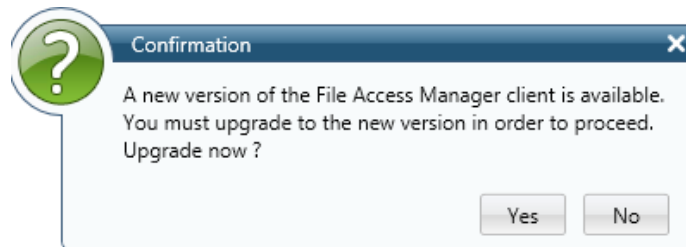


Figure 4: Message - Update File Access Manager Client

Validate the Service Pack update

To validate the installation, and verify that the correct version was installed, check in the Windows Add/Remove programs in the control panel.

The versions of the IdentityIQ File Access Manager components should be set to 8.4.0.6000

The IdentityIQ File Access Manager Database version should be set to 8.4.0.6000

Note: See “Versions included in this release:” for a full list of components updated.

Optional: Uninstall .Net Core 3.1

After you have completed the installation, you optionally can uninstall .NET Core 3.1

Navigate to the Control Panel > Programs > Uninstall a program

Locate corresponding .NET Core 3.1.x program, right-click > Uninstall

Chapter 4: Important Information and Updates

SIQDEV-20715 – NTLM Authentication Proxy support

Previous to version 8.4 Service Pack 5, FAM did not support Proxy Authentication capabilities, the only out-of-the-box proxy available configurations were the proxy URL and whitelisting of sites where proxy is not used. This translated into certain limitations like not being able to read and make use of User and Password values to be able to authenticate itself against a Proxy.

FAM Proxy Configurator Tool

To ensure a correct setup, a new support tool is included on this release, it oversees setting the values in the selected alternative, as well as encrypting the password value (if needed), and performing basic testing of the provided settings.

Now, this latest version of FAM provides two options to securely store forementioned credentials:

Using Windows Environment Variables

ALL_PROXY – the proxy server used on HTTP and/or HTTPS requests in case HTTP_PROXY and/or HTTPS_PROXY are not defined.

Example: 10.10.10.10:8080

NO_PROXY – a comma-separated list of hostnames that should be excluded from proxying.

Example: SOME.DOMAIN.COM,LocalFAMServer1,LocalFAMServer2

USER_PROXY – Username for Proxy NTLM authentication.

PWD_PROXY – Password for Proxy NTLM authentication (encrypted by the FAM Proxy Configurator Tool(included)).

BOL_PROXY – Either enables or disables the Proxy usage for intranet addresses.

Using Windows Credential Manager

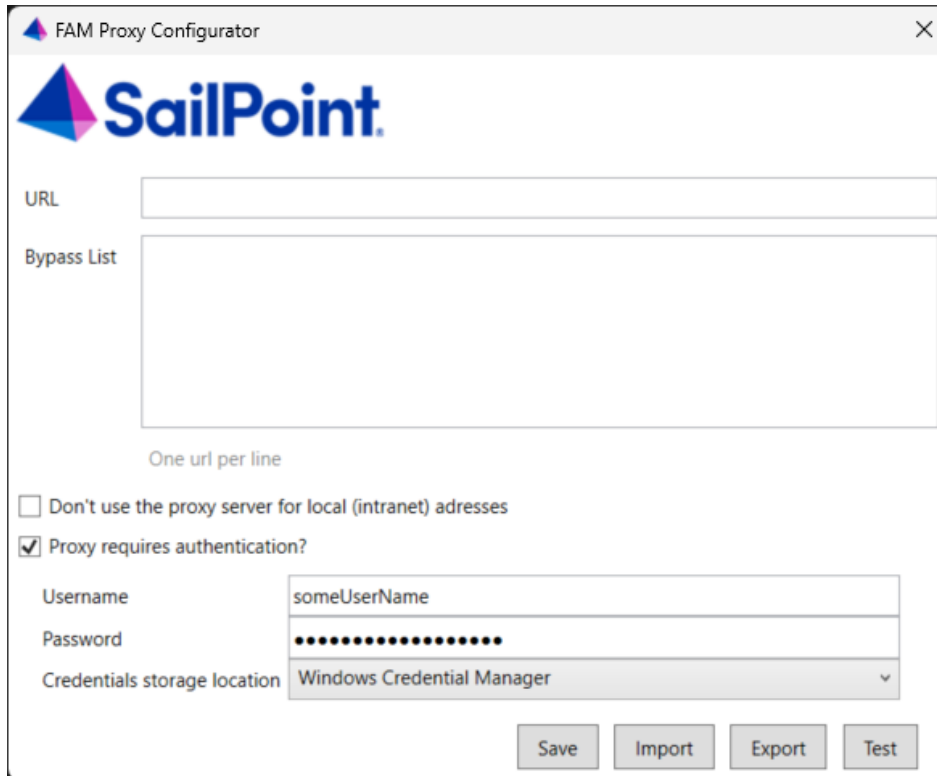
Another option is to make use of Windows Credential Manager. These specific values need to be configured on the FAM server(s) hosting the Engine/collector/Collector Sync services.

NOTE: This Tool must be executed using Admin credentials if Windows Credential Storage option is selected.

Please note that after creating these credentials (regardless of the store location), the corresponding FAM services must be restarted for the changes to take effect.

SIQDEV-20716 – NTLM Authentication Proxy Configurator Tool

We added an NTLM Authentication Proxy Tool to support/configure the actual values to be used as Credentials by the Proxy if NTLM Authentication is being used.



- **Url:** Proxy server name or IP address and port (optional).
This setting corresponds to the environment variable **ALL_PROXY**
- **Bypass List:** To avoid the use of the proxy server when visiting certain websites, enter the ending of the website address in the exception list (_for example, *.contoso.com*_).

For multiple websites, type each website address per line. The * is a wildcard so any website addresses that end with the website address listed will bypass the proxy server. This setting corresponds to the environment variable **NO_PROXY**.

- **Do not use the proxy server for local (intranet) addresses:** We recommend you select this check box unless your organization requires the proxy server to be used for intranet addresses.
This setting corresponds to the environment variable **BOL_PROXY**.

For further details on the Tool, please refer to the Readme.pdf file included with it.

SIQETN-3331 – Privacy scan getting stuck due to RabbitMQ duplicates

Data Privacy Scan task suffered from RabbitMQ messages being resent from DC engine due to intermittent connection generating some duplicate DB records, *KeyNotFoundException* being thrown caused FAM's thread to break and task get stuck.

This now have been fixed and DPS Task and RabbitMQ resiliency are now reassured.

SIQSUS-1312 – Exchange Online (EXO) updates for Cmdlet deprecation

On September 15th, 2024, Microsoft deprecated certain Exchange Online Admin Cmdlets that were used by File Access Manager Exchange Online integration. The deprecation of these Cmdlets **ONLY** affects the Activity Monitoring functionality of the File Access Manager Exchange Online integration. The four cmdlets in the Exchange Online V3



module that Microsoft deprecated are:

- Search-AdminAuditLog
- Search-MailboxAuditLog
- New-AdminAuditLogSearch
- New-MailboxAuditLogSearch

These cmdlets are no longer be available for use at this date, FAM code changes were made to switch to a Search-UnifiedAuditLog cmdlet instead to access audit logs. If not addressed, this could lead to disruptions in this specific functionality of File Access Manager for Exchange Online.

For more details, visit [Microsoft's announcement](#).

SIQSUS-1315 – Remove Oracle JDK in replace of AdoptOpenJDK

File Access Manager 8.4 Service Pack 5 replaces all Oracle JDK assets with Adoptium's Temurin JDK 17 (Latest LTS supported by ElasticSearch 8.2.2.) [Latest Releases | Adoptium](#).

