SMA TECHNOLOGIES

OPCON

Multi Instance EASE Connector

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Overview

The Multi-Instance EASE Connector scripts are API scripts which connect to EASE's instance of OpCon allowing you to schedule and monitor specific tasks within EASE's datacenter from your local instance of OpCon.

Note: The standard EASE Connector is not configured to be multi-instance. The Multi-Instance EASE Connector offering is a Premium option offered by EASE. Please contact your EASE representatives for more details. These scripts will not work unless they have made the appropriate configuration settings on their end.

Initial Setup

Install Scripts

Download all scripts from the scripts folder and load them into your OpCon environment as Embedded Scripts using the PowerShell Script Type.

The scripts with BUNDLE in their name launch and monitor multiple EASE Jobs from one OpCon Job. There are a few scenarios in where a single OpCon Job when running everything on premise may require two or three Jobs when running them through the EASE Connection. The bundles simplify migrating to the EASE, but using the stand-alone scripts provide more visibility and simplify troubleshooting.

- EASE-MULTI-BUNDLE-RSJEDIT.ps1
  - Includes the Job called by EASE-MONITOR.ps1
  - Includes the Job called by EASE-RSJEDIT.ps1
- EASE-MULTI-BUNDLE-SEQ-FTP.ps1
  - includes the Job called by EASE-SEQ.ps1
  - includes the Job called by EASE-LETTERFILE-COPY.ps1
  - includes the Job called by EASE-LETTERFILE-FTP-ONLY.ps1
- EASE-MULTI-BUNDLE-SEQ-PROMPT.ps1
  - includes the Job called by EASE-SEQ.ps1
  - includes the Job called by EASE-PROMPT.ps1
- EASE-MULTI-LETTERFILE-COPY.ps1
- EASE-MULTI-LETTERFILE-COPY-OR-RENAME.ps1
- EASE-MULTI-LETTERFILE-FTP-ONLY.ps1
- EASE-MULTI-LETTERFILE-RENAME.ps1
- EASE-MULTI-MONITOR.ps1
- EASE-MULTI-PROMPT.ps1
- EASE-MULTI-PROMPT-SEQ.ps1
- EASE-MULTI-RESET.ps1
- EASE-MULTI-RSJ.ps1
- EASE-MULTI-RSJEDIT.ps1
- EASE-MULTI-SEQ.ps1

Jack Henry Associates (JHA) Connection Setup

Introduction

JHA will provide the connection credentials for both their OpCon API and FTP credentials to their DMZ. Both need to be established for the EASE Connector to be effective.

The FTP credentials will need to be loaded into a Command Line driven FTP utility.

The OpCon API credentials will need to be loaded into OpCon. They are listed as “Static Parameters” within our script because they will very rarely change. There will be four components to the OpCon API connection. These components are listed below:

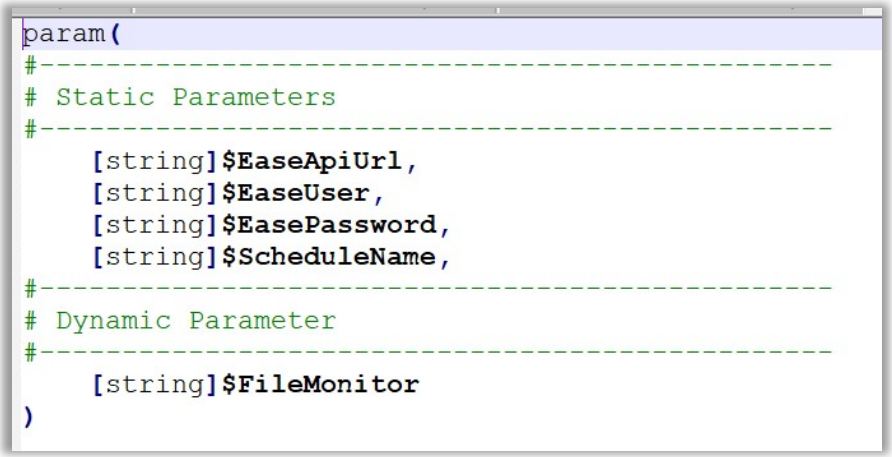
1. The OpCon API URL.
2. An OpCon User Account the API will use to connect to EASE’s environment.
3. The password for the OpCon User Account.
4. The Schedule you will access within EASE’s environment through the EASE Connector.

