



# About Sterling B2B Integrator



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# Contents

## Chapter 1. Overview of IBM Sterling Connect:Enterprise for UNIX Interoperability . . . . . 1

About Sterling B2B Integrator. . . . .	1
About Sterling Connect:Enterprise for UNIX. . . . .	1
Capabilities with Sterling Connect:Enterprise for UNIX Interoperability . . . . .	1
Concepts and Components of Sterling Connect:Enterprise for UNIX Interoperability . . . . .	2
How Sterling Connect:Enterprise for UNIX Interoperability Works . . . . .	3
Server Adapter Communication with Sterling Connect:Enterprise . . . . .	4
Services Used by Sterling B2B Integrator . . . . .	5
Tracking Activity . . . . .	6
Interoperability System Requirements for Sterling Connect:Enterprise for UNIX . . . . .	6
Installing the Third Party Jar Files . . . . .	6

## Chapter 2. Business Processes and Services in Sterling Connect:Enterprise for UNIX Interoperability. . . . . 7

Business Processes and Sterling Connect:Enterprise for UNIX Interoperability . . . . .	7
Sterling Connect:Enterprise UNIX Services and Sterling Connect:Enterprise for UNIX Interoperability . . . . .	7
CEU Server Add Service . . . . .	7
CEU Server Extract Service . . . . .	8
CEU Server Begin Session Service . . . . .	9
CEU Server End Session Service . . . . .	9
CEU Server Batch Status Service . . . . .	10
CEU Server Log Service . . . . .	11
Sample Business Process Scenario in Sterling Connect:Enterprise for UNIX Interoperability . . . . .	11

## Chapter 3. Configuring Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX for Interoperability . . . . . 13

Configuration Overview for Sterling Connect:Enterprise for UNIX Interoperability . . . . .	13
Defining a Remote Business Process (BP) Account . . . . .	13
Defining a Schedule . . . . .	16
Adding a Remote BP Account to a Schedule . . . . .	18
Setting Up Encryption. . . . .	20
Configuration Overview for Sterling B2B Integrator for Interoperability . . . . .	21
Configuring the Server Adapter . . . . .	21
Configuring Additional Instances of Server Adapter . . . . .	22

Testing Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX Interoperability . . . . .	24
Quick Test. . . . .	24
Interoperability Verification Demo . . . . .	25

## Chapter 4. Tracking Activity in Sterling Connect:Enterprise for UNIX Interoperability . . . . . 27

Tracking Interoperating Activity in Sterling Connect:Enterprise for UNIX . . . . .	27
Tracking Interoperating Activity in Sterling B2B Integrator . . . . .	28
Business Process Detail (Current Processes). . . . .	28
Server Adapter Monitoring (Current Activities) . . . . .	28
Correlation Search . . . . .	29
Business Document Tracking Scenario in Sterling Connect:Enterprise for UNIX Interoperability . . . . .	29

## Chapter 5. Demo of Sterling Connect:Enterprise for UNIX Interoperability . . . . . 31

Demo Overview of Sterling Connect:Enterprise for UNIX Interoperability . . . . .	31
CEUInterop_DemoPOAdd . . . . .	31
CEUInterop_DemoPOProcess . . . . .	33
Running the Sterling Connect:Enterprise for UNIX Interoperability Verification Demo . . . . .	33
Learning More About Sterling B2B Integrator . . . . .	34
Learning More About Sterling Connect:Enterprise . . . . .	34

## Chapter 6. Troubleshooting Sterling Connect:Enterprise for UNIX Interoperability . . . . . 37

Checking the Logs for Sterling Connect:Enterprise for UNIX Interoperability. . . . .	37
Getting Information About Sterling Connect:Enterprise in Sterling Connect:Enterprise for UNIX Interoperability. . . . .	37
Viewing Batches and Status in Sterling Connect:Enterprise for UNIX Interoperability . . . . .	37
Validating the Connection in Sterling Connect:Enterprise for UNIX Interoperability . . . . .	38
Solving Possible Problems in Sterling Connect:Enterprise for UNIX Interoperability . . . . .	38

## Index . . . . . 41



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# Chapter 1. Overview of IBM Sterling Connect:Enterprise for UNIX Interoperability

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## About Sterling B2B Integrator

IBM® Sterling B2B Integrator is a business process-centric transaction engine for modeling and managing business processes. Sterling B2B Integrator supports high volume electronic message exchange, complex routing, translation and flexible integration, and real-time interaction with multiple internal systems and external business partners.

Sterling B2B Integrator processing is based on industry standards:

- Business processes are created and run based on the Business Process Modeling Language (BPML), a metalanguage for the modeling of business processes.
- Internet communications protocols (HTTP, FTP, E-mail) meet industry standards.
- B2B management, packaging, and communications protocol standards are supported (ebXML, AS1, AS2, EDIFACT, ANSI X12).
- Security standards are supported (X.509 certificates, SSL, digital signatures, data encryption).

Using the Sterling B2B Integrator business process-centric transaction engine for modeling and managing business processes, you can automate system-to-system business document exchanges such as purchase orders, invoices, shipment notifications, and many other document types depending on yours or your trading partners business needs and required protocol standards.

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## About Sterling Connect:Enterprise for UNIX

IBM Sterling Connect:Enterprise™ for UNIX is an online data communications system for use with large networks within a UNIX environment. Sterling Connect:Enterprise enables the exchange of information between and within companies, including unattended, automatic data collection and distribution.

Sterling Connect:Enterprise supports Bisync, Async, FTP, Secure FTP, HTTP, AS2, and SSH SFTP. It provides open connections throughout the internet to any host, client/server, or remote workstation.

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## Capabilities with Sterling Connect:Enterprise for UNIX Interoperability

The interface between IBM Sterling B2B Integrator and IBM Sterling Connect:Enterprise for UNIX enables efficient movement of business data and correlation of process activities for both products. You can use Sterling B2B Integrator to extend internal and external processes with the vast array of EAI and B2B adapters available with Sterling B2B Integrator business process flows.

Sterling B2B Integrator and Sterling Connect:Enterprise work together to enable your company to easily communicate internally between applications and externally with trading partners.

You can use Sterling B2B Integrator and Sterling Connect:Enterprise to securely exchange business documents and data between the two applications in a near

seamless environment, and create automated business processes to interact with your back-end systems, eliminating the need for manually creating customized scripts to handle back-end processing.

In addition to having a more managed document exchange and business process environment, Sterling B2B Integrator and Sterling Connect:Enterprise provide the following key features:

- Tight integration with end-to-end file processing management and visibility
- A graphical process definition environment where process models include Sterling Connect:Enterprise interactions with Sterling B2B Integrator business processes
- Fault handling for error recovery
- Access to a broader set of business level protocols like ebXML, SOAP (Web Services), and RosettaNet

Before you can understand how Sterling B2B Integrator and Sterling Connect:Enterprise work together, you must first understand the concepts and components involved.

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## Concepts and Components of Sterling Connect:Enterprise for UNIX Interoperability

The following concepts and components are necessary in understanding and establishing communication between Sterling B2B Integrator and Sterling Connect:Enterprise:

Concepts and Components	Description
Sterling Connect:Enterprise for UNIX Server Adapter	At the heart of Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX is a special adapter that acts as the conduit to enable the two applications to exchange business documents. This is the Connect:Enterprise UNIX Server Adapter. All mention of Server Adapter in this documentation refer to the Sterling Connect:Enterprise for UNIX Server Adapter.
Schedules	In Sterling Connect:Enterprise, notification schedules are created in order to establish automatic connections with Sterling B2B Integrator at predefined times.  Additionally, Sterling B2B Integrator can receive notification from Sterling Connect:Enterprise when a batch meeting the criteria defined in the schedule is placed in a Sterling Connect:Enterprise mailbox.
Accounts	In Sterling Connect:Enterprise, a remote account identifies remote sites that are authorized access and provide access to remote sites by specifying remote ID and password. Maximum number of characters for the password is 55.  In Sterling B2B Integrator, account identifies users that are authorized access.
Batches	Data files stored in Sterling Connect:Enterprise mailboxes are called batches. Batches are identified by three attributes: batch number/creation date, batch ID, and mailbox ID. Batches represent the business documents that are handled during a Sterling B2B Integrator business process.

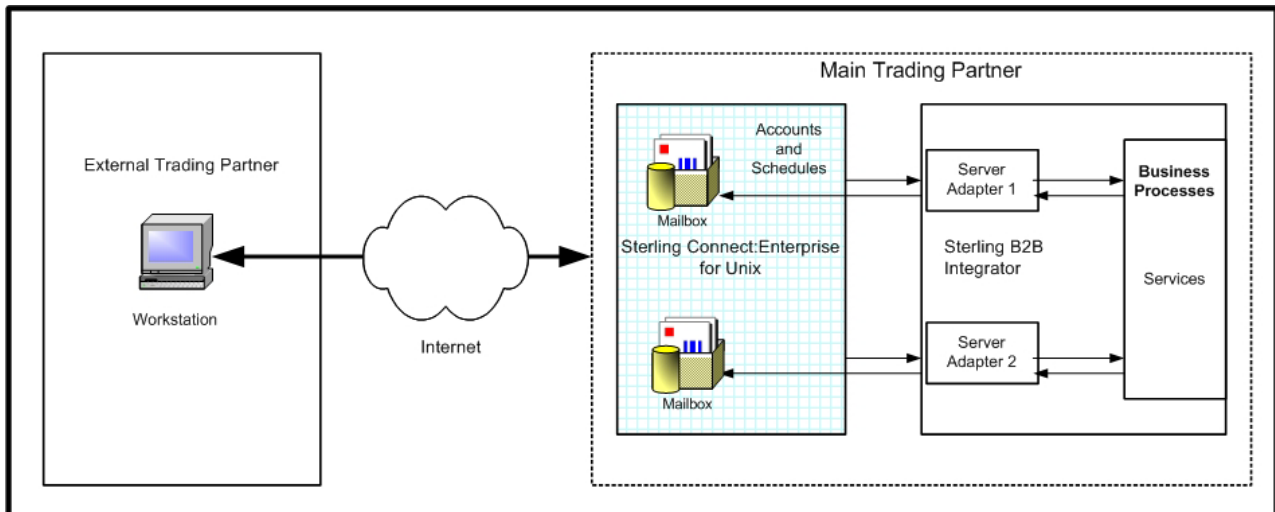
Concepts and Components	Description
Flags	Flags are attribute labels assigned to each batch. The query and update commands use flags to identify processing rules, protocols, and data formats that apply to the batch data.
Correlation Records	In Sterling B2B Integrator, specific correlation identifiers are stored to enable tracking of business processes and business documents based on related identifiers such as: session ID, mailbox ID, batch ID, and batch number, and schedule name.
Business Process Protocol	Business process protocol specifies the mutually visible business document exchange behavior between Sterling B2B Integrator and Sterling Connect:Enterprise. The Sterling Connect:Enterprise for UNIX Server Adapter is registered in Sterling Connect:Enterprise as a business process protocol daemon.
ProcessData	When a Sterling Connect:Enterprise schedule invokes a business process and batch summary data is retrieved in Sterling B2B Integrator, ProcessData stores all relevant batch summary data for the runtime of a business process.
Mailboxes	Individual entities where Sterling Connect:Enterprise batches are stored within the Sterling Connect:Enterprise repository. Specific Sterling Connect:Enterprise mailbox names can be configured in the CEU schedule as optional business process parameters that display in ProcessData. Business documents can be added to and extracted from those specified mailbox names during a Sterling B2B Integrator business process.
Services	Sterling B2B Integrator has a suite of services to work specifically with the Server Adapter in order to perform specific activities such as add, extract, update, and query on batch data in the Sterling Connect:Enterprise mailbox repository. When a business process is defined, specific services are called.

