



ADFExport Enterprise Subscription

# Requirements, Installation, and Configuration

# Notices

## Document Information

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## Software Revision

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## In this Guide ...

This guide describes the requirements and installation of ADFExport Enterprise Subscription rev. 1.3 to use as Enterprise Subscription service.

ADFExport Enterprise Subscription was designed to export data from SSZip archives created by the Agilent OpenLab ECM Scheduler Add-in for Waters Empower to the Allotrope Data Format.

**Table 1 Terms and abbreviations**

Term	Description
ADF	Allotrope Data Format Long-term archive and data exchange file format and content specification standardized by the Allotrope Foundation ( <a href="https://www.allotrope.org/">https://www.allotrope.org/</a> )
ECM	Agilent OpenLab Enterprise Content Manager System
Waters Empower	Waters Corporation Empower Chromatography Data System
ECM Scheduler Add-in	Agilent OpenLab ECM 3.6 Scheduler Add-in for Waters Empower

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# 1

## Introduction

ADFExport Enterprise Subscription is an Add-on that offers the possibility to export results to the Allotrope Data Format (ADF). A detailed description of the Allotrope Data Format and its structure is available on the Allotrope Foundation web site (<https://www.allotrope.org/>).

### Features

- Export Waters Empower data archived in ECM 3.6 to the Allotrope Data Format.
- Support of data generated by the ECM Scheduler Add-In for Waters Empower
- Export ACAML and raw data from SSZip and create target ADF file
- In ECM, user-defined keys specify which files shall be exported or have already been exported.
- ADFExport runs as a Windows service.
- Trigger the ADFExport service manually, or set up a periodical task in the Microsoft Task Scheduler

# Components

ADFExport Enterprise Subscription includes the following components:

- The ADFExport Windows Service  
This service reads the files from ECM, evaluates the user-defined keys, and exports the data to the ADF format.
- The ADFExportAgent command-line tool  
This tool offers functions to set up the ADFExport system and to trigger the ADFExport Windows Service.

# ADF File Content

In the current revision of ADFExport Enterprise Subscription, the following content is written into the ADF file (for detailed information see **ADFExport\_ADFContentDescription.pdf** available in the download package in SubscribeNet).

- ADF data description  
The data description contains an initial set of metadata about the single run or the entire sequence. The metadata includes information about the HPLC run, such as the system (HPLC instrument, including module and column information), the submitter, the sample, the injection, and the sequence. Furthermore, information on chromatograms and UV spectra as well as acquisition and processing method names and peak results are stored.
- ADF data cube  
The data cube contains exported raw data (chromatograms and spectra) in a format according to the ADF data cube ontology.
- ADF data package  
The data package contains a subfolder with the original unmodified SSZip archive data file created by the ECM Scheduler Add-in.

## 2

# Requirements

## Dedicated Computer

ADExport Enterprise Subscription must be deployed on a dedicated separate virtual or physical computer. On this computer, both the ECM Client and the ECM API version 2.2.0.0 or higher are required.

ADExport Enterprise Subscription works with ECM systems as follows:

- OpenLab ECM 3.6 system
- Waters Empower system with Workstation or Client/Server topology:  
ECM Client, ECM Scheduler Agent and ECM Scheduler Add-in installed on Waters Empower Workstation or Client

## ECM System Storage Size

Additional ECM system storage is required for target ADF files:

- ADF files have a minimum size of 1 MB
- Signal data in ADF files is not compressed (each 120 Hz channel requires 64 KB per minute)
- A verbatim copy of the original SSZip archive is stored in the ADF file.



## Requirements

# Hardware Requirements

**Table 2** Hardware requirements for the ADFExport computer

Name	Description
Hard disc	180 GB for Windows operating system, ADFExport Enterprise Subscription software and temporary data
Processor speed (CPU)	2 * 2 GHz CPU cores with 64-bit support
Physical memory (RAM)	8 GB
Network connection	100 Mbps to ECM Web and File Transfer servers

# Software Requirements

**Table 3** Software requirements

Requirement	Description
Operating Systems	Windows 10 (64 bit) Windows Server 2016 Windows Server 2019 Only English versions of Windows are supported.
ECM Client	3.6 Update 2 or higher
ECM API	ECM API version 2.2.0.0 or higher
Microsoft .NET Framework	3.5 (for ECM Client) 4.7.2 or higher
Microsoft .NET Core 3.1 Hosting Bundle	ADFExport Enterprise Subscription requires the Microsoft .NET Core Hosting Bundle 3.1. The hosting bundle includes: <ul style="list-style-type: none"><li>the .NET Core Runtime and</li><li>the ASP.NET Core components.</li></ul>
Localization	ADFExport Enterprise Subscription is not localized. It can only be used on English versions of OpenLab ECM
8.3 File Naming	Check that support for short names is enabled: <ol style="list-style-type: none"><li>1 Open Windows Command Prompt as administrator.</li><li>2 Execute the command: <code>fsutil 8dot3name query C:</code></li></ol>

## 3 Install and Set Up ADFExport

### Get Installation Package

Download the **ADFExport Enterprise Subscription** installation package from SubscribeNet and extract the files to a local folder or to a network share.

