Sterling File Gateway

IBM

Integration with EBICS

Version 2.2

Sterling File Gateway

Integration with EBICS

Version 2.2

Contents

Integration with EBICS Banking Server

IBM® Sterling File Gateway can integrate with the IBM Sterling B2B Integrator EBICS server.

Sterling File Gateway provides secure file transfer between internal and external partners using the same or different communication protocols, file naming conventions, and file formats. Sterling File Gateway supports movement of large and high-volume file transfers, with visibility of file movement in a process-oriented and highly-scalable framework that alleviates file transfer challenges, such as protocol and file brokering, automation, and data security.

Files move between the Sterling B2B Integrator EBICS server and Sterling File Gateway using shared partners and mailboxes. The shared mailboxes are created when EBICS partners are created. Sterling File Gateway then uses the mailboxes for transferring files to or from EBICS partners.

For inbound scenarios, a partner uses an EBICS client to perform an EBICS order file upload (FUL) to the Sterling B2B Integrator EBICS Server, which unpackages the payload and deposits into a shared mailbox (generally of the structure /User/Partner/Inbox). Sterling File Gateway is configured to pick up the file from that mailbox, perform any needed processing, and ultimately deliver the file to a consumer mailbox.

In the outbound scenario, Sterling File Gateway is configured to deposit a message in a consumer mailbox which will be routed and stored in the /User/Partner/Outbox. The partner uses an EBICS client to perform an EBICS order file download (FDL) from the Sterling B2B Integrator EBICS Server, which packages the payload and makes it available to the EBICS client.

To ensure appropriate Sterling File Gateway operation for EBICS inbound and outbound transfer scenarios, routing channel templates and routing channels require specific configurations. Routing channel templates used in EBICS scenarios must include the configuration of provisioning facts, and routing channels using those templates must include the specification of values for provisioning facts. Provisioning facts are optional elements in an RCT that provide a controlled way to customize particular routing channels within the context of a particular routing channel template by requiring user input during routing channel creation.

EBICS Operators can search for EBICS-specific activity in the Sterling File Gateway application and view an EBICS-centric information display. An individual activity can be selected to retrieve additional detail about the EBICS transaction and related messages. EBICS Operators are assigned to the EBICS/SFG Operators group.

Alternatively, EBICS Operators can search for general activity and view a file-centric information display that includes routes and deliveries that resulted from EBICS activity.

EBICS Operators can perform basic and advanced searches for activity initiated with the EBICS protocol, and drill down to detail associated with each activity.

EBICS Operators can subscribe for notifications of specified EBICS events. When a subscribed event occurs, the subscriber receives an email notification.

Overview

License information for EBICS

IBM provides the license files for each feature of Sterling B2B Integrator that you purchased.

You do not have to contact IBM Customer Support to get the license files. A separate license is required for each Sterling B2B Integrator feature that you purchased. During installation, you must choose the license files according to what has been purchased. IBM Customer Support will audit the system once your system is in use. If after the installation is finished, you determine that you need to modify licenses files, see the *License Modification* topic in the Sterling B2B Integrator online library at Sterling B2B Integrator 5.2 online library for more information.

To utilize the EBICS Banking Server, you must also have an EBICS license.

System Administrator

About EBICS integration with Sterling File Gateway

Sterling File Gateway is required in order to route files to or from EBICS Partners/Subscribers. After you install Sterling B2B Integrator with the EBICS module, you must separately install Sterling File Gateway, and perform an additional procedure to set up integration.

Sterling File Gateway is an application for transferring files between partners using different protocols, file naming conventions, and file formats.Sterling File Gateway supports movement of large and high-volume file transfers, with visibility of file movement in a process-oriented and highly-scalable framework that alleviates file transfer challenges, such as protocol and file brokering, automation, and data security.

When handling EBICS transactions, Sterling File Gateway uses templates to describe how each transaction is interpreted to determine how and where it should be delivered and provides visibility into the details of the transfers for auditing and troubleshooting.

Files move between the EBICS server and Sterling File Gateway using shared partners and mailboxes. The shared mailboxes are created when EBICS partners are created. Sterling File Gateway then uses the mailboxes for transferring files to or from EBICS partners.

For inbound scenarios, a partner uses an EBICS client to perform an EBICS order file upload (FUL) to the Sterling B2B Integrator EBICS Server, which unpackages the payload and deposits it into a shared mailbox (generally of the structure /User/Partner/Inbox). Sterling File Gateway is configured to pick up the file from that mailbox, perform any needed processing, and ultimately deliver the file to a consumer mailbox.

In the outbound scenario, a file (or files) is available in an EBICS partner shared mailbox (generally of the structure /User/Partner/Outbox). The partner uses an EBICS client to perform an EBICS order file download (FDL) from the Sterling B2B Integrator EBICS Server, which packages the payload and makes available to the EBICS client.

