Application

AS2 Edition Guide

Standards Library Version 5.0

Sterling Commerce

An IBM Company

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Chapter 1

AS2 Edition Overview

The AS2 Edition combines the strengths of Application with Applicability Statement 2 (AS2) EDIINT technology, a protocol for securely exchanging data with non-repudiation of receipt over the Internet.

The AS2 Edition is a message management system enabling the exchange of a variety of documents between trading partners using secure AS2 EDIINT technology. The AS2 Edition uses the Internet as a transport mechanism, ensures privacy and security of documents exchanged, and provides a means of non-repudiation. The AS2 Edition extends your investments by sending and receiving documents and interacting with your existing processes. Basically, you put a document into a specific mailbox or directory to send it to a specific partner and you receive documents from partners in partner-specific mailboxes or directories.

This section explains what the AS2 Edition is and what you need to know to interact with the product. This section also gives an overview of the steps you must take from installation to exchanging documents with your AS2 trading partners.

Is AS2 Edition Right for Your Implementation?

The AS2 Edition contains all the Application components necessary to configure a basic AS2 implementation. The AS2 Edition may not be suitable for all environments. We recommend that you carefully evaluate whether your needs will be met by the AS2 Edition or if you require an advanced implementation that will necessitate you writing custom business processes to use the EDIINT services. You will require a custom implementation for any of the following reasons:

✦ You need to trade messages with many trading partners.

✦ You want to integrate directly with the translator or any other Application subsystem, instead of simply doing input and output to mailboxes or to the file system.

✦ You want to write either more simple or different processes for performance reasons (for example, you do not want to use the JDBC service or the AS2_TRADEPART_INFO table (the application-specific database table for mapping directories or mailboxes to contracts) because foregoing these components will improve performance).

✦ You need to exchange AS1 messages.

AS2 Edition Components

The AS2 Edition has the following components that are embedded in Application:

✦ Predefined business processes to send messages and check for acknowledgements (MDNs)—these business processes contain built-in error notification mechanisms that are able to send e-mails if MDNs are not received or if a negative MDN is received

✦ Services

✦ Browser-based user interface to configure and manage AS2 trading partners

✦ Database table (AS2_TRADEPART_INFO) that enables the mapping of directories and mailboxes to trading partner contracts

✦ Default AS2 URL (ApplicationIP_ADDRESS:port/b2bhttp/inbound/as2), which invokes the business process EDIINTParse and is designed to work both with and without the AS2 Edition to verify whether the sender/recipient are in the AS2_TRADEPART_INFO database table and, if so, perform application-specific handling in addition to message parsing

The predefined business processes and the services leverage the EDIINT implementation and enable you to exchange documents with your trading partners through AS2.

The AS2 Edition uses either the Application file system (directories) or mailboxes for processing business documents inbound and outbound. These mailboxes and directories are created by the AS2 wizard. This enables you to put a document into a specified mailbox or directory to send it to a particular trading partner and you receive documents from partners though partner-specific mailboxes and directories.

For more information about monitoring predefined business processes, see Chapter 4, *Tracking and Managing Document Exchange in the AS2 Edition*.

AS2 Edition Predefined Business Processes

The AS2 Edition uses predefined business processes (in conjunction with predefined services) to implement the AS2 EDIINT protocol. These predefined business processes are automatically installed and configured when you install the AS2 Edition.

The AS2 Edition uses these predefined business processes along with services to build and transmit messages to trading partners. Data files are collected from the file system or extracted from mailboxes. After the AS2 Edition collects files from the file system or extracts files from mailboxes, it launches business processes that:

1. Encapsulate the data files into AS2-compliant messages.

2. Attempt to transmit those messages through HTTP or HTTPS.

3. Potentially process responses or acknowledgements to those messages.

Note: The AS2 Edition provides business processes for sending messages and checking for acknowledgements (MDNs). These business processes contain built-in error notification mechanisms that can continue to send e-mails if an MDN is not received, or if a negative MDN is received.

4. Existing predefined AS2 business processes include enhanced retry logic for each partner, and a parameter that enables you to specify how many files to retrieve from a partner's file system during

each scheduled interval. This enables Application to stop send attempts to a partner's system when it is down. This limits how many processes spawn ends at any one time, and preventing Application from overloading itself and your partner's system.