### Install ADFExport Enterprise Subscription

Install the software on a dedicated separate virtual or physical computer.

- 1 To ensure that ECM components and Microsoft runtimes are installed, select **Windows Settings > Apps > Apps & features**. Confirm that the following apps are installed:
  - **Agilent OpenLab ECM Client**
  - **Agilent OpenLab ECM v2.2.0.0**
  - **Microsoft ASP.NET Core 3.1**

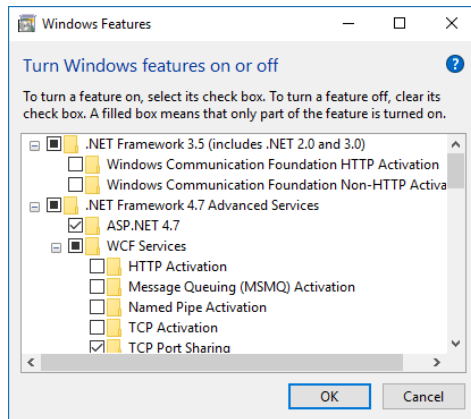
The ECM components are required for connecting to the ECM server, logging in to the content management system, and accessing the Software Verification Tool.

To prepare for and install the ECM Client, refer to chapter 12 in the Agilent Enterprise Content Manager Installation Guide.

- 2 To ensure that .NET 4.7.2 or higher is installed, select **Windows Settings > Apps > Apps & features**.
- 3 Under **Related Settings**, click **Programs and Features**.
- 4 Click **Turn Windows features on or off**.

## Install and Set Up ADFExport

- 5 Ensure that **.NET Framework 4.7** (or higher) is checked:



- 6 Run **Agilent.OpenLab.ECM.ADFExport.msi**.
- 7 Follow the wizard.

## Software Verification Tool

The Software Verification Tool (SVT) is included with OpenLab ECM client.

To run the SVT after installing ECM ADFExport:

- 1 Select **Start > Agilent Technologies > Software Verification Tool**.
- 2 Select the **Agilent OpenLab ECM ADFExport** check box.
- 3 Click **Qualify** to create the Software Verification Report.

The report informs you about successful installation on the existing system.

# Provide User Credentials to Connect to ECM

To establish connections from the ADFExport computer to ECM, you must provide the credentials of a user with sufficient privileges. To provide the credentials, you must use **ADExportAgent**.

ADExportAgent uses the Credential Manager from Microsoft to store the required user credentials.

It is recommended to configure one or more dedicated ECM users per ECM Account for ADFExport. This can help to isolate the permissions for selected locations, and to separate ADFExport from manual ECM workflows.

## Windows Domain Requirements

The connection to ECM can be established by an ECM built-in user or by a Windows domain user who has access to ECM.

To operate ADFExportAgent as a *Windows domain* user:

- The ADFExport computer must be joined to the domain of the Windows user.
- You must log in to Windows as the specific domain user.
- Tasks in the Windows task scheduler must be configured to run as the Windows domain user.
- It is advisable that the Windows Domain user has a non-expiring password.
- Windows users working with the system in the future will also have to be in the same domain

## Required Privileges

To work with ADFExport, the ECM user or Windows user must be assigned an ECM role that grants the following ECM privileges:

- Content: File: **View, Add**
- Content: File Associations: **View**
- Content: File Filtering: **Edit**
- Content: File Revisions: **View**
- Content: Folder: **View, Edit**
- System: Advanced Search: **Run**
- System: Filtering Configuration: **View**
- System: Indexing Configuration: **View**

## Install and Set Up ADFExport

### Provide user credentials

Carry out the following procedure for each ECM user that will run the ADF Export. Repeat it for every required or updated user account and for every additional ECM Server or ECM account.

- 1 Open Windows Command Prompt and navigate to **ADFExportAgent**. By default, it is installed at C:\Program Files (x86)\Agilent Technologies\OpenLab ECM ADFExport\Agent.
- 2 Prepare the ECM\_URI parameter that you will need in the next step.