New installations of File Access Manager 8.4 Service Pack 5 will deploy Adoptium's Temurin JDK by default, in support of the File Access Manager Elasticsearch deployment. Upgrades of existing deployments must follow the deployment instructions provided with the product documentation, using the new File Access Manager Server Installer, included with Service Pack 5. For further info, please refer to the Pre-Upgrade Steps [section](#).

SIQSUS-1318 – Enable FAM's Memory Protected Extraction by default

Out-of-the-Box Data Classification setting *useProtectedExtraction* default value as true. In previous versions it is disabled by default.

As a note, with this enabled setting, FAM creates a memory configuration based on available memory when DC task starts. Then it checks and adjusts memory usage while running to prevent out of memory exceptions.

SIQDEV-20711- FAM's upgrade to .NET 8

Starting with 8.4 Service Pack 4, FAM has been upgraded to make use of the latest Long Term Support .NET Framework version, which is 8. More information regarding this update can be found [here](#) on the prerequisites list as it needs to be installed prior to any FAM-related installation task for this upgrade.



SIQSUS-880- Data Classification Policy Scope Isolation

Now, FAM applications can have a delta scan that should be based on the set application scope of the policy.

- Delta Scan: The DC task will only scan recently modified folders (last modified updated from last crawl).
- Full Scan: The DC task will re-scan all folders in the DC scope.

After a full Data Classification scan, only changed folders detected after a crawl will be scanned on the next DC run. A full re-scan of all folders will only occur if active DC policies, rules or policy objects are changed.

If a policy change occurs that would only result in results being removed, a full scan will not be triggered. This is an optimization because of the expensive cost of running a DC task.

SIQSUS-880 fixes an issue introduced in v8.4 with the new policy scope feature, where a particular policy can be restricted to a particular application(s) or application type(s). Since we use a global last changed policies timestamp, the problem is that it will trigger a full DC re-scan when a DC policy/rule/object is changed even if it is outside the scope of that application.

The fix for SIQSUS-880 is to add a [last_updated] column to [dc_policy] table, as well as an [ocr_enabled_last_updated] column to the [bam] table. This way we have fine-grained knowledge of when a particular DC policy has changed and so can correctly calculate the last modified policies timestamp for a particular application based on it's given policy scope and active policies only and will not be affected by changes to policies outside of it's scope.

Internal rules of when to consider a policy updated:

- If a policy/rule/object is changed or created, but the object is not active and part of an active policy within the policy scope of a particular application, it will not trigger a full re-scan.
- If a new policy is created, but does not yet have any rules, a new DC full re-scan will not be triggered, as only active policies with at least one active rule are considered when computing the last changed policies timestamp just before a particular DC task run.

SIQETN-3295 – DFS Crawl improvements

Crawl issues (like uncaught exceptions) have been fixed within DFS stored procedures along with some performance improvements.

Also, in some cases, temp tables were not being removed/renamed generating extra burden to the DB. As a safety measure, moved the deletion of the temp tables at the end of the Workflow to ensure they are always deleted.

SIQETN-3297 – Data Privacy Scan ElasticSearch query improvements

Improved performance on Data Privacy Scan by reducing the number of searches/queries made to ElasticDB.

On Data Privacy Scan, when saving to Elastic, the process was searching for changes, deleting BR IDs, updating and inserting records, to improve it, the process now deletes the records and inserts the records.

Also, added enhancements to the help with the Save process, by avoiding any search bigger than 2GB from ElasticSearch, which was causing issues within ES.



SIQSUS-879 - Data Classification OOTB Policy Optimization

Updated RegEx expressions for IBAN and ICD rules to reduce false positives and address common use cases - by tuning current OOTB rules and expanding inter-rule relations to achieve more complex, and accurate data detection.

1. ICD - Codes A00-Z99 policy regex updated to include optional decimal point and one or two digits.
2. EU IBAN policy regex updated to get the most accurate results.

SIQSUS-1034 - Groups query for IIQ Correlation

The FAM Classifications Aggregation task now has a new "Query Type" argument that provides a choice between the FAM SCIM service that is used to aggregate classifications:

1. The legacy API that aggregates classifications via FAM Permissions
2. A new, more efficient API that aggregates classifications via FAM Groups

NOTE: This option is enabled in the following IIQ versions: *8.2p6, 8.3p4, *8.4p1, 8.5 (those w/ an asterisk have been already released).

There is a new feature in the IIQ FAM Classification task that is now exposed. The Classification Filter Rule is used to narrow the scope of Classifications for the task. Like most rules, it accepts a SailPointContext and a Logger. The return value is a QueryOptions that contains a Filter that is used to generate the SCIM query. The Filter is not as feature-rich as a traditional Hibernate Filter. It supports "and" operations but not "or". If expression values include reserved URL characters, they need to be encoded.

The Page Size is now configurable on the task. This argument specifies the number of records that we fetch with each SCIM call to FAM.

Several arguments have been added to the FAM Classification task to allow users to adjust its tolerance. They are as follows:

- Retry Limit: The number of times that we retry a failed query before giving up and moving on.
- Retry Gap: The number of milliseconds that we wait before retrying a failed query.
- Max Errors: The number of times that we give up on retrying individual queries before giving up on the task entirely.

Standard Properties

*Indicates a required field.

Name*	<input type="text" value="File Access Manager Classification Aggregation"/>	Previous Result Action	<input type="text" value="Delete"/>
Description	<input type="text" value="Aggregate classifications from File Access Manager"/>		
Allow Concurrency	<input type="checkbox"/>		
Require Signoff	<input type="checkbox"/>		
Host	<input type="text"/>		
Number of Runs	2		
Average Run Time	0:00:03		
	<input type="button" value="Reset Run Statistics"/>		
Email Task Alerts			
Email Notification	<input type="text" value="Disabled"/>		

File Access Manager Classification Aggregation Options

Query Type	<input type="text" value="Group"/>
Classification Customization Rule	<input type="text" value="-- Select One --"/>
Classification Filter Rule	<input type="text" value="Group"/>
Automatically promote descriptions to this locale	<input type="text" value="-- Select an Object --"/>
Classification Page Size	<input type="text"/>
Classification Retry Limit	<input type="text"/>
Classification Retry Gap	<input type="text"/>
Classification Maximum Errors	<input type="text"/>

NOTE: These enhancements require the import of the following file to expose the new configuration options for the task:

- New installations: WEB-INF/config/init-fam.xml
- Existing installations: WEB-INF/config/patch/identityiq-fam-8.4p1.xml

For more detailed information please reach out to IIQ Support Teams.

SIQETN-3284 – DB Cleanup Task performance optimization.

FAM's Database Cleanup Task is a crucial maintenance job that users can trigger or schedule as needed. The primary goal of this task is to ensure that FAM's DB remains in optimal conditions. It encompasses various processes such as tables maintenance (including temporal ones), rebuilding DB indexes, cleaning up some other stuff not used anymore like old reports and Application Wizard Records, removing obsolete information related to deleted resources (e. g. DSAR information) from Elasticsearch, and more. Key optimizations include:

Rebuild DB indexes: Potentially long running process that may time out after the configured *rebuildIndexTimeLimitMinutes* setting.

- Some DB Store Procedures were optimized to be executed and the progress of it can be tracked.
- Now the process reports how many indexes were rebuilt.
- If the process did not complete in the elapsed time, mark the task log entry as a warning.

Remove deleted resources privacy records from ElasticSearch repository and Database: Potentially long running process that was not cancelable, even if the task is cancelled the process kept running in the background.

- The process is now cancelled as expected.
- Added a new config setting (*removeDsarRecordsTimeLimitMinutes*) that allows the configuration of a timeout for this step of the process and honor it in execution. To adjust setting, complete the following steps:
 - 1) Stop the FAM Scheduled Task Handler Windows Service.
 - 2) Navigate to FAM's installation path and locate the *ScheduledTaskHandlerServiceHost.dll.config* within the *\SailPoint\FileAccessManager\ScheduledTaskHandler* path.
 - 3) Update the *removeDsarRecordsTimeLimitMinutes* value accordingly.
 - 4) Start the FAM Scheduled Task Handler Windows Service.



