

WebSphere® Adapters
Version 7 Release 0 Feature Pack 1

*WebSphere Adapter for Flat Files User
Guide
Version 7 Release 0 Feature Pack 1*

IBM

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Note

Before using this information and the product it supports, read the information in "Notices" on page 31.

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This edition applies to version 7, release 0, modification 1 of IBM® WebSphere Adapter for Flat Files and to all subsequent releases and modifications until otherwise indicated in new editions.

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WebSphere Adapter for Flat Files documentation

WebSphere® Adapter for Flat Files provides the ability for WebSphere Process Server or WebSphere Enterprise Service Bus modules to interact with the files in the local file system without the need for custom file interaction coding.

What is new in this release

This version includes several new features that enhance the business flexibility, user experience, and performance of the adapter.

Complete information about other supported features is available at the WebSphere Adapter for Flat Files information center, http://publib.boulder.ibm.com/infocenter/dmndhelp/v7r0mx/topic/com.ibm.wsadapters.jca.ff.doc/doc/stbp_ffa_welcome.html, which is periodically updated with the latest information.

WebSphere Adapter for Flat Files supports the following new features:

- Receiving notification of any file content changes in the event directory.
- Delivering only the appended file contents at the end of the file.
- Polling unchanged files in the event directory for a specific time interval.

Note: In WebSphere Integration Developer, ensure that you have only one version of the adapter imported into your workspace. You can either have the adapter Fix Pack version 7.0.0.1 or Feature Pack version 7.0.1.0.

In the runtime environment, the application (EAR) should contain only one version of the embedded RAR file, either the adapter Fix Pack version 7.0.0.1 or Feature Pack version 7.0.1.0. The node level deployed adapter should also have only any one version of the adapter.

File retrieval

During inbound processing, you can manage the retrieval of the files by using the Notification for file changes or the Time interval for polling unchanged files property. You can also use the Notification for appended file contents property to retrieve only the appended file contents.

The Notification for file changes property and the Time interval for polling unchanged files property are mutually exclusive properties.

File retrieval based on last recorded time stamp

The Notification for file changes property enables the adapter to receive notifications of file content changes in the event directory during the subsequent poll cycles after the previous event poll. On receiving the notification, the adapter retrieves the event files and delivers them to the endpoint.

When you configure this property, the adapter retrieves the new files added to the event directory since the last poll cycle along with the existing modified files.

This property enables the adapter to monitor file changes based on the last modified time stamp of each file. When the adapter is started for the first time, all

event files are polled and processed from the event directory. The adapter does not delete any polled event file from the event directory after event processing.

Later, in the next poll cycles, only those event files are picked for polling whose `lastModifiedTimeStamp` values have changed. If the `lastModifiedTimeStamp` for a file is same, it means that the file has not changed and therefore it is not picked up for polling. For more information, see the Notification for file changes property details.

You can also configure the adapter to deliver only the appended file contents at the end of the file by using the Notification for appended file contents property. This property is enabled when you select the Notification for file changes property in the external service wizard.

If there is a change in the last modified time stamp value, during the next poll cycle, the adapter checks the event file for any change in the file content. The changes to the file contents that are considered by the adapter for polling again are in the form of appended business objects. If the appended business objects exist, the adapter retrieves only the appended file contents by comparing the file with the file contents of the previous poll. The adapter compares by using the total number of business objects in the previously polled contents and the contents in the current poll. It does not process any business object if the counts of the business objects are same or less than the last poll.

The following scenarios illustrate how the adapter decides if a business object is to be delivered to the endpoint. In this example, three business objects are taken as a sample count. The scenarios depict how the adapter processes the business objects based upon their new processing order in the event file.

- If another business object is added after the three business objects, the adapter delivers the fourth business object to the endpoint.
- If the second business object is deleted, and two more business objects are added at the end, the adapter delivers only the last business object to the endpoint. In the changed position, the third business object is not delivered although it is a new business object.
- If the second business object is deleted, and no new business objects are added, the adapter does not poll the event file for delivery to the endpoint. If two more business objects are added at the end, the adapter delivers both the business objects to the endpoint.
- If one business object is added in between the second and the third business object, then the existing third business object is delivered again to the endpoint.
- If two business objects are deleted and two new business objects are added, then the adapter does not deliver any business object to the endpoint.
- If the second business object is deleted and two new business objects are added in its place, the existing third business object becomes last in the row. This configuration increases the count of the business objects and the adapter delivers the earlier existing third business object to the endpoint.

Note: When the server is restarted after a shutdown, the adapter polls all the contents of the files modified during this time to the endpoint that also include the appended contents.

For more information, see the Notification for appended file contents property details.

Note: If you select the Notification for file changes property, then you cannot configure the Time interval for polling unchanged files, File pass by reference, and all the archiving properties.

File retrieval based on time interval

The Time interval for polling unchanged files property monitors the changes to files in the event directory for the specified time interval. When you configure this property, the adapter polls the files for event processing that have not undergone any change during the time interval. The adapter also polls files that are currently being edited but have not been saved during the specified time interval. The unsaved contents are not processed during the event processing. This configuration prevents occurrence of any erroneous results.

When the adapter polls the directory, it uses this property to check if a file has been modified by any event during the specified time interval. The adapter uses the lastModifiedStamp values of the files to determine if a file has changed during the time interval.

The adapter retrieves the unchanged files in their present state and the changed files from their last saved state. For more information, see the Time interval for polling unchanged files property details.

Note: If you select the Time interval for polling unchanged files property, then you cannot configure the Notification for file changes property.

File splitting

The adapter supports an optional file splitting feature to reduce memory loading during the event processing. When this feature is used, the adapter divides large event files into smaller chunks, which are then posted separately to the endpoint.

The adapter splits large event files into several business objects, also called chunks, based on the value you specify in the SplitCriteria property, which can be either a delimiter or a chunk size. Each business object is delivered to the endpoint separately. You can split files using a delimiter when the content of the business object has a definite structure; for example, if you have a customer business object with elements such as name, address, and city. You can also split files by size when the business object contains unstructured data, such as plain text or binary files.

When event files are split into such chunks, each chunk creates a business object. This means that the value specified for the PollQuantity property and the number of business objects delivered to the endpoint can be different. When file splitting based on a delimiter is enabled, the PollQuantity activation specification property specifies the number of such event files that are present in the event store, and the class used to split the event file is set in the SplittingFunctionClassName activation specification property.

The adapter does not reassemble the chunked data.

The value specified in the SplitCriteria property determines the method that is used. The default value for SplitCriteria property is zero, which means that no splitting is performed. You can also leave the values of the SplitCriteria and SplittingFunctionClassName properties empty, if no splitting is required.

You can optionally provide a custom file splitter class. Set the `SplittingFunctionClassName` property to the name of the class.

File splitting by delimiter

When one or more characters such as a comma (,), semicolon (;), quote (",'), brace ({}), or slash (/ \) delimiters are used to separate the business objects in a file, the adapter can split the file into smaller chunks based on the delimiter. Each chunk is a logical unit that is used to construct a business object when forwarded to WebSphere Process Server or WebSphere Enterprise Service Bus. You define the delimiter that separates the business objects in the file in the `SplitCriteria` property.