To ensure appropriate v operation for EBICS inbound and outbound transfer scenarios, routing channel templates and routing channels require specific configurations. Routing channel templates used in EBICS scenarios must include the configuration of provisioning facts and routing channels using those templates must include the specification of values for provisioning facts. Provisioning facts are optional elements in an RCT that provide a controlled way to customize particular routing channels within the context of a particular routing channel template by requiring user input during routing channel creation.

Operators can search for EBICS-specific activity in the Sterling File Gateway application and view an EBICS-centric information display. An individual activity can be selected to retrieve additional detail about the EBICS transaction and related messages.

Alternatively, operators can search for general activity and view a file-centric information display that includes routes and deliveries that resulted from EBICS activity.

Operators can perform basic and advanced searches for activity initiated with the EBICS protocol.

Operators can subscribe for notifications of specified EBICS events. When a subscribed event occurs, the subscriber receives an email notification.

Role of EBICS System Administrators in Sterling File Gateway

EBICS System Administrators perform these functions:
- Install and maintain system software
- Handle functions accessed in Sterling B2B Integrator
- Create and manage initial administrative user accounts
- Configure services and adapters
- Manage extensibility features
- Move resources and configurations between systems
- Set up EBICS integration with Sterling File Gateway and Sterling B2B Integrator

Setting up an HTTP server adapter for EBICS

An HTTP Server adapter instance is used to receive the incoming EBICS requests and will initiate a business process to start processing the EBICS transactions.

About this task

By default, an HTTP Server adapter instance (EBICS Http Server Adapter) is auto-configured for handling EBICS requests. The HTTP Server adapter instance has a URI mapped to the business process.

The URI /ebicsrequest is the default URI specified in the EBICS HTTP Server Adapter. To configure a new URI:

Procedure

1. From Sterling File Gateway, select **Tools** > **B2B Console**.
2. From the Admin console, select **Deployment** > **Services** > **Configuration**.
3. Next to **Create New Service**, click **Go!**
4. From the tree directory, select **HTTP Server Adapter** and click **Save**.

5. Click **Next**. Type a name and description for your EBICS HTTP Server Adapter instance.
6. Click **Next**. Enter a port number and Total Business Process queue depth threshold. Enter 0 for an unlimited queue depth threshold.
7. Click **add** next to **New URI**. Type the desired URI.
8. Select **Business Process** under **Launch a BP Or WAR**.
9. Set **Send Raw Messages** to No.

   Note: The newly configured URI and the HTTP Server port number must match the host URL of the bank's profile.

Setting up EBICS integration with Sterling File Gateway

Before you can use Sterling File Gateway to route files to or from EBICS Partners/Subscribers, you must set up EBICS integration with Sterling File Gateway.

About this task

To set up EBICS integration with Sterling File Gateway:

Procedure

1. From Sterling File Gateway, select **Tools** > **B2B Console**.
2. From the Sterling B2B Integrator Admin menu, select **Deployment** > **Services** > **Configuration** to enable the scheduler that will be used by the EBICS Server service for transaction housekeeping.
3. Select **EBICS** > **Subscription Manager**.
4. Select to create the following EBICS resources:
   * Bank
   * Partner
   * User
   * Offer
   * Contract
   * Permissions
5. Repeat Step 4 for as many partners as you want to create.
6. Close the Sterling B2B Integrator window, but do not log out, to return to Sterling File Gateway.
7. From Sterling File Gateway, select **Participants** > **Groups**.
8. Select **Add Partners** and associate EBICS Partners/Subscribers with the Sterling File Gateway All Partners group.

   Note: You may see an error message that the EBICS partner does not have an associated User Account. This does not affect the association with the group.
9. Select **Routes** > **Templates** to set up a routing channel template to use for routing files to or from EBICS Partners/Subscribers. You must define a routing channel template using the UserID as a provisioning fact and then reference the UserID provisioning fact in the mailbox path for the producer, consumer, or both, depending on how the template will be used.

   Note: By adding the provisioning fact in the template, you ensure that mailbox path structures match what was previously set up during EBICS

Partner/Subscriber creation. If a mailbox path structure other than /User/Partner/Inbox or /User/Partner/Outbox was specified, the template should match that structure.

10. Select **Routes** > **Channels** to set up routing channels to use for routing files between EBICS Partners/Subscribers.

11. Test the setup by accessing an EBICS client, log in as the EBICS Partner/Subscriber, and send an EBICS order.

12. Select **Routes** > **Activity**.

13. Select the EBICS Partner/Subscriber from the **Producer** menu.

14. Click **Find**.

15. Look for the transfer initiated in Step 10 and select the row to view details.

16. Select the message ID hyperlink to view the route details and link to dataflows and communication sessions in the B2B Console.

About EBICS Event Codes (Version 2.2.2 or Later)

Each activity during the progress of a file transfer generates an event code. These codes are displayed in the activity details to enable Partners and Operators to see the progress and navigate to more details.