SIQSUS-1036 – Incorporate Custom DB Ports for SharePoint Content DBs into SP Configuration.

Support was added to allow for a custom port definition of the SharePoint content databases during its configuration. In a future Service Pack we are looking to include the ability to auto-detect the SharePoint Content Databases. Currently they need to be manually entered.

In the SharePoint application configuration screen the User will now have the following options:

Toggle option to specify All Content Database ports. Utilize this option if all Content Databases share same port number.

Content Databases

Specify Port (i)

Port Number *

Set the port number for all content databases.

0

Individual Ports numbers per DB/Host. Utilize this option if Content Databases use different ports. Note: If Content Database does not have the port specifically defined it will default to port entered in “Specify Port” section.

Specify Individual Port(s) (i)

Takes precedence over “specify port” entry

Host Name	Port	
content_db_1_local	1111	(trash)
content_db_2_local	2222	(trash)

[Add Another](#)

SIQETN-3118 – Enhance Data Classification Skipped Document Log Messages.

Updated the error description to include both the actual file size and the metadata file size:

*Skipping content of file {filePath} because it is too large.
The extracted content size {computedFileSize} MB. exceeds the max file size.
Metadata reported size = {fileSize} MB.*

SIQETN-3119 – Summarize Failed Documents During Data Classification in Task Details.

The purpose of this report is to improve the visibility and clarity of failed documents during the data classification



process. The summary is divided in 2 general sections:

Settings section:

Setting	Description
BAM	Business unit name
Task	Name of the task
Agent	Name of the agent
Start time	Starting date time of the task
End time	Ending date time of the task
Elapsed time	Time it took for task time to complete
Excluded formats	DC_Parameters.FormatsToExcludeFromIndex
Formats to Index	DC_Parameters.FormatsToIndexAsDocuments
Archive formats	DC_Parameters.ArchiveFormats
Max file size	DC_Parameters.MaxFileSizeMB

Note: Parameters that do not have a value or are null in DC_Parameters will not be included.

Errors sections

Errors are grouped in categories, with the title being the type of error and the error count of that category:

- { CATEGORY_NAME } { ERROR_COUNT } items)

All errors include the timestamp when they occurred, a brief description of the error and the file name it applies to

- InvalidOperation (1 item)
2023-07-27T17:23:20 | Invalid operation for file [_corrupt_doc_file_.docx]

Applicable categories

Category	Description
FileIsEncrypted	(Hyland). File is encrypted
FileIsLocked	(Hyland). File is locked or in use
FileNotFound	(Hyland). File was not found
FileNotReadable	(Hyland). File is not readable
General	(Hyland). General error
InvalidOperation	(Hyland). The operation is invalid for this type of object
MaximumFileSize	File size exceeds the maximum configured size
OutOfMemory	(Hyland). Out of memory
OpenError	(Hyland). Error opening the file
OutOfMemory	(Hyland). Corrupt file
WrongType	(Hyland). Attempt to open file with wrong type

NLog configuration

A new log file definition for the report is needed for the summary report.

Target definition:

```
<target
  name="failedDocumentsDetailsLogFile" xsi:type="File"
  keepFileOpen="true" concurrentWrites="false"
  fileName="${environment:SAILPOINT_HOME_LOGS}\DataClassification_[AGENT_NAME].Failed Documents Details.log"
  archiveNumbering="DateAndSequence" archiveDateFormat="yyyy-MM-dd" maxArchiveFiles="10" archiveEvery="Day"
  archiveAboveSize="31457280"
  layout="{message}"
/>
```




The new module will need to be manually installed by the customer on any machines running Exchange Online tasks: Activity Monitoring and the Permission Collection engine. The command to install the latest version of the module and should be run from an elevated administrator PowerShell prompt:

```
Install-Module -Name ExchangeOnlineManagement -MinimumVersion 3.1.0 -Scope AllUsers -Force -AllowClobber
```

The above command will install the latest stable version and will be included in the FAM documentation for this connector. Note that any upgrades of the EXO module will require a restart of the relevant activity monitoring and permission collection services, since it will have loaded different versions of internal module libraries.

To check which version of EXO module is installed, run:

```
Get-InstalledModule
```

Optimized Get-EXO* Cmdlets

We are now using the new Get-EXO* cmdlets where possible:

- Get-EXOMailbox (to replace Get-Mailbox)
- Get-EXOMailboxFolderPermission
- Get-EXOMailboxFolderStatistics
- Get-EXOMailboxPermission
- Get-EXOMailboxStatistics
- Get-EXORecipient
- Get-EXORecipientPermission

Mailbox Folder Statistics Collection Now Opt-In To Address Performance

As an optimization, we will make collecting the following statistics optional:

- LastLogonTime - Updates business_service_last_used table.
- ItemCount - Updates files_count in business_service table.
- TotalItemSize - Updates size in business_service table.

While this data may be useful to some customers, the performance penalty of collecting it causes crawls to run an order of magnitude slower, as a separate REST call must be made for each mailbox after getting the initial root collection. This will now be disabled by default but can be re-enabled by setting crawlCalculateSize from Never to Always row in bam_configuration_value table for matching bam and can create row if it doesn't exist. (There is precedent for this change as Exchange On-Prem already has this backend hidden switch but is always on.)

Exclude Internal Folders "SubstrateHolds" and "DiscoveryHolds"

Hidden folders created internally by Microsoft named SubstrateHolds and DiscoveryHolds are excluded from crawl results.

Memory Usage

Microsoft has noted usage of the new EXO V3 module does create a memory leak. Over time, across many re-runs of an Exchange Online crawl or permission collection task, you may experience a gradual increase in memory usage of the Permission Collection engine service.

There is a note about it on the [Microsoft EXO module about page](#):

ⓘ Note

Frequent use of the **Connect-ExchangeOnline** and **Disconnect-ExchangeOnline** cmdlets in a single PowerShell session or script might lead to a memory leak. The best way to avoid this issue is to use the *CommandName* parameter on the **Connect-ExchangeOnline** cmdlet to limit the cmdlets that are used in the session.

We are using the *CommandName* parameter to import any needed REST cmdlets to reduce memory usage. When this is corrected by Microsoft, we will include Microsoft updates/recommendations into the upcoming Service Pack.

Overall Performance

With focused efforts on improving the speed of the crawl, we have made adjustments to no longer fetch statistic by default. Internal testing efforts see a decreased in the crawls time to completion.

Logging and Configuration

There is a way to enable Microsoft internal EXO V3 module logging by editing the NLog configuration file. Setting **writeTo="logFile"** will enable this logger and new logs will be created beginning with EXO.



Local Disk (C:) > Program Files > SailPoint > Logs

Name	Date modified	Type	Size	File version
elasticsearch	5/31/2023 1:30 AM	File folder		
ActivityAnalytics-Statistics.log	5/31/2023 10:00 PM	Text Document	40 KB	
DataClassification_DC1.log	5/31/2023 9:52 PM	Text Document	32 KB	
EventCollector-Statistics.log	5/31/2023 9:59 PM	Text Document	54 KB	
EventManager-Statistics.log	5/31/2023 9:53 PM	Text Document	125 KB	
EXO_RESTCmdletLogs-20230531-215503562.csv	5/31/2023 9:57 PM	CSV File	10 KB	
EXO_RESTCmdletLogs-20230531-215520014.csv	5/31/2023 9:57 PM	CSV File	10 KB	
EXO_RESTCmdletLogs-20230531-215527600.csv	5/31/2023 9:57 PM	CSV File	8 KB	
EXO_RESTCmdletLogs-20230531-215534334.csv	5/31/2023 9:57 PM	CSV File	8 KB	
EXO_RESTCmdletLogs-20230531-215540905.csv	5/31/2023 9:57 PM	CSV File	6 KB	
EXOPowerShellModuleLogs-708-20230531-215512896.csv	5/31/2023 9:55 PM	CSV File	2 KB	
EXOPowerShellModuleLogs-708-20230531-215526817.csv	5/31/2023 9:55 PM	CSV File	6 KB	
EXOPowerShellModuleLogs-708-20230531-215533572.csv	5/31/2023 9:55 PM	CSV File	2 KB	
EXOPowerShellModuleLogs-708-20230531-215539960.csv	5/31/2023 9:55 PM	CSV File	2 KB	
EXOPowerShellModuleLogs-708-20230531-215546525.csv	5/31/2023 9:57 PM	CSV File	471 KB	
PermissionsCollection_PC1.log	5/31/2023 9:59 PM	Text Document	727 KB	
PermissionsCollection_PC1.Statistics.log	5/31/2023 8:10 PM	Text Document	1 KB	