These business processes can detect several types of errors and can inform users and restage data files if errors occur. The business processes attempt to retry in the following situations:

✦ When what is potentially a transient HTTP error is detected based on the return code (408, 503, or 504).

✦ When an asynchronous Message Disposition Notification (MDN) is requested, and the MDN does not show up in the MDN timeout interval.

When you are collecting and saving data using the file system, a scheduled business process, AS2 File System Adapter.bpml, invokes the File System adapter, which collects data files from the file system. The EDIINTMessageService is used to build AS2 messages and process acknowledgements. The HTTPClientSend business process is used to transmit messages via HTTP. The Wait service is used to wait for acknowledgements or for an interval to expire before a retry, and the EDIINT Acknowledge Check Service is used to check for acknowledgements.

The following steps summarize the activities completed by business processes when sending messages:

1. Business processes send messages requesting synchronous receipts, asynchronous receipts, or no receipts.

2. Based on the receipt options specified for a trading partner, the business processes handle business documents, as appropriate.

The following steps provide an overview of activities completed by predefined business processes when receiving messages:

1. Business processes parse messages, generate and send receipts.

2. Using the File System adapter, the business processes extract business documents.

Predefined business processes run up to three times if the message transaction is not completed within a specified amount of time. The AS2 Edition enables you to monitor the predefined business processes and perform manual activities, such as starting and stopping predefined business processes.

The following types of business processes enable document transactions with the AS2 Edition:

✦ Extraction business process

✦ Message sending business process

Extraction Business Process

The AS2 Edition provides one extraction predefined business process, the AS2Extract business process. The AS2Extract business process writes a business document that is attached to a message to an outbound folder for a trading partner by completing the following process:

1. The AS2Extract business process calls the JDBC adapter to obtain the name of the trading partner outbound folder from the AS2TradingPartnerInfo table.

2. The AS2Extract business process calls the File System adapter to write the business document to a file in the outbound folder.

The following table describes the extraction business processes:

Business Process	Description
EDIINTParse	Parses messages; is configured on the default Application AS2 URL ([Application]IP_ADDRESS:port/b2bhttp/inbound/as2).
	Note: This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
AS2Extract	Extracts business payload data to the trading partner's inbound subdirectory.

Message Sending Business Processes

The AS2 Edition provides three business processes for sending messages. Depending on which message disposition notification (MDN) option you choose when configuring your trading partner information, the AS2 Edition selects the appropriate business process for the File System adapter to send data to a trading partner.

The message sending processes are input/output specific—that is, there is one set of processes using documents from file system directories and one set of processes using documents from mailboxes. The mailbox business processes use throttling if a trading partner is "down" or unable to accept messages (based on a connection failure or a non-transient HTTP error code) by setting a lock in the database. Then, if a lock is set by an associated business process, the business process responsible for creating (spawning) the business process to send the documents will not attempt to create more sending business process instances while the lock is set. Once Application determines that the trading partner is able to accept messages, the backlog of messages (messages that were unable to be sent while the database lock was in place) are cleared in a manner so that your trading partner is not bombarded with many messages all at once.

Note: You can set a Max Files to Collect parameter for the File System adapter to ensure that any backlog of messages is cleared in an orderly manner.

For more information about MDNs, see *Message Disposition Notifications* on page 12.

The following table describes each message sending business process:

Business Process	Description
AS2SendNoMDN	Builds a message from the file system when no MDN is expected.
	Note: This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
AS2SendAndProcess NoMDN	Sends a message from the file system when no MDN is expected.
	Note: This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
AS2SendSyncMDN	Builds a message from the file system when a synchronous MDN is expected.
	Note: This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.