The event codes in following table are specific to EBICS transactions:

Event Code	Name	Description	Subscription Setting
EB_0001	InitRequestReceived	Initialization Request is received	No
EB_0002	RequestValidationOK	Request validation is successful	No
EB_0003	NumberOfSegmentRequired	Number of segment required	No
EB_0004	MessageMatchingFileFormatFound	Message matching with file format is found	No
EB_0005	OrderExecutionOK	Order execution is successful	Yes
EB_0006	InitResponseOK	Initialization Response is sent without error	No
EB_0007	TransferRequestReceivedBegin	Bank begins to receive Transfer Request	No
EB_0008	TransferRequestReceived	Transfer Request is received	No
EB_0009	TransferResponseOK	Transfer Response is sent without error	No
EB_0010	AckRequestReceived	Acknowledgment Request is received	No
EB_0011	AckResponsePostProcessed	Positive/Negative acknowledgment is received	No
EB_0012	ForwardingToOrderDataProcessing	Forwarding to Order Data Processing	No
EB_0013	TransactionCompleted	Transaction is completed successfully	Yes
EB_0014	PSRGenerationOK	PSR is generated successfully	No
EB_0015	InitResponseInSegOK	Initialization Response in segment is sent without error	No
EB_0016	TransactionSegmentUnderRun	The total number of segments transmitted during transaction initialization was not reached	No
EB_0017	HEVRequestReceived	HEV Request is received	No
EB_0018	ESNumberRequired	Number of personal signature is required	No
EB_0050	RequestValidationFailed	Request validation is unsuccessful	Yes

Event Code	Name	Description	Subscription Setting
EB_0051	OrderExecutionFailed	Order execution is unsuccessful	Yes
EB_0052	InitResponseWithError	Initialization Response is sent with error code	Yes
EB_0053	PotentialAttackDetected	Potential Attack detected	Yes
EB_0054	RecoveryDetected	Recovery is required	Yes
EB_0055	TransferResponseWithError	Transfer Response is sent with error code	Yes
EB_0056	AckResponseWithError	Acknowledgment Response is sent with error code	Yes
EB_0057	TransactionFailed	Transaction is terminated with failure	Yes
EB_0058	PSRGenerationFailed	PSR generation is unsuccessful	Yes
EB_0059	OrderTypeVerificationFailed	Order Type verification is unsuccessful	No
EB_0060	BasicOrderAttribVerificationFailed	Basic Order Attribute verification is unsuccessful	No
EB_0061	ReplayTestFailed	Replay Test is unsuccessful	No
EB_0062	InvalidTechSubscriber	Technical Subscriber is invalid	No
EB_0063	InvalidTechSubscriberStatus	Technical Subscriber status is invalid	No
EB_0064	SignatureAuthenticationFailed	Message Signature Authentication is unsuccessful	No
EB_0065	InvalidSubscriber	Subscriber is invalid	No
EB_0066	InvalidSubscriberStatus	Subscriber status is invalid	No
EB_0067	BankKeysHashVerificationFailed	Bank Key's Hash value verification is unsuccessful	No
EB_0068	OrderTypeAuthorisationFailed	Order Type authorisation is unsuccessful	No
EB_0069	BankTechPrelimVerificationFailed	Bank Technical preliminary verification is unsuccessful	No
EB_0070	OrderAttribVerificationFailed	Order Attribute verification is unsuccessful	No
EB_0071	TransactionGenerationFailed	Transaction Generation is unsuccessful	No
EB_0072	TransactionIDVerificationFailed	Transaction ID verification is unsuccessful	No
EB_0073	TxPhaseTxStepVerificationFailed	Transaction Phase and Step verification is unsuccessful	No
EB_0074	SegmentNumberAndSizeVerification Failed	Segment number and size verification is unsuccessful	No
EB_0075	TransferResponseWithError2	Transfer Response is sent with error code	No
EB_0101	UnpackOrderDataOK	Unpackaging of Order Data is successful	No
EB_0102	PackOrderDataOK	Packaging of Order Data is successful	No
EB_0103	OrderDataDocCreated	Raw Order Data document is created for download request	No
EB_0104	OrderDataDocPutIntoMbx	Raw Order Data is put into upload mailbox	No
EB_0105	ESDocUnpackedOK	Raw ES document is unpacked successfully	No
EB_0106	OrderParamsDocCreated	Order Parameters document is created	No
EB_0107	SignerInfo	Signer Information	No