C:\Program Files\SailPoint\Logs\EXOPowerShellModuleLogs-708-20230531-215546525.csv - Notepad++ [Administrator]

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

```
1 StartTime,Type,AssemblyVersion,TenantId,Cmdlet,Parameters,PipelineIndex,OutputObjectCount,ExecutionResult,ClientRequest
2 2023-05-31-21:55:47.795,2,,,,,0,1,Success,1d694446-8106-4606-8274-af252d43ed25,ef51148d-eed7-6b05-0086-26df8b0b6d78,0,G
3 2023-05-31-21:55:47.790,1,15.20.5966.023,154dccc9-b44e-4883-860c-8c4da5ceae46,Get-EXOMailboxPermission,Identity;Owner,1
4 2023-05-31-21:55:49.323,2,,,,,0,1,Success,ecc3956a-ed42-42b3-8294-9248aa2b9c29,432f7d09-fd16-0361-a926-ff0d811ca024,0,G
5 2023-05-31-21:55:49.323,1,15.20.5966.023,154dccc9-b44e-4883-860c-8c4da5ceae46,Get-EXOMailboxPermission,Identity,1,0,Suc
6 2023-05-31-21:55:49.916,2,,,,,0,1,Success,8139a981-6301-48ea-ae74-f4828a9d438a,36e0e03e-7fd5-d0a0-d723-db6a87963392,0,G
7 2023-05-31-21:55:49.915,1,15.20.5966.023,154dccc9-b44e-4883-860c-8c4da5ceae46,Get-EXORecipientPermission,Identity,1,0,S
8 2023-05-31-21:55:50.445,2,,,,,0,1,Success,1db209d0-8a6c-494f-b90e-4cc2b7102be3,c8b0f1b7-cbd6-3259-752e-dd560f509206,0,G
9 2023-05-31-21:55:50.445,1,15.20.5966.023,154dccc9-b44e-4883-860c-8c4da5ceae46,Get-EXOMailboxPermission,Identity;Owner,1
10 2023-05-31-21:55:50.457,2,,,,,0,2,Success,de0dde0b-d476-4bd7-8422-dd452fcb7655,f7fa306a-8021-3883-be42-64f94f0cbef5,0,G
11 2023-05-31-21:55:50.456,1,15.20.5966.023,154dccc9-b44e-4883-860c-8c4da5ceae46,Get-EXOMailboxFolderPermission,Identity,1
12 2023-05-31-21:55:51.463,2,,,,,0,1,Success,1f5c0ecf-2e53-4041-a7ae-e51167486f2a,4bad377b-bc57-5d31-96e3-52659314cd8e,0,G
13 2023-05-31-21:55:51.463,1,15.20.5966.023,154dccc9-b44e-4883-860c-8c4da5ceae46,Get-EXOMailboxPermission,Identity,1,0,Suc
14 2023-05-31-21:55:52.129,2,,,,,0,1,Success,767945b4-fdd3-4bf6-9b60-b260f4cf5e4,eacda6ab-9a62-538f-b09c-ef8223cab204,0,G
15 2023-05-31-21:55:52.129,1,15.20.5966.023,154dccc9-b44e-4883-860c-8c4da5ceae46,Get-EXORecipientPermission,Identity,1,0,S
```

This may be useful to quickly capture and report Microsoft bugs, as EXO V3 is still undergoing development and stability fixes and should not yet be considered mature.

References:

- [Connect to Exchange Online PowerShell](#)
- [Deprecation of Remote PowerShell \(RPS\) for New Exchange Online Tenants](#)
- [Welcome to the Microsoft Tech Community](#)
- [App-only authentication in Exchange Online PowerShell and Security & Compliance PowerShell](#)
- [Use C# to connect to Exchange Online PowerShell](#)

SIQETN-3194 – IIQ SCIM API - Allow for more than 100K results to be returned in Permission Forensics Call

This feature is applicable to customers that utilize integration with IIQ and FAM.

Prior to this change, IIQ API queries would return a maximum number of one hundred thousand results.

This change increases the query's index limit to ten million. Restructuring was completed to improve performance and two additional indexes have been introduced to improve query plans.



Please note these queries still may require a significant time to return results. Additional work is planned for upcoming Service Packs (for both IIQ and FAM) to improve the performance of the results.

SIQETN-3204 – Support custom port configuration for SharePoint On Prem Content Databases

These changes will allow for custom port use for the SharePoint Content databases.

In order to enable this piece of functionality in your environment the following script should be applied to your specific FAMDB with the help of your DBA and SailPoint's Support team.

Please make sure to create a Backup of the DB prior to any changes.

```
DECLARE @bam_id int = -1,
        @port nvarchar(max) = '1433'
IF EXISTS (
    SELECT 1
    FROM whiteops.bam_configuration_value
    WHERE bam_configuration_id = @bam_id
    AND name = 'hasSpecificContentDatabasePort')
BEGIN
    UPDATE whiteops.bam_configuration_value
    SET [value] = 'True'
    WHERE bam_configuration_id = @bam_id
    AND [name] = 'hasSpecificContentDatabasePort'
END
ELSE BEGIN
    INSERT INTO whiteops.bam_configuration_value
    VALUES (@bam_id, 'hasSpecificContentDatabasePort', 'True')
END
IF EXISTS (
    SELECT 1
    FROM whiteops.bam_configuration_value
    WHERE bam_configuration_id = @bam_id
    AND name = 'specificContentDatabasePort')
BEGIN
    UPDATE whiteops.bam_configuration_value
    SET value = @port
    WHERE bam_configuration_id = @bam_id
    AND [name] = 'specificContentDatabasePort'
END
ELSE BEGIN
    INSERT INTO whiteops.bam_configuration_value
    VALUES (@bam_id, 'specificContentDatabasePort', @port)
END
```

After the script has been applied, the output should be this at the whiteops.bam_configuration_value table:

785	24	hasSpecificConfigDatabasePort	True
786	24	specificConfigDatabasePort	41232

Note - FAM only supports a single custom port for the Content Databases. If multiple content databases are used, they all should be utilizing the same custom port.



SIQSUS-850 – Migration to Microsoft Graph API

Microsoft made an announcement of their intentions to deprecate Azure AD Graph API starting June 2023: <https://learn.microsoft.com/en-us/graph/migrate-azure-ad-graph-overview>

With this announcement, the service pack now supports Microsoft Graph API.

Necessary steps:

After the upgrade has complete, please reissue new Authorization codes for:

- Azure Active Directory Identity Collector
- SharePoint Online application
- OneDrive application

If you need help performing this, please submit a support ticket. Or reference the **8.4** documentation to view details around Microsoft Cloud endpoints for further details.

If you are not utilizing any of the above, there are no needed changes which need to be performed.

Considerations:

A list of resources that are accessed by File Access Manager using the REST graph API include:

`https://graph.windows.net/{tenant_domain_name}/tenantDetails`
`https://graph.windows.net/{tenant_domain_name}/users`
`https://graph.windows.net/{tenant_domain_name}/users/{user_id}`
`https://graph.windows.net/{tenant_domain_name}/groups/{group_id}`
`https://graph.windows.net/{tenant_domain_name}/directoryRoles`
`https://graph.windows.net/{tenant_domain_name}/directoryRoles/{role_id}`

Please be aware of these changes and adjust access accordingly. Please reference **8.4** documentation to view details around Microsoft Cloud endpoints for further details.