Business Process	Description
AS2SendAndProcess SyncMDN	Sends the message from the file system and processes the MDN when a synchronous MDN is expected. **Note:** This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
AS2SendASyncMDN	Builds a message from the file system when an asynchronous MDN is expected. **Note:** This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
AS2SendAndProcess ASyncMDN	Sends the message from the file system and processes the MDN when an asynchronous MDN is expected. **Note:** This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
MailboxAS2SendNo MDN	Builds and sends a message from a mailbox when no MDN is expected. Also uses throttling if a trading partner is "down" or unable to accept messages (based on a connection failure or a non-transient HTTP error code) by setting a lock in the database. **Note:** This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
MailboxAS2SendNo MDNSpawner	Spawns an instance of MailboxAS2SendNoMDN with an extracted message. **Note:** If a lock is set by the MailboxAS2SendNoMDN business process, this spawning process will not attempt to create more sending process instances while the lock is set. **Note:** This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
MailboxAS2SendSync MDN	Builds and sends a message from a mailbox when a synchronous MDN is expected. Also uses throttling if a trading partner is "down" or unable to accept messages (based on a connection failure or a non-transient HTTP error code) by setting a lock in the database. **Note:** This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
MailboxAS2SendSync MDNSpawner	Spawns an instance of MailboxAS2SendSyncMDN with an extracted message. **Note:** If a lock is set by the MailboxAS2SendSyncMDN business process, this spawning process will not attempt to create more sending process instances while the lock is set. **Note:** This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.

Business Process	Description
MailboxAS2SendASync MDN	Builds and sends a message from a mailbox when an asynchronous MDN is expected. Also uses throttling if a trading partner is "down" or unable to accept messages (based on a connection failure or a non-transient HTTP error code) by setting a lock in the database.
	Note: If a lock is set by the MailboxAS2SendASyncMDN business process, this spawning process will not attempt to create more sending process instances while the lock is set.
	Note: This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
MailboxAS2SendASync MDNSpawner	Spawns an instance of MailboxAS2SendAsyncMDN with an extracted message.
	Note: This business process uses the EDIINT Pipeline service instead of the EDIINT Message service because of the ability of the former service to handle large and high-concurrency files.
HTTPSyncSend	Sends a synchronous MDN using the EDIINT Message service or EDIINT Pipeline service.
HTTPAsyncSend	Sends an asynchronous MDN using the EDIINT Message service or EDIINT Pipeline service.
SMTPSend	Sends an SMTO (mailto) MDN using the EDIINT Message service or EDIINT Pipeline service.
MailboxAS2Add	Extracts business payload data to the trading partner's inbound mailbox.

Each business process completes the following process:

1. The business process calls the JDBC adapter to obtain the MDN information for a trading partner. This information consists of the error directory, the receipt time-out value, and the retry interval value.

2. The business process calls the EDIINT Pipeline service (or in rare cases, the EDIINT Message service to build a message for a trading partner.

3. The business process invokes the HTTPClientSend business process to send the message to the trading partner. The HTTPClientSend business uses the HTTP Client Begin Session Service, HTTP Client POST Service, and HTTP Client End Session Service. If the send request fails, the process attempts to resend the message in ten minutes. If needed, this step repeats a total of three times.

   ◆ If the send request is successful, the AS2SendSyncMDN process calls the EDIINT message service to parse the response, which should be a valid message disposition notification.

   ◆ If the send request fails, an error is written to the error log.

4. The AS2SendSyncMDN and the AS2SendASyncMDN business processes call the EDIINT Acknowledge Check service periodically to check whether the message has been acknowledged. These calls continue until the receipt time-out interval expires.

   ◆ If the message is acknowledged, the EDIINT Acknowledge Check service completes successfully.

   ◆ If the message is not acknowledged, the EDIINT Acknowledge Check service waits for the time period set in the Retry Interval parameter. If the retry interval expires and the message is still not acknowledged, the process retries from step 1 in this process. If the retry fails three times, an error indicating that the service failed is written to an error log in your trading partner's error folder on

your AS2 Edition system. A second error is written to the trading partner error log containing the original collected file under another name.

Message Disposition Notifications

A *message disposition notification (MDN)* is a receipt document that contains the original message ID of a message and status information about the original message.

Electronic Data Interchange-Internet Integration (EDIINT) is a family of protocols developed by the Internet Engineering Task Force (IETF) for securely packaging and transporting messages containing business data over the Internet, using S/MIME.

There are two flavors of EDIINT:

- AS1, which uses SMTP, POP, and IMAP as the transport

- AS2, which uses HTTP as the transport

Within a business process in Application, the EDIINT Message service builds and parses EDIINT AS1 and AS2 messages. The EDIINT Pipeline service on the other hand builds and parses only AS2 messages, including plain text, signed, and encrypted data.

