

Retain 4.10

Archiving Guide

October 2021

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Preface

About Retain

Retain Unified Archiving

- ♦ Archives email and text messages.
- ♦ Catalogs them for search and retrieval.

Retain is not a backup/restore system.

About This Guide

This is the archiving documentation for Retain Unified Archiving version 4.10.

For Documentation Feedback

Scroll to the bottom of the online page and enter a User Comment.

To Join the Retain Idea Exchange

Got an idea for a new Retain feature or enhancement? [Log in to Microfocus.com](#) and join the conversations happening inside the [Retain Idea Exchange](#).

For Additional Documentation

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To Contact Technical Support

Browse to [the Micro Focus Support Page \(https://www.microfocus.com/support-and-services/\)](https://www.microfocus.com/support-and-services/) and begin typing *Retain Unified Archiving* in the **Search for a Product** field.

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For Professional Services

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1 Setting Up Pull-Based Archiving

After your Retain system is installed and running properly and you have planned for the components needed for your target platforms, use the instructions in the following sections to set up Pull-based archiving for your organization.

- ♦ [“Understanding Retain Jobs” on page 7](#)
- ♦ [“Creating Modules” on page 9](#)
- ♦ [“Schedules” on page 11](#)
- ♦ [“Creating Workers” on page 13](#)
- ♦ [“Worker Servers” on page 21](#)
- ♦ [“Archiving BlackBerry Server Data” on page 27](#)
- ♦ [“Archiving Bloomberg” on page 44](#)
- ♦ [“Archiving Exchange and Office 365” on page 52](#)
- ♦ [“Archiving Gmail \(G Suite\)” on page 117](#)
- ♦ [“Archiving GroupWise” on page 140](#)

Understanding Retain Jobs

If your messaging platforms require pull-based archiving, you need a basic understanding of Retain Jobs and their components: modules, schedules, profiles, and workers, as illustrated in [Figure 1-1](#) and explained in [Table 1-1 on page 8](#).

Figure 1-1 The Components That Make Up a Job

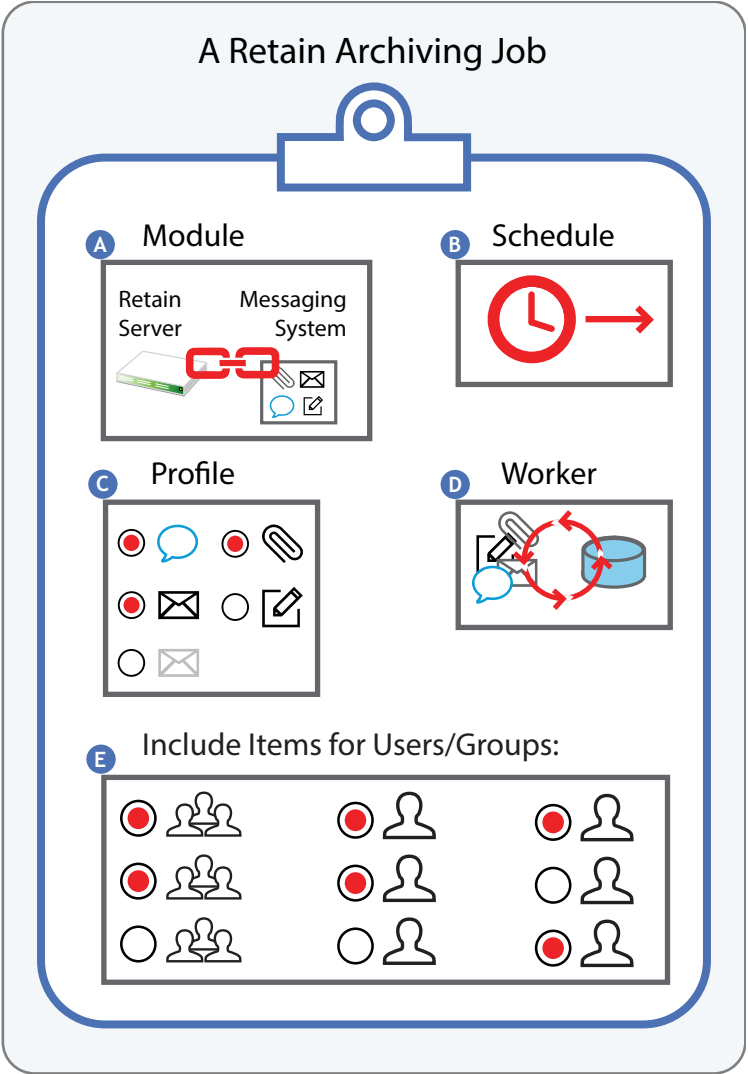


Table 1-1 Job Component Information and Links

Letter	Brief Description
A	Retain Modules are the foundation that links messaging systems to Retain. To set up a Job, you must first create a Module for the targeted messaging system so that the Retain Server can connect to it. Each module is as unique as the system it represents. Both Retain archiving models require a module. For Pull-based archiving, you cannot create Profiles or Jobs until after you create Modules for them. After you complete the instructions in this chapter, you are directed to Chapter 1, “Setting Up Pull-Based Archiving,” on page 7, which contains module-creation instructions.

Letter	Brief Description
B	Schedules define the time framework that jobs run within. They can set up a single time for a job to run or they can specify recurring times. Schedules are not module- or job-specific. You can use a schedule with as many jobs as makes sense. TIP: The order implied by the letters in Figure 1-1, reflects the process of creating jobs, beginning with module creation. However, as a best practice, you might want to start by planning the best times for your jobs to run, and then create schedules that reflect your plans. For instructions on creating schedules, see “Schedules” on page 11.
C	Profiles define what Retain retrieves from the message system. You can archive everything or filter by time periods, folders, subjects, and how the data is stored. Profiles are module-specific and module-dependent. Profiles perform duplicate checking, which keeps the Retain system from storing multiple instances of the same message. Instructions for creating profiles are contained in their relevant platform sections.
D	Workers pull data from message-system servers. They track their associated jobs, when to start them (the schedule), and which items to retrieve (the profile). Workers can only run one job at a time. They are not module-specific, but they might require module-specific settings in the module-specific tab. Each Worker has two parts: ♦ Worker Agent: Retrieves and initially processes message data. ♦ Worker Web Object: Connects (bootstraps) the Worker Agent and the Retain Server. Instructions for creating and setting up Workers are found in “Creating Workers” on page 13.
E	Jobs tie all the other components together. Jobs specify which mailboxes (users and groups) Retain archives on the targeted systems. Jobs and Modules tie directly to each other. You select one or more modules by name before creating the Job. Instructions for creating jobs are contained in their relevant platform sections.

Creating Modules

Retain Modules are the foundation that links your messaging systems to Retain. Each module type is as unique as the system it connects.

Both Retain archiving models (Push-based and Pull-based) require messaging-system-specific modules. For Pull-based archiving, you cannot create Profiles or Jobs until after you create Modules for their respective systems.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#)

Figure 1-2 The Module Configuration Page

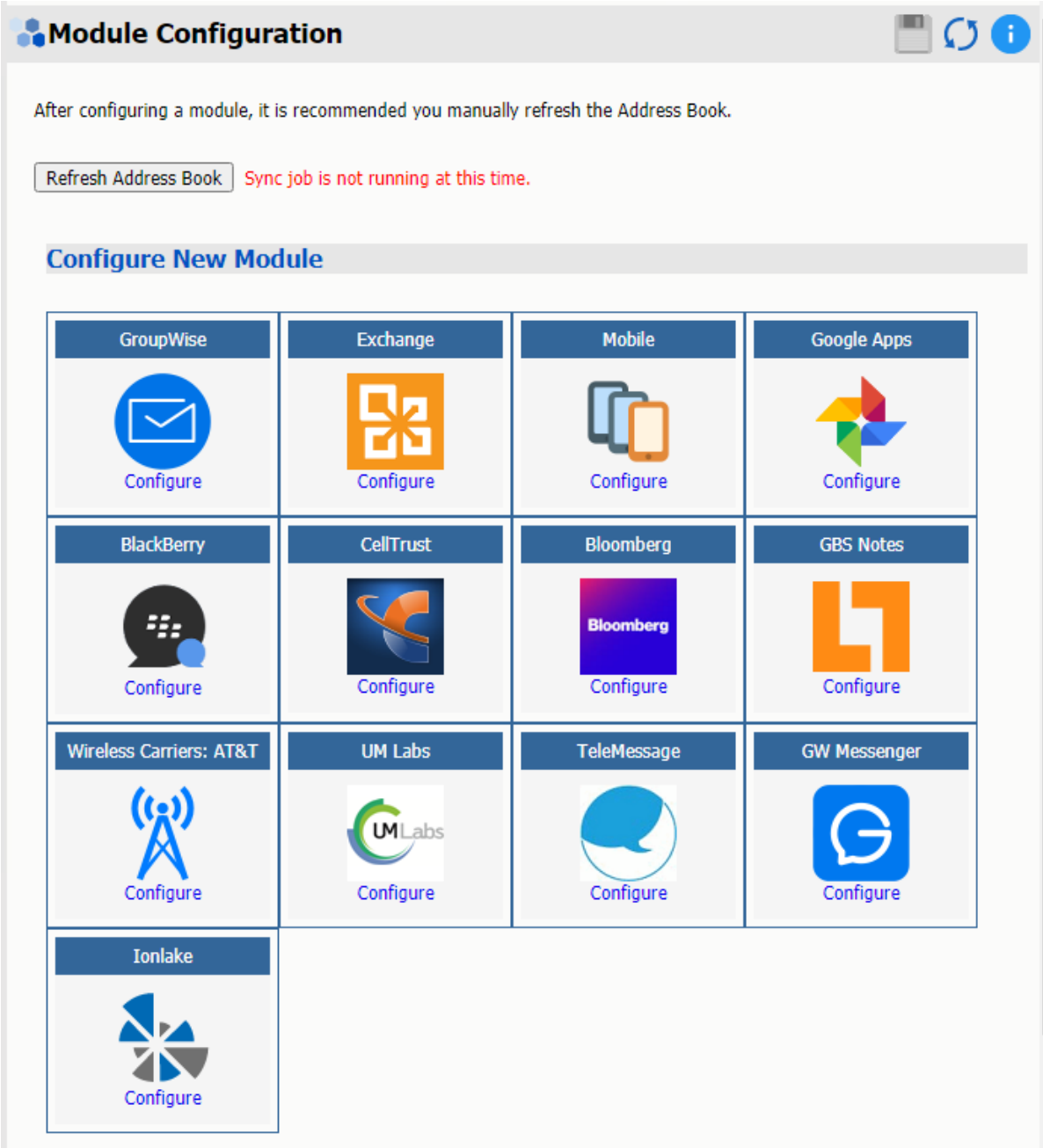


Table 1-2 Using the Module Configuration Page

Field, Option, or Button	Information and/or Action
Configure New Module	1. Click the icon for the module you are configuring. 2. Follow the instructions in the section for your messaging platform. Pull-based Modules are documented in this chapter, beginning with “Archiving BlackBerry Server Data” on page 27. Push-based Modules are documented in “Setting Up Push-Based Archiving” on page 163, beginning with “Archiving Android Messages and Call Information” on page 164.

Schedules

Schedules tell jobs when to start.

They are only required for [Pull-based archiving](#), not [Push-based archiving](#).

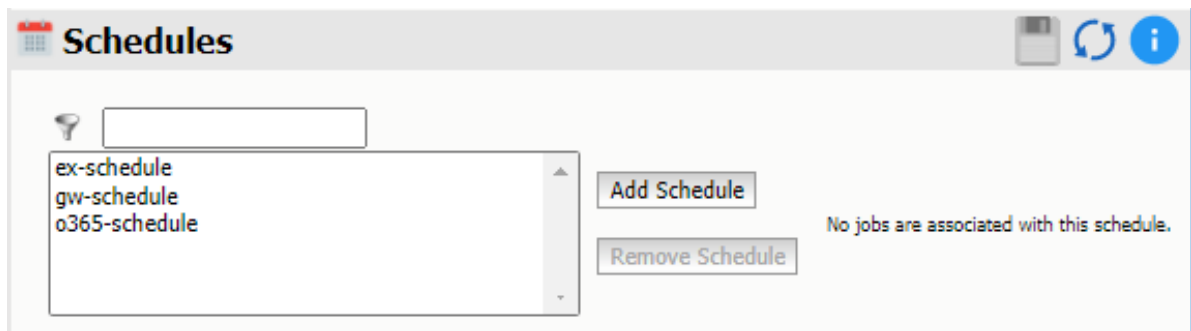
Their creation and usage is completely flexible, as follows:

- ♦ They can recur at regular intervals or be for one-time use only.
- ♦ The total number of schedules is not restricted.
- ♦ You can use each schedule with as many or as few jobs as needed.

Creating Schedules

If your messaging system uses push-based archiving, you must create at least one schedule.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Schedules](#)



- 1 Referring to the deployment plan that you began in [“First, Plan Your Retain Archiving System”](#) in the [Retain 4.10: Planning](#) guide, use the **Add Schedule** button to create one or more schedules that you can assign during Job creation.

For example, you might create a recurring schedule named Daily at 12 a.m. to start your archiving jobs each day at midnight.

- 2 Record the names and basic information about the schedules that you create, including the Jobs and/or messaging systems that they will be associated with.
- 3 Refer to the sections below for more information on Retain schedules.

Recurring Schedules

For day-to-day ongoing archiving work, use Recurring schedules.

The screenshot shows the configuration for a recurring schedule. At the top, the 'Schedule Name' is 'Daily at 08:00' and the 'Schedule Frequency' is set to 'Recurring'. Below this, a list of days from Sunday to Saturday is shown, each with a checked checkbox. To the right of the days, there are three settings: 'Start Job at:' with a time picker set to 08:00, 'Maximum job duration' with a dropdown set to 01 hours, and a checkbox labeled 'Do not interrupt job, even when duration expires' which is currently unchecked.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Schedules](#) > [Add Schedule](#) > [Schedule Frequency](#) > [Recurring](#)

- ♦ **Schedule Name:** Specify a name that clearly identifies the schedule for easy selection during Job creation.
- ♦ **Schedule Frequency:** Choose [Recurring](#).
- ♦ **Day List:** Select the days on which you want this schedule to occur.
- ♦ **Start Job at:** Select the time for assigned jobs to start.
- ♦ **Maximum Job Duration:** Specify the maximum time the job can run. If a job runs longer than this limit, it is interrupted by default.
- ♦ **Do not interrupt job, ...:** Select this option if you don't want assigned Jobs to be interrupted when they exceed the maximum job duration time.

Single (One-time) Schedules

You can use Single Schedules to start jobs manually (see “[Starting a Job Manually](#)” in [Retain 4.10: Configuration and Administration](#)).

The screenshot shows the configuration for a single schedule. The 'Schedule Name' is 'today at 4 pm' and the 'Schedule Frequency' is set to 'Single'. Below this, a message states: 'This job will run only once, at the time specified below unless an error occurs. If an error occurs the job will be retried unless you select the checkbox below.' Underneath, there is a date and time picker set to 'Jan 28 2020' at '16:00'. At the bottom, there is an unchecked checkbox with the text 'If time assigned for job start has elapsed, don't resend job'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Schedules](#) > [Add Schedule](#) > [Schedule Frequency](#) > [Single](#)

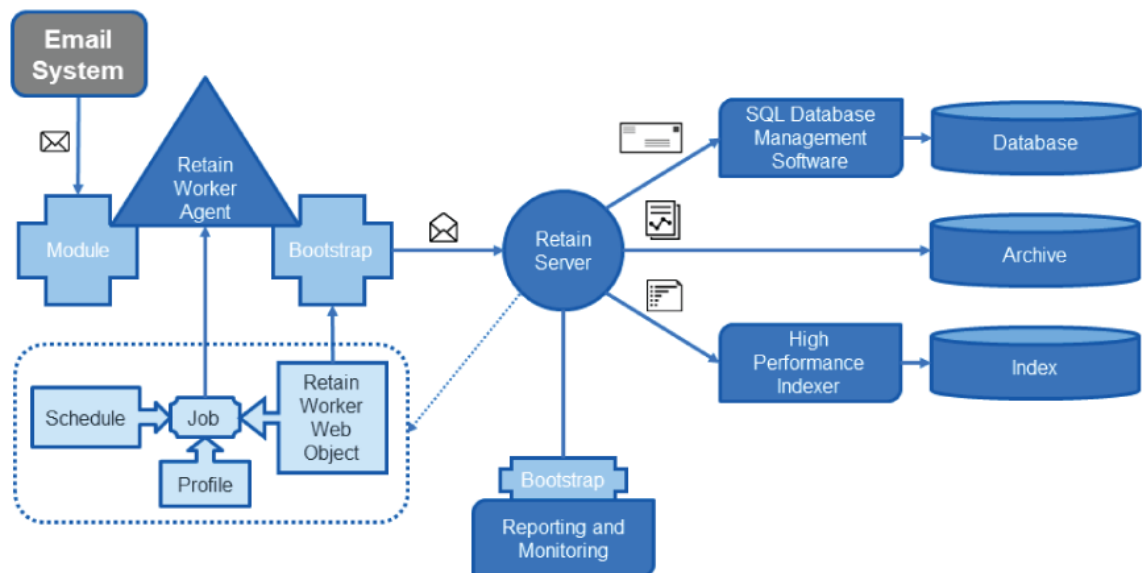
- ♦ **Schedule Name:** Specify a name that clearly identifies the schedule.
- ♦ **Schedule Frequency:** Choose **Single**.
- ♦ **Date:** Specify the date when the assigned jobs will start.
- ♦ **Time:** Specify the time when the assigned jobs will start.
- ♦ **If time assigned for job start has elapsed, ... :** As a general best practice, you should enable this option. This prevents Jobs from queuing up after their start time has passed. Otherwise, errors or schedule configuration adjustments can cause the system to redundantly resend jobs even though a schedule has technically expired.

Creating Workers

- ♦ [“Workers Overview” on page 13](#)
- ♦ [“Deciding Where to Install Your Workers” on page 13](#)
- ♦ [“Installing and Configuring a Worker” on page 14](#)
- ♦ [“Uploading a Worker Bootstrap to the Worker Console” on page 19](#)

Workers dredge data from messaging systems that are archived through Retain-initiated archiving. They have no role in Push-based archiving.

Workers Overview



Deciding Where to Install Your Workers

For Pull-based archiving, you must set up at least one Retain Worker to collect (dredge) the data from each messaging system and deliver that data to the Retain Server.

Best practice is to install a Worker on each messaging server from which Retain collects data.

A Worker can also be installed on the Retain Server itself, but this is not a best practice and is only sufficient for very small (100 or fewer users) systems or for evaluation purposes.

Worker traffic consumes network bandwidth and the archiving process is much slower than when the worker runs locally.

Retain lets you create as many workers as you need on Linux and/or Windows servers.

Installing and Configuring a Worker

- ♦ [“Installing a Worker” on page 14](#)
- ♦ [“Polling Tab” on page 14](#)
- ♦ [“Logging tab” on page 15](#)
- ♦ [“Connection Tab” on page 16](#)
- ♦ [“Module Specific Tab” on page 16](#)
- ♦ [“Status Tab” on page 18](#)
- ♦ [“Bootstrap Tab” on page 18](#)

Installing a Worker

1. Install a Worker on each server identified in [“Deciding Where to Install Your Workers” on page 13](#). Refer to the instructions specific to each server’s platform:
 - ♦ **Linux:** [“Deploying Production-Use Worker Agents on Linux”](#) in *Retain 4.10: Installation and Upgrade*
 - ♦ **Windows:** [“Installing Additional Retain Workers on Windows”](#) in *Retain 4.10: Installation and Upgrade*
2. On the Retain home page in the left menu bar, click **Workers**.
3. Click **Add Worker**.
4. Click the **Worker** text field, then type a name for the worker, for example: Local Worker 0.

IMPORTANT: If you are creating multiple workers on different servers, assign them unique names that identify where they are installed.

5. Click **Save Changes** to begin the creation process and continue with each of the tabs as documented in the following sections.

Polling Tab

The default polling interval is 10 minutes and the update interval is 500 messages, shown on the Status tab. You can adjust these as required for the schedule you are creating or modifying.

Polling
Logging
Connection
Module specific
Status
Bootstrap

Interval

How often should the worker poll for configuration changes, and how many messages should the worker send before updating status?

Poll for configuration every minutes (5-255)

Update status every messages.

Logging tab

This tab lets you control logging. Having a record of what a Worker does can help with troubleshooting.

Polling
Logging
Connection
Module specific
Status
Bootstrap

Logging Options

Logging enabled	☒
Log level	Diagnostic (Trace) ▾
Compress logs	☒
Remove old logs	☒
When age exceeds (days)	10

Logging is enabled by default.

There are four logging levels:

- ♦ Diagnostic (Trace): Maximum logging level. Default logging level.
- ♦ Verbose (Debug)
- ♦ Normal (Info)
- ♦ Error Only: Minimum logging level.

Logs are compressed at midnight, by default.

Old logs are removed at midnight after 10 days, by default.

Connection Tab

Polling

Logging

Connection

Module specific

Server Connection

The worker will need to know how to connect to the Server. It is highly recommended that you use a DNS host name for the Host Name. It's important to note that you are specifying the URL from the point of view of the **Worker contacting the Server**, which may or may not match the URL you'd use from your browser to reach the Worker or Server.

For administrators using the GroupWise Disaster Recovery interface, note the worker password assigned must be the same for each worker that contacts the GroupWise Disaster Recovery Server. As part of setting of the GroupWise Disaster Recovery Server, you must know this password.

Server Protocol	http
Server Host Name	retain-win
Server Port	48080
Server Path	/RetainServer
Worker Password	 (Password is default)

Note: Changing any of these parameters will require recopying the worker bootstrap file!

Although this should be populated automatically, make sure that the Retain Server Host Name is correct.

The specified Retain Server Host Name must resolve from within a browser running on the server where the Worker is located.

IMPORTANT: If you do not set this correctly, the Retain Worker will not be able to contact the Retain Server and any associated jobs won't run. In that case, the host name information must be corrected and the bootstrap must be replaced.

Module Specific Tab

The Module Specific tab contains information specific to individually configured GroupWise or Exchange modules and allows for archiving at more granular levels when systems are very large or complex. Generally, the settings can be left blank.

Polling
Logging
Connection
Module specific
Status
Bootstrap

Depending on the modules you have configured, you will need to provide additional configuration information here.

GroupWise SOAP Access

When using GroupWise, the Retain Worker needs to connect via SOAP to a initial default POA (preferably one local to the Worker) to gather job membership information. Initially this is set to the default you specified in the Groupwise Module Configuration, but it can be changed on a per worker basis.

POA Host Name	rick-gw182.qa.gwava.com
SOAP Port	7191
Enable SSL	☒

Exchange

As the worker processes each mailbox, it performs an auto-discovery process to find the "best" server to connect to. Providing an Active Directory Site improves the accuracy of the algorithm, although this is optional.

Active Directory Site (case sensitive)

GroupWise SOAP Access Section

If your GroupWise deployment is complex, you can create multiple workers and use the settings in this section to connect the different workers to only specific Post Office Agents.

This allows Retain to support multiple post offices with mixed SSL and non-SSL GroupWise environments.

For example, if you have a version 2014R2 POA that doesn't use SSL and a version 18 POA that requires SSL, you could do the following:

1. Create two Worker Agents named gw-no-ssl and gw-ssl.
2. For the gw-no-ssl worker, in the Module Specific tab, specify the host name of the version 2014RD POA and disable SSL.
3. In the gw-ssl worker's Module Specific tab, specify the host name of the version 18 POA and enable SSL.
4. Finally, create two Jobs, one for each worker, and archive each post office separately.

Exchange Section

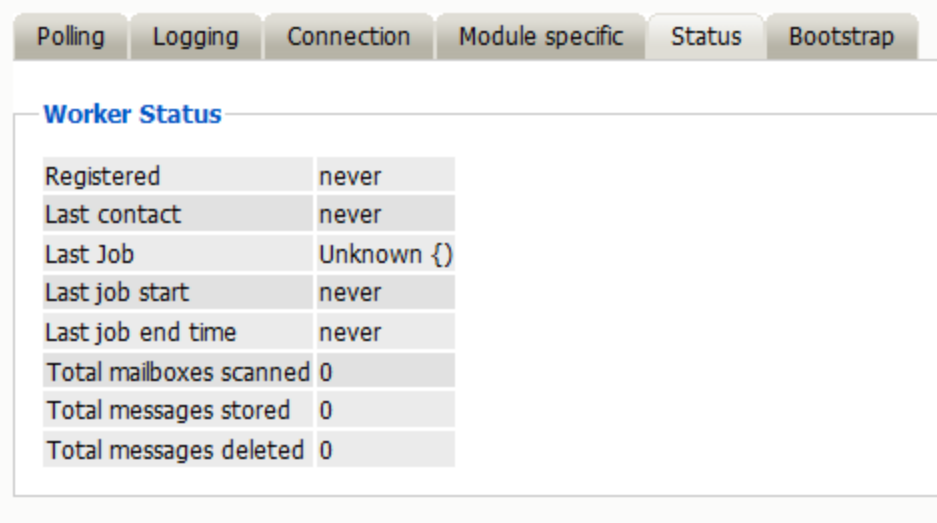
If your Exchange system is complex, you might want to create multiple workers that specify specific Active Directory Sites that the workers are located in.

This approach allows Retain to find the closest Exchange Server that is appropriate for the user to be archived.

The settings specified here are tied only to the specific worker configured, and do not affect the rest of the system, different workers can point to different Active Directory Sites.

Status Tab

After the worker has been saved, two additional tabs become visible for settings on the worker. You **MUST** save changes on a newly created worker before the 'Bootstrap' tab is available to be used. Before the bootstrap has been uploaded the Status is empty.



The screenshot shows the 'Worker Status' tab selected in a tabbed interface. The tabs are Polling, Logging, Connection, Module specific, Status, and Bootstrap. The 'Worker Status' section contains a table with the following data:

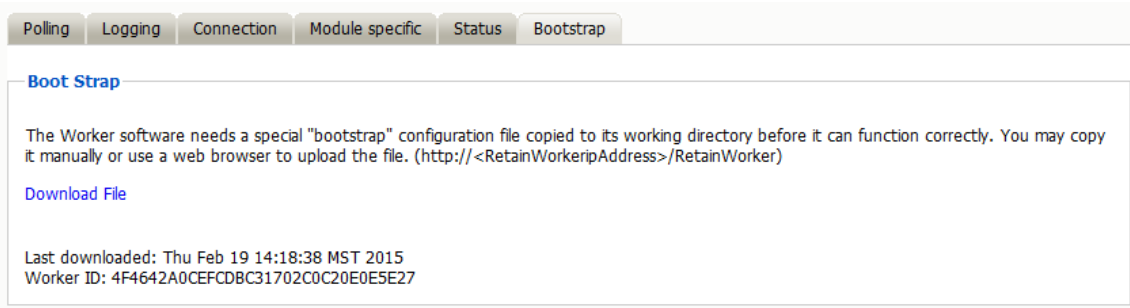
Registered	never
Last contact	never
Last Job	Unknown {}
Last job start	never
Last job end time	never
Total mailboxes scanned	0
Total messages stored	0
Total messages deleted	0

The status tab for the new worker will not display pertinent information until a job has been run or the worker has registered and communicated with the server. After a job has been completed, information displays on the general status of the selected Worker.

Check this page after the worker has connected to the Server for information and jobs, such as total mailboxes scanned, messages stored, and so on.

Bootstrap Tab

- 1 After verifying your settings, click **Save Changes** before browsing to another page.
The Bootstrap tab displays (see below).
- 2 Open the Bootstrap tab and click **Download File**.
- 3 Save the bootstrap file to your management workstation.



The screenshot shows the 'Bootstrap' tab selected in the same tabbed interface. The 'Boot Strap' section contains the following text:

The Worker software needs a special "bootstrap" configuration file copied to its working directory before it can function correctly. You may copy it manually or use a web browser to upload the file. (<http://<RetainWorkeripAddress>/RetainWorker>)

[Download File](#)

Last downloaded: Thu Feb 19 14:18:38 MST 2015
Worker ID: 4F4642A0CEFCDBC31702C0C20E0E5E27

Uploading a Worker Bootstrap to the Worker Console

After creating the bootstrap file in the Retain Server Console you must upload it to the Worker Agent Console so that the worker can connect to the Retain Server.

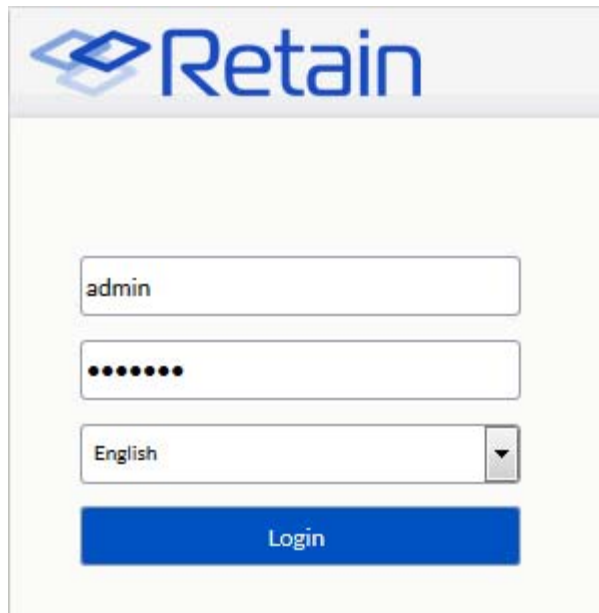
- 1 On your management workstation, open a new browser window or tab and type:
`http://retain_worker_ip_address/RetainWorker`
The upload screen appears when a worker has not been initialized.
- 2 Click **Browse** and navigate to the file you just downloaded in [Step 3 on page 18](#), and select it.
- 3 Click **Open**.
- 4 Click **Upload File**.
- 5 If the upload went well, you will see this screen:

Configuration Complete. From now on, you'll have to log in as a user (such as the initially created admin user) with the Manage Workers right.

[Continue](#)

After you click the **Continue** button, you will be returned to the login page.

- 6 Log in as Admin.

The image shows the login page of the Retain Worker Console. At the top, there is a header with the Retain logo, which consists of a blue diamond shape followed by the word "Retain" in a blue sans-serif font. Below the header, the page has a light yellow background. In the center, there are three input fields: the first contains the text "admin", the second contains a series of black dots representing a password, and the third is a dropdown menu currently showing "English". Below these fields is a large blue button with the word "Login" in white text.

On all subsequent logins, you should see the configuration page first.


Welcome, admin | Logout

Configuration
Server Connection
Status
Scheduler

Worker Configuration

Friendly Name	Local Worker
Worker Unique ID	AED6EC9000145878312C2D9EED9F0CD6
URI to Server	http://retain-win:48080/RetainServer/
Worker Version	4.9.0.0
Memory Free/Max/Total	1369794/16777216/4194304

Check for New Version
Refresh job cache now

Click "Refresh job cache now" to prompt the worker to poll for configuration changes right now.

Bootstrap information has been applied to this server. If the configuration must be changed in the future, replace the configuration file at C:\Program Files\Beginfinite\Retain\RetainWorker\\WEB-INF\cfg\ and restart the Worker.

You should be able to see your configuration on the screen, as shown. The **Check for New Version** button checks for updates. The **Refresh job cache now** button tells the worker to poll the server for configuration changes and new jobs. After this button is selected, the Worker page will refresh automatically after the Retain Server has been polled. It takes just a few seconds.

- 7 Verify the Retain Server connection success by selecting the Server Connection tab.

Configuration
Server Connection
Status
Scheduler

Server Connection

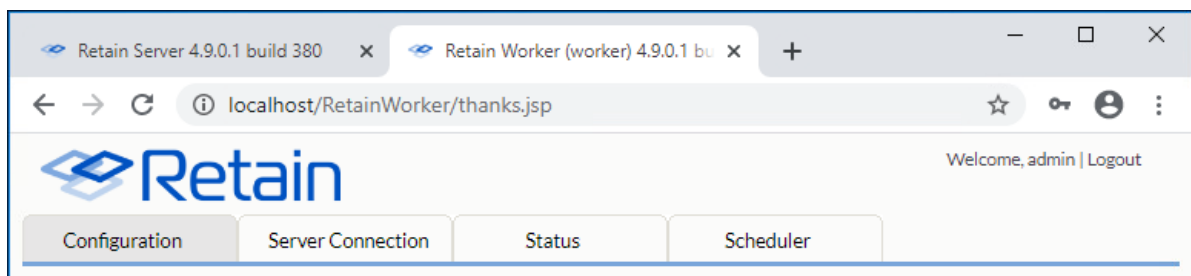
Successfully connected to Retain server

- 8 Go back to the Retain Server console.
- 9 Click **Workers**.
- 10 Click the worker you just created, then click the Status tab.

You should now see the Registered and Last Contact data filled in:

Polling	Logging	Connection	Module specific	Status	Bootstrap
Worker Status					
Registered	28-Jan-2020 14:19:49				
Last contact	28-Jan-2020 14:19:49				
Last Job	Unknown {}				
Last job start	never				
Last job end time	never				
Total mailboxes scanned	0				
Total messages stored	0				
Total messages deleted	0				

Worker Servers



Path: `http://worker-server-IP-or-DNS/RetainWorker`

Configuration Tab

Configuration

Server Connection

Status

Scheduler

Worker Configuration

Friendly Nameworker

Worker Unique ID1A308855F1E8F69127A3635C26D663AA

URI to Serverhttp://localhost:48080/RetainServer/

Worker Version4.9.0.1

Memory Free/Max/Total3377862/12582912/4194304

Check for New Version

Refresh job cache now

Click "Refresh job cache now" to prompt the worker to poll for configuration changes right now.

Bootstrap information has been applied to this server. If the configuration must be changed in the future, replace the configuration file at C:\Program Files\Beginfinite\Retain\RetainWorker\WEB-INF\cfg\ and restart the Worker.

Path: Retain Worker Manager > Configuration Tab

Table 1-3 Using the Worker Server Configuration Tab

Field, Option, or Button	Information and/or Action
<Dialog, Tab, Panel>	
♦ <field or button>	♦ <Description>.
♦ Delete button	1. <Action>.
<Subtab, Subpanel>	

Server Connection Tab

Configuration

Server Connection

Status

Scheduler

Server Connection

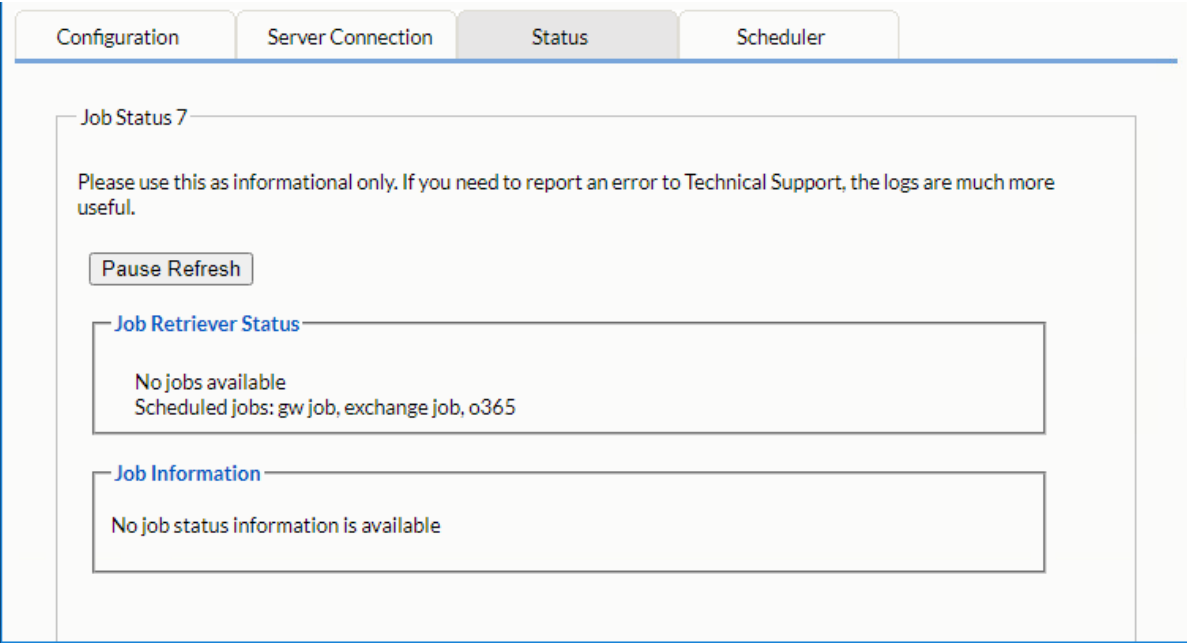
Successfully connected to Retain server

Path: Retain Worker Manager > Server Connection Tab

Table 1-4 Using the Worker Server Connection Tab

Field, Option, or Button	Information and/or Action
<Dialog, Tab, Panel>	
♦ <field or button>	♦ <Description>.
♦ Delete button	1. <Action>.
<Subtab, Subpanel>	

Status Tab

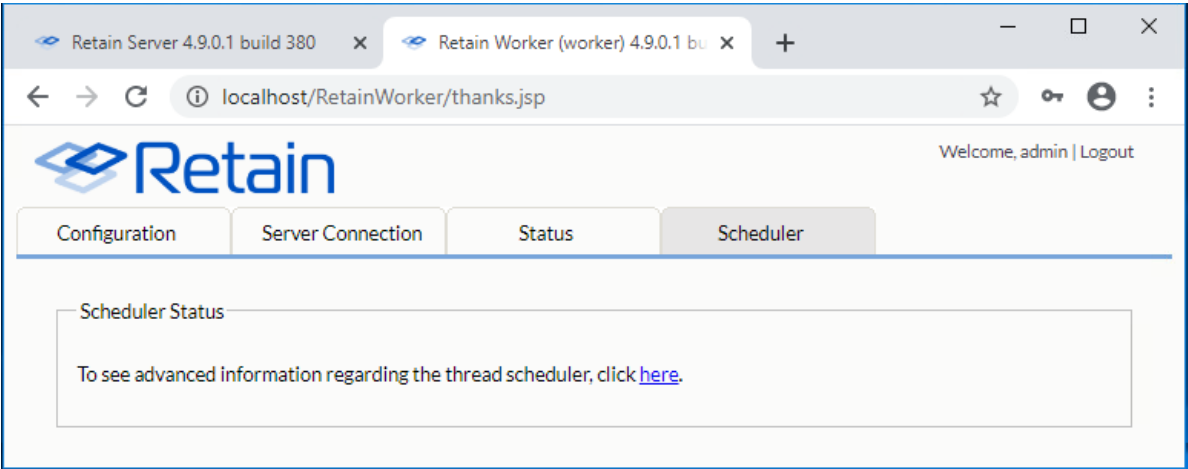


Path: [Retain Worker Manager](#) > **Status Tab**

Table 1-5 Using the Worker Status Tab

Field, Option, or Button	Information and/or Action
<Dialog, Tab, Panel>	
♦ <field or button>	♦ <Description>.
♦ Delete button	1. <Action>.
<Subtab, Subpanel>	

Scheduler Tab



Path: [Retain Worker Manager](#) > **Scheduler Tab**

Table 1-6 Using the Worker Server Configuration Tab

Field, Option, or Button	Information and/or Action
<Dialog, Tab, Panel>	
♦ <field or button>	♦ <Description>.
♦ Delete button	1. <Action>.
<Subtab, Subpanel>	

Admin View Scheduler Tab

Retain Server 4.9.0.1 build 380

localhost/RetainWorker/checkSci

+

localhost/RetainWorker/checkScheduler.jsp?factory=admin

☆

⊙

⋮

Select Scheduler:

Admin

Go

Scheduler Information

Scheduler Name: RTWQuartzScheduler_Admin
Scheduler standby: false
Scheduler started: true
Scheduler paused: false
Summary: Quartz Scheduler (v1.8.6) 'RTWQuartzScheduler_Admin' with instanceId 'NON_CLUSTERED' Scheduler class: 'org.quartz.impl.StdScheduler' - running locally.
Running since: Tue Jun 30 14:25:49 PDT 2020 Not currently in standby mode. Number of jobs executed: 2 Using thread pool 'org.quartz.simpl.SimpleThreadPool' - with 2 threads. Using job-store 'org.quartz.simpl.RAMJobStore' - which does not support persistence. and is not clustered.
Currently running jobs: NONE

Group: JobRetrieverGroup

Job: JobRetriever

Description: This regularly polls the Server for configuration changes and job scheduling
Class of Job: com.gwava.jobs.ArchiveJobRetriever
Durable: false
Stateful: false
Volatile: false
requestRecovery: false

Trigger: JobRetrieverTrigger

Description: null
State: -1
Start: Tue Jun 30 14:55:52 PDT 2020
End: null
Last fired: null
Next fire: Tue Jun 30 14:55:52 PDT 2020
Final fire: Tue Jun 30 14:55:52 PDT 2020
Misfire Inst: 0
May fire again: true

SimpleTrigger specific properties

Repeat Count: 0
Repeat Interval: 0

Path: [Retain Worker Manager](#) > [Configuration Tab](#) > [here link](#) > [Admin](#)

Table 1-7 Using the Admin View Scheduler Tab

Field, Option, or Button	Information and/or Action
<Dialog, Tab, Panel>	
♦ <field or button>	♦ <Description>.
♦ Delete button	1. <Action>.
<Subtab, Subpanel>	

Archiver View Scheduler Tab

Select Scheduler: **Archiver**

Scheduler Information

Scheduler Name: RTWQuartzScheduler_Archive
Scheduler standby: false
Scheduler started: true
Scheduler paused: false
Summary: Quartz Scheduler (v1.8.6) 'RTWQuartzScheduler_Archive' with instanceId 'NON_CLUSTERED' Scheduler class: 'org.quartz.impl.StdScheduler' - running locally. Running since: Tue Jun 30 14:25:49 PDT 2020 Not currently in standby mode. Number of jobs executed: 0 Using thread pool 'org.quartz.simpl.SimpleThreadPool' - with 9 threads. Using job-store 'org.quartz.simpl.RAMJobStore' - which does not support persistence, and is not clustered.
Currently running jobs: NONE

Group: 1C6FAC016A58B2EFD27C34A7A3722573_group

Job: 1C6FAC016A58B2EFD27C34A7A3722573

Description: 1C6FAC016A58B2EFD27C34A7A3722573 was placed in the scheduler at Tue Jun 30 14:45:52 PDT 2020 exchange job
Class of Job: com.gwava.jobs.RetainArchiveJob
Durable: false
Stateful: false
Volatile: false
requestRecovery: false

Trigger: 1C6FAC016A58B2EFD27C34A7A3722573_triggerName

Description: This trigger is a recurring friendly job name = exchange job
State: -1
Start: Tue Jun 30 14:45:52 PDT 2020
End: null
Last fired: null
Next fire: Wed Jul 01 14:30:00 PDT 2020
Final fire: null
Misfire Inst: 0
May fire again: true

CronTrigger specific properties

Cron Expression: 0 30 14 ? * 1,2,3,4,5,6,7
Expression Summary: seconds: 0 minutes: 30 hours: 14 daysOfMonth: ? months: * daysOfWeek: 1,2,3,4,5,6,7 lastdayOfWeek: false nearestWeekday: false NthDayOfWeek: 0 lastdayOfMonth: false years: *

Group: D905955246DDFEC9A5F383F30F9280B4_group

Job: D905955246DDFEC9A5F383F30F9280B4

Description: D905955246DDFEC9A5F383F30F9280B4 was placed in the scheduler at Tue Jun 30 14:45:52 PDT 2020 gw job
Class of Job: com.gwava.jobs.RetainArchiveJob
Durable: false
Stateful: false
Volatile: false
requestRecovery: false

Trigger: D905955246DDFEC9A5F383F30F9280B4_triggerName

Description: This trigger is a recurring friendly job name = gw job
State: -1
Start: Tue Jun 30 14:45:52 PDT 2020
End: null
Last fired: null
Next fire: Wed Jul 01 14:00:00 PDT 2020
Final fire: null
Misfire Inst: 0
May fire again: true

CronTrigger specific properties

Cron Expression: 0 0 14 ? * 1,2,3,4,5,6,7
Expression Summary: seconds: 0 minutes: 0 hours: 14 daysOfMonth: ? months: * daysOfWeek: 1,2,3,4,5,6,7 lastdayOfWeek: false nearestWeekday: false NthDayOfWeek: 0 lastdayOfMonth: false years: *

Group: AA36506FDABBE5F95FB86A072AC070FB_group

Job: AA36506FDABBE5F95FB86A072AC070FB

Description: AA36506FDABBE5F95FB86A072AC070FB was placed in the scheduler at Tue Jun 30 14:45:52 PDT 2020 o365
Class of Job: com.gwava.jobs.RetainArchiveJob
Durable: false
Stateful: false
Volatile: false
requestRecovery: false

Trigger: AA36506FDABBE5F95FB86A072AC070FB_triggerName

Description: This trigger is a recurring friendly job name = o365
State: -1
Start: Tue Jun 30 14:45:52 PDT 2020
End: null
Last fired: null
Next fire: Tue Jun 30 15:00:00 PDT 2020
Final fire: null
Misfire Inst: 0
May fire again: true

Path: [Retain Worker Manager](#) > [Configuration Tab](#) > [here link](#) > [Archiver](#)

Table 1-8 Using the Archiver View Scheduler Tab

Field, Option, or Button	Information and/or Action
<Dialog, Tab, Panel>	
♦ <field or button>	♦ <Description>.
♦ Delete button	1. <Action>.
<Subtab, Subpanel>	

Archiving Blackberry Server Data

- ♦ “Blackberry Prerequisites” on page 27
- ♦ “Creating a Blackberry Module” on page 27
- ♦ “Setting a Blackberry Schedule” on page 34
- ♦ “Specifying a Blackberry Profile” on page 34
- ♦ “Setting Up a Blackberry Worker” on page 38
- ♦ “Creating a Blackberry Job” on page 38

Blackberry Prerequisites

- ♦ Retain uses Blackberry server log files to collect the information about phone activity. System phones require no changes.
- ♦ Make sure that the Blackberry server is configured to log the data. Otherwise, Retain cannot archive the information.
- ♦ Make sure that SOAP is enabled on every Blackberry Enterprise and Unified Endpoint Management server that Retain will archive from.
- ♦ To archive the Blackberry information, Blackberry servers must be configured to log phone calls, PIN, BBM and SMS data.
- ♦ For BES 5.x, instructions to modify the logging in the Blackberry Enterprise Server can be found in the Blackberry Enterprise Server help file. (Found under Start | Programs | Blackberry Enterprise Server | Help | Blackberry Manager Help)
- ♦ For BES 10.x and 12.x, users must be set on EMM – Regulated mode and have the logging set to ‘yes’ for all types desired. Balanced mode users will not have logs created for them in the BES system and as a result will not be archived.

Creating a Blackberry Module

- 1 To begin configuring the Blackberry Module, open [Retain Server Manager > Configuration > Module Configuration > Blackberry-Configure > Core Settings](#).
- 2 Use the information and options in the sections that follow to configure the Blackberry Module.

Core Settings Tab (Blackberry Module)

BlackBerry

BlackBerry specific information is configured here.

Core SettingsEnterprise ServersMessenger EnterpriseUnified Endpoint Management

BES Integration

Normally these entries should be enabled.

- Enable Address Book Caching determines if this module caches address book entries from its directory services during Maintenance.
- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name

Blackberry-bes1-module

Enable Address Book Caching

☒

Enable Jobs

☒

Normally this entry should be disabled.

- Send BlackBerry items to an external system.

Select Send Method

disabled

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Blackberry-Configure](#) > [Core Settings](#)

Table 1-9 Configuring Blackberry Core Settings

Option, Field, or Sub-panel	Information and/or Action
Module Name	1. Specify an arbitrary name that identifies this module.
Address Book Caching	1. As a best practice, always have Address Book Caching enabled. Retain uses the address book to match data with existing users in the archive, thus preventing the creation of redundant user archives.
Enable Jobs	1. This allows Jobs to run that are associated with the module and should generally be enabled. You can temporarily disable this option if needed. In rare cases, administrators create modules that they run only occasionally.

Option, Field, or Sub-panel	Information and/or Action
Select Send Method drop-down list	1. The Send Method option enables redundant archiving of message data for this module by forwarding a copy of each archived message to either an SMTP or FTP server. Both options require that the SMTP or FTP system is configured on the Server Configuration page > Module Forwarding Tab. (See that section for more detail.) Drop-down list options: ♦ disabled: There is no redundant archiving of message data. ♦ FTP: As they are archived, a copy of each message is also sent to the FTP server that is configured on the Server Configuration page > Module Forwarding Tab > FTP Forwarding for Modules Panel. ♦ SMTP: As they are archived, a copy of each message is also sent to the SMTP server that is configured on the Server Configuration page > Module Forwarding Tab > SMTP Forwarding for Modules Panel. By default, each forwarded message shows the phone number or PIN of the device that received the message. ♦ Use Email Address instead of Phone Number. Retain checks the sender (From) and recipient (To) fields for valid email addresses. If found, they are used in the forwarded message. If either is not found, Retain checks the phone number's properties for a valid email address to use instead. If a valid email is still not found, the phone number or PIN is used by itself. ♦ Specify string to append to phone number/PIN: Selecting this option causes Retain to perform the actions outlined for the first option to the point that no valid email address is found. When a valid email address is not found, Retain appends the specified string to the phone number or PIN and this is used in the forwarded message. NOTE: Selecting this option by itself or in conjunction with the first option, produces the same result.