To demonstrate how the `PollQuantity` value works with delimiter file splitting, consider two event files. The first event file contains a business object and the second event file contains two business objects. If the `PollQuantity` value is 2, the first business object from the first event file and the next business record from the second event file are sent in the first poll cycle. The second business object from the second file is sent in the second poll cycle.

The following rules apply to the use of delimiters:

- All new lines in the delimiter are represented by platform-specific newline characters. The platform-specific newline characters are shown in Table 1.

Table 1. Platform-specific newline characters

Platform	Newline character
Macintosh	\r
Microsoft® Windows®	\r\n
UNIX®	\n

- If there is more than one delimiter, each delimiter must be separated by a semicolon (;). The delimiters are matched in the order in which they are given. If the semicolon is part of the delimiter, it must be escaped as \;. For example, if the delimiter is ##\;##, it is processed as ##;##.
- To skip content that is part of the delimiter, specify a double semicolon (;;) in front of it so that the content between the delimiters is skipped. For example, if the event file contains a business object in the following format and the delimiter is ##;\$\$, the adapter considers ##\$\$ to be the delimiter and skips the words "content skipped by the adapter", as shown here:

```
Name=Smith
Company=IBM
##content skipped by the adapter$$
```

- The delimiter can have any value, and there are no restrictions on it. The delimiter is a combination of a valid string, the newline character (for example, \n), and a semicolon separator if there is more than one delimiter. A delimiter does not have to comprise the newline character and a semicolon. The newline character is used only when a newline is to be considered when splitting the contents of the file. Examples of valid delimiters include:

- ####;\n;\n
- ####;\$\$\$;\n;####
- %%%;\$\$\$\$\$;#####
- \n;\n;\$\$\$\$
- ####\;####;\n;\$\$\$\$
- \n;\n;\n

- ####;\$\$\$\$
 - \r
 - \r\n
 - \$\$\$;\$\r\n
- If the delimiter is located at the end of the file, the SplitCriteria property uses END_OF_FILE to determine the physical end of the file.

An example of a scenario with the commonly used delimiter format is shown in Table 2.

Table 2. Using the delimiter format

Data binding	BO content	Recommended delimiter format
XML	<pre><?xml version="1.0" encoding="UTF-8"?> <customer:Customer xsi:type="customer:Customer" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:customer="http://www.ibm.com/xmlns/prod/websphere/ j2ca/flatfile/customer"> <CustomerName>Deepa</CustomerName> <Address>IBM</Address> <City>Bangalore</City> <State>KA</State> </customer:Customer> ##</pre>	##;\n

File splitting by size

The value specified in the SplittingFunctionClassName property determines whether a file is split by size. If the SplittingFunctionClassName property is set to com.ibm.j2ca.utils.filesplit.SplitBySize, the SplitCriteria property must contain a valid number that represents the maximum file size, in bytes. If the event file is larger than the value specified in the SplitCriteria property, the file is split into chunks and each chunk is posted to the endpoint separately. If the event file is smaller than the SplitCriteria value, the entire event file is posted to the endpoint.

When event files are split into chunks, each chunk becomes a business object. This means that the value specified for the PollQuantity property and the number of business objects delivered to the endpoint can be different. Although the adapter polls according to the PollQuantity value, it actually processes the business objects in the file one at a time. For example, if an event file is chunked into three parts, one file is polled and the three business objects are delivered to the endpoint (because each chunk creates a single business object).

If you use the Notification for file changes property, then the size of the event file must be a multiple of the split chunks. For example, for an event file that contains 90 bytes, the split size can either be 15, 6, 3, or 2.

When the event file is not a multiple of the split chunks and the last business object is smaller than the split size, the adapter delivers the last business object to the endpoint correctly during the first event poll. When new contents are appended to the event file and the Notification for file changes property is specified as True, then the updated business object that was smaller than the split size, does not send any new content to the endpoint. The sample scenarios for this configuration, when a content is split by 2 bytes, are described in the following example.

When the content "ABCDE" is split by 2 bytes, so that the last business object contains only "E", then the adapter delivers the contents "AB", "CD", and "E" to the endpoint during the first event poll. In the next event poll, if the content is changed to:

- "ABCDEF", the content is split to "AB", "CD", and "EF", and the adapter delivers the contents "AB", "CD", and "E" to the endpoint.
- "ABCDEFG", the content is split to "AB", "CD", "E", and "G", and the adapter delivers the contents "AB", "CD", "E", and "G" to the endpoint.

Note: When an event file has failed business objects and file splitting by size is enabled, then the event file is archived only with the .original extension. The adapter does not store any file with the .fail extension in the specified archive directory.

At the endpoint, the adapter does not reassemble the chunked data into a single file, but it provides information about the chunks to enable WebSphere Process Server or WebSphere Enterprise Service Bus to reassemble them into a single file. The chunk information is included in the ChunkFileName property of the FlatFileInputStreamRecord record, and includes the chunk size in bytes and the event ID. The event ID of a chunk uses the following form: eventFileLocation/_timestampStr/_MofN, where M is the current chunk number and N is the total number of chunks. An event ID would look like the following example:

C:\flatfile\eventdir\eventfile.in/_2005_01_10_10_17_49_864/_3of5, where timestampStr has the following format: year_month_day_hour_minutes_seconds_milliseconds.

Setting deployment and runtime properties

After you have decided whether your module is to be used for outbound or inbound communication with the enterprise information system (local file system), you must configure the activation specification properties, which hold the inbound event processing configuration information for the export.

Before you begin

Before you can set the properties in this section, you must have created your adapter module. It is displayed in WebSphere Integration Developer below the adapter project. For more information about creating the adapter project, see http://publib.boulder.ibm.com/infocenter/dmndhelp/v7r0mx/topic/com.ibm.wsadapters.jca.ff.doc/doc/cbp_ffa_esd.html.

About this task

To set the activation specification properties, follow this procedure. For more information about the properties in this topic, see "Activation specification properties" on page 12.