Event Code	Name	Description	Subscription Setting
EB_0150	UnpackOrderDataFailed	Unpackaging of Order Data is unsuccessful	Yes
EB_0151	PackOrderDataFailed	Packaging of Order Data is unsuccessful	Yes
EB_0152	DataSegmentPreprocessingFailed	Data segment preprocessing is unsuccessful	No
EB_0154	OrderDataDecodingFailed	Order Data decoding is unsuccessful	No
EB_0155	OrderDataDecryptionFailed	Order Data decryption is unsuccessful	No
EB_0156	OrderDataDecompressionFailed	Order Data decompression is unsuccessful	No
EB_0157	ESVerificationFailed	ES verification is unsuccessful	No
EB_0158	OrderDataSchemaValidationFailed	Order Data schema validation is unsuccessful	No
EB_0159	OutMbxOrderDataProvisionFailed	Order data Provision is unsuccessful in outbox mailbox	No
EB_0160	OrderDataCompressionFailedOrder	Order Data compression is unsuccessful	No
EB_0161	OrderDataEncryptionFailed	Order Data encryption is unsuccessful	No
EB_0162	OrderDataEncodingFailed	Order Data encoding is unsuccessful	No
EB_0163	ESDocUnpackedFailed	ES is failed to be validated	Yes
EB_0164	ArcMbxOrderDataProvisionFailed	Order data Provision is unsuccessful in archive mailbox	No
EB_0165	SignerInvalidPermission	Signer has no permission for personal signature	No
EB_0166	SigNumberNotMatch	Personal Signature is either incomplete or more than expected	No
EB_0167	TechUserCannotIssueES	Technical Subscriber cannot issue Personal Signature	No
EB_0168	UploadMbxUnavailable	Upload mailbox is not available	Yes
EB_0201	NewCertificateAddedOK	New subscriber's certificate is added	No
EB_0202	CertificateUpdated	Subscriber's certificate is updated	No
EB_0203	SubscriberStatusChanged	Change in Subscriber status	No
EB_0204	PostBPInvokedOK	Post Business Process is invoked successfully	No
EB_0250	PostBPInvokedFailed	Post Business Process is failed to be invoked	Yes
EB_0251	CertUserValidationFailed	Certificate user validation is unsuccessful	No
EB_0252	CertVersionValidationFailed	Certificate version validation is unsuccessful	No
EB_0253	X509ComponentVerificationFailed	X509 component doesn't exist	No
EB_0254	PostBPVerificationFailed	Post Business Process doesn't exist	No
EB_0255	CertUpdateFailed	Certificate update is unsuccessful	No
EB_0256	CertIsRevoked	Certificate is revoked	Yes

Integration Architect

Adding EBICS partners to the All Partners group

About this task

An EBICS partner subscriber onboarded through the Sterling File Gateway EBICS Subscription Manager and stored as an identity is automatically associated with the File Gateway All Partners group to be eligible for Sterling File Gateway operations.

Using Provisioning Facts with EBICS

About this task

For EBICS operations, you add a provisioning fact to the routing channel template to ensure that mailbox path structures match what was previously setup during EBICS Partner/Subscriber creation. If you do not use provisioning facts, mailboxes may not be appropriately set up to support EBICS operations. Generally, a mailbox path structure of the format /User/Partner/Inbox or /User/Partner/Outbox is needed to support EBICS transactions.

To define a mailbox path appropriate for EBICS operations:

Procedure

1. In the Routing Channel Template wizard, click on the Provisioning Facts tab, and specify the following:
   - Display Label - User ID
   - Fact name - myUserId
   - Description - Enter the User ID for the consumer mailbox.
2. Click Save to save the provisioning fact definition.
3. In the Routing Channel wizard, select a template of the form created in step 1.
4. Select the producer and consumer.
5. Save the routing channel.

Example EBICS scenarios

An example inbound EBICS scenario is:

1. An EBICS order is uploaded from an EBICS client to an EBICS server in a file upload (FUL) function.
2. The EBICS Order Data Processor (ODP) unpackages the payload to its raw inner .DAT format.
3. The EBICS ODP deposits the file into a mailbox of the structure User/Partner/Inbox (according to the EBICS specification).
4. Sterling File Gateway routes the file from the mailbox for downstream processing and ultimate delivery to the consumer according to the routing channel (RC), which specifies the template to use for the route. The template uses provisioning facts that established the mailbox path and user ID that were determined for the routing channel. The details of an example template suitable for an inbound EBICS scenario are:

Field	Value
Template Name	EBICSFUL

Field	Value
In the Type tab	
Type	Static
In the Special Characters tab	
Special Characters	None
In the Groups tab	
Groups	All Partners for producers and consumers
In the Provisioning Facts tab	
Fact Name	myUserId
Display Label	User ID
Description	The user ID of the producer
In the Producer tab	
Producer Mailbox Path	/${myUserId}/${ProducerName}/Inbox
Producer File Structure	Click Add
Producer File Type	Unknown
File name pattern as regular expression	{([^_]+)_([^_]+)_(.+)([.]DAT)}
File name pattern group fact names, comma delimited	myHostId,myFileFormat,mySuffix, myExtension
In the Consumer tab	
Delivery Channel Description	Click Add
Pattern for Consumer Mailbox Path	/${ConsumerName}/Inbox
If checked, mailboxes matching this pattern may be created on demand	Do not check the box
Consumer File Structures	Click Add
Consumer File Type	Unknown
Consumer file name format	${myHostId}ara_${mySuffix}${myExtension}

