

OpenLab ECM XT Import Scheduler

Administration Guide

Notices

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Software Revision

This guide is valid for the 2.8 revision or higher of the OpenLab ECM XT Import Scheduler program until superseded.

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Agilent OpenLab ECM XT Import Scheduler

This guide is targeted for the system administrator of the OpenLab ECM XT Import Scheduler.

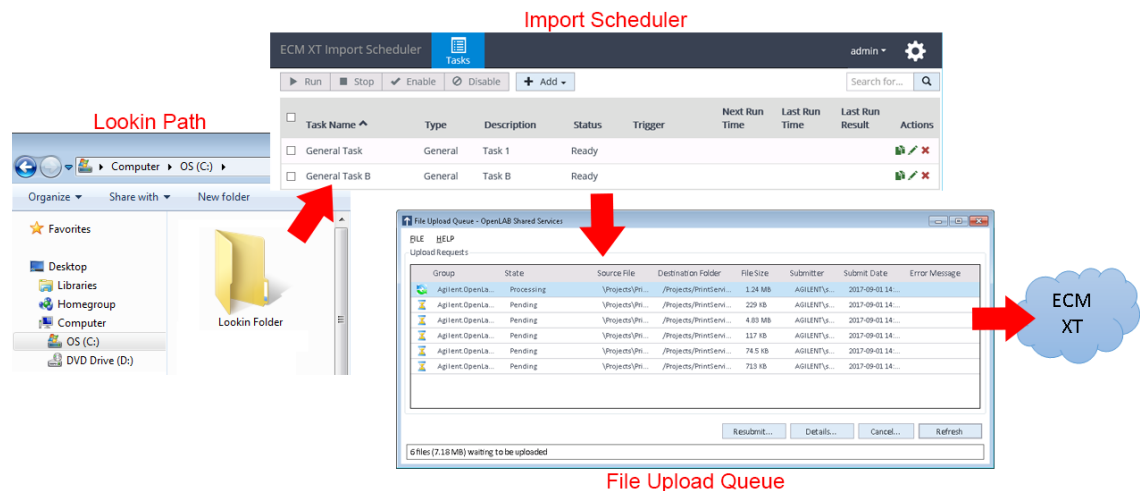
This guide provides information about administrative and maintenance procedures that must be taken to ensure that the OpenLab ECM XT Import Scheduler remains stable and performs well over time.

About the OpenLab ECM XT Import Scheduler Software

The OpenLab ECM XT Import Scheduler is an add-on program available for the OpenLab ECM XT software. See the *OpenLab ECM XT Import Scheduler Installation Guide* for details on system requirements and installation procedures.

Use the Import Scheduler to create tasks to import files from your network to Secure Storage. You can configure multiple tasks that are executed manually by users or executed automatically at specified times. Import processes can be fine-tuned to transfer files based on file location, file type, folder structure, or folder groupings.

A task is created that links a **Lookin** folder to a destination in Secure Storage. This location must be in a project. When a task is executed, files in the **Lookin** folder are copied into the OpenLab Shared Services File Upload Queue. The File Upload Queue uploads the files into the destination folder in Secure Storage.



Import Scheduler only supports shared locations in a Windows operating system.

Migrate Import Scheduler Empower Add-on from Empower 3 FR4 to Empower 3 FR5

Versions of Import Scheduler with Empower Add-on prior to version 2.7 work with Waters Empower 3 FR4, which is supported only on Windows 7 for clients. Starting with version 2.7, Import Scheduler with Empower Add-on supports Waters Empower 3 FR5, which is supported on Windows 10 for clients.

Use the following steps to perform the migration to a new machine.

- 1 Prepare a backup of Import Scheduler on your old system.
- 2 Install Import Scheduler with Empower Add-on on a new machine.
- 3 Restore the backup from Step 1 on the newly installed Import Scheduler with Empower Add-on.
- 4 Resubmit Empower tasks.

NOTE

Make sure that your old Empower client and new Empower client have the same Alias.

Access Import Scheduler

To access the Import Scheduler after installation is complete,

- 1 Open a supported Internet browser.
- 2 Go to: `http://<<import scheduler host name>>:port`, where `<<import scheduler host name>>` is the host server where Import Scheduler is installed, and `port` is the port number specified during the Import Scheduler installation. The URL will be `http` or `https` based on your specific configuration.

Set Up OpenLab ECM XT Import Scheduler Security

Import Scheduler uses OpenLab ECM XT authentication. Only OpenLab ECM XT users with the **ECM XT Import Scheduler Administrator** role can log in. Import Scheduler supports internal and domain authentication types. If domain authentication is used, users should provide the domain in the appropriate field.

Table 1 describes possible error messages related to authentication.

Table 1 Authentication Error Messages

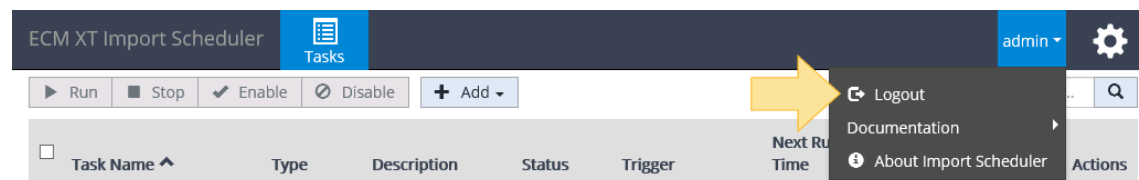
Error Message	Action Required
The password must be changed. Change the password and then connect to ECM XT Import Scheduler.	Change the password and connect to Import Scheduler.
User is disabled.	Enable the user.
User does not have sufficient privileges.	User should have the ECM XT Import Scheduler Administrator role, or another role that has the Manage System Components and Manage Import Scheduler permissions.
There is no valid ECM XT license.	Install a valid OpenLab ECM XT license.
Connection to the selected server failed.	Check the connection to the OpenLab ECM XT server.
User account is temporarily locked due to unsuccessful login attempts.	Wait for the user lock timeout (configured in Control Panel), or check the OpenLab ECM XT credentials.
Username or password is incorrect.	Check the OpenLab ECM XT credentials.

After logging in, users will be directed to the **Task Management** page (see [page 13](#)). If logging into Import Scheduler for the first time, users will be directed to the **Configuration** page (see [page 31](#)).

When a user has been idle in Import Scheduler for some time, they will be prompted to continue their session. If they do not confirm, they will be automatically logged out and will need to log in again to continue working with the system. The automatic logout time is based on the **Inactivity time before locking the application** option configured in OpenLab Control Panel.

If a user closes the Import Scheduler Web browser, they will be automatically logged out.

To manually log out of Import Scheduler, click **User**, and select **Logout**.



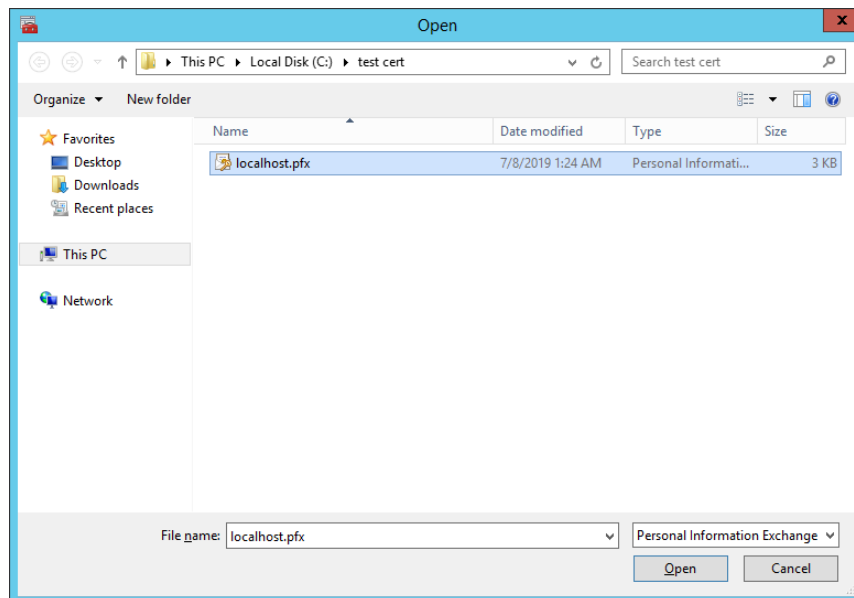
If the computer where Import Scheduler is installed is shut off for more than 20 consecutive days, the user must revalidate the upload credentials for the task to run successfully.

To revalidate credentials, the user must resubmit the task (open a task to edit and save it). When the task is resubmitted, the credentials entered when logging into the application will be used as the upload user, and the credentials are revalidated.

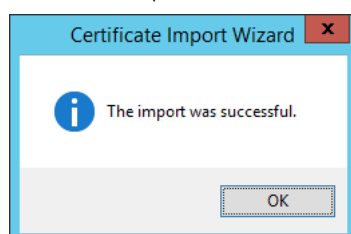
Configure HTTPS with HTTP.sys

You must have a valid certificate with a generated PFX (Personal Information Exchange) file to perform this procedure. The certificate should have "subjectAltName" for self-sign certificate (<hostname>.cnf should contain the subjectAltName parameter) for Chrome starting with version 58.

- 1 Import the certificate in the MMC snap-in for a local computer.
 - a Run **mmc** from the **Start** menu.
 - b Select **File > Add/Remove Snap In**.
 - c From the **Available snap-ins** list, select **Certificates**, and click **Add**.
 - d In the **Certificates snap-ins** window, select **Computer account**, and click **Next**.
 - e Click **Finish**.
 - f Click **OK**.
 - g Select **Certificates (local computer) > Trusted Root Certification Authorities > Certificates**.
 - h Right-click **Certificates**, and select **All Tasks**.
 - i Click **Next**.
 - j Browse for and select the PFX file for the specified certificate, and click **Open**.