Chapter 5: Troubleshooting

Upgrade Package Loading Fails

Problem: During the package upload step, you receive a warning with the message "*Loading the package failed due to the following error: Signature is not valid*":

The problem is likely that the machine hosting the User Interface service does not have the necessary Root Certificate (or is missing part of the Certification Chains leading up to the root) to validate the signature of the upgrade package.

Suggested solution:

1. To resolve the issue you should check that the machine hosting the User Interface service contains the root certificate named "DigiCert Assured ID Root CA", which has a serial#
0C:E7:E0:E5:17:D8:46:FE:8F:E5:60:FC:1B:F0:30:39.
If this root certificate is missing, it can be downloaded from <https://www.digicert.com/digicert-root-certificates.htm> and installed as a trusted root certificate manually.
2. Another reason for this error would be that the machine hosting the User Interface service has been configured so that updating root certificates is disabled. To fix this, set the registry value
HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\SystemCertificates\AuthRoot\DisableRootAutoUpdate to 0, and retry uploading the upgrade package.
This will allow Microsoft to restore the missing root certificate during validation.

NHibernate configuration

Problem: During the upgrade, the NHibernate configuration file or registry key do not display on one of the machines:

Suggested solution:

1. Copy the "hibernate.cfg" from another server to \SailPoint\Nhibernate.
2. Copy the "[HKEY_LOCAL_MACHINE\SOFTWARE\whiteboxSecurity]" key from another machine to this machine.
3. Run the ResetDBPassword utility, to reencrypt the database password with the current server's certification
 - a. Make sure the SecurityIQ Home environment variable is set to the correct location
 - b. Ensure that the folder named "External Tools", containing the "makecert.exe" executable, or copy that folder from the Core Services server (the server hosting the User Interface service), and place it in the SecurityIQ Home directory
 - c. Ensure that the folder named "ServerInstaller" exists in the "%SECURITYIQ_HOME%\File Access Manager" path, and within that folder you can locate the "Tools" directory or copy it from the Core Services server.
 - d. Navigate to the "DBResetPassword" folder
 - e. In a Command Line window (cmd) from the "DBResetPassword" directory path, run the following command:

```
C:\Program Files\SailPoint\File Access Manager\Server
Installer\Tools\DBResetPassword>
DBResetPassword.exe {YourPasswordGoesHere}
```

- f. After the NHibernate file is re-encrypted, resume the manual uninstallation and installation of the remaining service on that server.

Business Website

Problem: You encounter an “Access Denied” error message while logging in to the Business Website after the upgrade

Suggested solution:

1. Navigate to the wwwroot folder on the server hosting the Website at C:\inetpub\wwwroot).
2. Verify that the IdentityIQFAM and SiqApi folders are in the wwwroot folder.
3. If these folders are in the wwwroot folder, but there are still problems with the Business Website, contact support.
4. If these folders are **not** in the wwwroot folder, perform the following steps:
5. Open the Internet Information Service (IIS) manager (Server Manager ➤ Tools ➤ Internet Information Service (IIS) manager).
6. Select the Application Pools node.
7. Verify that the IdentityIqFamV1_ApplicationPool, IdentityIqFamV2_ApplicationPool and SiqApi_ApplicationPool are missing from the Application Pools node.
8. Create the new application pools, (naming them IdentityIqFamV1_ApplicationPool, IdentityIqFamV2_ApplicationPool and SiqApi_ApplicationPool), with the following parameters: .Net CLR Version: .Net CLR Version v4.0.30319 Managed pipeline mode: Integrated
9. Check the “**Start application pool immediately**” checkbox.
10. For each application pool, navigate to Advance Settings (Right-click ➤ **Advanced Settings**)
11. Under Process Model, set the “**Identity**” parameter to **LocalSystem**.
12. Under Recycling set the “**Regular Time Interval (minutes)**” to **720**.
13. From the Site panel (on the left), navigate to **IdentityIQFAM**, and click on it.
14. Click “**Basic Settings**” on the right. If this option is not available, right click **IdentityIQFAM** (on the left) and select “Convert to Application”.
15. On the newly opened screen, click **Select**, select the IdentityIqFamV1_ApplicationPool you created earlier, and click **OK** twice.
16. Double click “**Authentication**”.
17. Enable “Windows Authentication” and disable all other authentication methods.
18. Repeat Steps 11-15 for the SiqApi site and SiqApi_ApplicationPool.
19. Reset the IIS using the iisreset command.

Business Website

Problem: You encounter the following error, in the File Access Manager Server Installer log, when trying to uninstall the Business Website:

```
Unable to uninstall service: WBXBusinessWebsite System.InvalidOperationException:  
Sequence contains more than one matching element
```

Suggested solution:

1. Open the **Internet Information Services (IIS) Manager**
2. Expand the **Server Name**
3. Expand **"Sites"**
4. Expand **"Default Web Site"**
5. Select **"SecurityIQBiz"** and click **"Basic Settings"** on the right side
6. Click **"Select..."** then select **"SecurityIQ_ApplicationPool"** then click **OK**, then click **OK** again
7. Go to **"Application Pools"**
8. Select **"SecurityIQ_ApplicationPool"** and click **"View Applications"** on the right side
9. Right click **"/SecurityIQBiz/Whitebox_Rest"**, then click **"Change Application Pool"**, select **"DefaultAppPool"** and click **OK**
10. Right click **"/SecurityIQBiz/WhiteopsRest"**, then click **"Change Application Pool"**, select **"DefaultAppPool"** and click **OK**
11. Go to **"Application Pools"** and Confirm that the **"SecurityIQ_ApplicationPool"** application pool has only one application (in the **"Applications"** column)
12. Try to uninstall again.

Improper upgrade path

Problem: The improper upgrade path was taken. 8.3 SP4 was uploaded and upgraded was started but prerequisite of being on 8.3 failed.

Steps to "rollback" the failed installation.

PLEASE NOTE: whenever performing changes to the database we always recommend performing a backup prior to the changes and working with your DBA. We also recommend working with Professional or Expert Services to help perform these changes.

1. Find and note the *id* associated to the failed SP4 installation in the *whiteops.upgrade* table.
 - o `select * from whiteops.upgrade;`
2. Run the following delete queries in order, updating the `[[UPGRADE_ID_VALUE]]` with the *id* value noted above.
 - o `delete from whiteops.upgrade_state where upgrade_component_id in (select id from whiteops.upgrade_component where upgrade_id = '[[UPGRADE_ID_VALUE]]');`
 - o `delete from whiteops.upgrade_component_dependency where dependency_version = '8.3.0.4000';`
 - o `delete From whiteops.upgrade_component where upgrade_id = '[[UPGRADE_ID_VALUE]]';`
 - o `delete from whiteops.upgrade where id = '[[UPGRADE_ID_VALUE]]';`
 - o `delete from whiteops.wbx_file where id not in (select file_id from whiteops.upgrade_component UNION select certificate_wbx_file_id from whiteops.installed_service);`



3. Delete contents of the `%SAILPOINT_HOME%\Packages` folder

After the DB has been cleaned up and reloading the Client the 8.3 SP4 wbxpkg will no longer be listed in the 'Upgrades & Patches' screen. This allows for following a valid upgrade path to 8.3.0.000 and then retry SP4, Once FAM has been upgraded to at least 8.3.0.0000 there should be no issue reloading the SP4 wbxpkg and successfully completing the installation.



Chapter 6: List of Released E-Fixes

The following E-Fixes are included in this Service Pack and will be automatically deployed by the Service Pack:

Service Pack 6

SIQETN-3333 – Dropbox Report - Password Resets on Dropbox report does not seem to be pulling relevant records

Fix for empty 'Password Resets on Dropbox' report issue.