Enterprise Servers (BES) Tab (Blackberry Module)

BlackBerry

BlackBerry specific information is configured here.

Core SettingsEnterprise ServersMessenger EnterpriseUnified Endpoint Management

BlackBerry Enterprise Servers

The Retain Worker needs to know where the BES log files are located.

Retain accesses the BlackBerry Enterprise Servers via the SOAP protocol which needs to be enabled.

+

 Add BlackBerry Enterprise Server

✖

Server Name

BB Enterprise 1

Logfile Path

C:\BlackBerry\BES\Logs\device-logs

SOAP Host

192.168.1.225

SOAP Port

18084

SOAP User

admin

SOAP Password

.....

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Blackberry-Configure](#) > [Enterprise Servers](#)

Table 1-10 Adding BlackBerry Enterprise Servers

Option, Field, or Sub-panel	Information and/or Action
Add BlackBerry Enterprise Server	1. Use the green plus sign  to configure additional BB Enterprise servers. IMPORTANT: You must add each BB Enterprise server from which the Retain system archives data.
Server Name	1. Type an arbitrary name that is unique within this module and clearly identifies the server you are adding. For example: bes-svr-1 or Stack-A-Server

Option, Field, or Sub-panel	Information and/or Action
Logfile Path	IMPORTANT: The Retain Worker must have open and active access to the log files on the BlackBerry Enterprise server. If not, you must set up a shared folder (Windows) or mount point (Linux), and make sure there are no firewalls or other network security mechanisms that block worker access to the server. 1. Type the path to the BB Enterprise server's log files from the perspective of the Retain Worker. Worker on BB server: Ideally, you have installed the worker on the server that it targets, in which case you type a local path, such as ♦ Windows example: C:\BlackBerry\BES\Logs\device_logs ♦ Linux example: /bes/Logs/device_logs Worker on remote server: If the worker is not installed on the BlackBerry server, use a UNC path on Windows or a mount point on Linux. ♦ Windows example: \\ret-srv-1\BlackBerry\BES\Logs\device_logs ♦ Linux example: /mnt/bes/Logs/device_logs 2. If you specify a UNC path to a remote Windows server, make sure that the Retain service (Tomcat) is running as a user with permissions to read the log data on the remote server.
SOAP Host	Retain uses the SOAP protocol to obtain address book data for caching. 1. Type the DNS name or IP address of the BlackBerry Enterprise Server you are configuring.
SOAP Port	1. Type the port on which the Enterprise server sends and receives SOAP communications. BlackBerry uses Port 18084 by default.
SOAP User	1. Type the name of an <i>internal</i> BES administrative user that has access to the BES server's administrative web console. IMPORTANT: This cannot be a user that authenticates through an external directory, such as Activity Directory or another LDAP directory.
SOAP Password	1. Type the password for the admin user
Test Connection button	1. Always click this to ensure that Retain can successfully connect to the server. Results display after the test completes.

Messenger Enterprise Tab (Push-based Archiving)

See ["Messenger Enterprise \(BBME\) Tab \(Blackberry\)" on page 174](#).

Unified Endpoint Management (UEM) Tab (Blackberry Module)

BlackBerry

BlackBerry specific information is configured here.

Core SettingsEnterprise ServersMessenger EnterpriseUnified Endpoint Management

BlackBerry Unified Enterprise Management

The Retain Worker needs to know where the UEM log files are located.

Retain accesses the Unified Enterprise Management Server via the SOAP protocol which needs to be enabled.

+

Add BlackBerry Unified Enterprise Management Server

✗

Server NameBB UEM 1

Logfile PathC:\BlackBerry\BES\Logs\device-logs

SOAP Host192.168.1.230

SOAP Port18084

SOAP Useradmin

SOAP Password.....

Test Connection

+

Add Encryption Key

User-friendly Key Nameencryption-key-1Encryption Key.....

User-friendly Key Nameencryption-key-2Encryption Key.....

User-friendly Key Nameencryption-key-3Encryption Key.....

User-friendly Key Nameencryption-key-4Encryption Key.....

* User-friendly Key Nameencryption-key-2Encryption Key.....

* User-friendly Key Nameencryption-key-4Encryption Key.....

* Modified Encryption Keys - See the Warning in the explanation table that follows.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Blackberry-Configure](#) > [Unified Endpoint Management](#)

Table 1-11 Using the Blackberry Unified Endpoint Management Tab

Option, Field, or Sub-panel	Information and/or Action
Add BlackBerry Unified Endpoint Management Server	1. Use the green plus sign  to configure additional UEM servers. IMPORTANT: You must add each UEM server from which the Retain system archives data.
Server Name	1. Type an arbitrary name that is unique within this module and clearly identifies the server you are adding. For example: uem-svr-1 or Stack-B-Server

Option, Field, or Sub-panel	Information and/or Action
Logfile Path	IMPORTANT: The Retain Worker must have open and active access to the log files on the UEM server. If not, you must set up a shared folder (Windows) or mount point (Linux), and make sure there are no firewalls or other network security mechanisms that block worker access to the server. 1. Type the path to the UEM server's log files from the perspective of the Retain Worker. Worker on BB server: Ideally, you have installed the worker on the server that it targets, in which case you type a local path, such as ♦ Windows example: C:\BlackBerry\UEM\Logs\device_logs ♦ Linux example: /uem/Logs/device_logs Worker on remote server: If the worker is not installed on the BlackBerry server, use a UNC path on Windows or a mount point on Linux. ♦ Windows example: \\ret-srv-1\BlackBerry\UEM\Logs\device_logs ♦ Linux example: /mnt/uem/Logs/device_logs 2. If you specify a UNC path to a remote Windows server, make sure that the Retain service (Tomcat) is running as a user with permissions to read the log data on the remote server.
SOAP Host	Retain uses the SOAP protocol to obtain address book data for caching. 1. Type the DNS name or IP address of the UEM Server you are configuring.
SOAP Port	1. Type the port on which the UEM server sends and receives SOAP communications. BlackBerry uses Port 18084 by default.
SOAP User	1. Type the name of an <i>internal</i> BlackBerry UEM administrative user that has access to the UEM server's administrative web console. IMPORTANT: This cannot be a user that authenticates through an external directory, such as Activity Directory or another LDAP directory.
SOAP Password	1. Type the password for the admin user
Test Connection button	1. Always click this to ensure that Retain can successfully connect to the server. Results display after the test completes.

Option, Field, or Sub-panel	Information and/or Action
WARNING: UEM servers let users encrypt their messages using keys that are stored on the UEM server. Retain 4.9 and later supports UEM encryption and archives users' message data using their encryption keys. UEM needs only the latest passwords, etc. to protect users' message data. Previously entered passwords are overwritten on the system because they are no longer needed by UEM. Retain, on the other hand, requires the exact encryption key that was used at the time a message was archived in order to decrypt and retrieve it. Therefore, it is critical that 1. During the initial configuration for a UEM server, you enter every User-friendly Key Name and its companion Encryption Key as listed on the UEM server. 2. Every time a user changes anything in their encryption information, add the modified User-friendly key name and its companion Encryption Key to the affected UEM Module. For example, if the users of Encryption Key 2 and Encryption Key 4 change their passwords, you must add new entries for these keys (as reflected in the screenshot of the Unified Endpoint Management panel above). 3. Never remove or replace an Encryption Key entry in the module list. If you do, the data archived using that key becomes inaccessible.	
Add Encryption Key	1. Using the green plus sign, add the same encryption key information as on the UEM server being targeted.
User-friendly Key Name	1. Copy and paste the User-friendly Key Name from the UEM server console.
Encryption Key	1. Copy and paste the Encryption Key from the UEM server console.

Save the Blackberry Module Before Continuing.

Retain dialogs require that you always save your changes. Otherwise, the configurations you have specified are lost.

Setting a Blackberry Schedule

If you have not already created one or more schedules for use with your Blackberry Job, go to [“Creating Schedules” on page 11](#) and complete the task now.

Specifying a Blackberry Profile

After you have created a Blackberry Module and one or more schedules, you can create a Blackberry Profile.

- 1 To begin configuring the Blackberry Profile, open [Retain Server Manager > Data Collection > Profiles](#).
- 2 Click **Blackberry > Add Profile**.
- 3 Use the information and settings in the sections that follow to configure the profile.
 - ♦ [“Core Settings Tab \(Blackberry Profile\)” on page 35](#)
 - ♦ [“Message Settings Tab \(Blackberry Profile\)” on page 35](#)

- ♦ “Scope Tab (Blackberry Profile)” on page 36
- ♦ “Advanced Tab (Blackberry Profile)” on page 37

Core Settings Tab (Blackberry Profile)

Profile Name

Core Settings Message Settings Scope Advanced

Profile Functions

☒ Enable Archiving (store messages in Retain)

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Blackberry](#) > *Select the Profile* > **Core Settings**

Table 1-12 Using the Blackberry Profile Core Settings Tab

Option, Field, or Sub-panel	Information and/or Action
Profile Name	1. Type a name that clearly identifies this profile.
Enable Archiving	1. Select this so that the Job associated with the profile will run. 2. Click Save Changes.

Message Settings Tab (Blackberry Profile)

Profile Name

Core Settings Message Settings Scope Advanced

Item Type

By default, Retain stores every type of message. You can restrict this.

☒ SMS ☒ MMS ☒ Phone Call ☒ BB PIN ☒ BBM

Item Source

Messages are classified in one of these categories. You may restrict the storage of messages if desired.

☒ Received ☒ Sent

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Blackberry](#) > *Select the Profile* > **Message Settings**

Table 1-13 Configuring BlackBerry Profile Message Settings

Option, Field, or Sub-panel	Information and/or Action
Item Type	Most administrators want to archive all message types, but you can restrict the selection if desired. If you want chat messages archived, be sure that BBM is selected. IMPORTANT: The selections here must match your logging selections on the BlackBerry server. If data isn't logged on the server, Retain can't archive it.
Item Source	- You can choose to archive only messages that are received, or that are sent, or both. - Click Save Changes.Click Save Changes.

Scope Tab (Blackberry Profile)

Profile Name

Core Settings
Message Settings
Scope
Advanced

Date Range to Scan

New items

Advance Flags

You may not want to advance the flag after running the job.

☐ Don't Advance Timestamp

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Blackberry](#) > [Select the Profile](#) > [Scope](#)

Table 1-14 Configuring BlackBerry Profile Message Settings

Option, Field, or Sub-panel	Information and/or Action
IMPORTANT: This is the most critical tab, at least initially, because it limits how much data to archive. For example, if a system has been running for years, it could take weeks or even months to archive everything. A best practice might be to make sure that the most recent data is archived first, and then add other profiles and jobs gradually, in order to work back through time, while keeping current at the same time.	

Option, Field, or Sub-panel	Information and/or Action
Date Range to Scan	The Date Range determines which message items are collected, depending on the date of the message. ♦ New Items: All items that have not been archived by Retain since the last time the job ran. ♦ All Items in Mailbox: All items in the mailbox starting from 1/1/1970, duplicates will be processed but not stored if they already exist in the Retain archive. ♦ Number of days before job start date and newer: Only items from the relative number of days from the time the job began will be archived. E.g. messages that came into the email system 7 days ago or less. ♦ Number of days from job start date and older: Only items previous to the relative number of days from the time the job began will be archived. E.g. messages that came into the email system 7 days ago or more. ♦ Specify custom date range: Only items between two absolute dates will be dredged. ♦ Specify custom date range relative to job start: Only items between two relative dates will be dredged. E.g. messages that came into the email system between 7 and 5 days ago.
Advance Flags	1. If you enable Don't Advance Timestamp, Retain doesn't update the timestamp flag on dredged messages. As a result, all messages are considered "new" by Retain each time the job runs. This is generally only useful for troubleshooting purposes. 2. Click Save Changes.

Advanced Tab (Blackberry Profile)

Generally, since storage space is inexpensive, Micro Focus recommends that you archive all message content.

However, if you need to limit what is archived, you can use the Advanced tab to do it.

Profile Name

Core Settings
Message Settings
Scope
Advanced

Advanced Criteria

You may add advanced criteria such as specific attachment names, sizes, subject here.

Add

Delete
Subject
is

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Blackberry](#) > [Select the Profile](#) > [Advanced Settings](#)

Table 1-15 *Configuring Blackberry Profile Advanced Settings*

Option, Field, or Sub-panel	Information and/or Action
Advanced Criteria	Use this dialog to define the conditions Retain uses to determine what to archive. Each line sets a specific parameter and the lines are all added together (AND-ed). To check how Retain will interpret your settings, read through the lines in turn, inserting AND between each one. - For the first field, select from among the following items: ◆ Subject ◆ Sender ◆ Recipient ◆ Size ◆ Attachment Name - For the second field, specify the relationship of the first field to the (third field): ◆ is ◆ is not ◆ contains ◆ does not contain - Type a string for the third field. - Click Add to enter another statement - When the conditions are defined, click Save Changes.

Setting Up a Blackberry Worker

If you have not already created one or more Workers for use with your Blackberry Job, go to [“Creating Workers” on page 13](#) and complete the tasks there.

Creating a Blackberry Job

After completing the instructions in the preceding sections, you can create a Blackberry Job.

- 1 To begin creating a Blackberry Job, open [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#).
- 2 Click **Blackberry** > **Add Job**.
- 3 Use the information in the sections that follow to configure each tab.

Core Settings Tab (Blackberry Job)

Core Settings | Mailboxes | Notification | Status

Core Settings

Job enabled ☒

Each Job must have the following assigned to it:

- [schedule](#) - How often to run
- [profile](#) - What to do when running
- [worker](#) - Where to run the job

Schedule: daily-at-midnight ▼

Profile: bberry-bes1-profile ▼

Worker: Local Worker ▼

Items archived with this job can optionally be set with an "expiration timestamp" which the Deletion Manager can use to remove obsolete items. The expiration timestamp can only be extended, never reduced.

Enable data expiration ☐

Expire in: 0 Days ▼

Base Expiration Time on: Date Item is stored in Retain (recommended) ▼

Path: [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#) > [Blackberry](#) > [Select the Job](#) > [Core Settings](#)

Table 1-16 Configuring Blackberry Job Core Settings

Option, Field, or Sub-panel	Information and/or Action
Job Enabled	1. Jobs are enabled for archiving by default. If you need to deactivate the Job (stop archiving) for any reason, deselect the option.
Schedule	1. Using the drop-down list, select a previously defined schedule to control when and how often the job will run.
Profile	1. Using the drop-down list, select a previously defined profile to control what data to archive.
Worker	1. Using the drop-down list, select a previously defined worker to dredge the targeted BlackBerry server.
Enable data expiration	1. When enabled, Retain places a timestamp on the data archived by this job in the Retain database. The deletion manager can leverage this to remove old data. NetApp and Hitachi HCAP can use this timestamp to enforce hardware-level deletion protection. IMPORTANT: Data expiration timestamps are applied to data based on the job configuration at the time when the data is archived. Data already in the database is not affected.
Expire in	1. Specify the number of days from the Base Expiration Time (below) until archived data can be deleted.

Option, Field, or Sub-panel	Information and/or Action
Base Expiration Time on	1. Using the drop-down options, specify from these two options: ♦ Date item is stored in Retain ♦ Date item was delivered to mail server

Mailboxes Tab (Blackberry Job)

Core Settings

Mailboxes

Notification

Status

Mailboxes

Select the BES/UEM server to be included in this job.

BB Enterprise 1 ▾

Users

Include Users:

Add User

Exclude Users:

Add User

Path: [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#) > [Blackberry](#) > [Select the Job](#) > [Mailboxes](#)

Table 1-17 Configuring Blackberry Job Mailboxes Settings

Option, Field, or Sub-panel	Information and/or Action
The mailboxes tab specifies the BlackBerry server and its users to be archived by the job.	

Option, Field, or Sub-panel	Information and/or Action
Select the BES/UEM server ...	1. Select a server for this job to target from the list of servers you included in the BlackBerry module.
Users	When you select a server, all of its associated users are automatically included and not further action is required unless you want to limit which users have their data archived. Before you can create a list of users to include or exclude, you must first populate the list to choose from by running the job. Clicking the + Users link, opens the black lists shown in the screenshot. TIP: In most situations, it is best to use only one of the following lists. If the Include Users list has any entries, only those users will have their data archived. All other users are logically excluded. On the other hand, if only the Exclude Users list has entries, all users except those users will have their data archived.
Include Users	1. To include a subset of users on the BlackBerry server, add them to this list. Only the specified users are then archived.
Exclude Users	1. To exclude a subset of users from all users on the BlackBerry server, Add them to this list. All of the users will be archived, except the users in this list.

Notification Tab (Blackberry Job)

Core Settings
Mailboxes
Notification
Status

Notification

You can have Retain e-mail a summary of operations and/or errors that occurred when the job completes.

SMTP Mail Server	mail-server.ret-doc-lab.com
SMTP Security Protocol	unencrypted ▼
SMTP Port	25
SMTP Mail From Address	Retain@ret-doc-lab.com
SMTP To Address	admin@ret-doc-lab.com
SMTP Username	admin
SMTP Password	 (Password is set)
Mail when errors occur	☒
Mail summary when job complete	☒

Test Connection

Path: [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#) > [Blackberry](#) > [Select the Job](#) > [Notification](#)

Table 1-18 *Configuring BlackBerry Job Notification Settings*

Option, Field, or Sub-panel	Information and/or Action
The Notification tab configures Retain to send email notifications regarding errors, and job summaries and statistics.	
SMTP Mail Server	1. Specify the DNS name or IP address of the mail server that Retain should send notifications through.
SMTP Security Protocol	1. Specify whether Retain should use encryption when communicating with the SMTP server. The default is to use an unencrypted connection. Encryption requires installing certificates from an industry-certified certificate authority.
SMTP Port	1. The default port is 25. If your network uses a non-standard SMTP port, you can change this.
SMTP Mail From Address	1. Specify an email address that you want Retain to include as the "From" address in notifications.
SMTP To Address	1. Specify a valid email address for the one receiving the notifications.
SMTP Username	1. If required, specify a username for Retain to use when communicating with the SMTP server.
SMTP Mail Server	1. Specify a password for the SMTP username.
Mail when errors occur	1. Enable this option if you want Retain to send notifications when errors occur.
Mail summary when job completes	1. Enable this option if you want Retain to send notifications each time this job completes a run cycle.
Test Connection button	1. After specifying the SMTP configuration, make sure you use this button to verify that Retain can communicate with the SMTP server using the settings you have specified.

Status Tab (Blackberry Job)

Core Settings	Mailboxes	Notification	Status
Status [Refreshes in 4]			
Job: bes-job (076BAA354E928B3CD8FB5DC374C94281)			
	Current	Last	Overall
Job began	---	never	---
Job ended	---	never	---
Mailboxes	0	0	0
Messages Archived	0	0	0
Messages Processed	0	0	0
Messages Deleted	0	0	0
Errors	0	0	0
	Current	Last	Error
Mailbox			
MS			
Error			---

Path: [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#) > [Blackberry](#) > *Select the Job* > [Status](#)

Table 1-19 Configuring Blackberry Job Notification Settings

Option, Field, or Sub-panel	Information and/or Action
The Notification tab configures Retain to send email notifications regarding errors, and job summaries and statistics.	
Status	Initially, when the job has not yet run, there is no status to report. As soon as a job begins, this tab becomes a monitoring tool, reporting archive progress and any errors generated. You can view job statistics for Current (meaning currently running), Last (meaning most recently completed), and Overall (total) job runs, as follows: ♦ Job starting and ending dates and times. ♦ The number of mailboxes dredged. ♦ The number of messages archived, processed, and deleted. ♦ The errors generated.

Next Step

Once a job has completed you can confirm the items are in the archive by checking the Search Message interface. See “[Using Retain’s Archives](#)” in the [Retain 4.10: User Guide](#).

Archiving Bloomberg

- ♦ “Creating a Bloomberg Module” on page 44
- ♦ “Setting a Bloomberg Schedule” on page 46
- ♦ “Specifying a Bloomberg Profile” on page 46
- ♦ “Setting Up a Bloomberg Worker” on page 49
- ♦ “Creating a Bloomberg Job” on page 49

Creating a Bloomberg Module

The Bloomberg module archives Bloomberg IM and Mail messages from daily FTP downloads to Retain.

Prerequisites (Bloomberg Module)

On the Bloomberg server create a user that Retain can use to log in to the Bloomberg SFTP server.

Configuring the Bloomberg Module

- 1 To begin configuring the Bloomberg Module, open [Retain Server Manager](#) > **Configuration** > **Module Configuration** > **Bloomberg-Configure** > **Core Settings**.
- 2 Use the information and options in the sections that follow to configure the Bloomberg Module.

Core Settings Tab (Bloomberg Module)

The screenshot shows the 'Bloomberg' configuration window with the 'Core Settings' tab selected. The window title is 'Bloomberg' and it has a save icon and a refresh icon in the top right corner. Below the title bar, a message states 'Bloomberg specific information is configured here.' There are two tabs: 'Core Settings' (active) and 'Bloomberg Servers'. Under the 'Core Settings' tab, a note says 'Normally this entry should be enabled.' followed by a bullet point: 'If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.' Below this, there is a text input field for 'Module name' containing 'Bloomberg-1' and a checkbox for 'Enable Jobs' which is checked. Another note says 'Normally this entry should be disabled.' followed by a bullet point: 'Send Bloomberg items to an external system.' Below this, there is a dropdown menu for 'Select Send Method' with 'disabled' selected.

Path: [Retain Server Manager](#) > **Configuration** > **Module Configuration** > **Bloomberg-Configure** > **Core Settings**

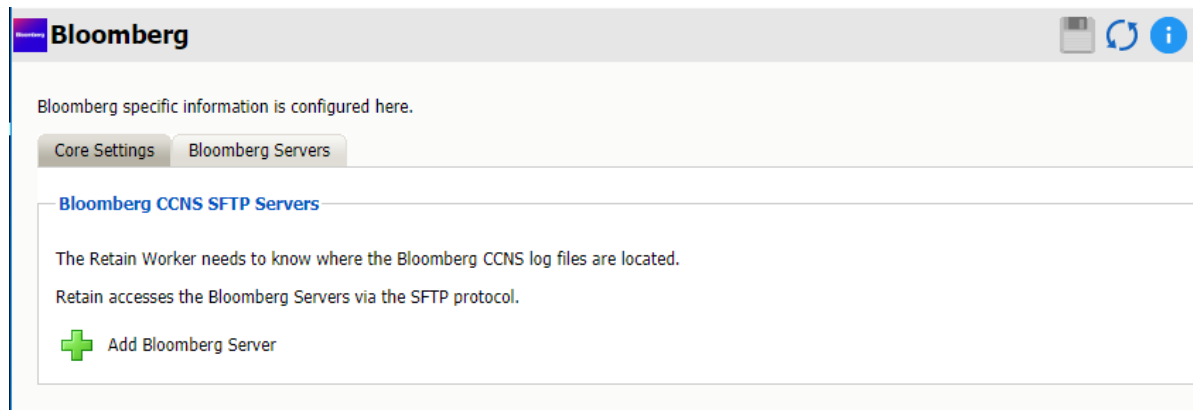
- 1 Type a name for the Bloomberg module.
- 2 Leave the module enabled and active in the Retain system.
- 3 The Send Method lets you send Bloomberg items to an external system using FTP or SMTP.

In most cases this should be disabled so that items are archived in Retain.

To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

- 4 Save your settings, then click the Bloomberg Server tab.

Bloomberg Servers Tab (Bloomberg Module)



Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Bloomberg-Configure](#) > [Bloomberg Servers](#)

- 1 Click the green plus sign to add a Bloomberg server.
You can add as many server as needed for your organization.
- 2 Specify the following settings:
 - ♦ **Server Name:** The name Retain will use to reference Bloomberg messages. You can use any name you wish.
 - ♦ **Logfile Path:** Where the worker will transfer the logfiles to locally before processing. The log file path must be unique for each server.
 - ♦ **Delete log files after archive?:** By default, Retain processes and archives the log files, keeping the log files in the Logfile Path directory indefinitely. Disabling this option allows you to set the *Numbers of days to keep Logfiles* option.
 - ♦ **Number of days to keep Logfiles:** How many days to keep the files downloaded from Bloomberg before Retain deletes the logfiles from the log file directory. 0 means never delete the files.
 - ♦ **SFTP Host:** The IP address or hostname of the Bloomberg server.
 - ♦ **SFTP Port:** Port 22, by default, but can be changed by the admin.
 - ♦ **SFTP User:** This user is created on the Bloomberg server by the Bloomberg server administrator. The user can authenticate either through password or SSH using a private key.
 - ♦ **SFTP Password:** This password is created on the Bloomberg server.
 - ♦ **SFTP SSH Key Filename:** The local path to the SSH key file downloaded from the Bloomberg Server.
 - ♦ **SFTP SSH Key Passphrase:** Created on the Bloomberg server.
 - ♦ **SFTP Encryption Key Filename:** The local path to the Encryption key file downloaded from the Bloomberg Server.
 - ♦ **SFTP Encryption Key Passphrase:** Created on the Bloomberg server.

Save the Bloomberg Module Before Continuing

Retain dialogs require that you always save your changes. Otherwise, the configurations you have specified are lost.

Setting a Bloomberg Schedule

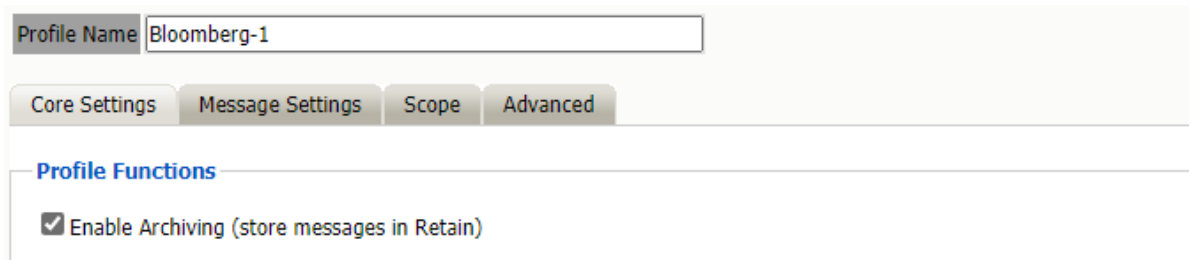
If you have not already created one or more schedules for use with your Bloomberg Job, go to [“Creating Schedules” on page 11](#) and complete the task now.

Specifying a Bloomberg Profile

- 1 To begin configuring the Blackberry Profile, open [Retain Server Manager > Data Collection > Profiles](#).
- 2 Click **Bloomberg > Add Profile**.
- 3 Use the information and settings in the sections that follow to configure the profile.

Core Settings Tab (Bloomberg Profile)

Core settings allow you to enable archiving.



The screenshot shows the 'Core Settings' tab for a Bloomberg profile. At the top, there is a text field labeled 'Profile Name' containing the text 'Bloomberg-1'. Below this is a horizontal tab bar with four tabs: 'Core Settings' (which is selected and highlighted), 'Message Settings', 'Scope', and 'Advanced'. Under the 'Core Settings' tab, there is a section titled 'Profile Functions' with a single checkbox labeled 'Enable Archiving (store messages in Retain)', which is checked.

Path: [Retain Server Manager > Data Collection > Profiles > Bloomberg > Select the Profile > Core Settings](#)

- 1 Type a name for the profile.
- 2 Make sure that Enable Archiving is selected.
- 3 Click Save Changes.
- 4 Continue with the Message Settings tab.

Message Settings Tab (Bloomberg Profile)

The message settings tab lets you restrict the types of messages to be archived.

Profile Name

Core Settings Message Settings Scope Advanced

Item Type

By default, Retain stores every type of message. You can restrict this.

☒ Message

Item Source

Messages are classified in one of these categories. You may restrict the storage of messages if desired.

☒ Received ☒ Sent

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Bloomberg](#) > *Select the Profile* > **Message Settings**

All items are selected by default.

Scope Tab (Bloomberg Profile)

Profile Name

Core Settings Message Settings Scope Advanced

Date Range to Scan

▼

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Bloomberg](#) > *Select the Profile* > **Scope**

The Date Range to Scan option determines how much data gets archived.

- ♦ **All Items in Mailbox:** Archive all items in the mailbox starting from 1/1/1970. Duplicates are not archived.
- ♦ **Number of day before job start date and newer:** Archive items from the specified number of days from the time the job began. For example, archive all messages that came into the email system 7 days ago or less.
- ♦ **Number of days from job start date and older:** Archive items starting with the specified number of days before the job started. For example, archive messages that came into the email system 7 days ago or more.
- ♦ **Specify custom date range:** Archive items that came into the email system between two specified dates.

- ♦ **Specify custom date range relative to job start:** Archive items that came into the system between two dates relative to the start date. For example, archive messages that came into the email system between 7 and 5 days ago.

Advanced Tab (Bloomberg Profile)

Generally, since storage space is inexpensive, Micro Focus recommends that you archive all message content.

However, if you need to limit what is archived, you can use the Advanced tab to do it.

The screenshot shows a web interface for configuring a profile. At the top, there is a text field labeled "Profile Name" containing the text "BlackBerry-1". Below this is a horizontal tab bar with four tabs: "Core Settings", "Message Settings", "Scope", and "Advanced". The "Advanced" tab is currently selected. Under the "Advanced" tab, the section is titled "Advanced Criteria" in blue. Below the title is a descriptive text: "You may add advanced criteria such as specific attachment names, sizes, subject here." There is an "Add" button. Below that is a row of controls: a "Delete" button, a dropdown menu showing "Subject", a dropdown menu showing "is", and an empty text input field.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Bloomberg](#) > *Select the Profile* > [Scope](#)

Table 1-20 *Configuring Bloomberg Profile Advanced Settings*

Option, Field, or Sub-panel	Information and/or Action
Advanced Criteria	Use this dialog to define the conditions Retain uses to determine what to archive. Each line sets a specific parameter and the lines are all added together (AND-ed). To check how Retain will interpret your settings, read through the lines in turn, inserting AND between each one. - For the first field, select from among the following items: ◆ Subject ◆ Sender ◆ Recipient ◆ Size ◆ Attachment Name - For the second field, specify the relationship of the first field to the (third field): ◆ is ◆ is not ◆ contains ◆ does not contain - Type a string for the third field. - Click Add to enter another statement - When the conditions are defined, click Save Changes.

Setting Up a Bloomberg Worker

If you have not already created one or more Workers for use with your Bloomberg Job, go to [“Creating Workers” on page 13](#) and complete the tasks there.

Creating a Bloomberg Job

After completing the instructions in the preceding sections, you can create a Blackberry Job.

- 1 To begin creating a Bloomberg Job, open [Retain Server Manager > Data Collection > Jobs](#).
- 2 Click **Bloomberg > Add Job**.
- 3 Use the information in the sections that follow to configure each tab.
- 4 Make sure that you save your changes before leaving the dialogs.

Core Settings Tab (Bloomberg Job)

The screenshot shows the 'Core Settings' tab for a job named 'Bloomberg-1'. At the top, there are four tabs: 'Core Settings', 'Mailboxes', 'Notification', and 'Status'. Below the tabs, the 'Core Settings' section is active. It features a 'Job enabled' checkbox which is checked. A note states: 'Each Job must have the following assigned to it:'. Below this note are three bullet points: 'schedule - How often to run', 'profile - What to do when running', and 'worker - Where to run the job'. These correspond to three dropdown menus labeled 'Schedule', 'Profile', and 'Worker', all of which currently show '(none)'. Further down, there is a section for 'Expiration timestamp' with the text: 'Items archived with this job can optionally be set with an "expiration timestamp" which the Deletion Manager can use to remove obsolete items. The expiration timestamp can only be extended, never reduced.' This section includes an 'Enable data expiration' checkbox (unchecked), an 'Expire in' field set to '0' with a 'Days' dropdown, and a 'Base Expiration Time on' dropdown set to 'Date Item is stored in Retain (recommended)'.

Job

Core Settings Mailboxes Notification Status

Core Settings

Job enabled ☒

Each Job must have the following assigned to it:

- [schedule](#) - How often to run
- [profile](#) - What to do when running
- [worker](#) - Where to run the job

Schedule

Profile

Worker

Items archived with this job can optionally be set with an "expiration timestamp" which the Deletion Manager can use to remove obsolete items. The expiration timestamp can only be extended, never reduced.

Enable data expiration ☐

Expire in Days

Base Expiration Time on

Path: [Retain Server Manager](#) > Data Collection > Jobs > Bloomberg > *Select the Job* > Core Settings

A job must be enabled or it will not run.

Select the following from the drop-down lists presented:

1. Schedule
2. Profile
3. Worker

If you want Retain to remove data from your message system as it archives you may use Enable data expiration, but it is recommended to remove items with your message system administration console which is better suited to the task.

Mailboxes Tab (Bloomberg Job)

The screenshot shows the 'Mailboxes' tab selected for a job named 'Bloomberg-1'. The interface includes tabs for 'Core Settings', 'Mailboxes', 'Notification', and 'Status'. Below the tabs, the 'Mailboxes' section is titled. It contains the instruction: 'Select the Bloomberg server to be included in this job.' Below this is a dropdown menu currently set to '(none)'. At the bottom of the section, there is a link with a plus icon and the text 'Users'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#) > [Bloomberg](#) > *Select the Job* > **Mailboxes**

Select the server to archive from.

Alternatively, you may select to include or exclude individual users from the archive job.

Notification Tab (Bloomberg Job)

The screenshot shows the 'Notification' tab selected for a job named 'Bloomberg-1'. The interface includes tabs for 'Core Settings', 'Mailboxes', 'Notification', and 'Status'. Below the tabs, the 'Notification' section is titled. It contains the instruction: 'You can have Retain e-mail a summary of operations and/or errors that occurred when the job completes.' Below this is a form with the following fields:

SMTP Mail Server	
SMTP Security Protocol	unencrypted ▼
SMTP Port	25
SMTP Mail From Address	Retain@microfocus.com
SMTP To Address	
SMTP Username	
SMTP Password	(Password is not set)
Mail when errors occur	☐
Mail summary when job complete	☐

At the bottom of the form is a button labeled 'Test Connection'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#) > [Bloomberg](#) > *Select the Job* > **Notifications**

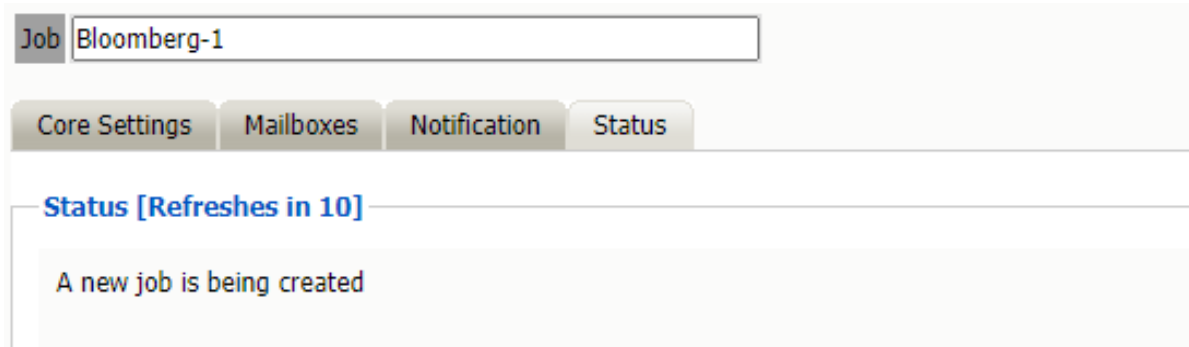
To send status messages about the job:

1. Enter the mail server connection data.
2. Enter the desired To: email address.

3. Enable “Mail when errors occur”, if desired.
4. Enable “Mail summary when job is complete”, if desired.

After entering the data use the “Test Connection” button to send a test message from Retain.

Status Tab (Bloomberg Job)



The screenshot shows the Retain Server Manager interface. At the top, there is a 'Job' dropdown menu with 'Bloomberg-1' selected. Below this are four tabs: 'Core Settings', 'Mailboxes', 'Notification', and 'Status'. The 'Status' tab is active. Below the tabs, there is a status bar that says 'Status [Refreshes in 10]'. Below the status bar, there is a message box that says 'A new job is being created'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Jobs](#) > [Bloomberg](#) > *Select the Job* > [Status](#)

The Status tab will show the current status of the job.

While a job is running an abort button displays. See “[Stopping a Job](#)” in the [Retain 4.10: Configuration and Administration](#).

Next Step

Once a job has completed you can confirm the items are in the archive by checking the Search Message interface. See “[Using Retain’s Archives](#)” in the [Retain 4.10: User Guide](#)..

Archiving Exchange and Office 365

- ♦ “[Prerequisites for Archiving Exchange Data](#)” on page 52
- ♦ “[Creating an Exchange Module](#)” on page 62
- ♦ “[Setting an Exchange Schedule](#)” on page 106
- ♦ “[Specifying an Exchange Profile](#)” on page 107
- ♦ “[Setting Up an Exchange Worker](#)” on page 114
- ♦ “[Creating an Exchange Job](#)” on page 114

Prerequisites for Archiving Exchange Data

There are several prerequisites that need to be completed for setting up an Exchange module.

- ♦ “[Make Sure That Autodiscover Is Enabled and Working \(Office 365 Only\)](#)” on page 53
- ♦ “[Get the SMTP Server URL \(Office 365 Only\)](#)” on page 53
- ♦ “[Preventing the Deletion of Unarchived Messages \(Exchange Server Only\)](#)” on page 53
- ♦ “[Preventing the Deletion of Unarchived Messages \(All Exchange Versions and Office 365\)](#)” on page 55

- ♦ “Setting Up Users with a PowerShell Script” on page 55
- ♦ “Synchronizing the Exchange Address Book with Retain” on page 56
- ♦ “Configuring Retain for Archiving Site-Collection Document Links” on page 62

Make Sure That Autodiscover Is Enabled and Working (Office 365 Only)

IMPORTANT: Autodiscover is essential:

- ♦ It lets you skip users or immediately abort a job.
- ♦ If Autodiscover isn’t working, serious errors occur when Retain attempts to archive users’ messages.

-
- 1 Test that Autodiscover is enabled and working for the domain by doing the following:
 - 1a Browse to the [Microsoft Remote Connectivity Analyzer \(https://testconnectivity.microsoft.com/\)](https://testconnectivity.microsoft.com/).
 - 1b On the Office 365 tab, under **Microsoft Office Outlook Connectivity Tests**, select **Outlook Autodiscover**.
 - 1c Enter your credentials and run the test.
 - 2 If the test succeeds, continue with the next section, [Get the SMTP Server URL \(Office 365 Only\)](#)
 - 3 If the test fails, contact Microsoft and have them turn autodiscover on, then rerun the test until it succeeds.

Get the SMTP Server URL (Office 365 Only)

Retain requires an SMTP server for sending notifications.

1. In the Microsoft Remote Connectivity Analyzer (<https://testconnectivity.microsoft.com/> (<https://testconnectivity.microsoft.com/>) > the Office 365 tab, under **Microsoft Office Outlook Connectivity Tests**, select **Inbound SMTP Email**.
2. Enter your credentials and run the test.
3. Record the SMTP server URL .

Preventing the Deletion of Unarchived Messages (Exchange Server Only)

NOTE: Prior to Retain 4.9.1, Micro Focus recommended using Microsoft in-place holds to prevent the deletion of unarchived data.

Starting October 1, 2020, management of in-place holds is no longer possible in Exchange Online/ Office365.

For now, the information in this section still applies to Exchange Server deployments. However, as a best practice, Micro Focus recommends that you begin replacing in-place holds with Microsoft’s Retention Policies and Retention Labels. For more information, see [this article on Microsoft.com](#).

If you use Exchange Online/Office 365, you must skip to [“Preventing the Deletion of Unarchived Messages \(All Exchange Versions and Office 365\)”](#) on page 55.

- ♦ [“How Message Deletion Works in Exchange”](#) on page 54
- ♦ [“Set Retain Profile/Miscellaneous to Include Recoverable Items”](#) on page 54
- ♦ [“Setting Up a Distribution List”](#) on page 54
- ♦ [“Placing the Distribution List under a 90-day Hold”](#) on page 54
- ♦ [“Finding How Many Mailboxes Were Placed Under Hold”](#) on page 54

To prevent data loss, you must keep users from removing items before Retain has a chance to archive them.

How Message Deletion Works in Exchange

When users delete messages in Outlook, the messages are moved, by default, to the trash.

When users empty their trash, deleted items are moved to the mostly hidden Recoverable Items folder, where they are kept for 14 day before being removed from the disk.

In the interim, users can right-click the Trash to recover items, but they can also purge the items, which immediately deletes them.

If a hold is in place, purged items are moved to a Purged folder that is not user-accessible and kept there until the hold is lifted.

Set Retain Profile/Miscellaneous to Include Recoverable Items

In Retain, set Profile/Miscellaneous to Include user's recoverable items.

Setting Up a Distribution List

- 1 Access the Exchange Admin Console.
- 2 Set up a distribution list.
For example, create a list named `All_Mailboxes` that contains all mailboxes.
- 3 Create a policy that adds new users to this distribution list by default.

Placing the Distribution List under a 90-day Hold

- 1 Access the Exchange Management Shell.
- 2 Enter the following command, replacing `All_Mailboxes` with the name of the distribution list mailbox that you created in [“Setting Up a Distribution List”](#) above.

```
New-MailboxSearch "Retain90DayHold" -ItemHoldPeriod 90 -InPlaceHoldEnabled $true -SourceMailboxes All_Mailboxes
```

It takes time for the hold to take effect.

Finding How Many Mailboxes Were Placed Under Hold

You can determine how many mailboxes were placed under hold with the following script:

```
((Get-Mailbox).InPlaceHolds).Count
```

Preventing the Deletion of Unarchived Messages (All Exchange Versions and Office 365)

IMPORTANT: Starting October 1, 2020, management of in-place holds is no longer allowed in Exchange Online/Office 365. Existing in-place hold mechanisms are still enforced, but they cannot be modified, only removed.

To prevent your users from deleting Exchange message data before Retain can archive it, you should implement Microsoft Retention Policies within your organization's Exchange or Office 365 infrastructure.

Organization requirements differ widely. Therefore, we recommend that you begin with [this informative article on Microsoft.com](#).

The article contains numerous links to additional information that you can use to identify and create policies that fit your organization's needs.

Setting Up Users with a PowerShell Script

NOTE: Retain uses PowerShell to connect to Office 365 .

PowerShell does not allow the following special characters in names or passwords: # \$ () * + . [] ? \ / ^ { } |

Create a Retain Impersonation User

In the O365 Exchange Admin Center, create a Retain Impersonation user with a mailbox, making sure to give it a license.

Give the Impersonation user the proper rights. Under Permissions, create a new Admin Role (e.g. Retain Impersonation Management), add the ApplicationImpersonation right and the Retain Impersonation user as a member .

Create a Retain Administrator User

Retain needs a user with Administrator rights to download the address book from Office 365 every day with the Office 365 Address Book Synchronization Script. This can be an existing administrator account or you can create a separate one. It needs to have sufficient rights to see all the users in the address book.

Setting Up Access to Shared Mailboxes for the Impersonation User

Impersonation rights allow the Retain user to enter other mailboxes but those rights do not extend to shared mailboxes. To access a shared mailbox, the Retain user needs rights to each shared mailbox that is to be archived. These rights can be granted through the Exchange Management Shell.

For example, If the shared mailbox is owned by John Doe and your Retain impersonation account is Retain, you would issue the following command in an Exchange Management Shell (EMC):

```
Add-MailboxPermission -Identity "John Doe" -User Retain -AccessRights FullAccess -InheritanceType All -AutoMapping $false
```

Synchronizing the Exchange Address Book with Retain

For Retain to authenticate users and access mailboxes for archiving, it needs to know what mailboxes are in Office 365. There are two ways to do this:

- ♦ “[Synchronizing the Address Book Using Office 365 \(Microsoft GraphAPI\)](#)” on page 56
- ♦ “[Synchronizing the Address Book Using PowerShell Scripts](#)” on page 57

Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)

To enable Retain for access to the Office 365 Address Book through the GraphAPI, you must:

- ♦ “[Register the Retain Server on the Microsoft Azure Portal](#)” on page 56
- ♦ “[Add the Azure Portal Information to the Office 365 Module](#)” on page 56

Register the Retain Server on the Microsoft Azure Portal

- 1 Enter the following URL in your administrative browser:

https://portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/applicationsListBlade

- 2 Create a new app registration pointing it to your Retain Server URL.

For example:

https://retain.mf_lab.com/RetainServer

- 3 After creating the app registration, click **API permissions for the app** > **Add a permission** > **Microsoft Graph** > **Application permissions**.

NOTE: Adding the following permissions requires Admin credentials, for which you are prompted the next time you log in.

- 4 Select the following permissions:

- ♦ User.Read.All
- ♦ Directory.Read.All

- 5 Click **API permissions for the app** > **Add a permission** > **Exchange** > **Application permissions**.

- 6 Select the following permission:

- ♦ full_access_as_app (Only needed for archiving data, not address book synchronization)

- 7 Go to **Certificates & secrets** and select **New client secret** to create a secret for Retain.

IMPORTANT: Make a record of the Client secret value because it is only visible now.

- 8 Add the following information to the record you just made:

- ♦ Application (client) id (found on the **Overview** page)
- ♦ Directory (tenant) id (found on the **Overview** page)

Add the Azure Portal Information to the Office 365 Module

- 1 Access the Office 365 module.
- 2 In the **Service Connection Details** tab, configure the module to populate the address book using Office 365.

Synchronizing the Address Book Using PowerShell Scripts

Retain includes two PowerShell scripts (under the Tools menu) for extracting address book information from Office 365.

Both scripts download the Office 365 address book and save it in two .csv files.

PowerShell Sync Script 1.0 saves the username and password in plaintext in the script.

PowerShell Sync Script 4.0 encrypts the password to a separate file.

Retain cannot archive members of the distribution lists if the `HiddenFromAddressListsEnabled` field is set to `True`.

If using multiple modules, you must create separate folders for the script and the resulting .csv files. The folder location that Retain should pull the .csv file data from is set in the module as detailed below. You must also create a scheduled task for each script.

- ♦ [“PowerShell Sync Script 1.0 \(sync365.ps1\)” on page 57](#)
- ♦ [“Settin Up the PowerShell Scripts” on page 57](#)
- ♦ [“PowerShell Sync Script 4.0 \(sourcesync365.ps1\)” on page 59](#)
- ♦ [“Troubleshooting the PowerShell Export Process” on page 60](#)
- ♦ [“Using PowerShell when Retain Is Linux-based” on page 61](#)
- ♦ [“Create a Batch File to Transfer the Files” on page 61](#)
- ♦ [“Automate the Script” on page 61](#)

PowerShell Sync Script 1.0 (sync365.ps1)

IMPORTANT: This script requires that you enter an Office 365 administrative password in cleartext. if this is a concern, use the [“PowerShell Sync Script 4.0 \(sourcesync365.ps1\)” on page 59](#) instead.

The script requires PowerShell 2.0 . This script connects to the target system and downloads the address book and distribution group lists into two address book .csv files, `exchangeuser.csv` and `exchangegroup.csv`.