Connection - Global Property

It is required to store the OpCon API connection credentials into an encrypted Global Property within your OpCon environment. This will do a few things for you:

- Store the credentials in a centralized location.
- Simplify your command lines combining 4 parameters into one Global Property
- Keep the credentials secure by encrypting the Global Property value.

At the top of each script you will see a section listing all Static Parameters as well as Dynamic Parameters. The Dynamic parameters will be entered on the command line individually. The Static will be added by including the Global Property. Below is an example of the parameters listed at the top of the script.



```
param(
#-------------------------------------------------
# Static Parameters
#-------------------------------------------------
    [string]$EaseApiUrl,
    [string]$EaseUser,
    [string]$EasePassword,
    [string]$ScheduleName,
#-------------------------------------------------
# Dynamic Parameter
#-------------------------------------------------
    [string]$FileMonitor
)
```

Example

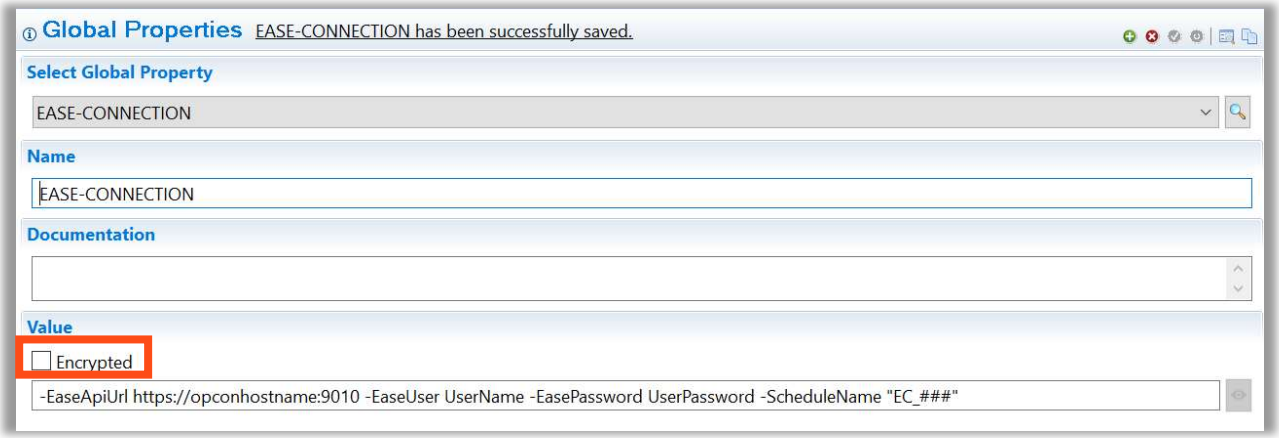
Let's pretend the connection credentials are the following.

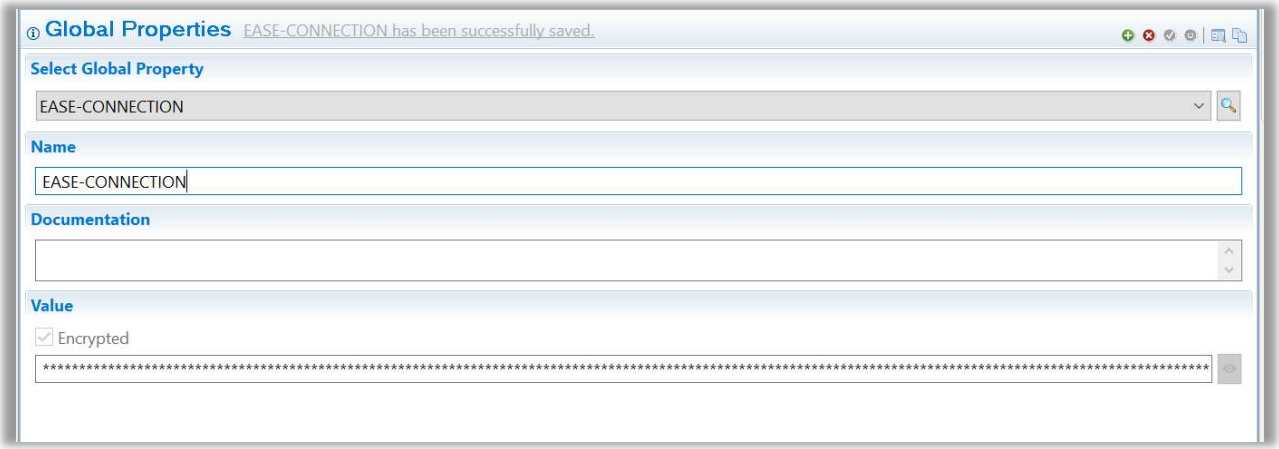
- **URL** = "**https://opconhostname:9010**"
- **User Name** = "**EC_999**"
- **Password** = "**examplepassword**"
- **Schedule Name** = "**EC_999**"