MDNs that conform to the EDIINT specifications can contain a cryptographic hash calculated over the content of the message after EDIINT processing.

An MDN can be either:

✦ Signed – Contains an encrypted digital signature of the receiver.

✦ Unsigned – Contains only the original message ID and not a digital signature.

Signed MDNs that conform to the EDIINT specifications can provide non-repudiation of receipt in addition to message status information. A valid digital signature over an EDIINT MDN shows that the MDN was sent by the trading partner possessing the relevant key pair. It also shows that the signed area of the MDN (which includes the cryptographic hash calculated over the received content) was not altered after signing. A message sender compares the hash in the MDN with the hash calculated when the message was generated. If the hashes match, the sender knows that the receiver received the content and has the MDN to demonstrate the status.

Whether signed or not, MDNs do not show that the received message content conforms to EDI or other business document formatting requirements.

MDNs are sent either:

✦ Synchronously – Returned immediately during the same communication session. As shown in the following diagram, A initiates the connection to B and delivers the data to B. A then leaves the connection open while waiting for an MDN from B during the same communication session. After A receives the MDN, A closes the connection.

✦ Asynchronously – Returned at a later time during a different communication session. As shown in the following diagram, A initiates the connection to B and drops the data for delivery to B. A closes the connection and does not wait for an MDN from B during the same communication session. In a later

session, B initiates a connection to A, receives the data from A, and sends an MDN to A. When the MDN is delivered, B closes the connection.
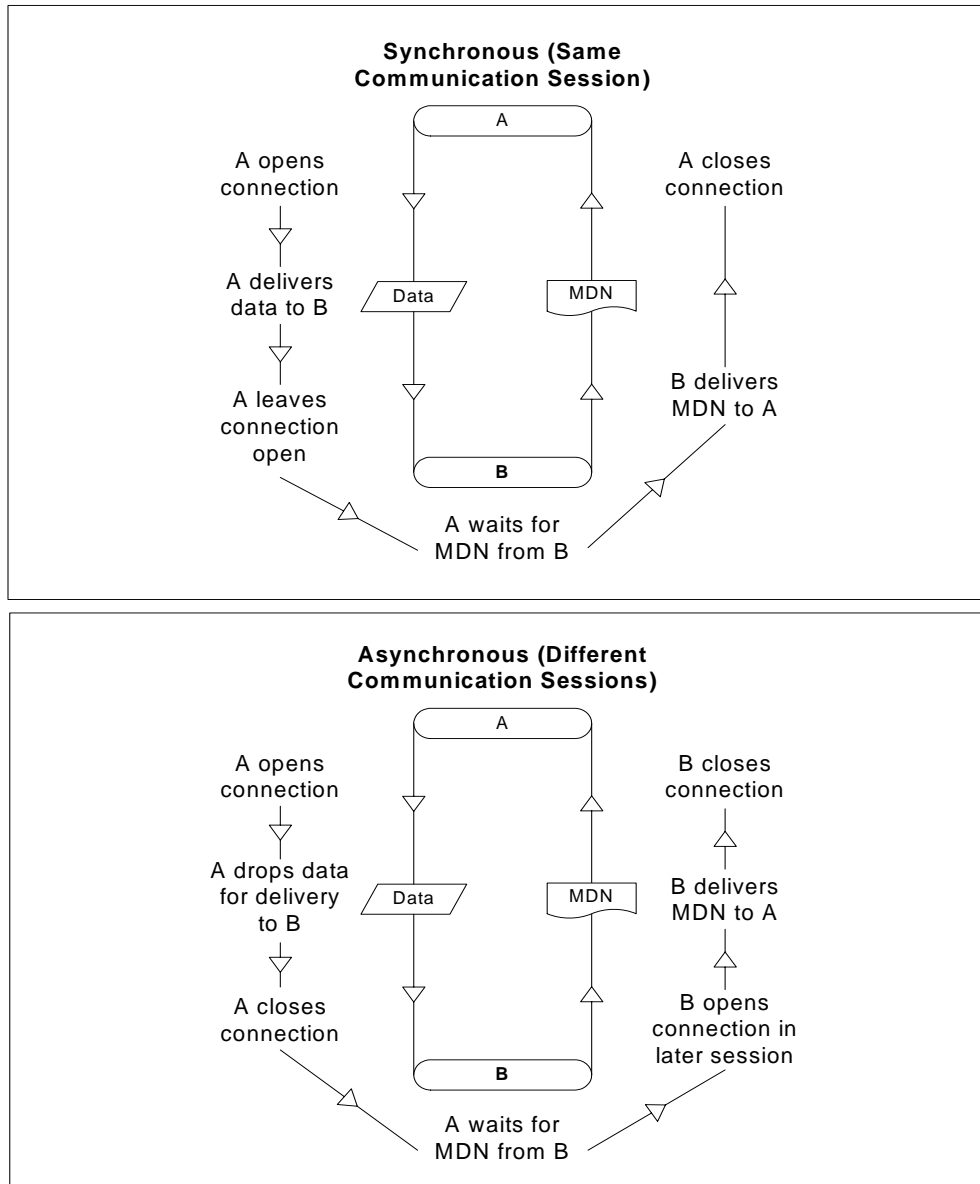
Reprocessing and Resending Messages with the Original Message ID