Settin Up the PowerShell Scripts

- 1 Install PowerShell 2.0 or higher. (Windows 7 and Server 2008 R2 already come with PowerShell 2.0)
- 2 Enable Microsoft .NET Framework 3.5.1.
- 3 Install the Office 365 PowerShell cmdlets. Two packages are needed which can be downloaded from the Microsoft Azure Active Directory PowerShell Module Version Release History, currently found at: [Where Can I Find the Latest Version of AAD PowerShell](#).
 - ♦ Microsoft Online Services Sign-In Assistant for IT Professional RTW (this is the prerequisite to the Azure AD Module)
 - ♦ Azure Active Directory Module for Windows PowerShell (64-bit version)
- 4 You might need to change the execution policy to allow these scripts to function:
 - ♦ Allow PowerShell script execution

The Default Execution Policy is set to restricted, it can be viewed by entering this command in PowerShell:

```
Get-ExecutionPolicy
```

- ♦ The script provided by Micro Focus must be run as an Administrator in PowerShell:
Set-ExecutionPolicy RemoteSigned
- 5 In the Retain Management Console, download the script by clicking **Tools > O365 Archiving > PowerShell Sync Script 1.0**.
The downloaded script filename is sync365.ps1.
 - 6 If you plan to run the script on the Retain server itself, move the sync365.ps1 script to the ~\Program Files\Beginifinite\Retain\RetainServer\WEB-INF\cfg folder.
Otherwise, if you run it on the management workstation, be sure to copy the resulting exchangeuser.csv and excahngegroup.csv files to that directory on the Retain server.
 - 7 Edit the sync365.ps1 script with the Microsoft Integrated Scripting Environment (ISE) editor.
 1. At the top are 3 settings:
 - ♦ **\$User** Set this to the UPN of an administrator account in Office 365.
 - ♦ **\$PlainPassword** Set this to the plain text password of the administrator account.
 - ♦ **\$ExportBasePath** Set this to a directory where the two resulting .csv files are saved.
If the path does not yet exist, you must create it manually, making sure to escape the backslashes (\\).
For example:
\$ExportBasePath="C:\\Program
Files\\Beginifinite\\Retain\\RetainServer\\WEB-INF\\cfg"
 2. Execute the script by clicking the play button. This process can take a while if there are many users. When the script finishes, a message displays in the bottom status bar.
 3. Make sure that the exchangeuser.csv and exchangegroup.csv files are in ~\Program Files\Beginifinite\Retain\RetainServer\WEB-INF\cfg for Retain to use for the address book.
 - 8 Set the Task Scheduler to run the script automatically once per day by doing the following.
If you create it at the Task Scheduler (Local) level, you can find it after it is created in the Task Scheduler Library folder, center pane.
 - 8a Create a New Task.
 - 8b On the General tab, give it a name description.
 - 8c Under **Security options**, choose: **Run whether user is logged in or not**.
 - 8d In the Triggers tab, click **New....**
 - 8e Under Settings, choose **Daily** and set the **Start Time** to an hour before the Exchange archive job is set to begin to guarantee that the script finishes in time.
 - 8f Choose **Do not expire**.
 - 8g Enable the task.
 - 8h Under the Actions tab: Create a New action.
 - 8h1 Set the Action to "Start a program"
 - 8h2 Program/script: powershell
 - 8h3 Add arguments: -NoProfile -ExecutionPolicy Bypass -file "[drive]:\Program Files\Beginifinite\Retain\RetainServer\WEB_INF\cfg\sync365.ps1" -Verb RunAs
 - 8h4 Start In: (leave blank)

PowerShell Sync Script 4.0 (sourcesync365.ps1)

Use this script if exposing the administrator password in plain text is not acceptable under your organization's security policy.

Requirements

- ♦ The script must be run on the same machine as it was downloaded to because the password encryption is specific to the machine it runs on.
- ♦ This script requires PowerShell 4.0 or higher or it aborts .
You can determine the installed PowerShell version by running the cmdlet:

```
$PSVersionTable.PSVersion
```
- ♦ If using Windows Server 2008R2 or earlier, the script generates errors because the Task Scheduler cmdlets are not supported and the Scheduled Task must be created manually.

Running the Script

- 1 In the Retain Management Console, download the script by clicking **Tools > O365 Archiving > PowerShell Sync Script 4.0**.
- 2 After downloading and extracting the script, open PowerShell and change to the directory the script is in.
- 3 enter `.\Save-CredentialsEncrypted.ps1`
If you haven't run a PowerShell script before, you might have to change the Execution Policy to get a script to run using the following command:

```
Set-ExecutionPolicy -ExecutionPolicy Bypass -Scope Process.
```
- 4 A dialog box displays
- 5 Enter the user name (example: DomainAdmin@company.onmicrosoft.com) and password of an administrator user with sufficient rights to download the address book from Office 365.
- 6 Specify the destination folder of the address book files.
Provide it with a name for the Scheduled task.
You can specify any arbitrary destination folder you want. However, the resulting address book files, `exchangeuser.csv` and `exchangeuser.csv` must be in the `~\Program Files\Beginfinite\Retain\RetainServer\WEB_INF\cfg` folder on the Retain Server when Retain refreshes the address book.
If you are using a Linux-based Retain Server, you must set up a process to move the address book files to the Linux-based Retain Server's `opt/beginfinite/retain/RetainServer/WEB-INF/cfg` folder, as outlined in ["Using PowerShell when Retain Is Linux-based" on page 61](#).
- 7 Specify a separate task and destination folder for each Exchange module that you create.

- 8 The script then sets up a recurring task (SyncO365) in Task Scheduler to download the address book every day at 12:30am.

The script requests your logon credentials as it sets up the task. The script starts the task before exiting. If you are using Windows Server 2008, multiple errors appear because the Task Scheduler cmdlets do not exist, this is expected and the task can be created manually in Task Scheduler.

- 9 It takes a moment to download the address book files: *exchangeuser.csv* and *exchangeuser.csv*. For a small system (<100 users) it might take a few minutes, for a large system (>10k users) it can take more than half an hour. After the script completes, make sure that the address book files are in the same folder as your PowerShell script.

If there are no files, it may be an execution policy issue. See [Troubleshooting the PowerShell Export Process](#).

Troubleshooting the PowerShell Export Process

- ♦ **Task Scheduler Reliability:** Because the scheduler has been known to stop working at times, we recommend monitoring the .csv files to ensure that they are being updated every day.
- ♦ **Blank .csv files:** Office 365 requires regular password changes. If the wrong credentials are entered or the password has expired, two blank .csv files are created. You must run the script again, entering the Administrator logon name, the new password, and the destination folder. The script starts the task to update the address book files.
- ♦ **Red Text Displays and Window Closes:** If you see red text and the window closes immediately, there was an error of some kind.
 1. Open a PowerShell window, change to the script folder
 2. Run the following command in a PowerShell window to allow execution for the current process:


```
Set-ExecutionPolicy -ExecutionPolicy Bypass -Scope Process
```
 3. Run the script from the same process window using the following command.


```
.\Save-CredentialsEncrypted.ps1
```

Using PowerShell when Retain Is Linux-based

PowerShell scripts don't run on Linux.

Instead, run the script on a Windows computer with the required version of PowerShell installed, then copy the resulting .csv files to the Retain server.

Create a Batch File to Transfer the Files

You can create a small Windows VM that only runs the Powershell script and then copy the exchangeuser.csv and exchangegroup.csv files to the Retain server.

You can use the free program WinSCP (<http://winscp.net/eng/index.php>) to copy from a Windows computer to a Linux server.

You can use windscp.com as the basis of a batch file to copy the resulting .csv files to the Retain server.

For example:

```
retain.bat
"C:\Program Files (x86)\WinSCP\winscp.com" /command ^
"option batch abort" ^
"option confirm off" ^
"open scp://[user]:[password]@[retain server address]" ^
"cd /opt/beginfinite/retain/RetainServer/WEB-INF/cfg" ^
"option transfer binary" ^
"put [file location on windows]*.csv" ^
"close" ^
"exit"
```

Explanation of what each line does:

```
#Specify that all commands are run on the command line, while using ^ to split long
lines for readability.
"C:\Program Files (x86)\WinSCP\winscp.com" /command ^
# Automatically abort script on errors
"option batch abort" ^
# Disable overwrite confirmations that conflict with the previous
"option confirm off" ^
# Connect replacing your own username, password and retain server address
"open scp://[user]:[password]@[retain server address]" ^
# Change remote directory
"cd /opt/beginfinite/retain/RetainServer/WEB-INF/cfg" ^
# Force binary mode transfer
"option transfer binary" ^
# Upload the file to current working directory
"put [file location on windows]*.csv" ^
# Disconnect
"close" ^
# Exit WinSCP
"exit"
```

Automate the Script

You can now automate the running of this batch file in Task Scheduler (<https://technet.microsoft.com/en-us/library/cc721871.aspx>) as a simple task to run before the Retain archive job. Set the run time of the task so that it completes before the Retain job begins.

Configuring Retain for Archiving Site-Collection Document Links

Online Exchange in Office 365 lets you attach documents that are stored in Site Collections in SharePoint Online/OneDrive. However, Exchange only contains links to the documents, not actual copies of them. The documents still reside only in the Site Collections themselves.

The ApplicationImpersonation right only provides Retain with access to what is stored in Exchange. Therefore, when Retain attempts to archive an attached document, it generates an error similar to the following:

```
11:04:16, 704[Thread-4920] [ERROR] ExchangeAttachment: error while creating attachment. java.io.IOException: SharePointError - Impersonation has no access to: https://my.sharepoint.com/personal/user08_onmicrosoft_com1/Documents/Email attachments/office 365 users(1) (1).txt
```

Granting Access to a Site Collection

For Retain to archive an attached document in Exchange, the Retain user must be added as a Site Collection Administrator in SharePoint/OneDrive.

- 1 Browse to the Office 365 Admin page.
- 2 Select **SharePoint**, then click **Site Collections** and select the collection that contains the attachment.
- 3 Click the Owners tab and choose **Manage Administrators**.
- 4 Add the Retain user as a Site Collection Administrator.

The Retain user now has rights to access the documents for archiving.

Granting Access to Multiple Site Collections

If you need to provide site collection administration access to multiple collections, consider a solution, such as the [SharePoint Online Management Shell script \(http://sharepointjack.com/2015/add-a-person-as-a-site-collection-administrator-to-every-office-365-site-sharepoint-online-site-collection/\)](http://sharepointjack.com/2015/add-a-person-as-a-site-collection-administrator-to-every-office-365-site-sharepoint-online-site-collection/).

Creating an Exchange Module

- ♦ [“Office 365” on page 62](#)
- ♦ [“Exchange without Access to Active Directory” on page 71](#)
- ♦ [“Exchange with Access to Active Directory” on page 78](#)
- ♦ [“Core Settings Tab \(Exchange\)” on page 102](#)
- ♦ [“Impersonation Tab \(Exchange\)” on page 102](#)
- ♦ [“Hosted Services Tab - Office 365 Settings” on page 103](#)
- ♦ [“Hosted Services Tab - Non-LDAP Exchange Settings” on page 104](#)
- ♦ [“Exchange Forest Tab \(Exchange\)” on page 105](#)
- ♦ [“User Forests Tab \(Exchange\)” on page 106](#)
- ♦ [“Delegates Tab \(Exchange\)” on page 106](#)

Office 365

If your organization uses Office 365, use this section to configure your Exchange module.

NOTE: If you use Exchange, the configuration steps key off whether you have access to Active Directory.

Skip now to the section that applies to you:

- ♦ [“Exchange without Access to Active Directory” on page 71.](#)
 - ♦ [“Exchange with Access to Active Directory” on page 78.](#)
-

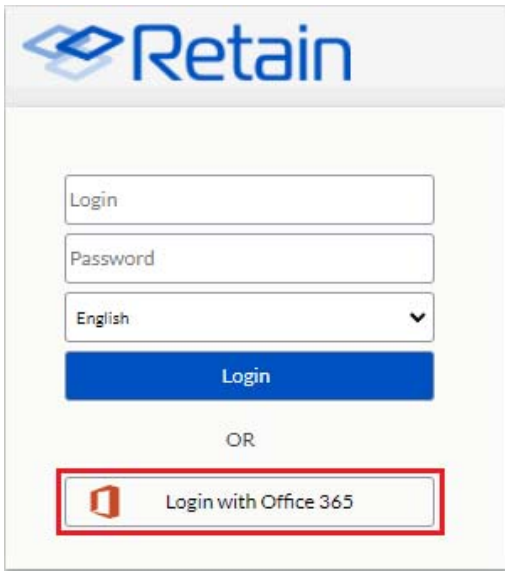
This section contains the following:

- ♦ [“Providing Retain Users with Access Through Their Office 365 Accounts” on page 63](#)
- ♦ [“Configure the Exchange Module for Office 365” on page 64](#)
- ♦ [“Core Settings Tab” on page 65](#)
- ♦ [“Impersonation Tab” on page 67](#)
- ♦ [“Hosted Services Tab” on page 68](#)
- ♦ [“Refresh the Address Book” on page 70](#)

Providing Retain Users with Access Through Their Office 365 Accounts

Retain 4.10 lets users access Retain via a **Login with Office 365** button.

IMPORTANT: You can require that Office 365 users only [use the Login button](#). If you don't do this, they can still enter a username and password, which is fine, but the password they use must be an assigned App Password. For more information, see [“Authentication Part 1: Username/Password or OpenID Connect”](#) and [“When Google and Office 365 Systems Require an App Password”](#) in the [Retain 4.10: How Retain Works](#) guide.



The image shows the Retain login interface. At the top is the Retain logo. Below it are three input fields: 'Login', 'Password', and a language dropdown menu currently set to 'English'. A blue 'Login' button is positioned below these fields. Underneath the button is the text 'OR'. At the bottom, there is a button with the Office 365 logo and the text 'Login with Office 365'. This button is highlighted with a red rectangular border.

Retain redirects users to Office 365 and they then have 10 minutes to authenticate successfully and access Retain.

Enabling OpenID Access (Modern Authentication)

To enable this functionality you must do the following:

- 1 Complete the instructions in [“Configure the Exchange Module for Office 365” on page 64](#), making sure that you choose to populate the address book directly from Office 365.

IMPORTANT: Using a .csv file to populate the address book is not compatible with this functionality.

- 2 After you have created the module and verified (tested) the Office 365 connection, open the [Retain Server Manager](#).
- 3 Click **Server Configuration > Accounts** tab and go to the **Office 365 End User Authentication** panel.
- 4 Copy and paste the same Tenant ID and Client ID as you used in the [“Credentials Sub-panel” on page 70](#).
- 5 In Microsoft Azure, on the **Registered Apps** page in the **Authentication** menu, do the following:
 - 5a Under **Web > Redirect URIs**, add the URL of the `openIdConnect.jsp` file on the Retain Server that you are configuring.
For example, `https://your-Retain-server/RetainServer/Server/openIdConnect.jsp`
 - 5b Under **Implicit grant**, enable the **ID tokens** option.
 - 5c Under **Supported account types**, enable the **Accounts in any organizational directory (Any Azure AD directory - Multitenant)** option.

Enabling Multiple Retain Servers for OpenID Support

If you have multiple Retain servers archiving from the same Office 365 system, you must do the following on each of those Retain servers.

- 1 Edit the `/opt/beginfinite/retain/RetainServer/WEB-INF/classes/config/misc.properties` file.
- 2 Add the following line:
`msopenId.redirecturi=https://your-Retain-server/RetainServer/Server/openIdConnect.jsp`
- 3 Restart Tomcat.

Configure the Exchange Module for Office 365

The Exchange module must be configured in the Retain Server before any communication between Retain and an existing Exchange message system can occur. Open the Retain management page on the Retain Server, and select Module Configuration.

Retain Language: English Welcome, admin | About | Tools | Status & Updates | Logout

Module Configuration

After configuring a module, it is recommended you manually refresh the Address Book.

[Refresh Address Book](#) Sync job is not running at this time.

[Mailbox Mapping Options](#)

Configured Modules

GroupWise	Exchange	Social Messaging	Mobile
Configure	Configure	Configure	Configure
Install Date: 10-Feb-2014 17:06:20	Install Date: 10-Feb-2014 17:06:20	Install Date: 10-Feb-2014 17:06:20	Install Date: 10-Feb-2014 17:06:20
Last Address Book: 15-Sep-2015 01:19:19	Last Address Book: 15-Sep-2015 01:19:21	Status: Configured.	Status: Configured.
Cache	Cache		
Status: Configured.	Status: Configured.		

Google Apps	BlackBerry	CellTrust
Configure	Configure	Configure
Install Date: 10-Feb-2014 17:06:20	Install Date: 10-Feb-2014 17:06:20	Install Date: 17-Oct-2014 21:21:07
Last Address Book: 15-Sep-2015 01:19:44	Status: Configured.	Status: Configured.
Cache		
Status: Configured.		

Select the 'Configure' option in the Exchange module. A new window or tab opens with the module configuration.

NOTE: Ensure that your Retain Server and your Exchange server use the same DNS server.

The Exchange module uses DNS settings to auto discover critical information about Exchange that is stored in Active Directory. It cannot work correctly unless both systems use the same DNS server.

Core Settings Tab

The Core Setting Tab allows you to disable all jobs and disable users logging into Retain.

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send Exchange items to an external system using FTP or SMTP.

In most cases this should be disabled so that items are archived in Retain.

To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.


Exchange Module



EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core Settings
Impersonation
Hosted Services
Exchange Forest
User Forests
Delegates

Core Settings

Normally all of these entries should be enabled.

- Enable Address Book Caching determines if this module caches address book entries from its directory services during Maintenance.
- Enable Authentication indicates if users logging into Retain should be able to use the module's authentication system.
- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name	Exchange4.213
Enable Address Book Caching	☒
Enable Authentication	☒
Enable Jobs	☒
Message body	Store default as provided from Exchange (either HTML or plain text) ▼
If autodiscover fails for a user, take this action:	skip user ▼

Normally this entry should be disabled.

- Send Exchange items to an external system.

Select Send Method
disabled ▼

Normally all the checkbox options on this tab are enabled. It is rare that you would ever deselect any of them. Two cases where you might, would be: troubleshooting (as instructed by Technical Support), and retiring an old email system.

The Enable Address Book Caching function allows Retain to regularly cache the online email systems address book and synchronize it with Retain. This is critical for administration, authentication, and archiving purposes. It is recommended to cache the Address Book once every 24 hours to keep the Retain storage system up to date. By default, maintenance is set to cache the Address Book once every 24 hours.

The Enable Authentication checkbox determines if end-user authentication is performed when the user logs into Retain. If it is deselected, the Retain system cannot authenticate the user against the email system and the user cannot log in unless another authentication method is enabled.

The Enable Jobs checkbox determines if configured data retrieval jobs are ever passed to the Worker. Even if the individual job is fully configured and enabled, if this checkbox is switched off, no jobs configured for this module can be processed.

The Message body allows the administrator to decide whether to store either the HTML or plain text message body, or both.

Send Method

The Send Method lets you send Exchange items to an external system using FTP or SMTP.

In most cases this should be disabled so that items are archived in Retain.

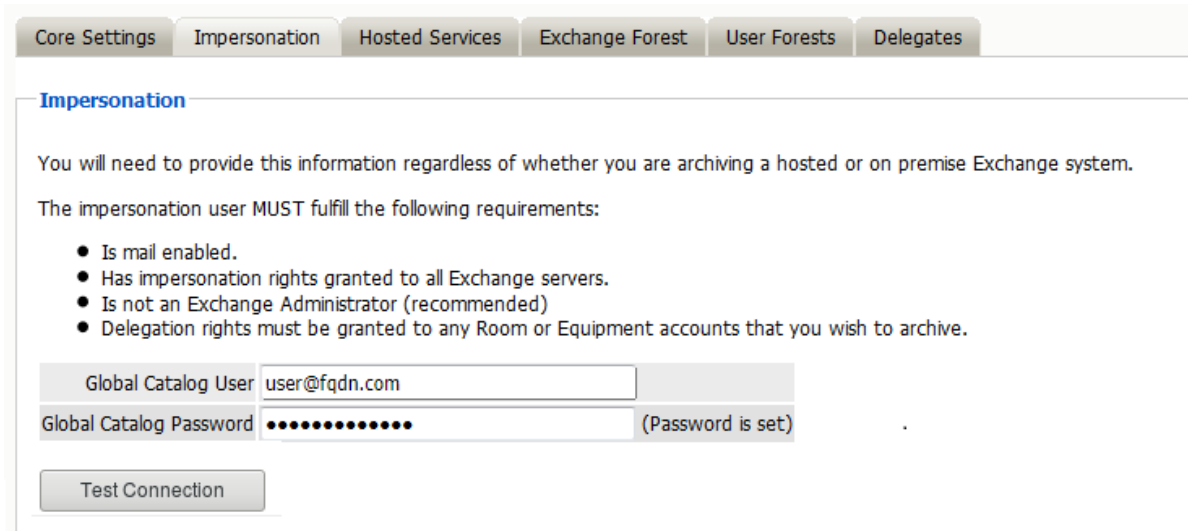
To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

Impersonation Tab

If the Impersonation and Core Settings tabs are not completely configured with the correct information, the hosted system cannot be archived correctly.

IMPORTANT: The Global Catalog User and Password specified here must be valid in both Exchange/O365 as well as in the Sharepoint system.

- 1 Enter the Impersonation user credentials.
- 2 Then click **Test Connection** to verify that both the user FQDN and password are entered correctly.



The screenshot shows a configuration interface with a tabbed menu at the top. The tabs are: Core Settings, Impersonation (selected), Hosted Services, Exchange Forest, User Forests, and Delegates. Below the tabs, the 'Impersonation' section is titled. It contains the following text: 'You will need to provide this information regardless of whether you are archiving a hosted or on premise Exchange system.' and 'The impersonation user MUST fulfill the following requirements:'. Below this is a bulleted list of requirements: 'Is mail enabled.', 'Has impersonation rights granted to all Exchange servers.', 'Is not an Exchange Administrator (recommended)', and 'Delegation rights must be granted to any Room or Equipment accounts that you wish to archive.' Under the requirements, there are two input fields: 'Global Catalog User' with the value 'user@fqdn.com' and 'Global Catalog Password' with a masked password '●●●●●●●●●●'. To the right of the password field is the text '(Password is set)'. At the bottom of the section is a 'Test Connection' button.

Core Settings Impersonation Hosted Services Exchange Forest User Forests Delegates

Impersonation

You will need to provide this information regardless of whether you are archiving a hosted or on premise Exchange system.

The impersonation user MUST fulfill the following requirements:

- Is mail enabled.
- Has impersonation rights granted to all Exchange servers.
- Is not an Exchange Administrator (recommended)
- Delegation rights must be granted to any Room or Equipment accounts that you wish to archive.

Global Catalog User user@fqdn.com

Global Catalog Password ●●●●●●●●●● (Password is set)

Test Connection

Hosted Services Tab

Exchange Module

Save Changes

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core SettingsImpersonationHosted ServicesExchange ForestUser ForestsDelegates

Hosted Services

Important:

Use this tab only if you are using either Office 365 or a Hosted Exchange System without LDAP. Otherwise, use the three tabs to the right instead of this tab.

☒ I am using a Hosted Exchange system

☒ Office 365

☐ Hosted Exchange without LDAP

Address Book Discovery

☐ Import from CSV file

Path :

☒ Populate from Office 365

Mailbox Archiving Authentication

Credentials

Tenant ID

Client ID

Client Secret

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#)

Table 1-21 Using the Hosted Services Tab

Panels and Sub-panels	Information and/or Action
Hosted Services	See “Hosted Services Panel” on page 69.
Address Book Discovery	See “Address Book Discovery Sub-panel” on page 69.
Mailbox Archive Authentication	See “Mailbox Archiving Authentication Sub-panel” on page 69.
Credentials	See “Credentials Sub-panel” on page 70.

Hosted Services Panel

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#)

Table 1-22 Using the Hosted Services Panel

Option, Field, or Sub-panel	Information and/or Action
I am using a Hosted Exchange system option	Enable this option if you use hosted Exchange services. If you select this option, Retain ignores the Exchange Forest, User Forests, and Delegates tabs. IMPORTANT: Once you select this option and save the module, you cannot switch and configure the Exchange Forest, User Forests, and Delegates tabs because they are ignored. You must create a new module instead.
Office 365 option	Select this if you use Office 365. When you select this option, the Hosted Services tab panel expands to let you specify settings for address-book discovery, mailbox archiving authentication methods, and the credentials required for connecting with Office 365. IMPORTANT: Once you select this option and save the module, you cannot switch to the Hosted Exchange without LDAP option (below). You must create a new module instead.
Hosted Exchange without LDAP option	Select this if you use a hosted Exchange service that doesn't utilize LDAP directory services. Selecting this requires that you import your address book from a PowerShell-generated CSV file. See "Synchronizing the Address Book Using PowerShell Scripts" on page 57.

Address Book Discovery Sub-panel

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#) > [Address Book Discovery Sub-panel](#)

Table 1-23 Using the Address Book Discovery Sub-panel

Option, Field, or Sub-panel	Information and/or Action
Import from CSV file option Path:	Specify the path to where the PowerShell Sync script saves the CSV user lists. For example: C:\Program Files\Beginfinite\Retain\RetainServer\WEB-INF\cfg. This requires the procedures described in "Synchronizing the Address Book Using PowerShell Scripts" on page 57.
Populate from Office 365 option	Select this option to populate your archived address book directly from Office 365. This requires the procedures described in "Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)" on page 56.

Mailbox Archiving Authentication Sub-panel

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#) > [Mailbox Archiving Authentication Sub-panel](#)

Table 1-24 Using the Mailbox Archiving Authentication Sub-panel

Option, Field, or Sub-panel	Information and/or Action
Use OAuth	This indicates that OAuth is the authentication method that this module uses for mailbox archiving.

Credentials Sub-panel

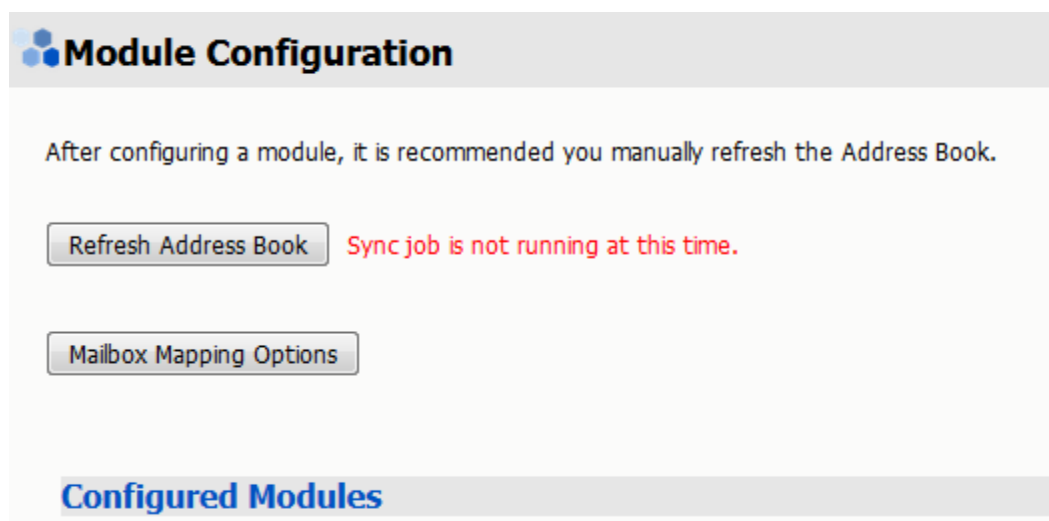
Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#) > [Credentials Sub-panel](#)

Table 1-25 Using the Credentials Sub-panel

Option, Field, or Sub-panel	Information and/or Action
Tenant ID field	This information is exposed when you complete the procedures described in “Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)” on page 56.
Client ID field	This information is exposed when you complete the procedures described in “Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)” on page 56.
Client Secret field	This information is exposed when you complete the procedures described in “Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)” on page 56.
Test Connection button	Click this to verify that the credentials you have entered are valid with your Office 365 system. The connections to both Graph API and EWS (if using OAuth) are verified and reported separately.

Refresh the Address Book

After saving changes, return to the Retain Server's Module Configuration page, and trigger a refresh of the Address Book.



Depending on the size of the address book, it may take several minutes to return with information, but a successful configuration returns a correct address book cache date and no errors. The date should reflect the date when the address book refresh was triggered.

The Status may show “Address Book Cache Never Run” or may list commonly mis-configured or missed items if the Refresh job fails.

Once the status is configured and the Address Book has been cached, Retain can connect to and archive messages from the Exchange server. The system is ready to have workers, schedules, profiles, and jobs configured, and those options now appear on the main administrative interface.

The Address Book is refreshed whenever the button is pressed, during the nightly maintenance cycle, and before each job.

Exchange without Access to Active Directory

Use this section to configure a module for a hosted Exchange system where you don't have administrative access to its associated Active Directory services.

This section contains the following:

- ♦ [“Configure the Exchange Module for Exchange without Access to Active Directory” on page 71](#)
- ♦ [“Core Settings Tab” on page 72](#)
- ♦ [“Impersonation Tab” on page 74](#)
- ♦ [“Hosted Services Tab” on page 75](#)
- ♦ [“Refresh Address Book” on page 77](#)

Configure the Exchange Module for Exchange without Access to Active Directory

The Exchange module must be configured in the Retain Server before any communication between Retain and an existing Exchange message system can occur. Open the Retain management page on the Retain Server, and select Module Configuration.

Retain

Language: English | Welcome, admin | About | Tools | Status & Updates | Logout

Module Configuration

After configuring a module, it is recommended you manually refresh the Address Book.

[Refresh Address Book](#) Sync job is not running at this time.

[Mailbox Mapping Options](#)

Configured Modules

GroupWise	Exchange	Social Messaging	Mobile
 Configure Install Date: 10-Feb-2014 17:06:20 Last Address Book Cache: 15-Sep-2015 01:19:19 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Last Address Book Cache: 15-Sep-2015 01:19:21 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Status: Configured.
 Configure Install Date: 10-Feb-2014 17:06:20 Last Address Book Cache: 15-Sep-2015 01:19:44 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Status: Configured.	 Configure Install Date: 17-Oct-2014 21:21:07 Status: Configured.	

Select the 'Configure' option in the Exchange module. A new window or tab opens with the module configuration.

NOTE: Ensure that your Retain Server and your Exchange server use the same DNS server.

The Exchange module uses DNS settings to auto discover critical information about Exchange that is stored in Active Directory. It cannot work correctly unless both systems use the same DNS server.

Core Settings Tab

The Core Setting Tab allows you to disable all jobs and disable users logging into Retain.

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send Exchange items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.


Exchange Module



EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core Settings
Impersonation
Hosted Services
Exchange Forest
User Forests
Delegates

Core Settings

Normally all of these entries should be enabled.

- Enable Address Book Caching determines if this module caches address book entries from its directory services during Maintenance.
- Enable Authentication indicates if users logging into Retain should be able to use the module's authentication system.
- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name	Exchange4.213
Enable Address Book Caching	☒
Enable Authentication	☒
Enable Jobs	☒
Message body	Store default as provided from Exchange (either HTML or plain text) ▼
If autodiscover fails for a user, take this action:	skip user ▼

Normally this entry should be disabled.

- Send Exchange items to an external system.

Select Send Method
disabled ▼

Normally all the checkbox options on this tab are enabled. It is rare that you would ever deselect any of them. Two cases where you might, would be: troubleshooting (as instructed by Technical Support), and retiring an old email system.

The Enable Address Book Caching function allows Retain to regularly cache the online email systems address book and synchronize it with Retain. This is critical for administration, authentication, and archiving purposes. It is recommended to cache the Address Book once every 24 hours to keep the Retain storage system up to date. By default, maintenance is set to cache the Address Book once every 24 hours.

The Enable Authentication checkbox determines if end-user authentication is performed when the user logs into Retain. If it is deselected, the Retain system cannot authenticate the user against the email system and the user cannot log in unless another authentication method is enabled.

The Enable Jobs checkbox determines if configured data retrieval jobs are ever passed to the Worker. Even if the individual job is fully configured and enabled, if this checkbox is switched off, no jobs configured for this module can be processed.

The Message body allows the administrator to decide whether to store either the HTML or plain text message body, or both.

Send Method

The Send Method lets you send Exchange items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

Impersonation Tab

If the Impersonation and Core Settings tabs are not completely configured with the correct information, the hosted system cannot be archived correctly.

Enter the Impersonation user credentials.

Core Settings

Impersonation

Hosted Services

Exchange Forest

User Forests

Delegates

Impersonation

You will need to provide this information regardless of whether you are archiving a hosted or on premise Exchange system.

The impersonation user MUST fulfill the following requirements:

- Is mail enabled.
- Has impersonation rights granted to all Exchange servers.
- Is not an Exchange Administrator (recommended)
- Delegation rights must be granted to any Room or Equipment accounts that you wish to archive.

Global Catalog User

user@fqdn.com

Global Catalog Password

.....

(Password is set)

Test Connection

Hosted Services Tab

Exchange Module

Save Changes

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core Settings

Impersonation

Hosted Services

Exchange Forest

User Forests

Delegates

Hosted Services

Important:

Use this tab only if you are using either Office 365 or a Hosted Exchange System without LDAP. Otherwise, use the three tabs to the right instead of this tab.

☒ I am using a Hosted Exchange system

☒ Office 365

☐ Hosted Exchange without LDAP

Address Book Discovery

☐ Import from CSV file

Path :

☒ Populate from Office 365

Mailbox Archiving Authentication

Use OAuth

Credentials

Tenant ID

Client ID

Client Secret

Test Connection

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#)

Table 1-26 Using the Hosted Services Tab

Panels and Sub-panels	Information and/or Action
Hosted Services	See “Hosted Services Panel” on page 69.
Address Book Discovery	See “Address Book Discovery Sub-panel” on page 69.
Mailbox Archive Authentication	See “Mailbox Archiving Authentication Sub-panel” on page 69.
Credentials	See “Credentials Sub-panel” on page 70.

Hosted Services Panel

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#)

Table 1-27 Using the Hosted Services Panel

Option, Field, or Sub-panel	Information and/or Action
I am using a Hosted Exchange system option	Enable this option if you use hosted Exchange services. If you select this option, Retain ignores the Exchange Forest, User Forests, and Delegates tabs.
Office 365 option	Select this if you use Office 365. When you select this option, the Hosted Services tab panel expands to let you specify settings for address-book discovery, mailbox archiving authentication methods, and the credentials required for connecting with Office 365.
Hosted Exchange without LDAP option	Select this if you use a hosted Exchange service that doesn't utilize LDAP directory services. Selecting this requires that you import your address book from a PowerShell-generated CSV file. See "Synchronizing the Address Book Using PowerShell Scripts" on page 57.

Address Book Discovery Sub-panel

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#) > [Address Book Discovery Sub-panel](#)

Table 1-28 Using the Address Book Discovery Sub-panel

Option, Field, or Sub-panel	Information and/or Action
Import from CSV file option Path:	Specify the path to where the PowerShell Sync script saves the CSV user lists. For example: C:\Program Files\Beginfinite\Retain\RetainServer\WEB-INF\cfg. This requires the procedures described in "Synchronizing the Address Book Using PowerShell Scripts" on page 57.
Populate from Office 365 option	Select this option to populate your archived address book directly from Office 365. This requires the procedures described in "Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)" on page 56.

Mailbox Archiving Authentication Sub-panel

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#) > [Mailbox Archiving Authentication Sub-panel](#)

Table 1-29 Using the Mailbox Archiving Authentication Sub-panel

Option, Field, or Sub-panel	Information and/or Action
Use OAuth	This indicates that OAuth is the authentication method that this module uses for mailbox archiving.

Credentials Sub-panel

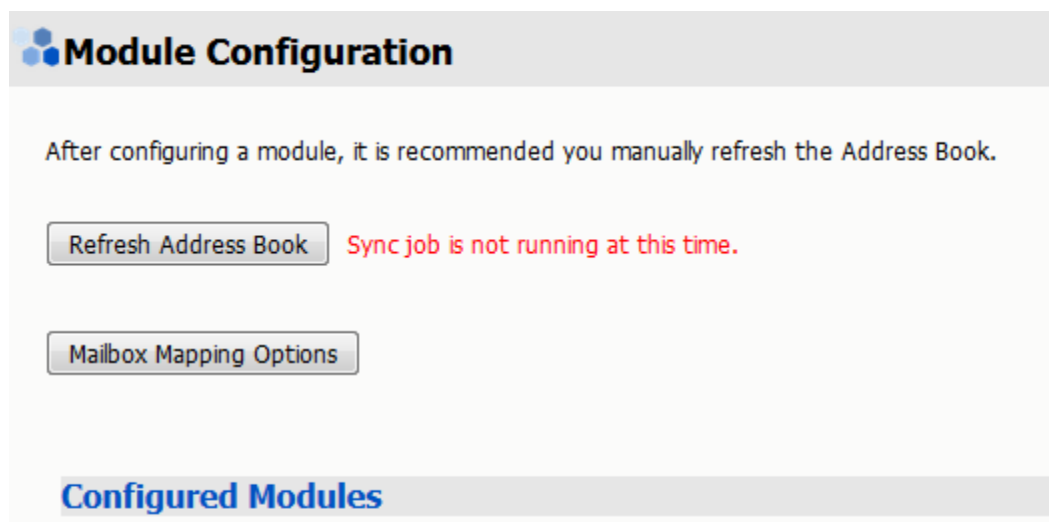
Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange](#) > [Hosted Services Tab](#) > [Hosted Services Panel](#) > [Credentials Sub-panel](#)

Table 1-30 Using the Credentials Sub-panel

Option, Field, or Sub-panel	Information and/or Action
Tenant ID field	This information is exposed when you complete the procedures described in “Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)” on page 56.
Client ID field	This information is exposed when you complete the procedures described in “Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)” on page 56.
Client Secret field	This information is exposed when you complete the procedures described in “Synchronizing the Address Book Using Office 365 (Microsoft GraphAPI)” on page 56.
Test Connection button	Click this to verify that the credentials you have entered are valid with your Office 365 system.

Refresh Address Book

After saving changes, return to the Retain Server's Module Configuration page, and trigger a refresh of the Address Book.



Depending on the size of the address book, it may take several minutes to return with information, but a successful configuration returns a correct address book cache date and no errors. The date should reflect the date when the address book refresh was triggered.

The Status may show “Address Book Cache Never Run” or may list commonly mis-configured or missed items if the Refresh job fails.

Once the status is configured and the Address Book has been cached, Retain can connect to and archive messages from the Exchange server. The system is ready to have workers, schedules, profiles, and jobs configured, and those options now appear on the main administrative interface.

The Address Book is refreshed whenever the button is pressed, during the nightly maintenance cycle, and before each job.

Exchange with Access to Active Directory

The Exchange module can connect to On-Premise Exchange servers.

Supported Exchange Forest Configurations

Retain supports:

- ♦ A single forest Active Directory system, (Exchange and standard users)
- ♦ An Exchange Resource Forest, (One Exchange Forest linked to one or multiple User Forests)

Retain does NOT support multiple linked Exchange Forests. Ensure that the Exchange Settings have been configured correctly before continuing the Exchange module setup.

Exchange Prerequisites required for Retain

There are several prerequisites that need to be done in Exchange for Retain to successfully archive the mailbox databases:

- ♦ A mailbox user with ApplicationImpersonation rights
- ♦ Basic Authentication enabled for Autodiscover and EWS on all Client Access Servers
- ♦ A DNS SRV record
- ♦ Set the DNS used by the Retain server to be the same as used by Exchange.
- ♦ Set a Rolling In-Place Hold to retain data until Retain can archive it.
- ♦ If "Configure email forwarding for a mailbox" is in use, enable "Deliver messages to both forwarding address and mailbox", otherwise no messages can be stored in Exchange and Retain cannot archive any messages.

Create the Retain Global Catalog User

To connect with Exchange, Retain needs a user with appropriate rights. This can be accomplished by using an existing user, or by creating a new one. It is recommended to create a new user for Retain archiving. If creating a new user, ensure that the user is an active user account and that the password does not change to ensure Retain can access mail without changing settings. This user is sometimes called a 'service account'. Retain calls this user the 'global catalog user'.

The user created or used for Retain must be a “mailbox-enabled user” with read access to see all other users, groups, resources, and Exchange Servers in the Exchange Forest. The user is utilized by both the Retain Server and the Worker for LDAP lookups in Active Directory. The Retain user also must have Exchange impersonation rights to every mailbox user on every server in the organization to be archived. The Retain user **MUST NOT** be a member of any Exchange Administrator group, as Exchange denies impersonation rights for all administrator accounts.

Additional permissions need to be added to the user created for Retain. The quickest way to add these rights is through the Exchange Management Shell.

After creating the new user in Active Directory, open the Exchange Management Shell.

Grant Impersonation Permissions to the Retain user.

In Exchange 2013 and 2016 Impersonation permissions can be granted in the Exchange Admin Center under Permissions.

Under Admin Roles create a new role (e.g. Retain Impersonation Management). Add the role "ApplicationImpersonation" and add the Retain User as a member.

You can also accomplish this via PowerShell commands using the Exchange Management Shell.

The commands required are different depending on the version of the Exchange Server. Exchange 2010, and 2013 require only one command per Exchange system to be issued, whereas Exchange 2007 requires the commands to be run on every Exchange server in the Exchange system to grant required permissions. If the Exchange system contains mixed 2007, 2010, and 2013 servers, the different commands must be completed on one server of each type.

Exchange 2010, 2013, and 2016 commands

For Exchange 2010, 2013, and 2016 the only command necessary for impersonation permissions is:

```
New-ManagementRoleAssignment -name ImpersonationAssignmentName -Role  
ApplicationImpersonation -User ServiceAccount
```

Where the 'Name' is a name chosen by the administrator and the 'ServiceAccount' is the name of the Retain user.

For Example:

```
New-ManagementRoleAssignment -Name impersonation-retain -Role ApplicationImpersonation -  
UserRetain
```

If additional Exchange servers are added to the system after running this command to grant rights to the 'retain' user, the command must be run again to grant rights to the new server.

Room and Equipment Resources

To archive Room and Equipment Resources, or to restore them, the Retain user, or Service Account, must also have delegation rights. These commands must be issued manually for each Room and Equipment or resource mailbox on every relevant server. This is required for 2013 and 2016.

These commands must be issued:

('Retain' is used here as the name of the Service Account, or Retain user, and the 'Mailbox Database' should be changed to the appropriate name.)

(NOTE: every time a new Room and Equipment or resource mailbox is added, the first command must be re-run.)

Exchange 2013 and 2016 Powershell commands

```
Get-Mailbox -ResultSize Unlimited -Database "Mailbox Database" | Add-MailboxPermission -User  
"Retain" -AccessRights FullAccess
```

```
Add-ADPermission -Identity "Mailbox Database" -User "Retain" -ExtendedRights Receive-As
```

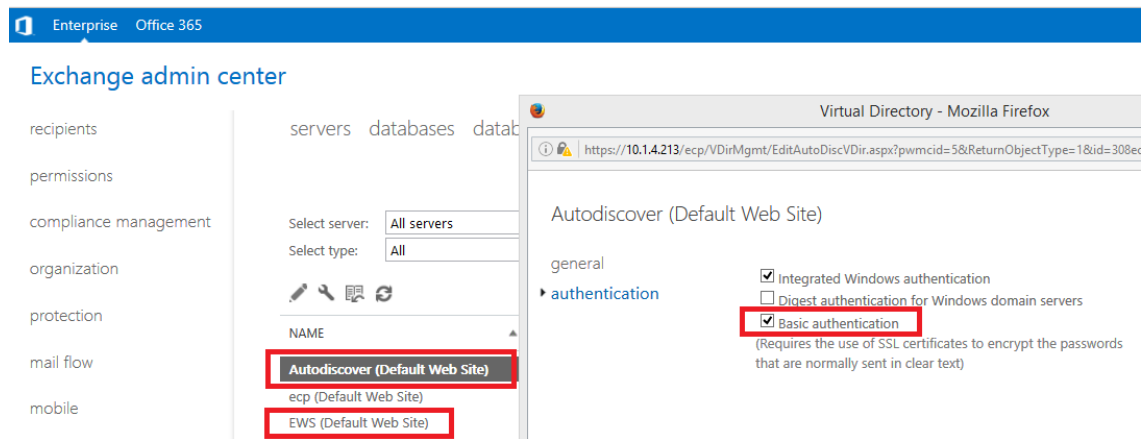
```
Add-ADPermission -Identity "Mailbox Database" -User "Retain" -ExtendedRights Send-As
```

Basic Authentication

Retain requires Basic Authentication to be enabled on *each* CAS Exchange server in the system for Autodiscover and EWS.

In Exchange Admin Center, go to Servers, then go to the Virtual Directories tab.

1. Edit Autodiscover and under Authentication enable Basic authentication if it is not enabled.
2. Edit EWS and under Authentication enable Basic authentication if it is not enabled.
3. Do this for each server in the list.



To check if this worked, run the following PowerShell cmdlets:

For EWS:

```
Get-WebServicesVirtualDirectory | ft server,basicauthentication
```

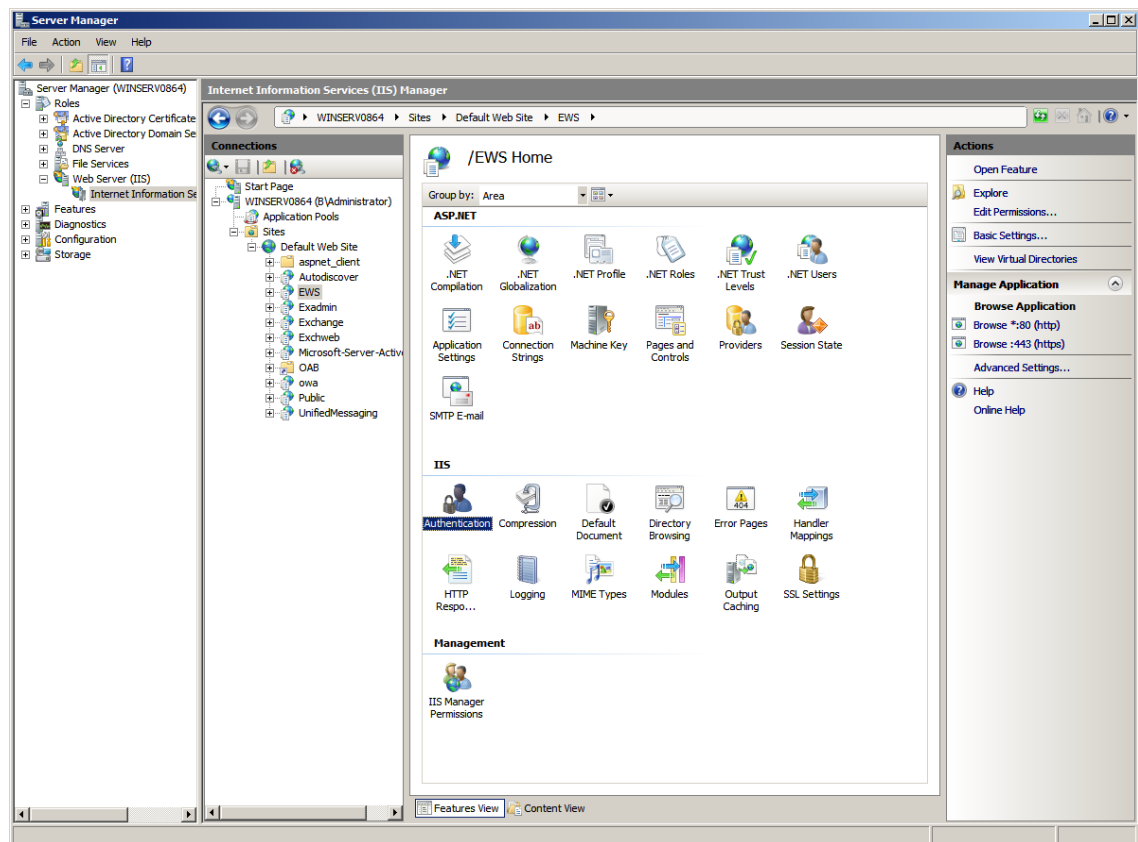
For Autodiscover:

```
Get-AutoDiscoverVirtualDirectory | ft server,basicauthentication
```

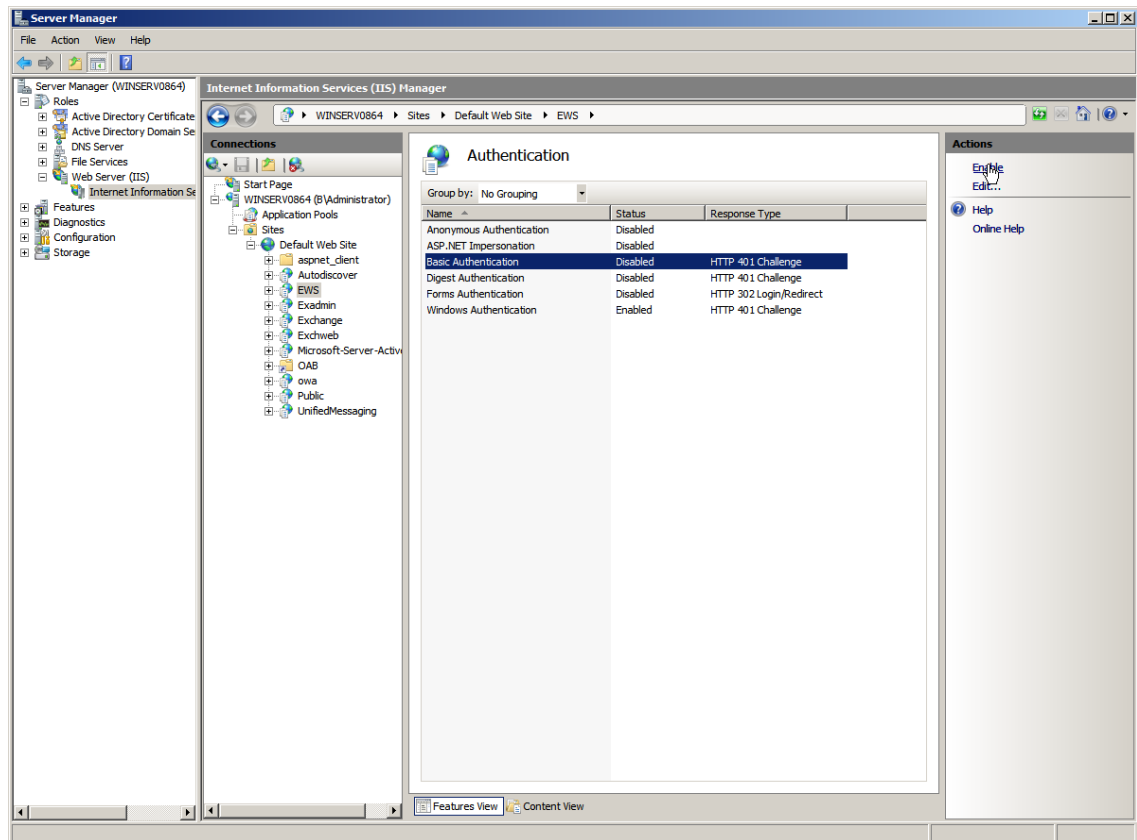
On Exchange systems prior to 2013 you may need to set basic authentication manually.