- k Enter the password used during the PFX generation, and click **Next**.
 - l For the **Certificate Store**, select **Trusted Root Certification Authorities**, and click **Next**.
 - m Finish importing the certificate.
 - n When the import is successful, click **OK**.



Agilent OpenLab ECM XT Import Scheduler

Configure HTTPS with HTTP.sys

2 Bind the certificate to a port number.

a Run the Command Prompt with administrator privileges.

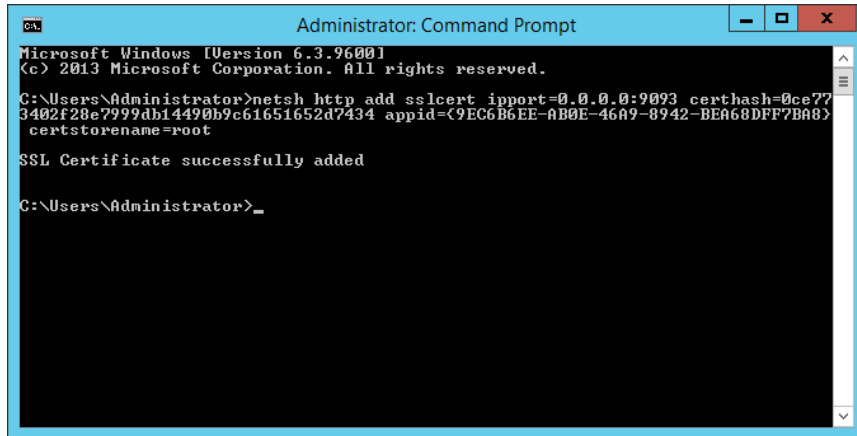
b Execute the following command:

```
netsh http add sslcert ipport=0.0.0.0:9093 certhash=<Certificate
Thumbprint> appid={<appid>} certstorename=root
```

c The **certhash** parameter specifies the thumbprint of the certificate.

The **ipport** parameter specifies the IP address and port

The **appid** parameter is a GUID that can be used to identify the owning application.



```
Administrator: Command Prompt
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>netsh http add sslcert ipport=0.0.0.0:9093 certhash=0ce77
3402f28e7999db14490b9c61651652d7434 appid={9EG6B6EE-AB0E-46A9-8942-BEA68DFF7BA8}
certstorename=root

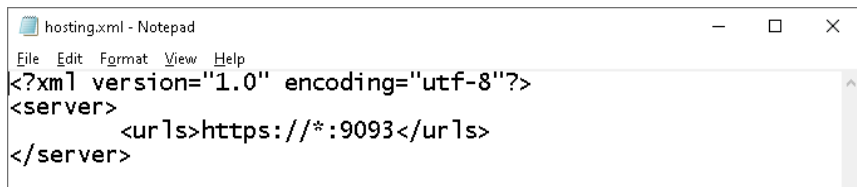
SSL Certificate successfully added

C:\Users\Administrator>_
```

3 Configure HTTPS for Import Scheduler Web Application

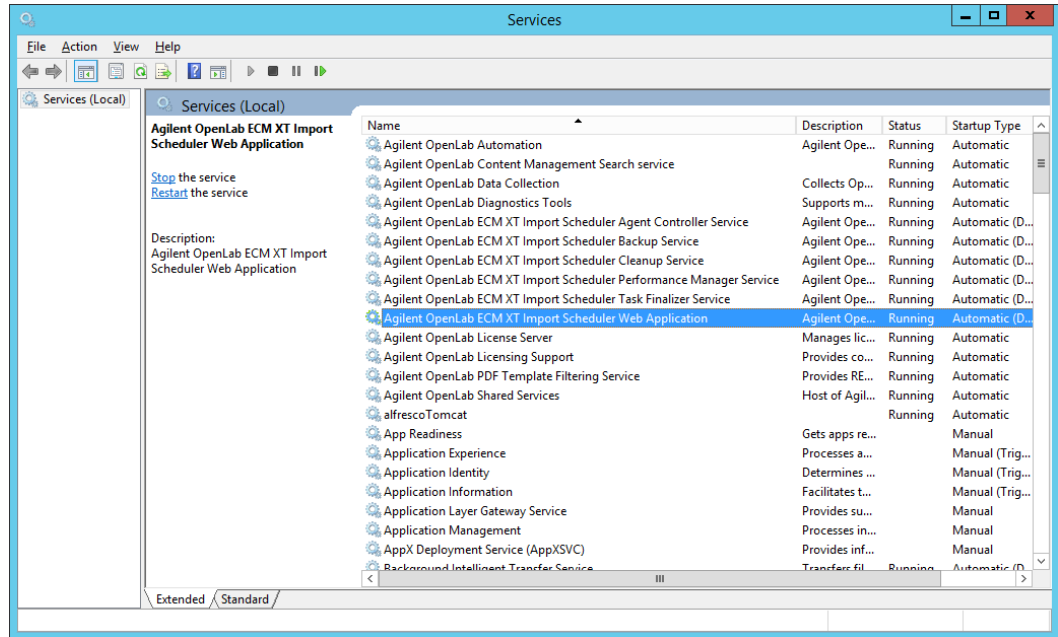
a Open the **hosting.xml** file. The default location is C:\Program Data\Agilent\OpenLab ECM XT Import Scheduler.

b Update **<urls>** from **http** to **https**, and the 9091 port to 9093.



```
hosting.xml - Notepad
File Edit Format View Help
<?xml version="1.0" encoding="utf-8"?>
<server>
  <urls>https://*:9093</urls>
</server>
```

- c Restart the **Agilent OpenLab ECM XT Import Scheduler Web Application** Service or restart the server PC.



OpenLab ECM XT Import Scheduler Task Management Page

The OpenLab ECM XT Import Scheduler **Task Management** page allows users to observe task information and perform configuration and management activities related to different tasks. On this page, users can do the following:

- Check task statuses and last run results
- Create, edit, copy, or delete tasks
- Run or stop tasks manually
- Enable or disable tasks

Users can search general tasks by **Task Name**, **Description**, **Lookin Path**, and **Destination Path**. Users can search Empower tasks by **Task Name**, **Description**, and **Destination Path**.

Table 2 describes the columns on the **Task Management** page.

Table 2 Task Management columns

Column	Description
Task Name	The name of the task
Type	The type of task (for example, General Plugin Task)
Description	A detailed description of the task
Status	<p>The status of the task</p> <ul style="list-style-type: none"> • Ready: The task is ready to start • Running: The task is currently running • Disabled: The task was disabled by a user or the system • Corrupted: The task is corrupted by the environment or system failure. Users can get detailed information about this status by hovering over the symbol.
Trigger	The task schedule details
Next Run Time	The date and time that the task will run next
Last Run Time	The date and time that the task was last run, displayed after task completion.

Table 2 Task Management columns (continued)





Column	Description
Last Run Result	<p>The result of the last task run, displayed after task completion.</p> <ul style="list-style-type: none"> • Empty status: The task has not run or is currently running. • Task run successfully: The task has completed successfully. • Task stopped by user: The task has been manually stopped by a user. • Task stopped by exceeding maximum run time: The running task has met the maximum run time allowed for the completion of the import. The import will stop at this time. If the task is scheduled to run again or if the task is started manually, the import will resume at the point where it stopped. • Failed to run task. Source Access User doesn't have read permissions: The task failed because the Source Access User cannot access the Lookin folder for one of the following reasons: <ul style="list-style-type: none"> • The Source Access User does not have read permissions to the Lookin folder. • The Lookin folder has been moved or deleted. • Task ended with errors: The task imported all files successfully. However, the post-import task of deleting the sources files was not completed because the Source Access User does not have write permissions for the Lookin folder. Users can get detailed information about this status by hovering over the  symbol. • Task can't start due to low system resources: The task cannot start because the operating system has breached the threshold on free HDD space or RAM. To correct the error, do one of the following: <ul style="list-style-type: none"> • Reconfigure the thresholds set in the Automatic response to events and errors section on the Configuration page. • Increase or re-assign system resources. • Failed to run task. There are no read permissions for destination: The task failed because the OpenLab Shared Services user who submitted the task doesn't have read permissions and cannot upload data in the selected project. To correct the error, do one of the following: <ul style="list-style-type: none"> • Validate that the OpenLab Shared Services user is enabled, has the correct read permissions, and has a current password. • Log into Import Scheduler as a different user and resubmit the task (open a task to edit and save it). • Failed to run task. There are no write permissions for destination: The task failed because the OpenLab Shared Services user who submitted the task doesn't have write permissions and cannot upload data in the selected project. To correct the error, do one of the following: <ul style="list-style-type: none"> • Validate that the OpenLab Shared Services user is enabled, has the correct write permissions, and has a current password. • Log into Import Scheduler as a different user and resubmit the task (open a task to edit and save it). • Failed to run task. User who submitted task is not valid: The task failed because the OpenLab Shared Services user is disabled. To correct the error, do one of the following: <ul style="list-style-type: none"> • Enable the user. • Log into Import Scheduler as a different user and resubmit the task (open a task to edit and save it).