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## How Sterling Connect:Enterprise for UNIX Interoperability Works

Interoperability between Sterling B2B Integrator and Sterling Connect:Enterprise works in both directions. Both systems can initiate information exchange and respond to information requests with the ability to invoke business processes and track activity on both ends.

The following figure shows a high-level view of how Sterling B2B Integrator and Sterling Connect:Enterprise work together to exchange information:



## Sterling Connect:Enterprise for UNIX Server Adapter

As shown in the preceding figure, connectivity between Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX is handled through a special adapter, the Sterling Connect:Enterprise for UNIX Server Adapter.

When an external trading partner sends business documents electronically to a mailbox on Sterling Connect:Enterprise, the Server Adapter can receive notification and then use the account and schedule information from Sterling Connect:Enterprise to invoke business processes. These business processes use services to interact with the Sterling Connect:Enterprise mailbox. These services are described fully in the next section.

When data in a Sterling Connect:Enterprise mailbox matches the criteria of a notification schedule Sterling Connect:Enterprise notifies the Server Adapter. The Server Adapter can also call Sterling Connect:Enterprise unsolicited.

When the Server Adapter retrieves the batch summary data, it sets this information in ProcessData and invokes the business process. The business process can extract data from or add data to Sterling Connect:Enterprise and perform other back-end activities.

### CAUTION:

**Because of continuing efforts to improve services and adapters to align with new technology and capabilities, the Sterling Connect:Enterprise adapter was retired and replaced in Sterling B2B Integrator with the Sterling Connect:Enterprise for UNIX Server Adapter with related services.**

## Server Adapter Communication with Sterling Connect:Enterprise

The following information describes how the Server Adapter creates the ProcessData for Sterling Connect:Enterprise batches:

The CEUServerAdapterInstanceName and SessionId are at the top level of the batch data for visibility by the related Connect:Enterprise UNIX Services as in the following example:



```

<?xml version="1.0" encoding="UTF-8"?>
<ProcessData>
  <CEUServerAdapterInstanceName>BP</CEUServerAdapterInstanceName>
  <SessionId>2057</SessionId>
  <ACD_INFO>

```

The CEUServerAdapterInstanceName and SessionId indicate which Server Adapter instance and session is invoked by the business process. You can have multiple instances of the Server Adapter. Each service used in the business process needs to know which Server Adapter instance to communicate with so that business process activity is funneled back to the requesting Server Adapter.

The CEUBatchNumber and CEUBatchDateTime are used when data is extracted. In the following example, the data in bold shows the batch summary data for two batches that met the naming pattern \*.po and were located in the bporders mailbox. This information is batch summary data only and does not include the business document payload at this point of the business process.

```

<Batches>
  <Batch>
    <CEUBatchNumber>5262</CEUBatchNumber>
    <CEUMailbox>bporders</CEUMailbox>
    <CEUBatchId>CarOrder.po</CEUBatchId>
    <CEUBatchSize>208</CEUBatchSize>
    <CEUBatchDateTime>12/17/03 3:38 PM</CEUBatchDateTime>
  </Batch> <Batch>
    <CEUBatchNumber>5263</CEUBatchNumber>
    <CEUMailbox>bporders</CEUMailbox>
    <CEUBatchId>CarOrder.po</CEUBatchId>
    <CEUBatchSize>208</CEUBatchSize>
    <CEUBatchDateTime>12/17/03 3:40 PM</CEUBatchDateTime>
  </Batch> </Batches>
</ACD_INFO>
</ProcessData>

```

## Services Used by Sterling B2B Integrator

When the Sterling B2B Integrator business process is invoked, it uses specially created services to perform activities on batches in the Sterling Connect:Enterprise repository.

The following services are Sterling B2B Integrator components that work with the Server Adapter:

Service	Description
CEU Server Add Service	Adds batches to a Sterling Connect:Enterprise mailbox
CEU Server Extract Service	Extracts batches from a Sterling Connect:Enterprise mailbox
CEU Server Begin Session Service	Begins a session with an instance of Sterling Connect:Enterprise
CEU Server End Session Service	Ends a session with an instance of Sterling Connect:Enterprise
CEU Server Batch Status Service	Queries batch summary data and optionally can change the process flags that identify the batch status, such as transmit (T), delete (D), and extract (E) flags. Can change the data format flags for the batch contents (such as ASCII, EBCDIC, or BINARY), and can modify mailbox IDs and user batch IDs.

Service	Description
CEU Server Log Service	Writes log messages for business process success or error conditions to make them visible in the Sterling Connect:Enterprise reporting facility

## Tracking Activity

The Server Adapter writes Sterling B2B Integrator correlation records to enable searches for business processes containing a particular CEU\_ACDName or a CEU\_SessionId. You can also search on batch ID, mailbox ID, and batch number. For more information on correlation search, see Correlation Search.

The Server Adapter logs the notification event in Sterling Connect:Enterprise and identifies the business process that was invoked. This information is visible in the Sterling Connect:Enterprise Detail Schedule reports. For more information on viewing Sterling B2B Integrator business ProcessData in Sterling Connect:Enterprise, see Tracking Interoperating Activity in Sterling Connect:Enterprise for UNIX.

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## Interoperability System Requirements for Sterling Connect:Enterprise for UNIX

Sterling B2B Integrator interoperability with Sterling Connect:Enterprise for UNIX requires installation of the following:

- Sterling Connect:Enterprise for UNIX 2.2 or later
- Sterling B2B Integrator 3.1 or later
- Third party jar files (included with Sterling Connect:Enterprise and with Sterling B2B Integrator)
  - ceuSips.jar
  - ceubp.jar
  - jdkcompat.jar

**Note:** For Sterling Connect:Enterprise system requirements, see the *IBM Sterling Connect:Enterprise for UNIX Release Notes*<sup>®</sup>.

## Installing the Third Party Jar Files

To prepare and install the third party files for interoperability:

### Procedure

1. Stop Sterling B2B Integrator.
2. Make a backup of the {Sterling\_B2B\_Integrator\_home}/jar/ceu/1\_0\_1 directory. The original files will be overwritten in the next step.
3. Transfer the third party jars in binary format using FTP from Sterling Connect:Enterprise for UNIX into Sterling B2B Integrator. On Sterling Connect:Enterprise for UNIX the jar files reside in {ceu\_home}/javalib. The Sterling B2B Integrator jar files are replaced with the jar files from Sterling Connect:Enterprise for UNIX.

**Note:** There is no need to run Install3rdParty.sh to install the jar files when placed in this directory.

4. Restart Sterling B2B Integrator.

---

## Chapter 2. Business Processes and Services in Sterling Connect:Enterprise for UNIX Interoperability

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### Business Processes and Sterling Connect:Enterprise for UNIX Interoperability

The Server Adapter and a suite of B2B services enables interoperability between Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX and provides the Graphical Process Modeler (GPM) to create automated business processes.

These automated business processes enable you to connect your business documents to back-end processing activities without having to create customized processing scripts. They also enable you to connect the business documents to trading partners, exchanges, and customers.

In this graphical process definition environment, you can build process models that include the Sterling Connect:Enterprise interactions add, extract, query, and update batch status. These interactions are carried out by a suite of B2B services that use the Server Adapter. Using these capabilities combined with the process components in Sterling B2B Integrator for control flow, content based routing, and a comprehensive adapter library, you can define broader and more sophisticated Sterling Connect:Enterprise processes.

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### Sterling Connect:Enterprise UNIX Services and Sterling Connect:Enterprise for UNIX Interoperability

A suite of services in Sterling B2B Integrator enables you to write business processes to add batches, extract batches, update batches, and perform queries on the Sterling Connect:Enterprise mailbox repository. Services are also available to support session management and tracking in Sterling Connect:Enterprise. For detailed information about each service, search on Services and Adapters.

#### CEU Server Add Service

Use this service to add a batch to a Sterling Connect:Enterprise mailbox. If used in a business process initiated by a scheduled notification, it adds the batch and logs the activity into Sterling Connect:Enterprise as part of the schedule notification session. If the Add Service is used in an unsolicited business process invocation, the activity is represented in Sterling Connect:Enterprise as remote connect session activity.