Then the four command line parameters would be:

- -EaseApiUrl "https://opconhostname:9010"
- -EaseUser = "EC_999"
- -EasePassword = "examplepassword"
- -ScheduleName = "EC_999"

The Value of the Global Property will look like the following ***BEFORE*** it is encrypted. Notice we list the command line switch followed by the appropriate value and then the next command line switch until we complete all four.


Global Properties
EASE-CONNECTION has been successfully saved.
Select Global Property
EASE-CONNECTION
Name
EASE-CONNECTION
Documentation
Value
Encrypted
-EaseApiUrl https://opconhostname:9010 -EaseUser UserName -EasePassword UserPassword -ScheduleName "EC_###"


Global Properties
EASE-CONNECTION has been successfully saved.
Select Global Property
EASE-CONNECTION
Name
EASE-CONNECTION
Documentation
Value
Encrypted

Bundled Scripts Concepts

Several script bundles have been created to simplify Job setup. There are many more scenarios where this could be useful, but we started with a few common requests.

Load a file into Episys

Anytime you need to load a file into Episys it will consist of at least three Jobs.

- An FTP Job to upload the file from your network to JHA's DMZ using a command line driven FTP Utility.
    - The FTP Job transfers the file from your environment to JHA's DMZ. The file will automatically relay from their DMZ to the Letter Files directory within your production SYM on Episys.
- An EASE Connector File Monitor Job running on Episys to detect the arrival of a file.
    - The File Monitor Job is necessary because the relay from JHA's DMZ to Episys is not immediate. OpCon needs the File Monitor Job to verify the arrival of the file before moving forward.
- An EASE Connector RSJ Edit Job.
    - If there are no prompts to answer, you can then move forward with running the Edit Job.

Options for loading a file into Episys

If there are no prompts in the Episys Edit Job, you have two options on how to handle this.

1. The first option includes running a script which launches multiple EASE Jobs.
    a. Run an FTP Job to transfer the file to JHA's DMZ.
    b. Run **EASE-MULTI-BUNDLE-RSJEDIT.ps1** which executes both the File Monitor and RSJ Edit Job.
2. The second option is to run all three tasks individually.
    a. Run an FTP Job to transfer the file to JHA's DMZ.
    b. Run **EASE-MULTI-MONITOR.ps1** which will run the File Monitor Job.
    c. Run **EASE-MULTI-RSJEDIT.ps1** which will run the RSJ Edit Job.
        i. If there are prompts, then **EASE-MULTI-PROMPT.ps1** needs to be run before this job and **EASE-MULTI-RESET.ps1** needs to be run after.

Transfer a Report off Symitar

Transferring a report off Symitar requires four Jobs.

- An EASE Connector sequence number lookup.
    - This collects the sequence number of the specified report created during the specified Episys Job and stores it in a location for downstream processing.
- An EASE Connector Job to copy the report into Letter Files.
    - This is where the FTP Jobs are expecting the files.
- An EASE Connector FTP Job transferring the file to JHA's DMZ.
- A local FTP Job pulling the file from JHA's DMZ to your local system.

Options for Transferring a Report off Symitar

You have two options on how to handle this.