Table 2 Task Management columns (continued)

Column	Description
	<ul style="list-style-type: none"> • Failed to run task. Source Access User is not valid: The task failed because the Source Access User status is "Account is disabled" or "User must change password in Windows." Or, the Source Access User's password is expired. To correct the error, validate that the Source Access User is enabled and is using a correct password. • Failed to run task. Connection to the specified server failed: The task failed because Import Scheduler can no longer access the application server, due to one of the following reasons: <ul style="list-style-type: none"> • There is a communication failure to the Secure Storage user (network problem). • The application server is not available (shut down). • Failed to run task. Content Management authentication provider is not available: The task failed because Secure Storage has been disabled or corrupted. If using domain authentication, make sure that the main controller is available and configured properly. If using internal authentication, make sure that OpenLab Shared Services is running properly and that you can connect to Control Panel for OpenLab and Secure Storage. • Task cannot start. There is no valid ECM XT license: The task failed because Import Scheduler could not find a valid OpenLab ECM XT license. Check the license in Control Panel for OpenLab. • Failed to run task: A generic error status when an error occurs during the task run. Details can be viewed in the log files.
Actions	<p>Click an icon to Copy, Edit, or Delete a task.</p> <ul style="list-style-type: none"> •  Copy to be brought to the Create Task page that contains predefined values from the copied task. You must enter a new Task Name. •  Edit to be brought to the Edit Task page. Make changes as needed, and click OK. •  Delete to delete the task. Click Yes to confirm.

Import Scheduler Task Actions

There are five action buttons on the **Task Management** page to run, stop, enable, disable, or add a task.

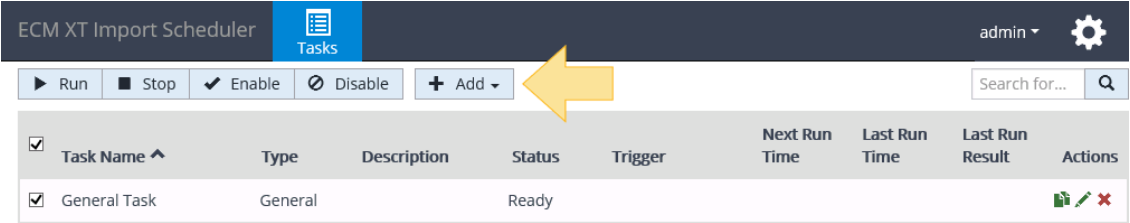


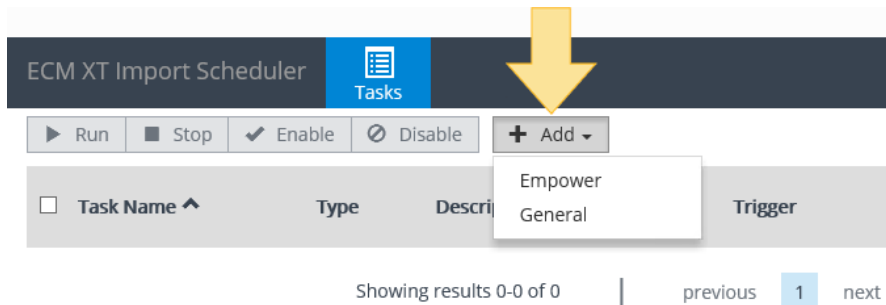
Table 3 Task Actions

Task	Action
Run	Manually start one or more selected tasks with a Ready status.
Stop	Manually stop one or more selected tasks with a Running status. The selected task will continue to run until it reaches a stable commit point before stopping completely. The task Last Run Result will be Task Stopped by User .
Enable	Enable one or more selected tasks with a Disabled status.
Disable	Disable one or more selected tasks with a Ready or Running status. A running task will be disabled after it completes. Disabled tasks will not be executed by Import Scheduler and cannot be started manually.
Add	Create a task. The task options displayed depend on the plug-ins installed. The user will be redirected to the Create Task page. See "Create a Task" on page 17.

Create a Task

Use the **Create Task** page to configure and add a new task. Users must have the **ECM XT Import Scheduler Administrator** and **Secure Storage Contributor** roles to create tasks and upload files.

On the **Task Management** page, select **Add > task**.



To create a **General** task, see See “Create a General Task” on page 17.

To create an **Empower** task, see “Create an Empower Task” on page 27.

Create a General Task

Specify Task information

- 1 Enter a unique **Task Name**.

The **Task Name** has a limit of 125 characters. The following characters are not allowed in a **Task Name**: \ / : * ? " < > |

- 2 Enter an optional **Description** for the task.

Create General Task

Tasks define how the Import Scheduler will perform an import job. It also defines whether the job will be executed 'on demand' by users, or will be automatically executed at a specific time, or is scheduled to be automatically executed repeatedly at specified intervals.

Task

Task Name:

Provide a short name for the import task (<125 characters). This name will be displayed and can be searched for in the tasks list page. This name is also used in diagnostic logs.

Task Description:

Optionally, provide a detailed description for the task. This description will be displayed and can be searched for in the tasks list page.

Schedule:

Specify when and how often this task will be executed.

Run on demand

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Create a General Task

- By default, the task is set to run on demand, so that the user must manually execute the task. The **Maximum run time** for the default task setting is three days. To change the schedule, click the schedule icon.

Task

Task Name:

Provide a short name for the import task (<125 characters). This name will be displayed and can be searched for in the tasks list page. This name is also used in diagnostic logs.

Task Description:

Optionally, provide a detailed description for the task. This description will be displayed and can be searched for in the tasks list page.

Schedule: Specify when and how often this task will be executed.

Run on demand

- Select **Run at scheduled time/s**.
- Click the calendar icon, and select the date and time. Click **Close**.
- Enter the amount of time during which the task can be executed in the **Maximum run time** field. This value must be an integer between 1 and 30240 minutes.
- To repeat the task every minute, hour, day, week, or month, select **Repeat task**, and specify when and how often you want the task to repeat.
- Click **OK**.

Schedule

☐ Run on demand

☒ Run at scheduled time/s

Start at: 2019-01-21 09:52:00 -08:00

Maximum run time: 30 minutes

☒ Repeat task

Repeats: **Monthly**

Repeat every: months

Repeat by: ☒ day of the week

Summary: At 2019-01-21 09:52:00 -08:00 with maximum run time 30 minutes.

OK Cancel

Specify Source information

- Select the **Upload Option**:
 - Select **Upload Individual Files** if you do not want to group files together in ECM XT.
 - Select **Upload Files as a File Set** if you do want to group files together. Analytical data spans across multiple files, and each analytical data file on its own does not have meaning. A file set is a special folder (indicated by a distinct blue color) in Secure Storage that groups these analytical files together so that they appear as one entity in ECM XT. File sets are available in OpenLab ECM XT version 2.4 and later.
- Browse for and select the **Lookin Path**. This is the path to the local or network source folder from where the task should collect files. If it is a path to a network folder, the path should be entered and formatted as **\\<machine_name>\<shared_folder>**. The Source Access User specified on the Configuration page (see [page 31](#)) must have read and write permissions for the selected folder.

The **Lookin Path** has a character limit of 255 characters.

Agilent OpenLab ECM XT Import Scheduler

Create a General Task

- 3 Enter the **Source Level** of the **Lookin** folder from which data will be uploaded. The **Source Level** must be an integer ranging from 0 to 99.

Level **0** = Root **Lookin** folder.

Level **1** = First level of subfolders in the **Lookin** folder

Level **2** = Second level of subfolders in the **Lookin** folder

Source

Upload Options:

☒ Upload Individual Files

Upload files independently of each other. No association is made between the files that are uploaded.

☐ Upload Files as a File Set

Upload files as a set. File sets have an association that can be used when searching in ECM XT to make it easier to find samples, sequences, result sets or other file groups.

Lookin Path:



Specify a network share path or local drive path on the Import Scheduler machine (server) where the files and folders to be uploaded are located. For browsing network shares please type in the share path (e.g., \\workstation1\masshunter) and hit browse.

Source Level:

This number specifies the depth within the lookin path at distinct sets of data (e.g., batches, studies, resultsets, etc.) are located. Level indicates to a task that it should handle folders separately when applying filtering and triggering rules (defined below).

HINT: Level '0' would indicate that the task should consider the lookin path itself as the source folder. Level '1' would indicate that source folders are one level beneath the lookin folder and so on.

Files and folders uploaded from levels other than 0 will include the entire path in Secure Storage. For example, if a user only uploaded files and folders from level 2, the path will be:

Level 0 (empty) > Level 1 (empty) > Level 2 (contents)

- 4 Select the **Upload Mode**.

If you selected **Upload Individual Files** as the **Upload Option**, select from the following options:

- **Upload individual files from current folder and include subfolders:** All files and subfolders starting from the specified level will be uploaded.
- **Upload individual files from current folder (exclude subfolders):** Only files from the specified level will be uploaded. Subfolders and their content are not uploaded.

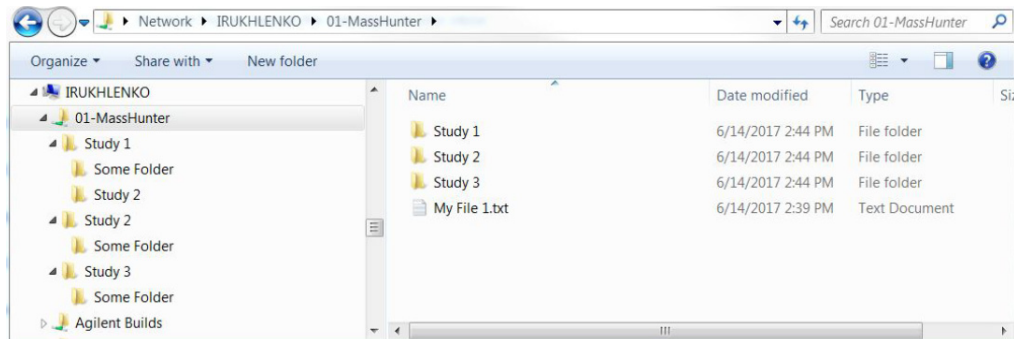
If you selected **Upload Files as a File Set** as the **Upload Option**, select from the following options:

- **Create a file set from current folder and include subfolders:** All files and subfolders starting from the specified level will be grouped together and uploaded as one file set.