#### About this task

The following steps describe what happens when this service is used in a business process:

#### Procedure

1. A Sterling B2B Integrator business process initiates an unsolicited request to transfer data to Sterling Connect:Enterprise (remote connect).
2. Sterling B2B Integrator begins a session with Sterling Connect:Enterprise

3. Sterling B2B Integrator adds a batch to a specific mailbox using the CEU Server Add Service. This service works through the Server Adapter to accomplish the add. Included in the transfer are: mailbox ID, batch ID, and the primary document.
4. Sterling Connect:Enterprise stores the data in the mailbox and returns a notification to the Server Adapter indicating the data transferred successfully. The notification includes the batch number Sterling Connect:Enterprise assigned to the file and the creation date.
5. A flag is set to J on the batch in Sterling Connect:Enterprise to indicate that Sterling B2B Integrator added the batch.
6. Sterling B2B Integrator adds a log entry into Sterling Connect:Enterprise that includes the business process ID to indicate the event.
7. Sterling B2B Integrator sets the correlations between the business process that initiated the request and batch summary data from Sterling Connect:Enterprise, which includes: batch ID, mailbox ID, batch number, schedule definition name, and session ID. These correlations enable subsequent searches for this information using the Sterling B2B Integrator Advanced Search function.
8. The Sterling B2B Integrator business process requests to end the session with Sterling Connect:Enterprise.
9. The Server Adapter ends the session and notifies Sterling Connect:Enterprise that the session is closed. The session is logged in Sterling Connect:Enterprise with hyperlinks to Sterling B2B Integrator.

## **CEU Server Extract Service**

### **About this task**

Use this service to extract a batch from a Sterling Connect:Enterprise mailbox. This service is triggered by a notification from Sterling Connect:Enterprise that a batch is in a particular mailbox. When Sterling Connect:Enterprise notifies Sterling B2B Integrator, this is known as a scheduled notification. Sterling B2B Integrator can also perform unsolicited requests to extract batches from Sterling Connect:Enterprise using this service. Unsolicited requests are represented in Sterling Connect:Enterprise as remote connect sessions.

The following steps describe what happens when this service is used in a business process:

### **Procedure**

1. The Server Adapter initiates a business process in response to a notification (autoconnect) from Sterling Connect:Enterprise.
2. The business process specifies to extract data from a Sterling Connect:Enterprise mailbox using the CEU Server Extract Service. This service works through the Server Adapter to accomplish the extraction.
3. Using information in the notification, the Server Adapter extracts the batch matching the batch number and batch date/time in ProcessData as provided by this service.
4. Sterling Connect:Enterprise sets the Transmitted (T) flag on the batch indicating that Sterling B2B Integrator extracted the batch.
5. Sterling B2B Integrator adds a log entry into Sterling Connect:Enterprise that includes the business process ID for the event.
6. The Server Adapter adds the batch into the business process as a primary document.

7. The Message From Service displays the following batch details: Batch ID, Batch Number, Mailbox ID, Create Date and Time, Batch Size, Session ID, Batch Status Flags, and Sterling B2B Integrator Document ID.
8. Sterling B2B Integrator sets the correlations between the business process that initiated the request and batch summary data from Sterling Connect:Enterprise, which includes: batch ID, mailbox ID, batch number, schedule definition name, and session ID. These correlations enable subsequent searches for this information using the Sterling B2B Integrator Advanced Search function.
9. The system performs additional activities as indicated within the business process.
10. The Sterling B2B Integrator business process requests to end the session with Sterling Connect:Enterprise.
11. The Server Adapter ends the session and notifies Sterling Connect:Enterprise that the session is closed.

## CEU Server Begin Session Service

### About this task

Use this service to initiate a session with Sterling Connect Enterprise for UNIX.

The following steps describe what happens when this service is used in a business process:

### Procedure

1. When a Sterling B2B Integrator business process initiates a session with Sterling Connect:Enterprise (known as a remote connect), the Begin Session Service is optional. Remote connect activity can be bracketed between a Begin Session Service and End Session Service under the same session ID.
2. The Begin Session Service populates ProcessData with a session ID.
3. Subsequent Adds (CEU Server Add Service) or Extracts (CEU Server Extract Service) are captured under that session ID, until the End Session Service is used.

**Note:** If a business process is invoked using a Sterling Connect:Enterprise schedule notification, the session initiation is automatic, and therefore the Begin Session Service is not necessary. When Sterling B2B Integrator attempts a remote connection with Sterling Connect:Enterprise, the user ID and Password defined in the Server Adapter configuration are used to verify and authorize access. Maximum number of characters for the password is 55.

## CEU Server End Session Service

Use this service to close or end a session with Sterling Connect Enterprise for UNIX.

The following information describes how this service is used in a business process:

- The End Session Service is required in sessions initiated by Sterling Connect:Enterprise (autoconnect) to end the session.
- In sessions initiated by Sterling B2B Integrator (remote connect), the End Session Service is optionally used with the Start Session service to bracket activity in the business process.

- If Begin Session Service and End Session Service are not used, any activity such as Add or Extract happens in its own session ID and is represented in Sterling Connect:Enterprise reports as separate, unrelated entries (Connect, Activity (Add or Extract), Disconnect).
- If the CEU End Session Service is not explicitly included in the business process, the connection times out.

**Note:** If a business process is not active, and the CEU Server End Session Service was not used, the autoconnect session (seen in cmusession as an ACD slave) times out after 30 seconds and ends the session.

## CEU Server Batch Status Service

### About this task

The CEU Batch Status Service queries batch summary data and optionally can change the process flags that identify the batch status, such as transmit (T), delete (D), and extract (E) flags. It can change the data format flags for the batch contents (such as ASCII, EBCDIC, or BINARY), and can modify mailbox IDs and user batch IDs.

A batch may exist in a Sterling Connect:Enterprise mailbox but may not be extractable by Sterling B2B Integrator because of process flag settings (for example, the batch was enabled for only one extract and has already been extracted). This service enables updating the process flag on the batch so that it can be extracted again.

The following steps describe what happens when this service is used in a business process:

### Procedure

1. A Sterling B2B Integrator business process requests to update the status of a specific batch in a designated Sterling Connect:Enterprise mailbox (remote connect).
2. Sterling B2B Integrator begins a session with Sterling Connect:Enterprise using the CEU Server Begin Session Service.
3. Sterling B2B Integrator requests to update a flag on a specific batch in the designated mailbox. Process flags, protocol flags, and data flags may be updated.
4. Sterling Connect:Enterprise updates the batch.
5. Sterling B2B Integrator sets the correlations between the business process that initiated the request and batch summary data from Sterling Connect:Enterprise, which includes: batch ID, mailbox ID, batch number, and session ID. These correlations enable subsequent searches for this information using the Sterling B2B Integrator Advanced Search function.
6. Sterling B2B Integrator writes a log entry to Sterling Connect:Enterprise that includes the business process ID of the originating request.
7. The Sterling B2B Integrator business process requests to end the session using the CEU Server End Session Service.
8. The Server Adapter ends the session and notifies Sterling Connect:Enterprise that the session is closed.

## CEU Server Log Service

### About this task

The CEU Server Log Service writes log messages for success or error conditions in the business process to make them visible in the Sterling Connect:Enterprise interface.

Use this service in a business process to provide success or error information to Sterling Connect:Enterprise.

The following steps describe what happens when this service is used in a business process:

### Procedure

1. A Sterling B2B Integrator business process extracts a batch from Sterling Connect:Enterprise and passes it along for EDI-to-XML translation.
2. An error occurs during translation and the batch is not translated properly.
3. As a result of the error, the CEU Server Log Service is used to return a log message about the translation failure to Sterling Connect:Enterprise.
4. When the Sterling Connect:Enterprise administrator views information about the activity in a report view, the message provided by the CEU Server Log Service displays with a hyperlink to Sterling B2B Integrator.

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## Sample Business Process Scenario in Sterling Connect:Enterprise for UNIX Interoperability

This business process scenario consists of two fictitious companies, MaxxMart and GameRAZ, who have entered into an agreement for MaxxMart, a large retailer, to purchase video game accessories exclusively from GameRAZ, a video game manufacturer.

### About this task

GameRAZ, who has the role of Main trading partner, has Sterling Connect:Enterprise for UNIX and Sterling B2B Integrator installed. GameRAZ defined a remote account: BP account and a notification schedule in Sterling Connect:Enterprise and configured an instance of Server Adapter in Sterling B2B Integrator.

MaxxMart has the role of the External trading partner and uses the Sterling Connect:Enterprise HTTP Interface to send business documents, or more specifically in this example, a purchase order to GameRAZ.

When GameRAZ receives the purchase order, they provide MaxxMart with an order acknowledgement and automatically sends the purchase order document to their back-end system for order fulfillment processing.

The Server Adapter, CEUInterop\_DemoPOProcess business process, and the following services are used in this scenario:

- CEU Server Extract Service
- XML Validation Service
- CEU Server Batch Status Service
- CEU Server End Session Service

The following steps outline the business process scenario being performed by Sterling B2B Integrator and Sterling Connect:Enterprise:

## Procedure

1. MaxxMart sends a purchase order to their specified mailbox within the GameRAZ Sterling Connect:Enterprise application.
2. When the purchase order is placed in the mailbox, it meets the criteria for schedule notification. Sterling Connect:Enterprise notifies the GameRAZ Server Adapter, which acts as a conduit between Sterling Connect:Enterprise and Sterling B2B Integrator.
3. The Server Adapter retrieves the batch summary data and sets an acknowledgement flag within Sterling Connect:Enterprise. The batch summary data provides correlation parameters, such as schedule name, session ID, batch ID and batch number/date. The purchase order itself has not been handled at this point.
4. The Server Adapter invokes the CEUInterop\_DemoPOProcess business process, which was included in the schedule notification.
5. The CEUInterop\_DemoPOProcess business process extracts the batch and validates that it is well-formed XML.
6. Sterling Connect:Enterprise sets the Transmitted (T) flag on the batch indicating that Sterling B2B Integrator extracted the batch.
7. Sterling B2B Integrator adds a log entry into Sterling Connect:Enterprise that includes the business process ID to indicate the event.
8. The Server Adapter adds the batch into the business process as a primary document. At this point, the payload is handled.
9. The Message From Service displays the following batch details: Batch ID, Batch Number, Mailbox ID, Create Date and Time, Batch Size, Session ID, Batch Status Flags, and Sterling B2B Integrator Document ID.
10. Sterling B2B Integrator sets the correlations between the business process that initiated the request and batch summary data from Sterling Connect:Enterprise, which includes: batch ID, mailbox ID, batch number, schedule definition name, and session ID. These correlations enable subsequent searches for this information using the Sterling B2B Integrator Correlation Search function.
11. The purchase order, which is now the business process primary document, is sent to the GameRAZ back-end system for further order fulfillment processing.
12. The GameRAZ back-end system verifies that the requested items are available in inventory.
13. The back-end system fulfills the order and generates an acknowledgement saying the order was filled. The Sterling B2B Integrator business process adds the acknowledgement to the external trading partner's Sterling Connect:Enterprise mailbox.
14. The Sterling B2B Integrator business process requests to end the session with Sterling Connect:Enterprise.
15. The Server Adapter ends the session and notifies Sterling Connect:Enterprise that the session is closed.