Procedure

1. In the Select the Processing Direction window, select **Inbound** and click **Next**.

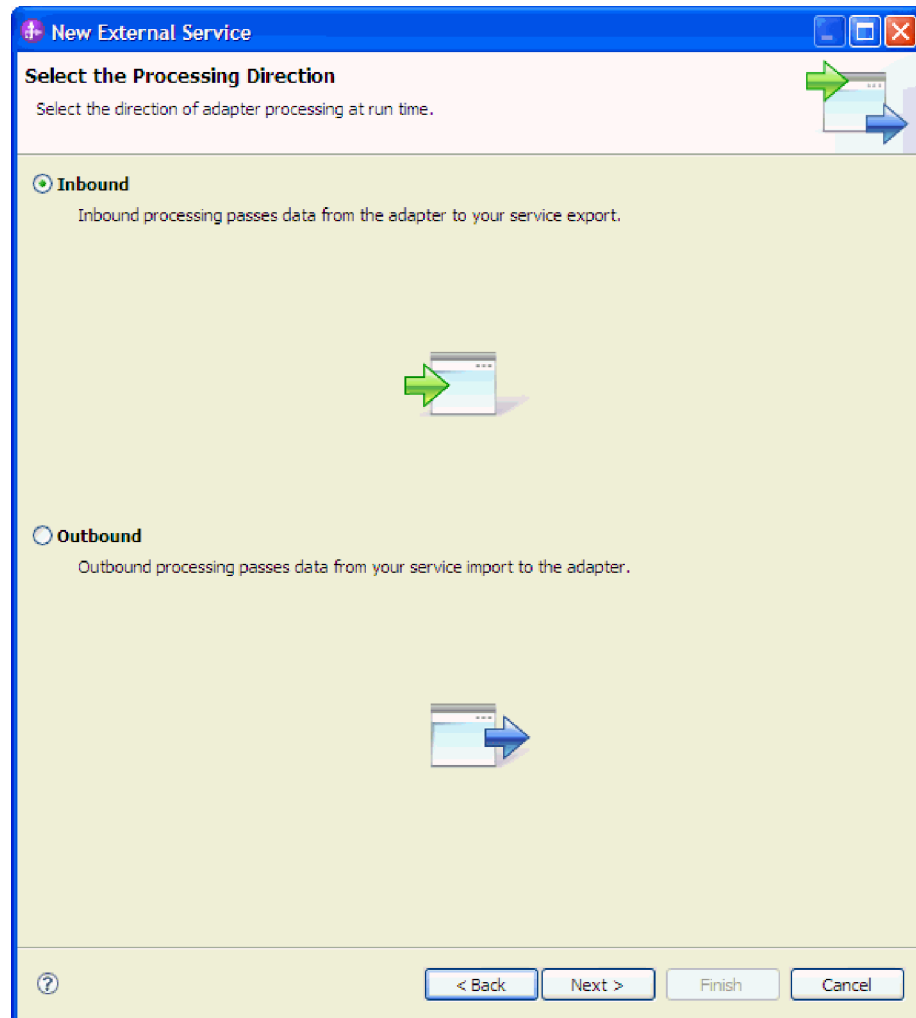


Figure 1. Selecting inbound or outbound in the external service wizard

2. In the Specify the Security and Configuration Properties window, in the **Deploy connector project** field, select **With module for use by single application**.
3. In the Specify the Security and Configuration Properties window, define the activation specification properties for your module. For more details on the properties found on this window, see "Activation specification properties" on page 12.

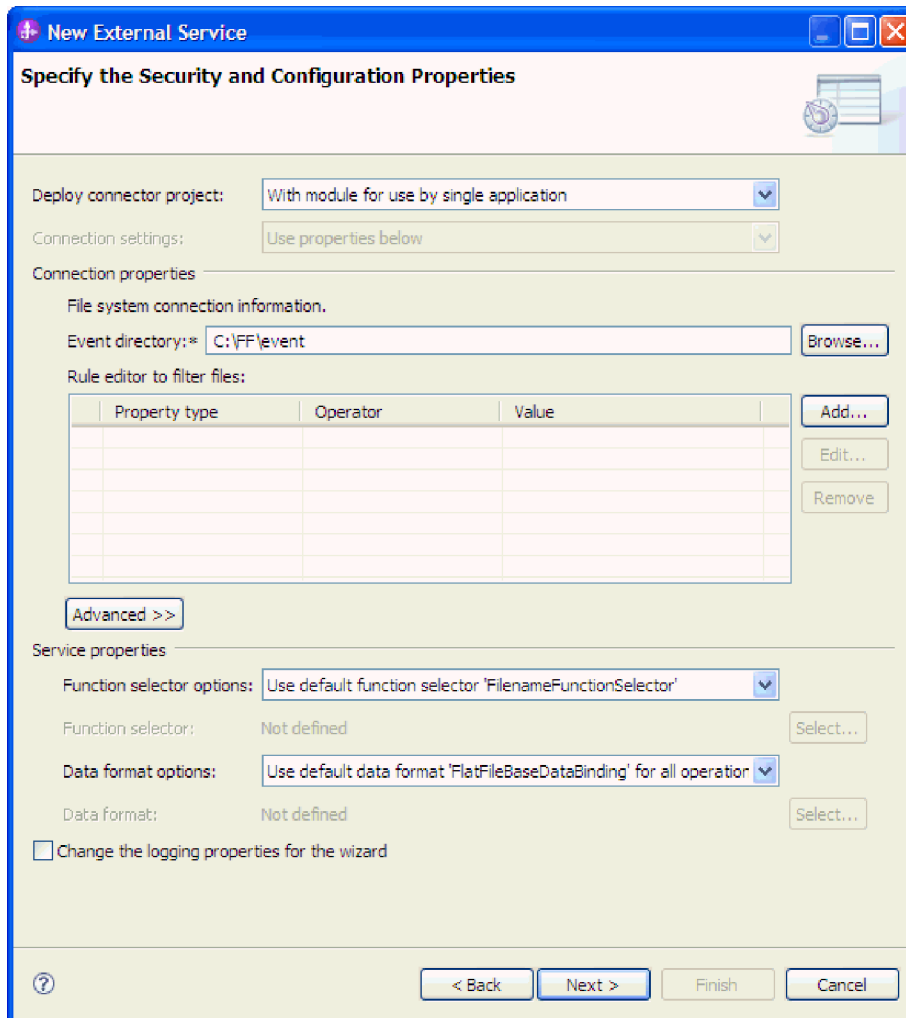


Figure 2. Setting the connection properties

4. In the **Event directory** field, specify the directory in the local file system where the event files are stored.
5. Click **Advanced** and expand the **Event polling configuration**, **Event delivery configuration**, **Event persistence configuration**, **Additional configuration**, **File archiving configuration**, **Bidi properties**, and **Logging and tracing** sections to specify additional properties.
 - a. Optional: In the **Event polling configuration** section, select **Retry EIS connection on startup**. If you select this property, the adapter continues trying to connect to a system to which it failed to connect when starting. For more information, see “Retry EIS connection on startup (RetryConnectionOnStartup)” on page 25.