An example outbound EBICS scenario is:

1. Sterling File Gateway routes an incoming file.
2. The file is packaged according to the EBICS configuration.
3. The file is deposited as a message in an EBICS partner's mailbox in the structure /User/Partner/Outbox based on a routing channel, which specifies the template to use for the route. The template uses provisioning facts that establish the mailbox path and user ID for the routing channel. The details of an example template suitable for an outbound EBICS scenario are:

Field	Value
Template Name	EBICSFDL
In the Type tab	
Type	Static
In the Special Characters tab	
Special Characters	None
In the Groups tab	
Producer Group	All Partners

Field	Value
Consumer Group	All Partners
In the Provisioning Facts tab	
Fact Name	myUserId
Display Label	User ID
Description	The user ID of the consumer partner
In the Producer tab	
Producer Mailbox Path	/${ProducerName}
Producer File Structure	Click Add
Producer File Type	Text
File name pattern as regular expression	.+
File name pattern group fact names, comma delimited	
In the Consumer tab	
Delivery Channel Description	Click Add
Pattern for Consumer Mailbox Path	/${myUserId}/${ConsumerName}/Outbox
If checked, mailboxes matching this pattern may be created on demand	Check the box
Consumer File Structures	Click Add
Consumer File Type	Text
Consumer file name format	${ProducerFilename}

4. The EBICS partner, using an EBICS client, initiates a file download (FDL) request to the EBICS server.
5. The file in the consumer mailbox is picked up by the EBICS server.
6. The packaged file is transferred from the EBICS server to the EBICS client.

Route Provisioner

About partners for EBICS

EBICS partner subscribers are onboarded through the Sterling B2B Integrator EBICS Subscription Manager.

Operator

Searching for EBICS transactions (2.2.0 - 2.2.4.2)

An EBICS license must be installed in order for EBICS transactions to be available for searching.

About this task

To search for EBICS transactions:

Procedure

1. On the Basic Search or the Advanced Search page, select **EBICS** as the protocol and click **Find**.

2. From the Basic Search page, click on **EBICS Search** in the upper right corner.
3. Specify any combination of the following search criteria, as appropriate. Leave any field blank to search for files that match all possible values of that field.

Field	Description	Action
Search Location	The location of the tables you wish to search.	Select from: • Live Tables (default) - to view active data • Restore Tables - to view archived business process data that has been restored. **Note:** EBICS activity, such as Transaction, Message, and associated EBICS events, is archived and can be searched from the restore tables or live tables. Sterling File Gateway activity is purged, not archived, and purged data cannot be searched.
Bank ID (Host ID)	Identifier for the bank.	Type the Host ID or select from the list.
Transaction ID	Identifier for a specific transaction.	Type the Transaction ID.
Transaction Status	The status of the transactions.	Select from the following: • Open • Received • Rejected • Pending
User ID	Identifier for a specific user.	Type the User ID.
Partner ID	Identifier for a specific partner.	Type the Partner ID.
Order ID	Identifier for a specific order.	Type the Order ID.
Order Type	Type of order.	Select from the following: • FDL • FUL • HCA • HCS • HEV • HIA • HPB • HPD • INI • PUB • SPR
Order Status	Status of the order. (Applies only when Order Type = FUL)	Select from the following: • RCVD • PDNG • RJCT

Field	Description	Action
File Format	Format of file.	Select from the list of available file formats that have been transferred.
Date (From)	Documents in progress or completed after the specified start date.	Click on the calendar icon to select the date to begin the search.
Time (From)	Documents in progress or completed after the specified start time.	Select the hour, in 24-hour format, and minutes to begin the search.
Date (To)	Documents in progress or completed before the specified end date.	Click on the calendar icon to select the date to end the search.
Time (To)	Documents in progress or completed before the specified end time.	Select the hour, in 24-hour format, and minutes to end the search.

4. Click **Find** to initiate the search. The Search Results tab opens and displays results matching all of your criteria. A maximum of 1000 files is displayed. The following default information is provided for each EBICS transaction:

- Order Status (only displayed for Order Type = FUL)
- Transaction Status
- Transaction ID
- Partner ID
- User ID
- Order ID
- Order
- File Format
- Time of Last Activity
- Mailbox Messages (click to view list of mailbox messages and links to arrived files in a popup window.)

The following additional information is available:

- Bank ID (Host ID)
- Message ID (FUL only, link to Arrived File)
- Order Attribute
- Security Medium
- Direction
- Order Data Type
- Transaction Phase
- Total Segments
- Transaction Start
- Transaction End
- Original Transaction ID
- Process Status
- System ID
- Segment Received
- Recovery Counter
- Recovery Point

Right-click on a column heading to change the sort order, or to show or hide different columns.

5. Under the column for Mailbox Messages, a graphic icon is presented. When you click on the icon, a popup window is presented with the list of mailbox messages. If links to Arrived Files are present, click on those links to navigate to the Arrived File details.