This parameter includes the ECM user, web server and ECM account.

For example:

```
https://<domain>%5C<username>@ecmserver.dns/<ECMAccount>
```

- Specify *https* or *http*, depending on the connection security you are using to access the ECM web server.
- Specify the ECM user's *domain*, for example, BUILT-IN, or the Windows domain of the user as mapped for the ECM account.

#### NOTE

Windows usernames used with ADFExport must not include symbols that are reserved for the Windows file system, or non-English letters.

- To separate domain and username, insert %5C before the username. This represents the backslash. If the username itself contains special (non-Latin) characters, these must be percent-encoded as well.
- Specify the fully qualified *DNS name* of the ECM web server, especially if you are using HTTPS to access the ECM system.
- To separate ECM web server name and the name of the ECM account, insert a *slash* before the ECM account name.

- 3 Call ADFExportAgent using the following command and syntax:

```
ADFExportAgent pwd <ECM_URI> "<password>"
```

- *ECM\_URI* must be specified.
- If *password* is not specified, ADFExportAgent will prompt twice to let you enter and verify the password for the ECM user.

If *password* contains spaces, parenthesis, carets, brackets, less-than, greater-than or other characters with special meaning for the Windows Command prompt, the entire password must be enclosed in double-quotes. These quotes will not be considered part of the password.

#### NOTE

If the password itself contains double-quotes, do not specify the password on the command-line, and do not enter it when prompted by ADFExportAgent. Instead, update the password using the Credential Manager in the Windows Control Panel.

## Install and Set Up ADExport

### Update credentials in the Credential Manager

- 1 Open Windows Settings.
- 2 Search for Credential Manager.
- 3 Click **Windows Credentials**.
- 4 Under **Generic Credentials**, identify the entry starting with Agilent\_ADF\_ECM corresponding to the ECM web server and ECM user.
- 5 Expand the section and click **Edit**.

### Initialize User-Defined Keys in ECM

To enable fast searching, and to maintain state for the export process, ADExport uses specific *user-defined keys* in the ECM system. To make the keys available for ADExport, you must initialize them.

User-defined keys are visible for ECM administrators in the **Administration** tab under **Enterprise > Account Administration > User defined keys**.

#### NOTE

Once you initialized the user-defined keys, they are available for all ECM accounts on the ECM system. They cannot be removed anymore. User-defined keys that are no longer used can be switched to Inactive.

- 1 Provide user credentials for an ECM user with an ECM role that grants the **System: Filtering Configuration (View, Edit)** privilege.
- 2 Open Windows Command Prompt and navigate to the **ADExportAgent**. By default, it is installed at C:\Program Files (x86)\Agilent Technologies\OpenLab ECM ADExport\Agent.
- 3 Call the ADExportAgent using the following command and syntax:  

```
ADExportAgent init <ECM_URI>
```

ECM\_URI must be specified; it must match the ECM\_URI parameter used to provide ECM user credentials (see "Provide user credentials " in the previous section13). However, the username must be from the user with the privilege to create system-wide user-defined keys.

The keys added for ADExport are **ADExport\_Status**, **ADExport\_Details**, and **ADExport\_AltVersion**.

# Configure User-Defined Keys for ECM Folders

ADFExport evaluates the following user-defined keys when it looks for data to be exported:

- ADFExport\_Status
- ADFExport\_Details

These keys are available once you initialized them. You must configure the keys and their values for every specific ECM Location, Cabinet, Drawer, or Folder that may contain data to be exported.

To manage user-defined keys for the initial configuration, the specified ECM user must have the ECM privilege: **System: Filtering Configuration (View, Edit)** for the individual ECM Locations, Cabinets, Drawers, and Folders.

- 4 Open the ECM client, and log in to the ECM system.
- 5 In the **Content** tab, navigate to the ECM Location, Cabinet, Drawer, or Folder.
- 6 Right-click the item and select **Properties**.
- 7 In the **General** tab, expand the **Filters** drop-down list, and select **User Defined**.
- 8 In the **Keys** tree, expand the **Keys** entry.
- 9 Select **ADFExport\_Status**, and click the arrow to add the entry to the **Selected keys** list.
- 10 Click **User defined key defaults**.
- 11 In the **User Defined Key Defaults** dialog, locate the row for **ADFExport\_Status**.

In the column **Value 1**, choose **ready\_for\_conversion** as the default. Data will then be marked to be exported.

To prevent SSZip archives in a certain ECM Location, Cabinet, Drawer, or Folder from being exported, specify **do\_not\_convert**

Do not specify a value in any other column.

- 12 Confirm and close all dialogs.