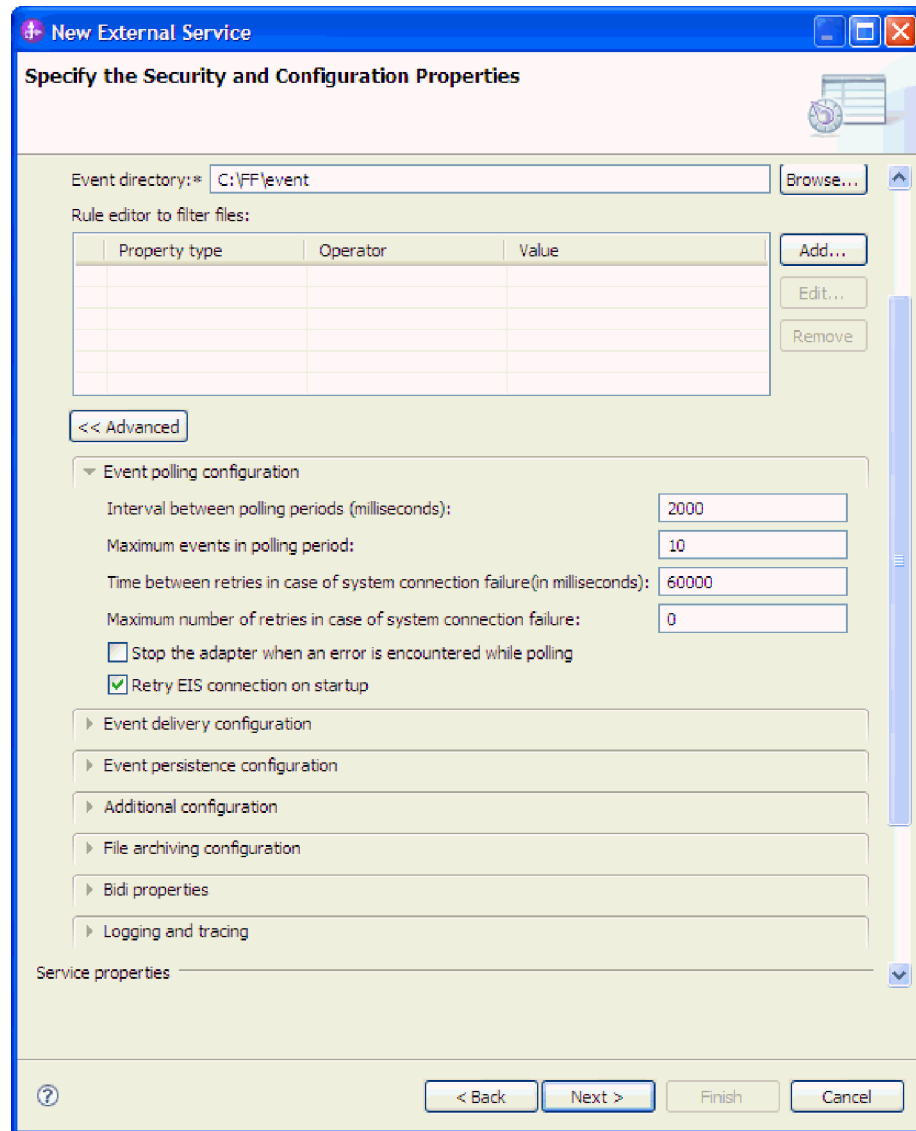


Figure 3. Selecting the Retry EIS connection on startup check box

- b. Optional: In the **File archiving configuration** section, you can set conditions to retrieve a file by using either the **Notification for file changes** or the **Time interval for polling unchanged file (in milliseconds)** fields. For more information about these properties, see “Activation specification properties” on page 12.
- c. Optional: In the **Additional configuration** section, select a value for the **File content encoding** field. If you are working with binary event data, select BINARY. If you are working with non-binary event data, such as text or XML, select a valid file encoding value, such as UTF-8 (the default value).
- d. Optional: If you have multiple instances of the adapter, expand **Logging and tracing** and enter a value in the **Adapter ID** field that is unique for this instance. For more information about this property, see http://publib.boulder.ibm.com/infocenter/dmndhelp/v7r0mx/topic/com.ibm.wsadapters.jca.ff.doc/doc/rbp_ffa_in_resource_adapter_props.html.
- e. If you want to mask certain information so that the information is not displayed in the logs or traces, select **Disguise user data as "XXX" in log and trace files**.

- f. Optional: To specify the log file output location or define the level of logging for this module, select the **Change logging properties for wizard** check box. For information about setting logging levels, see http://publib.boulder.ibm.com/infocenter/dmndhelp/v7r0mx/topic/com.ibm.wsadapters.jca.ff.doc/env/shared/tsha_config_log_properties.html.
6. For the **Function selector** field, select whether to use the default function selector configuration or create a new one.
 - a. To create a function selector configuration, click **New**.
 - b. In the Configure a New Function Selector window, click **Next**.
 - c. Select the required function selector from the list of available function selectors.

Note: A function selector assigns incoming messages or requests to the correct operation on the service.

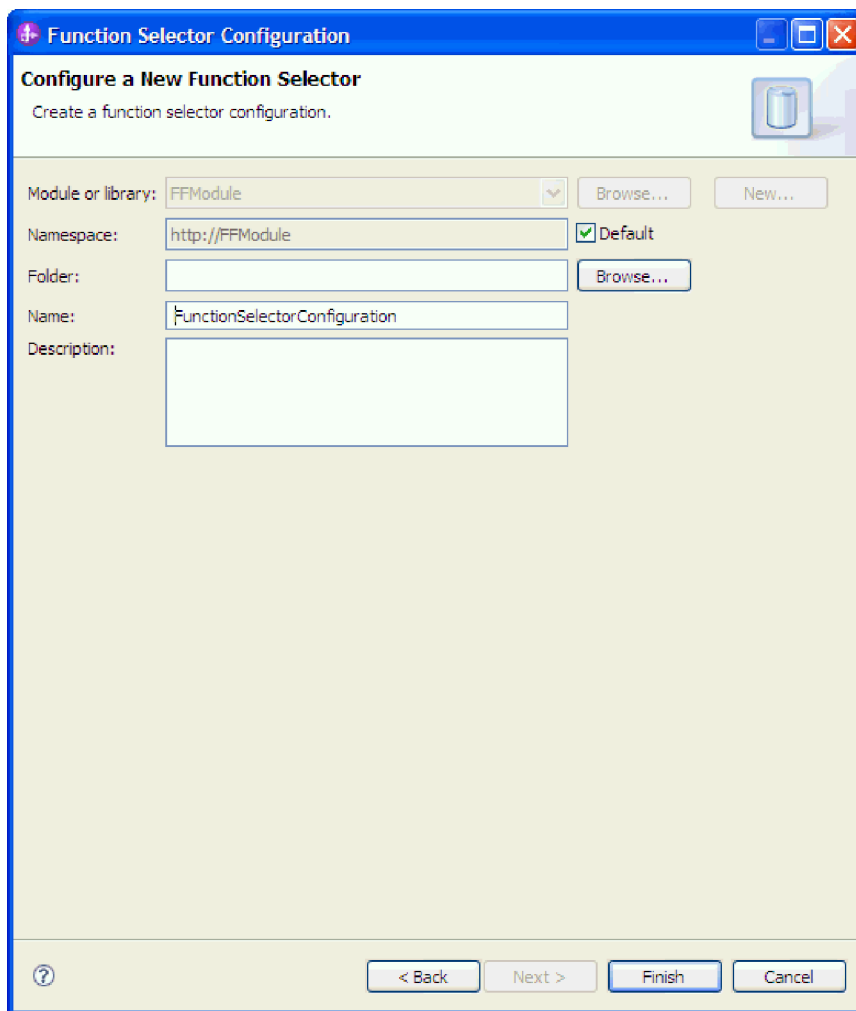


Figure 4. Creating a function selector configuration

Note: The enterprise information system (EIS) function name is not available in the external service wizard. If you want to specify a value other than the default that is generated by the adapter (base classes), you can edit it using the assembly editor.