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## Chapter 3. Configuring Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX for Interoperability

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### Configuration Overview for Sterling Connect:Enterprise for UNIX Interoperability

The following table provides the high-level tasks and where to find instructions to configure Sterling Connect:Enterprise for UNIX and Sterling B2B Integrator for interoperability:

Configuration Task	Application	Where to Find Instructions
Define a remote BP Account to connect to Sterling B2B Integrator	Sterling Connect:Enterprise for UNIX	Defining a Remote Business Process (BP) Account
Define a Schedule to indicate when to notify Sterling B2B Integrator	Sterling Connect:Enterprise for UNIX	“Defining a Schedule” on page 16
Configure the Server Adapter	Sterling B2B Integrator	Configuring the Server Adapter
Test connectivity between Sterling B2B Integrator and Sterling Connect:Enterprise (perform cmusession quick test)	Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX	Quick Test
Run the Interoperability Verification Demo	Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX	“Interoperability Verification Demo” on page 25

### Defining a Remote Business Process (BP) Account

You typically define one Remote BP Account and point all your notification schedules to the single account.

#### About this task

To define a remote BP account, you:

- Define basic account information.
- Specify the BP protocol.
- Provide a valid Sterling B2B Integrator user ID and password.
- Optionally, specify BP protocol PUT options.

#### Procedure

1. Access the web administration server from your browser.
2. From the left navigation panel, click **Define Accounts**.
3. From the Manage Accounts page, click **New**. The Create Account page displays.
4. Type or select the required and optional values using the table as a guide:

Field	Description	Valid Value
Account name	Required. Specifies name of the account.	Remote acct. = Logon of remote acct., 1–8 alphanumeric characters, underscore (_), and period (.).
Password	Required. Specifies password required to access the account.	Any valid string, except the user's system password.
Confirm password	Required. Confirms password required to access the account.	Any valid string, except the user's system password.
Given name	Specifies given name of the user who owns the account.	User given name.
Last name	Specifies last name of the user who owns the account.	User last name.
E-mail address	Specifies E-mail address of the user who owns the account.	User E-mail address.
Company name	Specifies name of the company the user represents.	User company name.
Telephone	Specifies telephone number of the user who owns the account.	User phone number.
Type of account	Specifies the type of account.	Remote = Site authorized to access Sterling Connect:Enterprise for UNIX using remote connection.
Save account as template	Specifies to save the account as a local or remote account and as a template for use in defining other accounts.	Disable = Default Enable
Template Name	Specifies the name of the account template.	Any name, 1–8 alphanumeric characters.
Protocol	Required. Specify BP for a Sterling B2B Integrator remote account.	BP
Use alternate routes	Enables Sterling Connect:Enterprise for UNIX to use an alternate route if the primary connection on an automatic transfer fails.	Disable = Default Enable
Number of alternate routes	Specifies the number of alternate routes to configure for the primary account.	Default = Blank

5. Type a comment for the account, if necessary, and click **Next**. A maximum of 978 characters are saved in the comment field.
6. From the Configure BP Connection page, define the values for the connection for an outbound automatic transfer (schedule) using the table as a guide.

Field	Description	Valid Value
Remote user ID	Specifies the user name on the Sterling B2B Integrator remote system.  The remote user ID and remote password configured here must match a user account defined in Sterling B2B Integrator	Account name = Default

Field	Description	Valid Value
Remote password	Specifies the password required to connect to the remote Sterling B2B Integrator account.	Password key = Default  Stored in clear text or encrypted format. Encrypted passwords require a global key and activating the password encryption option.
Confirm remote password	Specifies the password required to connect to the remote Sterling B2B Integrator account.	Retype the password.
User mailbox access	Identifies which mailboxes the remote user can access.	Default = No mailbox selected which enables access to all mailboxes.

7. Click **Next** to display the Specify PUT Options page.
8. From the Specify PUT Options page, type or select account information using the following table as a guide. These options are applied to all batches added by this account, but can be overridden in the schedule or the business process using the CEU Server Add Service.

Field	Description	Valid Value
Mailbox ID	Specifies the mailbox ID for the batch being added.	Any valid Mailbox ID
Batch ID	Specifies the batch ID for the batch being added.	Any valid batch ID.
Data format	Specifies the format of the data being added.	ASCII = Default  EBCDIC  Binary or unknown
Reroute files automatically to other remote sites.	Enables files to be rerouted immediately to other remote sites (accounts).	Disable = Default  Enable

9. Enable the extract and transmit options as necessary by selecting the appropriate check boxes using the following table as a guide:

Field	Description	Valid Value
Extract once, transmit never	After the batch is extracted locally, it cannot be extracted again. The batch cannot be transmitted.	Disable = Default  Enable
Extract never, transmit once	The batch cannot be extracted. The batch can be transmitted once.	Disable = Default  Enable
Extract repeatedly, transmit never	No limit is placed on the number of times a batch can be extracted. The batch cannot be transmitted.	Disable = Default  Enable
Extract repeatedly, transmit once	The batch can be extracted repeatedly, but can only be transmitted once by batch ID or batch number, at which time it is flagged as transmitted. After it is flagged as transmitted, it can only be transmitted by batch number.	Disable = Default  Enable

Field	Description	Valid Value
Extract repeatedly, transmit repeatedly	No limit is placed on the number of times a batch can be extracted. No limit is placed on the number of times a batch can be transmitted.	Disable = Default Enable

10. Click Next to display the BP Account Summary page.
11. Review and click Save.
12. The Manage Accounts page displays with the new BP remote account listed in the account name list. If you saved the BP account as a template, the BP template is listed in the Template list.

## Defining a Schedule

Creating schedules for accounts enables you to initiate unattended, automatic interactions using Sterling B2B Integrator business processes. The Server Adapter receives a notification from Sterling Connect:Enterprise when data meeting the criteria of an automatic transfer is placed in a Sterling Connect:Enterprise mailbox or on a scheduled basis. The Server Adapter retrieves batch summary data, sets the BP Verified (V) flag within Sterling Connect:Enterprise, and then invokes a business process accordingly.

### About this task

Use this procedure to schedule automatic notifications between Sterling B2B Integrator and one or more remote accounts.

### Procedure

1. Access web administration through your browser.
2. From the left navigation panel, click Define Schedules.
3. From the Manage Schedules page:
  - To define a schedule, click New.
  - To edit a schedule, select the schedule from the list and click Edit.
4. For a new schedule, type a name for the schedule (required) in the Schedule name text box, up to 15 characters, which includes the .acd extension.  
If you do not specify the .acd extension in the schedule name but set the **When** and **Except** parameters in the schedule, the system adds the .acd extension automatically. If Contact Remote Site is set to Data Available Meets Criteria, the system adds the .acd extension automatically. If no **When** or **Except** settings are defined, the .acd extension is optional.
5. In the **Run at these times** column, set the time that you want the schedule to run or edit the current settings for a schedule. Setting a value for one field means that all remaining fields default to All.
6. If needed, define or edit the exceptions to the schedule in the **Except for these times** column. Setting a value for one field means that the remaining fields default to All.
7. Define or edit the schedule connection options using the following table as a guide:

Field	Description	Valid Values
Contact remote site	Identifies when to contact the remote site.	Always = Default; contact the remote site whether or not there is data to send.  Data = Contact the remote site if there is data to send.  Data available meets criteria = Start transfer when data or batch matching the selection criteria specified in the schedule definition is available. The batch must be added with the trigger parameter through the <code>cmuadd</code> , <code>\$\$ADD</code> , or <code>put</code> command.
Priority level in queue	Specifies the order in which a connection request is queued waiting for connection resources to become available.	07 = Default  1–15  1 = highest
Wait to re-queue failed remote connection	Specifies number of minutes to wait before re-queuing a remote site that it was unable to contact.	5 minutes = Default  0–120 minutes
Seconds between sessions	Specifies number of seconds the program waits after one session is complete before initiating another session.	0 = Default (immediate)  0–180 seconds  This parameter is valid only when Maximum number of concurrent sessions = 1.
Times to re-queue remote resource	Sets the number of times the specified resources are re-queued for any remote name in the list that is not connected after the number of retries have been attempted. The total number of attempts is: (# of Resources) × (RETRIES+1) × (REQUEUES+1).	5 = Default  0–99
Retry connection attempts	Specifies the number of times the system tries to contact a remote account after the first attempt fails. If more than one resource is defined, the schedule process attempts the connection the number of times specified by connection retry attempts+1 (RETRIES+1) for each resource before re-queuing the connection.	1 = Default (1 retry)  0–99

Field	Description	Valid Values
Maximum number of concurrent sessions	Specifies the maximum number of communications sessions permitted concurrently for a single schedule.	2 = Default 0–128 0 indicates the maximum allowable sessions = 128.
Specify seconds of inactivity (bisync only)	Specifies the number of seconds of session inactivity before the session is terminated.	Default = No; disconnect processing is not performed. 0–3600 seconds  If the disconnect interval is not specified here, then the value set in the account definition is used.

8. Type a comment to describe the schedule (optional), and click Next. The Update Schedule List page displays.

## Adding a Remote BP Account to a Schedule

When you create a notification schedule, you must assign a remote block to a remote BP account.