The following user-defined key is defined for internal-only use by ADFExport and no default must be configured for any ECM Location, Cabinet, Drawer or Folder:

- ADFExport\_AltVersion

### Check ECM Scheduler Add-in Settings

ADFExport Enterprise Subscription works with SSZip archives. These archives are uploaded to ECM by the ECM Scheduler Add-in for Waters Empower. The ECM Scheduler Add-in must be installed on the Waters Empower workstation or client in addition to the ECM client and the ECM Scheduler Agent.

To configure scheduled uploads of these SSZip archives, use the ECM Scheduler Task configuration in the ECM client on the individual ECM Scheduler Agent computer. For details, please refer to Technical Note 5991-6931EN *"Efficient Management of Waters Empower Software Data Using OpenLab ECM"*.

For ADFExport Enterprise Subscription, use the following ECM Scheduler Task configuration settings:

- Create SSZip archives based on Sample Sets or Result Sets (required).  
Project-based SSZip archives cannot be exported to a single ADF file, as they comprise multiple results sets and samples.
- Include spectra data (required)
- Generate files for OpenLab ECM Intelligent Reporter (required)
- Upload method information (recommended)

### Working with multiple file versions

With each run, ADFExportAgent finds the latest new version of the SSZip archives, and submits this version to be exported. The version of the original source file is recorded in the upload reason for the target ADF file.

Avoid ECM Scheduler tasks with intervals shorter than the acquisition time of the result sets. Otherwise, intermediate versions of the SSZip archives could be generated and exported to ADF.



## 4

# Run ADFExport

## Manually Run an Export

To export an SSZip archive to ADF, ADFExportAgent must search for relevant files in the selected ECM Location, Cabinet, Drawer, or Folder, and submit the files for export.

To start the export manually:

- 1 Open Windows Command Prompt and navigate to the **ADFExportAgent**. By default, it is available under C:\Program Files (x86)\Agilent Technologies\OpenLab ECM ADFExport\Agent.
- 2 Call ADFExportAgent using the following command and syntax:  
`ADFExportAgent <ECM_URI> "<ECM_PATH>" options`

For example (line-break was added only for formatting purposes in this document):

```
ADFExportAgent.exe https://WIN%5CUser@ecm1.example.com/LAB1  
"\Location\Cabinet\Drawer\Folder"
```

Both *ECM\_URI* and *ECM\_PATH* must be specified. Options can be omitted.

- The *ECM\_URI* parameter must specify ECM user, ECM server and ECM account. For details, see ["Provide user credentials"](#) on page 13.
- *ECM\_PATH* must begin with a backslash, and backslashes must be used to separate Location, Cabinet, Drawer, and Folder.

ECM paths and file names must not contain symbols reserved for the Windows file system, such as ':', '\', '/', '?', or '\*'. Also, avoid non-English letters, as Unicode support in the ECM system and the Allotrope Data Format is limited.

For ADFExport, the file names of the source archives must not start or end with spaces, and they must use the file extension **.SSZip**.

## Run ADFExport

**Table 4** ADFExportAgent options

Short option format	Long option format	Description
/?	/Help	Show detailed command-line usage information
/sd	/StockData	Include archive data files in the search that do not have a value for the ADFExport_Status user-defined key.
/ias	/IncludeAllStates	Include archive data files in the search with any value for the ADFExport_Status user-defined key.
/l	/List	Only search and show a list of archive data files that would be exported.
/v	/Verbose	Show verbose output with more details.
/qs "<expression>"	/QuickSearch "<expression>"	Perform a Quick Search with the specified expression to identify files for export.
/as "<expression>"	/AdvancedSearch "<expression>"	Performs an Advanced Search with the specified expression to identify files for export.
<b>Additional constraints</b>		
To specify additional constraints, the following additional choices can be added one or more times:		
/i "<filename>"	/Include "<filename>"	Include additional filenames.
/ib "<filename_part>"	/IncludeBeginsWith "<filename_part>"	Include additional filenames that begin with the specified prefix.
/ic "<filename_part>"	/IncludeContains "<filename_part>"	Include additional filenames that contain the specified text.
/ie "<filename_part>"	/IncludeEndsWith "<filename_part>"	Include additional filenames that end with the specified suffix.
/x "<filename>"	/exclude "<filename>"	Exclude the specified filenames.
/xc "filename_part"	/excludeContains "filename_part"	Exclude all filenames that contain the specified text.

## Run ADFExport

To search for all SSZip archives containing “HPLC” in the filename and export them to ADF call the ADFExportAgent and use one of the search expressions below. Per default the search is applied to all files with the status “ready\_for\_conversion”.