7. To filter the inbound event file by configuring rules, click **Add** or **Edit** in the Rule editor table. The rule constitutes three parameters, namely, Property type, Operator and Value.

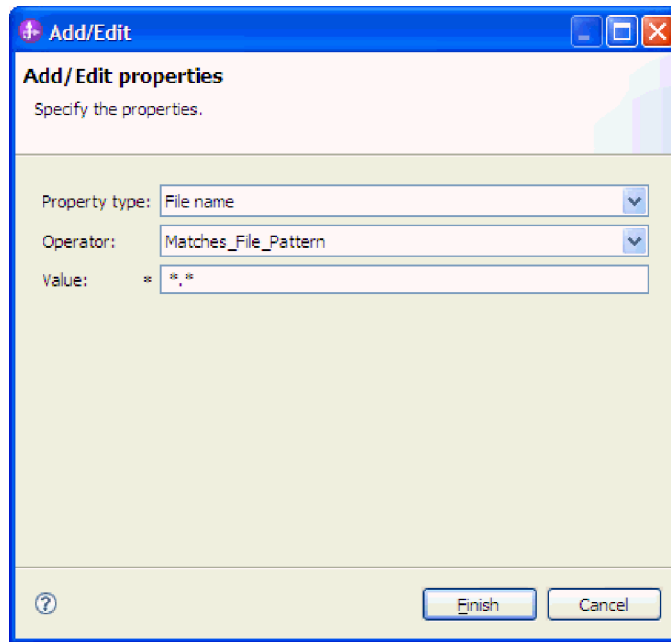


Figure 5. Adding or editing a rule

- a. Select any of the following metadata filtering property types from **Property type** list.
 - FileName
 - FileSize
 - Directory
 - LastModified
- b. Select the operator for the property type from the **Operator** list. Each of the property type metadata has its own operators.
 - 1) FileName contains the following operators:
 - Matches_File_Pattern (matches pattern)
 - Matches_RegExp (matches regular expression)
 - 2) FileSize metadata contains the following operators:
 - Greater than
 - Less than
 - Greater than or equal to
 - Less than or equal to
 - Equal to
 - Not equal to
 - 3) Directory contains Matches_RegExp as its operators.
 - 4) LastModified metadata contains the following operators:
 - Greater than
 - Less than
 - Greater than or equal to
 - Less than or equal to

- Equal to
 - Not equal to
- c. Type the value for filtering the event file in the **Value** column. You must enter a valid Java™ regular expression in value for Matches_RegExp operator.

To configure multiple rules, select **END-OF-RULE** option for each rule from the **Property type** list.

Note: The rules are grouped by using the logical **OR** operator, unless **END-OF-RULE** is selected in the property field. If an **END-OF-RULE** is selected between expressions (an expression can be a single rule or multiple rules grouped by an OR operator), it will be grouped using the logical **AND** operator. For example, If the rule A (FileName) is grouped with rule B (FileSize) using the logical **OR** operator, and on selecting the **END-OF-RULE** option, this expression will be grouped with another rule C (LastModified) using an **AND** operator. This can be represented as follows: ((A) OR (B)) AND (C)

For more information see, “Rule editor to filter files” on page 29.

8. Click **Finish**.

Results

The adapter saves the activation specification properties.

What to do next

Select a data type for the module and name the operation associated with the chosen data type.

Activation specification properties

Activation specification properties hold the inbound event processing configuration information for an export. You set activation specification properties through either the external service wizard or the administrative console.

The following activation specification properties are no longer required from version 6.1.0, but are supported for compatibility with previous versions.

- ArchivingProcessed
- DefaultObjectName
- EventContentType

The following table lists the activation specification properties for inbound communication. You set the activation specification properties using the external service wizard and can change them before deployment by using the WebSphere Integration Developer Assembly Editor or after deployment through the WebSphere Process Server administrative console.

A detailed description of each property is provided in the sections that follow the table. For information about how to read the property detail tables in the sections that follow, see http://publib.boulder.ibm.com/infocenter/dmndhelp/v7r0mx/topic/com.ibm.wsadapters.jca.ff.doc/shared/rsha_in_interpret_prop_details.html.

Table 3. Activation specification properties

Property name		
In the wizard	In the administrative console	Description
"Archive directory" on page 15	ArchiveDirectory	The directory where the adapter archives processed event files.
(Not available)	ArchivingProcessed	Deprecated
"Auto create event table" on page 15	EP_Create Table	Determines whether the event persistence table is created automatically or manually.
"Bidirectional transformation of event persistence properties" on page 16	EP_BiDiFormat	Determines whether the adapter transforms any of the event persistence properties.
(Not available)	DefaultObjectName	Deprecated
Delivery type	DeliveryType	Determines the order in which events are delivered by the adapter to the export.
Ensure once only event delivery	AssuredOnceDelivery	Specifies whether the adapter provides assured once delivery of events.
"Database schema name" on page 16	EP_SchemaName	The schema name of the database used by event persistence processing.
(Not available)	EventContentType	Deprecated
"Event directory" on page 17	EventDirectory	The directory where the event files are stored.
"Event recovery data source (JNDI) name" on page 18	EP_DataSource_JNDIName	The JNDI name of the data source used by event persistence processing to obtain the JDBC database connection. The data source must be created in WebSphere Process Server.
"Event recovery table name" on page 18	EP_TableName	The name of the table used by the adapter for event persistence processing.
Event types to process	EventTypeFilter	A delimited list of event types that indicates to the adapter which events it should deliver.
Retry limit for failed events	FailedEventRetryLimit	The number of times the adapter attempts to redeliver an event before marking the event as failed.
"Failure file extension for archive" on page 19	FailedArchiveExtension	The file extension used to archive unsuccessfully processed business objects in the input event file. This property is applicable only when the SplitByDelimiter file splitting criteria is used.
"File content encoding" on page 20	FileContentEncoding	The encoding of the files that are read by the adapter.