1. The first option includes running a script which launches multiple EASE Jobs.
    a. Run **EASE-MULTI-BUNDLE-SEQ-FTP.ps1** which executes the sequence number collection, the copy to Letter Files, and the FTP to JHA's DMZ.
    b. Run an FTP Job to download the file from JHA's DMZ.
2. The second option is to run all four tasks individually.
    a. Run **EASE-MULTI-SEQ.ps1** which will run the sequence number collection Job.
    b. Run **EASE-MULTI-LETTERFILE-COPY.ps1** which copies the report to Letter Files.
    c. Run **EASE-MULTI-LETTERFILE-FTP-ONLY.ps1** which FTPs the file to JHA's DMZ.
    d. Run an FTP Job to download the file from JHA's DMZ.

Transfer a Letter File off Symitar

When transferring a Letter File off Symitar three Jobs are required.

- An EASE Connector Job to either copy or rename the Letter File appending the prefix necessary to transfer the file to JHA's DMZ. (**EASE-MULTI-LETTERFILE-COPY-OR-RENAME.ps1)**
    - Use the Move if the Episys requires the file to be cleared.
    - Use a Copy if the file is overwritten by the Episys Job creating the file.
- An EASE Connector FTP Job transferring the file to JHA's DMZ. (**EASE-MULTI-LETTERFILE-FTP-ONLY.ps1)**
- A local FTP Job pulling the file from JHA's DMZ to your local system.

Answer a prompt with a SEQ Number

The concept of answering a prompt with the value of a sequence number is no different in the EASE Connector than when Episys is on premise. A bundled script was created to simplify the process.

Options for Answering a prompt with a SEQ Number

You have two options on how to handle this.

1. The first option includes running a script which launches multiple EASE Jobs.
    a. Run **EASE-MULTI-BUNDLE-SEQ-PROMPT.ps1** which executes sequence number collection and updates the prompt in the Episys Batch Job.
    b. Run **EASE-MULTI-RSJ.ps1** to run the Episys Batch Job.
2. The second option is to run all three tasks individually.
    a. Run **EASE-MULTI-SEQ.ps1** which collect the sequence number of the report which will be used as the value of the prompt.
    b. Run **EASE-MULTI-PROMPT.ps1** to answer the prompt.
    c. Run **EASE-MULTI-RSJ.ps1** to run the Episys Batch Job.

Bundled Scripts Overview

Run an Episys Edit File Job

The **EASE-MULTI-BUNDLE-RSJEDIT.ps1** script uses the OpCon API to add two Jobs to EASE's environment. This means one Job within your environment will control two Jobs in the EASE environment. The two Jobs do the following:

1. The first Job monitors for the arrival of the file which is relayed from JHA's DMZ.
2. The second Job runs the specified Episys Job loading the specified Edit File.

This script has four Dynamic Parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-FileMonitor**
  The name of the file which will be transferred to Episys to be used by the Edit Job.
- **-RSJJobName**
  The name of the Episys Job which will be run to load the file.
- -**EditFile**
  The name of the EditFile to load.
  - This should mirror the -FileName.

Answer a Prompt with a Sequence Number

The **EASE-MULTI-BUNDLE-SEQ-PROMPT.ps1** script uses the OpCon API to add two Jobs to EASE's environment. This means one Job within your environment will control two Jobs in the EASE environment. The two Jobs do the following:

1. The first Job searches for the sequence number of the defined report and stores it in a Schedule Instance Property within the EASE Schedule.
2. The second Job answers the specified prompt in the specified Episys Job with the sequence number collected during the first job.

This script has four Dynamic Parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-RSJJobName**
  The name of the Episys Job which was run to create the report whose sequence number we are searching for.
- -**ReportName**
  The title of the report whose sequence number you need to collect. This will be used as the answer to the -Prompt listed below.
- **-EpisysJobName**
  The name of the nested Episys Job which contains the prompt you are answering with the sequence number collected. In the case of a large batch Job containing many smaller Jobs, we need to specify the smaller Job which contains the prompt.
- **-Prompt**
  The prompt within the job. This needs to be the actual string of text.