- /qs “HPLC AND .ssizip”
- /as “([File Information.General Information.File Name] contains “HPLC” AND ([File Information.General Information.File Name] ends with “.ssizip”))”
- /ic “HPLC” /ie “.ssizip”

To review the search expression sent to ECM, specify the /v command-line option.

For more details about Quick Search and Advanced Search in ECM please refer to the online help of the ECM Client.

### NOTE

Combining the three different search types is not supported.

## Run ADFExport Periodically

In addition to calling ADFExportAgent on a per-use basis, it is useful to have it running periodically. A solution built-in to Windows is the Task Scheduler.

### Set up the Task Scheduler

To run the ADFExportAgent regularly, set up a task in Task Scheduler on the ADFExport computer. You can achieve this in different ways. The following procedure uses actions from the **Actions** pane.

- 1 Open the Windows Start menu.
- 2 Type *Task Scheduler* to search for the Task Scheduler, and click the top result to open it.
- 3 Select the **Task Scheduler Library** branch.
- 4 In the **Actions** pane, click **New Folder...**
- 5 In the **Enter name of the new folder** dialog, type *Agilent Technologies* for the folder name. This will keep your tasks separate from system tasks and other applications’ tasks.
- 6 Click **OK**.
- 7 Expand the **Task Scheduler Library** branch, and select the folder **Agilent Technologies** that you have just created.

## Run ADFExport

- 8 Repeat steps 4 to 6 to create a sub-folder named **OpenLab ECM ADFExport**, and select this folder.
- 9 In the **Actions** pane, click **Create Basic Task...**
- 10 In the **Create Basic Task Wizard** dialog, set up the task as follows:
  - a **Create a Basic Task:** Provide a short name (for example, *ADFExportAgent Example*), and a description for this task. Click **Next** to continue.
  - b **Trigger:** Select an appropriate trigger interval, for example, **Weekly**. Click **Next** to continue.

If required, provide details on the schedule. The details depend on the trigger that you have selected. For example, if you selected **Weekly**, configure the start date and time, the interval, and the days on which the task should run. Click **Next** to continue.

- c **Action:** Select **Start a program**. Click **Next** to continue.

Under **Program/script**, specify the executable path of ADFExportAgent, for example, *"C:\Program Files (x86)\Agilent Technologies\OpenLab ECM ADFExport\Agent\ADFExportAgent.exe"*.

Under **Add arguments (optional)**, specify the command-line arguments and options, for example:

```
https://WIN%5CUser@ecm1.example.com/LAB1 "\Location"
```

Click **Next** to continue.

- d **Finish:** Select the **Open the Properties dialog for this task when I click Finish** check box. Click **Finish** to create the task and open its properties dialog.
- 11 In the **Properties** dialog, set up the following options:
  - a On the **General** tab:

Define a specific Windows user for running ADFExportAgent. Click **Change User or Group**, and provide the desired Windows username. Click **OK** to confirm.

Select the **Run whether the user is logged on or not** option.
  - b On the **Triggers** tab:

The trigger condition that you have created is shown in the list. Click **Edit...** to provide more details for this trigger.

For example, to have ADFExportAgent being called every hour beginning at a certain start time: Modify the **Advanced settings** by setting **Repeat task every** to **1 hour** and **for a duration of** to **12 hours**.

## Run ADFExport

### NOTE

Interval and duration can be set to custom values, for example, every 37 minutes or for 15 hours.

Click **OK** to confirm.

**c** On the **Conditions** tab, review and modify the settings.

**d** On the **Settings** tab, review and modify the settings.

**12** Finally, click **OK** to save all settings.

The credentials dialog opens for the Windows user to run the task.

**13** Enter the correct password for the user, then click **OK** to confirm.

## Grant Required Privileges

When creating the task, you defined a specific Windows user to run the task (see step 12 above<sup>11</sup>). This user needs the Windows privilege **Log on as a batch job**.

**1** Start Windows Command Prompt as administrator, and run:

```
secpol.msc /s
```

The **Local Security Policy** dialog opens.

**2** Expand **Local Policies**, and select **User Rights Assignment**.

The policies are displayed on the right side.

**3** Right click the **Log on as batch job** policy, and click **Properties**.

**4** In the **Log on as a batch job Properties** dialog, click **Add User or Group...**

**5** In the **Select Users, Computers, Service Accounts, or Groups** dialog, add the relevant Windows user. Alternatively, add a suitable Windows group.