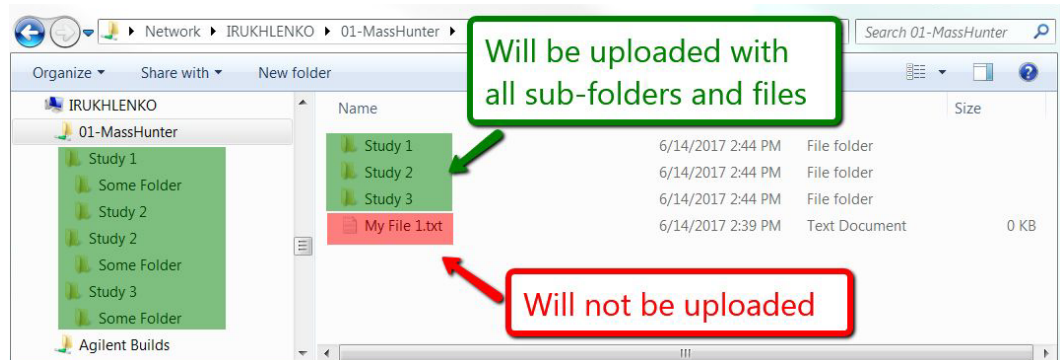
Create a file set from current folder (exclude subfolders): Only files from the specified level will be grouped together and uploaded as one file set. Subfolders and their content are not uploaded.

Source Levels and Upload Mode Examples

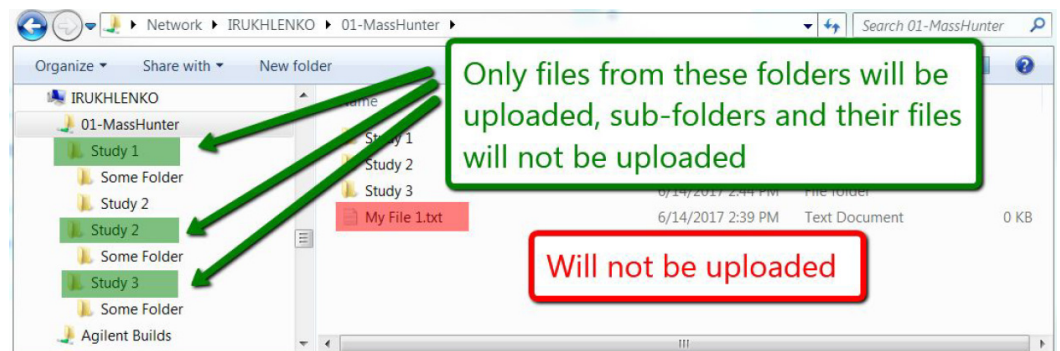
For example, the **Lookin** folder *01-MassHunter* contains the following folders and files:



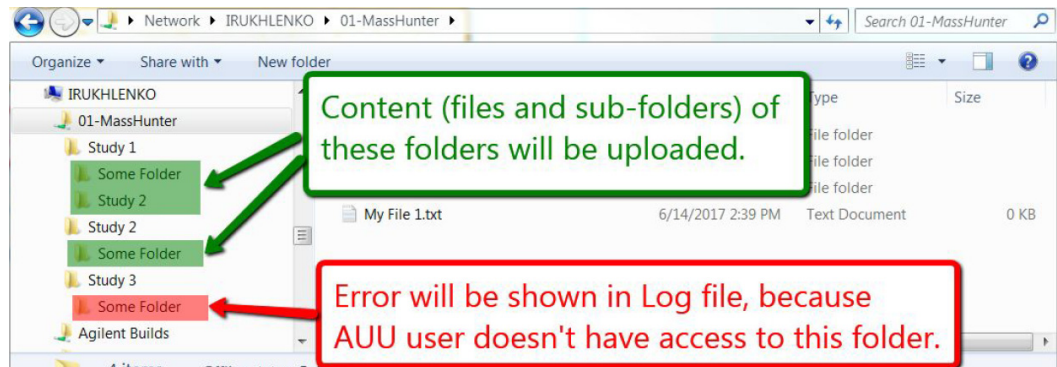
- If a user selected to **Upload individual files from current folder and include subfolders starting at level 1**, then the contents of the folders and all subfolders will be uploaded, and the file (which exists on level 0) will not be uploaded.



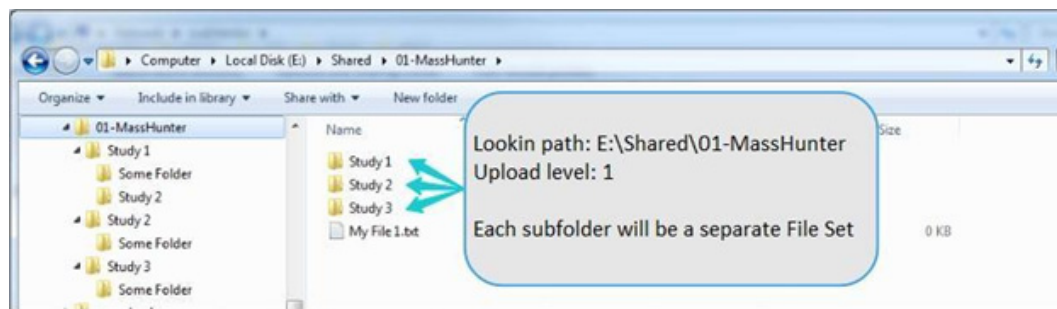
- If a user selected to **Upload files from folders at level 1**, then only the contents of the folders will be uploaded, and any subfolders will not be uploaded. Files that exist on level 0 will not be uploaded.



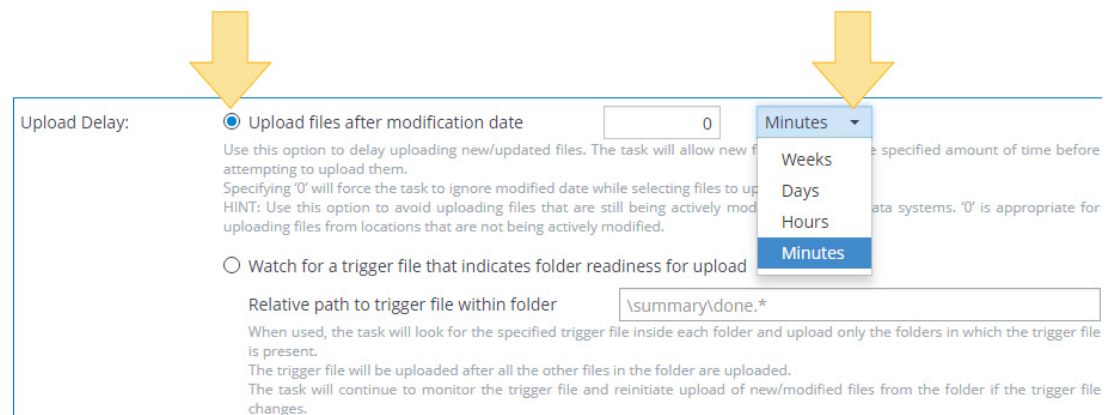
- If a user selected to **Upload individual files from current folder and include subfolders starting at level 2**, but does not have read permissions for all folders, then only the contents of the level 2 folders and subfolders will be uploaded. Contents from a folder for which the user does not have read permissions will not be uploaded.



- If a user selected to **Upload Files as a File Set** starting at **level 0**, then only one file set is created, which contains all files and folders from the specified Lookin path.
- If a user selected to **Upload Files as a File Set** starting at a level that contains subfolders, then the files of each subfolder in the Lookin path is created as a separate file set.



- 5 To exclude files from uploading if they are new or have been recently modified, select **Upload files after modification date**.




Specify the amount of time in **Minutes, Hours, Days, or Weeks**, and enter a numerical value between **0** to **999**. Enter a value of **0** to upload the files immediately.

Import Scheduler will check for this condition for each individual file every time the task is run.

- 6 To define a specific file that must exist within each folder on a specified level to start its upload, select **Watch for a trigger file that indicates folder readiness for upload**, and enter the **Relative path to trigger file**.

Upload Delay: ☐ Upload files after modification date

Use this option to delay uploading new/updated files. The task will allow new files to age for the specified amount of time before attempting to upload them.
Specifying '0' will force the task to ignore modified date while selecting files to upload.
HINT: Use this option to avoid uploading files that are still being actively modified by source data systems. '0' is appropriate for uploading files from locations that are not being actively modified.

 ☒ **Watch for a trigger file that indicates folder readiness for upload**

Relative path to trigger file within folder

When used, the task will look for the specified trigger file inside each folder and upload only the folders in which the trigger file is present.
The trigger file will be uploaded after all the other files in the folder are uploaded.
The task will continue to monitor the trigger file and reinitiate upload of new/modified files from the folder if the trigger file changes.

When the task is executed, Import Scheduler will look for the specified trigger file. If the trigger file does not exist, the files will not be uploaded. If the trigger file does exist, Import Scheduler will begin the upload process. The trigger file will always be the last file uploaded. Once the trigger file is uploaded, that folder is no longer considered triggered until a new trigger file matching the specified file name and path is present.

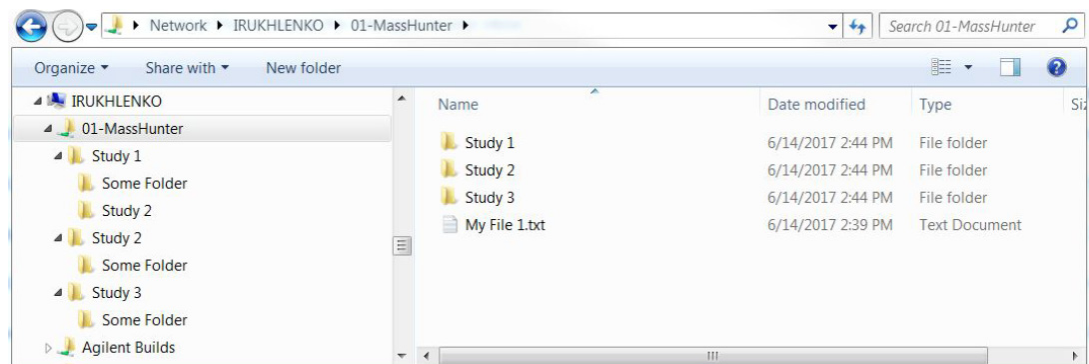
The trigger file is located in the folder at the level specified in **step 3**. For example, if you specified Source Level 2, the trigger file is in a Source Level 2 folder.