Open "Server Manager" on the Exchange server.

1. In the left pane, expand "Roles", expand "Web Server (IIS)", select "Internet Information Services (IIS) Manager".
2. A new "Connections" pane opens, expand your Exchange server object, expand "Sites", expand "Default Web Site (Multiple Protocols)", select "EWS".



3. Under heading "IIS", open "Authentication" icon



4. Select "Basic Authentication", click "Enable" in right pane.
You can now close "Server Manager".

DNS Considerations

DNS SRV Record

Microsoft has an article describing how to set up a DNS SRV record titled "[A new feature is available that enables Outlook 2007 to use DNS Service Location \(SRV\) records to locate the Exchange Autodiscover service \(https://support.microsoft.com/en-us/kb/940881\)](https://support.microsoft.com/en-us/kb/940881)".

In general, you must:

1. Open the DNS Manager.
2. Expand Forward Lookup Zones.
3. Locate and right-click on the external DNS zone and choose Other New Records.
4. Click Service Location (SRV) and enter:

Service: `_autodiscover`

Protocol: `_tcp`

Port Number: `443`

Host: [your mail host, e.g. mail.net, usually the AD domain forest found in AD Domains and Trusts on the MS AD server]

5. Click OK

The Microsoft autodiscover library in Retain expects a URL along the lines of `https://autodiscover.[your domain]/Autodiscover/Autodiscover.xml` (e.g., `https://autodiscover.xyzcompany.com/Autodiscover/Autodiscover.xml`), which can be found in the worker log as it attempts to log in by searching for "Discovered endpoint:" or "AutoDiscover".

Server DNS Setting

Retain performs best when the server's network setting is using the same DNS as the Exchange servers.

If Retain and Exchange must use different DNS, on the DNS that Retain uses, create a Conditional Forwarder that resolves to the Exchange server.

Placing Exchange Items on Hold to Prevent Data Loss

To prevent data loss, you must ensure that users are not able to remove items before Retain has a chance to archive them.

How Outlook Handles Item Deletion

By default, when a user deletes a message from Outlook it is moved to the Trash folder.

When the user empties the trash, the item is moved to the mostly hidden Recoverable Items folder, where it is kept for 14 days before being removed from disk.

During the 14-day period, the user can right-click the Trash to either

- ♦ Recover the item,
- Or
- ♦ Purge it, which actually moves the item to a Purged folder that is not user accessible.

Configuring Exchange Item Retention Policies

To ensure that items are available for archiving, it is vital that you understand the information in the following documents and that you then configure your system so that Items aren't removed from disk before Retain Archives them.

- ♦ [Learn about retention for Exchange \(https://docs.microsoft.com/en-us/microsoft-365/compliance/retention-policies-exchange?view=o365-worldwide\)](https://docs.microsoft.com/en-us/microsoft-365/compliance/retention-policies-exchange?view=o365-worldwide)
- ♦ [Create a Litigation Hold \(https://docs.microsoft.com/en-us/microsoft-365/compliance/create-a-litigation-hold?view=o365-worldwide\)](https://docs.microsoft.com/en-us/microsoft-365/compliance/create-a-litigation-hold?view=o365-worldwide)

Configure an Exchange Module for On-Premise Exchange

The Exchange module must be configured in the Retain Server before any communication between Retain and an existing Exchange message system can occur. Open the Retain management page on the Retain Server, and select Module Configuration.

Retain

Language: English | Welcome, admin | About | Tools | Status & Updates | Logout

Module Configuration

After configuring a module, it is recommended you manually refresh the Address Book.

[Refresh Address Book](#) Sync job is not running at this time.

[Mailbox Mapping Options](#)

Configured Modules

GroupWise	Exchange	Social Messaging	Mobile
 Configure Install Date: 10-Feb-2014 17:06:20 Last Address Book Cache: 15-Sep-2015 01:19:19 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Last Address Book Cache: 15-Sep-2015 01:19:21 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Status: Configured.
 Configure Install Date: 10-Feb-2014 17:06:20 Last Address Book Cache: 15-Sep-2015 01:19:44 Status: Configured.	 Configure Install Date: 10-Feb-2014 17:06:20 Status: Configured.	 Configure Install Date: 17-Oct-2014 21:21:07 Status: Configured.	

Select the 'Configure' option in the Exchange module. A new window or tab opens with the module configuration.

NOTE: Ensure that your Retain Server and your Exchange server use the same DNS service. The Exchange module uses these DNS settings to auto discover critical information about Exchange that is stored in Active Directory and cannot function correctly unless both systems use the same DNS server.

Core Settings

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send Exchange items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

Normally all the checkbox options on this tab are enabled. It is rare that you would ever deselect any of them. Two cases where you might, would be: troubleshooting (as instructed by Technical Support), or retrieving an old email system.

Exchange Module

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core Settings Impersonation Hosted Services Exchange Forest User Forests Delegates

Core Settings

Normally all of these entries should be enabled.

- Enable Address Book Caching determines if this module caches address book entries from its directory services during Maintenance.
- Enable Authentication indicates if users logging into Retain should be able to use the module's authentication system.
- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name	Exchange4.213
Enable Address Book Caching	☒
Enable Authentication	☒
Enable Jobs	☒
Message body	Store default as provided from Exchange (either HTML or plain text)
If autodiscover fails for a user, take this action:	skip user

Normally this entry should be disabled.

- Send Exchange items to an external system.

Select Send Method disabled

The Enable Address Book Caching function allows Retain to regularly cache the online email systems address book and synchronize it with Retain. This is critical for administration, authentication, and archiving purposes. It is recommended to cache the Address Book once every 24 hours to keep the Retain storage system up to date. By default, maintenance is set to cache the Address Book once every 24 hours.

The Enable Authentication checkbox determines whether end-user authentication is performed when the user logs into Retain. If it is deselected, the Retain system cannot authenticate the user against the email system and the user cannot log in unless another authentication method is enabled.

The Enable Jobs option determines whether job retrieve data and pass it to the Worker. Even if the individual job is fully configured and enabled, if this option is disabled, no jobs configured for this module can be processed.

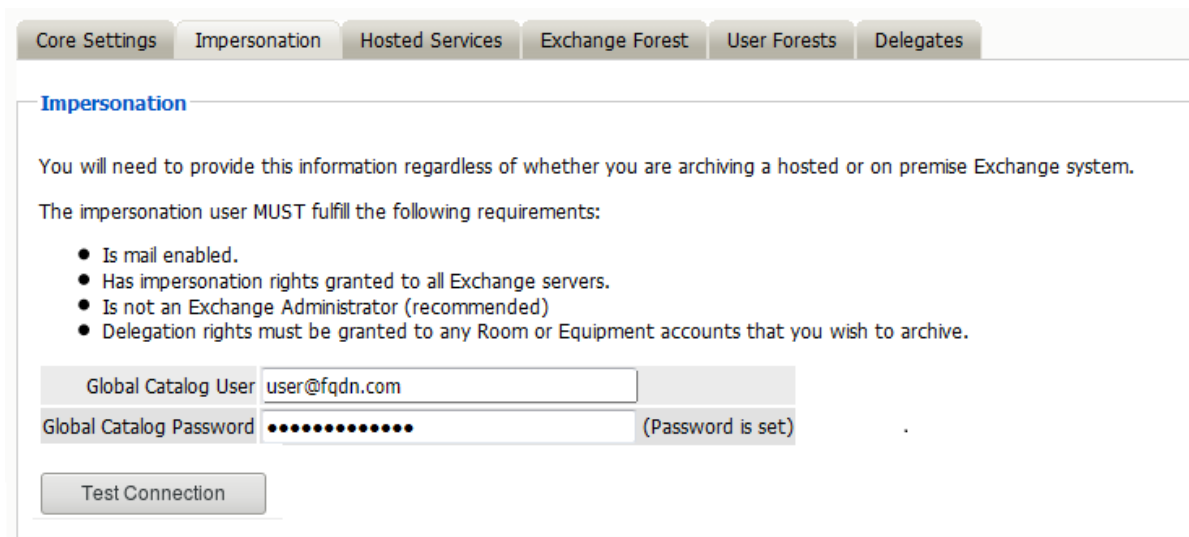
The Message body allows the administrator to decide whether to store either the HTML or plain text message body, or both.

Send Method

The Send Method lets you send Exchange items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

Impersonation

If the Impersonation and Core Settings tabs are not completely configured with the correct information, the hosted system cannot be archived correctly.



The screenshot shows a software interface with a tabbed menu at the top. The tabs are: Core Settings, Impersonation (selected), Hosted Services, Exchange Forest, User Forests, and Delegates. Below the tabs, the 'Impersonation' section is titled in blue. It contains the following text: 'You will need to provide this information regardless of whether you are archiving a hosted or on premise Exchange system.' and 'The impersonation user MUST fulfill the following requirements:'. Below this is a bulleted list of requirements: 'Is mail enabled.', 'Has impersonation rights granted to all Exchange servers.', 'Is not an Exchange Administrator (recommended)', and 'Delegation rights must be granted to any Room or Equipment accounts that you wish to archive.' At the bottom of the section are two input fields: 'Global Catalog User' with the value 'user@fqdn.com' and 'Global Catalog Password' with a masked password '.....'. To the right of the password field is the text '(Password is set)'. Below these fields is a 'Test Connection' button.

Core Settings Impersonation Hosted Services Exchange Forest User Forests Delegates

Impersonation

You will need to provide this information regardless of whether you are archiving a hosted or on premise Exchange system.

The impersonation user MUST fulfill the following requirements:

- Is mail enabled.
- Has impersonation rights granted to all Exchange servers.
- Is not an Exchange Administrator (recommended)
- Delegation rights must be granted to any Room or Equipment accounts that you wish to archive.

Global Catalog User user@fqdn.com

Global Catalog Password (Password is set)

Test Connection

Hosted Services

This tab is not used with an On-premise Exchange system.

Exchange Forest

Retain needs to know where to access the Global Catalog Host and existing domains before any archiving can be accomplished.

Core Settings Impersonation Hosted Services Exchange Forest User Forests Delegates

Exchange Forest

Ignore this tab if you are running a hosted system.

You MUST fill out all of the entries on this tab if you are running an on-premise Exchange system. Hosted services do not normally use this information.

Typically, you provide the connectivity information for a global catalog, and a user that has full access to Active Directory.

Here are the specific requirements for this user:

- The user account must fulfill all the requirements specified on the Impersonation tab. In fact you enter the username and password on that tab, not here.
- Has read-only access to all parts of Active Directory involving the Exchange System and users.

You also provide a list of Active Directory DNs to search for users and groups.

Global Catalog Host	10.1.3.226
Global Catalog Port	3268
Global Catalog Security	Plain Text

 Add Search Base (e.g. dc=users,dc=company,dc=com)

 dc=exchange2013,dc=qa,dc=gwava,dc=com

Resource Forest

Select this checkbox if Exchange is running in a dedicated resource forest. You must then fill out information on the User Forests tab. If this checkbox is not selected, information on the User Forests tab is ignored.

☐ Enable Resource Forest

Open the “Exchange Forest” tab and enter the IP address or hostname of the Global Catalog Host.

Click on the Green Plus sign to add a search base. This should be set to the highest level of the LDAP domain so the entire address book can be found. For example:
DC=exchange2013,DC=qa,DC=mf-lab,DC=com

Retain uses Active Directory extensively when integrating with Exchange. Its uses include: populating the address book, authentication, and access to the Exchange System.

There are settings required for Exchange, see [“Exchange Prerequisites required for Retain” on page 78](#).

On the Exchange Forest tab, you configure all the Active Directory information you need for an Exchange forest. There is no need to fill out any information on the User Forest tab unless the users exist in a separate forest from the Exchange Forest.

On the Exchange Forest tab, specify whether to use SSL or not for the Global Catalog Security and the search base, (use of SSL with the Global Catalog Security and search base is highly recommended). The search base is the LDAP path to where Retain starts searching for valid Exchange users.

The Global Catalog Port defaults depend on whether SSL is used for security or not. (SSL is strongly recommended. Default ports are 3268 for plain text, and 3269 for SSL.) Adjust as appropriate for your system.

You also must provide the credentials of an Active Directory user. This user is special. It must have full read rights to Active Directory, be a mailbox-enabled, user, and be granted various Impersonation and Delegation rights. More on this is discussed in [“Exchange Prerequisites required for Retain” on page 78](#). The username must be in UPN format, (user principal name).

This search base, in LDAP form, must be high enough in the tree to include ALL users, groups, and servers. Multiple search bases can be specified, though it often results in a less efficient interface. These are LDAP search bases which allow Retain to resolve all users, groups, and servers of interest in the forest.

After the Search Base has been added, test the connection to ensure information and connection works. The test performs a simple login to confirm that the user exists, the Exchange Server is reachable, and that the credentials are accepted. The test does not confirm impersonation or delegation rights necessary for the Service Account.

Test Connection

Test begins....

LDAPServer connection parameters:

```
host=10.1.3.226,port=3268,security=none,user=retain@exchange2013.qa.gwava.com;pageSize=900;environment=key=java.naming.factory.initial;value=com.sun.jndi.ldap.LdapCtxFactory
key=java.naming.referral;value=follow
key=java.naming.security.principal;value=retain@exchange2013.qa.gwava.com
key=com.sun.jndi.ldap.connect.timeout;value=10000
key=java.naming.ldap.attributes.binary;value=msExchMailboxGuid objectguid objectsid msExchMasterAccountSID
key=com.sun.jndi.ldap.read.timeout;value=60000
key=java.naming.provider.url;value=ldap://10.1.3.226:3268
key=java.naming.security.authentication;value=simple
key=java.naming.security.credentials;value=****
```

Connect to and search for user:

For a more stringent test, be sure to refresh the Address Book Cache and then check the logs.

SUCCESS: Connected to CN=retain,CN=Users,DC=exchange2013,DC=qa,DC=gwava,DC=com NOTE: This only tests basic LDAP authentication. If you want a more stringent test, including autodiscover, impersonation, login, etc, try this link AFTER SAVING Exchange configuration: [testExchange.jsp](#) in the Util directory of RetainServer

If the test results in an error stating: "FAILURE: User doesn't exist or is not mail enabled," It indicates that the user's mailbox is unavailable. A mailbox is not required for Retain to utilize the specified user. If the user Retain utilizes does not have a mailbox, this error may be ignored. However, if the user specified does have a mailbox, this may indicate connection issues.

If the test results in an error with an LDAP error code 49 it is an authentication error. The important bit of information is what comes after the data field. That is the LDAP connection error code that applies to this case.

- ♦ 525 user not found
- ♦ 52e invalid credentials
- ♦ 530 not permitted to logon at this time
- ♦ 531 not permitted to logon at this workstation
- ♦ 532 password expired
- ♦ 533 account disabled
- ♦ 701 account expired
- ♦ 773 user must reset password
- ♦ 775 user account locked

The Exchange Forest tab is the only tab required by the Server and the Worker to archive mail from the Exchange system. The User Forest tab, however, is required for Exchange systems utilizing a resource forest, to allow the end user to log in to Retain.

Resource Forest

Select this checkbox if Exchange is running in a dedicated resource forest. You must then fill out information on the User Forests tab. If this checkbox is not selected, information on the User Forests tab is ignored.

Enable Resource Forest ☐

If the system contains a Resource Forest, enable the checkbox on the Exchange Forest tab and save changes. If the Resource Forest checkbox is not enabled, the User Forests tab is non-functional and all settings contained on that tab are ignored. The checkbox must be unchecked in a single forest Active Directory deployment, and it must be checked in a multiple forest Active Directory deployment.

Check all information to ensure that it is correct and save changes, and then configure the User Forest if required.

User Forest

The User Forest must have an entry for each user forest attached to the system.

User Forests

Ignore this tab if you are running a hosted system.

You need to list every User Forest (dns name) that you will archive in Retain, along with a Global Catalog of that forest, and search base(s) capable of resolving all users. Information on this tab is used only for end-user authentication.

 Add User Forest

 User Forest

Global Catalog Host

Global Catalog Port

Global Catalog Security

 Add Search Base (e.g. dc=users,dc=company,dc=com)

Select the green '+' button and input the LDAP information required by the Forests' Global Catalog server: IP address or hostname, port, security, (SSL is strongly recommended), and all search bases to include all the users. No administrative credentials are required. Each end user's provided credentials are used on login.

Delegates

You can set Retain to use delegate rights with On-Premise Exchange.

Delegates

Ignore this tab if you are running a hosted system.

Retain can partially support the Delegates feature in Exchange. If a user uses Outlook to grant delegation rights to their mailbox to another user, the second user can have access to the Retain mailbox of the first user. Please note the rights are not granular in this case - the second user either has full rights or no rights to the Retain mailbox.

Enable delegates support

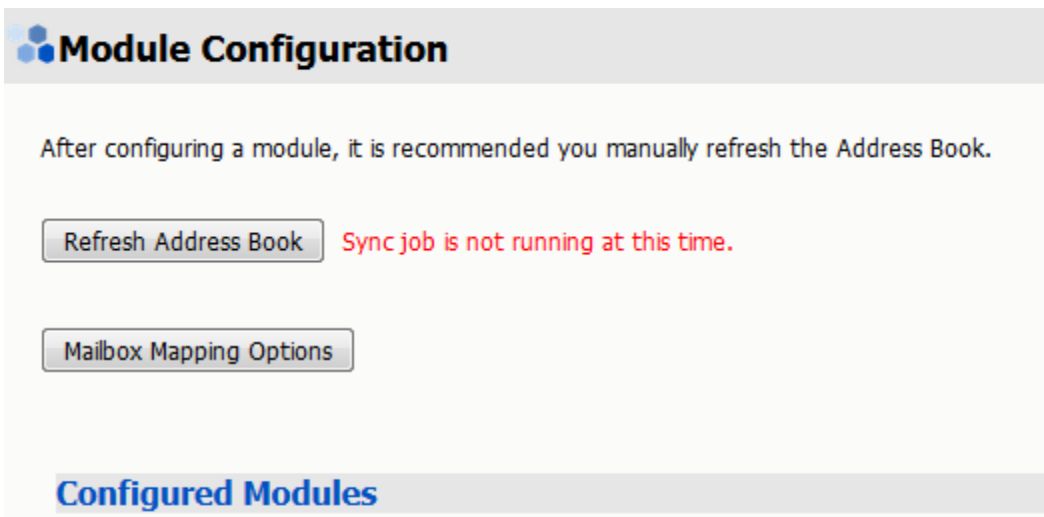
☒

Finishing On-Premise Exchange

Save all changes before closing the Exchange Module page.

Refresh Address Book

After saving changes, return to the Retain Server's Module Configuration page, and trigger a refresh of the Address Book.



Depending on the size of the address book, it may take several minutes to return with information, but a successful configuration returns a correct address book cache date and no errors. The date should reflect the date when the address book refresh was triggered.

The Status may show “Address Book Cache Never Run” or may list commonly misconfigured or missed items if the Refresh job fails.

Once the status is configured and the Address Book has been cached, Retain can connect to and archive messages from the Exchange server. The system is ready to have workers, schedules, profiles, and jobs configured, and those options now appear on the main administrative interface.

The Address Book is refreshed whenever the button is pressed, during the nightly maintenance cycle, and before each job.

Exchange Distributions Lists

You can create distribution list in Exchange Admin Center to manage information dissemination. Retain queries Exchange for a list of users in each distribution list. While you can create a distribution list in Active Directory Users and Computers these changes are not reflected in Exchange and therefore Retain is unaware of them. If you want to rename a distribution group it must be done in Exchange or Retain will not see it.

Distribution lists can be hidden in Exchange. If a distribution list is hidden, Retain cannot see the users associated with the distribution list and cannot archive the distribution list. The distribution list will be marked as (hidden) in Job | Mailboxes | Distribution Lists.

Dynamic Distribution Lists cannot be seen by Retain because they only create a user list when a message is sent. Remember to refresh the address book if you want to see the latest list changes.

Shared Mailboxes, Rooms and Equipment

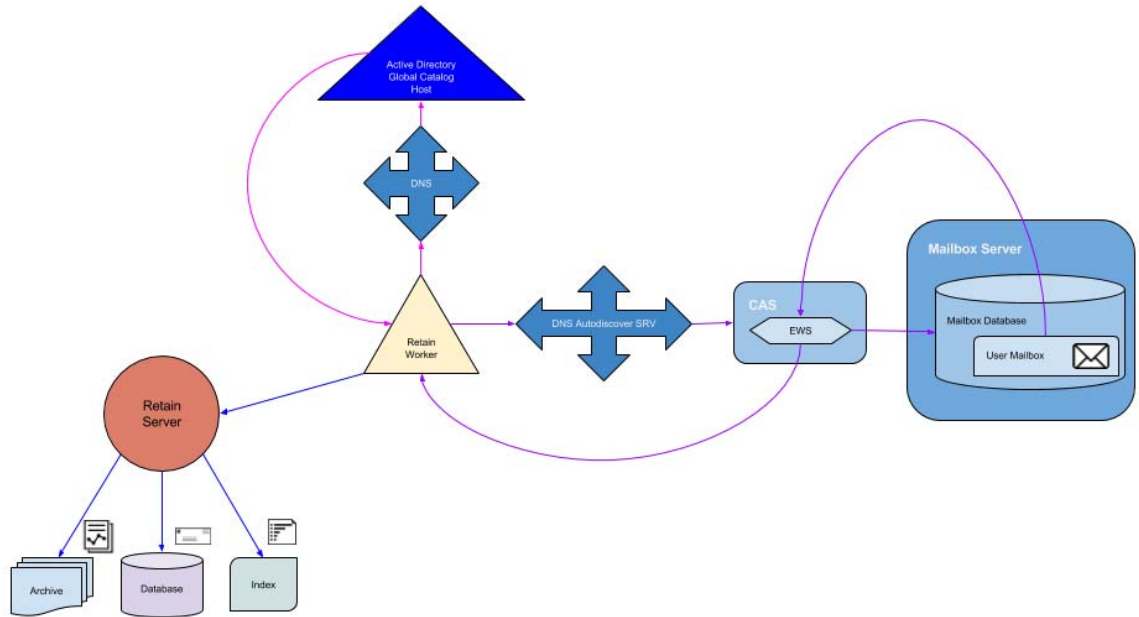
Impersonation rights allow the Retain user to enter other mailboxes but those rights do not extend to shared mailboxes. To access a shared mailbox the Retain user would need delegate rights to each shared mailbox that is to be archived. These rights can be granted through the Exchange Management Shell.

If the shared mailbox is owned by “John Doe” and your Retain impersonation account is "Retain", you would issue the following command in an Exchange Management Shell (EMC):

```
Add-MailboxPermission -Identity "John Doe" -User Retain -AccessRights FullAccess -
InheritanceType All -AutoMapping $false
```

Exchange Message Dredging Process Overview

How does Retain get messages from Exchange?



1. When a job starts, the Retain Worker queries the DNS for the SCP record to the URL of the Active Directory Global Catalog Host.
2. Then the worker queries Active Directory for the Autodiscover SCP Records and Active Directory returns the Autodiscover URLs. The URLs tell Retain where to connect to autodiscover. There are also some default autodiscover URLs that Retain uses to connect to autodiscover.
3. Retain then uses autodiscover to connect to the Client Access Server. It is helpful to have an autodiscover SRV record on the DNS to speed up this process.
4. Once Retain has connected to the Client Access Server (CAS), the CAS uses EWS to connect Retain to the correct Mailbox Server.
5. Retain uses the impersonation user credentials to enter the mailbox of the user we are attempting to dredge messages from. Retain queries Exchange for messages that meet the criteria set in the job.
6. Exchange then serves the oldest message that meets the criteria back to the Retain Worker through EWS on the CAS.
7. The Retain Worker receives the message and opens it to query the Retain Server if the message body or attachments already exists.
 - a. If the Retain Server determines that the message is new, then the body and attachments are stored in the archive, the header information and hash is saved in the database with links to the archive and the contents of the message are indexed.
 - b. If the message already exists, the database is updated with the header data and linked to the existing data, and the existing message body or attachment is dropped by the worker and the next message is retrieved from the email system.

Troubleshooting Exchange Performance

In general, we have found that acceptable throughput is in the 3-5 messages per second range. In well designed systems with sufficient hardware resources we have seen throughput above 10 m/s. There is definitely an issue if the throughput is less than 3, and we have seen instances of less than 0.1. The first place to look is the worker log.

Mailbox Delays

We are looking for how long it takes Retain to log in to each mailbox and when it finds the endpoint which tells us it entered the mailbox.

Search the log for lines containing:

```
enterMailbox
Discovered endpoint
```

Now you want to compare the difference in times between these two lines. It should be less than 2 seconds. If it is significantly longer than 2 seconds it is most likely an issue with the DNS not properly serving autodiscover.

```
2015-09-25 12:00:07,256 TRACE [RTWQuartzScheduler_Archive_Worker-1] com.mf-
lab.caapi.MailboxArchivingStats: enterMailbox: JDoe@RETAIN.mf-labUTAH
2015-09-25 12:02:14,177 DEBUG [RTWQuartzScheduler_Archive_Worker-1] com.mf-
lab.ews.archiveimpl.process.ExchangeUser: Discovered endpoint: https://
ad.test.sys/ews/exchange.asmxscreen
```

This indicates that there is an issue with how autodiscover is configured in the DNS. It may need an SCP or SRV record.

Message Delays

Another thing to search for are connection failures and retries, which increase each time it fails which can add up to 4 minutes:

search for items

Software caused connection abort: recv failed

EWS request failed: null. Will retry after

```
2015-07-22 00:25:25,056 TRACE [Thread-1341102] com.mf-
lab.ews.RetainExchangeWebserviceFactory: retry, exception :
javax.xml.ws.WebServiceException: java.net.SocketException: Software caused
connection abort: recv failed
at
com.sun.xml.ws.transport.http.client.HttpClientTransport.readResponseCodeAndMessag
e(Unknown Source)
...
at com.mf-
lab.ews.archiveimpl.process.CursorFetchThread.run(CursorFetchThread.java:1334)
Caused by: java.net.SocketException: Software caused connection abort: recv failed
at java.net.SocketInputStream.socketRead0(Native Method)
...
at
sun.net.www.protocol.https.HttpsURLConnectionImpl.getResponseCode(HttpsURLConnectionImpl.java:318)
... 27 more
2015-07-22 00:25:25,056 DEBUG [Thread-1341102] com.mf-
lab.ews.RetainExchangeWebserviceFactory: EWS request failed: null. Will retry after
2 seconds
```

This retries a few times with longer delays until it aborts. Here we are losing connection to the Exchange server while already in a mailbox. This can indicate that there are issues with either a message attachment or the webserver on the Exchange or CAS servers is unable to serve the item at this time. Go to the message in Outlook or OWA and see if it can be accessed.

If the message can be accessed successfully export it as a .pst and use the PST Importer to bring it into Retain.

If the message cannot be accessed successfully then it must be deleted.

Exchange Health

You may also want to check the health of the Exchange server itself.

Performance Monitor

The first thing to check is the performance of the server by going into Performance Monitor to see it is above 80% utilization of CPU, Memory, Disk and/or Network. If they are consistently high you should use the various Server health, monitoring, and performance cmdlets to pinpoint the issue

Queues

Another thing to check are the Queues. The mail queues are how Exchange handles mail. You can see they by going into Exchange Toolbox/Queue Viewer. The number of messages in the queues should be low, if there is a queue with hundred or thousands of messages and they are not being cleared then that queue may have a stuck message, which would need to be cleared.

You can also use the Exchange Management Shell (EMS) to check the status of the queues.

Get-Queues

Mailboxes

Another thing to check are the mailboxes. Performance can degrade if a mailbox has too many messages (~100k). The number of messages is more important than the size of the messages. For large systems you should pipe to a file since this command can exceed the EMS buffer.

Get-Mailbox | Get-MailboxStatistics > c:\mailboxstat.txt

If there is a specific mailbox with issues you may need to repair the mailbox.

Server Health

You can get a quick overview of an Exchange server's health by running this EMS cmdlet:

Get-ServerHealth -Identity server1 | Sort-Object AlertValue | ft Name, AlertValue

Exchange Throttling Policy and Bandwidth/Performance (2013)

Microsoft Exchange 2013 uses client throttling policies by default to track bandwidth for each Microsoft Exchange user and enforce bandwidth limits as necessary. Throttling policies should be turned off for the Retain Service Account, because they can affect the performance of Retain for Exchange when accessing mailboxes with a large number of folders and mail items.

1. On a computer that hosts the Microsoft Exchange Management Shell, open the Microsoft Exchange Management Shell.
2. Type these commands:
 - a. New-ThrottlingPolicy [give it a policy name of your choosing]

- b. Set-ThrottlingPolicy [policy name from step "a"] -RCAMaxConcurrency Unlimited - EWSMaxConcurrency Unlimited -EWSMaxSubscriptions Unlimited -CPAMaxConcurrency Unlimited -EwsCutoffBalance Unlimited -EwsMaxBurst Unlimited -EwsRechargeRate Unlimited
 - c. Set-Mailbox [Retain impersonation user account] -ThrottlingPolicy [policy name from step "a"]
3. To check the policy run the command: Get-ThrottlingPolicy -Identity [policy name from step "a"] | Format-List

Exchange Throttling Policy and Bandwidth/Performance (2010)

The error indicates that either you have a throttling policy applied or the Exchange server is busy. Microsoft Exchange 2010 uses client throttling policies by default to track bandwidth for each Microsoft Exchange user and enforce bandwidth limits as necessary. Throttling policies should be turned off for the Retain Service Account, because they can affect the performance of Retain for Exchange when accessing mailboxes with a large number of folders and mail items.

1. On a computer that hosts the Microsoft Exchange Management Shell, open the Microsoft Exchange Management Shell. Find out the default Throttling Policy: Get-ThrottlingPolicy
2. Type these commands:
 - a. New-ThrottlingPolicy [give it a policy name of your choosing] -RCAMaxConcurrency \$null - RCAPercentTimeInAD \$null -RCAPercentTimeInCAS \$null - RCAPercentTimeInMailboxRPC \$null -EWSMaxConcurrency \$null -EWSPercentTimeInAD \$null -EWSPercentTimeInCAS \$null -EWSPercentTimeInMailboxRPC \$null - EWSMaxSubscriptions \$null -EWSFastSearchTimeoutInSeconds \$null - EWSFindCountLimit \$null
 - b. Set-Mailbox [Retain impersonation user account] -ThrottlingPolicy [policy name from step "a"]
3. Check the Throttling Policy for the "retain" impersonation user: Get-ThrottlingPolicy -Identity [policy name from step "a"] | Format-List

Exchange Journaling Mailbox

Using Exchange Journaling Mailbox is not recommended, but there are some situations where it is a viable option.

According to a Microsoft technician, they recommend at least 1 journaling mailbox per mail server. Exchange can only effectively support mailboxes under 5 - 10G. Exchange experiences performance issues when the Inbox exceeds 2500-5000 messages. <http://blogs.technet.com/b/exchange/archive/2005/03/14/395229.aspx>

This means that, once you enable a journaling mailbox, you should begin archiving its contents and using the Retain option to delete the items from the mailbox once archived. However, if there are delays in getting those journaling mailboxes archived, you should watch the size. If it gets to 5G, turn it off and re-route email to another journaling mailbox until you get all of them archived and emptied out.

1. Set up a journal mailbox for each mailbox database.
2. Journaling jobs should have their own Profile with the Scope set to "All messages (ignore date)" and Duplicate Check set to "Try to publish all message (SLOW)" to gather all messages from the beginning of the mailbox. This profile can be used for all journaling mailbox jobs.
3. Under Job, "Enable Journaling" and "Delete archived items from journal" must be enabled (checked) so that the journaling mailbox is cleared during the job, and choose the journaling mailbox you want archived. Create a separate job for each journaling mailbox.

Important note: As Retain archives the journal mailbox it creates a list of messages to be deleted but only sends the delete request when it exits the mailbox. If the job fails before it exits then the messages won't be deleted. Limiting the scope of the job to allow Retain to finish the job successfully ensures that the messages are deleted.

Transitioning from Journaling to Rolling In-Place Hold for Exchange Archiving

There are changes you must make in Exchange and Retain for this transition to go as smoothly as possible.

Mandatory Exchange Tasks:

1. Enable Rolling In-Place Hold. You can test that the hold is properly enabled by going into Outlook or OWA and deleting an item, going into the recoverable items dialog and attempting to purge the item. It should end up in the Purges folder which the user cannot see but Retain can. So you should run an archive job against it to see it within Search Messages in Retain. In Exchange 2010 you should enable Single Item Recovery, which allows you to set a rolling duration for holding deleted items.

Get-Mailbox | Set-Mailbox -SingleItemRecoveryEnabled \$true -RetainDeletedItemsFor 90

2. Disable Journal Rule in Exchange. Once the rolling in-place hold is enabled, you can disable the journal rule in Exchange. <https://technet.microsoft.com/en-us/library/bb124264%28v=exchg.141%29.aspx>

Mandatory Retain Tasks:

1. Keep the existing Retain journaling job and allow that to run until the journal mailbox is empty. If you are currently unable to archive your existing journal mailbox(es) because they have become too large for Exchange to manage, there are powershell scripts for transferring mail to another mailbox.
2. Create New Profile. The primary option to enable is Profile/Miscellaneous/"Include user's recoverable items". With this option enabled Retain will dredge each users recoverable items folder and all items and folders inside it, except the logs found in the Audits subfolder.
3. Create a New Job(s) If you have multiple Exchange databases we recommend one job per mailbox database and one worker per job so they can run in parallel. (Retain Technical Support has a PowerShell 4.0 script to make this easier)

Large Attachments and/or Messages Cannot Be Archived From Exchange

Symptoms you may notice when experiencing problems with default IIS limitations:

- ♦ Retention is turned on in GroupWise and messages up to a certain date can't be deleted.
- ♦ Errors on retrieving attachments show in the Worker log.
- ♦ Can see messages that don't have all the attachments in Retain.
- ♦ You may also have difficulty getting larger exports through the web interface (exports larger than 28.6 MB).
- ♦ When logging is set to diagnostic for the Worker you can see errors like this:

15:15:15,668 RetainServerCommunication - Attempt to connect, but Server returned HTTP status (404): Not found (this line is typically repeated several times over the course of 5 minutes)

15:15:15,668 RetainServerCommunication - Giving up...too many retries! 15:15:15,668

ArchiveAttachment - Send a nice healthy blob:Archive: ERROR: Fatal Error Result=AddedEMails: 0, emailID=null, parentID=null 15:15:15,691 JobUtilities - HandleArchivingException

*Note: IIS is not supported by Micro Focus. These are suggested methods for allowing Retain to archive large emails through IIS. For further information visit the MicroSoft support pages: <http://www.iis.net/configreference/system.webserver/security/requestfiltering/requestlimits> (<http://www.iis.net/configreference/system.webserver/security/requestfiltering/requestlimits>) Some other useful information can also be found on the IIS forums: <http://forums.iis.net/t/1066272.aspx> (<http://forums.iis.net/t/1066272.aspx>)

This may not be as much of an issue in Retain installations that were created with 3.x and later. The RetainWorker will now communicate, by default, directly to the RetainServer on port 48080 thereby bypassing IIS. If you'd like to change this for an older installation, change the connection address of the worker. See the manual (look up "Worker Configuration") for your particular installation for more information. You may still have this be an issue on your Exchange server when Retain tries to collect from it if there are message attachments or messages that are larger than whatever IIS is set to allow through. This would be a setting on the Exchange side that would need to be changed. Default is 30000000 bytes.

For getting exports out of Retain you can also choose to bypass IIS and use [http://\(RetainIP\):48080/RetainServer](http://(RetainIP):48080/RetainServer). IIS integration is more of a convenience to point users at Retain so that you don't have to deal with port information in a URL and other advantages that this can provide.

IIS, by default, limits the amount of data that can be imported by Retain. You can remove, or at least mitigate, this limitation by changing 4 settings. This example will be assuming you'd like to archive files up to 931 MB.

1. 1. You'll need to increase the limit on how much data the RetainWorker and RetainServer can push/pull through IIS. You can do that using the following command*:
 - a. `** %windir%\system32\inetsrv\appcmd set config "Default Web Site/RetainWorker" -section:requestFiltering -requestLimits.maxAllowedContentLength:1000000000`
 - b. `%windir%\system32\inetsrv\appcmd set config "Default Web Site/RetainServer" -section:requestFiltering -requestLimits.maxAllowedContentLength:1000000000`
 - c. Current testing indicates that you'll also have to do a blanket statement:
`%windir%\system32\inetsrv\appcmd set config -section:requestFiltering -requestLimits.maxAllowedContentLength:1000000000`

*Note: the number at the end of the command is the size you'd like to have as the max in bites.

**Note: the "Default Web Site/RetainWorker" piece may vary depending on your server setup. See the picture in the next section.


```
Administrator: Command Prompt
Microsoft Windows [Version 6.1.7600]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

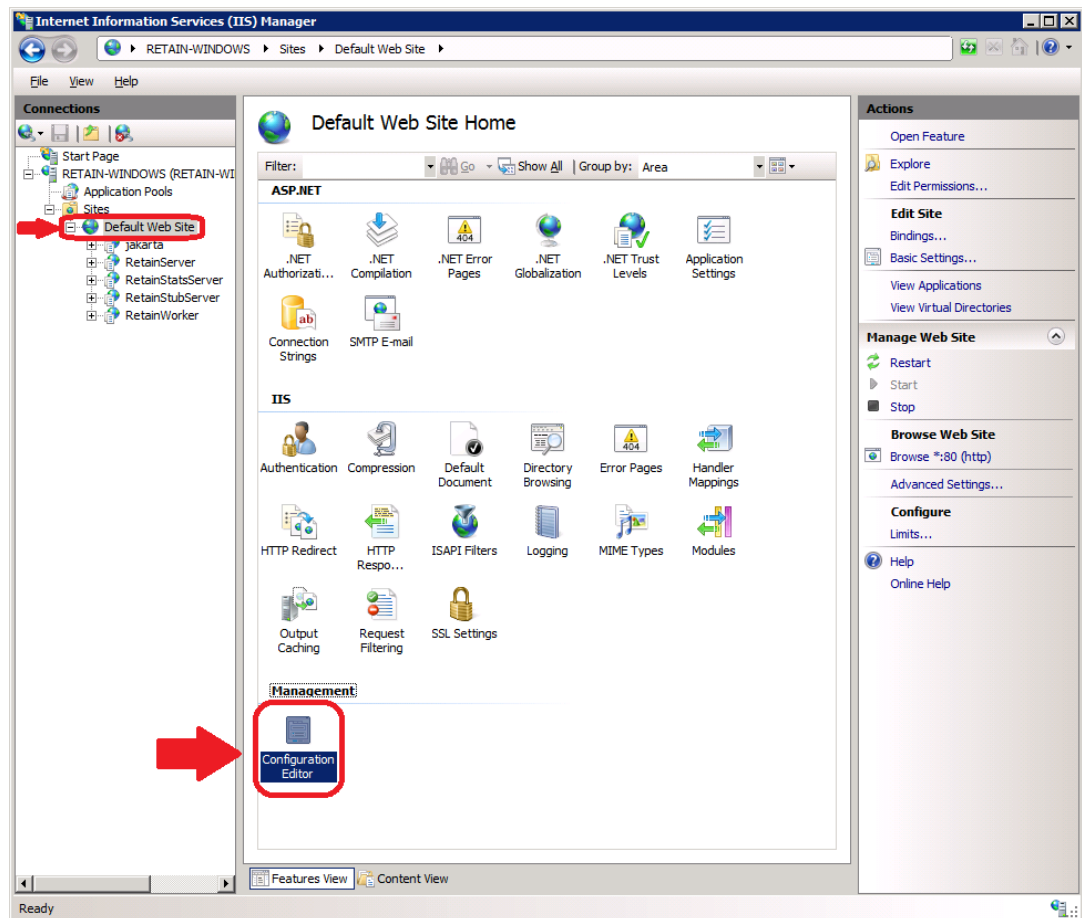
C:\Users\Administrator>%windir%\system32\inetsrv\appcmd set config "Default Web Site/RetainWorker" -section:requestFiltering -requestLimits.maxAllowedContentLength:1000000000
Applied configuration changes to section "system.webServer/security/requestFiltering" for "MACHINE/WEBROOT/APPHOST/Default Web Site/RetainWorker" at configuration commit path "MACHINE/WEBROOT/APPHOST/Default Web Site/RetainWorker"

C:\Users\Administrator>%windir%\system32\inetsrv\appcmd set config "Default Web Site/RetainServer" -section:requestFiltering -requestLimits.maxAllowedContentLength:1000000000
Applied configuration changes to section "system.webServer/security/requestFiltering" for "MACHINE/WEBROOT/APPHOST/Default Web Site/RetainServer" at configuration commit path "MACHINE/WEBROOT/APPHOST/Default Web Site/RetainServer"

C:\Users\Administrator>%windir%\system32\inetsrv\appcmd set config -section:requestFiltering -requestLimits.maxAllowedContentLength:1000000000
Applied configuration changes to section "system.webServer/security/requestFiltering" for "MACHINE/WEBROOT/APPHOST" at configuration commit path "MACHINE/WEBROOT/APPHOST"

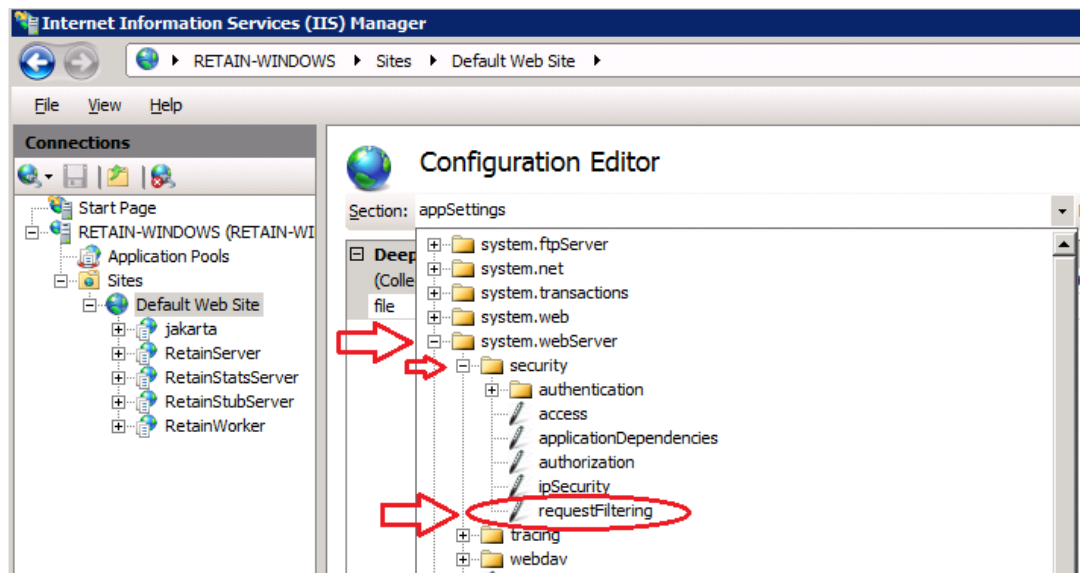
C:\Users\Administrator>_
```

2. 2. If you don't like command line you can also change it through the IIS manager.
 - a. Bring up the IIS manager and highlight "Default Web Site"

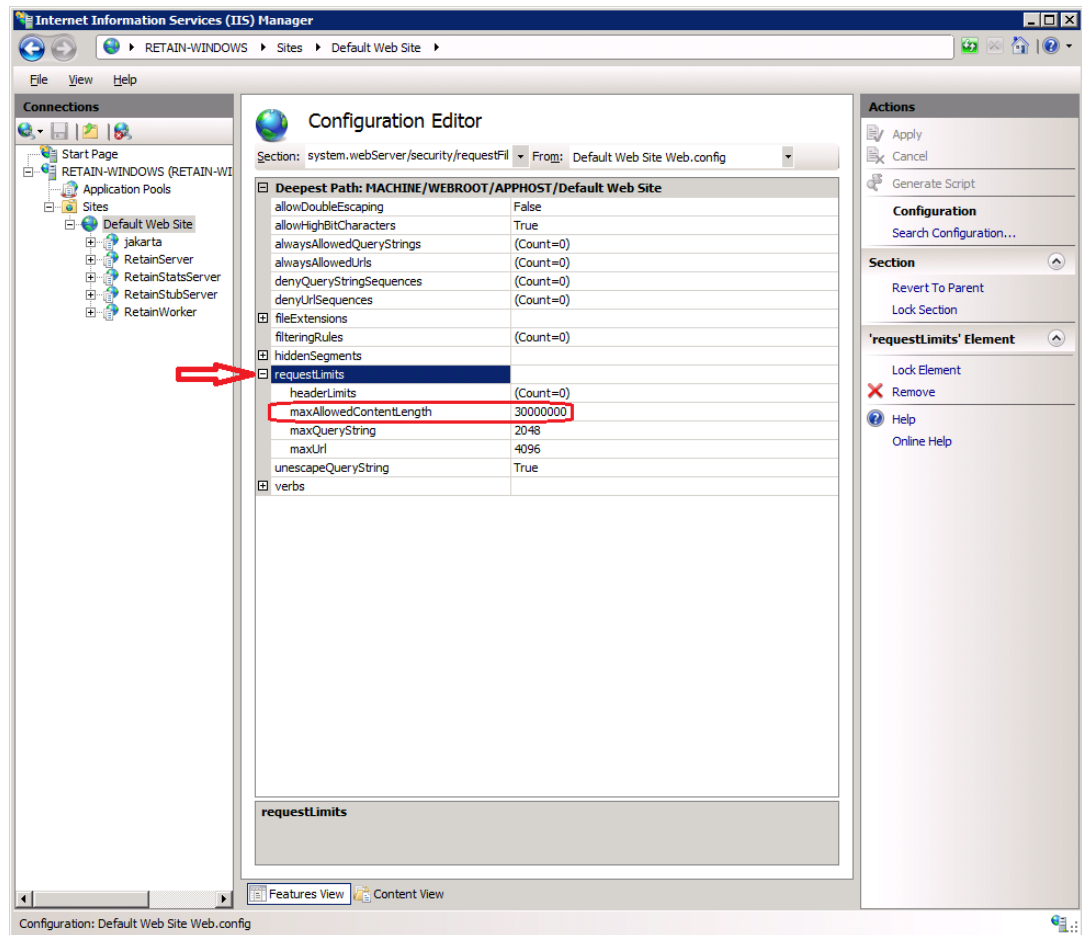


- b. Double click on "Configuration Editor" as shown in the figure above.

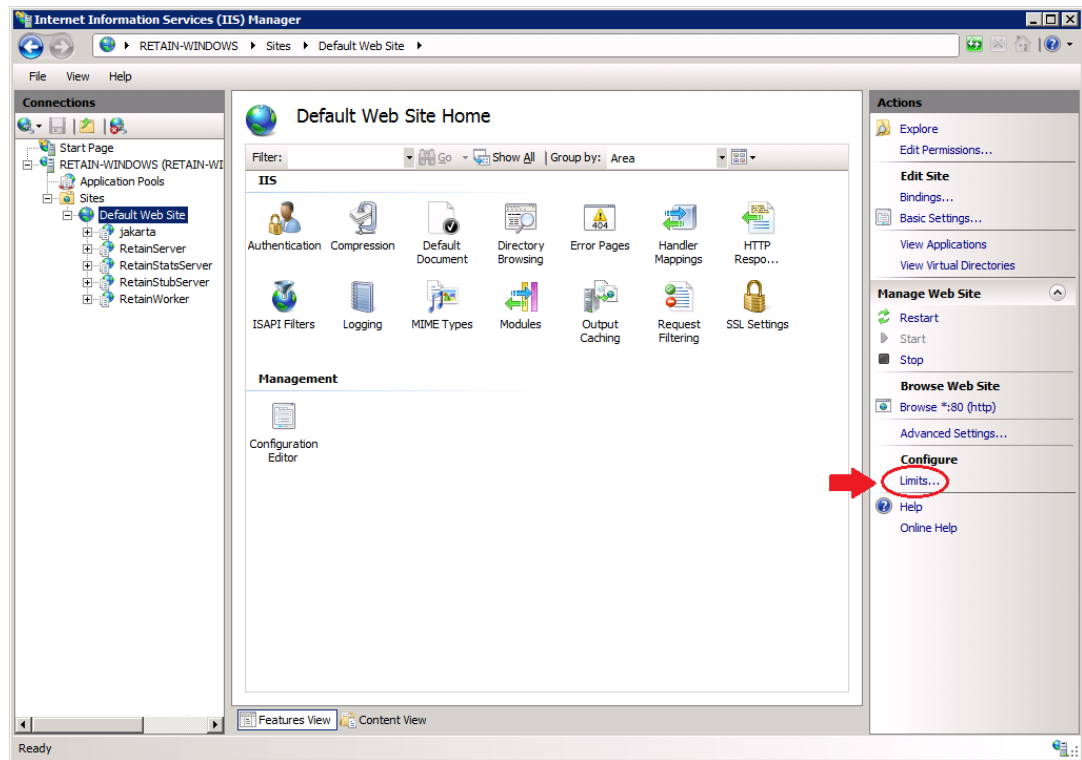
- c. Use the "Section" area drop down box to go to "requestFiltering" as shown in the following figure.