Transfer a Report off Episys

The **EASE-MULTI-BUNDLE-SEQ-FTP.ps1** script uses the OpCon API to add three Jobs into the EASE environment. These three Jobs perform the following functions:

1. The first Job searches for the sequence number of the defined report and stores it in a Schedule Instance Property within the EASE Schedule.
    a. **Note**: All sequence number Jobs update the same Schedule Instance property. Because of this you need to make sure only one of these Jobs run at a time. OpCon Resource Dependences are recommended.
2. The second Job copies this report from the "reports" directory into the Letter Files directory.
    a. This is done because the following FTP Job deletes the source file. We do not want to delete the file from the Reports directory, so a copy is made which can be safely transferred and deleted.
    b. A prefix is added to the report during the copy. This is to prevent overwriting other files in the Letter Files directory.
3. The third Job FTPs the file from Symitar to JHA's DMZ.
    a. **Note**: A prefix will be added to the file name when it is copied from the "reports" directory into Letter Files.
    b. **Example**: File **test.txt** becomes **EC999_test.txt**.
    c. The -Email parameter is a required parameter. It is used by MoveIT to notify the specified email once the transfer is complete.

This Job has four parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
    - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
    - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-JobName**
  The name of the Episys Job which was run to create the report whose sequence number we are searching for.
- -**ReportName**
  The title of the report whose sequence number you need to collect. This will be used as the answer to the -Prompt listed below.
- **-FileName**
  This parameter is used to give the destination file name of the Job copying the report to Letter Files, as well as to define the source file for the Job which will transfer the file to JHA's DMZ.
    - The path is hard-coded within the Job in the EASE environment. DO NOT include the path in this parameter.
    - A prefix is added to the file name when it is copied to the Letter Files directory. That prefix is hard-coded within the subsequent FTP Job.

- **-Email**
  This is the email address which will used to notify once the file is ready for pickup on the DMZ. This is a required parameter. Using a group email account is the best practice.

Individual Scripts Overview

File Monitor

The **EASE-MULTI-MONITOR.ps1** script uses the OpCon API to add a **File Monitor Job** within EASE's OpCon environment. This Job monitors the Episys Letter Files directory for the file you uploaded to the JHA DMZ. JHA automatically passes the file from their DMZ to the Letter Files directory. Once the file arrives the script will finish successfully and report back to your OpCon system. This will let your OpCon system know when it is ok to continue with processing.

This script has three Dynamic Parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-FileMonitor**
  The name of the file which is being transferred to Episys. A prefix will be added to the file name when it is relayed to Episys. Ignore that prefix in the file name specified in your Job.
  - **Example**: File **test.txt** becomes **EC999_test.txt**. The **-FileMonitor** parameter on your Command Line should look like "**test.txt**" and **NOT** "**EC999_test.txt**".

The purpose is to make sure a unique Schedule Instance property is used to store the SEQ Numbers created during the workflow.

The Job will consist of the EASE-CONNECTION Global Property followed by the -FileMonitor parameter. This parameter will consist of the name of the file you uploaded.

Answer a Prompt

The **EASE-MULTI-PROMPT.ps1** script uses the OpCon API to add a Job updating an Episys prompt within EASE's OpCon environment. This script will be used any time you want to run an Episys Job which has a prompt (or prompts) that need to be answered. A few things to consider with this EASE Connector script are:

1. You can only answer one prompt each time the Job is run. The script passes a single prompt and single response. If the same Episys Job has multiple prompts we need to break this up into multiple EASE Connector Jobs.
2. We have a different form of the script if the answer to the prompt is the sequence number of a report. For more information on this, read about the **EASE-MULTI-SEQ-PROMPT.ps1** script.

This script has three Dynamic Parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-JobName**
  The name of the nested Episys Job which contains the prompt. In the case of a large batch Job containing many smaller Jobs, we need to specify the smaller Job which actually contains the prompt.
- **-Prompt**
  The prompt within the job. This needs to be the actual string of text.
- **-Response**
  This parameter will contain the desired response to that prompt.

Answer a Prompt with a Sequence Number

The **EASE-MULTI-PROMPT-SEQ.ps1** script uses the OpCon API to add a Job updating an Episys prompt within EASE's OpCon environment using the sequence number stored by the previous Job. Keep in mind that you can only answer one prompt each time the Job is run. The script passes a single prompt and single response. If the same Episys Job has multiple prompts we need to break this up into multiple EASE Connector Jobs.