6. The results display the list of Arrived Files where the Arrived File protocol was EBICS. Select a row to display a new pane with Arrived File Events and new tabs with Routes and Deliveries.

   Note: Search displays information with respect to Arrived Files only. Therefore, if the search parameter is Protocol=EBICS, only files for which the Arrived File protocol is EBICS, such as files resulting from an FUL transaction, are displayed. For an FDL transaction, the Arrived File protocol is not EBICS and the transaction will not be displayed under the search results with search parameter Protocol=EBICS.

7. On the Event pane, click on the hyperlinks (underlined in blue font) to view the unpackaged output documents, dataflows, order parameters, routing channel templates, or workflows (business process details).

8. Event codes in a red font denote error conditions.

Searching for EBICS transactions (2.2.5 or higher)

An EBICS license must be installed in order for EBICS transactions to be available for searching.

About this task

To search for EBICS transactions:

Procedure

1. From the Basic Search page, click **EBICS Search** in the upper right corner.

2. On the EBICS Search page, specify any combination of the following search criteria, as appropriate. Leave any field blank to search for files that match all possible values of that field.

Field	Description	Action
Search Location	The location of the tables you wish to search.	Select from: • Live Tables (default) - to view active data • Restore Tables - to view archived business process data that has been restored. **Note:** EBICS activity, such as Transaction, Message, and associated EBICS events, is archived and can be searched from the restore tables or live tables. Sterling File Gateway activity is purged, not archived, and purged data cannot be searched.

Field	Description	Action
Bank ID (Host ID)	Identifier for the bank.	Type the Host ID or select from the list.
Transaction ID	Identifier for a specific transaction.	Type the Transaction ID.
Transaction Status	The status of the transactions.	Select from the following: • Open • Received • Rejected • Pending
User ID	Identifier for a specific user.	Type the User ID.
Partner ID	Identifier for a specific partner.	Type the Partner ID.
Order ID	Identifier for a specific order.	Type the Order ID.
Protocol Version	Identifies the protocol version	Select one of the following protocol versions: • H000 • H003 • H004
Order Type	Type of order.	Select the order type from the dropdown list.
Order Status (Applies only when Order Type = FUL)	Status of the order.	Select from the following: • Open • Received • Rejected • Pending • Cancelled • VEU
File Format	Format of file.	Select from the list of available file formats that have been transferred.
Date (From)	Documents in progress or completed after the specified start date.	Click on the calendar icon to select the date to begin the search.
Time (From)	Documents in progress or completed after the specified start time.	Select the hour, in 24-hour format, and minutes to begin the search.
Date (To)	Documents in progress or completed before the specified end date.	Click on the calendar icon to select the date to end the search.
Time (To)	Documents in progress or completed before the specified end time.	Select the hour, in 24-hour format, and minutes to end the search.

3. Click **Find** to initiate the search.

   The Transaction Summary tab opens and displays results matching all of your criteria. A maximum of 1000 files is displayed. The following default information is provided for each EBICS transaction:

   • Order Status (only displayed for Order Type = FUL)

- Transaction Status
- Transaction ID
- Partner ID
- User ID
- Order ID
- Protocol Version
- Order
- File Format
- Last Activity
- Mailbox Messages (click to view list of mailbox messages and links to arrived files in a popup window.)

Right-click on a column heading to change the sort order, or to show or hide different columns.

The following columns are available but hidden by default:

- Bank ID (Host ID)
- Message ID (FUL only, link to Arrived File)
- Order Attribute
- Security Medium
- Direction
- Order Data Type
- Transaction Phase
- Total Segments
- Transaction Start
- Transaction End
- Original Transaction ID
- Process Status
- System ID
- Segment Received
- Recovery Counter
- Recovery Point

4. Under the column for Mailbox Messages, a graphic icon is presented. When you click on the icon, a popup window is displayed with the list of mailbox messages.
   - Mailbox Message ID
   - Document ID
   - Document Type
   - Arrived File Search

   If links to Arrived Files are present, click those links to navigate to the Arrived File details.

   Note: Search displays information with respect to Arrived Files only. Therefore, if the search parameter is Protocol=EBICS, only files for which the Arrived File protocol is EBICS, such as files resulting from an FUL transaction, are displayed. For an FDL transaction, the Arrived File protocol is not EBICS and the transaction will not be displayed under the search results with search parameter Protocol=EBICS.

5. From the Transaction Summary tab, click any row to display the Transaction Events pane and Message Details tab for the transaction in that row.

6. The Transaction Events pane displays the following information:
   - Event Code (Event codes in a red font denote error conditions.)
   - Time
   - Description

   Right-click on a column heading to change the sort order, or to show or hide different columns. The Counter column is available, but hidden by default.

   In the Description column, you can click the hyperlinks (underlined in blue font) to view other information such as unpackaged output documents, dataflows, order parameters, routing channel templates, or workflows (business process details).