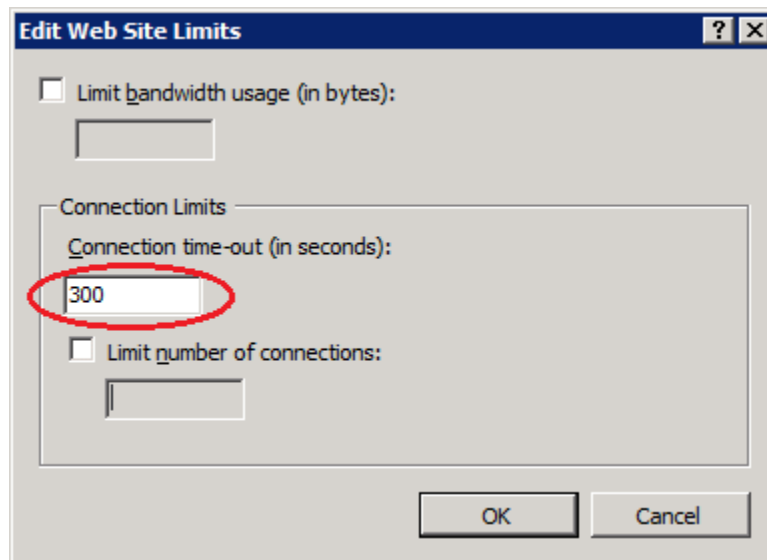
- d. Expand the "requestLimits" section. Change the "maxAllowedContentLength" shown in the next figure to the size (in bytes) you would like to be able to pass though.



- e. Repeat for both RetainServer and RetainWorker.
3. 3. You may also need to change the timeouts in IIS. To do this:
- a. Open the IIS manager.
 - b. Highlight "Default Web Site".
 - c. Click on "Limits"



- d. Change "Connection time-out (in seconds):" to the desired time.



Moving Users to a New Exchange Domain

If you need to move your users to a new Exchange domain without changing their email addresses (for example from user@organization.local to user@organization.org) you will need to use the moveMailboxes tool to keep the users associated with their existing archive, otherwise a new archive will be created for all users.

Prerequisites

- ♦ The new on-premise Exchange system can not have been archived by Retain before.
- ♦ The users continue to use the same email address, though the UPN may be different.

Procedure

1. In the Retain Web Console, go to the Exchange module and select configure.
2. Under the Impersonation tab, enter the new impersonation user credentials.
3. Under the Exchange Forest tab, reconfigure the settings to the new Exchange system.
4. Click the Test Connection button to confirm the connection can be made.
5. Save your changes.
6. Return to the Module Configuration page and Refresh the Address Book by clicking the Refresh Address Book button. Wait for the refresh to complete.
7. Open the RetainServer log and tail the log to watch progress of the tool. On Windows a utility program like baretail is useful for this.
8. Open a new tab and enter the URL: `http://<your Retain Server Address>/RetainServer/Util/moveMailboxes.jsp`. The page will be blank.
9. In the RetainServer log when the migration is complete, you will see the message "MoveMailboxes: mailboxes moved: [amount of mailboxes]. Process Complete."
10. Re-index all messages. In the Retain Web Console, go to Server Configuration | Index and press the Re-index All Messages button. This may take significant time in larger systems and search will be limited as the re-index is going on.
11. Once re-indexing is complete, archiving can resume normally.

When the users log in to Retain they will see two folders one with the mails from the original Exchange system and the other with mail from the new system. They have different system IDs so cannot be combined seamlessly

Exchange Concurrent Connection Limits

If jobs fail with the error: 421 4.3.2 The maximum number of concurrent connections has exceeded a limit, closing transmission channel.

It may be because we are hitting the maximum inbound connections per source limit connecting to Exchange. You will need to increase the `MaxInboundConnectionPerSource` parameter. See "Understanding message rate limits and throttling" ([https://technet.microsoft.com/en-us/library/bb232205\(v=exchg.160\).aspx](https://technet.microsoft.com/en-us/library/bb232205(v=exchg.160).aspx)) for details.

Core Settings Tab (Exchange)

Exchange Module

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core SettingsImpersonationHosted ServicesExchange ForestUser ForestsDelegates

Core Settings

Normally all of these entries should be enabled.

- Enable Address Book Caching determines if this module caches address book entries from its directory services during Maintenance.
- Enable Authentication indicates if users logging into Retain should be able to use the module's authentication system.
- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name	Exchange-1
Enable Address Book Caching	☒
Enable Authentication	☒
Enable Jobs	☒
Message body	Store default as provided from Exchange (either HTML or plain text)
If autodiscover fails for a user, take this action:	skip user

Normally this entry should be disabled.

- Send Exchange items to an external system.

Select Send Methoddisabled

Path: [Retain Server Manager](#) > Configuration > Module Configuration > Exchange-Configure > Core Settings

Impersonation Tab (Exchange)

Exchange Module

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core SettingsImpersonationHosted ServicesExchange ForestUser ForestsDelegates

Impersonation

You will need to provide this information regardless of whether you are archiving a hosted or on premise Exchange system.

The impersonation user MUST fulfill the following requirements:

- Is mail enabled.
- Has impersonation rights granted to all Exchange servers.
- Is not an Exchange Administrator (recommended)
- Delegation rights must be granted to any Room or Equipment accounts that you wish to archive.

Global Catalog User	user@fqdn.com	
Global Catalog Password	••••••••	(Password is not set)

Test Connection

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange-Configure](#) > [Impersonation](#)

Hosted Services Tab - Office 365 Settings

 **Exchange Module**

Save Changes  

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core Settings

Impersonation

Hosted Services

Exchange Forest

User Forests

Delegates

Hosted Services

Important:
Use this tab only if you are using either Office 365 or a Hosted Exchange System without LDAP.
Otherwise, use the three tabs to the right instead of this tab.

☒ I am using a Hosted Exchange system

☒ Office 365

☐ Hosted Exchange without LDAP

Address Book Discovery

☐ Import from CSV file

Path : Type the path to the file

☒ Populate from Office 365

Mailbox Archiving Authentication

Use OAuth

Credentials

Tenant ID

Client ID

Client Secret

Test Connection

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange-Configure](#) > [Hosted Services](#) > [Office 365 option](#)

Hosted Services Tab - Non-LDAP Exchange Settings

Exchange Module

Save Changes

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core SettingsImpersonationHosted ServicesExchange ForestUser ForestsDelegates

Hosted Services

Important:
Use this tab only if you are using either Office 365 or a Hosted Exchange System without LDAP. Otherwise, use the three tabs to the right instead of this tab.

☒ I am using a Hosted Exchange system

☐ Office 365

☒ Hosted Exchange without LDAP

Address Book Discovery

Import from CSV file

Path :

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange-Configure](#) > [Hosted Services](#) > [Hosted Exchange without LDAP](#) option

Exchange Forest Tab (Exchange)

 **Exchange Module**

Save Changes  

EXCHANGE

Exchange specific information is configured here. At a minimum, the CORE SETTINGS and IMPERSONATION tabs must be filled out completely. Then, examine each of the other tabs to determine if they apply to your system.

Core SettingsImpersonationHosted ServicesExchange ForestUser ForestsDelegates

Exchange Forest

Ignore this tab if you are running a hosted system.

You **MUST** fill out all of the entries on this tab if you are running an on-premise Exchange system. Hosted services do not normally use this information. Typically, you provide the connectivity information for a global catalog, and a user that has full access to Active Directory.

Here are the specific requirements for this user:

- The user account must fulfill all the requirements specified on the Impersonation tab. In fact you enter the username and password on that tab, not here.
- Has read-only access to all parts of Active Directory involving the Exchange System and users.

You also provide a list of Active Directory DNs to search for users and groups.

Global Catalog Host	127.0.0.1
Global Catalog Port	3268
Global Catalog Security	Plain Text ▼

 Add Search Base (e.g. dc=users,dc=company,dc=com)



Test Connection

Resource Forest

Select this checkbox if Exchange is running in a dedicated resource forest. You must then fill out information on the User Forests tab. If this checkbox is not selected, information on the User Forests tab is ignored.

Enable Resource Forest ☐

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Exchange-Configure](#) > [Exchange Forest](#)

User Forests Tab (Exchange)

The screenshot shows the 'Exchange Module' configuration window with the 'User Forests' tab selected. The tab title is 'User Forests'. Below the title, there is a note: 'Ignore this tab if you are running a hosted system.' followed by a paragraph: 'You need to list every User Forest (dns name) that you will archive in Retain, along with a Global Catalog of that forest, and search base(s) capable of resolving all users. Information on this tab is used only for end-user authentication.' Below this text, there is a section for adding user forests. It starts with a green plus icon and the text 'Add User Forest'. Below this, there is a red 'X' icon and a text input field for 'User Forest'. Below that, there is a 'Global Catalog Host' text input field, a 'Global Catalog Port' text input field with the value '3269', and a 'Global Catalog Security' dropdown menu with 'SSL' selected. Below these fields, there is another green plus icon and the text 'Add Search Base (e.g. dc=users,dc=company,dc=com)'. Below this, there is a red 'X' icon and a text input field.

Path: [Retain Server Manager](#) > Configuration > Module Configuration > Exchange-Configure > User Forests

Delegates Tab (Exchange)

The screenshot shows the 'Exchange Module' configuration window with the 'Delegates' tab selected. The tab title is 'Delegates'. Below the title, there is a note: 'Ignore this tab if you are running a hosted system.' followed by a paragraph: 'Retain can partially support the Delegates feature in Exchange. If a user uses Outlook to grant delegation rights to their mailbox to another user, the second user can have access to the Retain mailbox of the first user. Please note the rights are not granular in this case - the second user either has full rights or no rights to the Retain mailbox.' Below this text, there is a checkbox labeled 'Enable delegates support' which is currently unchecked.

Path: [Retain Server Manager](#) > Configuration > Module Configuration > Exchange-Configure > Delegates

Setting an Exchange Schedule

If you have not already created one or more schedules for use with your Exchange Job, go to [“Creating Schedules” on page 11](#) and complete the task now.

Specifying an Exchange Profile

The job will need an Exchange profile set up to connect to the email system properly.

This requires that an appropriate module be configured as documented in one of the following sections:

- ♦ [“Office 365” on page 62.](#)
- ♦ [“Exchange without Access to Active Directory” on page 71.](#)
- ♦ [“Exchange with Access to Active Directory” on page 78.](#)

After the Exchange Module has been configured, the Exchange Profile will be available for configuration. If an Exchange Profile is not configured, jobs cannot be run against the Exchange system.

Click on “Add Profile” and provide a profile name, or select an already existing profile to access the configuration tabs. All changes made on this page must be saved by selecting the “save changes”, disk icon, at the top right of the page. Tabs may be changed and navigated through without affecting new settings, but any move to another page will require saving, or abandoning the changes made.

Skype for Business

With Office 365, Retain also archives Skype for Business conversations. They are saved to the Conversation History folder of the user.

Core Settings Tab

The core settings consist of an enabled/disabled option which must be enabled for any jobs based on this profile to archive anything.

Retain

Language English Welcome, admin | About | Tools | Status & Updates | Logout

Overview

- Documentation
- Search Messages
- Auditing
- System Log
- Reporting
- Monitoring

Data Collection

- Schedules
- Profiles
 - GroupWise
 - Exchange
 - Social Messaging
 - Mobile
 - Google Apps
 - BlackBerry
 - CellTrust
 - Workers
- Jobs

Management

- Users
- Groups
- Device Management
- Deletion Management

Configuration

- Server Configuration
- Rules Configuration
- Module Configuration
- Router Configuration
- Storage Manager
- Stubbing Server
- Reporting and Monitoring
- Licensing

Profiles

Exchange Profile, ItemStoreFlag, Journal by Year
Exchange Profile, No Flag, Journal by Year

Add Profile Edit Profile Remove Profile

Associated Jobs

- Exchange Journal Now

Profile Exchange Profile, No Flag, Journal by Year loaded.

Profile Name Exchange Profile, No Flag, Journal by Year

Core Settings Message Settings Scope Miscellaneous Advanced

Profile Functions

☒ Enable Archiving (store messages in Retain)

Archive Mark

You can request Retain to mark items as archived. You may view the status at the Windows client as a custom column.

☐ Mark emails as archived

Messaging System Deletion

☐ Delete archived messages from messaging system

Keep x number of days in messaging system 0

Profile Functions

The Profile Functions tell the Retain Server what to do with the mail it archives from the messaging system. If Archiving is not enabled, mail will not be archived by Retain.

Archive Mark

Some users may opt to use the Archive Mark for messages that have been archived by Retain. The archive mark is a custom flag and may be modified, therefore is not secure and should not be used for compliance. Archive Mark slightly degrades job performance. Check the check box to enable Archive Mark for the selected profile.

When the Archive Mark is active, Retain creates a custom column for mail, called "RetainArchived" which users and administrators may add to their email client to view mail which has been archived. The "RetainArchived" column indicates an archived mail item by displaying a '1' in the message row, while remaining blank when the message is not archived.

Messaging System Deletion

For systems where the administrator wishes to have archived messages removed from the system automatically, the Messaging System Deletion option may be used. Messaging System Deletion will remove messages from a mailbox after they are archived, according to the time frame specified in the settings. The amount of time to keep messages is specified in days. The recommended setting depends on the archiving scheme in the system. For example, if messages are to persist in the system for 30 days, then the system deletion setting should be set to 30 and enabled. A setting of 0 will remove messages from the system as soon as they are archived. Be sure to configure the system before enabling the setting in the profile.

However, it is recommended that the messaging system do the deletion rather than Retain.

Message Settings Tab

Retain can archive and select specific types of mail and Exchange system items to be archived. The Manage Settings tab provides access to manage those settings.

The screenshot shows the 'Message Settings' tab selected among five tabs: 'Core Settings', 'Message Settings', 'Scope', 'Miscellaneous', and 'Advanced'. The settings are organized into four sections:

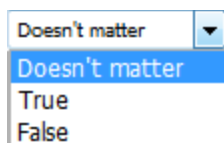
- Mailbox Type:** A heading followed by the text 'You can choose to store items only from User mailboxes or from Room / Equipment resources.' Below this are two checked checkboxes: ☒ Users and ☒ Room / Equipment.
- Item Type:** A heading followed by the text 'By default, Retain stores every type of message. You can restrict this.' Below this are five checked checkboxes: ☒ Mail, ☒ Appointment, ☒ Note, ☒ Task, and ☒ Voice Message.
- Item Source:** A heading followed by the text 'Messages are classified in one of these categories. You may restrict the storage of messages if desired.' Below this are four checked checkboxes: ☒ Received, ☒ Sent, ☒ Draft, and ☒ Personal.
- Message Status:** A heading followed by the text 'You can restrict the storage of messages based upon the setting of various status flags'. Below this are four dropdown menus, each with 'Doesn't matter' selected:
 - Read is:
 - Private is:
 - Personal is:
 - Confidential is:

The Mailbox type specifies whether to include or exclude the available types of mailboxes. Because there can be multiple profiles and jobs, it may be advantageous to archive the Users and Room / Equipment mailboxes separately as needed and appropriate for the system.

The Item Type option specifies the different types of messages found in Exchange that can be archived, and allows the exclusion of or inclusion of the different individual types.

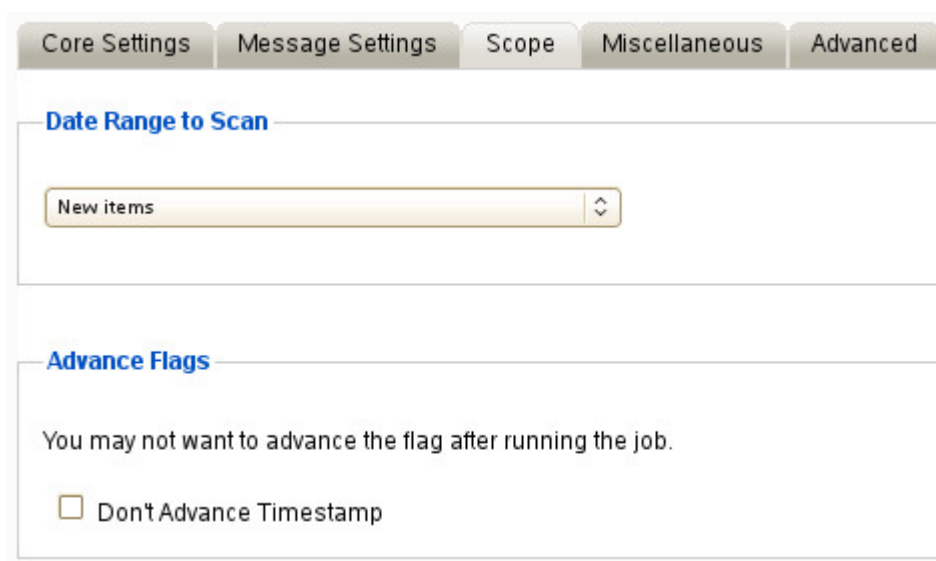
The Item Source option allows administrators to exclude or include messages that have not yet been sent or received, or posted.

The Message Status allows messages which have or have not been read or opened, or marked private or confidential to be archived. The different options in the drop-down menu are as shown.



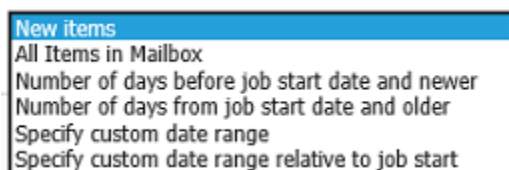
Scope Tab

The Scope tab dictates the date range Retain will scan in the attached archiving jobs.



Date Range to Scan

The Date Range to Scan instructs Retain to scan for, and archive, messages after, or before, a certain date. This is useful if only specific chunks or areas of mail are to be archived.



New Items: All items that have not been archived by Retain since the last time the job ran.

All Items in Mailbox: All items in the mailbox starting from 1/1/1970, duplicates will be processed but not stored if they already exist in Retain's archive.

Number of days before job start date and newer: Only items from the relative number of days from the time the job began will be archived. E.g. messages that came into the email system less than 7 days ago.

Number of days from job start date and older: Only items previous to the relative number of days from the time the job began will be archived. E.g. messages that came into the email system more than 7 days ago.

Specify custom date range: Only items between two absolute dates will be dredged.

Specify custom date range relative to job start: Only items between two relative dates will be dredged. E.g. messages that came into the email system between 7 and 5 days ago.

It is recommended to archive all New items.

Advance Flags

Enabling "Don't Advance Timestamp" will not update the timestamp flag. Items that are dredged will still be considered new by Retain the next time the job runs.

This is useful when troubleshooting, but is generally not used for normal jobs.

NOTE: Unlike GroupWise, Exchange does not ensure any compliance when scanning end user mailboxes; users may freely delete their email. The Item store flag does not prevent mail deletion. Only setting a rolling hold on all mailboxes guarantees all items have been archived.

Miscellaneous Tab

The Miscellaneous tab allows access to settings detailing how messages are stored and what is archived. Attachments, message information such as the Internet headers, and how the data is stored and named, (by folders, year, or year and month), dictate not only the message store structure, but affect the storage size.

Miscellaneous options also allow for the archiving of the 'recoverable items'. To enable checking and archiving of the 'Recoverable Items' for compliance reasons, select the checkbox next to the option.

Core Settings
Message Settings
Scope
Miscellaneous
Advanced

Miscellaneous

You can save disk space by restricting attachment storage.

☒ Store all attachments
☐ Don't store any attachments, other than the message

You may choose to store and index the Internet Headers. This exacts a performance penalty. However, it may be necessary for your compliance policy.

☒ Store/index Internet Headers

Note: The following options can dramatically slow down archiving and increase disk space utilization.

☐ Include user's archive mailbox
☐ Include user's recoverable items
 Include Public Folders(slow)

You may store Journaling Mailboxes in one flat folder, or partition them by year and/or month.

☐ Store in one folder
☒ Store by year (yyyy)
☐ Store by year and month (yyyyMM)

Advanced Tab

Generally, since storage space is inexpensive, Micro Focus recommends that you archive all message content.

However, if you need to limit what is archived, you can use the Advanced tab to do it.

Core Settings
Message Settings
Scope
Miscellaneous
Advanced

Advanced Criteria

You may add advanced criteria such as specific attachment names, sizes, subject here.

Folder Scope

Normally, you want to include all folders in your scan. However, you may have specific reasons to include or exclude folders. Choose a folder root, an optional subfolder (you may have multiple subfolders with the \ delimiter, and whether to include all subfolders in the pattern).

Table 1-31 Configuring Exchange Profile Advanced Settings

Option, Field, or Sub-panel	Information and/or Action
Use this dialog to define the conditions Retain uses to determine what to archive.	
Advanced Criteria	Each line sets a specific parameter and the lines are all added together (AND-ed). To check how Retain will interpret your settings, read through the lines in turn, inserting AND between each one. - For the first field, select from among the following items: ◆ Subject ◆ Sender ◆ Recipient ◆ Size ◆ Attachment Name - For the second field, specify the relationship of the first field to the (third field): ◆ is ◆ is not ◆ contains ◆ does not contain - Type a string for the third field. - Click Add to enter another statement - When the conditions are defined, click Save Changes.
Folder Scope	By default, Retain archives the items from all folders. Using this panel, you can restrict which folders are archived, by either: ◆ Specifying the folders to include (the Only items from folders listed below option) or ◆ Specifying the folders to exclude (the All folders except those listed below option) To specify the folders to include or exclude, do the following: - Specify a System Folder (mandatory). Example: Calendar. - Optionally, specify a subfolder within that folder. Example: entering old would mean the folder old under Calendar. - Use the / delimiter to specify multiple hierarchies under that. Example: old/mail would mean the subfolder mail under old under Calendar. - Specify whether the option includes subfolder. Example: If you specify old and deselect includes subfolder, then Calendar/old is archived. If you specify old and select includes subfolder, Calendar/old/mail is archived.

Setting Up an Exchange Worker

If you have not already created one or more Workers for use with your Exchange Job, go to [“Creating Workers” on page 13](#) and complete the tasks there.

Creating an Exchange Job

Use Exchange jobs for On-premise Exchange or Office 365.

A job is made up of:

1. Schedule [“Schedules” on page 11](#)
2. Profile [“Specifying an Exchange Profile” on page 107](#)
3. Worker [“Workers Overview” on page 13](#)
4. Job [“Creating an Exchange Job” on page 114](#)

Core Settings Tab

The Core Settings of a job contains configuration which must be set for the job to be saved and become active. A job must be enabled before it will run. Jobs must also have a specified schedule, profile, and worker. These are all selected from drop-down menus, and will not be populated unless those items are already configured in the system.

Core Settings

Job enabled ☒

Each Job must have the following assigned to it:

- [schedule](#) - How often to run
- [profile](#) - What to do when running
- [worker](#) - Where to run the job

Schedule

GW8NTPO

Profile

AllFolders AllMessages NoArchiveMark NoStubbing ItemStore

Worker

Local Worker

Items archived with this job can optionally be set with an "expiration timestamp" which the Deletion Manager can use to remove obsolete items. The expiration timestamp can only be extended, never reduced.

Enable data expiration ☒

Expire in

1

Days

Base Expiration Time on

Date Item was delivered to mail server.

Some customers may wish to override the default expiration settings for specific folders. You may specify these folders below - any folders that do NOT meet these criteria will have the expiration settings specified above applied. If you only want the folders to have expiration policies, enter -1 above for the base expiration value.

Add

The Data Expiration setting is an option to place a time stamp on data in the Retain database, which allows for ease of automation for the deletion manager. In addition, devices such as NetApp and Hitachi HCAP may use this number to enforce hardware level protection of the stored item so that no one (including Retain) may delete the item before its expiration date. Job Expiration is not retroactive

for mail in the database, and only applies to mail archived by the job that it is active for. In order to have messages with custom job or folder expiration dates properly expire, the deletion management date scope must be set to delete messages with an Expiration Date older than 1 day.

Exchange Job Option - Journaling

In order to achieve compliance, Exchange utilizes a Journaling mailbox. This mailbox can be set to be archived by retain to collect all messages on the system. The Journaling mailbox can rapidly grow in size if it is not cleaned out after messages have been archived. The Journaling option for Exchange jobs allows Administrators to set whether Retain will automatically clean out messages from the Journaling mailbox which have been archived.

Core Settings Journaling Mailboxes Notification Status

Journaling

Exchange uses Journaling to achieve compliance. You can list journaling mailboxes to be dredged by the Worker below, and indicate if you wish the original journal entry to be deleted after being archived (recommended). You may also consolidate all archived items to a single mailbox (funnel mailbox) in Retain. If you do not select a funnel mailbox, each journaling mailbox will create separate mailboxes in Retain.

Make sure all entries belong to the domain you specified in the Core Settings tab, or they will not be saved.

Enable Journaling ☒

Delete archived items from journal ☐

Journaling mailbox

JournalMB (mass.ERIC-EXCH2013)

Funnel mailbox

On larger systems where there are multiple journaling mailboxes, Retain will automatically create a mailbox for each of them in the archive. However, if desired, the journaling mailboxes may be all archived to the same specified mailbox in the archive. This is the funnel mailbox. If desired, specify the mailbox by selecting the 'funnel mailbox' button, search for and select the desired mailbox. Only existing mailboxes in the Retain system may be specified as a funnel mailbox.

Once a job begins the job may be monitored in Reporting and Monitoring or on the Worker Console.

Mailboxes Tab

The mailboxes tab is where the administrator specifies which entities (mail servers and/or Distribution Lists) are to be scanned. This tab is not displayed for the mobile module.

Expand the Post Office and/or Distribution List trees, and check off the items you want to be dredged.

NOTE: If you desire to have a job backup a single user, or selected group of users, select the Users menu and assign the users desired

The screenshot shows the 'Mailboxes' tab in a configuration window. At the top are four tabs: 'Core Settings', 'Mailboxes', 'Notification', and 'Status'. The 'Mailboxes' tab is active. Below the tabs, the text reads: 'Assign the Post Offices and/or Distribution Lists to be included in this job. Distribution Lists *must* have System Visibility.' There are four rows, each with a plus icon in a box on the left and a label on the right. The labels are 'Mail Servers', 'Distribution Lists', 'Distribution Lists (exclude)', and 'Users'.

The Distribution List selection allows you to include or exclude a group of users from an archive job. If you want to use GroupWise Distribution Lists, the visibility needs to be set to “system wide”.

The users section allows you to select individual users to include, or exclude them from an archive job. For example: you can select an entire Mail Server to be archived, and then expand the users section to include or exclude users to the job.

This can also be used to select only certain users in the system for an archive job.

To add a user to the Include or Exclude list, select the respective ‘Add user’ button and search for the user. It can be helpful to unselect the ‘only show recently cached items’ option. Add the selected users to the list in the search window, then select ‘OK’ to add them to the include or exclude list.

Notification Tab

When a job is run, the Notification option allows the administrator to be emailed a summary and report of any errors, for each running job.

The screenshot shows the 'Notification' tab in a configuration window. At the top are three tabs: 'Core Settings', 'Notification', and 'Status'. The 'Notification' tab is active. Below the tabs, the text reads: 'You can have Retain e-mail a summary of errors that occurred after a device is processed. You may also specify the hour of the day to send the summary of activity.' There is a form with several fields: 'SMTP Mail Server' (mail.qa.gwava.com), 'SMTP Security Protocol' (unencrypted), 'SMTP Port' (25), 'SMTP Mail From Address' (Retain40@qa.gwava.com), 'SMTP To Address' (softwareqa@gwava.com), 'SMTP Username' (empty), 'SMTP Password' (masked with dots, with a note '(Password is default)'), 'Mail when errors occur' (checkbox), 'Enable summary reports' (checkbox), and 'Hour to send summary report (0-23)' (0). At the bottom is a 'Test Connection' button.

For notification to function correctly, the SMTP information for the desired SMTP server must be fully filled-out. How much information is required varies depending on the mail system used.

Status Tab

The Status tab displays the status of any currently running jobs, as well as the stats of the last completed job.

Core Settings

Notification

Status

Status [Refreshes in 6]

Job: brice-1 (4E57377E7FF223B76811B534E9470561)

	Current	Last	Overall
Job began	---	never	---
Job ended	---	never	---
Mailboxes	0	0	0
Messages Archived	0	0	0
Messages Processed	0	0	0
Messages Deleted	0	0	0
Errors	0	0	0
	Current	Last	Error
Mailbox			
MS			
Error			---

On some modules, currently running jobs may be terminated here. For the rest, this tab is informational only.

Next Step

Once a job has completed you can confirm the items are in the archive by checking the Search Message interface. See [“Using Retain’s Archives”](#) in the *Retain 4.10: User Guide*. .

Archiving Gmail (G Suite)

- ♦ [“Preparing Google Apps to Work with Retain”](#) on page 117
- ♦ [“Creating a Google Apps Module”](#) on page 129
- ♦ [“Setting a Google Apps Schedule”](#) on page 132
- ♦ [“Specifying a Google Apps Profile”](#) on page 132
- ♦ [“Setting Up a Google Apps Worker”](#) on page 137
- ♦ [“Creating a Google Apps Job”](#) on page 137

Preparing Google Apps to Work with Retain

You must configure the Google system to allow Retain access, then configure Retain to connect to Google through OpenID Connect by doing the following:

- ♦ [“Creating a Project”](#) on page 118
- ♦ [“Creating a Client ID Key”](#) on page 119

- ♦ [“Recording the Client Secret” on page 121](#)
- ♦ [“Creating a Service Account and Generating a P12 Certificate” on page 123](#)

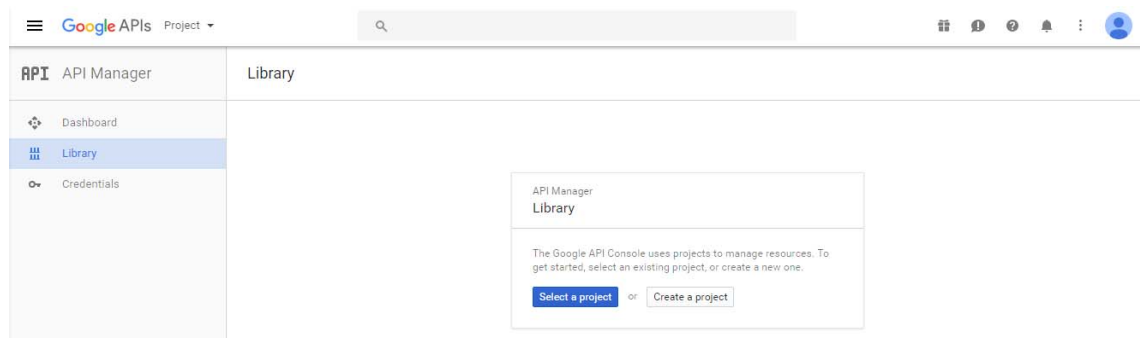
Creating a Project

Retain can leverage two-factor authentication on the Google system through OpenId Connect. To utilize OpenId Connect the Retain Server needs to be accessible from the Internet. The URL through which the Retain Server is accessible from the Internet must be specified. For this, you must create a Project and Client ID.

IMPORTANT: You must use the Google Apps Admin user when following the step below. If you use a user that has been given admin rights, the connection fails.

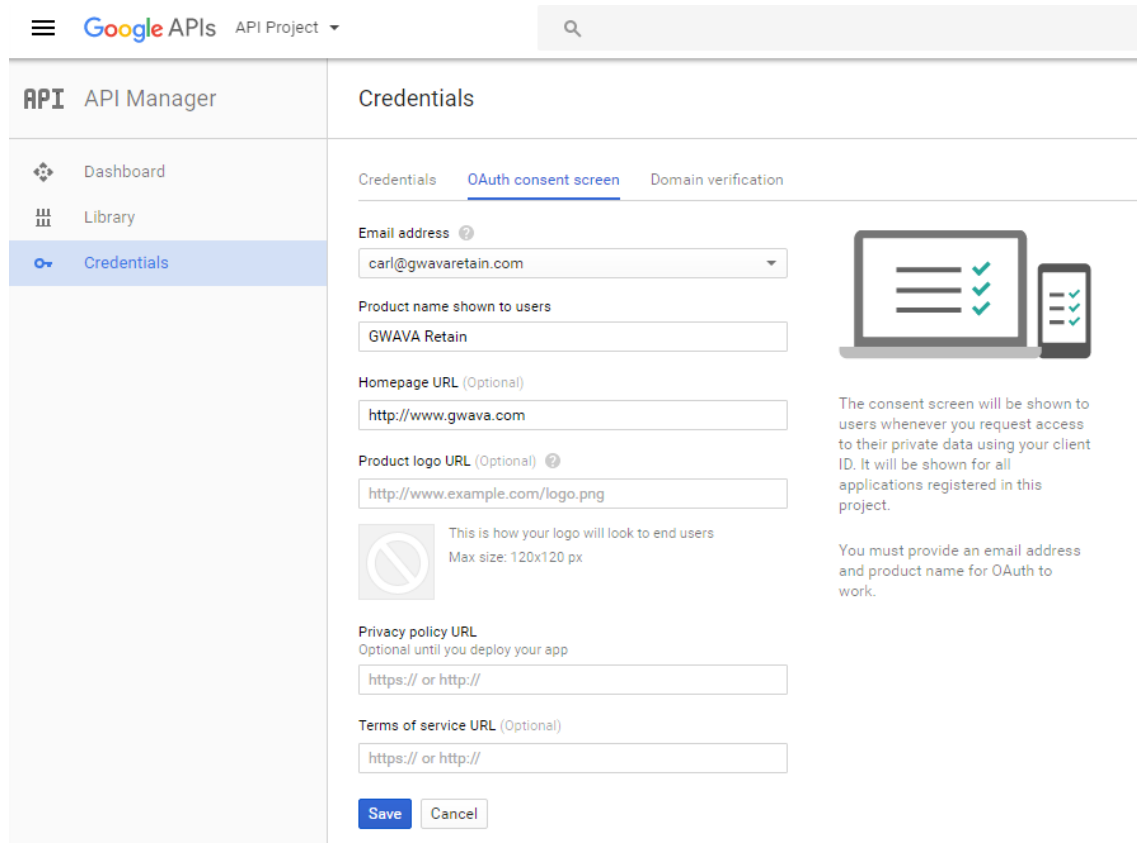
To configure OpenID Connect for Retain's use:

- 1 Go to the Google API Console, and select 'Create a project'



- 2 In the sidebar under "API Manager", select 'Credentials' and then select 'OAuth consent screen' tab.

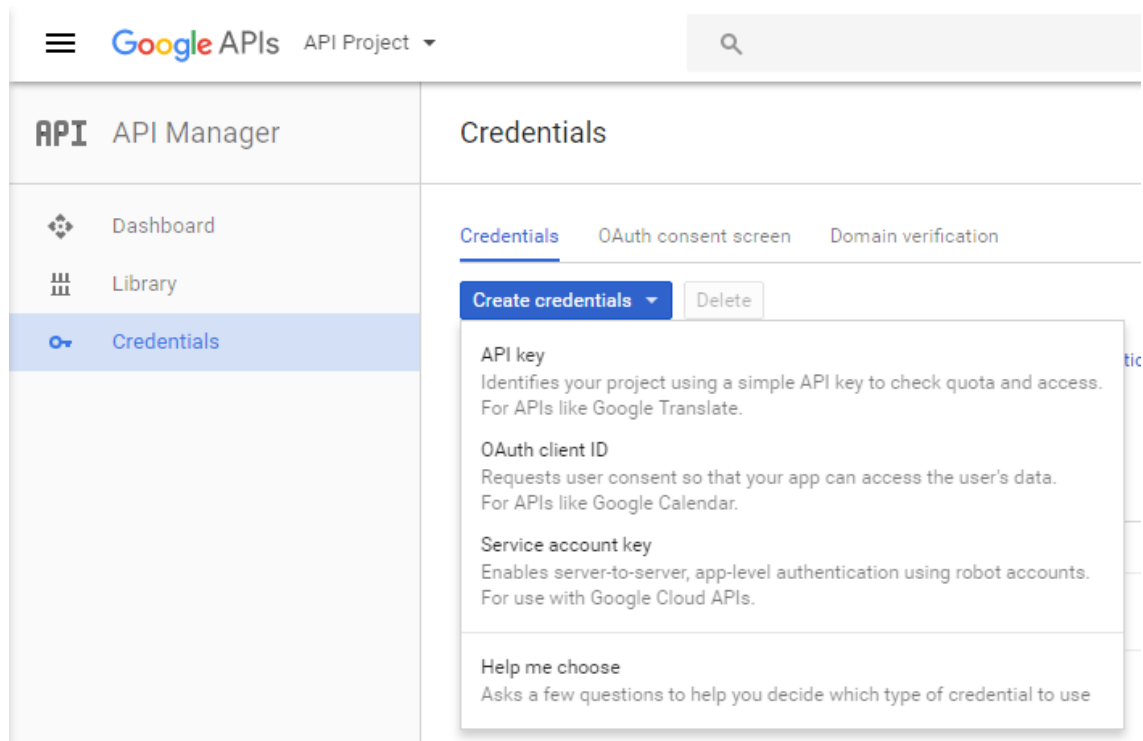
3 Choose an 'Email Address', specify a 'Product Name', and press 'Save'.



The screenshot shows the Google API Manager interface. On the left is a sidebar with 'API Manager' and navigation links for 'Dashboard', 'Library', and 'Credentials' (which is selected). The main area is titled 'Credentials' and has three tabs: 'Credentials', 'OAuth consent screen' (which is active), and 'Domain verification'. The 'OAuth consent screen' tab contains several form fields: 'Email address' (a dropdown menu showing 'carl@gwavaretain.com'), 'Product name shown to users' (a text box with 'GWAVA Retain'), 'Homepage URL (Optional)' (a text box with 'http://www.gwava.com'), 'Product logo URL (Optional)' (a text box with 'http://www.example.com/logo.png'), 'Privacy policy URL' (a text box with 'https:// or http://'), and 'Terms of service URL (Optional)' (a text box with 'https:// or http://'). There is also a placeholder for a product logo with a note: 'This is how your logo will look to end users. Max size: 120x120 px'. At the bottom are 'Save' and 'Cancel' buttons. On the right side of the form, there is an illustration of a laptop and a smartphone displaying consent screens with checkmarks, and a text block explaining that the consent screen will be shown to users when requesting access to their private data using the client ID, and that an email address and product name are required for OAuth to work.

Creating a Client ID Key

1 In the 'Credentials' tab, select the 'Create credentials' drop-down list, and select OAuth client ID



- 2 Under 'Application type', select 'Web application' and Specify a name. The origin field should be the Retain Server's URL.

If using two-factor authentication for GMail login, enter an Authorized redirect URL (e.g. `http://retain.mf_lab.com/RetainServer/Server/openIdConnect.jsp?`).

When complete, click Create.

API Manager

- Dashboard
- Library
- Credentials**

Credentials

[←](#)

Create client ID

Application type

- ☒ Web application
- ☐ Android [Learn more](#)
- ☐ Chrome App [Learn more](#)
- ☐ iOS [Learn more](#)
- ☐ PlayStation 4
- ☐ Other

Name

Retain

Restrictions

Enter JavaScript origins, redirect URIs or both

Authorised JavaScript origins

For use with requests from a browser. This is the origin URI of the client application. It can't contain a wildcard (http://*.example.com) or a path (http://example.com/subdir). If you're using a nonstandard port, you must include it in the origin URI.

http://retain.gwava.com

http://www.example.com

Authorised redirect URIs

For use with requests from a web server. This is the path in your application that users are redirected to after they have authenticated with Google. The path will be appended with the authorisation code for access. Must have a protocol. Cannot contain URL fragments or relative paths. Cannot be a public IP address.

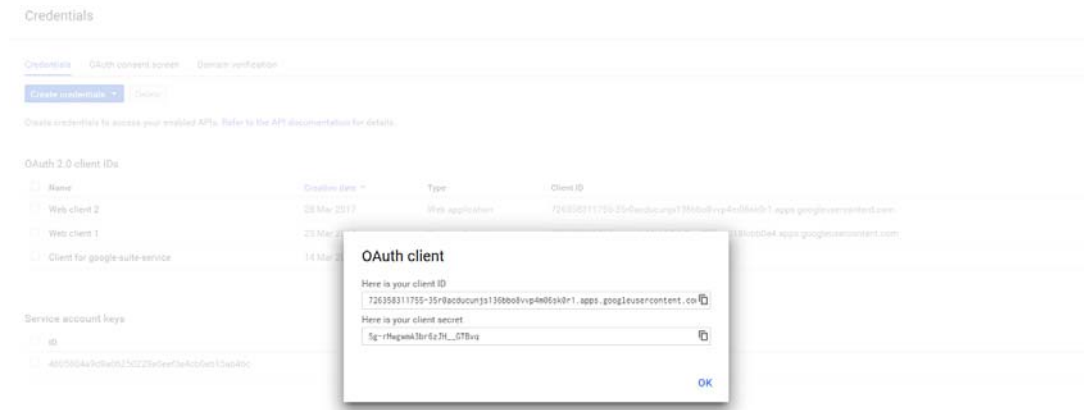
http://www.example.com/oauth2callback

Create Cancel

Recording the Client Secret

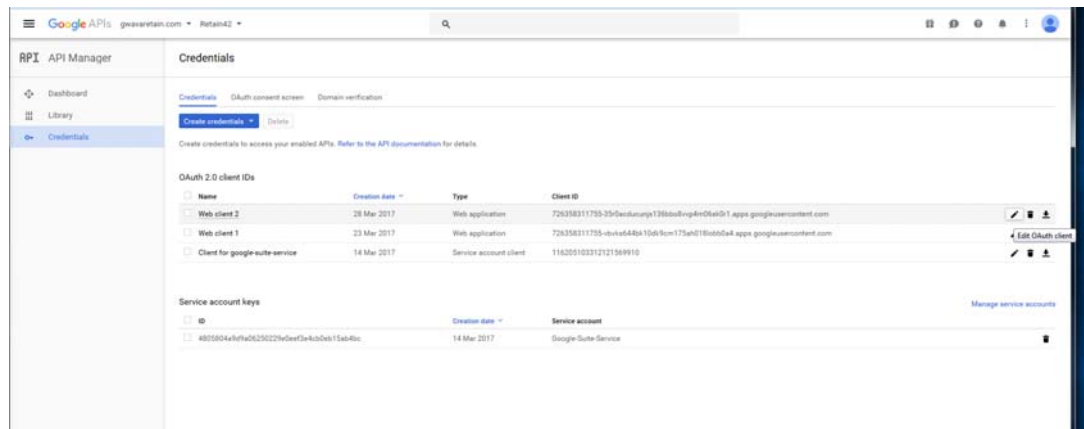
- 1 The OAuth client dialog box should be displayed. This dialog box contains the Client ID and Client secret.
 - ♦ Copy the Client ID and paste it into the Retain Client ID field in the Google Apps module configuration. Do not lose the client secret.

- ♦ OAuth access requires the secret and ID. *This is the only time the secret will be displayed.*



To obtain the client secret for an existing project:

1. Select the Web Client and click the *Edit OAuth Client* button



2. Copy the Client ID and Client Secret which is required to configure OpenId tab for Google apps module.

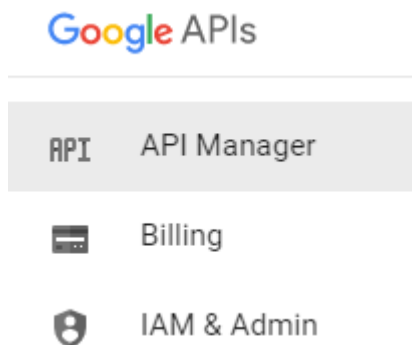
The screenshot shows the Google APIs console interface. On the left, a sidebar contains a hamburger menu icon and the text 'API Manager'. Below this, a list of navigation items includes 'Dashboard', 'Library', and 'Credentials', with 'Credentials' being the active selection. The main content area is titled 'Credentials' and features three buttons at the top: 'Download JSON', 'Reset secret', and 'Delete'. Below these buttons, the section 'Client ID for Web application' displays the following information:

Client ID	726358311755-350anducunjs136bbo8vvp4m06sk0r1.apps.googleusercontent.com
Client secret	Sg-rMwgwmA3br6zJH_GTBvq
Creation date	28 Mar 2017, 10:42:51

Below the table, there is a 'Name' field with the value 'Web client 2'. Underneath, the 'Restrictions' section is visible, with the instruction 'Enter JavaScript origins, redirect URIs or both'. It contains two sub-sections: 'Authorised JavaScript origins' and 'Authorised redirect URIs', each with a text input field. The 'Authorised JavaScript origins' field contains 'http://www.example.com'. The 'Authorised redirect URIs' field contains 'http://www.example.com/oauth2/callback'. At the bottom of the form, there are 'Save' and 'Cancel' buttons.

The OAuth Client needs to be enabled for domain-wide delegation to function. To enable domain-wide delegation, Retain requires a service account.

- 2 From the Products and Services hamburger menu at the top-left: Select IAM & Admin



Creating a Service Account and Generating a P12 Certificate

- 1 Select the 'Service Accounts' and click the 'Create service account' button

IAM & Admin

All projects

IAM

Quotas

Service accounts

Labels

Settings

Service Accounts

CREATE SERVICE ACCOUNT

DELETE

PERMISSIONS

Service accounts for project "API Project"

A service account represents a Google Cloud service identity, such as code running on Compute Engine VMs, App Engine app

Find a service account

Service account name	Service account ID	Key ID
Service account 1	131561450672-a9mfjgs1t07faficpe662q03kiuu085e@developer.gserviceaccount.com	6580f455282e6:6fe37e6d58036:ea4b5f3668c64:942707f225d5e

- 2 In the Create service account dialog, do the following:
 - 2a Type a name for the **Service account name** and **Service account ID** name.
Note the names specified for use when configuring Retain.
 - 2b Select **Furnish a new private key**.
Under **Key type**, select **P12**.
 - 2c Select **Enable G Suite Domain-wide Delegation**.
 - 2d Click **Create**.

Create service account

Service account name ?

Retain-Service

Role ?

Select a role

Service account ID

retain-service @civil-charmer-824.gwavaretain.com.iam.gservice

☒ **Furnish a new private key**
 Downloads a file that contains the private key. Store the file securely because this key cannot be recovered if lost.