If you selected **Upload Files as a File Set** as the **Upload Option**, each folder on a specified level will be considered a file set and will be uploaded if the folder contains the specific trigger file.

The user must have read permissions for the trigger file and folder.

You can use the actual name of the file, or include wildcard characters in the file name (for example, ***.txt**). Acceptable wildcard characters are: ***** and **?**

For example, the **Lookin** folder **01-MassHunter** contains the following folders and files:

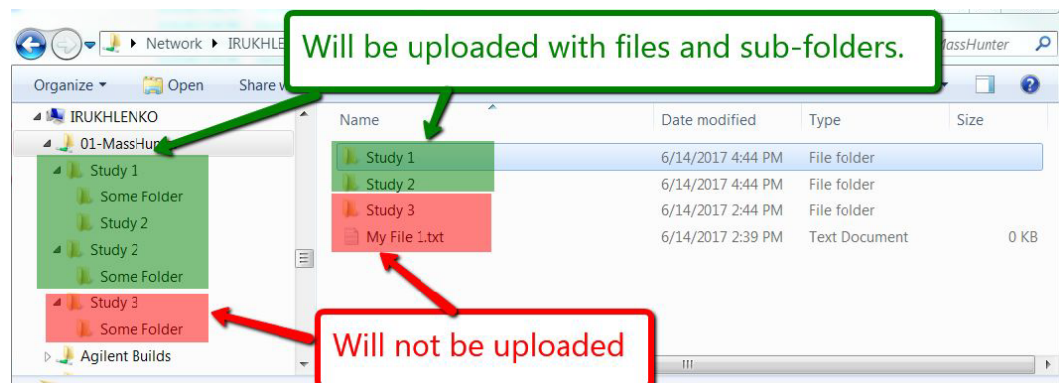


- A user selected to **Upload individual files from current folder and include subfolders from folders starting at level 1**, and specified the trigger file **done.txt**. The trigger file exists in folder **Study 1** and **Study 2**, but does not exist in folder **Study 3**.

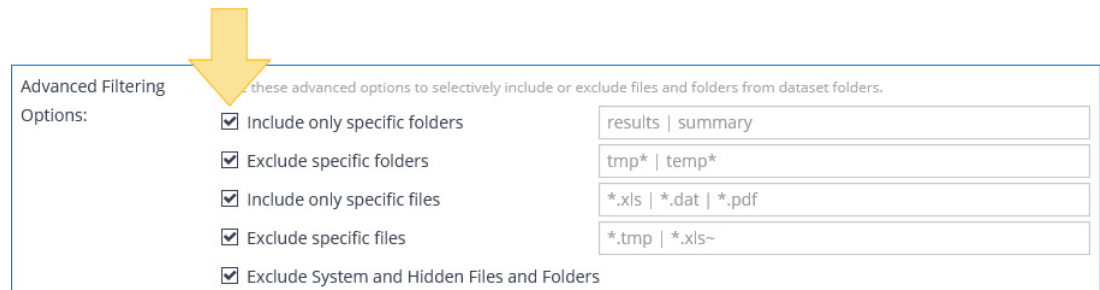
Agilent OpenLab ECM XT Import Scheduler

Create a General Task

When the task is executed, the contents and sub-folders of **Study 1** and **Study 2** will be uploaded, but the contents and sub-folders of **Study 3** and the file (which exists on level 0) will not be uploaded.



- 7 Specify **Advanced Filtering Options**. If you selected **Upload Files as a File Set** as the **Upload Option**, the Advanced Filtering Options define content for a file set. Only included folders and files within a folder on a specified level will be considered a file set. All excluded folders and files will be excluded from a file set.



For the following options, masks support wildcard characters and should be separated by the | character. Acceptable wildcard characters are: * and ?

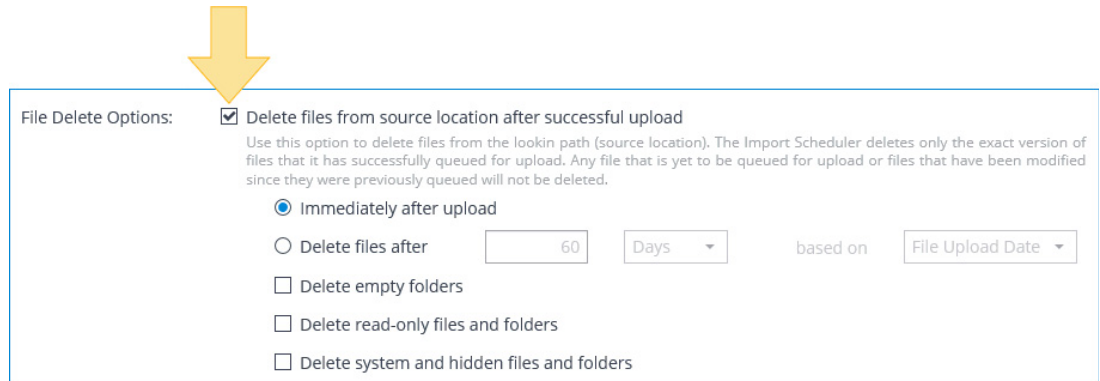
For example: **Mask "Temp | T?st | B*st"** will match to folders

"Temp, Test, Beast".

If a file or folder is specified to be both included and excluded, it will be excluded.

- **Include only specific folders:** Specify a folder name or mask that will be used to find folders to *include* in the upload. All files and subfolders from the matching folder will be uploaded, unless they are excluded using the file or folder exclude specifications.
 - **Exclude specific folders:** Specify a folder name or mask that will be used to find folders to *exclude* from the upload. All files and subfolders from the matching folder will be excluded from upload.
 - **Include only specific files:** Specify a file name or mask that will be used to find files to *include* in the upload.
 - **Exclude specific files:** Specify a file name or mask that will be used to find files to *exclude* from the upload.
 - **Exclude System and Hidden Files and Folders:** System and hidden files and folders will be excluded from the upload.
- 8 Specify **File Delete Options**. After uploading is complete, all successfully uploaded files will be added to a **Delete Queue**. The **Delete Queue** is managed by the **OpenLab ECM XT Import Scheduler Cleanup Service**.

To delete files after an upload, select **Delete files from source location after successful upload**.



File Delete Options: ☒ **Delete files from source location after successful upload**
 Use this option to delete files from the lookin path (source location). The Import Scheduler deletes only the exact version of files that it has successfully queued for upload. Any file that is yet to be queued for upload or files that have been modified since they were previously queued will not be deleted.

☒ Immediately after upload

☐ Delete files after based on

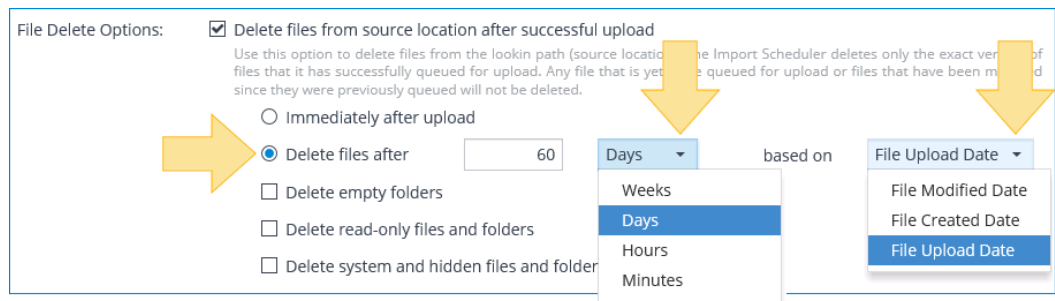
☐ Delete empty folders

☐ Delete read-only files and folders

☐ Delete system and hidden files and folders

- To delete files immediately after the upload is complete, select **Immediately after upload**.
- To delete files after a certain number of minutes, hours, days, or months, select **Delete files after**, and enter the time values.

Select whether the time duration is based on the **File Modified Date**, **File Created Date**, or **File Upload Date**.



File Delete Options: ☒ **Delete files from source location after successful upload**
 Use this option to delete files from the lookin path (source location). The Import Scheduler deletes only the exact version of files that it has successfully queued for upload. Any file that is yet to be queued for upload or files that have been modified since they were previously queued will not be deleted.

☐ Immediately after upload

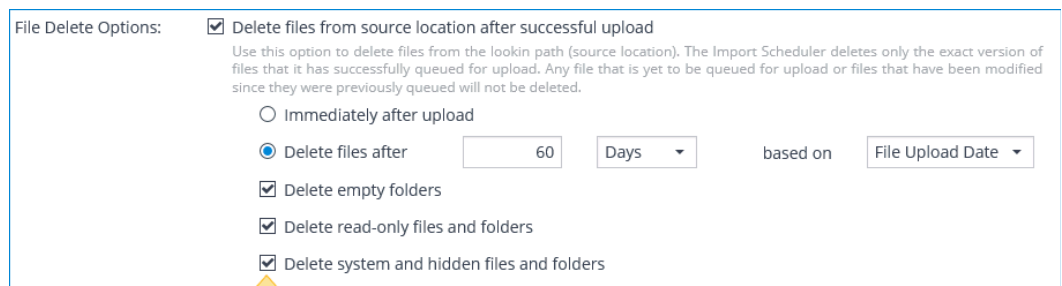
☒ Delete files after based on

☐ Delete empty folders

☐ Delete read-only files and folders

☐ Delete system and hidden files and folders

- To delete source files and folders that remain after the import task is complete, select the option with the attribute property that you would like to delete:
 - **Delete empty folders:** Empty subfolders in the **Lookin** folder are deleted if files from these subfolders were deleted after upload.
 - **Delete read-only files and folders:** Source files and folders with the Read-only attribute assigned to them are deleted.
- **Delete system and hidden files and folders:** Source files and folders with the Hidden attribute assigned to them are deleted.