SIQETN-3334 – Dropbox Report - Sharing Activities on Dropbox report does not seem to be pulling relevant records

Fix for empty 'Sharing Activities on Dropbox' report issue.

SIQETN-3335 – Dropbox Report - New Group Memberships on Dropbox report does not seem to be pulling relevant records

Fix for empty 'New Group Memberships on Dropbox' report issue.

SIQETN-3336 – Dropbox Report - Group Deletion Activities on Dropbox report does not seem to be pulling relevant records

Fix for empty 'Group Deletion Activities on Dropbox' report issue.

SIQETN-3337 – Dropbox Report - Grant of Admin Permissions on Dropbox report does not seem to be pulling relevant records

Fix for empty 'Grant of Admin Permissions on Dropbox' report issue.

SIQETN-3340 – Binary deserialization errors

Several deserialization errors were fixed, now all messages that can be sent / received through RabbitMQ correctly.

SIQETN-3343 – Include "Analyze Permissions on Files" setting on Sharepoint online configuration page

"Analyze Permissions on Files" checkbox now displays on SharePoint online configuration page.

SIQETN-3345 – DFS Crawl failure due to missing tables in DB



Fixed issue on DFS endpoint crawl, it was not creating some temporary database tables correctly

SIQETN-3346 – PowerScale (Isilon) crawl times out and hangs on certain roots

Fixed issue on Isilon crawl, some paths take a long time to process and task was timing out when process was still running.

SIQETN-3347 – Out of range date exception

The modified *getNewerDate* method helps to avoid **out of range** actions and uses ticks for comparisons.

SIQETN-3348 – Discard extra events for a single Action for WFS

Fixed an issue that will help to avoid duplicate events for a single Action (Read) in rare WFS instances that integrate with FAM.

Service Pack 5

SIQDEV-20715 – NTLM Authentication Proxy support

Add NTLM Authentication Proxy support for FAM endpoints Azure AD, OneDrive and SharePoint Online.

SIQDEV-20716 – NTLM Authentication Proxy Configurator Tool

Add NTLM Authentication Proxy Tool to support/configure the actual values to be used as Credentials by the Proxy if NTLM Authentication is being used.

SIQETN-3255 – Failed Documents Log Is Not Logging When Skipped Due to File Type

Dropbox net code improved to obtain properly root BR's IDs.

SIQETN-3320 – Services not using assigned certificate on FAMCertificateManagerTool

Fixed an issue on multiple services not using the correct certificate on startup when *clientCertificateThumbprint* value exists on app config file.

SIQETN-3321 – Campaign revokes are generating an exception

Corrected the formatting arguments so that the system does not throw a formatting exception in debug logging mode.

SIQETN-3323 – NetApp Test Connection fails using static index reference to API response

Test Connection now uses a proper configuration and FPolicy server online, Test Connection use to fail by using a proper configuration but FPolicy offline server.

SIQETN-3331 – Privacy scan getting stuck due to RabbitMQ duplicates

Fixed an issue on Privacy Scan, process gets stuck due to RabbitMQ resending messages when there is network intermittence.

SIQETN-3332 – Privacy scan collector stuck on Channel exception

Fixed issue on Data Classification where process gets stuck due to RabbitMQ channel gets closed, it now reopens channels.

SIQETN-3339 – EXO AuditData structure inconsistency

The new EXO cmdlets now support incomplete audit data structure for the EXO Modified Properties, this caused a conversion error when trying to parse the details from the response.

SIQETN-3340 – Binary deserialization errors

Several deserialization error were fixed, now all messages that can be sent / received through RabbitMQ correctly.

SIQETN-3341 – FAM Client Bulk import process not honoring FPolicy information

When creating a NetApp - CIFS application via the bulk import in the Client application, the bulk import process was not honoring FPolicy information. This has been fixed.

SIQETN-3344 – FAM Client Upgrade process DB Validation Script in Pending state

In certain scenarios, the upgrade task might get stalled due to Pending states for certain tasks. Validation have been added to prevent this from happening.

SIQSUS-1312 – Exchange Online (EXO) updates for Cmdlet deprecation

Deprecated Cmdlets have been renewed with the latest ones provided by Microsoft, this is in order to support Activity Monitoring FAM capabilities for EXO related endpoints.

SIQSUS-1315 – Remove Oracle JDK in replace of AdoptOpenJDK

Removed Oracle JDK from ElasticSearch/Server Installer, it now uses Adoptium Temurin OpenJDK.

SIQSUS-1318 – Enable FAM's Memory Protected Extraction by default

Out-of-the-Box Data Classification setting *useProtectedExtraction* default value as true.



Service Pack 4/4.5

SIQDEV-20706 – Sharepoint on-prem content db port empty space on UI

The unwanted space between toggle button and Port Number bold text causing some minor issues has been fixed.

SIQDEV-20710 – GDrive Permissions are displaying API names in Resources page instead of End User UI Text

Previous versions of FAM's simple view, tabs are showing according to the available roles: Owner, Organizer, FileOrganizer, Writer, Reader, Commenter, Other. Now, additional role of "editor", in addition to "writer" is available.

SIQDEV-20711 – FAM's upgrade to .NET 8

Starting with 8.4 Service Pack 4, FAM has been upgraded to make use of the latest Long Term Support .NET Framework version, which is 8. More information regarding this update can be found [here](#) on the prerequisites list as it needs to be installed prior to any FAM-related action.

SIQETN-3294 – Activity reports failing after 8.4 sp2 upgrade

Fixed an issue on GPO Changes report.

SIQETN-3295 – DFS Crawl improvements

Crawl issues (like uncaught exceptions) have been fixed within DFS stored procedure along with some performance improvements. Also, in some cases, temp tables were not being removed/renamed generating extra burden to the DB.

SIQETN-3297 – Data Privacy Scan failing due to limitation on ElasticSearch query

Improved performance on Data Privacy Scan by reducing the number of searches/queries made to ElasticDB.

SIQETN-3300 – Proper exception to handle unexpected local user structure of NetApi32

During the Normalization process, in some cases the user data could be corrupted on the target server, this could cause problems to read them correctly, this has now been caught properly to avoid interruptions to the process.

SIQETN-3302, SIQETN-3303 – Box Permissions report presenting empty group/username for an entity

Fixed the "Permissions by Entity name" tab of the Box Permissions report, empty user/group name row being generated with permissions; then, when doing a Forensics search, this user or group cannot be found.

SIQETN-3306 – "Direct Permissions" tab in EXO Fine Grained Permissions report is empty

Fixed the "Direct Permissions" tab in EXO Fine Grained Permissions report that was empty. It is expected to show users



with most permissions on resources.

SIQETN-3307 – "Total Permissions per Resource" tab in EXO Fine Grained Permissions report is empty

The "Total Permissions per Resource" tab in EXO Fine Grained Permissions report was empty. Now the tab in the report is showing the top 100 resources with the most user permissions.

SIQETN-3308 – Users for an AD application is not displayed as top root folder in the resource tree

Ensured within FAM's code that if BaseDN is specified, it works a filter while crawling AD resources.

SIQETN-3309 – Buffer size in Alphaleonis causes intermittent problem when enumerating shares

Buffer size for Alphaleonis updated to avoid exceptions being thrown.

SIQETN-3312 – Update did-you-know widget query for owners to exclude sensitive accounts

Updated the "did-you-know" widget query to not include sensitive accounts.

SIQETN-3313 – Queries run automatically and cannot be cancelled on Forensics (Permissions)

With this code fix, ensured that if the clear all button is pressed while a query is running, the query is properly cancelled.

SIQETN-3314 – Scheduled data source report name should be the same as the Report name along with timestamp

Updated the corresponding FAM's DB task to make use of the correct name.

SIQSUS-880- Data Classification Policy Scope Isolation

Now, FAM applications can have a delta scan that should be based on the set application scope of the policy.