**6** Confirm all dialogs.

## User-Defined Keys

### Usage of Keys During the Export

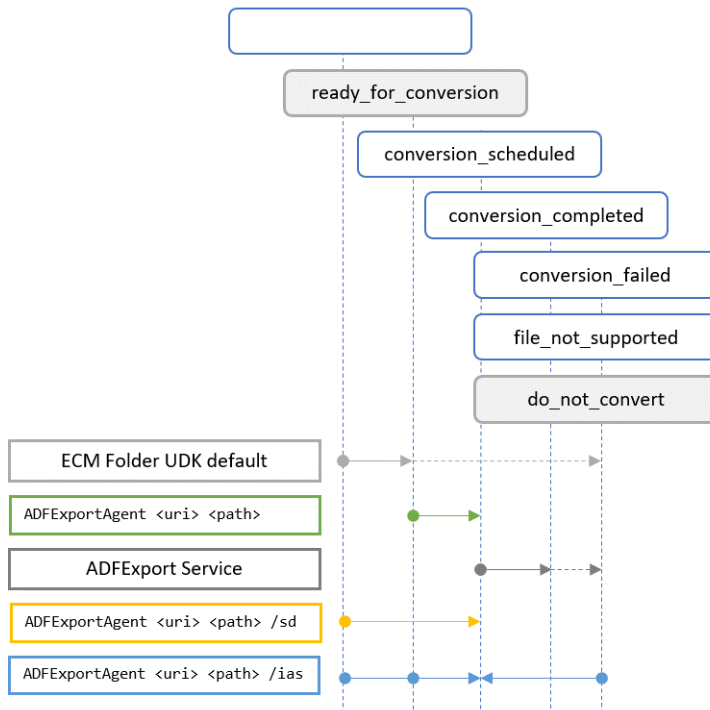
During an export, ADFExportAgent searches for files tagged **ready\_for\_conversion**, unless one of the options **/ias** (include any state) or **/sd** (include data with empty state) is used (see “[Table 4 ADFExportAgent options](#)” on page 18).

## Run ADFExport

If a file is scheduled for conversion, but neither the Folder nor the Drawer, Cabinet, nor Location that contain the file have the **ADFXport\_Status** key added, this key will be added to the Folder, with the value **ready\_for\_conversion**.

Once ADFExportAgent has scheduled a file for export, the **ADFXport\_Status** key for this file will be set to **conversion\_scheduled**. The **ADFXport\_Details** key will be set to an identifier representing the export operation in the ADFExport service.

After the ADF file has been created and uploaded to ECM, its source SSZip archive will be marked as **conversion\_completed**.



**Figure 1** Diagram showing the UDK default values (highlighted in grey) and the state changes done via the ADFExportAgent and by the ADFExport Service.

## Display User-Defined Keys in ECM

To review user-defined keys in the ECM client Content view:

- 1 Navigate to an SSZip archive file.
- 2 Right-click the archive, and select Properties from the context menu.

## Run ADFExport

- 3 Select the User Defined Keys tab.

If the keys for the ADFExport are not shown: Configure the Folder Details view as follows to display the ADFExport user-defined keys as columns:

- 1 In the ECM Client Administration view, navigate to Account Administration
- 2 Under **Synonyms**, create a category, for example *ADFFExport*.
- 3 Define a new synonym.

When selecting the keys for the synonym, choose the filter **User Defined**. Select the **Available in file view** check box.

- 4 Under **User Preferences**, click **Modify...**
- 5 Select, move, and arrange synonyms from **Available columns:** to **Selected columns** as required.



## 5 Troubleshooting

### Get More Information

Export tasks can be run as Windows Scheduled Tasks or in Windows Command Prompt.

In Windows Command prompt, the output of `ADFExportAgent` command includes operational and error messages. To increase the level of detail, specify the `/Verbose` command-line option (see “[Table 4 ADFExportAgent options](#)” on page 18).

To make sure SSZip archives are exported to ADF as configured, perform the following troubleshooting steps.

### Check the User-Defined Keys

The user-defined key **ADFExport\_Status** reflects the current export state of a source archive file. To check them, see “[Display User-Defined Keys in ECM](#)” on page 22.