File Delete Options: ☒ **Delete files from source location after successful upload**
 Use this option to delete files from the lookin path (source location). The Import Scheduler deletes only the exact version of files that it has successfully queued for upload. Any file that is yet to be queued for upload or files that have been modified since they were previously queued will not be deleted.

☐ Immediately after upload

☒ Delete files after based on

☒ Delete empty folders

☒ Delete read-only files and folders

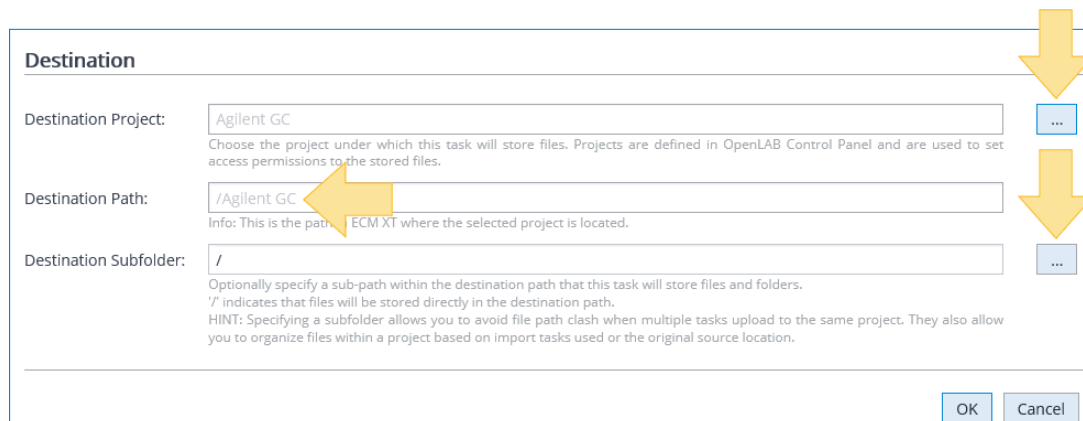
☒ Delete system and hidden files and folders

Specify Destination information

- 1 Browse for and select an existing OpenLab project for the **Destination Project**. The user must have the **View project or project group** and **Edit content of project** permissions for the selected project.

The **Destination Project** defines the **Destination Path**, which cannot be changed.

- 2 Optionally enter or browse for and select a subpath within the **Destination Path**.



Destination

Destination Project: ...

Choose the project under which this task will store files. Projects are defined in OpenLAB Control Panel and are used to set access permissions to the stored files.

Destination Path: ...

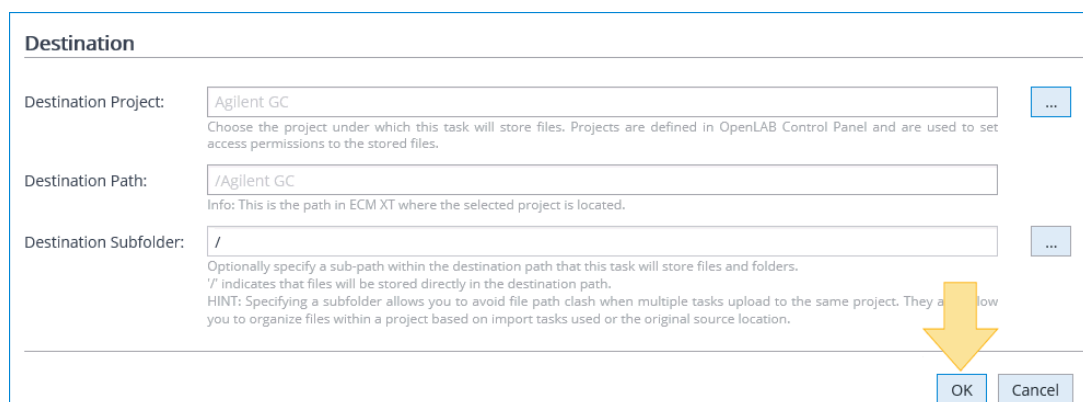
Info: This is the path in ECM XT where the selected project is located.

Destination Subfolder: ...

Optionally specify a sub-path within the destination path that this task will store files and folders.
 '/' indicates that files will be stored directly in the destination path.
 HINT: Specifying a subfolder allows you to avoid file path clash when multiple tasks upload to the same project. They also allow you to organize files within a project based on import tasks used or the original source location.

OK Cancel

- 3 Click **OK**.



Destination

Destination Project: ...

Choose the project under which this task will store files. Projects are defined in OpenLAB Control Panel and are used to set access permissions to the stored files.

Destination Path: ...

Info: This is the path in ECM XT where the selected project is located.

Destination Subfolder: ...

Optionally specify a sub-path within the destination path that this task will store files and folders.
 '/' indicates that files will be stored directly in the destination path.
 HINT: Specifying a subfolder allows you to avoid file path clash when multiple tasks upload to the same project. They also allow you to organize files within a project based on import tasks used or the original source location.

OK Cancel

If you selected **Upload Files as a File Set** as the **Upload Option**, all files from the source will be grouped as a file set after successfully uploading to ECM XT. If at least one file from the source could not upload or if the task was stopped in a safe manner, data will be grouped into a file set marked as incomplete. Details can be found in the file set version history.

If a file set is marked as incomplete, the next task will upload the complete version of the file set with all the information about the files uploaded in this run and all files from the previous incomplete versions of a file set.

Table 4 describes the main reasons for an incomplete file set.

Table 4. Reasons for incomplete file set

Reason	Description
Task was paused due to low system resources	<p>The task was paused because the operating system has breached the threshold for free HDD space. To correct the error, do one of the following:</p> <ul style="list-style-type: none"> Reconfigure the threshold settings in the Automatic response to events and errors section on the Configuration page. Increase or re-assign system resources.
Task was stopped by exceeding maximum run time	<p>The running task has met a maximum run time allowed for the completion of its import. An import will stop at this time. If the task is scheduled to run again or if the task is started manually, the import will resume at the point where it stopped.</p>
Task was stopped due to low system resources	<p>The task was stopped because the operating system has breached the threshold for free RAM. To correct the error, do one of the following:</p> <ul style="list-style-type: none"> Reconfigure the threshold settings in the Automatic response to events and errors section on the Configuration page. Increase or re-assign system resources.
Task was stopped by user	<p>The task has been manually stopped by a user.</p>
Failed to read file(s)	<p>The task is unable to read the file(s) from the source and skipped them. This is due to one of the following reasons:</p> <ul style="list-style-type: none"> Source Access User doesn't have enough permissions for the files A file is locked by another process <p>Check that the file is not busy and that the Source Access User has enough permissions.</p>
Failed to upload files	<p>The task is unable to upload the files to ECM XT and skipped them. Check the disk space and ensure that the Automatic response to events and errors settings is set up in accordance with the recommendations in this guide.</p>

Create an Empower Task

Create an Empower task to upload data from your Waters Empower™ 3 (FR5) system directly to Agilent OpenLab ECM XT. Each Empower project is saved as a file set.

To enable this feature, the **Import Scheduler Empower add-on** must be installed, and an extra license must be added to your Control Panel. See the *Agilent OpenLab ECM XT Import Scheduler Installation Guide* for details.

NOTE

An Empower task can upload only Empower projects with less than 35000 channels.

Specify Task information

- 1 Enter a unique **Task Name**.


The **Task Name** has a limit of 125 characters. The following characters are not allowed in a **Task Name**: \ / : * ? " ' < > |


- 2 Enter an optional **Description** for the task.


Create Empower Task

Tasks define how the Import Scheduler will perform an import job. It also defines whether the job will be executed 'on demand' by users, or will be automatically executed at a specific time, or is scheduled to be automatically executed repeatedly at specified intervals.

Task

Task Name: 
Provide a short name for the import task (<125 characters). This name will be displayed and can be searched for in the tasks list page. This name is also used in diagnostic logs.

Task Description: 
Optionally, provide a detailed description for the task. This description will be displayed and can be searched for in the tasks list page.



Schedule:  Specify when and how often this task will be executed.
Run on demand

- 3 By default, the task is set to run on demand, so that the user must manually execute the task. The **Maximum run time** for the default task setting is three days. To change the schedule, click the schedule icon.

Task

Task Name:
Provide a short name for the import task (<125 characters). This name will be displayed and can be searched for in the tasks list page. This name is also used in diagnostic logs.

Task Description:
Optionally, provide a detailed description for the task. This description will be displayed and can be searched for in the tasks list page.

Schedule:   Specify when and how often this task will be executed.
Run on demand

- a Select **Run at scheduled time/s**.
- b Click the calendar icon, and select the date and time. Click **Close**.
- c Enter the amount of time during which the task can be executed in the **Maximum run time** field. This value must be an integer between 1 and 30240 minutes.

- d To repeat the task every minute, hour, day, week, or month, select **Repeat task**, and specify when and how often you want the task to repeat.
- e Click **OK**.

Specify Source information

- 1 Enter valid credentials for the Empower administrator, and click **Login**.
To change the user, click **Logout**, enter new credentials, and click **Login**.
Credentials are not saved to the database until you click **OK**.

- 2 To exclude projects from being uploaded, click **Browse** and select the specific projects to exclude, and click **OK**.