### Procedure

1. From the left navigation bar, click **Define Schedules**.
2. From the Manage Schedules page, select the schedule that you want to add the remote account to and click **Edit**.
3. From the Create a Schedule page, click **Remotes** to display the Update Schedule List.
4. Click Add. The Add Remote Account to Schedule page displays.
5. Select or type the remote BP account and click Next to display the Configure BP Communications for Schedule page.
6. Define the outbound connection parameters using the following table as a guide:

Field	Description	Valid Values
Remote block description	Specifies a text description for the remote account.	Up to 255 characters.
Resource	Specifies an Server Adapter to notify.	Any available Server Adapter. Listed resources include all instances of the Server Adapter currently registered with Sterling Connect:Enterprise
Business process name	Specifies the business process to notify.	Any available business process. Use the Search pattern field to search for a business process if the Server Adapter is registered and you have access. <b>Note:</b> The list of business processes displayed using the list button is limited to 100. Using the search button enables filtering on the entire list of available processes.

Field	Description	Valid Values
Mailbox list	Mailbox IDs of data sent to the remote account and the sequence for sending the data.	A list can be up to 256 characters.  If no value is set, user is restricted to their own mailbox ID.
Batch ID	Specifies the batch ID of the batch being sent.	Any valid batch ID,1–64 characters; enclose in single or double quotes if it contains spaces. Wildcard characters are supported to specify a search pattern.

7. In the Specify Optional Business Process Parameters text box, type any additional business process parameters in XML format. Parameters entered here are available in ProcessData for special processing by the business process invoked.
8. Click Next to display the Define PUT Options for BP Remote Account page.
9. Define the BP account information using the following table as a guide. These options are applied to all batches added by this account, but can be overridden in the schedule or the business process using the CEU Server Add Service:

Field	Description	Valid Values
Mailbox ID	Specifies the mailbox ID for batches being added.	Default is the 1–8 character mailbox ID defined in the account.
Batch ID	Specifies the batch ID for the batch being added.	Any valid 1–64 character batch ID.
Data format	Specifies the format of the data being added.	ASCII = Default  EBCDIC  Binary or unknown
Reroute files automatically to other remote sites	Enables files to be rerouted immediately to other remote accounts.	No = Default  Yes  Blank = Use value set in account definition.

10. Define the extract and transmit options using the following table as a guide. Options defined in schedule override those defined in account. Both account and schedule values can be overridden by a business process using the CEU Server Add Service.

Field	Description	Valid Values
Extract once, transmit never	After the batch is extracted locally, it cannot be extracted again. The batch cannot be transmitted.	Disable = Default  Enable
Extract never, transmit once	The batch cannot be extracted. The batch can be transmitted once.	Disable = Default  Enable
Extract repeatedly, transmit never	No limit is placed on the number of times a batch can be extracted. The batch cannot be transmitted.	Disable  Enable = Default

Field	Description	Valid Values
Extract repeatedly, transmit once	The batch can be extracted repeatedly, but can only be transmitted once by batch ID or batch number, at which time it is flagged as transmitted. After it is flagged as transmitted, it can only be transmitted by batch number.	Disable = Default Enable
Extract repeatedly, transmit repeatedly	No limit is placed on the number of times a batch can be extracted. No limit is placed on the number of times a batch can be transmitted.	Disable = Default Enable

11. Click **Next**.
12. View the parameters from the summary page and click **Done** to add the remote BP account to the schedule and display it on the Update Schedule List page.
13. From the Update Schedule List page, click **Save** to save the schedule with the account. You can add multiple remote blocks to a single schedule.

## Setting Up Encryption

### About this task

By default, Sterling B2B Integrator connects to Sterling Connect:Enterprise with SIPS encryption turned off.

For Sterling B2B Integrator to communicate to a Sterling Connect:Enterprise instance that has SIPS encryption turned on:

### Procedure

1. Obtain the sipskeys encryption file from the Sterling Connect:Enterprise instance you are establishing communication with.
2. Edit the following Sterling B2B Integrator appserver property file, depending on the appserver type:

Appserver Type	Property File
jboss	jboss.properties
weblogic	weblogic.properties
websphere	websphere.properties
no-app	noapp.properties

3. Look for the following section toward the end of the file and provide the full path to the sipskeys file that you obtained from the Sterling Connect:Enterprise instance:

Read in CEUImplFactory.java to set ceu.sipskeys system parm to the path of the sipskeys encryption file.

```
ceu.sipskeys=???/sipskeys
```

For example, if you place the sipskeys file on the Sterling B2B Integrator server in the /tmp directory, then you would edit your Sterling B2B Integrator property file as follows:



Read in CEUImplFactory.java to set ceu.sipskeys system parm to the path of the sipskeys encryption file.

ceu.sipskeys=/tmp/sipskeys

4. Start Sterling B2B Integrator. The Server Adapter should now be able to connect to Sterling Connect:Enterprise with SIPS encryption. For Microsoft Windows Operating System, the path is in the format: C:\IBM\SI\sipskeys.

For Microsoft Windows Operating System, the path is in the format:  
C:\IBM\SI\sipskeys

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## Configuration Overview for Sterling B2B Integrator for Interoperability

The Server Adapter and six Connect:Enterprise UNIX services are included in Sterling B2B Integrator to establish connectivity to Sterling Connect:Enterprise.

The Server Adapter receives notifications from Sterling Connect:Enterprise when data meeting the criteria of a scheduled notification is placed in a Sterling Connect:Enterprise mailbox. This information invokes a business process.

You can have one or multiple instances of the Server Adapter configured to work with Sterling Connect:Enterprise.

This section explains how to complete the configuration of the Server Adapter for the verification demo and how to configure a new instance of the Server Adapter.

**Note:** For more information about how the Server Adapter works, see “Business Processes and Sterling Connect:Enterprise for UNIX Interoperability” on page 7.

### Configuring the Server Adapter

A sample instance of the Server Adapter is included in Sterling B2B Integrator in order to run the interoperability verification demo. This Server Adapter can also be used in a production environment. In either case, the Server Adapter must have certain information defined before configuration is complete.

#### Procedure

1. From the Sterling B2B Integrator **Deployment** menu, select **Services > Configuration**.

The Services Configuration page displays.

2. Under List, select the **Connect:Enterprise UNIX Server Adapter** from the **by Service Type** drop-down list and click **Go!**

The Services Configuration page displays with a list of service configurations.

3. Click **Edit** next to the Connect:Enterprise UNIX Server Adapter.

The Server Adapter Name page displays with a default name of BP and a default description.

When enabled, the Server Adapter name BP registers in Sterling Connect:Enterprise as a Business Process Protocol Daemon when you perform a cmusession command in Sterling Connect:Enterprise to view a list of registered daemons.

4. Click **Next**. The CEU Server Adapter BP:CEU-Side Configuration page displays.
5. Complete the fields using the following table as a guide:

Field	Description
CEU Host	The host name or IP address of the Sterling Connect:Enterprise instance for the Server Adapter to connect to.
CEU Port	The port number the Server Adapter uses to connect to the Sterling Connect:Enterprise application. This is the port of the Sterling Connect:Enterprise for UNIX control daemon.
CEU User ID	A valid remote account user ID (RSD) required to access the Sterling Connect:Enterprise application.
CEU Password	The password required to access the Sterling Connect:Enterprise application.  Maximum number of characters is 55.
Maximum active CEU sessions	The maximum number of sessions that can be active at any given time. Default value is 10. The minimum value is 1.

6. Click **Next**.
7. The **Listen Port** field displays the port number on which Sterling B2B Integrator monitors for a Sterling Connect:Enterprise Schedule notification. The port number is automatically generated based on the initial port number provided during Sterling B2B Integrator installation. Click **Next**. Both the listed port number and the next higher number are occupied for the Listen Port. Do not assign either of these ports for another purpose.
8. The Server Adapter BP:Confirm page displays with a summary of parameters chosen for the Server Adapter. Select **Enable Service for Business Processes** to activate the Server Adapter. If you do not enable the Server Adapter, Sterling B2B Integrator cannot communicate with Sterling Connect:Enterprise.
9. Click **Finish** to save settings and complete the configuration process.

## Configuring Additional Instances of Server Adapter

Although a sample instance of the Server Adapter is included in Sterling B2B Integrator, you can create a new instance of the Server Adapter as needed.

### About this task

Before configuring a new instance of the Server Adapter, review the following tips:

- You can use the sample Server Adapter named BP for your production environment. However, if you plan to use more than one instance of the Server Adapter with a single instance of Sterling Connect:Enterprise, you must create additional instances of the Server Adapter, with different names.
- The Sterling Connect:Enterprise Schedule that starts a connection to Sterling B2B Integrator points to a specific resource. This resource is the registered instance of the Server Adapter. Therefore, it may be useful to create and name instances of the Server Adapter based on how they are used in Sterling B2B Integrator (such as SAP, or Rosseta).

### Procedure

1. From the Sterling B2B Integrator **Business Process** menu, select **Deployment > Services > Configuration**. The Services Configuration page displays.
2. Under **Create**, next to **New Service**, click **Go!**
3. Using **List** view, select **Connect:Enterprise UNIX Server Adapter**
4. Click **Save**.
5. Click **Next**. The Server Adapter Name page displays.

6. Complete the following fields:

Field	Description
Name	Type a unique name of 1-8 characters to identify the new instance of the Server Adapter.  The name entered in this field registers in Sterling Connect:Enterprise as a Business Process Protocol Daemon. Perform a cmusession command in Sterling Connect:Enterprise to view a list of registered daemons.
Description	Type a description of the new instance of the Server Adapter.

7. Under **Select Group**, choose one of the following options:

Option	Description
No Group	Choose this option if you do not want to create an adapter group nor assign the current adapter to a group
Create New Group	Choose this option if you want to create a new adapter group. Type the name of the adapter group in the corresponding field.
Select Group	Choose this option if you want to assign the current adapter to an adapter group. Select the adapter group from the corresponding drop-down list.