Key type

☐ JSON
 Recommended

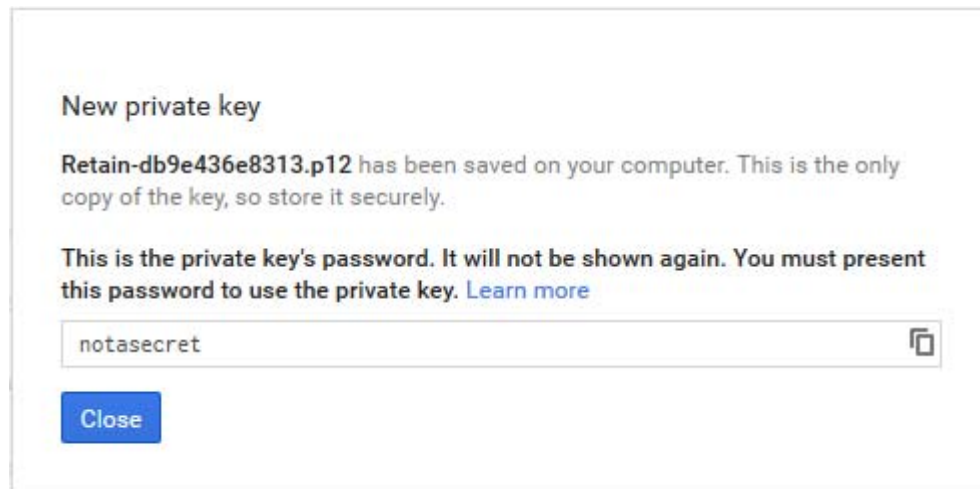
☒ P12
 For backward compatibility with code using the P12 format

☒ **Enable G Suite Domain-wide Delegation**
 Grants a client access to all users' data on a G Suite domain without manual authorisation on their part. [Learn more](#)

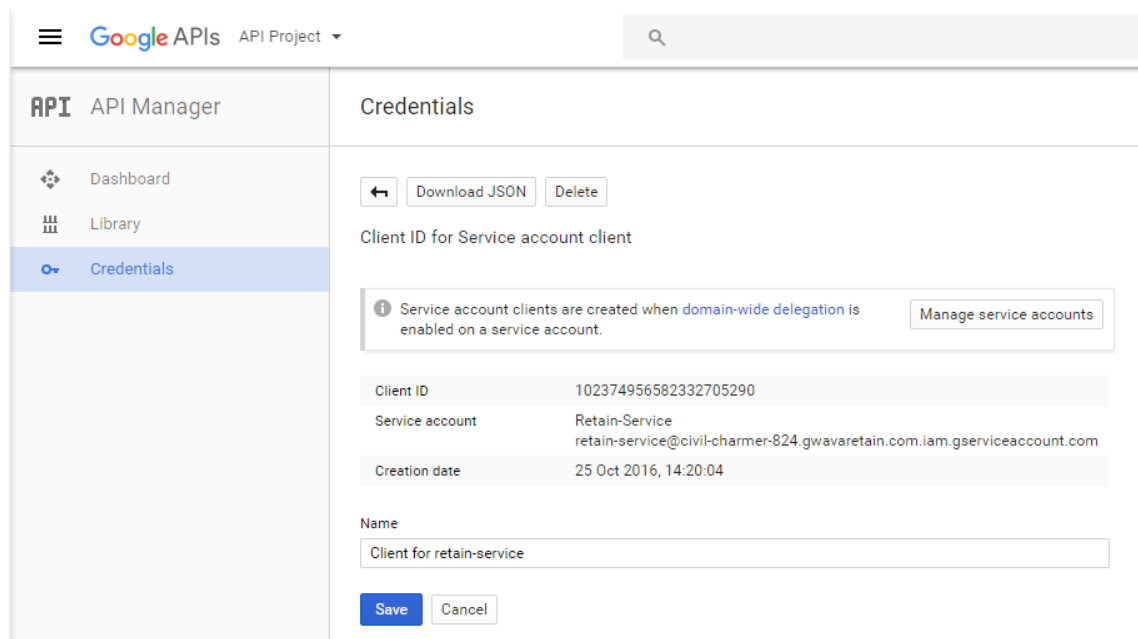
CANCEL

CREATE

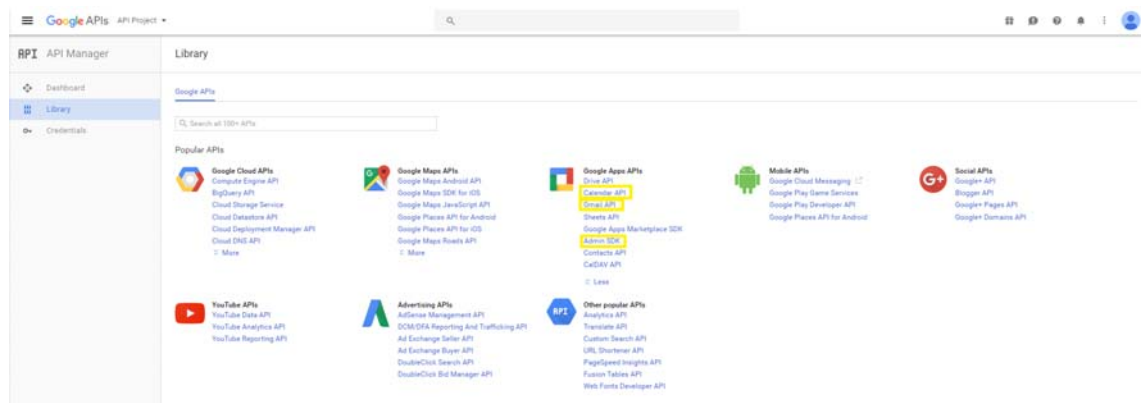
The key will be automatically created and downloaded to the local machine. Do not lose the P12 file. This is the only copy and it is required to configure Retain.



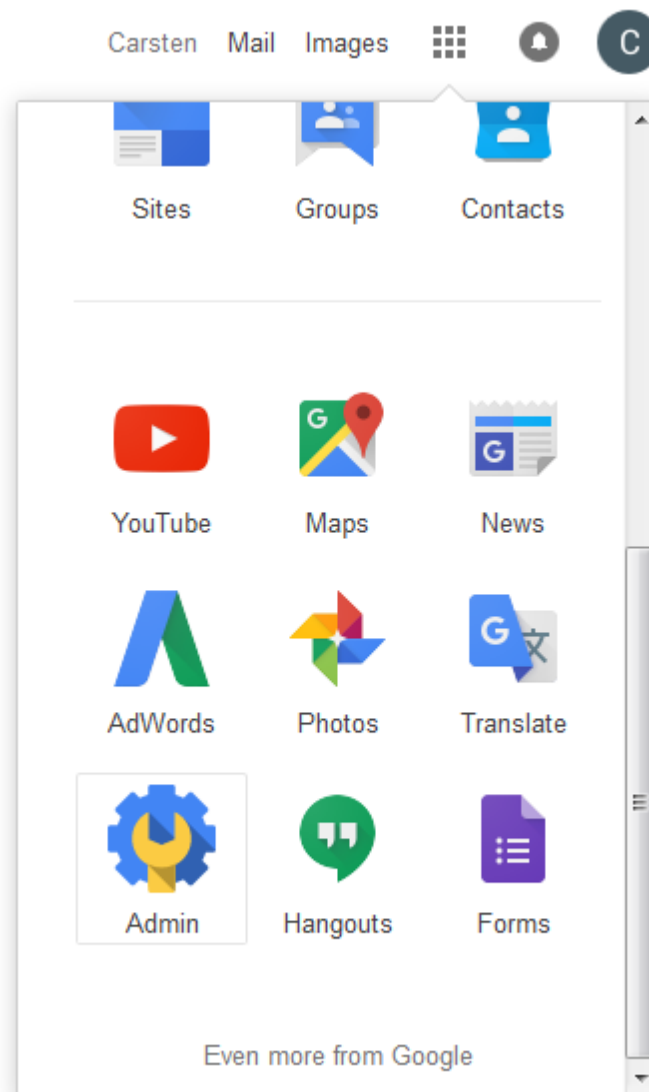
3 You will need the Client ID from the Service Account



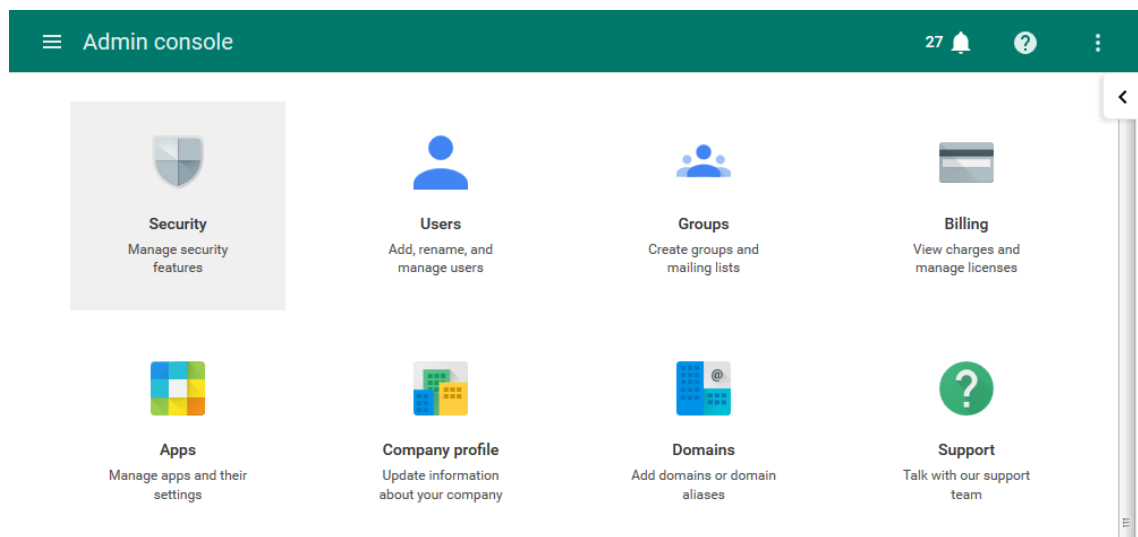
4 Go back to the API manager and enable: Calendar API, Gmail API and Admin SDK. Click on each one and click Enable on top.



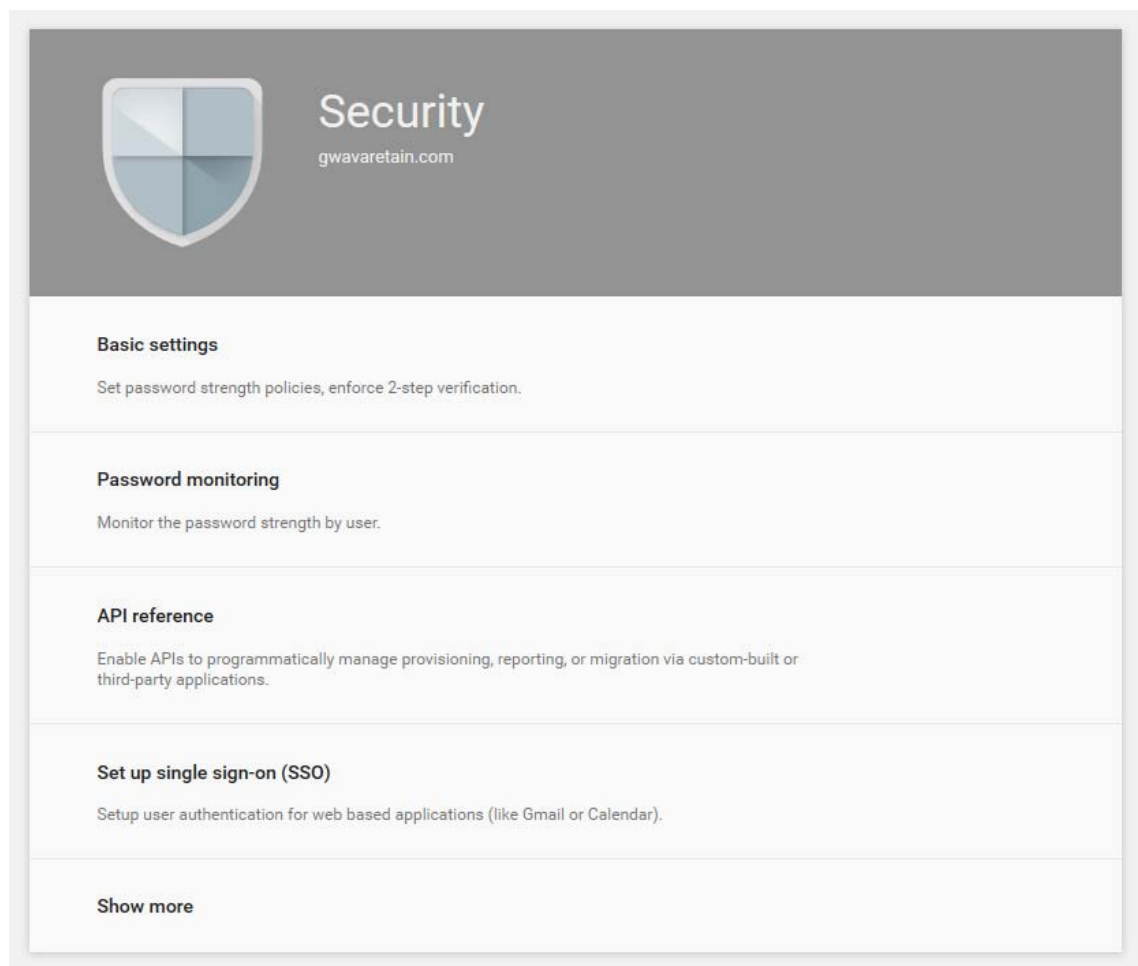
- 5 The last step is to authorize the domain. Browse to the Google home page and select 'Admin' from the drop down menu at the top right.



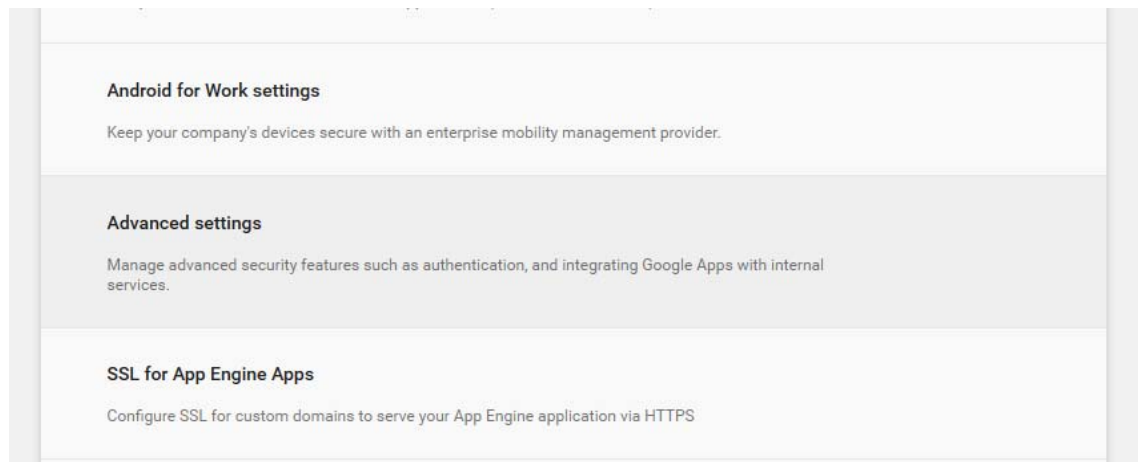
- 6 Select 'Security' from the administration menu.



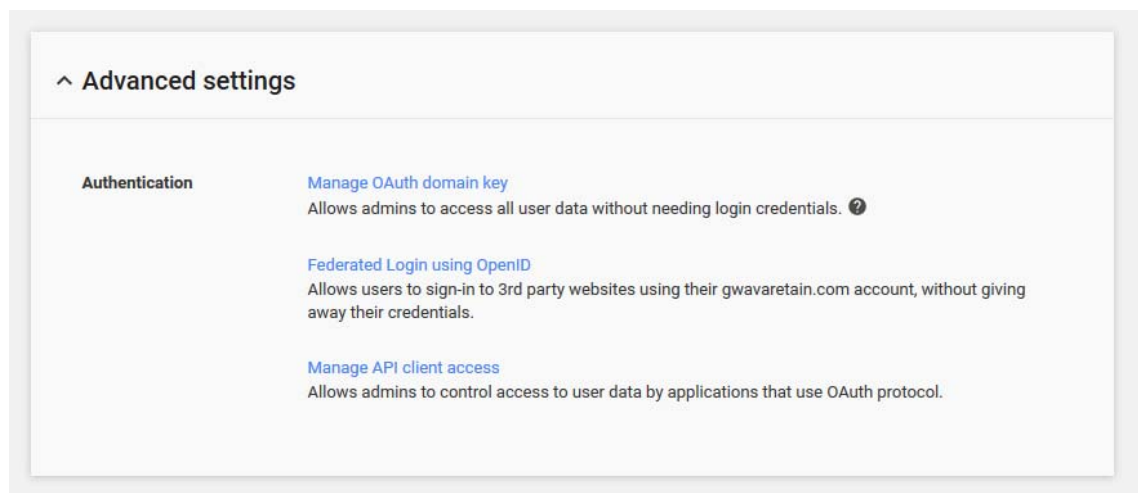
7 From the Security menu, click 'Show More'



8 Select the 'Advanced Settings' option.



9 On Advanced Settings, select 'Manage API client access'



10 In this window, enter the client ID created with the service account, and then input the entire domain the client will be accessing.

The Service Account name would be like Retain-Service as above and the API Scopes (listed in the module) would be:

<https://mail.google.com/> , <https://www.googleapis.com/auth/admin.directory.group> ,
<https://www.googleapis.com/auth/admin.directory.user> ,
<https://www.googleapis.com/auth/gmail.readonly>

Manage API client access
Developers can register their web applications and other API clients with Google to enable access to data in Google services like Calendar. You can authorize these registered clients to access your user data without your users having to individually give consent or their passwords. [Learn more](#)

Authorized API clients The following API client domains are registered with Google and authorized to access data for your users.

Client Name	One or More API Scopes
10237495658233270529d Example: www.example.com	https://mail.google.com/ , https://www.googleapis.com/auth/admin.directory.group Example: http://www.google.com/calendar/feeds/ (comma-delimited)
131561450672-a9mfga1t07aficpe662q03kiuu085e.apps.googleusercontent.com	https://mail.google.com/ Email (Read/Write/Send) https://mail.google.com/ View and manage the provisioning of groups on your domain https://www.googleapis.com/auth/admin.directory.group View and manage the provisioning of users on your domain https://www.googleapis.com/auth/admin.directory.user https://www.googleapis.com/auth/gmail.readonly
gwavaretain.com	This client has access to all APIs. Learn more

11 Once entered, click 'Authorize'.

All configuration required is now complete in Google Apps, and the information and files keys are available for configuration of Retain in “[Creating a Google Apps Module](#).”

Creating a Google Apps Module

IMPORTANT: To create a Google Apps Module, you must first complete the instructions in “[Preparing Google Apps to Work with Retain](#)” on page 117.

- ♦ “[Core Settings Tab \(Google Apps Module\)](#)” on page 129
- ♦ “[Settings Tab \(Google Apps\)](#)” on page 130
- ♦ “[Open ID Tab \(Google Apps module\)](#)” on page 131

Core Settings Tab (Google Apps Module)

Google Apps

Connections to Google Apps are configured here.

Core Settings Settings OpenId

Core Settings

Normally all of these entries should be enabled.

- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name	Googleapps-1
Enable Address Book Caching	☒
Enable Authentication	☒
Enable Jobs	☒

Normally this entry should be disabled.

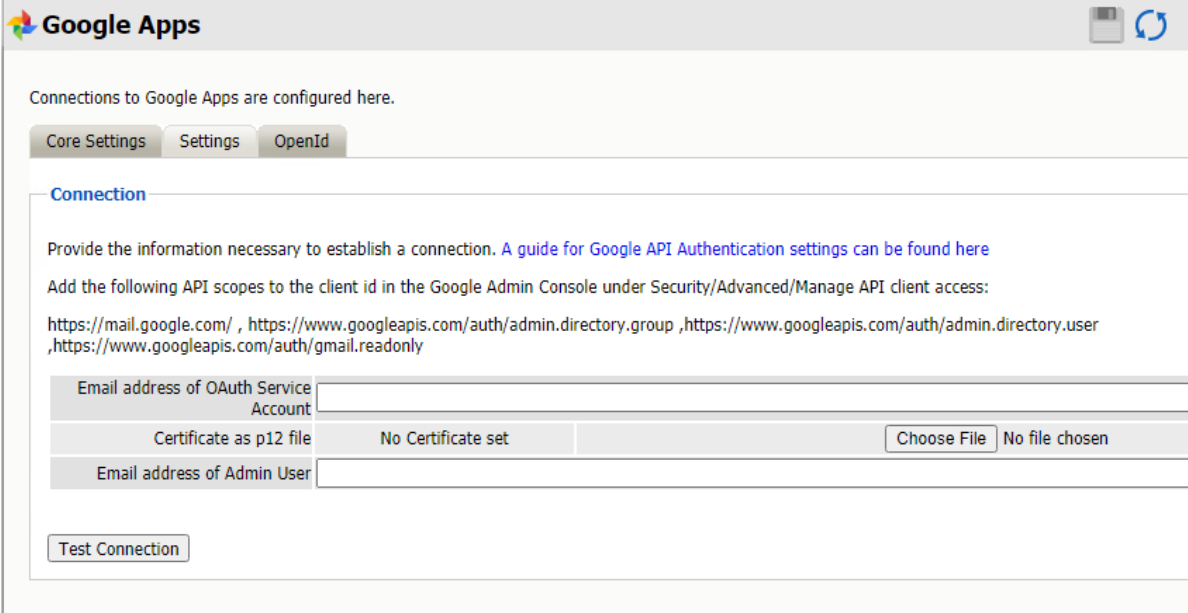
- Send Google Apps items to an external system.

Select Send Method disabled

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Google Apps-Configure](#) > [Core Settings](#)

- 1 Configure the Core Settings options as follows:
 - ♦ Module Name: Type a name for the module.
 - ♦ Enable Address Book Caching: This lets Retain gather and maintain a list of users
 - ♦ Enable Authentication: This is required for users to authenticate and access the Retain message store.
 - ♦ Enable Jobs: This must be enabled for Google App jobs to run.
- 2 The Send Method lets you send Google Apps message items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

Settings Tab (Google Apps)



The screenshot shows the 'Google Apps' settings interface. At the top, there's a header with the Google Apps logo and a refresh icon. Below the header, a message states 'Connections to Google Apps are configured here.' There are three tabs: 'Core Settings' (selected), 'Settings', and 'OpenId'. The 'Connection' section is active, displaying instructions on how to establish a connection, including a link to a guide for Google API Authentication settings. It lists the required API scopes: `https://mail.google.com/`, `https://www.googleapis.com/auth/admin.directory.group`, `https://www.googleapis.com/auth/admin.directory.user`, and `https://www.googleapis.com/auth/gmail.readonly`. Below this, there are input fields for the 'Email address of OAuth Service Account', a 'Certificate as p12 file' section with a 'Choose File' button and 'No file chosen' text, and an 'Email address of Admin User' field. A 'Test Connection' button is located at the bottom of the form.

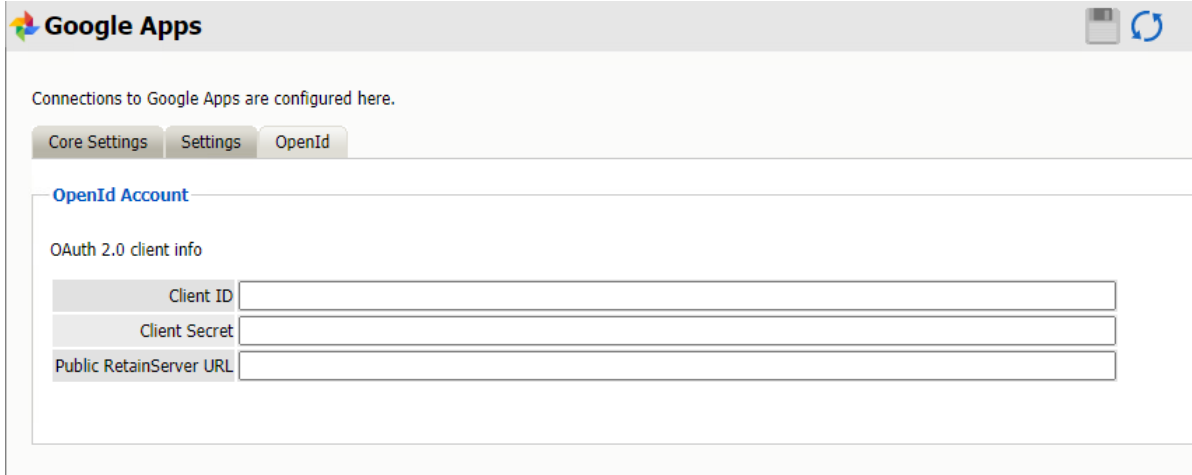
Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Google Apps-Configure](#) > [Settings](#)

In order to connect to the Google system, Retain requires the email address of the Admin user OAuth Service Account and a p12 Certificate for authentication. Retain archives the Gmail system through IMAP, and will login and download the message data to the Retain data store.

Test the connection to ensure that the configuration has been completed correctly.

Jobs and profiles for Gmail will not be visible until the address book has been cached. After the module has been cached, all configuration options for profiles, workers, schedules, jobs, and data storage will be enabled and visible.

Open ID Tab (Google Apps module)



The screenshot shows the 'Google Apps' configuration window. At the top, there's a header with the Google Apps logo and a refresh icon. Below the header, a message states 'Connections to Google Apps are configured here.' There are three tabs: 'Core Settings', 'Settings', and 'OpenId'. The 'OpenId' tab is selected. Under the 'OpenId Account' section, it says 'OAuth 2.0 client info'. There are three input fields: 'Client ID', 'Client Secret', and 'Public RetainServer URL'.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Google Apps-Configure](#) > [OpenID](#)

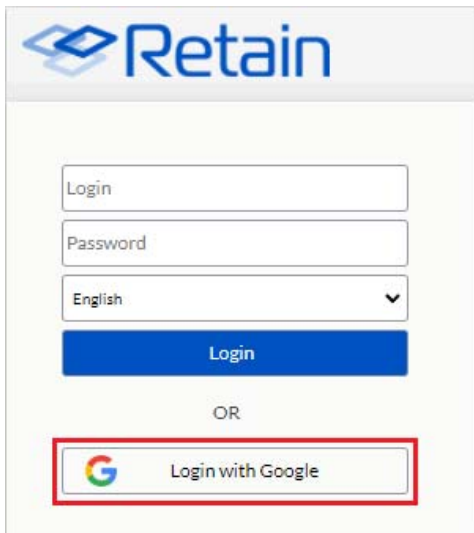
Configure the OpenId tab in Retain by inputting the Client ID, the Client Secret, and the Public RetainServer URL and saving changes.

IMPORTANT: The public RetainServer URL is `http://yourdomain.com/RetainServer`.

Only specify up to the `/RetainServer` portion of the URL, the rest is automatically supplied in the request. If you specify the path after your domain name, users receive a connection error.

If Retain has been configured with OpenId credentials, the Login Page automatically displays an option to log in with Google credentials.

IMPORTANT: You can require that GSuite users only [use the Login button](#). If you don't do this, they can still enter a username and password, which is fine, but the password they use must be an assigned App Password. For more information, see "[Authentication Part 1: Username/Password or OpenID Connect](#)" and "[When Google and Office 365 Systems Require an App Password](#)" in the [Retain 4.10: How Retain Works](#) guide.



The image shows the Retain login interface. At the top is the Retain logo. Below it are three input fields: 'Login', 'Password', and a language dropdown menu currently set to 'English'. A blue 'Login' button is positioned below the language dropdown. Below the button is the text 'OR'. At the bottom is a 'Login with Google' button, which features the Google logo and is highlighted with a red rectangular border.

If the user is currently logged-in to their Gmail account, clicking the **Login with my Google account** button automatically logs them in to Retain.

Setting a Google Apps Schedule

If you have not already created one or more schedules for use with your Google Apps Job, go to [“Creating Schedules” on page 11](#) and complete the task now.

Specifying a Google Apps Profile

After you have created a Google Apps Module and one or more schedules, you can create a Google Apps Profile.

- 1 To begin configuring the Google Apps Profile, open [Retain Server Manager > Data Collection > Profiles > Google Apps](#)
- 2 Click **Google Apps > Add Profile**.
- 3 Use the information in the sections that follow to configure each tab.

Core Settings Tab (Google Apps Profile)



The image shows the 'Core Settings' tab of a Google Apps Profile configuration page. At the top, the 'Profile Name' is set to 'Google Apps-1'. Below this are five tabs: 'Core Settings' (which is selected), 'Message Settings', 'Scope', 'Miscellaneous', and 'Advanced'. Under the 'Core Settings' tab, there is a section titled 'Profile Functions' with a single checkbox labeled 'Enable Archiving (store messages in Retain)', which is currently checked.

Path: [Retain Server Manager > Data Collection > Profiles > Google Apps > Select a Profile > Core Settings](#) tab

The profile will not become active and will not allow jobs to be run unless the profile is enabled. Enable the profile by placing a check mark in the 'Enable Archiving' checkbox.

Message Settings Tab (Google Apps Profile)

The screenshot shows the 'Message Settings' tab for a profile named 'Google Apps-1'. The tab is part of a settings interface with other tabs: 'Core Settings', 'Message Settings' (selected), 'Scope', 'Miscellaneous', and 'Advanced'. Under the 'Message Settings' tab, there are two sections: 'Item Source' and 'Message Status'. The 'Item Source' section states 'Messages are classified in one of these categories. You may restrict the storage of messages if desired.' and has three checked checkboxes: 'Received', 'Sent', and 'Draft'. The 'Message Status' section states 'You can restrict the storage of messages based upon the setting of various status flags.' and has a 'Read is' dropdown menu set to 'Doesn't matter'.

Profile Name

Core Settings Message Settings Scope Miscellaneous Advanced

Item Source

Messages are classified in one of these categories. You may restrict the storage of messages if desired.

☒ Received ☒ Sent ☒ Draft

Message Status

You can restrict the storage of messages based upon the setting of various status flags.

Read is

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > [Select a Profile](#) > **Message Settings** tab

The Message Settings tab contains the source and status settings for the messages to be archived. Message types and sources which are checked will be archived in this profile.

Any item type or status which is not selected or specified will exclude qualifying items from being archived in Retain.

Scope Tab (Google Apps Profile)

The screenshot shows the 'Scope' tab for a profile. The tab is part of a settings interface with other tabs: 'Core Settings', 'Message Settings', 'Scope' (selected), 'Miscellaneous', and 'Advanced'. Under the 'Scope' tab, there are two sections: 'Date Range to Scan' and 'Advance Flags'. The 'Date Range to Scan' section has a dropdown menu set to 'New items'. The 'Advance Flags' section states 'You may not want to advance the flag after running the job.' and has an unchecked checkbox labeled 'Don't Advance Timestamp'.

Core Settings Message Settings Scope Miscellaneous Advanced

Date Range to Scan

Advance Flags

You may not want to advance the flag after running the job.

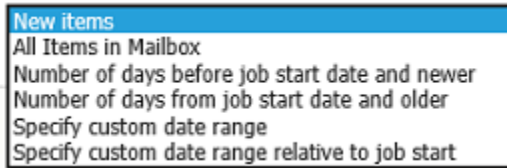
☐ Don't Advance Timestamp

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > [Select a Profile](#) > **Scope** tab

This is the most critical tab to fill out as it sets the limits on how much to archive.

Date Range to Scan

The Date Range determines which message items are collected, depending on the date of the message.



New Items: All items that have not been archived by Retain since the last time the job ran.

All Items in Mailbox: All items in the mailbox starting from 1/1/1970, duplicates will be processed but not stored if they already exist in the Retain archive.

Number of days before job start date and newer: Only items from the relative number of days from the time the job began will be archived. E.g. messages that came into the email system 7 days ago or less.

Number of days from job start date and older: Only items previous to the relative number of days from the time the job began will be archived. E.g. messages that came into the email system 7 days ago or more.

Specify custom date range: Only items between two absolute dates will be dredged.

Specify custom date range relative to job start: Only items between two relative dates will be dredged. E.g. messages that came into the email system between 7 and 5 days ago.

Advance Flags

Enabling "Don't Advance Timestamp" will not update the timestamp flag. Items that are dredged will still be considered new by Retain the next time the job runs.

This is useful when troubleshooting, but is generally not used for normal jobs.

Miscellaneous Tab

The screenshot shows the 'Miscellaneous' tab selected in a settings interface. At the top, there is a 'Profile Name' field containing 'Google Apps-1'. Below this are five tabs: 'Core Settings', 'Message Settings', 'Scope', 'Miscellaneous' (which is highlighted), and 'Advanced'. The 'Miscellaneous' section has a title 'Miscellaneous' in blue. It contains a paragraph: 'You can save disk space by restricting attachment storage. You can also attach the Routing Properties to the message, if desired.' Below this are two radio buttons: 'Store all attachments' (which is selected) and 'Don't store any attachments, other than the message'. Another paragraph follows: 'You may choose to store Sent Items properties, and/or store and index the Internet Headers. Both of these (particularly Sent Items properties) exact a performance penalty. However, it may be worthwhile to store and index the Internet Header if your compliance policy then allows Retain to choose to skip storing MIME.822 (which consumes lots of disk space since it's not usually single-instanceable).' At the bottom of this section is a checkbox labeled 'Store/index Internet Headers' which is currently unchecked.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > [Select a Profile](#) > **Miscellaneous tab**

The miscellaneous tab allows the configuration to allow or deny archiving and indexing of attachments in Retain. If attachments are to be archived, they may also be indexed to provide searching capability in the browse messages interface.

Advanced Tab

Generally, since storage space is inexpensive, Micro Focus recommends that you archive all message content.

However, if you need to limit what is archived, you can use the Advanced tab to do it.

The screenshot shows the 'Advanced' tab selected in the same settings interface. The 'Advanced' tab is highlighted. The 'Advanced Criteria' section has a title 'Advanced Criteria' in blue. It contains a paragraph: 'You may add advanced criteria such as specific attachment names, sizes, subject here.' Below this is an 'Add' button. The 'Folder Scope' section has a title 'Folder Scope' in blue. It contains a paragraph: 'Normally, you want to include all folders in your scan. However, you may have specific reasons to include or exclude folders. Choose a folder root, an optional subfolder (you may have multiple subfolders with the \ delimiter, and whether to include all subfolders in the pattern).' Below this is a dropdown menu currently showing 'Items from All Folders'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > [Select a Profile](#) > **Advanced tab**

Table 1-32 *Configuring Google Apps Profile Advanced Settings*

Option, Field, or Sub-panel	Information and/or Action
Use this dialog to define the conditions Retain uses to determine what to archive.	
Advanced Criteria	Each line sets a specific parameter and the lines are all added together (AND-ed). To check how Retain will interpret your settings, read through the lines in turn, inserting AND between each one. - For the first field, select from among the following items: ◆ Subject ◆ Sender ◆ Recipient ◆ Size ◆ Attachment Name - For the second field, specify the relationship of the first field to the (third field): ◆ is ◆ is not ◆ contains ◆ does not contain - Type a string for the third field. - Click Add to enter another statement - When the conditions are defined, click Save Changes.
Folder Scope	By default, Retain archives the items from all folders. Using this panel, you can restrict which folders are archived, by either: ◆ Specifying the folders to include (the Only items from folders listed below option) or ◆ Specifying the folders to exclude (the All folders except those listed below option) To specify the folders to include or exclude, do the following: - Specify a System Folder (mandatory). Example: Calendar. - Optionally, specify a subfolder within that folder. Example: entering old would mean the folder old under Calendar. - Use the / delimiter to specify multiple hierarchies under that. Example: old/mail would mean the subfolder mail under old under Calendar. - Specify whether the option includes subfolder. Example: If you specify old and deselect includes subfolder, then Calendar/old is archived. If you specify old and select includes subfolder, Calendar/old/mail is archived.

Setting Up a Google Apps Worker

If you have not already created one or more Workers for use with your Google Apps Job, go to [“Creating Workers” on page 13](#) and complete the tasks there.

Creating a Google Apps Job

All data collection for Google Apps is configured through the Google Apps job interface. The jobs here combine the Profile, the Schedule, and a Worker together to archive a specified mailbox, distribution list, or domain. A Job must have a Profile, Schedule, Worker, and a target, mailbox, list, or domain, before it can be saved or run.

The Schedule, Profile, and Worker selected here will determine what is archived, when it is archived, and what worker does the actual archival work. The Job **MUST** be enabled to run. Only previously configured Schedules, Profiles, and Workers can be selected.

Core Settings Tab (Google Apps Job)

Core settings allows you to enable the job and set the Schedule, Profile and Worker needed to run the job.

Job

Google-Apps-1

Core Settings

Mailboxes

Notification

Status

Core Settings

Job enabled

☒

Each Job must have the following assigned to it:

•

schedule

- How often to run

•

profile

- What to do when running

•

worker

- Where to run the job

Schedule

(none)

▼

Profile

(none)

▼

Worker

(none)

▼

Items archived with this job can optionally be set with an "expiration timestamp" which the Deletion Manager can use to remove obsolete items. The expiration timestamp can only be extended, never reduced.

Enable data expiration

☐

Expire in

0

Days

▼

Base Expiration Time on

Date Item is stored in Retain (recommended)

▼

Some customers may wish to override the default expiration settings for specific folders. You may specify these folders below - any folders that do NOT meet these criteria will have the expiration settings specified above applied. If you only want the folders to have expiration policies, enter -1 above for the base expiration value.

Add

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > [Job Name](#) > **Core Settings**

The Data Expiration is an option to place a timestamp on the mail in the Retain database, which allows for ease of automation for the deletion manager. In addition, devices such as NetApp and Hitachi HCAP may use this number to enforce hardware level protection of the stored item so that no one (including Retain) may delete the item before its expiration date.

Job Expiration is not retroactive for mail in the database, and only applies to mail archived by the job that it is active for. The base folders and criteria are specified under the custom expiration dates accessed through the 'Add' button at the bottom. All messages included in any specified folders will have a different date or be exempted from the standard expiration date. To have messages with custom job or folder expiration dates properly expire, the deletion management date scope must be set to delete messages with an Expiration Date older than 1 day.

Mailboxes Tab (Google Apps Job)

The mailboxes tab is where the administrator specifies which entities (mail servers and/or Distribution Lists) are to be scanned.

Expand the Post Office and/or Distribution List trees, and check off the items you want to be dredged.

NOTE: If you desire to have a job backup a single user, or selected group of users, select the Users menu and assign the users desired.

The screenshot shows the 'Mailboxes' tab selected in the 'Core Settings' section. At the top, there is a 'Job' dropdown menu set to 'Google-Apps-1'. Below the tabs, the 'Mailboxes' section is titled. A note states: 'Assign the Post Offices and/or Distribution Lists to be included in this job. Distribution Lists *must* have System Visibility.' There are three input fields with expand/collapse icons (+/-) to the left. To the right of these fields are three funnel icons with corresponding labels: 'Mail Servers', 'Distribution Lists', and 'Distribution Lists (exclude)'. At the bottom left, there is a '+ Users' link.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > [Job Name](#) > **Mailboxes**

The users section allows you to select individual users to include, or exclude them from an archive job. For example: you can select an entire Mail Server to be archived, and then expand the users section to include or exclude users to the job.

This can also be used to select only certain users in the system for an archive job.

To add a user to the Include or Exclude list, select the respective 'Add user' button and search for the user. It can be helpful to deselect the 'only show recently cached items' option.

Add the selected users to the list in the search window, then select 'OK' to add them to the include or exclude list.

Notification Tab (Google Apps Job)

When a job is run, the notification option allows the administrator to be emailed a summary of each running job if desired.

The screenshot shows the 'Notification' tab for a job named 'Google-Apps-1'. The tab is selected among 'Core Settings', 'Mailboxes', 'Notification', and 'Status'. Below the tab name, a message states: 'You can have Retain e-mail a summary of operations and/or errors that occurred when the job completes.' A table of settings follows:

SMTP Mail Server	
SMTP Security Protocol	unencrypted ▼
SMTP Port	25
SMTP Mail From Address	Retain@microfocus.com
SMTP To Address	
SMTP Username	
SMTP Password	(Password is not set)
Mail when errors occur	☐
Mail summary when job complete	☐

At the bottom of the settings table is a 'Test Connection' button.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > *Job Name* > **Notification**

For notification to function correctly, the SMTP information for the desired SMTP server must be fully filled-out. How much information is required varied depending on the mail system used.

Status Tab (Google Apps Job)

The Status tab displays the status of any currently running jobs, as well as the stats of the last completed job.

The screenshot shows the 'Status' tab for a job named 'Google-Apps-1'. The tab is selected among 'Core Settings', 'Mailboxes', 'Notification', and 'Status'. Below the tab name, it says 'Status [Refreshes in 10]'. The main content area displays the message: 'A new job is being created'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > *Job Name* > **Status**

This tab is informational only unless a job is currently running. If the selected job is running, an option to abort the job is displayed.

This window will refresh every ten seconds to keep you up to date as to the status of the selected job. The completed line is displayed during an active job. The completed status is a display of how many mailboxes have been completed, the job mailbox total, and gives an incrementing percentage for the amount completed. This amount is based entirely on the number of mailboxes, not the amount of mail. Because the last mailbox could be larger than the rest of the system, this percentage may not be accurate according to time.

You may now configure Schedules, Workers and Jobs.

Once a job has completed you can confirm the items are in the archive by checking the Search Message interface. See [“Using Retain’s Archives”](#) in the *Retain 4.10: User Guide*. .

Archiving GroupWise

- ♦ [“Creating a GroupWise Module”](#) on page 140
- ♦ [“Setting a GroupWise Schedule”](#) on page 147
- ♦ [“Specifying a GroupWise Profile”](#) on page 147
- ♦ [“Setting Up a GroupWise Worker”](#) on page 157
- ♦ [“Creating a GroupWise Job”](#) on page 157

Creating a GroupWise Module

- ♦ [“Prerequisites of the GroupWise Module”](#) on page 140
- ♦ [“Core Settings Tab”](#) on page 142
- ♦ [“SOAP Tab”](#) on page 143
- ♦ [“LDAP Tab”](#) on page 144
- ♦ [“GroupWise Proxy Accounts”](#) on page 146
- ♦ [“Next Step”](#) on page 146

The GroupWise module enables Retain to archive messages from GroupWise. The GroupWise module must be fully configured before Retain can archive or communicate with the GroupWise mail system.

Other tools that work with the GroupWise Module:

- ♦ [GroupWise Client Plugin](#)
- ♦ [GroupWise WebAccess Plugin](#)
- ♦ A [Stubbing Server](#) can be installed which allows users to search the Retain archive from their GroupWise client. (See [“Performing Retain Searches Within The GroupWise Client”](#) in *Retain 4.10: Configuration and Administration*.)
- ♦ [GroupWise Archive Migration Tool](#)

Prerequisites of the GroupWise Module

Before beginning you should gather the following information:

- ♦ IP Address and SOAP port of a Post Office Agent (POA)
- ♦ A Trusted Key Name and Trusted Application Key

Browse to the GroupWise Administration page. Under *System | Trusted Applications*, create a key called Retain and export the key. You need this for the SOAP section below.

The screenshot shows the 'Trusted Applications' dialog box in the GroupWise Administration interface. The 'Retain' key is selected in the list on the left. The main configuration area for the 'Retain' key is displayed, showing the following settings:

- Name: Retain
- Description: Trusted App key for Retain archiving
- ☐ Restrict use of the trusted app key to connections from:
 - Address: [Empty text box]
 - Port: 0 [Spin box]
 - ☐ Require SSL
- ☒ Provides Message Retention Service
- ☐ Allow access to archive service
 - Archive Service Address: [Empty text box]
 - Port: 0 [Spin box]
 - ☐ Require SSL

At the bottom of the dialog are buttons for '?', 'OK', 'Cancel', and 'Close'.

- ♦ Enable Message Retention Services in GroupWise, so that users cannot delete messages before they are stored by Retain.

Setting up the GroupWise Module

The GroupWise module page opens first with the Core Settings.

Core Settings Tab

 **GroupWise Module**

GroupWise specific information is configured here. At a minimum, the CORE SETTINGS and SOAP tabs must filled out completely.

Core Settings

SOAP

LDAP

Proxy

Core Settings

Normally all of these entries should be enabled.

- Enable Address Book Caching determines if this module caches address book entries from its directory services during Maintenance.
- Enable Authentication indicates if users logging into Retain should be able to use the module's authentication system.
- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name	Groupwise-1
Enable Address Book Caching	☒
Enable Authentication	☒
Enable Jobs	☒
Show shared folders	☐

Make shared folders visible for non owners, based on current rights from Groupwise

Set Storage Flags

If you are using either the Purge or Retention features in GroupWise, you probably want these to be advanced automatically as items are stored so users may delete messages in their mailbox that have been stored by Retain.

☐ Retention Flag ☐ Purge Flag

Normally this entry should be disabled.

- Send GroupWise items to an external system.

Select Send Method

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [GroupWise-Configure](#) > **Core Settings**

Normally all the checkbox options on this tab are enabled. It is rare that you would ever deselect any of them. Two cases where you might, would be: troubleshooting (as instructed by Technical Support), and retiring an old email system.

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send GroupWise items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

The Enable Address Book Caching function allows Retain to regularly cache the online email system's address book and synchronize it with Retain. This is critical for administration, authentication, and archiving purposes. It is recommended to cache the Address Book once every 24 hours to keep the Retain storage system up to date. By default, maintenance is set to cache the Address Book once every 24 hours.

The Enable Authentication checkbox determines if end-user authentication is performed when the user logs into Retain. If it is deselected, the Retain system cannot authenticate the user against the email system and the user cannot log in unless another authentication method is enabled.

The Enable Jobs checkbox determines whether data can be retrieved and passed to the Worker. Even if the individual job is fully configured and enabled, if this option is disabled, no jobs configured for this module are run.

Set Storage Flags Section

If you have Retention Services enabled, which we highly recommend, you should keep the Retention and/or Purge flags updated, depending on what you are using. Generally, you would use the Retention flag for Retain and the Purge flag for your backup software, such as GroupWise Disaster Recovery.

You would enable Retention Services in GroupWise Administration under Domain or Post Office. Then in Client Options, Integrations, Retention, and Enable Message Retention Service.

This would be used in conjunction with a Trusted App Key which the GroupWise module needs for the SOAP tab.

The Send Method lets you send GroupWise items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

SOAP Tab

 **GroupWise Module**

GroupWise specific information is configured here. At a minimum, the CORE SETTINGS and SOAP tabs must filled out completely.

Core Settings

SOAP

LDAP

Proxy

Trusted Application Key Generation

Retain uses the Trusted Application feature of GroupWise to access the user mailboxes. You must generate a trusted application key to continue.

Enter the name and key of a Trusted Application you wish to use as defined in GroupWise administration.

Trusted Key Name

Retain

Trusted Application Key:

(Password is not set)

GroupWise SOAP Access

POA Host Name

127.0.0.1

SOAP Port

7191

Enable SSL

☐

Test Connection

Post Office Redirection Tables

✚ Mail Servers

Path: Retain Server Manager > Configuration > Module Configuration > GroupWise-Configure > SOAP

Provide the POA Host Name and SOAP port. IP addresses are acceptable, but host names are preferred as IP addresses can change. SSL is supported, but it slows down the archiving process. Create a Trusted Application key for Retain, either manually from GroupWise Administration, System, Trusted Applications in GroupWise 2014 or above or Console One for GroupWise 2012 or earlier.

The SOAP access information must be provided, and the connection tested and verified before the system can connect. After providing the required information, click the 'Test Connection' button. The results are displayed. A connection is required for Retain to archive messages from GroupWise.

Test Connection

Initiate Soap Connection.
Use the following parameters:
host:port= 10.1.12.19:7191
trustname=Retain, trustkey=58E6....
ssl=false

SUCCESS: Connected to AmandeepK
For a more stringent test, be sure to refresh the Address Book Cache and then check the logs.

If mail server Redirection is required for mail servers which are not contained on the local WAN and must have the connection addresses manually specified, the appropriate information can be modified in the redirection table. Most installations do not require any modifications.

LDAP Tab

 **GroupWise Module**  

GroupWise specific information is configured here. At a minimum, the CORE SETTINGS and SOAP tabs must filled out completely.

Core Settings SOAP LDAP Proxy

E-Mail Address Based Login

If enabled, Retain can use the email address of the user as an alternative to the mailbox login name. An LDAP query will be performed, and the password will be matched against the LDAP directory password. Most administrators do not need this functionality - the LDAP Authentication option in GroupWise at the Post Office level largely duplicates this functionality. However, if you want to allow users to login using their e-mail addresses it is required.

- The email address attribute in eDirectory is not indexed by default. For large trees, you may want to index this field. Consult the user manual for details on how to do this.
- The Admin DN, and Search DN need to be in LDAP form, not eDirectory form. The Admin DN should specify a user with rights to all properties in the LDAP Server.

Enable EMail Address lookup	☐
LDAP Server (Host/IP)	127.0.0.1
LDAP Port (usually 389 or 636)	389
Use SSL	☐
LDAP Admin User (e.g. cn=admin,o=beginfinite)	cn=admin,o=beginfinite
Password for LDAP Admin User	(Password is not set)
Top Search Context (e.g. o=beginfinite)	o=beginfinite

Path: Retain Server Manager > Configuration > Module Configuration > GroupWise-Configure > LDAP

LDAP can be used to authenticate users against other directory services such as eDirectory or Active Directory.

LDAP can be used for individual users wishing to access their respective archives. If LDAP is set up and desired to be used for Retain user authentication, it must be fully configured in the GroupWise module.

Utilizing LDAP allows users to log in to their respective archives using the user's full email address. This authentication requires that the email attribute be marked indexed in GroupWise.

Using Active Directory Authentication

Before you use Active Directory Authentication, you must have LDAP Authentication configured in GroupWise and configure Retain to use Active Directory Authentication:

GroupWise Configuration for AD LDAP Authentication

- ☐ Make sure you have Active Directory configured as an LDAP directory and an LDAP server in the GroupWise Admin Console. Also, make sure the following are set in the GroupWise Admin Console:
 - ♦ On the LDAP Directory, **Enable Synchronization** must be selected.
 - ♦ On the LDAP server > **Post Offices** tab, select the Post Office that you are using for LDAP.
 - ♦ Go to **Post Offices** > **Select the Post Office that you are using for LDAP** > **Security**. Select **LDAP Authentication** and make sure the LDAP server is listed in the **Selected LDAP Servers** column in the **Preferred LDAP Servers**.

Follow the steps in [LDAP Directories and Servers in Your GroupWise System](#) in the *GroupWise 18 Administration Guide* if you need help setting up the LDAP directory or LDAP server.

- ☐ Make sure that your GroupWise mailboxes are associated with their LDAP users by following the steps in [Associating GroupWise Users with an LDAP Directory](#) in the *GroupWise 18 Administration Guide*.

Retain Configuration for AD LDAP Authentication

- ☐ In the GroupWise Module > LDAP tab, enter in the information for your LDAP server. Make sure Enable EMail Address Lookup is selected.