Agilent OpenLab ECM XT Import Scheduler

Create an Empower Task

- To upload only Empower projects that have not been modified for a specific amount of time, specify the time in Minutes, Hours, Days, or Weeks. Files will be uploaded after the specific amount of time.

Exclude Specific Projects: Specify which projects will be executed from upload

All projects will be uploaded.

Upload Delay: Upload data after modification 

Use this option to delay uploading new/updated data. The task will allow new data to age for the specified amount of time before attempting to upload.
Specifying "0" will force the task to archive data immediately. A value of "0" should not be used if Empower Projects are being actively updated.

Upload Options: ☒ Ignore project integrity errors

Delete Options: ☐ Delete Empower data after upload
Use this option to delete Empower data. Import Scheduler only deletes Empower data that has been uploaded.

☐ Immediately after upload

☒ Delete after based on creation date

- Select **Ignore project Integrity Errors** to upload all chosen projects. If not selected, Import Scheduler uploads only Empower projects without integrity errors.

Exclude Specific Projects: Specify which projects will be executed from upload

All projects will be uploaded.

Upload Delay: Upload data after modification

Use this option to delay uploading new/updated data. The task will allow new data to age for the specified amount of time before attempting to upload.
Specifying "0" will force the task to archive data immediately. A value of "0" should not be used if Empower Projects are being actively updated.

Upload Options: ☒ Ignore project integrity errors

Delete Options: ☐ Delete Empower data after upload
Use this option to delete Empower data. Import Scheduler only deletes Empower data that has been uploaded.

☐ Immediately after upload

☒ Delete after based on creation date

- After uploading is complete, all successfully uploaded files will be added to a **Delete Queue**. The **Delete Queue** is managed by the **OpenLab ECM XT Import Scheduler Cleanup Service**.
To also delete the original project from the Empower system after an upload, select **Delete Empower data after upload**.

Exclude Specific Projects: Specify which projects will be executed from upload

All projects will be uploaded.

Upload Delay: Upload data after modification

Use this option to delay uploading new/updated data. The task will allow new data to age for the specified amount of time before attempting to upload.
Specifying "0" will force the task to archive data immediately. A value of "0" should not be used if Empower Projects are being actively updated.

Upload Options: ☒ Ignore project integrity errors

Delete Options: ☒ Delete Empower data after upload
Use this option to delete Empower data. Import Scheduler only deletes Empower data that has been uploaded.

☐ Immediately after upload

☒ Delete after based on creation date

- To delete Empower projects immediately after the upload is complete, select **Immediately after upload**.
- To delete Empower projects after a certain number of minutes, hours, days, or months, select **Delete after**, and enter the time values. The time duration is based on the creation date of the Empower project.

If a project has been modified before the scheduled deletion, it will not be deleted.

Specify Destination information

- 1 Browse for and select an existing OpenLab project for the **Destination Project**. The user must have the **View project or project group** and **Edit content of project** permissions for the selected project.

The **Destination Project** defines the **Destination Path**, which cannot be changed.

Optionally enter or browse for and select a subpath within the **Destination Path**.

Destination

Destination Project:

Agilent GC

...

Destination Path:

/Agilent GC

Info: This is the path in ECM XT where the selected project is located.

Destination Subfolder:

/

...

Optionally specify a sub-path within the destination path that this task will store files and folders.

'/' indicates that files will be stored directly in the destination path.

HINT: Specifying a subfolder allows you to avoid file path clash when multiple tasks upload to the same project. They also allow you to organize files within a project based on import tasks used or the original source location.

- 2 Click **OK**.

Destination

Destination Project:

Agilent GC

...

Destination Path:

/Agilent GC

Info: This is the path in ECM XT where the selected project is located.

Destination Subfolder:

/

...

Optionally specify a sub-path within the destination path that this task will store files and folders.

'/' indicates that files will be stored directly in the destination path.

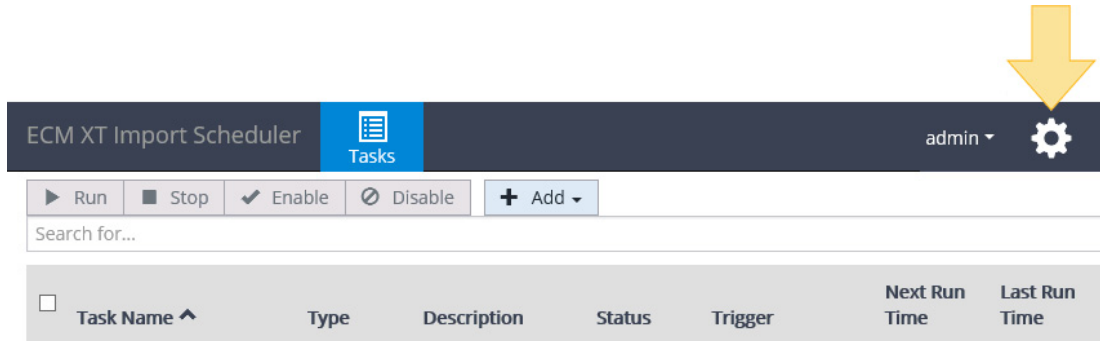
HINT: Specifying a subfolder allows you to avoid file path clash when multiple tasks upload to the same project. They also allow you to organize files within a project based on import tasks used or the original source location.

OK

Cancel

OpenLab ECM XT Import Scheduler Configuration Page

The OpenLab ECM XT Import Scheduler **Configuration** page contains the Import Scheduler configuration settings. Users are brought to this page after logging in for the first time, or this page can be accessed by clicking **Configuration**.



The **Configuration** page contains three sections:

- ECM XT Import Scheduler Settings
- **“Automatic response to events and errors”** on page 33
- **“Backup”** on page 34

ECT XT Import Scheduler Settings

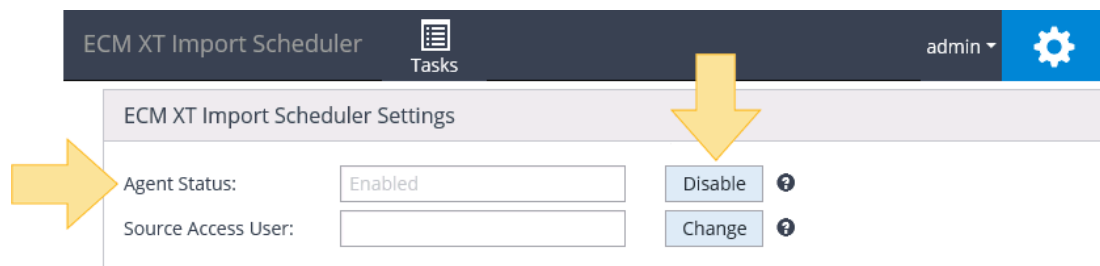
In this section, users can configure the **Agent Status** and **Source Access User**.

Configure Agent Status

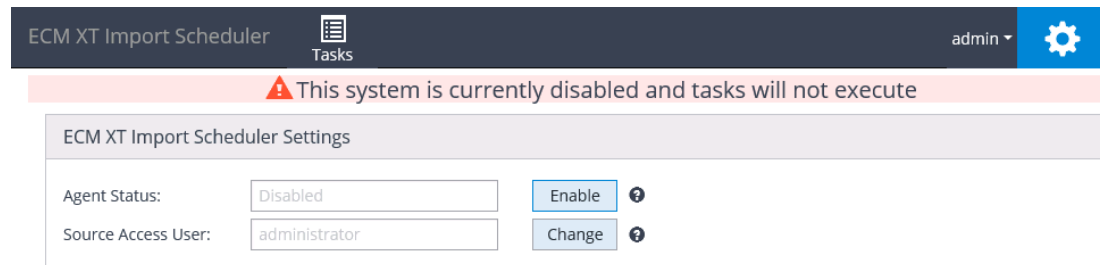
Agent Status displays one of two Import Scheduler agent statuses:

- **Enabled:** By default, the application is enabled, and the user can use all capabilities of Import Scheduler.
- **Disabled:** The application is disabled, and
 - All running tasks will be stopped at a safe point.
 - Import Scheduler will not run tasks.
 - A user can create, edit, copy, and delete tasks.
 - A user can enable and disable tasks.

Agilent recommends disabling the agent in case of any maintenance work on the Import Scheduler server.



When the **Agent Status** is **Disabled**, Import Scheduler displays a warning message.



Before performing maintenance on the Import Scheduler server, make sure that there are no running tasks on the **"OpenLab ECM XT Import Scheduler Task Management Page"** on page 13.

Configure Source Access User

The **Source Access User** is a Windows user with access to the following:

- The **Lookin Path** for General Tasks (network and local folders). The user should have read and write permissions on the **Lookin** folder and nested files and folders.
- The **Empower Project Raw Data Path** for Empower Tasks (network and local folders). The user should have read and write permissions on the **Empower Project Raw Data Path** folder and nested files and folders.

If you are uploading files from a local machine, the Source Access User can be a local user. If you are uploading files from a share or network site, the Source Access User must be a domain user.

If changing this user, valid Windows credentials are required. The user name can include the domain name (for example, mydomain\myusername).

Automatic response to events and errors

Import Scheduler provides threshold mechanisms to maintain a stable working environment. When a task breaches the threshold values, Import Scheduler performs actions to correct the system workload.

The following are the threshold options available and enabled by default in Import Scheduler.

- **Do not start new tasks when available disk space on the file queue drive falls below:** The default value is 15 GB.
- **Pause running tasks when available disk space on file queue drive falls below:** The default value is 10 GB.
- **Do not start new tasks when available free memory falls below:** The default value is 1 GB.
- **Stop running tasks when available free memory falls below:** The default value is 500 MB.