Table 3. Activation specification properties (continued)

Property name		
In the wizard	In the administrative console	Description
"File extension for archive" on page 20	OriginalArchiveExtension	The file extension used to archive the original event file.
Notification for file changes	FileChangeNotification	Specifies whether the adapter polls the files that have changed since the last recorded time stamp.
Time interval for polling unchanged files	FileUnchangedTimeInterval	Specifies whether the adapter retrieves only those files that are not changed during the specified time interval.
"Include business object delimiter in the file content" on page 21	IncludeEndBO Delimiter	Specifies whether the delimiter value specified in the SplitCriteria property is sent with the business object content for further processing.
Interval between polling periods	PollPeriod	The length of time that the adapter waits between polling periods.
Maximum number of retries in case of system connection failure	RetryLimit	The number of times the adapter tries to reestablish an inbound connection after an error.
"Notification for appended file contents" on page 22	ProcessFileAppendedContent	Specifies whether to process and deliver only the appended file contents compared to the last polled file contents.
"Pass only file name and directory, not the content" on page 23	FilePassByReference	Specifies whether the adapter delivers the file content to the export.
"Password used to connect to event data source" on page 23	EP_Password	The password used by event persistence processing to obtain the JDBC database connection from the data source.
Poll quantity	PollQuantity	The number of events the adapter delivers to the export during each poll period.
"Poll subdirectories in event directory" on page 24	PollSubDirectories	Specifies whether the adapter polls the subdirectories within the event directory.
"Retrieve files in sorted order" on page 24	SortEventFiles	The sorting order of polled event files.
"Retrieve files with pattern" on page 25	EventFileMask	The file filter for the event files.
Retry connection on startup	RetryConnectionOnStartup	Controls whether the adapter retries the connection to the local file system if it cannot connect at startup.

Table 3. Activation specification properties (continued)

Property name		
In the wizard	In the administrative console	Description
Time between retries in case of system connection failure (milliseconds)	RetryInterval	The length of time that the adapter waits between attempts to establish a new connection after an error during inbound operations.
“Specify criteria to split file content” on page 26	SplitCriteria	The delimiter that separates the business objects in the event file or the maximum size of the event file, depending on the value that is set in the Splitting Function Class Name.
“Split function class name” on page 27	SplittingFunctionClassName	Specifies how the event file is to be split, by delimiter or by size.
“Stop the adapter when an error is encountered while polling (StopPollingOnError)” on page 28	StopPollingOnError	Specifies whether the adapter stops polling for events when it encounters an error during polling.
“Success file extension for archive” on page 28	SuccessArchiveExtension	The file extension used to archive successfully processed business objects.
“User name used to connect to event data source” on page 28	EP_UserName	The user name used by event persistence processing to obtain the JDBC database connection from the data source.
Rule editor to filter files	ruleString	The collection of rules used to filter the events.

Archive directory

This property specifies the directory where the adapter archives processed event files.

Table 4. Archive directory details

Required	No
Default	None
Property type	String
Usage	You can use a WebSphere Application Server environment variable to represent the archive directory. Specify the name of the environment variable in braces, preceded by a \$ symbol. For example: \${ARCHIVE_DIRECTORY}. See the topic on creating an environment variable in this documentation. Note: You must enter the location of the archive directory, if PassByReference is set to True.
Globalized	Yes
Bidi supported	Yes

Auto create event table

This property determines whether the event persistence table is created automatically or manually.

Table 5. Auto create event table details

Required	No
Possible values	True False
Default	False
Property type	Boolean
Usage	If this value is set to True, the adapter creates the event persistence table. If the value is set to False, the adapter does not create the table and you must manually create it.
Globalized	No

Bidirectional transformation of event persistence properties

This property determines whether the adapter transforms any of the event persistence properties.

Table 6. Bidirectional transformation of event persistence properties

Required	No
Possible values	You can specify a string value, such as VRYNN.
Default	None
Property type	String
Usage	The value set on the event persistence bidirectional format property (EP_BiDiFormat) determines the bidirectional transformation. You can specify a string value, such as VRYNN to enable bidirectional transformation of event persistence properties. If the EP_BiDiFormat property is not specified, the adapter displays a null value. Note: You can do bidirectional transformation of only those event properties whose values are set on the bidirectional context enterprise information system (EIS) property.
Globalized	No
Bidi supported	Yes

Database schema name

This property specifies the schema name of the database used by event persistence processing.

Table 7. Database schema name details

Required	No
Default	None
Property type	String
Globalized	Yes
Bidi supported	Yes

Delivery type (DeliveryType)

This property specifies the order in which events are delivered by the adapter to the export.

Table 8. Delivery type details

Required	No
Possible values	ORDERED UNORDERED
Default	ORDERED
Property type	String
Usage	The following values are supported: <ul style="list-style-type: none"> • ORDERED: The adapter delivers events to the export one at a time. • UNORDERED: The adapter delivers all events to the export at once.
Globalized	No
Bidi supported	No

Ensure once-only event delivery (AssuredOnceDelivery)

This property specifies whether to provide ensure once-only event delivery for inbound events.

Table 9. Ensure once-only event delivery details

Required	Yes
Possible values	True False
Default	True
Property type	Boolean
Usage	<p>When this property is set to True, the adapter provides assured once event delivery. This means that each event will be delivered once and only once. A value of False does not provide assured once event delivery, but provides better performance.</p> <p>When this property is set to True, the adapter attempts to store transaction (XID) information in the event store. If it is set to False, the adapter does not attempt to store the information.</p> <p>This property is used only if the export component is transactional. If it is not, no transaction can be used, regardless of the value of this property.</p>
Globalized	No
Bidi supported	No

Event directory

This property specifies the directory in the local file system where the event files are stored.

Table 10. Event directory details

Required	Yes
Default	None

Table 10. Event directory details (continued)

Property type	String
Usage	You can use a WebSphere Application Server environment variable to represent the event directory. Specify the name of the environment variable in braces, preceded by a \$ symbol. For example: \${EVENT_DIRECTORY}. See the topic on creating an environment variable in this documentation.
Globalized	Yes
Bidi supported	Yes

Event recovery data source (JNDI) name

This property specifies the JNDI name of the data source used by event persistence processing to obtain the JDBC database connection.

Table 11. Event recovery data source (JNDI) name details

Required	No
Default	None
Property type	String
Usage	The data source must be created in WebSphere Process Server. Leave this value empty to enable event polling without using the database.
Globalized	Yes
Bidi supported	Yes

Event recovery table name

This property specifies the name of the table to be used by the adapter for event persistence processing.

Table 12. Event recovery table name details

Required	No
Default	No default value
Property type	String
Usage	When multiple activation specification instances are used, this value must be unique for each activation specification instance.
Globalized	Yes
Bidi supported	Yes

Event types to process (EventTypeFilter)

This property contains a delimited list of event types that indicates to the adapter which events it should deliver.

Table 13. Event types to process details

Required	No
Possible values	A comma-delimited (,) list of business object types
Default	null
Property type	String

Table 13. Event types to process details (continued)

Usage	Events are filtered by business object type. If the property is set, the adapter delivers only those events that are in the list. A value of null indicates that no filter will be applied and that all events will be delivered to the export.
Example	To receive events related to the Customer and Order business objects only, specify this value: Customer,Order
Globalized	No
Bidi supported	No

Retry limit for failed events (FailedEventRetryLimit)

This property specifies the number of times that the adapter attempts to redeliver an event before marking the event as failed.