- Delta Scan: The DC task will only scan recently modified folders (last modified updated from last crawl).
- Full Scan: The DC task will re-scan all folders in the DC scope.

For more details, please refer to [Chapter 4](#).

SIQSUS-1253, SIQSUS-1265 – CloudHSM adoption for Code Signing.

As part of the CloudHSM implementation (for FAM's Code Signing purposes) this has been included.

Service Pack 3

SIQDEV-20293 – Data Classification Policies Update - 8.4 V2

Reduce False Positives and address common use cases - by tuning current OOTB rules (updated RegEx expressions for IBAN and ICD rules) and expanding inter-rule relations to achieve more complex, and accurate data detection. Includes **SIQSUS-879** (Data Classification OOTB Policy Optimization), **SIQDEV-17448** (ICD - Codes A00-Z99) and **SIQDEV-17507** (Policy object IBAN updates).

SIQSUS-1034 – Groups query for IIQ Correlation

Before this Service Pack update, it takes too long to query permissions type with SCIM with million Business Services (Resources). As IIQ only needs Group unique identifier and data classification categories related to that group, new API was created to support IIQ Correlation.

SIQETN-2634 – Orphan permissions report template does not work

Updated fields in database from Orphan to Orphan Account to avoid this issue from happening.

SIQETN-2980 – Certain Variables Missing from Alert Messages

Code added resolve IP address from the Server's name event attribute

Missing variables added:

- *Excuting PolicyRule*
- *Path* (only in move actions)
- *FieldOrFolderName* (only in rename actions)

SIQETN-3148 – File Server SMTP Response Variables Not Returning Values

Added DB script to remove unmapped response variables from WFS.

SIQETN-3178 – CDC throwing duplicate key errors

Fixed issued on Data Classification process when duplicates appear from RabbitMQ due to network issues. The issue appears when connection problems between Engine/Collector to Rabbit appear, mostly the process losing connection after getting a message is not able to acknowledge the message to Rabbit, so when connection is reestablished same message from Rabbit is processed again. Duplicates now will be ignored (once the first occurrence has been processed correctly) and the process will continue.

SIQETN-3253 – Issues trying to filter Permissions by Classification Categories that come from a Global Rule

Global rule is now included in filter as expected.

SIQETN-3260 – SP update_ra_roles_br_permissions Transactional error

SP whiteops.update_ra_roles_br_permissions updated to avoid a transactional error if the initial insert into a temporal table fails, this can happen if the table whiteops.ra_role_br_permission contains duplicates.

SIQETN-3261 – Fix PolicyImport tool to correctly handle policy categories

Fixed an issue with the PolicyImport tool that was causing the tool to skip certain categories.

SIQETN-3262 – FAMCertificateManager Tool, update to help message to clarify correct field values to use

Help text on FAM Certificate Manager tool updated for clarity.

SIQETN-3263 – Deprecated dependency to RabbitMQ Message Serialization.

A new Message Serializer was added (JsonMessageSerializer) to avoid the error, it works as an alternative to BinarySerializer.

SIQETN-3268 – Campaign Summary report generation failure for status 'All'

Fixed issue on Campaign Summary Report not handling correctly some records that have a null value.

SIQETN-3269 – Meta data is not classified correctly on Office files with suffix .docx, .pptx, .xlsx

Property validation implemented for file Metadata for OfficeOpenXML format (.xlsx, .docx, .pptx), in case not present clone value from "Description" property (if available).

SIQETN-3270 – Adding DEC to activity monitoring causes forensics issues as DEC is not added to activity details retroactively

Fixed ElasticSearch query for empty DEC fields.

SIQETN-3271 – Deleted users are still showing up in the recipient search on Reports Template

Component fixed to show only active users.

SIQETN-3272 – Research how CLR strict security impacts FAM upgrades and improve it

Fixed a problem with a database object that was not properly signed. Some [prerequisites](#) are required for this to be fixed.

SIQETN-3273 – Active Directory BAM Showing Wrong ObjectClass for the Target Objects

Fixed issue on Activity Monitor for Active Directory BAM, now correctly saves the Object Class field from events.

SIQETN-3278 – Associated bam records are not cleaned when a BAM is deleted

Fixed issue on database store procedure that were not deleting records in the correct order.



SIQETN-3280 – Campaign creation error when displaying deleted resource filter

Filter is now properly displaying the BRs even after the deletion of them.

SIQETN-3283 – Box Crawl Issues

With this Service Pack now Box rate limit exceptions are honored by waiting at least the specified time by Box before making another API request to it. Also, now the expired tokens are refreshed and used in every Box data request (token validation must be done before each of those retries).

SIQETN-3284 – Db Cleanup task enhancements

DB cleanup task process was prone to errors when the cleanup tasks was not executed for several weeks or months; those errors have been resolved. For more information on it please refer to page [13](#).

SIQETN-3285 – Permission Collection: RA_USER shows records with entity type = Local Group

Fixed issue on Permission collection saving local groups as users on database.

SIQETN-3286 – Stale Data Report error when BR has a size of 10 TB or more.

Fixed issue on Stale Data Report not handling correctly directories having a size bigger than 10 TB.

SIQETN-3287 – Fix boolean operator to consider values above 1 as true

Minor change on the database to correctly reflect true/false values on the forensics screen.

Service Pack 2

SIQSUS-1023 – OneDrive Resource > Alerts are not triggering alerts/sending emails

Now Alert options checked trigger alerts/send emails to data owners.

SIQSUS-1024 – OneDrive Alerts, Default Email Templates Not Displaying Variable Values.

OneDrive Email alerts were not replacing variables with the appropriate values. This affected both the default emails sent from Resource Alerts and those from Alert Rules using the default OneDrive template.

SIQSUS-1036 – Incorporate Custom DB Ports for SharePoint Content DBs into SP Configuration.

Some customers have multiple sharepoint on-prem databases with different ports, currently FAM use default port to access them, but that is not working for those customers. Now UI to allows users to enter:



- 1) OverrideAllPort (a textbox for all content db hostnames)
- 2) Key value for individual ports

SIQSUS-1156 – Incorrect Tooltip for "Specific Port" and "Specific Individual Port(s)" in "Connection Details - SharePoint" app configuration page.

Tooltips for "Specific Port" and "Specify Individual Port(s)" in the "Connection Details - SharePoint" application configuration page were flipped; this has been fixed.

SIQETN-2850 - In Forensics Data Classification resource filtering, "Including subfolders" doesn't stay unchecked.

Not all changes in the filter were checked after editing, this is fixed.

SIQETN-3045 - Import DC Results allows import of delete business resource.

An update to the DC import process was made to ensure deleted BRs are no longer imported.

SIQETN-3107 - "Not" Type Filters are Not Properly Filtering Results In Activity Forensics When Used with DEC Fields.

Fixed issue with ElasticSearch Query Filters on Forensics – Activities

SIQETN-3118 – Enhance Data Classification Skipped Document Log Messages.

Updated the error description to include both the actual file size and the metadata file size.

SIQETN-3119 – Summarize Failed Documents During Data Classification in Task Details.

Generated a new reports summary document, please refer [Chapter 4](#) for specifics.

SIQETN-3170 - Failed Cloud Data Classification Task Leaves Sensitive Temp Data.

This enhancement is included to ensure upon any failure of the data classification task, the temporary folder is also deleted.

SIQETN-3171 - Improve Readability of Box Errors/Add Information to Task Details.

Improved log messages by including Parent Path.

Box Crawler is reporting a warning message to Task Details when Crawler is not unable to access resources.

SIQETN-3173 - Remove obsolete config keys from RoleAnalyticsServiceHost.dll.config.

Removed unused keys *queueBusySleepTime* and *queueBusySleepTime* from RoleAnalyticsServiceHost.dll.config

SIQETN-3177 - Remove deprecated dependencies from whiteops.dependency table.



Some obsolete dependencies were still being registered during the FAM installation process, so another initial installation script was added to remove them.