Consider the following when deciding threshold values:

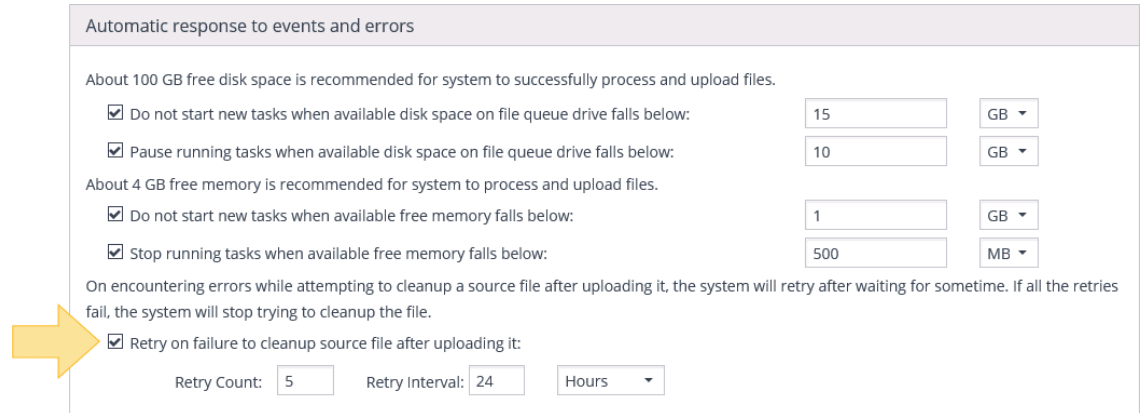
- The space set aside for Windows
- The space set aside for other applications
- The maximum size of files (source files + file copies in cache folder)
- How many tasks could be running at the same time
- The total disk space for the location of the cache folder

Agilent recommends using the following formulas to determine **Stop** and **Pause** values:

- **Stop** = (maximum file size) x (possible concurrent tasks) + 10 GB
- **Pause** = (maximum file size) x (possible concurrent tasks) + 5 GB

To set the system to re-attempt the cleanup of the source file after uploading, select **Retry on failure to cleanup source file after uploading it**.

Enter the number of retries, and specify the delay time between retry attempts.



Automatic response to events and errors

About 100 GB free disk space is recommended for system to successfully process and upload files.

☒ Do not start new tasks when available disk space on file queue drive falls below: 15 GB

☒ Pause running tasks when available disk space on file queue drive falls below: 10 GB

About 4 GB free memory is recommended for system to process and upload files.

☒ Do not start new tasks when available free memory falls below: 1 GB

☒ Stop running tasks when available free memory falls below: 500 MB

On encountering errors while attempting to cleanup a source file after uploading it, the system will retry after waiting for sometime. If all the retries fail, the system will stop trying to cleanup the file.

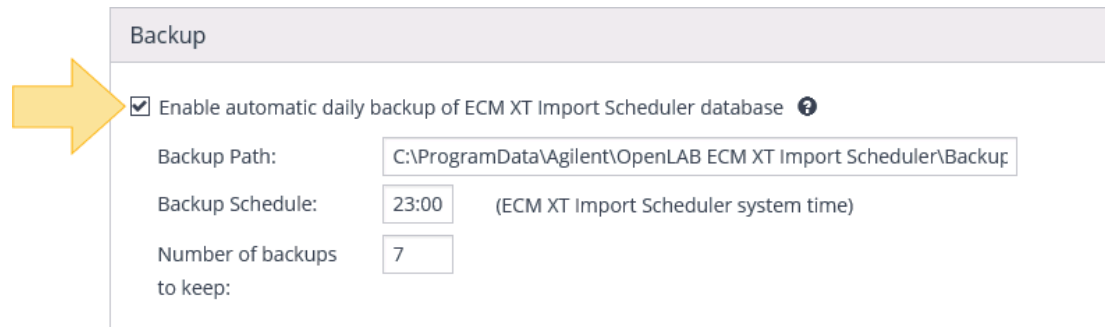
☒ Retry on failure to cleanup source file after uploading it:

Retry Count: 5 Retry Interval: 24 Hours

To apply threshold changes, click **Save configuration**.

Backup

Automatic backup is enabled by default.



Backup

☒ Enable automatic daily backup of ECM XT Import Scheduler database ?

Backup Path: C:\ProgramData\Agilent\OpenLAB ECM XT Import Scheduler\Backup

Backup Schedule: 23:00 (ECM XT Import Scheduler system time)

Number of backups to keep: 7

- **Backup Path:** The path where backups will be stored.
- **Backup Schedule:** The time of day in 24-hour format to launch the backup procedure. The default is **23:00**.
- **Number of backups to keep:** The number of backups stored by the Backup Service. The default is **7**. The latest n backups will be stored, and the older ones will be deleted when the backup process is complete.

To apply backup changes, click **Save configuration**.

OpenLab ECM XT Import Scheduler Backup and Restore

Protect your data with a disaster recovery plan that includes a tested backup and restore process.

Set Up an Automated System Backup

All Import Scheduler user data and settings are stored in a relational database. This includes data and settings from the file upload history, delete queue, task definitions, and configuration settings.

It is mandatory that Import Scheduler is backed up regularly. Periodic full backups are created by AgilentECMXTBackupService. These backups are the only way to restore an Import Scheduler database if a hardware or software failure occurs. Performing backups guarantees that Import Scheduler data committed at the time of the backup can be restored. Any Import Scheduler data changed after the last backup is not recoverable by the restore procedure.

The restore procedures must be tested to ensure that the backups are performed properly and can be used for a restore. To perform an efficient restore, a disaster recovery plan must be created.

Backup configuration settings can be found in **"Backup"** on page 34.

Restore the databases

A database restore may be required if the system has been moved or the database has been corrupted. During this procedure, do not delete your old Import Scheduler database until you make sure that the system works with the restored database.

- 1 If the system is operating, disable **Agent Status** on the **"OpenLab ECM XT Import Scheduler Configuration Page"**.
- 2 If running, stop the following Import Scheduler services:
 - Agilent OpenLab ECM XT Import Scheduler Backup Service
 - Agilent OpenLab ECM XT Import Scheduler Cleanup Service
 - Agilent OpenLab ECM XT Import Scheduler Performance Manager Service
 - Agilent OpenLab ECM XT Import Scheduler Web Application
 - Agilent OpenLab ECM XT Import Scheduler Agent Controller Service
- 3 Rename the current database file. The default current database path is:
C:\ProgramData\Agilent\OpenLab ECM XT Import Scheduler\Database\AUTOUPLOADER.FDB.
- 4 Open the command line as an administrator, change the directory to the nbackup_utility directory, which was specified during installation.

Run the command: `cd "path_to_nbackup_utility"`

For example, `cd C:\Program Files (x86)\Agilent Technologies\OpenLab ECM XT Import Scheduler\services\Nbackup`

- 5 Run the command: `nbackup -r "full_path_to_restored_DB" "full_path_to_backup"` where `full_path_to_restored_DB` is the fully qualified filename to the restored Import Scheduler database and `full path to backup` is the fully qualified filename to the backup file. The `full_path_to_restored_DB` should have the same path and name as the old database.

For example:

```
nbackup -r "C:\ProgramData\Agilent\OpenLab ECM XT Import  
Scheduler\Database\AUTOUPLOADER.FDB"  
"C:\mybackups\backup3\AUTOUPLOADER-test-base.fbk"
```

- 6 Make sure that there are no errors during the execution of the command. A new database file appears in the specified path.
- 7 Run all Import Scheduler services that had been stopped in Step 2.
- 8 Enable **Agent Status** on the **"OpenLab ECM XT Import Scheduler Configuration Page"**.

Connect Your OpenLab ECM XT Scheduler to a Different OpenLab ECM XT Server

It may be necessary to reconfigure Import Scheduler to point to a new ECM XT Server if the original server is no longer functional or if you want to move your database to a larger server.

Before you perform this procedure, make sure of the following:

- Import Scheduler **Agent Status** is disabled. See [“OpenLab ECM XT Import Scheduler Configuration Page”](#) on page 31.
- The application server where OpenLab Shared Services is installed must be operational. If a restore is necessary, see the *OpenLab Server and OpenLab ECM XT Administration Guide*.
- The same projects from the original server exist on the new server.

To configure Import Scheduler for a new OpenLab ECM XT Server,

- 1 Configure the connection to the new server using the Server Maintenance Utility.
- 2 Restart the **Agilent OpenLab ECM XT Import Scheduler Web Application** service.
- 3 Log in to Import Scheduler.
- 4 Resubmit all tasks (open a task to edit and save it). You do not have to complete this step if the new ECM XT server has the same name and IP address as the previous one.
- 5 Enable **Agent Status** on the [“OpenLab ECM XT Import Scheduler Configuration Page”](#).

OpenLab ECM XT Import Scheduler Logs

Use the Import Scheduler Logs to help maintain the system and troubleshoot errors. Import Scheduler has two types of logs: installation logs and system logs.

Installation information is logged to files stored in **C:\ProgramData\Agilent\OpenLab ECM XT Import Scheduler\InstallLogs**. These logs are created during installation and log details on the system status (software versions, file locations, installation errors, etc.).

System logs are stored in **C:\ProgramData\Agilent\OpenLab ECM XT Import Scheduler\Logs**. The System log files record the event of system components and can provide detail when troubleshooting a task failure. The following log files exist:

- ECMXTImportScheduler-AgentControl.log
- ECMXTImportScheduler-BackupService.log
- ECMXTImportScheduler-CleanupWindowsService.log
- ECMXTImportScheduler-PerformanceManagerService.log
- ECMXTImportScheduler-TaskExecutionManager.log
- ECMXTImportScheduler-WebApplication.log

Sales and Support Assistance

Please check the following web site for your local sales and support contact:

<https://www.agilent.com/en/support>

www.agilent.com

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