7. The Message Details tab displays the following information:
   - Message Type
   - Message Status
   - Segment Number
   - Data Flow
   - Timestamp

   Right-click on a column heading to change the sort order, or to show or hide different columns.

   You can click any available hyperlinks to view other information.

View Detailed EBICS Transactions

About this task

EBICS messages are a part of each transaction. It is analogous to one arrived file having one or more routes. One transaction can have one or more messages. Once you execute a typical transaction (FUL, FDL, for example), that has payload data, the Messages tab will pop up to the right of the Transaction tab.

Procedure

1. On the Advanced Search page, under the Arrived File section, select **EBICS** as the protocol and click **Find**.

2. A list of files where the Arrived File protocol is EBICS is displayed. For example, files resulting from an EBICS FUL transaction.

3. Under the Delivery section, select the protocol and click **Find**. The protocols to select from are:
   - EBICS Inbound - refers to an external EBICS client contacting the EBICS server to download the file from the delivery mailbox. This mode is for an initiating consumer scenario.
   - EBICS Outbound - not currently supported
   - EBICS - includes both Inbound and Outbound

4. A list of files where the Delivery protocol is EBICS is displayed. For example, files resulting from an EBICS FDL transaction.

5. Click on any file in the results to view the Events, Routes, and Delivery details.

Replaying an EBICS Transaction from the Beginning of a Transfer (2.2.0 - 2.2.4.2)

Replay a successful or a failed route to have the file transferred again from the beginning.

About this task

To replay a route:

Procedure

1. From the Search page, enter criteria for the file to replay.
2. Click **Find** to initiate the search.

   Note: Once activity is purged, it is no longer available in the system and will not be found in a search that matches the criteria for it. You cannot replay messages that have been purged.
3. On the Search Results page, right-click next to the file you want to replay.
4. You can enter a new name to rename the file for the replay. Do not use the following characters: !%*?<>"/\|:.
5. You can add a comment about the replay. Up to 255 characters are allowed for the comment. The selected file is replayed and added to the list of arrived files, with a special icon to indicate it is a replay. You can replay a route any number of times.
6. When you replay a route, the reviewed box is automatically checked. Right-click and select **Mark as Not Reviewed** to remove the check.

   Note: Once an EBICS transaction is replayed, the replayed activity will not be noted as being an EBICS transaction, because the EBICS translation activity does not take place in the replay.

Replaying EBICS Transactions from the Beginning of a Transfer (2.2.5 or higher)

Replay successful or failed routes to have one or more files transferred again from the beginning.

About this task

To replay a route:

Procedure

1. Use either Basic Search or Advanced Search. From the Search Criteria tab, enter the criteria for the file or files you want to replay.
2. Click **Find** to initiate the search.

   Note: Once activity is purged, it is no longer available in the system and will not be found in a search that matches the criteria for it. You cannot replay messages that have been purged.
3. To replay all files matching the search criteria:
   a. Click **Replay All**.
   b. In the Replay Arrived File pop-up, you can add a comment about the replay. Up to 255 characters are allowed.

c. In the Replay Arrived File pop-up, click **Replay**.

All files matching the search criteria, not just the ones displayed or selected, will be replayed.

Skip the remaining steps.

4. To replay only selected files, on the Arrived File tab, select one or more files to replay.

To select a file, click the check box in the first column to display a check mark.

To select all files, click the Header check box at the top of the column. All selected files will display a check mark in the first column.

The Header check box will display one of the following values depending on file selections:

- Checked - indicates all the files are selected
- Unchecked - indicates no files are selected
- Filled - indicates some, but not all, of the files are selected

If only one file is selected, the Arrived File Events will be displayed and Route and Delivery tabs will be available.

5. Click **Replay**. In the Replay Arrived File pop-up:

a. If only one file was selected, you can enter a new name to rename the file for the replay. Do not use the following characters: !%*?<>"/\|:..

b. You can add a comment about the replay. Up to 255 characters are allowed.

c. Click **Replay**.

Results

The selected files are replayed and added to the list of arrived files, with a special icon to indicate it is a replay. If only a single file was selected for replay, it is replayed when you click **Replay**. If multiple files were selected for replay, or if you chose **Replay All**, the files are marked for replay and the actual replay occurs the next time the `FileGatewayReroute` business process runs. By default, the `FileGatewayReroute` business process runs every five minutes.

You can replay a route any number of times. When you replay a route, the reviewed box is automatically checked. Right-click and select **Mark as Not Reviewed** to remove the check.

Note: Once an EBICS transaction is replayed, the replayed activity will not be noted as being an EBICS transaction, because the EBICS translation activity does not take place in the replay.

Redelivering a Processed EBICS File (2.2.0 - 2.2.4.2)
About this task

Redeliver a successful or a failed route to have the processed file delivered again. Only files that have had a previous delivery attempt, successful or failed, can be redelivered.