## Troubleshooting

**Table 5** ADFExport\_Status values

Value	Description
ready_for_conversion	<ul style="list-style-type: none"><li>The file has been uploaded after the last time ADFExportAgent was called. or</li><li>The file is not matching the export query (by default, only SSZip archive data files are exported).</li></ul>
conversion_scheduled	When the ADFExportAgent submitted a file, its value is <b>conversion_scheduled</b> until the ADFExport Service has downloaded and processed the archive. <b>ADFExport_Details</b> contains the corresponding export identifier.
conversion_completed	The file has been exported successfully ( <b>ADFExport_Details</b> contains details)
file_not_supported	Exporting the scheduled file has failed because the file's content is not supported (a technique, instrument, module, or signal in the archive cannot be exported by ADFExport). <b>ADFExport_Details</b> contains details.
conversion_failed	Exporting the scheduled file has failed for other reasons. <b>ADFExport_Details</b> contains details.
do_not_convert	This value can be set manually as a default if <b>ready_for_conversion</b> is no longer suitable

The default value "ready\_for\_conversion" for ADFExport\_Status should be configured for the Location, Cabinet, Drawer or Folder of archives uploaded by the ECM Scheduler Add-in for Waters Empower. It will be used to initialize the ADFExport\_Status user-defined key for all uploaded files in its path. Otherwise, the initial value will be empty (not marked). Such files are referred to as "stock data" and can be exported to ADF with ADFExportAgent using the /sd (stock data) option.

After ADFExportAgent submitted the file, its value is "conversion\_scheduled." until ADFExport Service has downloaded and processed the archive.

If an error occurs during the export process, the source archive data file gets marked "file\_not\_supported" (if a technique, instrument, module, or signal in the archive cannot be exported by ADFExport) or "conversion\_failed" (for other reasons).

A source file can be manually marked "ready\_for\_conversion", for example, in the following scenarios:

- after an export failed and if the reason suggests that the same archive can be exported
- after missing ECM permissions have been granted
- a check-out of a previous version of the Allotrope Data File was canceled, or its read-only flag was reset

## Troubleshootin

An additional value for ADFExport\_Status that can be set manually is "do\_not\_convert". It can be used as a Folder default for ADFExport\_Status if no export is planned for many files in the Folder.

Removing a user-defined key from a Folder does not remove the key from any file or revision in the Folder.

## Search for Failed Exports

To speed up a search, always navigate to the most specific Location, Drawer or Cabinet. Use the search examples below and add any other criteria that may help restrict the number of files to be searched. Refer to the ECM Client online-help for details about searching in ECM.

To search for files with a status of "file\_not\_supported" or "conversion\_failed", open the context menu, and click "Search". In the Search dialog, switch to the Advanced tab and specify the "Search expression"

```
[User Defined.Keys.ADFExport_Status] =  
"file_not_supported" OR [User  
Defined.Keys.ADFExport_Status] = "conversion_failed"
```

To search for files with more specific error messages, execute an Advanced Search with the "Search expression"

```
[User Defined.Keys.ADFExport_Details] begins with  
"Error 99"
```

To search for failed exports of specific files with additional criteria, execute an Advanced Search with the "Search expression"

```
[File Information.General Information.File Upload  
Date] > #2021-01-01 02:03:04# AND [User  
Defined.Keys.ADFExport_Details] begins with "Error 99"
```

To search for exports that were interrupted because the connection to the ECM server failed intermediately, execute an Advanced Search with the "Search expression"

```
[User Defined.Keys.ADFExport_Status] =  
"conversion_scheduled"
```

### Repeat a Failed Export

You can manually mark a file **ready\_for\_conversion**, for example, after an export failed and if the reason suggests that the same archive can be exported again. For example, after missing ECM permissions have been granted, after a checkout of a previous version of the ADF file was canceled, or after its read-only flag reset.

Review the error message in the ADFExport\_Details user-defined key and clear it.

The export is repeated when the ADFExportAgent is run again for the containing Location, Cabinet, Drawer, or Folder.

It is not possible to repeat an export if the current or a newer version of the source archive has been successfully exported and the target ADF file for the current version already exists.

ADFXport will automatically repeat failed exports with transient errors when the network connection is restored after an interruption, when the specified ECM server becomes available again after a shutdown, or when the ADFExport Service is restarted.

### Exclude a File from the Export

To exclude files from being exported, remove the **ADFXport\_Status** key from the files, Folders, Drawers, Cabinets, and Locations.

#### NOTE

Removing a user-defined key from a *Folder* does not remove the key from any file or revision *in* the Folder.

Alternatively, set the **ADFXport\_Status** key for the relevant items manually to **do\_not\_convert** or to an empty value.

If the **ADFXport\_Status** key has an *empty default value* (not marked) on a Folder, this key will be initialized with an empty value for all files that you upload into this Folder. Such files are referred to as *stock data* and can be exported with ADFExportAgent using the **/sd** (stock data) option.