8. Click **Next**.The CEU Server Adapter BP:CEU-Side Configuration page displays

9. Complete the following fields:

Field	Description
CEU Host	The host name or IP address of the Sterling Connect:Enterprise instance for the Server Adapter to connect to.
CEU Port	The port number the Server Adapter uses to connect to the Sterling Connect:Enterprise application. This is the Sterling Connect:Enterprise Control Daemon monitoring port.
CEU User ID	A valid remote account user ID required to access the Sterling Connect:Enterprise application.
CEU Password	The password required to access the Sterling Connect:Enterprise application.  Maximum number of characters is 55.
Maximum active CEU sessions	The maximum number of sessions that can be active at any given time. Default value is 10. The minimum value is 1.

10. Click **Next**.The **Listen Port** field displays the port number Sterling B2B Integrator monitors for a Sterling Connect:Enterprise Schedule notification. Both the listed port number and the next higher number are occupied for the Listen Port. Do not assign either of these ports for another purpose.
11. Type a valid and unique port number on the Sterling B2B Integrator host that does not conflict with another process.
12. Click **Next**.The CEU Server Adapter Confirm page displays with a summary of parameters chosen for the adapter.
13. Select **Enable Service for Business Processes** to activate the new instance of the Server Adapter.If the new instance of the Server Adapter is not enabled, Sterling B2B Integrator cannot communicate with Sterling Connect:Enterprise.
14. Click **Finish** to save settings and complete the configuration process.

---

## Testing Sterling B2B Integrator and Sterling Connect:Enterprise for UNIX Interoperability

You can test that Sterling B2B Integrator and Sterling Connect:Enterprise were configured correctly and are now communicating by the following methods:

- Perform a quick test
- Run the interoperability verification demo

### Quick Test

The Server Adapter must be configured with a valid Sterling Connect:Enterprise host, port, user id, and password so the Server Adapter can be registered in Sterling Connect:Enterprise as a business process protocol daemon. After the Server Adapter is configured and registered, Sterling Connect:Enterprise sees the Server Adapter as just another protocol.

**Note:** Maximum number of characters for the password in the Server Adapter is 55. If the Sterling Connect:Enterprise for UNIX password is longer than 55 characters, it must be changed to 55 characters or less.

### Testing the Configuration

To test the configuration, follow this procedure.

#### Procedure

1. Start the Sterling Connect:Enterprise server.
2. Edit the CEUAdapter BP.
3. Click **Enable**.
4. Click **Finish**.

### Verifying the Configuration

To quickly verify that the Server Adapter is configured correctly and that Sterling B2B Integrator and Sterling Connect:Enterprise are communicating, follow this procedure.

#### Procedure

1. Type one of the following `cmession` commands to find a registered instance of the Server Adapter:
  - To list only registered business process protocols:  
`cmession -u admin -p adminpass -g`
  - To list all registered protocols:  
`cmession -u admin -p adminpass`  
where *admin* is the Sterling Connect:Enterprise product administrator login and *adminpass* is the password for that login id
2. Verify that the Server Adapter is listed as a BP protocol.  
If the Server Adapter name is not in the list of registered protocols, the following are the most frequently encountered problems:

#### Results

If the Server Adapter name is not in the list of registered protocols, the following are the most frequently encountered problems:

- Invalid host IP address or port number

- The adapter is not enabled

To identify the problem:

1. In the web administrator, navigate to **Operations > System > Log**
2. Turn on special ceuinterop.log.

## **Interoperability Verification Demo**

Sterling B2B Integrator includes a demo that you can run to verify interoperability between Sterling B2B Integrator and Sterling Connect:Enterprise.

For a demo overview and instructions on how to run the demo, see [Demo Overview of Sterling Connect:Enterprise for UNIX Interoperability](#).



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## Chapter 4. Tracking Activity in Sterling Connect:Enterprise for UNIX Interoperability

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### Tracking Interoperating Activity in Sterling Connect:Enterprise for UNIX

You can perform batch queries in Sterling Connect:Enterprise to view batch activity that has occurred as a result of a business process in Sterling B2B Integrator. You can also view account and schedule reports to locate business process IDs and track specific business processes back to Sterling B2B Integrator to view even more detailed information.

#### About this task

The following pages and reports are available in Sterling Connect:Enterprise to track batch and business process detail:

- Select Batches page
- Generate Account Reports
- Generate Schedule Reports

#### Procedure

1. Start Sterling Connect:Enterprise.
2. From the left navigation panel, click one of the following, depending on which page or report you want to view:

Page	Description
Select Batches	<p>The <b>Select Batches</b> filtering option enables you to perform queries on batch activity that may have resulted from an Sterling B2B Integrator business process. You can get batch activity detail based on batch ID, mailbox ID, account ID, and processing status.</p> <p>Use the following values in <b>Select By</b>:</p> <ul style="list-style-type: none"><li>• V (BP verified)</li><li>• J (added by a Business Process).</li></ul>
Generate Account Report	<p>The Summary Account Report and Detail Account Report enable you to perform queries on remote account activity based on the business process protocol, mailbox ID, batch number, batch ID, or session ID. You cannot query on business process ID, but it displays in the Detailed Account Report.</p> <p>Under the business process ID, hyperlinks to the Sterling B2B Integrator Business Process Details page are available to easily track activity to the responsible business process.</p> <p>If a Connect:Enterprise UNIX Service runs in a business process, a log entry is written and visible in the Detail Account report.</p>

Page	Description
Generate Schedule Report	<p>The Generate Schedule Report function enables you to report on the activity for a schedule. You can generate a Summary Schedule Report, Detail Schedule Report, or Queued Schedule Report. You can view information associated with the schedule such as remote account, mailbox ID, batch number and ID, protocol, status, and session ID.</p> <p>The Detail Schedule Report includes the business process ID with hyperlinks to the Sterling B2B Integrator Business Process Details page to easily link activity to the responsible business process.</p>

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## Tracking Interoperating Activity in Sterling B2B Integrator

You can perform queries in Sterling B2B Integrator to view business-process activity that has occurred in Sterling Connect:Enterprise.

### About this task

The following tracking and search functions are available in Sterling B2B Integrator to track business process and Server Adapter activity:

- Business Process Detail (Current<sup>®</sup> Processes page)
- Server Adapter Monitoring (Current Activities page)
- Correlation Search

### Procedure

1. From the Sterling B2B Integrator Business Process menu, select **Monitor**.
2. Click one of the following, depending on which search function you want to perform:
  - **Current Processes**
  - **Current Activities**
  - **Advanced Search > Correlation**

### Business Process Detail (Current Processes)

The Current Processes page displays a summary of the processes in Sterling B2B Integrator. A Green status indicates no errors or warnings occurred during processing. A Red status indicates errors or warnings were encountered during processing. Use this page to:

- Review detailed processing information such as the document payload
- View the business process definition
- View the current state of a business process
- View the date and time a business process Started and Ended

### Server Adapter Monitoring (Current Activities)

The Current Activities page enables you to monitor an instance of the Sterling Connect:Enterprise UNIX Server Adapter. When you select an Server Adapter to monitor, Sterling B2B Integrator displays activity detail occurring on the Server Adapter.

Activities include Add and Extract. The percentage of data transfer completed displays.



## Correlation Search

### About this task

The Server Adapter and related services write Sterling B2B Integrator correlation records to enable searches for business processes and documents that contain certain correlation identifiers.

The Correlation Search page enables you to search for business process activity based on the Server Adapter instance name, Sterling Connect:Enterprise session ID, mailbox ID, batch ID, and batch number.

### Procedure

1. Select **Batch ID** from the **Name** field.
2. Type the batch ID name in the **Value** field.

The result of the search is all business processes and documents associated with that batch ID.

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## Business Document Tracking Scenario in Sterling Connect:Enterprise for UNIX Interoperability

### About this task

To help understand how reporting and search capabilities in Sterling Connect:Enterprise and Sterling B2B Integrator can work together, read the following tracking scenario in which MaxxMart, the fictitious retailer discussed in Sample Business Process Scenario in Sterling Connect:Enterprise for UNIX Interoperability, has not received their order for video game accessories from GameRAZ, another fictitious company.

GameRAZ, who has the role of Main trading partner, has Sterling Connect:Enterprise for UNIX and Sterling B2B Integrator installed. GameRAZ defined their remote BP account and notification schedule in Sterling Connect:Enterprise and they configured an instance of the Server Adapter in Sterling B2B Integrator in order to establish interoperability between the two applications.

MaxxMart contacts GameRAZ to find out why they did not receive their order. GameRAZ researches the order in their back-end order fulfillment system and realizes the order never went to the processing department.

The following steps show how GameRAZ can use interoperability between Sterling Connect:Enterprise and Sterling B2B Integrator to figure out what happened to the MaxxMart order.

### Procedure

1. GameRAZ uses Sterling Connect:Enterprise to check the MaxxMart specified mailbox to see if the MaxxMart order was present. It was present, but it had not been extracted.
2. GameRAZ accesses the Sterling Connect:Enterprise interface and generates an account report to view activity on the MaxxMart mailbox. A detail account report is returned that displays activity information for the mailbox. There is a hyperlink in the report to Sterling B2B Integrator and provides detailed business process information. GameRAZ clicks on the appropriate hyperlink in order to track the business processes related to this mailbox.

3. From the business process detail, GameRAZ sees that the back-end system was down the day the order was submitted, based on the error messages in the business process detail.