AS2 Edition allows you to easily reprocess messages because the building and sending of messages is all handled by the predefined business processes. This enables you to reprocess and resend messages using the same message identifier by simply restarting the appropriate business process. The business process will automatically use the primary document (message) with the original message identifier.

To restart a business process, navigate to the Business Process Manager and perform a business process restart. See *Running and Stopping Predefined Business Processes in the AS2 Edition* on page 57.

AS2 Edition Services and Adapters

The AS2 Edition uses services within predefined business processes to carry out a range of AS2-related functions.

Note: The EDIINT-related services are available for customized implementations.

The following services enable document transactions with the AS2 Edition:

✦ HTTP Server adapter

✦ HTTP Client adapter

✦ HTTP Client Begin Session service

✦ HTTP Client POST service

✦ HTTP Client End Session service

✦ EDIINT Message service

✦ EDIINT Acknowledge Check service

✦ EDIINT Pipeline service

✦ EDIINT MDN Building service

✦ File System adapter

Caution: Because of our continuing efforts to improve services and adapters to align with new technology and capabilities, the B2B HTTP Server adapter and the B2B HTTP Client adapter have entered the retirement process in Application and are being replaced with the HTTP Server adapter and the HTTP Client adapter and related services, respectively.

AS2 Edition HTTP Server Adapter

Caution: Because of our continuing efforts to improve services and adapters to align with new technology and capabilities, the B2B HTTP Server adapter has entered the retirement process in Application and will be replaced with the HTTP Server adapter.

The HTTP Server adapter completes the following actions in the AS2 Edition:

1. Receives messages in the AS2 Edition from a Java™ servlet running in a Web server.

Note: The Java servlet provides the HTTP listener service for receiving AS2 messages from trading partners.

2. Runs business processes to handle the messages.

Note: The Java servlet can deploy in a demilitarized zone (DMZ) environment, while the AS2 Edition, including the HTTP Server adapter, resides in the secure area behind the DMZ.

AS2 Edition HTTP Client Adapter

Caution: Because of our continuing efforts to improve services and adapters to align with new technology and capabilities, the B2B HTTP Client adapter has entered the retirement process in Application and is being replaced with the HTTP Client adapter and related services.

The HTTP Client adapter sends messages and asynchronous MDNs to trading partners using the HTTP/HTTPS communication protocols.

AS2 Edition EDIINT Message Service

The EDIINT Message service completes the following steps in the AS2 Edition:

1. Builds or parses EDIINT messages.
2. Generates receipts for messages, as necessary.
3. Correlates receipts with messages.
4. Runs business processes that send receipts and processes inbound documents.

EDIINT Acknowledge Check Service

The EDIINT Acknowledge Check service determines whether an MDN acknowledgement has been received for an EDIINT message within a business process in [Application]. If the MDN acknowledgement is not received within a specific period of time or if a negative MDN is received, the service can cause the business process to fail (or it can continue successfully, depending on the service configuration).