Table 14. Retry limit for failed events details

Required	No
Possible values	Integers
Default	5
Property type	Integer
Usage	<p>Use this property to control how many times the adapter tries to send an event before marking it as failed. It accepts the following values:</p> <p>Default If this property is not set, the adapter tries five additional times before marking the event as failed.</p> <p>0 The adapter tries to deliver the event an infinite number of times. When the property is set to 0, the event remains in the event store and the event is never marked as failed.</p> <p>> 0 For integers greater than zero, the adapter retries the specified number of times before marking the event as failed.</p> <p>< 0 For negative integers, the adapter does not retry failed events.</p>
Globalized	No
Bidi supported	No

Failure file extension for archive

This property specifies the file extension used to archive unsuccessfully processed business objects in the input event file, and applicable only when an event file has failed business objects and file splitting by delimiter is enabled.

Table 15. Failure file extension for archive details

Required	No
Default	fail
Property type	String

Table 15. Failure file extension for archive details (continued)

Usage	The event file is archived with the .fail extension only when you have specified SplitByDelimiter as the file splitting criteria. When you specify SplitBySize as the file splitting criteria, the file is not archived with the .fail extension.
Globalized	Yes
Bidi supported	Yes

File content encoding

This property specifies the encoding of the files read by the adapter.

Table 16. File content encoding details

Required	No
Default	UTF-8
Property type	String
Usage	You can specify any Java-supported encoding set, such as UTF-8. If the FileContentEncoding property is not specified, the adapter uses the default system encoding. If the adapter is working with binary event data, set this property to BINARY. If the adapter is working with non-binary event data, such as text or XML, set this property to a valid file encoding value, such as UTF-8.
Globalized	No
Bidi supported	No

File extension for archive

This property specifies the file extension used to archive the original event file.

Table 17. File extension for archive details

Required	No
Default	original
Property type	String
Usage	This property preserves the entire event file for reference if any of the business objects fail processing.
Globalized	Yes
Bidi supported	Yes

File retrieval based on last recorded time stamp

This property specifies whether the adapter polls files that have changed since the last recorded time stamp.

Table 18. Notification for file changes

Required	No
Default	False
Property type	Boolean

Table 18. Notification for file changes (continued)

Usage	This property enables the adapter to retrieve files from the event directory, when a file is changed from the last recorded time stamp. When this property is selected, the adapter polls the new and changed files during each subsequent poll cycle after the previous event poll. Also, the adapter does not delete any event file from the event directory. Note: The adapter does not archive any files in the specified archive directory.
Globalized	No
Bidi supported	No

File retrieval based on time interval

This property specifies whether the adapter retrieves only those files that are not changed during the specified time interval.

Table 19. Time interval for polling unchanged file

Required	No
Default	0
Unit of measure	Milliseconds
Property type	Integer
Usage	This property enables the adapter to retrieve only those files that are not modified in the event directory for a specified time interval. When this property is selected, the adapter retrieves the unchanged files during the poll cycles. The adapter also polls the files that are currently being edited but retrieves the file content present during the last save of the file.
Globalized	No
Bidi supported	No

Include business object delimiter in the file content

This property specifies whether the delimiter value specified in the SplitCriteria property is sent with the business object content for further processing.

Table 20. Include business object delimiter in the file content details

Required	No
Possible values	True False
Default	False
Property type	Boolean
Usage	When this property is set to true, the delimiter value specified in the SplitCriteria property is sent with the business object content for further processing. This property is valid only if event file splitting is based on a delimiter; that is, if the SplittingFunctionClassName property is set to <code>com.ibm.j2ca.utils.filesplit.SplitByDelimiter</code> . Note: This property must be used with a custom data binding that can handle end BO delimiter in the contents. Using it with XMLDataHandler results in failure at the data binding level.
Globalized	No
Bidi supported	No

Interval between polling periods (PollPeriod)

This property specifies the length of time that the adapter waits between polling periods.

Table 21. Interval between polling periods details

Required	Yes
Possible values	Integers greater than or equal to 0.
Default	2000
Unit of measure	Milliseconds
Property type	Integer
Usage	The poll period is established at a fixed rate, which means that if running the poll cycle is delayed for any reason (for example, if a prior poll cycle takes longer than expected to complete) the next poll cycle will occur immediately to make up for the lost time caused by the delay.
Globalized	No
Bidi supported	No

Maximum events in polling period (PollQuantity)

This property specifies the number of events that the adapter delivers to the export during each poll period.

Table 22. Maximum events in polling period details

Required	Yes
Default	10
Property type	Integer
Usage	The value must be greater than 0. If this value is increased, more events are processed per polling period and the adapter may perform less efficiently. If this value is decreased, fewer events are processed per polling period and the adapter's performance might improve slightly.
Globalized	No
Bidi supported	No

Notification for appended file contents

This property specifies whether to process and deliver only the appended file contents at the end of the file when compared to the last polled file contents.

Table 23. Notification for appended file contents

Required	No
Default	False
Property type	Boolean
Usage	When you select this property, the adapter processes and delivers only the appended business objects (data) at the end of the file when compared to previous poll contents. If the event file has same or less number of business objects than the last poll, then the file is not processed for delivery to the endpoint. Note: When you enable this property, the adapter does not archive or delete any files.

Table 23. Notification for appended file contents (continued)

Globalized	No
Bidi supported	No

Number of times to retry the system connection (RetryLimit)

This property specifies the number of times the adapter tries to reestablish an inbound connection.

Table 24. Number of times to retry the system connection details

Required	No
Possible values	0 and positive integers
Default	0
Property type	Integer
Usage	<p>This property controls how many times the adapter retries the connection if the adapter cannot connect to the local file system to perform inbound processing. A value of 0 indicates an infinite number of retries.</p> <p>To control whether the adapter retries if it cannot connect to the local file system when it is first started, use the RetryConnectionOnStartup property.</p>
Globalized	No
Bidi supported	No

Pass only file name and directory, not the content

Table 25. Pass only file name and directory, not the content details

Required	No
Possible values	True False
Default	False
Property type	Boolean
Usage	<p>If this property is set to True, the adapter always archives the file and sends the directory name and file name to the endpoint. However, the adapter does not load the content of the file. The event file is appended with a time stamp and archived to the archive directory. For example, if a.txt is the event file, it is archived as a.txt.yyyy_MM_dd_HH_mm_ss_SSS in the archive directory. Additionally, for COBOL or XMLDataHandler, the event file is archived to a.txt.yyyy_MM_dd_HH_mm_ss_SSS.original file.</p> <p>Note: If this property is set to True and archive directory is not specified, the adapter throws an exception. This property can be used with a custom data binding that does not fail at run time if no content is set; or it can be used in a pass-through scenario. Using this property with XMLDataHandler results in failure at the data binding level, because XMLDataHandler expects content in addition to the file name and directory path.</p>
Globalized	No

Password used to connect to event data source

This property specifies the password used by event persistence processing to obtain the JDBC database connection from the data source.

Table 26. Password used to connect to event data source details

Required	No
Default	None
Property type	String
Globalized	Yes
Bidi supported	Yes

Poll subdirectories in event directory

This property specifies whether the adapter polls the subdirectories within the event directory.