# Use ADFExportAgent Options /nu and /nc

When calling the ADFExportAgent it first runs an “update query” checking all “conversion\_scheduled” files for their conversion result and stores it in the ADFExport\_Details user-defined key of the original .SSlzip archive. In a second step a new “conversion query” runs searching for all relevant .SSlzip archives and exporting them to ADF. To skip the “conversion query” and to just update the conversion results in ECM e.g., in case of an interrupted server connection use the ADFExportAgent option **/nc** (no conversion). When you export large amounts of data to ADF it might be helpful to skip the “update query” and immediately run the “conversion query”. This can be done by the ADFExportAgent option **/nu** (no update).

## Check the Windows Event Log

To review ADFExport Service events in the Windows event log, start the Windows Event Viewer, navigate to **Windows Logs >Application**. From the context menu or the Actions pane, select **Filter Current Log**. In the Filter Current Log dialog, open the **Event sources** drop-down-list and select **Agilent.OpenLab.AdfExport.WebService**.

## Review the Export Queue

The ADFExport Service maintains a queue of export requests that it received from ADFExportAgent.

A copy of the items in this queue is stored on disk. This enables ADFExport to save state and error messages, and to facilitate an automated restart of export requests that were interrupted by a service shutdown or network connectivity issues.

You find the queue under **C:\ProgramData\Agilent\AdfExportService\Queue**. Access to this folder is limited to the Windows Local System account under which the ADFExport Service is running.

Each request is represented by a file. For normal operation, no manual changes to these files are necessary. However, it can be useful to identify processing issues by reviewing their respective error messages.

## Troubleshooting

No analytical data is stored in these files, so it is safe to omit these files from backup. Since the export status is also maintained in the user-defined keys in ECM for each respective archive data file, the next corresponding run of ADFExportAgent will resubmit the export request.

The user authentication information in each file is encrypted and not usable for authorization.

Entries in the queue and the related files are automatically deleted after 30 days.

Before you manually delete any files in the queue, you must stop the ADFExport Service.

## Check the Log Files

The ADFExport Service maintains a limited amount of log files in the C:\ProgramData\Agilent\LogFiles folder.

Old files in this folder are automatically deleted if the size of all files exceeds 150 MB.

File names starting with “adfexport-service”, or ending with “LocalServiceError” contain error and warning messages for recent exports.

File names ending with “LocalServiceDiag” may be used for detailed analysis by Agilent Support.

## 6 Uninstallation

### NOTE

ADFExport can be decommissioned with the computer dedicated to run it.

#### To uninstall the ADFExport Enterprise Subscription software:

- 1 Log in to the computer as an administrator.
- 2 Remove tasks:
  - a Open the Windows Task Scheduler:
  - b End all tasks for ADFExport that are currently running.
  - c For backup, export the ADFExport task definitions.
  - d Delete all ADFExport tasks.
- 3 Uninstall ADFExport:
  - a In the Windows Settings, open Apps > Apps and features.
  - b Select **OpenLab ECM ADFExport**, and confirm to uninstall it.

If a message appears that files and services cannot be updated or removed while the system is running: Cancel the uninstallation, and wait for the pending ADFExport processes to finish. Then repeat the uninstallation. A system restart is not necessary.
- 4 Remove stored ECM credentials:
  - a Open the Windows Credential Manager.
  - b Select **Windows Credentials**.
  - c Remove all entries that are named **Agilent\_ADF\_ECM**.
- 5 Remove operational and log files: Open Windows Explorer and delete the following folders:
  - C:\ProgramData\Agilent\AdfExportService
  - C:\ProgramData\Agilent\LogFiles\ADFExport
- 6 Remove temporary files:
  - a Open Windows Settings.
  - b Navigate to **Storage settings**.
  - c Click **Temporary files**.
  - d Select all categories.
  - e Click **Remove files**.

## Uninstallation

The ECM client software can be uninstalled from the computer using the Windows Settings Apps & features screen.

### NOTE

If ADExport is no longer used with an ECM account, set the specific user-defined keys to **Inactive**.

#### To deactivate all specific ADExport user-defined keys in ECM:

- 1 Open the ECM client, and log in as an ECM user with privileges to manage user-defined keys.
- 2 Navigate to the **Administration** tab, expand the **Enterprise > Account Administration** node, and open the **Keys** configuration item.
- 3 Edit the following user-defined keys and clear the **Key active** check box:
  - **ADExport\_AltVersion**
  - **ADExport\_Details**
  - **ADExport\_Status**



## Appendix: License Terms

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# In This Book

This manual describes the ADFExport Enterprise Subscription rev. 1.3:

- Requirements
- Installation and Set Up
- Running ADF Export
- Troubleshooting
- Uninstallation

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