This is the same set of parameters as the **EASE-MULTI-PROMPT.ps1** excluding the Response. The reason the response is excluded is it is hard coded in the Job pointing to the Property where the sequence number is stored.

This script has three Dynamic Parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-JobName**
  The name of the nested Episys Job which contains the prompt. In the case of a large batch Job containing many smaller Jobs, we need to specify the smaller Job which contains the prompt.
- **-Prompt**
  The prompt within the job. This needs to be the actual string of text.

Reset a Prompt

The **EASE-MULTI-RESET.ps1** script uses the OpCon API to add a Job resetting an Episys prompt back to a value which requires manual input. It is best practice to do this for each prompt answered after running the RSJ Job. We do not what to leave old hard-coded values.

This script has three Dynamic Parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-JobName**
  The name of the nested Episys Job which contains a prompt which needs to be reset.
- -**Prompt**
  The prompt within the Job above which needs to be set back to requiring manual input.

Run Symitar Job (RSJ)

The **EASE-MULTI-RSJ.ps1** script uses the OpCon API to add a Job running an Episys Batch Job. A few things to know about this script:

- The RSJ Jobs are always set to single_thread.
- The Edit File switch is not provided by this Job.
- The Restart Point parameter is not provided by this job.

This script has two Dynamic Parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-JobName**
  The name of the Episys Job which will be run.

Run Symitar Job (RSJ) with an Edit File

The **EASE-MULTI-RSJEDIT.ps1** script uses the OpCon API to add a Job running an Episys Batch Job which is doing an Edit Run.

This is like the EASE-MULTI-RSJ script, but it has an additional -EditFile switch. This will specify the name of the Edit File. The file is expected to be in the Letter Files directory.

Note: The Edit File Jobs are single threaded by default. If you launch more than one at a time, they will appear like they are running on your end but run one at a time on EASE's end. It is best to set Dependencies between Edit Jobs to make sure you only launch one at a time.

There are three parameters in this Job:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-JobName**
  The name of the Episys Job to run.
- **-EditFile**
  The name of the file to use as the edit file.

Sequence Number Lookup (SEQ)

The **EASE-MULTI-SEQ.ps1** script uses the OpCon API to add a Job which collect the sequence number of a report and stores it to be used downstream.

There are three parameters in this Job:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-JobName**
  The name of the Episys Batch Job which ran when creating the report.
- **-ReportName**
  The name of the report whose sequence number you need to collect.

Rename a Letter File delivered from JHA's DMZ (Incoming Files)

The **EASE-MULTI-LETTERFILE-RENAME.ps1** script uses the OpCon API to add a Job which renames a Letter File removing the prefix MoveIT added to the file name. This is required if the Letter File name is hard coded in the Episys Job using the Letter File.

Note: A prefix is added to the file name during the transfer to Episys. This prefix should NOT be included in the -SourceFile parameter. It is hard coded in the EASE Job so you only need to include the name before the prefix was added.

This Job has three parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-SourceFile**
  This is the name of the Letter File we are copying.
  - Remember to not include the Prefix added during the transfer from JHA's DMZ to Episys.
  - Example:
    The original file name is CUSC.MISMATCH. When the file gets transferred from the JHA DMZ to Symitar's Letter Files Directory it gets renamed to EC999_ CUSC.MISMATCH. When running the rename script the -SourceFile should be CUSC.MISMATCH and NOT EC999_ CUSC.MISMATCH

- **-DestinationFile**
  This is the name that will be given to the destination file. A prefix will automatically be added to the name supplied. Because of this, you can use the same name supplied in the -SourceFile parameter.

Copy a Report to Letter Files (Outgoing Files)

The **EASE-MULTI-LETTERFILE-COPY.ps1** script uses the OpCon API to add a Job which copies Report to the Letter Files directory preparing it to be FTP'ed to JHA's DMZ.

Note: A prefix is added to the file name during the copy to prepare it for the FTP.

This Job has two parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-ReportName**
  This is the name given to the report when it is copied into the Letter Files directory.

Rename or Copy a Letter File (Outgoing Files)

The **EASE-MULTI-LETTERFILE-COPY-OR-RENAME.ps1** script uses the OpCon API to add a Job which renames or copies a Letter File adding the required prefix for JHA's FTP client to transfer the file to their DMZ.