Procedure
1. From the Search page, enter criteria for the file to redeliver.
2. Click **Find** to initiate the search.

Note: Once activity is purged, it is no longer available in the system and will not be found in a search that matches the criteria for it. You cannot redeliver messages that have been purged.

3. In the resulting list, select the file.
4. On the **Delivery** tab, right-click on the delivery and select **Redeliver this Arrived File**.
5. You can add a comment about the redelivery. Up to 255 characters are allowed for the comment. The selected file is redelivered. Information about the redelivery is added to the delivery details of the original delivery. You can redeliver a route any number of times.

   Note: Redeliveries create additional events for the original delivery, and do not display as separate routes in the search results page.

   Note: Once an EBICS transaction is replayed, the replayed activity will not be noted as being an EBICS transaction, because the EBICS translation activity does not take place in the replay.

Redelivering Processed EBICS Files (2.2.5 or higher)

Redeliver successful or failed routes to have one or more processed files delivered again.

About this task

Only files that have had a previous delivery attempt, successful or failed, can be redelivered.

To perform redelivery:

Procedure

1. Use either Basic Search or Advanced Search. From the Search Criteria tab, enter the criteria for the file or files you want to replay.
2. Click **Find** to initiate the search.

   Note: Once activity is purged, it is no longer available in the system and will not be found in a search that matches the criteria for it. You cannot redeliver messages that have been purged.

3. To redeliver all files matching the search criteria:
   a. Click **Redeliver All**.
   b. In the Redeliver Arrived File pop-up, you can add a comment about the replay. Up to 255 characters are allowed.
   c. In the Redeliver Arrived File pop-up, click **Redeliver**.

   All files matching the search criteria, not just the ones displayed or selected, will be redelivered. Information about the redelivery is added to the delivery details of the original delivery. You can redeliver a route any number of times.

   Skip the remaining steps.

4. To redeliver only selected files, on the Arrived File tab, select one or more files to redeliver.

   To select a file, click the check box in the first column to display a check mark.

   To select all files, click the Header check box at the top of the column. All selected files will display a check mark in the first column.

The Header check box will display one of the following values depending on file selections:

- Checked - indicates all the files are selected
- Unchecked - indicates no files are selected
- Filled - indicates some, but not all, of the files are selected

If only one file is selected, the Arrived File Events will be displayed and Route and Delivery tabs will be available.

5. Click **Redeliver**. In the Redeliver Arrived File pop-up:
   a. You can add a comment about the replay. Up to 255 characters are allowed.
   b. Click **Redeliver**.

Results

The selected files are redelivered. If only a single file was selected for redelivery, it is redelivered when you click **Redeliver**. If multiple files were selected for redelivery, or if you chose **Redeliver All**, the files are marked for redelivery and the actual redelivery occurs the next time the `FileGatewayReroute` business process runs. By default, the `FileGatewayReroute` business process runs every five minutes.

Information about the redelivery is added to the delivery details of the original delivery. You can redeliver a route any number of times. Redeliveries create additional events for the original delivery, and do not display as separate routes in the search results page.

When you redeliver a route, the reviewed box is automatically checked. Right-click and select **Mark as Not Reviewed** to remove the check.

Note: Once an EBICS transaction is redelivered, the replayed activity will not be noted as being an EBICS transaction, because the EBICS translation activity does not take place in the redelivery.

Notices

This information was developed for products and services offered in the US. This material might be available from IBM in other languages. However, you may be required to own a copy of the product or product version in that language in order to access it.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
US

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those

websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you provide in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
US

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBMproducts. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to actual people or business enterprises is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to

IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work must include a copyright notice as shown in the next column.

© 2015.
Portions of this code are derived from IBM Corp. Sample Programs.
© Copyright IBM Corp. 2015.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency which is now part of the Office of Government Commerce.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

ITIL is a registered trademark, and a registered community trademark of the Office of Government Commerce, and is registered in the U.S. Patent and Trademark Office.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Java™ and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.

Linear Tape-Open, LTO, the LTO Logo, Ultrium and the Ultrium Logo are trademarks of HP, IBM Corp. and Quantum in the U.S. and other countries.

Connect Control Center®, Connect:Direct®, Connect:Enterprise®, Gentran®, Gentran®:Basic®, Gentran:Control®, Gentran:Director®, Gentran:Plus®, Gentran:Realtime®, Gentran:Server®, Gentran:Viewpoint®, Sterling Commerce™, Sterling Information Broker®, and Sterling Integrator® are trademarks or registered trademarks of Sterling Commerce®, Inc., an IBM Company.

Other company, product, and service names may be trademarks or service marks of others.

Terms and conditions for product documentation

Permissions for the use of these publications are granted subject to the following terms and conditions.

Applicability

These terms and conditions are in addition to any terms of use for the IBM website.

Personal use

You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative work of these publications, or any portion thereof, without the express consent of IBM.

Commercial use

You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Rights

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

IBM ®

Product Number: 5200

Printed in USA