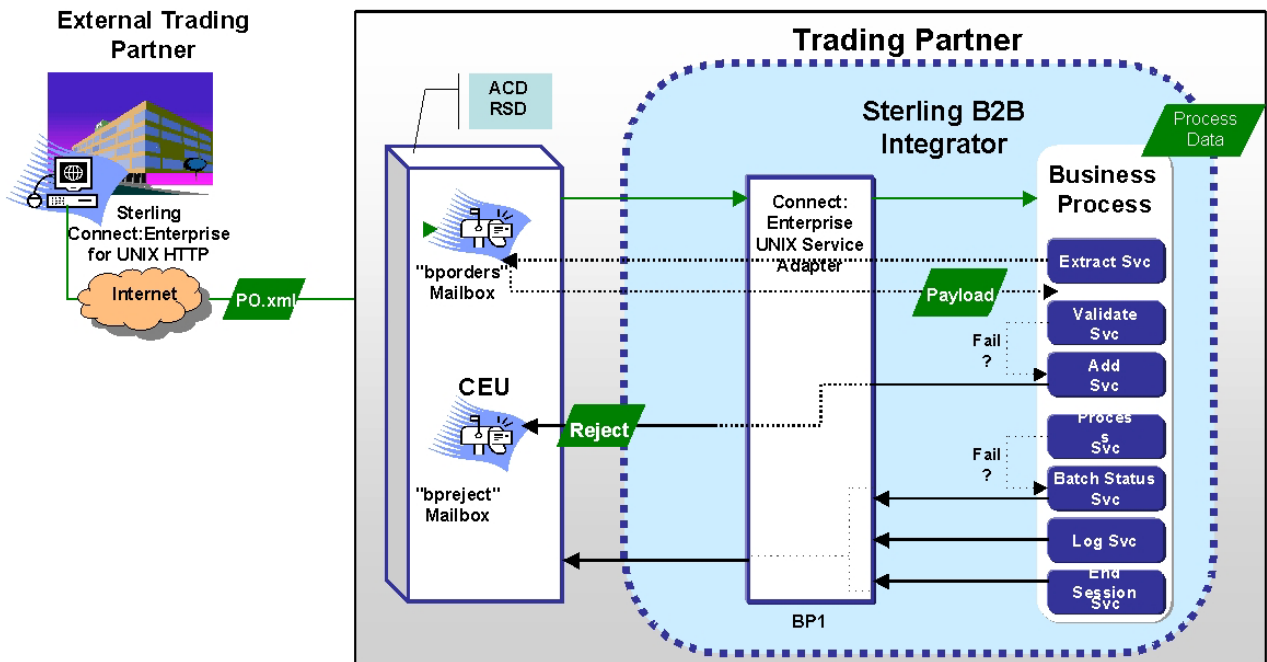
The business process logged the error in Sterling Connect:Enterprise and made the order re-eligible for processing using the CEU Server Batch Status Service to reset the V and T flags. The reason it had not been processed again was because no new orders had been added to the mailbox to trigger the automatic schedule notification.

4. GameRAZ realizes they need to add a timed schedule to the MaxxMart autoconnect schedule file. GameRAZ corrects the problem by updating the MaxxMart schedule file in Sterling Connect:Enterprise to run twice daily.
5. To ensure that problems are detected promptly, GameRAZ establishes a routine of running a Schedule Report for Processing Status = Failed. If all processes are executing properly, this report is empty.

## Chapter 5. Demo of Sterling Connect:Enterprise for UNIX Interoperability

### Demo Overview of Sterling Connect:Enterprise for UNIX Interoperability

The following diagram illustrates the business process flow for the verification demo:



The verification demo involves two trading partners: an external trading partner sending a purchase order for model cars and the other trading partner receiving and validating the purchase order.

The demo runs the following sample business processes included in Sterling B2B Integrator:

- CEUInterop\_DemoPOAdd
- CEUInterop\_DemoPOProcess

**Note:** The CEUInterop\_DemoPONoTrigger is an optional business process you can run. It puts an order in a mailbox but does not trigger the autoconnect for the CEUInterop\_DemoPOProcess business process. You can run this demo to add an order to a mailbox only. When you perform the CEUInterop\_DemoPOAdd business process, it adds its own order to the mailbox and cause processing of all the orders in the mailbox.

#### CEUInterop\_DemoPOAdd

Using the CEUInterop\_DemoPOAdd business process, a batch is added to the borders mailbox on Sterling Connect:Enterprise. A predefined schedule in Sterling Connect:Enterprise named samp\_bp.acd is configured to look for data in this

mailbox based on specific criteria. When an XML file is detected, the notification schedule invokes the CEUInterop\_DemoPOAdd business process to add the purchase order batch to the Sterling Connect:Enterprise bporders mailbox. This notification is the result of the schedule defined in Sterling Connect:Enterprise.

The CEUInterop\_DemoPOAdd business process simulates the external trading partner using the HTTP option, as shown on the left side in the preceding figure. By using the CEUInterop\_DemoPOAdd business process to add an XML file to the bporders mailbox, the following is accomplished:

- The demo is started by adding a batch to bporders.
- It serves as an example of how to use the CEU Server Add Service.
- The CEUInterop\_DemoPOAdd business process notifies the registered Server Adapter to invoke the CEUInterop\_DemoPOProcess business process.
- The CEUInterop\_DemoPOProcess business process performs the extract and validate on the batch summary data.
- The schedule notification also passes important batch summary data to the business process.

The following ProcessData is an example of what information is sent to the business process:

```
<?xml version="1.0" encoding="UTF-8"?>
<ProcessData>
  <SessionId>3907</SessionId>
  <ACD_INFO>
    <AcidName>brads.acd</AcidName>
    <SessionId>3907</SessionId>
    <AdapterName>kup22800</AdapterName>
    <MailboxList>bporders</MailboxList>
    <BatchIdPattern>*.xml</BatchIdPattern>
    <PutOptions>$$CODE=A MULTXMIT=YES</PutOptions>
    <BusinessProcessParameters format="xml">
      <TP_INFO>
        <Mailboxes>
          <Rejected>bpreject</Rejected>
          <InProcess>bpinproc</InProcess>
          <Invoice>bpinvoic</Invoice>
          <Messages>bpmsg</Messages>
        </Mailboxes>
        <EmailAddress>user_one@ibm.us.com</EmailAddress>
      </TP_INFO>
    </BusinessProcessParameters>
  <Batches>
    <Batch>
      <CEUBatchNumber>5262</CEUBatchNumber>
      <CEUMailbox>bporders</CEUMailbox>
      <CEUBatchId>CarOrder.po</CEUBatchId>
      <CEUBatchSize>208</CEUBatchSize>
      <CEUBatchDateTime>12/17/03 3:38 PM</CEUBatchDateTime>
    </Batch>
    <Batch>
      <CEUBatchNumber>5263</CEUBatchNumber>
      <CEUMailbox>bporders</CEUMailbox>
      <CEUBatchId>CarOrder.po</CEUBatchId>
      <CEUBatchSize>208</CEUBatchSize>
      <CEUBatchDateTime>12/17/03 3:40 PM</CEUBatchDateTime>
    </Batch>
  </Batches>
</ACD_INFO>
</ProcessData>
```

The information within the Batches tag shows the batch summary data for two batches with an .xml file name extension found in the bporders mailbox. This

information is batch summary data only and does not include the business document payload at this point of the business process.

The CEUAdapterInstanceName and SessionId indicate which Server Adapter instance and session invoked the business process. Because you can have multiple instances of the Server Adapter, each CEU Service used in the business process must know which Server Adapter instance to communicate with.

The Business Process Parameters tag in the preceding example includes mailbox information, and additional user-defined XML content such as an email address and other information that is pertinent to the business process. The parameters were entered in Sterling Connect:Enterprise as optional business process parameters when the schedule was defined. This information is available in ProcessData and is accessed using Xpath by the BPML writer.

The CEUBatchNumber and CEUBatchDateTime are used when a batch is extracted.

## CEUInterop\_DemoPOProcess

The Sterling Connect:Enterprise schedule notification is preconfigured to look for an \*.xml file in the bporders mailbox. When an XML file is added, Sterling Connect:Enterprise communicates to the Server Adapter to invoke the CEUInterop\_DemoPOProcess business process.

The CEUInterop\_DemoPOProcess business process uses the CEU Extract Service to retrieve the batch, extract the business document payload, and validate the XML.

---

## Running the Sterling Connect:Enterprise for UNIX Interoperability Verification Demo

### About this task

To run the demo business process to verify successful configuration of Sterling B2B Integrator and Sterling Connect:Enterprise interoperability, follow this procedure.

### Procedure

1. From the Sterling B2B Integrator Business Process menu, select **Manager**.
2. Type **ceu** to search for the Sterling Connect:Enterprise business processes and click **Go!**
3. There should be three sample business processes. Next to the CEUInterop\_DemoPOAdd business process, click **Execution Manager**.
4. On the Execution Manager page, ensure that the business process is enabled and set as the default version, and click **Execute**.
5. Click **Browse** to locate the sample po.xml file on your local machine and click **Go!** The sample po.xml file is located in the Sterling B2B Integrator install directory as: `<installdir > /installed_data/asset/ceuinterop/po.xml`  
You can use any \*.xml file. The sample is included for your convenience.
6. Close the window when the business process completes.  
This process adds a batch to Sterling Connect:Enterprise using the CEU Server Add Service. The mailbox ID is bporders. The batch ID matches the name of the XML file you accessed.
7. From the Business Process menu, select **Monitor > Current Processes**.

Look for the entry for the business process you just executed:  
CEUInterop\_DemoPOAdd

The schedule file samp\_bp.acd in Sterling Connect:Enterprise is pre-configured to look for an XML file to be added into the bporders mailbox. When the CEUInterop\_DemoPOAdd business process executes, Sterling Connect:Enterprise communicates to Sterling B2B Integrator (more specifically, to the registered Server Adapter) to invoke the CEUInterop\_DemoPOProcess business process.

8. To verify that this occurred successfully, in the Current Processes list, look for:  
CEUInterop\_DemoPOProcess  
If this business process is listed, you know Sterling B2B Integrator and Sterling Connect:Enterprise interoperability was successfully achieved. The business process should extract the batch, validate the XML and end.
9. Browse the Sterling Connect:Enterprise interface and locate batch and business process activity in both a Detailed Account Report and Detailed Schedule Report. In the **Business Process ID** column, Batch activity data relating to a business process in Sterling B2B Integrator are hyperlinked to Sterling B2B Integrator providing business process details responsible for that activity.
10. Browse the Sterling B2B Integrator Admin User Interface to find Sterling Connect:Enterprise activity using the correlation search function.  
Using this function, you can define search criteria. For example, to find all business processes invoked by samp\_bp.acd, choose CEU\_ACDName in the **Name** column, and samp\_bp.acd in the **Value** column.