Table 27. Poll subdirectories in event directory details

Required	No
Default	False
Property type	Boolean
Usage	<p>When this property is set to True, the adapter polls the files in the event directory and also the files in its subdirectories. When this property is set to False, the adapter polls only the files in the root directory and ignores any subdirectories.</p> <p>During a poll cycle, the adapter first polls the files in the root directory and then polls the files in the subdirectories. It sorts them according to the value set for the SortEventFiles property and processes them according to the value set for the PollQuantity property. It then sends the business objects to the downstream components.</p> <p>When the PollSubDirectories property is set to True and archiving is enabled, all the polled files, including the files that are polled from the subdirectories, are archived to the archive directory.</p>
Globalized	No
Bidi supported	No

Retrieve files in sorted order

This property specifies the sorting order of polled event files.

Table 28. Retrieve files in sorted order details

Required	No
Possible values	File name - sort in ascending order on file name Time stamp- sort in ascending order on last modified time stamp No sort- not sorted
Default	No sort
Property type	String
Usage	To support globalization, the sorting of file names is provided according to the system locale. The ICU4J package is used to track the locales and the rules corresponding to the locales.
Globalized	No
Bidi supported	No

Retrieve files with pattern

This property specifies the file filter for the event files.

Table 29. Retrieve files with pattern details

Required	Yes
Default	*.*
Property type	String
Usage	The file filter is a well-qualified valid regular expression that can consist of alphanumeric characters and the wildcard character "*". * . For example, if you specify event*, only file names beginning with event are processed.
Globalized	Yes
Bidi supported	Yes

Retry EIS connection on startup (RetryConnectionOnStartup)

This property controls whether the adapter attempts to connect again to the local file system if it cannot connect at startup.

Table 30. Retry EIS connection on startup details

Required	No
Possible values	True False
Default	False
Property type	Boolean
Usage	<p>This property indicates whether the adapter should retry the connection to the local file system if the connection cannot be made when the adapter is started:</p> <ul style="list-style-type: none">• Set the property to False when you want immediate feedback about whether the adapter can establish a connection to the local file system, for example, when you are building and testing the application that receives events from the adapter. If the adapter cannot connect, the adapter writes log and trace information and stops. The administrative console shows the application status as Stopped. After you resolve the connection problem, start the adapter manually.• Set the property to True if you do not need immediate feedback about the connection. If the adapter cannot connect during startup, it writes log and trace information, and then attempts to reconnect, using the RetryInterval property to determine how frequently to retry and the value of the RetryLimit property to retry multiple times until that value is reached. The administrative console shows the application status as Started.
Globalized	No
Bidi supported	No

Retry interval if connection fails (RetryInterval)

When the adapter encounters an error related to the inbound connection, this property specifies the length of time the adapter waits before trying to establish a new connection.

Table 31. Retry interval details

Required	Yes
Default	2000
Unit of measure	Milliseconds
Property type	Integer
Usage	Only positive values are valid. When the adapter encounters an error related to the inbound connection, this property specifies the length of time the adapter waits before trying to establish a new connection.
Globalized	No
Bidi supported	No

Specify criteria to split file content

This property specifies either the delimiter that separates the business objects in the event file or the maximum size of the event file.

Table 32. Specify criteria to split file content details

Required	No
Default	0
Property type	String

Table 32. Specify criteria to split file content details (continued)

Usage	<p>This property specifies the delimiter that separates the business objects in the event file or the maximum size of the event file. The value of this property is determined by the value that is set in the SplittingFunctionClassName property:</p> <ul style="list-style-type: none"> • If the SplittingFunctionClassName property is set to <code>com.ibm.j2ca.utils.filesplit.SplitByDelimiter</code>, the SplitCriteria property must contain the delimiter that separates the business objects in the event file. • If the SplittingFunctionClassName property is set to <code>com.ibm.j2ca.utils.filesplit.SplitBySize</code>, the SplitCriteria property must contain a valid number that represents the maximum file size in bytes. If the event file size is greater than this value, it is split into chunks of this value and that number of chunks are posted. If the event file size is less than this value, the entire event file is posted. <p>If the SplitCriteria property value is set to 0, file splitting is disabled. Note: During an inbound pass-through scenario, if file splitting is based on size and the FilePassByReference property is enabled, the event files are not split into chunks. Note: For input files that contain multiple COBOL copybook records, in order to enable file splitting by size you must provide the correct length of each record. To determine the size of each record, use the following method:</p> <ol style="list-style-type: none"> 1. Open the Business Object in a text editor. 2. Look for the complex type tag with the business object name value in the name attribute. In the example that follows, the business object name is DFHCOMMAREA. 3. Locate a namespace-appended tag called aggregateInstanceTD and use the value for the attribute contentSize. In this example, the value is 117. This value is the size of each record of type DFHCOMMAREA. <pre><complexType name="DFHCOMMAREA"> <annotation> <appinfo source="http://www.ibm.com/cam/2005/typedescriptor"> <td:typeDescriptorCT> <td:aggregateInstanceTD accessor="readWrite" attributeInBit="false" contentSize="117" offset="0" size="117"></pre>
Globalized	Yes
Bidi supported	Yes

Split function class name

This property determines how the event file is to be split.

Table 33. Split function class name details

Required	No
Possible values	<code>com.ibm.j2ca.utils.filesplit.SplitByDelimiter</code> – Files are split based on a delimiter that separates business objects in the event file <code>com.ibm.j2ca.utils.filesplit.SplitBySize</code> – Files are split based on the size of the event file
Default	<code>com.ibm.j2ca.utils.filesplit.SplitBySize</code>
Property type	String
Usage	<p>The delimiter or file size is set in the SplitCriteria property. Note: If the EventContentType property is null, the SplittingFunctionClassName property is automatically set to <code>com.ibm.j2ca.utils.filesplit.SplitBySize</code>.</p>
Globalized	No
Bidi supported	No

Stop the adapter when an error is encountered while polling (StopPollingOnError)

This property specifies whether the adapter will stop polling for events when it encounters an error during polling.

Table 34. Stop the adapter when an error is encountered while polling details

Required	No
Possible values	True False
Default	False
Property type	Boolean
Usage	If this property is set to True, the adapter stops polling when it encounters an error. If this property is set to False, the adapter logs an exception when it encounters an error during polling and continues polling.
Globalized	No
Bidi supported	No

Success file extension for archive

This property specifies the file extension used to archive successfully processed business objects.

Table 35. Success file extension for archive details

Required	No
Default	success
Property type	String
Globalized	Yes
Bidi supported	Yes

User name used to connect to event data source

This property specifies the user name used by event persistence processing to obtain the JDBC database connection from the data source.

Table 36. User name used to connect to event data source details

Required	No
Default	None
Property type	String
Globalized	Yes
Bidi supported	Yes

Rule editor to filter files

This property is used to filter event files based on a set of rules

Table 37. Rule editor to filter files

Required	Optional
Default	None
Property type	String
Usage	During an inbound processing, if the value in the rule table is specified, then the event files are fetched after filtering, based on the specified rules before polling those event files.
Globalized	Yes
Bidi supported	No

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