NOTE: The LDAP Admin User must be entered using the following form:

CN=Administrator,CN=Users,DC=company,DC=com

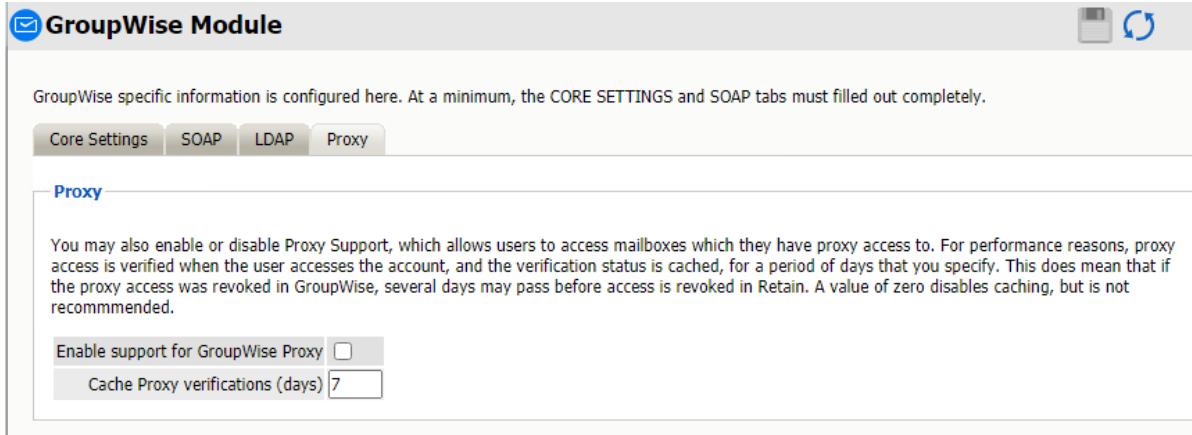
The Top Search Context is usually the distinguished name of the domain and must be entered using the following form:

DC=company, DC=com

- ☐ Edit the ~Beginfinite\Retain\RetainServer\WEB-INF\classes\config\misc.properties file on the server changing the following lines:

custom.ldap.enabled=1
custom.ldap.class=com.gwava.authenticate.gw.AlternativeGWLdapAuthentication
- ☐ Restart tomcat on the Retain server.

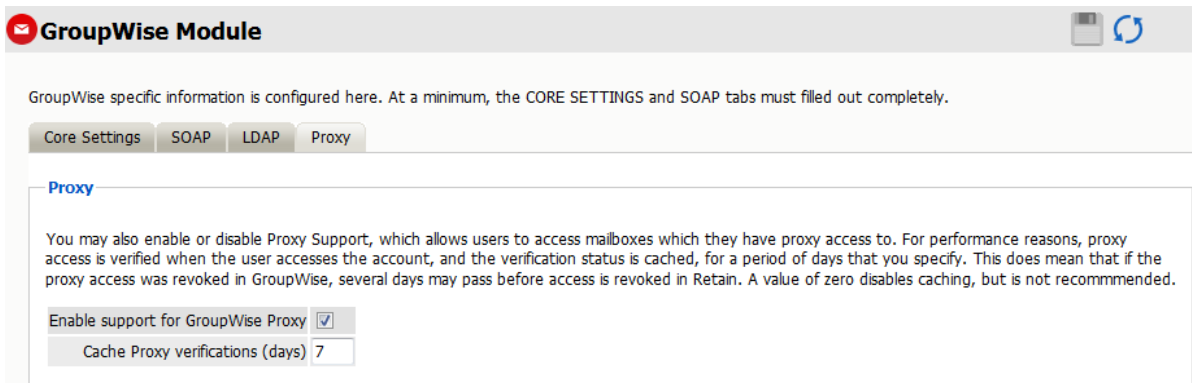
GroupWise Proxy Accounts



The screenshot shows the 'GroupWise Module' configuration window with the 'Proxy' tab selected. The window has a title bar with a blue icon and a refresh button. Below the title bar is a header with the text 'GroupWise specific information is configured here. At a minimum, the CORE SETTINGS and SOAP tabs must filled out completely.' Below this is a tab bar with 'Core Settings', 'SOAP', 'LDAP', and 'Proxy'. The 'Proxy' tab is active and shows a blue header 'Proxy'. The main content area contains a paragraph explaining proxy support, followed by two settings: 'Enable support for GroupWise Proxy' with an unchecked checkbox, and 'Cache Proxy verifications (days)' with a text box containing the value '7'.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [GroupWise-Configure](#) > [Proxy](#)

Users who have been given proxy to another account in GroupWise may be granted access to proxy accounts in the Retain archive as well.



This screenshot is similar to the previous one, but the 'Enable support for GroupWise Proxy' checkbox is now checked, and the 'Cache Proxy verifications (days)' text box still contains the value '7'.

For performance reasons, Retain caches proxy verifications for a period of days (default is 7 days). Revocation of proxy access might not be reflected immediately in Retain. The caching period may be reduced or even disabled, (a value of '0' disables caching), but this is not recommended.

Next Step

Configure a [“Setting a GroupWise Schedule”](#) on page 147.

Setting a GroupWise Schedule

If you have not already created one or more schedules for use with your Blackberry Job, go to [“Creating Schedules” on page 11](#) and complete the task now.

Specifying a GroupWise Profile

- ♦ [“Core Settings Tab” on page 148](#)
- ♦ [“Message Settings Tab” on page 150](#)
- ♦ [“Scope Tab” on page 151](#)
- ♦ [“Miscellaneous Tab” on page 154](#)
- ♦ [“Advanced Tab” on page 155](#)

The Profile lets you set what is to be dredged from your GroupWise system.

This requires that the module be configured [“Creating a GroupWise Module” on page 140](#).

Click on “Add Profile” and provide a profile name, or select an already existing profile to access the configuration tabs. All changes made on this page must be saved by selecting the “save changes”, disk icon, at the top right of the page. Tabs may be changed and navigated through without affecting new settings, but any move to another page will require saving, or abandoning the changes made.

Core Settings Tab

Retain

Language EnglishWelcome, admin | About | Tools | Status & Updates | Logout

Overview

Documentation

Search Messages

Auditing

System Log

Reporting

Monitoring

Data Collection

Schedules

Profiles

GroupWise

Exchange

Social Messaging

Mobile

Google Apps

BlackBerry

CellTrust

Workers

Jobs

Management

Users

Groups

Device Management

Deletion Management

Configuration

Server Configuration

Rules Configuration

Module Configuration

Router Configuration

Storage Manager

Stubbing Server

Reporting and Monitoring

Licensing

Profiles

AllFolders AllMessages NoArchiveMark NoStubbing ItemStore loaded.

Add Profile

Edit Profile

Remove Profile

Associated Jobs

GW weekdays at 4:00

GW7NTPO2

GW on Wednesdays at 12:00

GW CrapPO

CBIPO A-D

Des Zero Oneby

NTPO2

NWPO

GW8LXPO

GW8NTPO

RickL

LXPO and IS&T

GW weekdays at 10:15

Müllingüß

T&T

NTPO

GW14LXPO

GW7NTPO

Profile Name

AllFolders AllMessages NoArchiveMark NoStubbing ItemStore loaded.

Core Settings

Message Settings

Scope

Miscellaneous

Advanced

Profile Functions

The normal function of Retain is to archive mail. However, GroupWise 8 introduces the capability to "Stub" items so they appear to be in the original mailbox, but are really stored in Retain. This can save disk space.

You may enable Archiving and Stubbing separately or together, depending on what you think your users would like.

We tend to recommend you do NOT stub Calendar Items, because it can lead to confusing results if they are rescheduled or reassigned. (Most Calendar Items aren't terribly large anyway).

You may safely enable stubbing on a GroupWise 7 post office, however the functionality will be ignored, and the item will not be stubbed.

☒ Enable Archiving (store messages in Retain)

☐ Enable Stubbing (if items are already archived)

☒ Do not stub Calendar Items (Appointments, Notes, and Tasks)

☐ Stub only items exceeding a size threshold

2048

Size Threshold (bytes)

Archive Mark

You can request Retain to mark items as archived. You may view the status at the Windows client as a custom column.

☐ Mark emails as archived

Messaging System Deletion

☐ Delete archived messages from messaging system

Keep x number of days in messaging system

0

Profile Functions

The Profile Functions tell the Retain Server what to do with the mail it archives from the GroupWise system. If Archiving is not enabled, mail will not be archived by any Retain jobs using this profile.

148 Setting Up Pull-Based Archiving

Stubbing

Before enabling stubbing, make sure you understand the way stubbing works and how that will work in your system, because, once enabled, the stubbing process cannot be reversed. Stubbing, which requires GroupWise 8.02HP1 or above, allows Retain to replace archived messages and items in the GroupWise Post office with 'stubs' that link back to the full message or item in the Retain Archive. End users should not notice a difference as they have transparent access to the stubbed item through the GroupWise Post office, if they only use the client. The stub behaves much like the native item is still in the GroupWise system.

Stubbing cannot be reversed.

Plan your system and understand the positive and negative sides to Stubbing before you continue. To use stubbing, it is strongly recommended that the GroupWise system be at least 8.02HP1. Previous versions of GroupWise do not contain critical stability fixes.

Why you might want to implement stubbing (Pros):

- ♦ Save Disk space. Mail can be removed from the system without being 'deleted'.
- ♦ Users have easy access to items stored in Retain
- ♦ Transparent access, no need to log in to Retain for common tasks.

Why stubbing may not work for your system (Cons):

- ♦ Mobile, Web, IMAP, and POP3 clients will only see posted empty items, not actual contents.
- ♦ Stubbing cannot be reversed. (Once a message is stubbed, it cannot be returned to the same position in the system)
- ♦ User training for stubbed items may be necessary due to decreased access speed
- ♦ No method for protecting stubs from deletion in the GroupWise client. (Recreation is difficult and complicated.)
- ♦ Non-mail items should not be stubbed. (Calendar and appointment items behave erratically when rescheduled).
- ♦ Stub items are not compatible with third party API's. These applications view the stubs as posted items only, with no text or attachments.

Determine the correct option for your system. If you wish to enable Stubbing, you need to install and configure the Stubbing Server as well. Refer to the install guide for your specific OS and the Stubbing Server sections. Stubbing can only be active for items which have been archived by Retain.

Calendar Items should not be stubbed unless necessary, as this can cause erratic behavior if archived items are rescheduled. If you wish to only stub large items in your Post Office, you may set a size threshold. Any item larger than the specified size will be stubbed. If this option is not set, all messages will be stubbed, regardless of size.

Archive Mark

Some users may opt to use the Archive Mark in GroupWise for messages that have been archived by Retain. The archive mark is a custom flag and may be modified, therefore is not secure and should not be used for compliance. Archive Mark slightly degrades job performance. Check the check box to enable Archive Mark for the selected profile.

When the Archive Mark is active, Retain creates a custom column for mail, called "RetainArchived" which users and administrators may add to their GroupWise clients to view mail which has been archived. The "RetainArchived" column indicates an archived mail item by displaying a '1' in the message row, while remaining blank when the message is not archived.

	From	Subject	Date ▾	RetainArchived
	Suzie Wathen	cool lightning	8/25/2008 4:21 PM	
	Steve Orchard	Old Ladies' Noggins	8/25/2008 4:17 PM	1

To add the column, in the client: highlight desired mailbox or folder, right-click on columns header, select More Columns, select RetainArchived, and select Add.

Messaging System Deletion

Retain can delete items from GroupWise after they have been archived by enabling "Delete archived messages from messaging system".

However, it is recommended that the messaging system do the deletion rather than Retain.

Set how far back the messages will be kept by entering a reasonable number. like 90, of "Keep x number of days in messaging system". The amount of time to keep messages is specified in days. The recommended setting depends on the archiving scheme in the system.

For example, if messages are to persist in the system for 30 days, then the system deletion setting should be set to '30' and enabled.

A setting of '0' will remove messages from the system as soon as they are archived. Be sure to configure the system before enabling the setting in the profile.

Message Settings Tab

The message settings tabs allows you to restrict the types of messages to be archived.

- ♦ Mailbox type: You can restrict the type of mailbox users, resources, or both
- ♦ Message Item: Select what type of items within these mailboxes to dredge
- ♦ Message Source: Select whether incoming, outgoing, draft, or posted items get dredged
- ♦ Message Status: You can decide whether to dredge an item based on its GroupWise flags

The default settings dredge all items, regardless of flag status.

Core Settings

Message Settings

Scope

Miscellaneous

Advanced

Mailbox Type

You can choose to store items only from Users or from Resources.

☒ Users ☒ Resources

Item Type

By default, Retain stores every type of message. You can restrict this.

☒ Mail ☒ Appointment ☒ Note ☒ Task ☒ Phone Message

Item Source

Messages are classified in one of these categories. You may restrict the storage of messages if desired.

☒ Received ☒ Sent ☒ Draft ☒ Personal

Message Status

You can restrict the storage of messages based upon the setting of various status flags.

Opened is

Doesn't matter

 Read is

Doesn't matter

 Private is

Doesn't matter

By default, all items are selected for collection.

Scope Tab

This is the most critical tab to fill out as it sets the limits on how much to archive.

Core Settings
Message Settings
Scope
Miscellaneous
Advanced

Date Range to Scan

New items

Advance Flags

You may not want to advance the flag after running the job.

☐ Don't Advance Timestamp

Date Range to Scan

The Date Range determines which message items are collected, depending on the date of the message.

New items
All Items in Mailbox
Number of days before job start date and newer
Number of days from job start date and older
Specify custom date range
Specify custom date range relative to job start

New Items: All items that have not been archived by Retain since the last time the job ran.

All Items in Mailbox: All items in the mailbox starting from 1/1/1970, duplicates will be processed but not stored if they already exist in the Retain archive.

Number of day before job start date and newer: Only items from the relative number of days from the time the job began will be archived. E.g. messages that came into the email system 7 days ago or less.

Number of days from job start date and older: Only items previous to the relative number of days from the time the job began will be archived. E.g. messages that came into the email system 7 days ago or more.

Specify custom date range: Only items between two absolute dates will be dredged.

Specify custom date range relative to job start: Only items between two relative dates will be dredged. E.g. messages that came into the email system between 7 and 5 days ago.

Advance Flags

Enabling "Don't Advance Timestamp" will not update the timestamp flag. Items that are dredged will still be considered new by Retain the next time the job runs.

This is useful when troubleshooting, but is generally not used for normal jobs.

About GroupWise's Purge and Retention Flags

The Purge, and Retention flags perform similar functions. The Purge and Retention flags are stored internally in the GroupWise post office on a per-mailbox basis. The Retain Server also keeps its own timestamp flag internally in the Retain configuration database.

Each can be thought of as simply a "time stamp" indicating the last time data was retrieved by a third-party application. There are a few subtle differences between the three flags, which are discussed below.

The Purge flag was introduced by Novell in GroupWise version 6.0.

With Purge enabled in GroupWise:

- ♦ The flag is a time stamp, stored in the user's mailbox.
- ♦ Items older than the time stamp can be deleted freely.
- ♦ Items newer than the time stamp cannot be deleted.
- ♦ A 3rd party application, such as backup software can retrieve and/or set this time stamp value. GroupWise never changes the time stamp value.
- ♦ The initial purpose of this was for backup software. Backup software can either manually or automatically, (via the SMS TSAGW component of GroupWise), advance this time stamp once all items are backed up. The backup software can also use this time stamp to "know" that all items older than this time stamp have already been backed up, and can be skipped.
- ♦ Retain can use this flag to skip archived items, and automatically advance it as well. However, in practice, you'll rarely want to do this, because backup software, including Micro Focus GroupWise Disaster Recovery, already uses this flag. There's no way to "share" the flag.

Because makers of retention and compliance software wanted a flag of their own, one that wasn't shared with the backup software Purge flag, the Retention flag was introduced by Novell in GroupWise 6.5.1.

In almost all respects, the Retention flag is identical in purpose and function to the Purge flag. Like the Purge flag, it is stored internally, and is primarily used to prevent premature deletion, and to skip previously stored messages. In fact, these are so identical in purpose, in theory virtually all backup software could switch to using the Retention flag, and all Retention software to the Purge flag, and you'd notice almost no difference. The primary difference is simply it's a different value, used by different vendors.

There are some small distinctions:

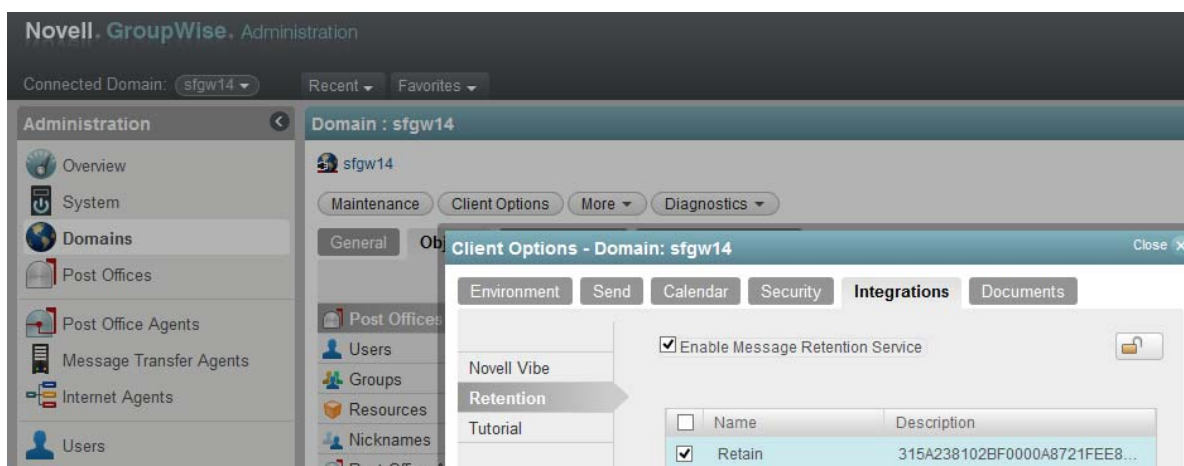
- ♦ It's enabled and configured in a different location in ConsoleOne.
- ♦ It cannot be enabled or configured until a Trusted Application (like Retain) is installed and specifically requests it be made available.
- ♦ The Purge flag is turned on/off globally. The Retention flag can be configured at the Domain, PO, or user level.

Most customers using Retain will want to use the Retention flag. It's logical and consistent to do so, and avoids conflict with backup software. It is recommended that you use this flag unless there is a compelling reason not to. A few possibilities are discussed below.

Retain can use the Purge and Retention flags.

Setting up Purge and Retention flags in GroupWise

It is highly recommended that Message Retention Service is enabled, so users cannot delete items before the item is archived.



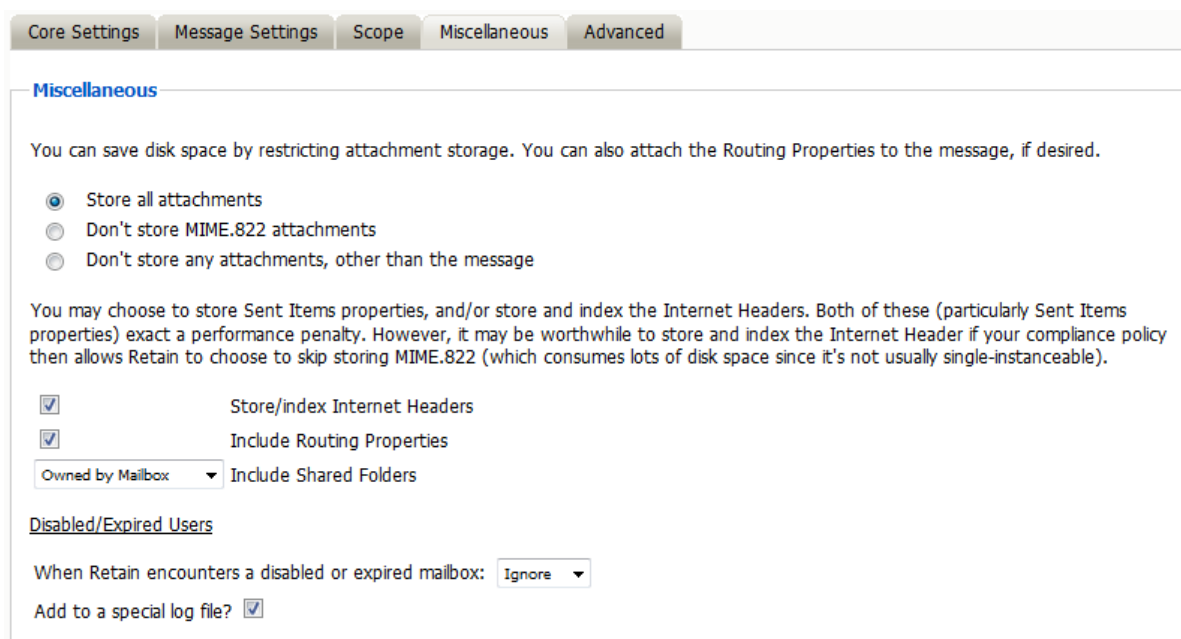
In GroupWise Administration, go to the Domain or Post Office you wish to enable Retention on.

- ♦ Open Client Options. Select Integrations and then Retention.
- ♦ Check the box to enable the Retention Flag service.
- ♦ Select the Trusted Application that uses the Retention Service.
- ♦ Finally, Lock it on and Ok to exit.

In GroupWise 8 through 2012 enable by highlighting the GroupWise system, domain, post office, or user object and selecting Tools | GroupWise System Operations | Retention Services.

Miscellaneous Tab

Miscellaneous: What to do with attachments? Most of the time, you will want to store all attachments. That is the default setting.



But if you don't want to store attachments, you can control this here. Note that the attachment names and sizes will still be listed when viewing the message, but the attachments will be clearly marked as unavailable.

Retain can store the Index or Internet Headers and the Routing properties of messages. This information is stored in a XML attached to the message document and is searchable.

Store/index Internet Headers

This option tells Retain to store the headers in the SQL database. In order to use the header search option in the search interface you must have this option selected. To save disk space and still satisfy storage compliance, select this option and select "Don't store the mime.822 attachments". All other parts of the MIME file are already being archived, so if you store and index the Internet Header, you will already be archiving all information required.

Include Routing Properties

Routing Properties are kept in the MIME.822 file, if you are not storing that file, and are required to store the routing properties of the message then enable this option.

Disabled/Expired Users

This option tells Retain how to react to a disabled or expired user in GroupWise. By default, Retain will ignore a disabled mailbox and continue to the next mailbox. The Warn option will show a warning in the logs and the Reporting and Monitoring Server reports. The Error option will show an error in the log, will send an error email, if the job is configured to send error messages, and be shown in the Reporting and Monitoring Server reports.

A special log file can be created in the logs location.

Advanced Tab

Generally, since storage space is inexpensive, Micro Focus recommends that you archive all message content.

However, if you need to limit what is archived, you can use the Advanced tab to do it.

The screenshot shows the 'Advanced' tab in the Retain configuration interface. At the top, there are five tabs: 'Core Settings', 'Message Settings', 'Scope', 'Miscellaneous', and 'Advanced'. The 'Advanced' tab is active. Below the tabs, there are two main sections: 'Advanced Criteria' and 'Folder Scope'.

Advanced Criteria: This section has a title 'Advanced Criteria' in blue. Below it is a text box that says 'You may add advanced criteria such as specific attachment names, sizes, subject here.' There is an 'Add' button. Below that is a 'Delete' button, followed by a dropdown menu showing 'Subject', a dropdown menu showing 'is', and an empty text input field.

Folder Scope: This section has a title 'Folder Scope' in blue. Below it is a text box that says 'Normally, you want to include all folders in your scan. However, you may have specific reasons to include or exclude folders. Choose a folder root, an optional subfolder (you may have multiple subfolders with the \ delimiter, and whether to include all subfolders in the pattern).' Below this text is a dropdown menu showing 'Items from All Folders'.

Table 1-33 *Configuring GroupWise Profile Advanced Settings*

Option, Field, or Sub-panel	Information and/or Action
Use this dialog to define the conditions Retain uses to determine what to archive.	
Advanced Criteria	Each line sets a specific parameter and the lines are all added together (AND-ed). To check how Retain will interpret your settings, read through the lines in turn, inserting AND between each one. - For the first field, select from among the following items: ◆ Subject ◆ Sender ◆ Recipient ◆ Size ◆ Attachment Name - For the second field, specify the relationship of the first field to the (third field): ◆ is ◆ is not ◆ contains ◆ does not contain - Type a string for the third field. - Click Add to enter another statement - When the conditions are defined, click Save Changes.
Folder Scope	By default, Retain archives the items from all folders. Using this panel, you can restrict which folders are archived, by either: ◆ Specifying the folders to include (the Only items from folders listed below option) or ◆ Specifying the folders to exclude (the All folders except those listed below option) To specify the folders to include or exclude, do the following: - Specify a System Folder (mandatory). Example: Calendar. - Optionally, specify a subfolder within that folder. Example: entering old would mean the folder old under Calendar. - Use the / delimiter to specify multiple hierarchies under that. Example: old/mail would mean the subfolder mail under old under Calendar. - Specify whether the option includes subfolder. Example: If you specify old and deselect includes subfolder, then Calendar/old is archived. If you specify old and select includes subfolder, Calendar/old/mail is archived.

Setting Up a GroupWise Worker

If you have not already created one or more Workers for use with your GroupWise Job, go to [“Creating Workers” on page 13](#) and complete the tasks there.

Creating a GroupWise Job

After completing the instructions in the preceding sections, you can create a GroupWise Job.

- 1 To begin creating a GroupWise Job, open [Retain Server Manager > Data Collection > Jobs](#).
- 2 Click **GroupWise > Add Job**.
- 3 Use the information in the sections that follow to configure each tab.
- 4 Make sure that you save your changes before leaving the dialogs.

Core Settings Tab (GroupWise Job)

The Core Settings of a job contains configuration which must be set for the job to be saved and become active. A job must be enabled before it will run. Jobs must also have a specified schedule, profile, and worker. These are all selected from drop-down menus, and will not be populated unless those items are already configured in the system.

Job
GroupWise-1

Core Settings
Mailboxes
GroupWise Disaster Recovery
Notification
Status

Core Settings

Job enabled
☒

Each Job must have the following assigned to it:

- [schedule](#) - How often to run
- [profile](#) - What to do when running
- [worker](#) - Where to run the job

Schedule
(none)

Profile
(none)

Worker
(none)

Items archived with this job can optionally be set with an "expiration timestamp" which the Deletion Manager can use to remove obsolete items. The expiration timestamp can only be extended, never reduced.

Enable data expiration
☐

Expire in
0
Days

Base Expiration Time on
Date Item is stored in Retain (recommended)

Some customers may wish to override the default expiration settings for specific folders. You may specify these folders below - any folders that do NOT meet these criteria will have the expiration settings specified above applied. If you only want the folders to have expiration policies, enter -1 above for the base expiration value.

Add

Delete
Root
☐ Include subfolders
0
Days

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [GroupWise](#) > *Job Name* > [Core Settings](#)

The Data Expiration setting is an option to place a time stamp on data in the Retain database, which allows for ease of automation for the deletion manager. In addition, devices such as NetApp and Hitachi HCAP may use this number to enforce hardware level protection of the stored item so that no one (including Retain) may delete the item before its expiration date. Job Expiration is not retroactive for mail in the database, and only applies to mail archived by the job that it is active for. In order to have messages with custom job or folder expiration dates properly expire, the deletion management date scope must be set to delete messages with an Expiration Date older than 1 day.

Mailboxes Tab (GroupWise Job)

The mailboxes tab is where the administrator specifies which entities (mail servers and/or Distribution Lists) are to be scanned. This tab is not displayed for the mobile module.

Expand the Post Office and/or Distribution List trees, and check off the items you want to be dredged.

NOTE: If you desire to have a job backup a single user, or selected group of users, select the Users menu and assign the users desired

Job

Core Settings Mailboxes **GroupWise Disaster Recovery** Notification Status

Mailboxes

Assign the Post Offices and/or Distribution Lists to be included in this job. Distribution Lists *must* have System Visibility.

Users

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [GroupWise](#) > *Job Name* > **Mailboxes**

The Distribution List selection allows you to include or exclude a group of users from an archive job. If you want to use GroupWise Distribution Lists, the visibility needs to be set to “system wide”.

The users section allows you to select individual users to include, or exclude them from an archive job. For example: you can select an entire Mail Server to be archived, and then expand the users section to include or exclude users to the job.

This can also be used to select only certain users in the system for an archive job.

To add a user to the Include or Exclude list, select the respective ‘Add user’ button and search for the user. It can be helpful to unselect the ‘only show recently cached items’ option. Add the selected users to the list in the search window, then select ‘Ok’ to add them to the include or exclude list.

GroupWise Disaster Recovery Tab (GroupWise Job)

Core Settings Mailboxes **GroupWise Disaster Recovery** Notification Status

GroupWise Disaster Recovery

You can backup your GroupWise Disaster Recovery server, saving network bandwidth if desired. This requires GroupWise Disaster Recovery 2.5 or newer and some configuration changes on the GroupWise Disaster Recovery machine. Please consult the user manual for additional information.

☐ Enable GroupWise Disaster Recovery Integration

GroupWise Disaster Recovery
 Server Protocol
 Server Host Name
 Server Port

[Advanced GroupWise Disaster Recovery Settings](#)

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [GroupWise](#) > *Job Name* > **GroupWise Disaster Recovery**

Selecting this option tells the job to use the [GroupWise Disaster Recovery Integration](#) for systems utilizing GroupWise Disaster Recovery. See the GroupWise Disaster Recovery Integration section for instructions on configuration. The Server URL must be edited with the correct contact info for the GroupWise Disaster Recovery server. The default GroupWise Disaster Recovery port is 5555.

Retain instructs GroupWise Disaster Recovery to load the corresponding backup set for each date range in the profile. If a different set needs to be specified, the override setting specifies a date range specifically for GroupWise Disaster Recovery, which then will ignore the date range in the profile. Retain will still archive according to the profile date range or settings.

Advanced GroupWise Disaster Recovery Settings

Normally the GroupWise Disaster Recovery Sets that are backed up correspond to the Date Range specified in the profile. Occasionally, you might want to override this.

Override GroupWise Disaster Recovery Date Range ☐ Use the following number of backup sets (starting with the most recent):

Start: 1995 Jan 01

End: 1995 Jan 01

Notification Tab (GroupWise Job)

When a job is run, the Notification option allows the administrator to be emailed a summary and report of any errors, for each running job.

Job: GroupWise-1

Core Settings Mailboxes GroupWise Disaster Recovery Notification Status

Notification

You can have Retain e-mail a summary of operations and/or errors that occurred when the job completes.

SMTP Mail Server	
SMTP Security Protocol	unencrypted
SMTP Port	25
SMTP Mail From Address	Retain@microfocus.com
SMTP To Address	
SMTP Username	
SMTP Password	
Mail when errors occur	☐
Mail summary when job complete	☐

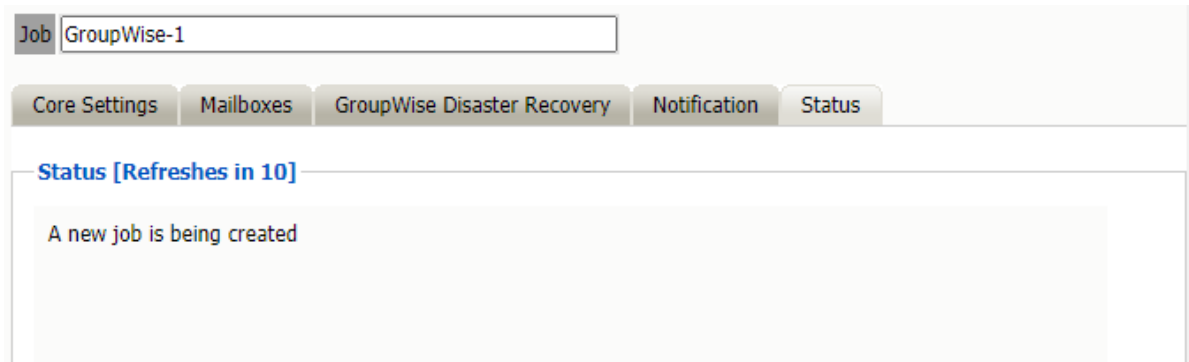
Test Connection

Path: [Retain Server Manager](#) > Data Collection > Profiles > GroupWise > Job Name > Notification

For notification to function correctly, the SMTP information for the desired SMTP server must be fully filled-out. How much information is required varies depending on the mail system used.

Status Tab

The Status tab displays the status of any currently running jobs, as well as the stats of the last completed job.



On some modules, currently running jobs may be terminated here. For the rest, this tab is informational only.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [GroupWise](#) > *Job Name* > **Status**

Next Step

Once a job has completed you can confirm the items are in the archive by checking the Search Message interface. See “[Using Retain’s Archives](#)” in the [Retain 4.10: User Guide](#).

2 Setting Up Push-Based Archiving

As background, make sure to review the information in “[Next, Match Your Messaging Systems to Retain’s Archiving methods](#)” in the *Retain 4.10: Planning* guide.

After your Retain system is running properly and you have identified the third-party systems that will archive to your Retain system, use the instructions in the following sections to set up archiving for your organization.

- ♦ “[First, Configure the Retain Server or Router Connection](#)” on page 163
- ♦ “[Archiving Android Messages and Call Information](#)” on page 164
- ♦ “[Archiving AT&T Messages](#)” on page 171
- ♦ “[Archiving Blackberry Messenger Enterprise](#)” on page 174
- ♦ “[Archiving CellTrust SL2](#)” on page 180
- ♦ “[Archiving GBS Notes](#)” on page 182
- ♦ “[Archiving GroupWise Messenger](#)” on page 184
- ♦ “[Archiving Ionlake MyRepChat](#)” on page 185
- ♦ “[Archiving TeleMessage Messages](#)” on page 188
- ♦ “[Archiving UM Labs Messages](#)” on page 189

First, Configure the Retain Server or Router Connection

Make sure that the Retain Server (or Retain Router) connection is properly configured.

- 1 On your management workstation, open the [Retain Server Manager](#).
- 2 Scroll down to **Retain Server Connection**.
- 3 Go to **Configuration > Server Configuration > Communications** tab.
- 4 Make sure that the connection settings are correct for the Retain Server or the Retain Router that you have designated to receive archive data through Retain’s Push-based archiving mechanisms.

Retain Server Connection

The Router and REST applications will need to know how to connect to the Server. It is highly recommended that you use a DNS host name for the Host Name. It's important to note that you are specifying the URL from the point of view of the **Router or REST application contacting the Server**, which may or may not match the URL you'd use from your browser to reach the Router or Server.

Server Protocol	https
Retain Server Host	retain2.qa.gwava.com
Retain Server Port	443
Retain Server Path	/RetainServer

- 5 Continue with setting up your organization’s Push-based archiving.

Archiving Android Messages and Call Information

IMPORTANT: If you need instructions for the deprecated Pull-based Mobile solution, refer to the documentation for earlier Retain releases on the [Micro Focus Documentation Site](https://www.microfocus.com/documentation/retain-unified-archiving/). (<https://www.microfocus.com/documentation/retain-unified-archiving/>)

- ♦ [“Creating a Mobile \(Android\) Module” on page 164](#)
- ♦ [“Creating a Mobile \(Android\) Profile” on page 167](#)
- ♦ [“Mobile Router Page” on page 169](#)
- ♦ [“Customizing the Mobile Registration Email Template” on page 170](#)

Creating a Mobile (Android) Module

The Retain for Mobile module captures and archives MMS, SMS, and phone call information from Android smart phones. The mobile application, Retain Service, supports Android 8.x (Oreo) and later and utilizes the REST API in Retain. The Retain Service APK can be accessed on the 'tools' page. The Tools page is accessed by selecting 'Tools' from the top right of the Retain Administration interface.

You will also need to set up the [RetainService Android App](#) for archiving the device, and the [Retain App](#) for accessing archived data.

Requirements—Mobile Module

To enable mobile data archiving, the following tasks must be completed in order:

1. Install the Retain Message Router on [Linux](#) or [Windows](#) and be available in the DMZ outside the host network.
2. Install a third-party TLS certificate on the Router.
3. Configure the Mobile Module.
4. Use a Mobile Device Management (MDM) system to install the Retain Android application on users' phones running 8.x (Oreo) or later.
5. Register the mobile devices under Device Management.
6. Have users use the registration email to verify device registration with the Retain server.
7. Manually create the Storage path folders.
8. For users that travel internationally, have them set their devices to connect through port 80. Port 48080 is blocked by telecom companies across borders.

Use a Mobile Device Management (MDM) system to distribute Retain Service to devices. When using an MDM to distribute the Retain app, the system can be set to not allow app removal. The MDM will need the package name for Retain Service, which should be set to *com.gwava.retain.mobile*. Consult the MDM's documentation for instructions.

MDMs that have been tested with Retain include:

- ♦ ACE
- ♦ Airwatch
- ♦ BES
- ♦ Citrix XenMobile

- ♦ Good Dynamics
- ♦ Google XenMobile
- ♦ MobileIron
- ♦ Blackberry Dynamics

The application sends collected information, approximately every hour, to the Retain Router. *No data will be archived until the application is registered and configured.*

In the user's archive, the folder will be called "In-network SMS" and will contain SMS and MMS messages from the carrier.

Core Settings Tab—Mobile Module

Mobile

Core Settings
Create Users

Core Settings

Normally this entry should be enabled.

- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name

Enable Jobs
☒

Normally this entry should be disabled.

- Send Mobile items to an external system.

Select Send Method

There are two parts to setting up the Mobile Module: a Tenant ID and selecting the device connection endpoint.

- A Tenant ID was generated for your Retain system when this page was loaded. It is used to identify your system during the registration and data collection processes.
- The Message Router or the Retain Server can receive the registration and data collection requests from the devices. The Message Router will forward them on to the Retain Server.

Tenant ID

d1cef57a-c58d-45c7-9485-16e49240be93

Use Message Router
☒

Device Transmission Frequency
minutes (5-1440)

The default value for the LDAP synchronization interval is 8 hours

- Determines how often retain will sync with remote LDAP for device updates

LDAP Sync Frequency
hours (1-24)

Email Registration Expiration

- If you are planning to use email registration of your devices, you have the option to set the expiration time for the registration email.

Registration email expiration time in days

Message Router Configuration

The base URL to use when connecting to the Message Router.

Base URL

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Mobile-Configure](#) > [Core Settings](#)

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send Mobile items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty. For more information, see the explanation associated with the Blackberry Module, [Table 1-9, “Configuring Blackberry Core Settings,” on page 28](#).

Mobile

Core SettingsCreate Users

Core Settings

Normally this entry should be enabled.

- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name

Enable Jobs ☒

Normally this entry should be disabled.

- Send Mobile items to an external system.

Select Send Method

There are two parts to setting up the Mobile Module: a Tenant ID and selecting the device connection endpoint.

- A Tenant ID was generated for your Retain system when this page was loaded. It is used to identify your system during the registration and data collection processes.
- The Message Router or the Retain Server can receive the registration and data collection requests from the devices. The Message Router will forward them on to the Retain Server.

Tenant ID

Use Message Router ☒

Device Transmission Frequency minutes (5-1440)

The default value for the LDAP synchronization interval is 8 hours

- Determines how often retain will sync with remote LDAP for device updates

LDAP Sync Frequency hours (1-24)

Email Registration Expiration

- If you are planning to use email registration of your devices, you have the option to set the expiration time for the registration email.

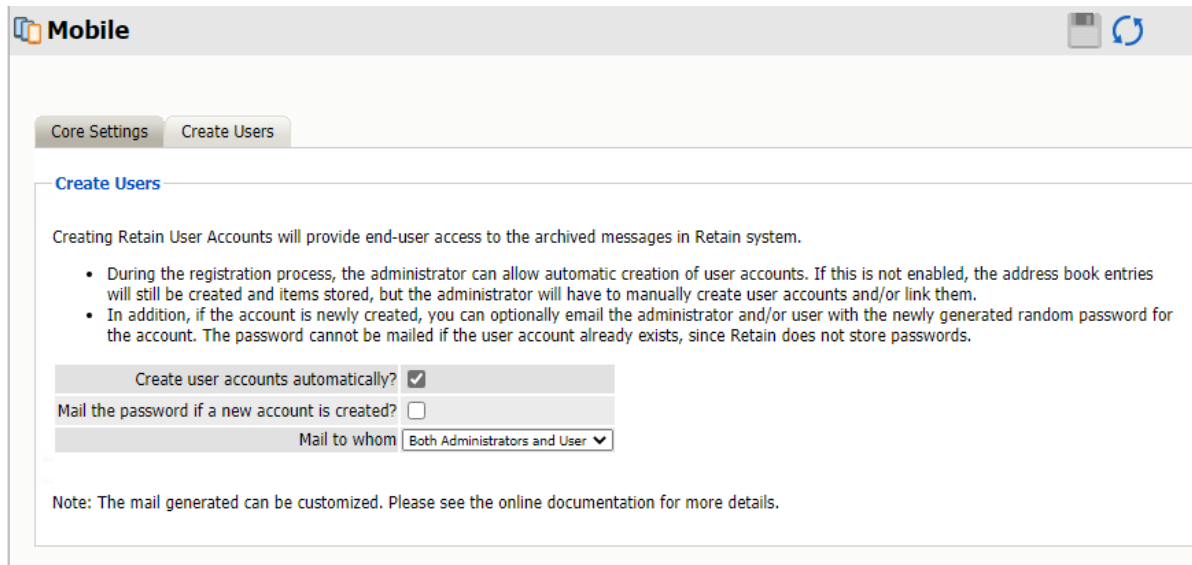
Registration email expiration time in days

Message Router Configuration

The base URL to use when connecting to the Message Router.

Base URL

Create Users Tab—Mobile Module



The screenshot shows the 'Mobile' module configuration interface. At the top, there's a header with the 'Mobile' logo and a refresh icon. Below the header, there are two tabs: 'Core Settings' and 'Create Users'. The 'Create Users' tab is active. The main content area is titled 'Create Users' and contains the following text: 'Creating Retain User Accounts will provide end-user access to the archived messages in Retain system.' Below this, there are two bullet points: 'During the registration process, the administrator can allow automatic creation of user accounts. If this is not enabled, the address book entries will still be created and items stored, but the administrator will have to manually create user accounts and/or link them.' and 'In addition, if the account is newly created, you can optionally email the administrator and/or user with the newly generated random password for the account. The password cannot be mailed if the user account already exists, since Retain does not store passwords.' Below the bullet points, there are three input fields: 'Create user accounts automatically?' with a checked checkbox, 'Mail the password if a new account is created?' with an unchecked checkbox, and 'Mail to whom' with a dropdown menu set to 'Both Administrators and User'. At the bottom, there is a note: 'Note: The mail generated can be customized. Please see the online documentation for more details.'

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Mobile-Configure](#) > [Create Users](#)

The Create Users tab allows for automatic user accounts, and associated passwords mailed to the designated address or addresses.

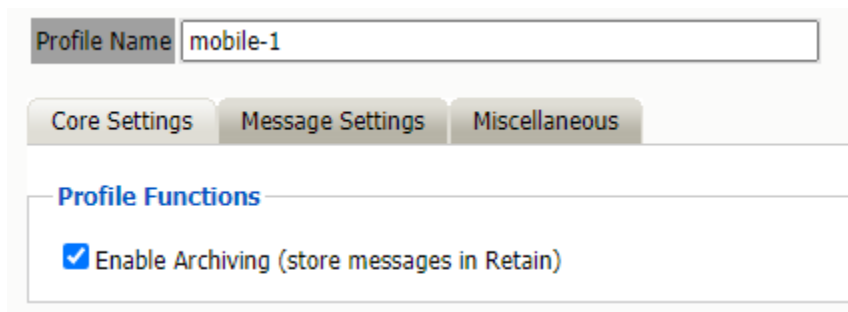
After the module configuration has been saved, the Mobile, Profile, and Device Management menu pages will become available.

Creating a Mobile (Android) Profile

After you have created a Mobile Module, you must create a Mobile Profile.

- 1 To begin configuring the Mobile Profile, open [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Mobile](#)
- 2 Click [Mobile](#) > [Add Profile](#).
- 3 Use the information in the sections that follow to configure each tab.

Core Settings Tab (Mobile Profile)



The screenshot shows the 'Mobile Profile' configuration interface. At the top, there's a header with the 'Profile Name' field containing 'mobile-1'. Below the header, there are three tabs: 'Core Settings', 'Message Settings', and 'Miscellaneous'. The 'Core Settings' tab is active. The main content area is titled 'Profile Functions' and contains a single checkbox labeled 'Enable Archiving (store messages in Retain)' which is checked.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Mobile](#) > [Select a Profile](#) > [Core Settings](#) tab

The profile will not become active and will not allow jobs to be run unless the profile is enabled. Enable the profile by placing a check mark in the 'Enable Archiving' checkbox.

Message Settings Tab (Mobile Profile)

The screenshot shows the 'Message Settings' tab for a mobile profile named 'mobile-1'. At the top, there is a 'Profile Name' field with the value 'mobile-1'. Below this are three tabs: 'Core Settings', 'Message Settings' (which is selected), and 'Miscellaneous'. The 'Message Settings' tab contains two sections. The first section, 'Item Type', has a description: 'By default, Retain stores every type of message. You can restrict this.' Below this are three checkboxes, all of which are checked: 'SMS', 'MMS', and 'Phone Call'. The second section, 'Item Source', has a description: 'Messages are classified in one of these categories. You may restrict the storage of messages if desired.' Below this are two checkboxes, both of which are checked: 'Received' and 'Sent'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Mobile](#) > [Select a Profile](#) > [Message Settings](#) tab

The Message Settings tab contains the source and status settings for the messages to be archived. Message types and sources which are checked will be archived in this profile.

Any item type or status which is not selected or specified will exclude qualifying items from being archived in Retain.

Miscellaneous Tab (Mobile Profile)

The screenshot shows the 'Miscellaneous' tab of a mobile profile configuration. At the top, there is a 'Profile Name' field containing 'mobile-1'. Below this are three tabs: 'Core Settings', 'Message Settings', and 'Miscellaneous', with the latter being selected. The 'Miscellaneous' section has a title 'Miscellaneous' and a description: 'You can save disk space by restricting attachment storage.' There are two radio button options: 'Store all attachments' (which is selected) and 'Don't store any attachments, other than the message'. Below these is a 'Maximum attachment size' field with a value of '-1' and a unit of 'KB'.

Path: [Retain Server Manager](#) > [Data Collection](#) > [Profiles](#) > [Google Apps](#) > [Select a Profile](#) > [Scope](#) tab

This is critical tab because it sets limits on how much to archive.

Mobile Router Page

The Retain Router has its own web page. This page can be used to test the connection to the Retain Server, as well as verify that communication is open and that devices registered in the Retain Server are listed in the Retain Router.

To access the Router page, open a browser and enter the connection URL.

`http://Retain_Router_IP_or_Domain/RetainRouter`

For example: `http://192.168.1.21/RetainRouter`

Message Router

Router Time: 2:09:39 AM

Retain Server: Message Router configuration missing

[Test Connection](#)

Tenant ID:

Mobile Data Path:

Archive Inbound:

Archive Outbound:

Daily Mobile Stats

Date	SMS - Disabled	MMS - Disabled	Phone - Disabled	Total
------	----------------	----------------	------------------	-------

Mobile Device List

Display Name	Device ID	E-Mail	Last Connection
------------------------------	---------------------------	------------------------	---------------------------------

Devices which are active are listed along with daily statistics. The daily statistics are reset every night.

This page is mainly an informational page.

Customizing the Mobile Registration Email Template

The Retain registration email template (...\\RetainServer\\WEB-INF\\classes\\config\\mobile\\registeruser.html) has many variables which allow for a customized registration email. There are a few variables which must remain unchanged, but the rest may be removed or modified, as desired, to adapt the email to any organization.

This is a quick description of the different variables, and which can be modified. They are distinguished by double brackets "[[and]]". The Retain Server code that sends out the email sets these variables with the product specific and user specific information.

Typically, only #1 will want to be changed – for use in mobile device management software. If an admin wishes to make the registration email to look like it is coming from their company, they should modify #'s 1-2, 6-9. However, variables 6-9 may be simply removed if the admin doesn't want users to know what they are using.

1. Your install location – This is typically the main variable to change. This variable is not included by default in the email to allow admins to utilize mobile device management software to push the Retain app to devices. It may be included in the email and filled in with the app's location so it can be manually downloaded to devices.
2. Product – This is automatically filled out with the Retain product name. Admins may set this to be the company name. This variable is used in the subject and the body of the email message.
3. Retainheader – This is automatically filled with the Retain product logo. Admins may set this to any branding or company image file. This must be an image file.
4. Name – Each user's individual username will be input here. This should not be changed.
5. GwavaURL – Automatically filled-in with a link to the Micro Focus website.
6. GwavaURLLabel – This determines text displayed for the GwavaURL link.
7. ProductNameURL – This is automatically filled-in with a link to the product website.
8. ProductNameLabel – This determines text displayed for the productNameURL link.

The registration code and information in that variable must not change. This information is generated by the device management page when the device is added.

The following variables must not change.

Do not modify the following:

- ♦ enrollmentCode: This is generated when the device is created on the device management page.
- ♦ tenantid: This is static number for retain. Displayed on the mobile page from Module Configuration.
- ♦ email: This is from the Device Management page.
- ♦ name: This is from the Device Management page.
- ♦ endpoint: This is the address of the Retain Server
- ♦ routerURL: This is pulled from the mobile page of Module Configuration.
- ♦ activateHREF: This is an identification string, a link specific to the user and installation.