**Note:** For more information on viewing Sterling Connect:Enterprise and Sterling B2B Integrator related activity, see Tracking Interoperating Activity in Sterling Connect:Enterprise for UNIX and Tracking Interoperating Activity in Sterling B2B Integrator.

## Learning More About Sterling B2B Integrator

After you have executed the demo, you can explore to learn about using the Sterling B2B Integrator application:

### Procedure

1. Navigate to **Business Process > Monitor > Current Processes**.
2. View step-by-step business process details and observe the ProcessData created during the processing.
3. Click on **Status Report** of each of the CEU Server Services.
4. View the PrimaryDocument for a corresponding CEU Server Extract Service to see the actual batch (business document).
5. Navigate to **Business Process > Monitor > Advanced Search > Correlation**.
6. Search for business documents and processes by CEU\_ACDName, CEU\_SessionId, CEU\_MailboxId, CEU\_BatchNumber, and CEU\_BatchId.

## Learning More About Sterling Connect:Enterprise

After you have executed the demo, you can explore to learn about using the Sterling Connect:Enterprise application:

### Procedure

1. Sign on as samp\_bp.

2. Click **Generate Account Report** (for remote connect activity) or **Generate Schedule Report** (for autoconnect activity).
3. Perform a **Detailed** search to view activity.
4. Click the **BP ID hyperlink** to view details in Sterling B2B Integrator **Business Process Details**.





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## Chapter 6. Troubleshooting Sterling Connect:Enterprise for UNIX Interoperability

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### Checking the Logs for Sterling Connect:Enterprise for UNIX Interoperability

#### About this task

If you encounter a problem, first check the logs. An error may have been logged that provides the information that is incorrect. By default, the log captures audit level messages indicating the following events, even when logging is not enabled:

- Adapter Startup/Shutdown
- Adapter Edit (Refresh)
- Batch Add
- Batch Extract
- Autoconnect trigger of BP
- Enter/Exit Adapter listening mode for Sterling Connect:Enterprise restart feature

If the error is not in the logs, turn on the Sterling B2B Integrator `ceuinerop.log` to capture activity of the Server Adapter and the Services:

#### Procedure

1. Browse to **Operation > System > Logs**
2. Click **Connect:Enterprise UNIX Server Adapter and Services**.
3. Attempt to recreate the problem.
4. View the log for more informative debug level entries.

---

### Getting Information About Sterling Connect:Enterprise in Sterling Connect:Enterprise for UNIX Interoperability

#### About this task

To determine which instance of Sterling Connect:Enterprise for UNIX the web administrator is connected to, follow this procedure.

#### Procedure

1. Click **About** at the top of any page.
2. The server, install directory, and build number display.

---

### Viewing Batches and Status in Sterling Connect:Enterprise for UNIX Interoperability

#### About this task

To view batches and status in a mailbox, follow this procedure.

#### Procedure

1. In the web administrator, navigate to the **Select Batches** page.

2. In Sterling Connect:Enterprise, use select batches, update batches, cmulist or cmustatus to verify that batches are in a mailbox and the flags are set as expected. If you have access privileges, you can use the update commends to reset specific flags.

---

## Validating the Connection in Sterling Connect:Enterprise for UNIX Interoperability

### About this task

To validate that the business process you are executing is connected, follow this procedure.

### Procedure

1. In the web administrator, navigate to **Define Schedules**.
2. Select the schedule you have a problem with.
3. Select the appropriate block for the schedule.
4. Check the drop down list of registered Server Adapters. Your Server Adapter must be listed to confirm that it is registered.

---

## Solving Possible Problems in Sterling Connect:Enterprise for UNIX Interoperability

Check the following table for possible problems and solutions:

Problem/Symptom	Solution
The Server Adapter displays as <b>Disabled</b> .	Perform the following steps to clear the problem: <ol style="list-style-type: none"> <li>1. Verify that <b>Enable for Business Processes</b> is selected.</li> <li>2. Verify Sterling Connect:Enterprise for UNIX is running.</li> <li>3. Verify the host, port, id, and password used to configure the Server Adapter are valid for the remote node. Maximum number of characters for the password is 55.</li> <li>4. Change the name of your Server Adapter. Sterling Connect:Enterprise business process protocol daemons must register with a unique name. Another Server Adapter may already be registered with the name of your adapter.</li> <li>5. Verify that you have a valid Sterling B2B Integrator license key for Sterling Connect:Enterprise UNIX Server. To check, browse to <b>Operations &gt; System &gt; Logs</b>. View the <b>ceuinterop</b> log.</li> </ol>

Problem/Symptom	Solution
A business process does not start as expected when a batch is added to a mailbox.	<p>Perform the following steps to clear the problem:</p> <ol style="list-style-type: none"> <li>1. In Sterling Connect:Enterprise, see <b>cmucheckcfg</b> to verify the <b>acd</b> and referenced remote block (<b>rsd</b>) are valid.</li> <li>2. Verify the acd file includes the .acd file name extension.</li> <li>3. In Sterling Connect:Enterprise, perform a <b>cmurefresh</b> to force Sterling Connect:Enterprise to read all <b>acd</b> fields again.</li> <li>4. Verify that the <b>rsd</b> remote id and password are valid in a Sterling B2B Integrator User Account.</li> <li>5. Verify that the <b>acd</b> schedule includes the entry <b>MODE=SENDONLY</b>.</li> <li>6. Verify the mailbox access is not set to restrict reads, writes, and directory listings.</li> <li>7. In Sterling B2B Integrator, verify that the <b>rsd</b> remote id (which maps to a Sterling B2B Integrator User Account) has privileges to execute the business process.</li> <li>8. Verify the acd schedule file includes the following entries defined for a triggered autoconnect:  <b>CONTACT = DATA_IMMEDIATE</b>  <b>SENDID =</b>  <b>BATCHID =</b>  <b>RESOURCE =</b></li> <li>9. From the <b>ceuinx</b> install directory, perform <b>cmusession -g</b> and verify the BP adapter name displays and the host name is correct.</li> <li>10. Verify the PUT options on the <b>rsd</b>. The trigger flag must be set to notify the autoconnect daemon.</li> </ol>
Hyperlinks in Account Reports or Schedule Reports open the browser, but the page displays a message <b>Login incorrect, please try again</b> .	<p>Perform the following steps to clear the problem:</p> <ol style="list-style-type: none"> <li>1. In Sterling Connect:Enterprise, verify you are logged in with a remote account defined using the BP protocol.</li> <li>2. Verify that the <b>rsd</b> remote id and password are valid in a Sterling B2B Integrator User Account.</li> </ol>
CEU Server Add Service returned an error <b>CEUInteropException</b> with a message <b>Mailbox error:EACCESS</b>	<p>Perform the following step to clear the problem:</p> <ol style="list-style-type: none"> <li>1. In the web administrator <b>Define Mailbox Access</b>, verify that the permissions for the mailbox are set correctly.</li> </ol>
Status Report contains <i>ERROR CEU Server-BatchStatusService - Caught exception of type CEUInteropException</i> (or similar)	<p>Perform the following steps to clear the problem:</p> <ol style="list-style-type: none"> <li>1. Verify that the user id and password used to configure the Server Adapter are valid for the Sterling Connect:Enterprise instance. Maximum number of characters for the password is 55. The user id must match an <b>rsd</b> file in the remote node.</li> <li>2. Login to the web administrator using the user id and password specified to test the validity.</li> </ol>
Receive error exception decrypting passphrase.	<p>Password exceeds limit of 55 characters in the Server Adapter. If the Sterling Connect:Enterprise for UNIX password is longer than 55 characters, it must be changed to 55 characters or less.</p>



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# Index

## A

- accounts, in Sterling
  - Connect:Enterprise 2
- ANSI X12 protocol 1
- AS1 protocol 1
- AS2 protocol 1
- Async protocol 1

## B

- B2B management 1
- batches, in Sterling Connect:Enterprise 2
- Bisync protocol 1
- business process 7
  - detail 28
  - flow diagram 31
- Business Process Modeling Language (BPML) 1
- business process protocol
  - daemon 3, 21, 23, 24
  - description 3
- Business Processes 7

## C

- CEU Server Service
  - Add 5
  - Batch Status 5, 10
  - Begin Session 5, 9
  - End Session 5, 9
  - Extract 5, 8
  - Log 6, 11
- checking logs 37
- configuring
  - Server Adapter 21
- correlation
  - records 3
  - search 29

## D

- demo
  - running for interoperability verification 33
- Detail Account Report 27
- Detail Schedule Report 28

## E

- E-mail protocol 1
- ebXML protocol 1, 2
- EDIFACT protocol 1

## F

- flags, in Sterling Connect:Enterprise 3
- FTP protocol 1

## G

- getting information about Sterling Connect:Enterprise 37
- graphic
  - business process flow 31
  - high-level view 3
- Graphical Process Modeler (GPM) 7

## H

- HTTP protocol 1

## I

- Internet communications protocols (HTTP, FTP, E-mail) 1
- interoperability testing 24

## L

- logs, enabling 37

## M

- mailbox, in Sterling Connect:Enterprise 3

## P

- ProcessData 3
- protocols supported 1, 2

## Q

- Queued Schedule Report 28

## R

- report
  - Detail Account 27
  - Detail Schedule 28
  - Queued Schedule 28
  - Summary Account 27
  - Summary Schedule 28
- RosettaNet protocol 2
- running the interoperability verification demo 33

## S

- schedules
  - defining 16
  - editing 16
  - in Sterling Connect:Enterprise 2
- Secure FTP protocol 1
- security
  - standards supported 1
- Select Batches 27
- Server Adapter
  - configuring 21
  - monitoring 28
- service
  - CEU Server Add 5
  - CEU Server Batch Status 5, 10
  - CEU Server Begin Session 5, 9
  - CEU Server End Session 5, 9
  - CEU Server Extract 5, 8
  - CEU Server Log 6, 11
    - description 3
  - SIPS encryption 20
  - SOAP protocol 2
  - SSH SFTP protocol 1
  - Sterling Connect:Enterprise for UNIX
    - description 1
    - Server Adapter 2, 3
  - Summary Account Report 27
  - Summary Schedule Report 28
  - system requirements 6

## T

- testing interoperability 24