- Use the Copy if the Episys Job or Jobs expect the file to always exist and appends data.
- Use the Rename if the Epsisys Job or Jobs create a new file every time they run.

This Job has four parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-Action**
  There are two options for this parameter.
  - **COPY** is used if the Letter File is constantly appended two and you need to keep the Letter File.
  - **RENAME** is used when you need to delete the Letter File before the process is run again.
- **SourceFile**
  This is the name of the Letter File we are copying or renaming.
- **-DestinationFile**
  This is the name that will be given to the destination file. A prefix will automatically be added to the name supplied. Because of this, you can use the same name supplied in the -SourceFile parameter.

Transfer a file off Symitar (Outgoing Files)

The **EASE-MULTI-LETTERFILE-FTP-ONLY.ps1** script uses the OpCon API to add a Job FTPs the specified file to JHA's DMZ.

This Job has three parameters:

- **-Identifier**
  The name of a unique value which will be used in all EASE Connector Jobs within a string of jobs. This has two purposes:
  - It creates unique Job Instances in EASE's environment using this identifier to append to the Job's name.
  - It is used for all Jobs updating or collecting a sequence number. The Identifier is added to the Schedule Instance Property name.
- **-DestinationFile**
  The name of the file which will be FTP'ed.
  - This will be used as both the source and destination name.
- **-Email**
  This is the email address which will used to notify once the file is ready for pickup on the DMZ. This is a required parameter. Using a group email account is the best practice.

Common Exit Codes

The EASE Connector could receive exit codes from four different areas. There is a possibility that the same exit could be used by multiple of these areas. The full message of within the Job Output should be able to help identify which area to start troubleshooting.

1. Defined Script Errors
2. Generic Powershell Errors
3. Generic REST API Errors
4. Program Errors

Defined Script Errors

The following errors are trapped and returned by the EASE Connector scripts. The EASE team will be the appropriate resource to help troubleshoot these errors.

- **600**
  This error occurs if the Schedule within EASE's environment is not built for the day. Please contact the EASE team to investigate why the Schedule was not built.
- **601**
  This error occurs when the Schedule within EASE's environment is in an **On Hold** status. Please check with the EASE team to determine when they will reactivate the Schedule.
- **602**
  This error occurs if a Job is run before the Schedule within EASE's environment is in a running status (if it is still in a Wait to Start status). The Schedule within EASE's environment starts when your agreed upon maintenance window ends.
- **603**
  This error occurs if a Job is run after the Schedule within EASE's environment closes for the day. The Schedule within EASE's environment ends when your agreed upon maintenance window begins.
- **610**
  This error occurs if there are parameters missing from the command line. The Job output will specify which parameter is missing.
- **650**
  This error occurs when the script is not successful in adding the specified Job within EASE's environment. Please have the EASE team verify that the proper privileges are setup for the Job Add request.
- **651**
  After the Job is added, the script polls to check its status. The 451 error occurs if the script cannot find the added Job. This could be caused by the lack of privileges or by something deleting the Job within EASE's environment. Please check with EASE to resolve this issue.
- **699**
  This error occurs when the script is unable to connect to EASE's OpCon API.
- **999**
  This is a timeout error which indicates the script has not been able to verify the status of the Job Add in an appropriate amount of time.

Generic Powershell Errors

The EASE scripts are all Powershell scripts. There is the potential for Powershell specific errors to occur. SMA Support will be the appropriate resource to help troubleshoot these errors. A few scenarios which would return a Powershell scripting exit code are:

- A required parameter is not entered
- A parameter name was mistyped causing it to be unrecognized
- The Batch User running the Job does not have the proper execution policy defined within Powershell
- Etc

Generic REST API Errors

We trapped many of these errors within the errors defined without the EASE scripts, but there is a chance you could run into REST API errors. SMA Support will be the appropriate resource to help troubleshoot these errors.

The following link describes the generic REST API errors.

https://restfulapi.net/http-status-codes/

Program Errors

The EASE scripts return the exit code provided by the program being run within the EASE environment. Programs run by the EASE scripts are:

- RSJ and its supporting programs
- OpCon UNIX Agent's File Arrival
- The AIX Move or Copy commands
- MoveIT Central