This service is designed to be used in a business process after a message has been sent

You must always include an EDIINT Message service or EDIINT Pipeline service configuration in a business process whenever you include an EDIINT Acknowledge Check service configuration.

EDIINT Pipeline Service

Within a business process, the EDIINT Pipeline service builds and parses only AS2 messages, including plain text, signed, and encrypted data.

Communications services, such as the B2B SMTP Client adapter or the HTTP Client adapter, then send or receive the messages within the business process.

The EDIINT Pipeline service also generates signed or unsigned Message Disposition Notifications (MDNs) when requested to do so and launches the workflow to send MDNs, and will request and process such MDNs too if the contract is so configured. Signed MDNs provide non-repudiation of receipt, which is realized when the original sender of a message verifies the signed receipt coming back from the receiver.

The EDIINT Pipeline service is identical to the EDIINT Message service in terms of functionality except for its added ability to parse large documents (up to 2 GB in size).

EDIINT MDN Building Service

The EDIINT MDN Building service builds a Message Disposition Notification (MDN) based on information in process data and a specified contract ID. This enables you to perform additional custom operations between message parsing and MDN generation so that you can consider the outcome of those operations by reviewing the status code reported in the MDN.

Note: This service is currently not used automatically by the AS2 Edition (the embedded AS2 application) or any predefined business processes—you must create a custom (user-defined) business process to implement it.

AS2 Edition File System Adapter

The File System adapter performs the following:

✦ Monitors an outbound directory configured for a trading partner for documents to send to the trading partner.

✦ Extracts business documents and error information to appropriate directories configured for a trading partner.

When configuring information about an AS2 trading partner, you configure the File System adapter to monitor the outbound folder for that trading partner. The frequency with which the monitoring occurs is specified during the trading partner configuration.

When monitoring the outbound directory, the File System adapter polls the folder to determine whether any new messages need to be sent to your trading partner. If new documents are in the folder and are ready to be sent, the adapter sends the documents to your trading partner.

Note: You can view the files in the inbound and outbound folders in the File Tracking page (the initial page that opens upon accessing the AS2 Edition). The File Tracking page also displays the error log for outbound documents that the File System adapter could not send because of processing errors.

When documents are received from a trading partner, the File System adapter extracts the documents to the inbound folder configured for the partner.

Transmission Failures

If a transmission attempt fails, the File System adapter extracts an error log and the original document to the error folder configured for the partner.

Note: This process does not work with mailbox input or output.

1. The business processes that send messages to trading partners do not retry when errors cannot be interpreted as transient HTTP errors (that is, time-outs because a system is busy at the moment) based on HTTP return codes. These processes use the System Lock service to set a lock when unable to communicate with a trading partner's server.

2. The business processes that send messages to trading partners use the Wait service.

3. The AS2 File System Adapter checks for a lock before invoking the File System Adapter to collect files. If the lock is found, the File System adapter will not be invoked.

4. The AS2 File System Adapter allows you to specify the maximum number of files to collect when invoking the File System adapter to collect files. The use of this value in conjunction with appropriate system sizing allows you to configure your system to be able to clear queued data when a trading partner's server comes back online.

Duplicate Message Processing

EDIINT messages contain message IDs. Message IDs are used to correlate receipts with messages. When a message received from a trading partner is parsed, information about the message, including its message ID, is stored in the database. If a second message is received with the same message ID as a previous message, the AS2 Edition handles the second message as a duplicate. In this case, Application AS2 Edition returns the MDN that it sent for the previous instance of the message to the message sender. AS2 Edition does not extract the message content to the inbound folder configured for the trading partner.

You can force the AS2 Edition to fully process duplicate messages by completing the following actions:

1. Stop the AS2 Edition.

2. Edit the file ediint.properties in the properties directory of your AS2 Edition installation.

3. Add the line ProcessDuplicateMessages = true to the file ediint.properties.

4. Save the file ediint.properties.

5. Start the AS2 Edition.

How the AS2 Edition Works

The AS2 Edition works in the following way:

1. You place a document in the Outbound directory or mailbox configured for a trading partner in your AS2 Edition system.

2. The File System adapter or Mailbox adapter checks the trading partner Outbound directory based on the schedule that you have specified.