Archiving AT&T Messages

- ♦ [“Creating a Wireless AT&T Module” on page 171](#)

Creating a Wireless AT&T Module

Retain can archive user SMS and MMS data from wireless carriers that have Message Archiving enabled.

For more detail see the AT&T site http://serviceguidenew.att.com/sg_flashPlayerPage/AMA

NOTE: Stored messages are pushed in near real-time to a company provided URL via HTTP POST and one-way SSL encryption. After a successful push, stored messages are deleted on the carrier side. If the push fails, retries will occur for an additional 5 days until items are deleted by the carrier. Messages are stored even when the user is roaming from the home network. All pushed messages are then encrypted, stored and viewed on the customer premise; no further end user action is required for message storage.

REST data flow can be monitored through the Archive User by Module Report. See [“Archive Summary by Module”](#) in the *Retain 4.10: Configuration and Administration*.

Prerequisites

- ♦ You will need to open the firewall, configure the module and create a REST collector, and send connection details to your carrier.
- ♦ Install the Module License. See [Submitting a PEM License](#) in *Retain 4.10: Installation and Upgrade*.
- ♦ Install the REST License. See [Installing a REST License](#) in *Retain 4.10: Installation and Upgrade*.

AT&T Module Setup

Firewall Setup

This module will not work with message router or cloud router. This module requires a hostname accessible from the Internet. You will need to open the firewall to allow data to flow. Provide a Firewall exception for incoming data.

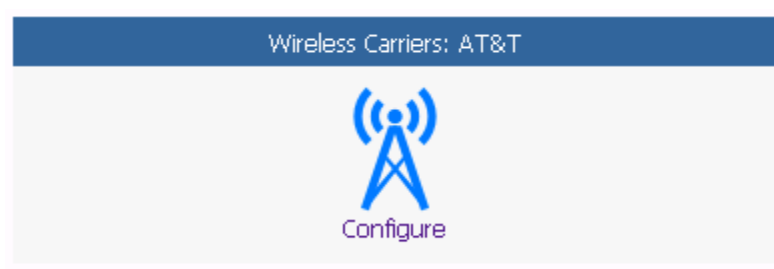
Data from AT&T will come from 12.130.30.68

Retain Side Setup

On the Retain Server: Enter the license, configure the module, and create a REST Collector.

Configure the Module

Select Module Configuration from the left navigation bar and click on the In-network: Wireless Carrier module to configure. A new tab will open



Core Settings Tab

To configure the module, disable and then re-enable Jobs and press Save to update the settings. You may also change the module name and set forwarding, if Module Forwarding is set up under Server Configuration.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Wireless Carriers: AT&T-Configure](#) > [Core Settings](#)

REST Key and Secret

Get REST Key and Secret from Retain Server to build the URL the carrier will need to connect to Retain.

1. The App Key and Secret are found in the Retain license directory. See Server Configuration|Storage|Advanced Settings.

For example: \retaindata\license\restapi\retain-att.zip

2. Extract and copy the **<applicationKey>** and **<applicationSecret>**.

REST Collector

Create a REST collector under Server Configuration in the [REST Collectors Panel](#) and send it to your service provider.

You will need to provide a username and password to your carrier for it to connect properly. This will be the key and secret from the REST collector.

1. Create a REST Collector
2. Export the collector.
3. From the XML file copy the following: **<key>** and **<secret>**.

URL

This will be the "Company Provided URL for Message Delivery". The Retain server URL needs to be Internet accessible by your carrier. The URL need to be formatted in the following way:

https://<Retain Server Hostname>/RetainServer/RestAPI/v1/atnt/mobile-messages?appKey=<Application Key>&appSecret=<Application Secret>

For example: <https://docs.microfocus.com/RetainServer/RestAPI/v1/atnt/mobile-messages?appKey=5DFD6637-23BA-4AD1-9533-5939B197D81F&appSecret=4b9b5d2d>

Username and password

Provide the Rest Collector username and password from the REST Collector step above to your carrier within the reply email with the onboarding form. The credentials need to be formatted in the following way:

User name: **restcollector/<key>**

Password: **<secret>**

For Example: Username: restcollector/6f460696-fe69-424b-a787-754c1953f792

Password: 069ddd7a-3747-4025-b7ea-827ba747ab11

Carrier Side

Sign up for Business Archiving which requires an In-network: Wireless Carrier Business Account. You will then receive a form from your carrier to complete.

1. The form you will receive from your carrier will be titled something like "Message Archiving - Onboarding Form".
2. Supply the "Company Provided URL for Message Delivery"
3. Supply a REST Collector username and password in the correct format. NOTE: This is not specifically asked for on the form, so add it to the reply email you send the form back with.

There are no Profiles or Jobs associated with this Module. Data flow can be monitored with the Archive Summary by Module report. See ["Archive Summary by Module"](#) in the [Retain 4.10: Configuration and Administration](#).

Archiving Blackberry Messenger Enterprise

- ♦ “Messenger Enterprise (BBME) Tab (Blackberry)” on page 174
- ♦ “Setting Up Blackberry Auditing and Archiving Services (BAAS) for BBM” on page 175

Messenger Enterprise (BBME) Tab (Blackberry)

The screenshot shows the BlackBerry configuration interface. At the top, there's a header with the BlackBerry logo and a 'Save Changes' button. Below the header, a message states 'BlackBerry specific information is configured here.' There are four tabs: 'Core Settings', 'Enterprise Servers', 'Messenger Enterprise' (which is selected), and 'Unified Endpoint Management'. Under the 'Messenger Enterprise' tab, there's a section titled 'BBM Integration'. It contains a paragraph explaining the three parts of setting up BBM Integration: a Tenant ID, an optional Message Router, and exporting the configuration. Below this, there are three bullet points: 1. A Tenant ID was generated for your Retain system when this page was loaded. It is used to identify your system during the registration and data collection processes. 2. The Message Router can receive the registration and data collection requests from the devices and forward them on to your Retain Server. 3. The Retain BBM configuration needs to be exported from Retain and then imported into the BlackBerry console. Below the text, there are four input fields: 'Tenant ID' with the value 'd1cef57a-c58d-45c7-9485-16e49240be93', 'Use Message Router' with an unchecked checkbox, 'Device Transmission Frequency' with a value of '60' and a unit of 'minutes (5-1440)', and 'Only Archive Protected Messages' with an unchecked checkbox. At the bottom, there is an 'Export BBM Configuration' button.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [Blackberry-Configure](#) > [Messenger Enterprise](#)

- ♦ The Blackberry module lets Blackberry servers archive BBM Enterprise data into the Retain system using the Retain REST API. The Blackberry servers must be configured to log phone calls, PIN, BBM and SMS data.
- ♦ The web server on the Retain Server and the Retain Router, and all other areas in Retain that require TLS must support TLS 1.2 or TLS 1.3. Earlier TLS versions are not sufficient.

For configuration instructions, see the appropriate link:

- ♦ IIS ([https://msdn.microsoft.com/en-us/library/windows/desktop/aa374757\(v=vs.85\).aspx](https://msdn.microsoft.com/en-us/library/windows/desktop/aa374757(v=vs.85).aspx))
 - ♦ Apache (https://httpd.apache.org/docs/2.4/ssl/ssl_howto.html)
- ♦ BBMe Supported Ciphers are:

ECDHE-ECDSA-AES256-GCM-SHA384
ECDHE-RSA-AES256-GCM-SHA384
ECDHE-ECDSA-AES128-GCM-SHA256
ECDHE-RSA-AES128-GCM-SHA256
DHE-RSA-AES256-GCM-SHA384
DHE-DSS-AES256-GCM-SHA384
DHE-RSA-AES128-GCM-SHA256
DHE-DSS-AES128-GCM-SHA256
ECDHE-ECDSA-AES128-SHA256
ECDHE-ECDSA-AES256-SHA384

ECDHE-RSA-AES256-SHA
ECDHE-ECDSA-AES256-SHA

Setting Up Blackberry Auditing and Archiving Services (BAAS) for BBM

IMPORTANT: For questions about BAAS licensing, setup, and so on, contact your Blackberry representative.

The following information is provided for your benefit.

Setting up Retain Blackberry Auditing and Archiving Service for BBM Enterprise (BAAS) is quite simple, as the BBM Enterprise application directly inputs data to Retain

The BBM Enterprise app can forward data to either the Retain Router or the Retain Server, but it will only forward to one or the other.

Because the BBM Enterprise app communicates directly to the Retain BAAS system, Retain needs to have an open connection to the Internet.

Whichever will be used, Router or Server, the configuration and a security certificate must be obtained before setup can be completed.

This supports the BBM App for Desktop (Windows and macOS).

IMPORTANT: Due to the Internet-open-connection requirement, the desired connection should be placed in the network's DMZ. To protect the Retain Server, the Retain Router has been designed to be placed in the DMZ. When the Router cannot be installed in the system, the Retain Server can handle all communication, but will need to be installed in the DMZ.

Blackberry Environment Requirements

- ♦ Enterprise ID (From Blackberry)
- ♦ Base API license (In licensing tab)
- ♦ Blackberry license (In Licensing tab)
- ♦ REST API base License (In REST API tab)
- ♦ BBM REST API license (In REST API tab)
- ♦ SSL security certificate obtained from a trusted third party certificate authority for either Server or Router (whichever is to be used).

Pre-setup Tasks

1. Create a Network structure plan (Where to place the Retain Server, and whether to use the Router.)
2. Set up and configure a Retain Server, or a Server and router.
3. Make sure the Router or Server is connected to and accessible in your DMZ.

Setting Up the Retain Blackberry Environment

- 1 Install the four required licenses to enable BAAS on the Retain server.

The first two licenses, base Retain license and the Blackberry module license, are uploaded to the Licenses page in the Retain Server management console.

The second two licenses are REST API licenses, REST API base license and the Blackberry REST API license, are installed under the Server Configuration | REST API tab.

- 2 From the Blackberry module's Messenger Enterprise tab, Export the BBM configuration file.

The BBM Configuration file is generated through the Blackberry module configuration page. Open the module configuration and look at the Core Settings tab. Look at the BBM Integration section. Here the decision is made whether to use the Retain Router or to use the Retain Server. If the Retain Router is to be utilized, select the 'Use Message Router' check box.

The Device Transmission Frequency setting is the setting which determines how often the BBM Enterprise application will upload archive data to the Retain Server. If there is no information to be archived, the BBM Enterprise application will wait until there is. The setting is in minutes. Minimum is every 5 minutes, maximum is 1440 minutes (24 hours). Once configured, select the 'Export BBM Configuration' button and save the file; you will need it later.

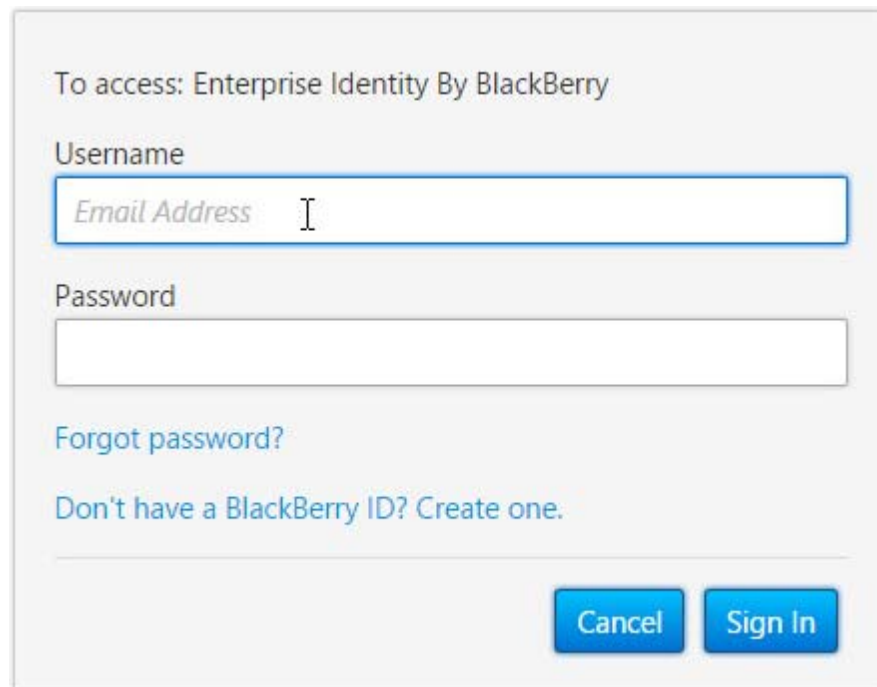
The module may be given a name.

The Send Method lets you send Blackberry items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

- 3 Obtain an SSL security certificate for the destination server or router (if not already obtained)

The security certificate must be obtained to configure the Blackberry Identity console. The security certificate needs to be in base 64 format.

- 4 Go to the Blackberry Enterprise Identity Console. (<https://idp.blackberry.com/enterprise>)



The screenshot shows the login interface for the BlackBerry Enterprise Identity console. At the top, it says "To access: Enterprise Identity By BlackBerry". Below this are two input fields: "Username" and "Password". The "Username" field has a placeholder text "Email Address" and a cursor. Below the "Password" field is a link "Forgot password?". At the bottom, there is a link "Don't have a BlackBerry ID? Create one." and two buttons: "Cancel" and "Sign In".

- 5 Enter the credentials provided by Blackberry when the account was created.

- 6 Enter the administrator console.

Welcome to Enterprise Identity by BlackBerry. Click the service below that you want to access.

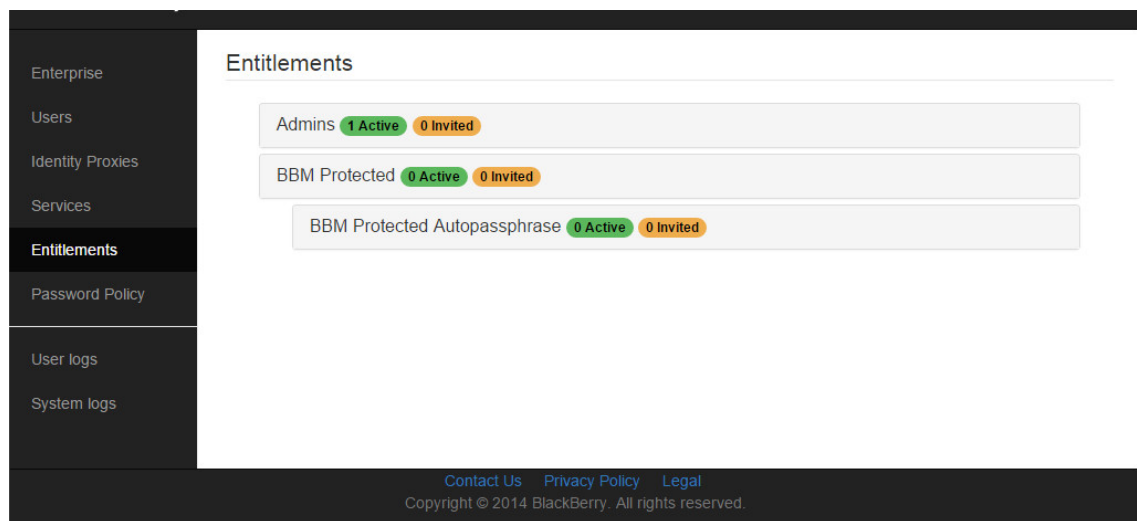


- 7 Select the 'Services' page.
- 8 BBM Enterprise must be enabled.

A screenshot of the BlackBerry Enterprise Identity web interface. On the left is a dark sidebar with navigation links: Enterprise, Users, Identity Proxies, Services (highlighted), Entitlements, Password Policy, User logs, and System logs. The main content area is titled "Services" and features a table with columns for Service, State, and Actions. The table lists four services: "BAAS for BBM Protected" (Available), "BBM Protected" (Active), "BBM Protected Autopassphrase" (Active), and "BBM Protected Plus" (Available). Each row has corresponding action buttons (Enable, Edit, Disable). Below the table, it says "Showing 1 to 4 of 4 entries" and includes a "Previous 1 Next" pagination control. At the bottom, there is a "Select a service type to create..." dropdown and a "+ Create" button. The footer contains links for "Contact Us", "Privacy Policy", and "Legal", along with the copyright notice "Copyright © 2014 BlackBerry. All rights reserved."

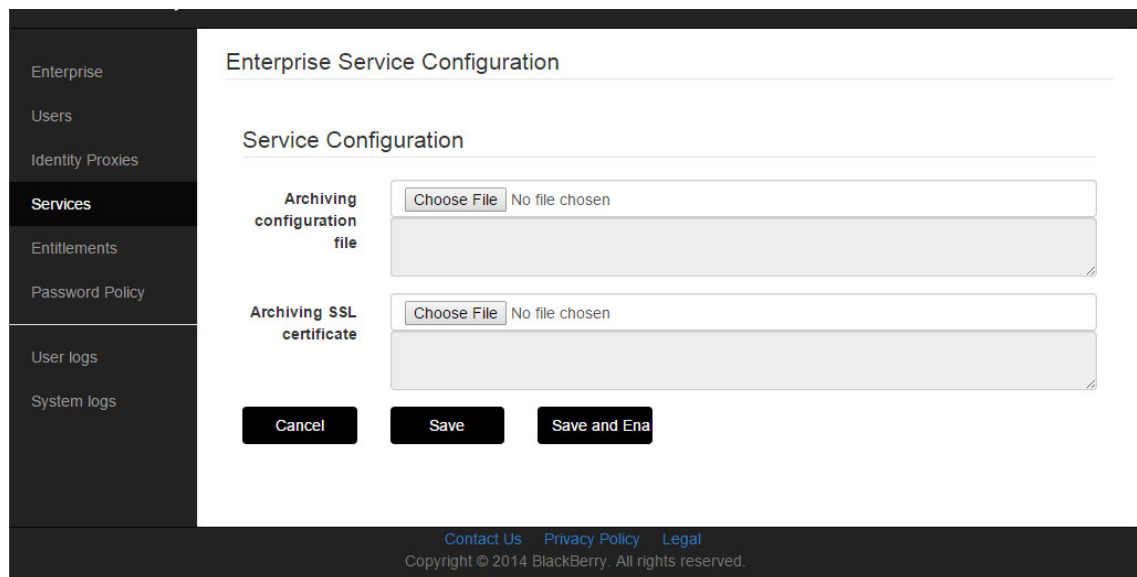
- 9 Enter 'entitlements' and invite users/devices to be added to the service (In this case BBM Enterprise)

Users must first be added to the BBM Enterprise system before they can be added to Retain BAAS.



10 Enable BAAS for Protected.

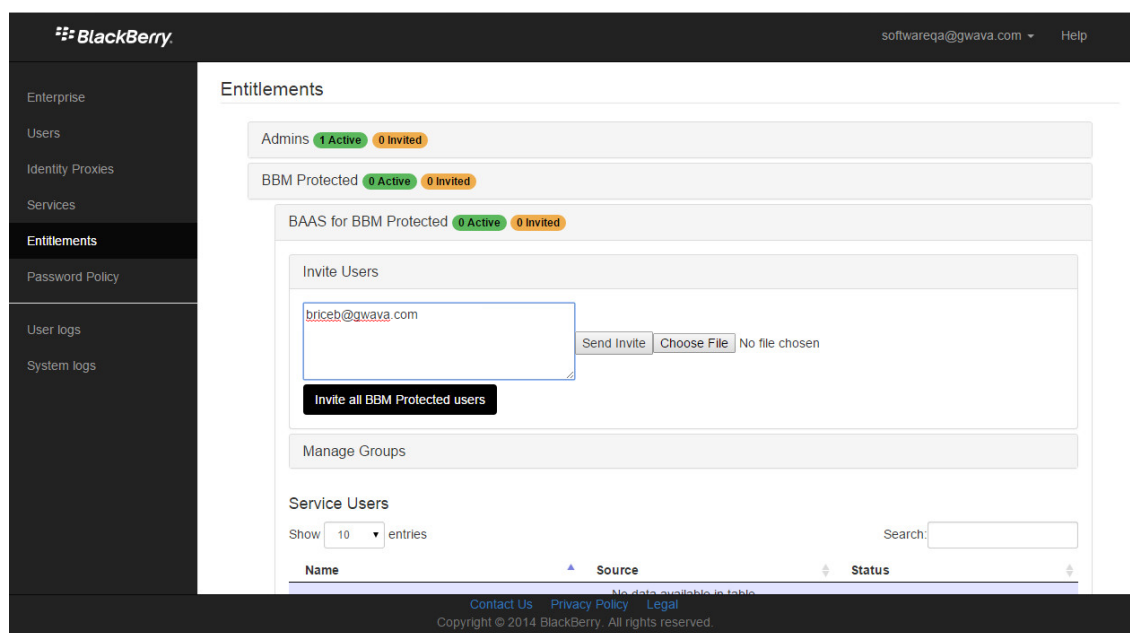
To enable BAAS for protected, from the 'Services' tab, select the 'enable' button for BAAS. There are two files which must be uploaded to the BlackBerry Identity Console, these are the two files saved earlier: the full chain SSL security certificate for the Retain Server or the Retain router, (whichever is going to be used), and the BBM Configuration file created in step 3.



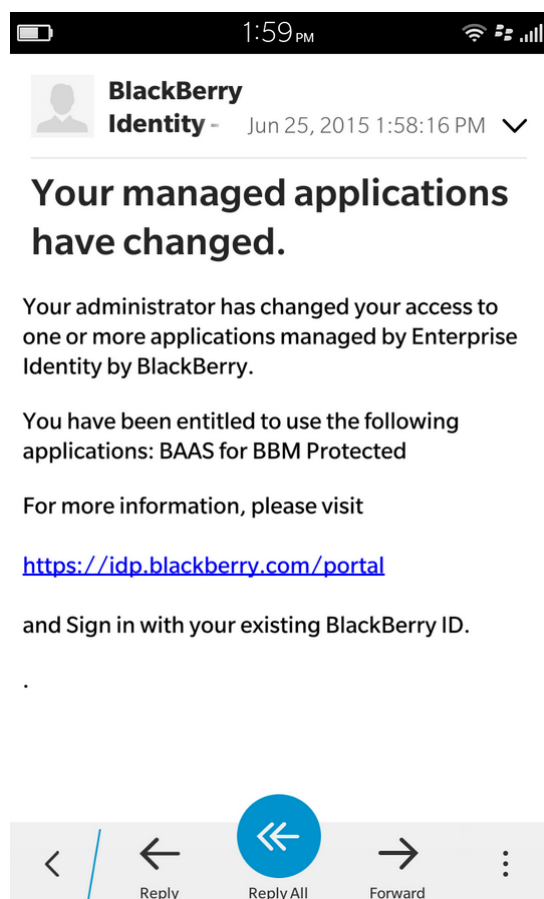
The Archiving configuration file is the BBM Configuration File, and the full chain SSL certificate needs to be uploaded to the 'Archiving SSL Certificate' section. Select the 'Choose file' button and browse to the appropriate file to upload it. Once both files have been uploaded, select the 'Save' button.

11 Enter Entitlements and invite users

Users invited to BAAS MUST already be users of BBM Enterprise. If users are not registered to use BBM Enterprise, BAAS will not work. First invite them to BBM Enterprise, and then invite to BAAS after the device has been registered with the BBM server for BBM Enterprise service.



12 Users will be notified that they have been added to the archiving



Once the devices and users have been invited to join the BAAS program, they will be sent a notification that they are now part of the BAAS archive.

They are now part of the BAAS system and their BBM Enterprise communication will be added to the Retain BAAS archive.

Blackberry Device Management

Devices are deleted from Retain through the Device Management interface. See “[Blackberry Device Management Overview](#)” in the *Retain 4.10: Configuration and Administration*.

Blackberry Support Explained

Retain supports archiving data from both Blackberry devices and devices running the BBM Enterprise system. Devices running the BBM Enterprise system can have their communication data archived through the BBM app, obtained from Blackberry.

The screenshot shows the 'Device Management' interface. At the top, there's a header with the title and a refresh icon. Below the header, a message states: 'Before managing devices, make sure the Mobile Profile is properly configured.' This is followed by a list of instructions: 'Mobile devices can be added for existing Retain users or for a new user.', 'Once added, an email with a registration .json file and link will be sent to the user.', 'The user should open the email on the device and download the .json file or click the registration link.', 'Once the registration completes, messages should flow from the device to the Message Router and then to Retain.', 'Deleting a device will stop the message flow to Retain and un-register the device.', and a note: 'Note: User provisioning options in the Mobile Module should be configured appropriately to ensure user accounts are created.' Below this, there are buttons: 'Delete Devices', 'Generate Report', 'Add Devices', and 'Reregister Devices'. A search bar is also present. The 'Device List' section contains a table with columns: 'Enrollment Code', 'Display Name', 'Email Address', 'Phone Number', 'Device ID', 'UID', and 'Time of Registration'. The table lists three devices: CL38FBO (Aileen O'Leary), 08C6SBC (Aiden Li), and O1DMG8C (Leroy Jenkins). Below the table, it says 'Devices Selected: 0'. At the bottom, there's a 'Batch Device Registration' section with a link to 'See sample for the expected structure.Example', a 'Browse...' button (showing 'No file selected.'), and an 'Upload a CSV file.' button.

Enrollment Code	Display Name	Email Address	Phone Number	Device ID	UID	Time of Registration
☐ CL38FBO	Aileen O'Leary	ailleen@sfgw14.gwava.net		VZDZQCNTPED53JY2TYBOM6WX		
☐ 08C6SBC	Aiden Li	aiden@doc.gwava.net		14JR4PTKQDBPB808K3MZESAZ		
☐ O1DMG8C	Leroy Jenkins	leroy@sfgw14.gwava.net		AE8GJQ5160S0M0IMJYSCTX9V		

The Blackberry device page displays all devices which have been registered into the Retain system. Native Blackberry and BBM Enterprise devices are displayed together. Retain registers Blackberry devices through log files from the BES server or through data sent by the device running the BBM Enterprise application. If a device is not yet registered, it is either not in the BES address book or no data has been archived for the device. The device list may be filtered for any specified content desired. In addition, devices may be selected for removal.

Archiving CellTrust SL2

- ♦ “[Prerequisites](#)” on page 181
- ♦ “[Configure the Retain Push-based Archiving Connection](#)” on page 181
- ♦ “[Create a REST Collector](#)” on page 181
- ♦ “[Configure the CellTrust Module](#)” on page 181

Prerequisites

- ♦ Install the Module License. See [Submitting a PEM License](#) in [Retain 4.10: Installation and Upgrade](#).
- ♦ Install the REST License. See [Installing a REST License](#) in [Retain 4.10: Installation and Upgrade](#).

Configure the Retain Push-based Archiving Connection

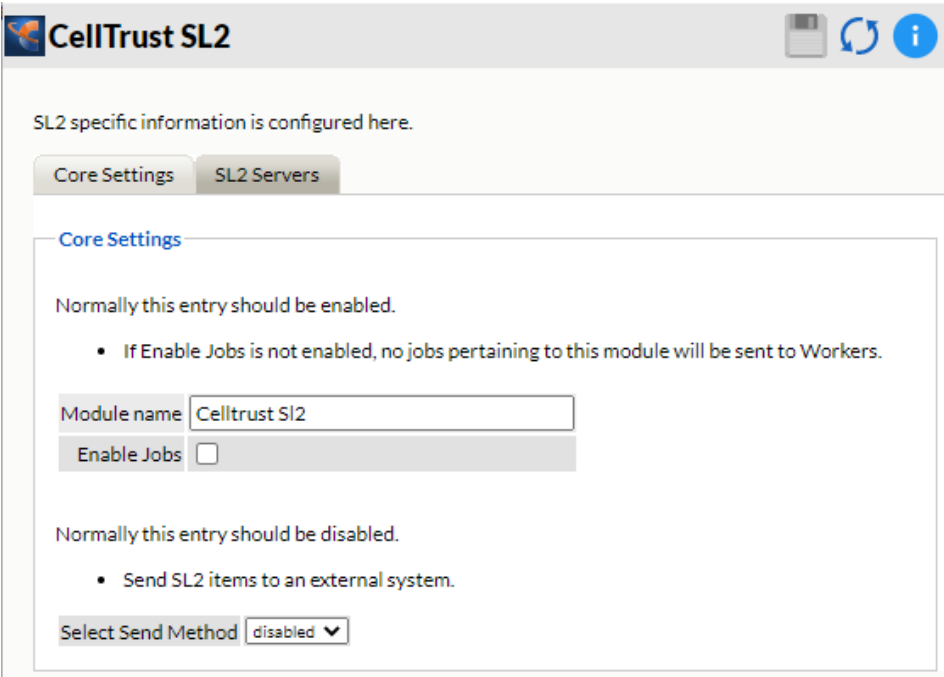
Make sure you have completed the instructions in “[First, Configure the Retain Server or Router Connection](#)” on [page 163](#).

Create a REST Collector

Create a REST collector under Server Configuration in the [REST Collectors Panel](#) and send it to your service provider.

Configure the CellTrust Module

To configure the CellTrust module, all that is required is to enable the Jobs in the module and Save Changes.



The screenshot shows the 'CellTrust SL2' configuration window. At the top, there's a title bar with the 'CellTrust SL2' logo and three icons: a save icon, a refresh icon, and an information icon. Below the title bar, a message states 'SL2 specific information is configured here.' There are two tabs: 'Core Settings' (selected) and 'SL2 Servers'. The 'Core Settings' tab contains the following elements: a note 'Normally this entry should be enabled.' followed by a bullet point 'If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.'; a text input field for 'Module name' containing 'Celltrust SL2'; a checkbox for 'Enable Jobs' which is currently unchecked; another note 'Normally this entry should be disabled.' followed by a bullet point 'Send SL2 items to an external system.'; and a dropdown menu for 'Select Send Method' currently set to 'disabled'.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [CellTrust SL2-Configure](#) > [Core Settings](#)

The “Enable Jobs” box must be checked to have data archiving functionality.

The Send Method lets you send CellTrust items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

Save changes and the module is configured. You may need to disable and re-enable "Enable Job" before it will allow you to Save Changes.

There is no need to configure the SL2 Servers.

Configure CellTrust

The REST connection to the collector needs to be configured by the Admin on the CellTrust system side.

Provide the Retain Server URL, Tenant ID, Key and Secret.

Once the connection is made data will begin to flow into Retain from CellTrust and will appear in the user's Retain mailbox.

There are no Profiles or Jobs associated with this Module. Data flow can be monitored with the Archive Summary by Module report. See [“Archive Summary by Module”](#) in the [Retain 4.10: Configuration and Administration](#).

Archiving GBS Notes

- ◆ [“Prerequisites—GBS Notes”](#) on page 183
- ◆ [“Configure the Retain Push-based Archiving Connection”](#) on page 183
- ◆ [“Create REST Collector for GBS Notes”](#) on page 183
- ◆ [“Configure the GBS Notes Module”](#) on page 183
- ◆ [“Configuring GBS Notes to Work with Retain”](#) on page 184

The GBS Notes module allows Retain to archive Lotus Notes/Domino communications via GBS. This is different from most modules in that there are no Profiles or Jobs. A REST API collector is connected between the GBS Notes and Retain systems and the data flows into the Retain archive as it is created in the GBS Notes system. Data is archived immediately as it enters or is created in the GBS Notes system.

REST data flow can be monitored by the Archive User by Module Report. See [“Archive Summary by Module”](#) in the [Retain 4.10: Configuration and Administration](#).

Prerequisites—GBS Notes

- ♦ Install the Module License. See [Submitting a PEM License](#) in [Retain 4.10: Installation and Upgrade](#).
- ♦ Install the REST License. See [Installing a REST License](#) in [Retain 4.10: Installation and Upgrade](#).

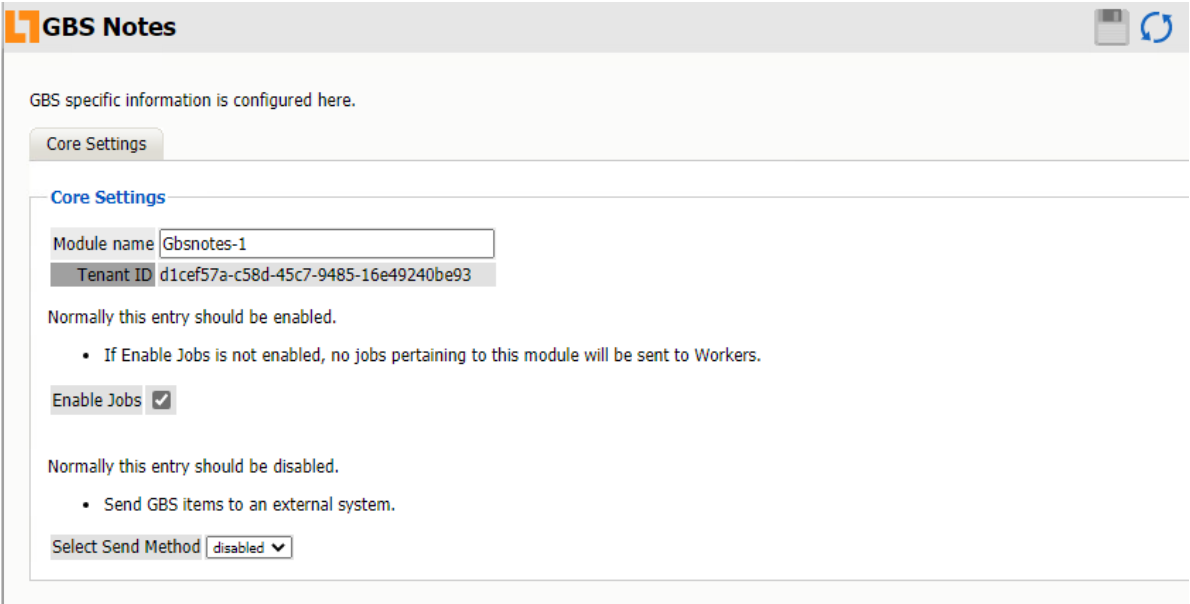
Configure the Retain Push-based Archiving Connection

Make sure you have completed the instructions in “[First, Configure the Retain Server or Router Connection](#)” on [page 163](#).

Create REST Collector for GBS Notes

Create a REST collector under Server Configuration in the [REST Collectors Panel](#) and send it to your service provider.

Configure the GBS Notes Module



The screenshot shows the 'GBS Notes' configuration page. At the top, there's a header with the 'GBS Notes' logo and a refresh icon. Below the header, a message states 'GBS specific information is configured here.' A 'Core Settings' tab is selected. Under 'Core Settings', the 'Module name' is 'Gbsnotes-1' and the 'Tenant ID' is 'd1cef57a-c58d-45c7-9485-16e49240be93'. A note says 'Normally this entry should be enabled.' followed by a bullet point: 'If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.' The 'Enable Jobs' checkbox is checked. Another note says 'Normally this entry should be disabled.' followed by a bullet point: 'Send GBS items to an external system.' The 'Select Send Method' dropdown is set to 'disabled'.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [GBS Notes-Configure](#) > [Core Settings](#)

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send GBS items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

To configure the GBS Notes module, all that is required is to enable the Jobs in the module and Save Changes.

Enable Jobs must be checked for Retain to archive GBS Notes data.

Configuring GBS Notes to Work with Retain

The REST connection to the collector needs to be configured by the Admin on the GBS Notes system side.

Once the connection is made data will begin to flow into Retain from GBS Notes and will appear in the user's Retain mailbox.

There are no Profiles or Jobs associated with this Module. Data flow can be monitored with the Archive Summary by Module report. See “[Archive Summary by Module](#)” in the *Retain 4.10: Configuration and Administration*.

Archiving GroupWise Messenger

- ♦ “[Prerequisites](#)” on page 184
- ♦ “[Configure the Push-based Archiving Connection](#)” on page 184
- ♦ “[Create a REST Collector for GW Messenger](#)” on page 184
- ♦ “[Configure the GW Messenger Module](#)” on page 184

Prerequisites

- ♦ GroupWise 18.1 or higher.
- ♦ Install the Module License. See [Submitting a PEM License](#) in *Retain 4.10: Installation and Upgrade*.
- ♦ Install the REST License. See [Installing a REST License](#) in *Retain 4.10: Installation and Upgrade*.

Configure the Push-based Archiving Connection

Make sure you have completed the instructions in “[First, Configure the Retain Server or Router Connection](#)” on page 163.

Create a REST Collector for GW Messenger

Create a REST collector under Server Configuration in the [REST Collectors Panel](#).

1. Export the REST key and secret.
2. Enter the REST key and secret, Tenant ID, Retain server address or hostname and port into *GroupWise Administration | GroupWise Messenger Archive*.

Configure the GW Messenger Module

Open the module to configure.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [GW Messenger-Configure](#) > [Core Settings](#)

Change the name, if desired.

Make sure that jobs are enabled.

Save the changes.

Archiving Ionlake MyRepChat

- ♦ [“Creating an Ionlake Module” on page 185](#)

Creating an Ionlake Module

The ionlake module lets you send messages from ionlake MyRepChat to Retain for archiving. The data is pushed from ionlake to Retain so no Job or Profile is required. Because there is no Job or Profile, you can monitor the data flow using the [Archive Summary by Module](#) report. To configure the ionlake module, complete the sections that follow:

- ♦ [“Configuring the Ionlake Module in Retain” on page 186](#)
- ♦ [“Configuring Ionlake MyRepChat” on page 187](#)

Configuring the Ionlake Module in Retain

ionlake specific information is configured here.

Core Settings

Core Settings

Normally this entry should be enabled.

- If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.

Module name

Enable Jobs ☒

Normally this entry should be disabled.

- Send ionlake items to an external system.

Select Send Method

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [ionlake-Configure](#) > [Core Settings](#)

- ☐ Install the ionlake module license and the REST License. See “[Submitting a PEM License](#)” and “[Installing a REST License](#)” in *Retain 4.10: Installation and Upgrade*.
- ☐ Create a REST Collector in the [REST Collectors Panel](#) for ionlake MyRepChat. Export the key and secret to enter into ionlake MyRepChat.
- ☐ Obtain the Retain server Hostname or Cloud Router configuration for your Retain system.
- ☐ Enter the [Tenant ID for your Retain system](#) into ionlake MyRepChat.
- ☐ Configure the ionlake module in Retain with a Module Name.
- ☐ Make sure that **Enable Jobs** is selected.
- ☐ Leave the Send Method disabled unless you are forwarding Ionlake message data to another system.

The Send Method lets you send ionlake items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

Configuring Ionlake MyRepChat

Enter the information gathered in “[Configuring the Ionlake Module in Retain](#)” on page 186 in your Ionlake MyRepChat system to send the archive data to Retain. Below is a screen shot of the MyRepChat interface to enter your Retain information:



MyRepChat can send your data to MicroFocus Retain for archival. In order to set this up you need to:

1. Enable the module in Retain.
2. Create a REST Collector in Retain and enter the information here:

REST COLLECTOR KEY

a8093ff9-66a5-4070-9651-bcfcab9b59cf

REST COLLECTOR SECRET

cd7dbbd7-3b63-4a4c-a0f5-02a3385e4647

3. Enter the Tenant ID for your Retain system:

943d1696-b314-4128-b57f-92125c2c42fe

4. Select the SSL-enabled destination for your application data:



RETAIN ROUTER

Hostname



RETAIN SERVER

Hostname

retain6.qa.gwava.com



CLOUD ROUTER

You must enable Cloud Router connections in Retain.

ACTIVATE ARCHIVING ☐

SAVE

Archiving TeleMessage Messages

- ♦ [“Creating a TeleMessage Module” on page 188](#)

Creating a TeleMessage Module

The TeleMessage module allows Retain to archive those messages. This is different from most modules in that there are no Profiles or Jobs. A REST API collector is connected between the TeleMessage and Retain systems and the data flows into the Retain archive as it is created in the TeleMessage system. Data is archived immediately as it enters or is created in the TeleMessage system.

REST data flow can be monitored by the Archive User by Module Report. See [“Archive Summary by Module”](#) in the *Retain 4.10: Configuration and Administration*.

Prerequisites—TeleMessage Module

- ♦ Install the Module License. See [Submitting a PEM License](#) in *Retain 4.10: Installation and Upgrade*.
- ♦ Install the REST License. See [Installing a REST License](#) in *Retain 4.10: Installation and Upgrade*.

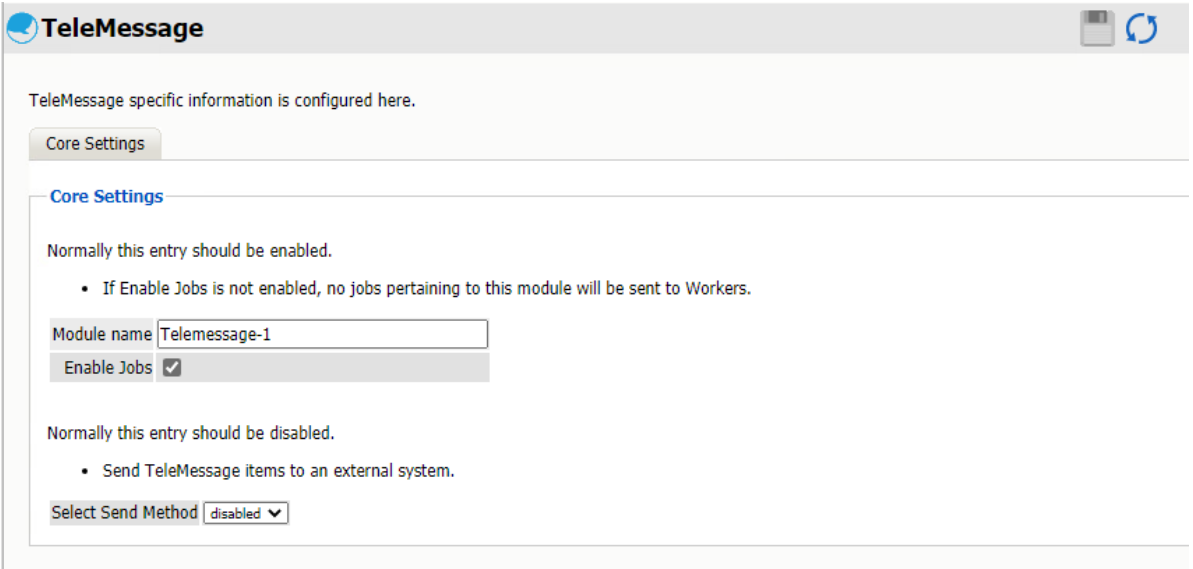
Configure the Push-based Archiving Connection

Make sure you have completed the instructions in [“First, Configure the Retain Server or Router Connection” on page 163](#).

Creating a REST Collector—TeleMessage Module

Create a REST collector under Server Configuration in the [REST Collectors Panel](#). Export the key and secret and send to your service provider.

Configuring the TeleMessage Module



The screenshot shows the 'TeleMessage' configuration window. At the top, there's a header bar with the 'TeleMessage' logo and a refresh icon. Below the header, a message states 'TeleMessage specific information is configured here.' A 'Core Settings' tab is selected. Under 'Core Settings', there's a note: 'Normally this entry should be enabled.' followed by a bullet point: 'If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.' Below this, there's a text input field for 'Module name' containing 'Telemesssage-1' and a checkbox for 'Enable Jobs' which is checked. Another note follows: 'Normally this entry should be disabled.' with a bullet point: 'Send TeleMessage items to an external system.' At the bottom, there's a dropdown menu for 'Select Send Method' currently set to 'disabled'.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [TeleMessage-Configure](#) > [Core Settings](#)

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send TeleMessage items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

To configure the module, all that is required is to enable the Jobs in the module and Save Changes.

The “Enable Jobs” box must be checked to have data archiving functionality.

Save changes and the module is configured. You may need to disable and re-enable “Enable Job” before it will allow you to Save Changes.

Configuring TeleMessage to Work with Retain

The REST connection to the collector needs to be configured by the Admin on the TeleMessage system side.

Once the connection is made data will begin to flow into Retain from TeleMessage and will appear in the user’s Retain mailbox.

There are no Profiles or actual Jobs associated with this Module. Data flow can be monitored with the Archive Summary by Module report. See “[Archive Summary by Module](#)” in the [Retain 4.10: Configuration and Administration](#).

Archiving UM Labs Messages

- ♦ “[Creating a UM Labs Module](#)” on page 189

Creating a UM Labs Module

The UM Labs module allows Retain to archive those messages. This is different from most modules in that there are no Profiles or Jobs. A REST API collector is connected between the UM Labs and Retain systems and the data flows into the Retain archive as it is created in the UM Labs system. Data is archived immediately as it enters or is created in the UM Labs system.

REST data flow can be monitored by the Archive User by Module Report. See “[Archive Summary by Module](#)” in the [Retain 4.10: Configuration and Administration](#).

Prerequisites

- ♦ Install the Module License. See [Submitting a PEM License](#) in [Retain 4.10: Installation and Upgrade](#).
- ♦ Install the REST License. See [Installing a REST License](#) in [Retain 4.10: Installation and Upgrade](#).

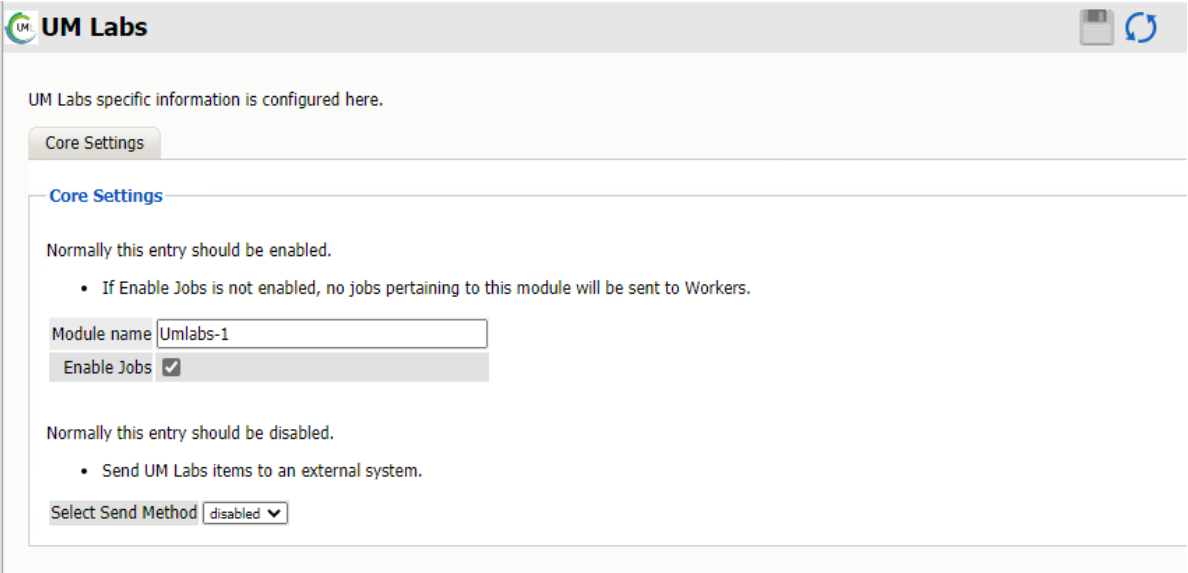
Configure the Retain Push-based Archiving Connection

Make sure you have completed the instructions in [“First, Configure the Retain Server or Router Connection” on page 163](#).

Creating a REST Collector—UM Labs Module

Create a REST collector under Server Configuration in the [REST Collectors Panel](#). Export the key and secret and send them to your service provider.

Configure the UM Labs Module



The screenshot shows the 'UM Labs' configuration window. At the top, there's a header with the 'UM Labs' logo and a refresh icon. Below the header, a message states 'UM Labs specific information is configured here.' The 'Core Settings' tab is selected. Under 'Core Settings', there's a note: 'Normally this entry should be enabled.' followed by a bullet point: 'If Enable Jobs is not enabled, no jobs pertaining to this module will be sent to Workers.' Below this, there's a 'Module name' text box containing 'Umlabs-1' and an 'Enable Jobs' checkbox which is checked. Another note follows: 'Normally this entry should be disabled.' with a bullet point: 'Send UM Labs items to an external system.' Below this is a 'Select Send Method' dropdown menu currently set to 'disabled'.

Path: [Retain Server Manager](#) > [Configuration](#) > [Module Configuration](#) > [UM Labs-Configure](#) > [Core Settings](#)

The module needs to be enabled on this page to make it active in the Retain system.

The module can be given a name.

The Send Method lets you send UM Labs items to an external system using FTP or SMTP. In most cases this should be disabled so that items are archived in Retain. To select the SMTP Forwarding or FTP features, you must first add and configure them in the [Module Forwarding Tab](#) on the Server Configuration page, otherwise the drop-down list is empty.

To configure the module, all that is required is to enable the Jobs in the module and Save Changes.

The “Enable Jobs” box must be checked to have data archiving functionality.

Save changes and the module is configured. You may need to disable and re-enable "Enable Job" before it will allow you to Save Changes.

Configure UM Labs to Work with Retain

The REST connection to the collector needs to be configured by the Admin on the UM Labs system side.

Once the connection is made data will begin to flow into Retain from UM Labs and will appear in the user's Retain mailbox.

There are no Profiles or Jobs associated with this Module. Data flow can be monitored with the Archive Summary by Module report. See [“Archive Summary by Module”](#) in the *Retain 4.10: Configuration and Administration*.