SIQETN-3198 - Reports cannot tolerate FAM application names with leading zero character.

Updated the Reports logic to properly handle all application names.

SIQETN-3210 - Backslashes can't be allowed in application names if customer wants activity monitoring.

Update to the UI to validate application names to not allow backslashes.

SIQETN-3215 - Detailed Error/Debug Messages.

Removed unnecessary/detailed SQL error messages containing raw queries from API responses.

SIQETN-3232 - Reports for User Scope should use custom properties from auth store IDC.

Fixed report generation, it failed when there were multiple sample properties.

SIQETN-3234 - SCIM app memory leak when IIQ queries permissions.

Fixed SCIM app memory leak for every database query.

SIQETN-3238 - User Scope Report shows deleted resources.

Deleted resources were being included because they were not excluded in the database query, query was modified to exclude these resources.

SIQETN-3239 - High Memory Usage Between Permission Collection Task Runs With Rabbit (On-Prem Connectors).

RabbitMQ now explicitly unsubscribe, if subscribed, and remove action callback handler in RabbitMessageBroker.

SIQETN-3241 - Linux Permission Collector throws index out of range exception when passwd contains # sign.

Fixed Linux crawler error on parsing /etc/passwd when it contains # sign.

SIQETN-3242 - Support custom port configuration for SharePoint On Prem Content Databases (extended).

Added support for different SharePoint on-prem content database (as sometimes it is FQDN, sometimes it is short name).



SIQETN-3243 - Changes to ports utilized by services via server installer not taking effect.

Now the Server Installer properly updates the ports utilized by the services.

SIQETN-3244 - `to_lower_invariant` fails for some unicode characters.

A new mechanism was created to handle the exceptional cases (use of emojis) that fail due to this error in the `SqlServerToLowerInvariant` assembly.

SIQETN-3245 - `GPOCache.refreshPolicyDisplayNames()` method may be called too frequently on "problematic" GPO's of AD.

Stretched out the interval between refresh calls.

SIQETN-3246 - Forensics >Permissions > saved queries should save selected columns and columns chooser selection.

The column selector component was not updated after loading saved queries. Not this behavior has been fixed.

SIQETN-3247 - Excel format with wrong options.

Now code uses the correct option for xlsx creation.

SIQETN-3248 - `EncryptStringForService` fails to find WBX-Nhibernate certificate.

The `EncryptStringForService` was updated to use up-to-date encryption mechanisms.

SIQETN-3250 - Box and OneDrive permission collection invokes stored procedure to create `user_role` tables excessively.

Performance improvements have been made to Box and OneDrive Permission Collection tasks to decrease runtime.

SIQETN-3254 - Improve query time for DFS owners on login.

Improve performance of Database function that retrieves owner's information from Business Resources.

SIQETN-3259 - Composite Analyze task doesn't match files matching the necessary criteria.

FAM having issues when executing the Composite Analyze task, certain files are not picked up for PHI even if the file happens to meet the criteria. For the fix to work, the PII Global rule must be enabled within the PII policies.

Service Pack 1



SIQSUS-706 – Clarify Design & Implement/Make changes around Group Permission Staleness

This issue will update permission forensics to use business resource's last used if available otherwise current behavior will remain unchanged.

SIQSUS-881 – Modernize EXO Connectivity v3.0

Use latest EXO V3 module and Get-EXO* optimized cmdlets where possible so that RPS (remote power shell) can be disabled for tenants.

SIQSUS-850 – Adjustment from MS Announcement to Deprecate Graph Azure AD API

Corrected reauthenticate Azure AD token process so Azure Synchronize IC Task won't fail.

SIQETN-3038 – Add In 'Empty' & 'Not Empty' operators for Category Filter in Forensics searches

'Empty' & 'Not Empty' operators for Category Filter in Forensics searches added.

SIQETN-3040 – Default SMTP SharePoint Online - Single Activity template does not pick up all template variables

Changed several potential versions of Share Point Online to SharePointOnline in the SMTP response body via database script, user story.

SIQETN-3185 – Null Reference Exception in Activity Reporting Due to duplicate event IDs

Allow Null values, and add logging to understand further why Event has Null data.

SIQETN-3194 – IIQ SCIM API - Allow for more than 100K results to be returned in Permission Forensics Call

Increase SCIM API's permission query's index limit to ten million. Additional restructuring was done to improve performance. Two additional indexes have been introduced to improve query plans.

SIQETN-3197 – website dashboard - threshold alert widget - ElasticSearch query timing out.

Improves performance of "threshold alerts" website dashboard.



SIQETN-3201 – SharePoint on-premise data classification failure to connect to HTTPS URL

Added support for SharePoint on-premise HTTPS endpoints during data classification.

SIQETN-3204 – Support custom port configuration for SharePoint On Prem Content Databases

Added enhancement to allow for custom port use as well for the content databases.

SIQETN-3205 – lock update_ra_users_br_permissions while inserting

Improved duplicate user handling during permission collection.

SIQETN-3206 – Composite Rule Policies Overrides one another so only one is tagged on qualifying resource

Added extra validations so now Composite Rules Policies are all now tagged accordingly within Forensics > Data Classifications menu.

SIQETN-3207 – Duplicates Not handled properly in gDrive crawl

Perform cleaned up for all duplicates vs in batches.

SIQETN-3208 – Dashboard Widget Calculation performance improvement

Performance improvement of 2 stored procedures that handle DFS within Dashboard calculation task.

SIQETN-3211 – Alerts to data owners not triggered off events on SPO when set through Resources->Alerts screen

Updated relevant tables with correct SPO events.

SIQETN-3212 – Some alerts to data owners not triggered off events on NetApp when set through Resources->Alerts screen

Updated relevant table with correct NetApp events and operators..

SIQETN-3213 – Token Refresh Server Resiliency Enhancement

Tokens refresh every 10 minutes before they are set to expire. If within this 10 minute window will keep trying to refresh every 1 minute until the token has completely expired.



SIQETN-3214 – Query Injection Provides Ability To Manipulate Database Queries

The vulnerable query was updated and validated along with the HTTP error message details.

SIQETN-3216 – Responses with Incorrect or Missing Content-type

Correct content-type on all response specified.

SIQETN-3217 – Impersonation of users on the FAM WEBUI does not change user accounts during impersonation

Addressed failure of impersonation.

SIQETN-3218 – FAM.SCIM self referencing loop

Resolved "self referencing loop detected" exception in FAM SCIM API.

SIQETN-3221 – AWS S3 Connector Incorrectly Pages Results Causing Crawl Failure

Implemented proper paging for all AWS queries that return List responses with Marker or NextToken property.

SIQETN-3222 – Rename Resource Alerts 'File or Folder is modified' to 'File is modified'

Updated to 'File is modified' and remove 'Folder'.

SIQETN-3223 – Correct continuous append

string builder is cleared and re-initialized with a new insert statement before appending next batch of row data.

SIQETN-3224 – Identity collector failure during delete

Allow identity collectors with mapped data sources to be deleted.

SIQETN-3225 – Some alerts to data owners not triggered off events in several endpoints when set through Resources->Alerts screen

Updated policy_business_rule_type_wpc_field table with correct operators.

SIQETN-3226 – Typo in User Group Memberships report

Both reports are now updated with the correct wording.

SIQETN-3227 – SPO ans OneDrive not showing all resource info in alert email

Added missing fields + hyperlink to resource.



SIQETN-3228 – OneDrive Drive Verification Fails Crawl During Root Collection When Using skipOneDriveExistenceVerification

Code updated to avoid issues when using skipOneDriveExistenceVerification flag.

SIQETN-3230 – Content Type displaying Incorrectly for SharePoint On Prem

Fix code that the engine will distribute the content type map to crawler.
Fix UI to show each content type total size when mouse hover on them.

SIQETN-3233 – wbxadmin login failed with impersonation bug fix

Addressed failure of impersonation.