3. If a document is found in the Outbound directory, the File System adapter (or Mailbox adapter) starts a predefined business process that sends the document to your trading partner's AS2 system.

4. If an error occurs during transmission of your document to your trading partner, a copy of the data and an error log are placed in the Error directory for that trading partner on your AS2 Edition system. You can review the error log, make the correction to the data and copy the corrected document to the Outbound directory to be sent to the trading partner.

5. If you requested an MDN, your trading partner's AS2 system returns the MDN to your AS2 Edition system. Your AS2 Edition system processes the MDN and updates the EDIINT transaction information for the MDN.

6. If the MDN contains a negative response, a copy of the data and an error log are placed in the Error directory for that trading partner on your AS2 Edition system. You can review the error log, make the correction to the data and copy the corrected document to the Outbound directory to be sent to the trading partner.

7. After the document is received by your trading partner, a system external to the AS2 system extracts the document for use in another system.

The following figure shows the process described in the preceding steps:

Starting, Accessing, and Using the AS2 Edition

Starting the AS2 Edition in UNIX or Linux

To start AS2 Edition in a UNIX or Linux environment, follow these steps:

1. Change the directory to /*install_dir*/bin.

2. Enter **run.sh**.

3. Enter the passphrase that you supplied during installation. If you receive a message about an invalid or corrupt license file, see UNIX/Linux troubleshooting information in the *Installation Guide*.

    When startup is complete, a message like the following is displayed:

    > *Open your Web browser to http://host:port/dashboard*, where *host:port* is the IP address and port number where Application resides on your system.

    Make a note of the URL address so you can access Application later.

    The system returns you to a UNIX prompt.

Starting the AS2 Edition in Windows

To start AS2 Edition in a Windows environment, follow these steps:

1. Do one of the following:

    - Double-click the Application shortcut icon on the server desktop. Application starts running.

    - Use Windows Explorer to open the installation directory (c:\sterlingcommerce\si\bin). Then, click on **startWindowsService.cmd**.

Note: It may take several minutes for Application components to initialize and start up.

    If Application does not start or if you receive a message about an invalid or corrupt license file, see Windows troubleshooting information in the *Installation Guide*.

2. When startup is finished, a message like the following is displayed:

    Open your Web browser to http://host:port/dashboard, where *host:port* is the IP address and port number where Application resides on your system.

    Make a note of the URL address so that you can access Application later.

Starting the AS2 Edition in iSeries

To start AS2 Edition in an iSeries environment, follow these steps:

1. Sign onto iSeries with your Application user profile.

2. Submit a batch job by entering the following command:

    SBMJOB CMD(QSH CMD('umask 002 ; cd *install_dir*/bin ; ./run.sh')) JOB(SIMAIN)

    Note: The job queue to which you submit the command must allow at least two active jobs. If the maximum number of active jobs is less than two, Application will not start up completely.

    To reduce keying errors at startup, create a command language (CL) program similar to the following example:

    ```
    PGM
    SBMJOB CMD(QSH CMD('umask 002 ; cd install_dir/bin ; ./run.sh')) +
    JOB(SIMAIN)
    ENDPGM
    ```

3. Wait for startup to complete, a process that takes 10 to 15 minutes.

4. Startup creates a spool file. When startup is finished, open the QPRINT spool file and check the end of the file for a message about how to connect to Application. For example, you may see a message like the following:

   Open your Web browser to http://host:port/dashboard, where *host:port* is the IP address and port number where Application resides on your system.

   Make a note of the address so you can access Application later.

   Note: It may take several minutes for Application to be available from the Web browser, even after the above URL message has been issued.

5. (Optional) To verify that Application has started normally and completely, view the system through WRKACTJOB and verify that only two QP0ZSPWP jobs (of yours) are left running in your GIS batch subsystem.

6. Prepare your browser to log in to Application. Configure your browser so that there is direct connection between the Web browser and iSeries. Do not configure the browser to use any proxy server between you and iSeries (unless it is a requirement of your network).

Accessing the AS2 Edition

To open the AS2 Edition:

1. Open a browser window.

2. In the Address line, type the following address:

   http://*IP address*:*port number*/dashboard

   Ensure that you separate the IP address and port number with a colon (:), for example, http://Application_IPAddress:Installation BasePortNumber+33/dashboard

3. At the login page, type your AS2 Edition user name and password.

Note: The AS2 Edition generic user name is **as2_user** and the password is **password**. For security purposes, change this user name and password after you have installed AS2 Edition.

Using the AS2 Edition

The following steps illustrate how to begin exchanging documents using the AS2 Edition:

1. Generate or check in one or more system certificates for use by your organization. For more information, see *About Digital Certificates in the AS2 Edition* on page 27.

2. Establish or acquire your company's AS2 identifier within your trading partner community. *AS2 identifier* is an identification number or name that your company uses when communicating with your trading partners.

3. Check out your certificates to files. For more information, see *Checking Out a System Certificate in the AS2 Edition* on page 41.

4. If you are going to require inbound SSL, contact Sterling Commerce Customer Support for instructions.

5. Exchange the following information with your trading partners, as appropriate:

- ◆ Certificates
- ◆ AS2 identifiers
- ◆ Server names or IP addresses
- ◆ Server ports
- ◆ Server URLs
- ◆ Agreed-upon algorithms for signing and encryption
- ◆ Receipt options

6. Check the trading partner certificates into Application. For information, see Chapter 2, *Managing Digital Certificates in AS2 Edition*.

7. Configure other trading partner settings. For information, see Chapter 3, *Configuring Organization and Trading Partner Information in the AS2 Edition*.

About the AS2 Edition Interface

The AS2 Edition interface enables you to easily navigate the AS2 Edition and quickly enable your organization to exchange documents with your trading partners.

Caution: Use the navigation buttons in the AS2 Edition interface instead of your browser Back and Forward buttons. Using the Back and Forward buttons can cause errors.

The following menu options display the pages that make up the AS2 Edition interface:

Menu Option	Description
File Tracking	Displays the File Tracking page, which is the first page that opens when you access the AS2 Edition. The page provides a link to system logs and after you provide information about your organization, configure your trading partner information, and define file locations for saving documents, this page lists: ◆ Inbound documents from trading partners ◆ Outbound documents to trading partners ◆ Errors that occurred when sending (outbound) documents to trading partners **Note:** The File Tracking page automatically refreshes every 10 seconds. To disable this feature, clear the **Automatically refresh every 10 seconds** check box.
Business Process	Provides access to the Execution Manager page. The Execution Manager page enables you to: ◆ Monitor predefined business processes. ◆ Perform activities to stop and start business processes, as appropriate.

Menu Option	Description
Central Search	Displays the Central Search page, which enables you to perform basic and advanced searches for: ♦ Live (active) business processes ♦ Active, archived, and restored business processes ♦ EDIINT transaction records for messages that include requests for MDNs
Trading Partners	Displays Trading Partner Configuration pages. Using the Trading Partner Configuration pages, you can establish communication and set preferences, which enable your organization and your AS2 trading partners to exchange documents.
Certificates	Displays the System Certificates pages, which enable you to check in digital certificates for secure document exchange.
Schedules	Displays the Schedules page, which enables you to schedule a business process and search for services, including predefined business processes. After locating a service, you can obtain archiving information about the service, edit the default service schedule to meet your business requirements, and enable or disable the service.

Correlating an AS2 Message with an EDI Document or Data

Application enables you to find and correlate an AS2 message with an EDI document or data, group, or transaction through a link in the EDI Correlation Search details—a **Document Correlation** information link that displays detailed interchange information about AS2 messages.

If you are using AS2, the Document Correlation link enables you using AS2 to quickly and easily view interchange details about AS2 messages, and to see the correlation between an AS2 message and a corresponding EDI document or data.

To search for AS2 correlations:

1. From the **Administration** menu, select **Business Process** > **Monitor** > **Advanced Search** > **EDI Correlation**.

2. In the Search Option area, specify any combination of the following search criteria, as appropriate:

Field	Description	Action
All Level Options		
Location	EDI correlations maintained in a specific location.	Select one of the following options: ♦ Live Tables – Display live (active) EDI correlations. ♦ Restored Tables – Display EDI correlations restored from an offline location.

Field	Description	Action
Search Level Type	EDI processing level.	Select one of the following options: ◆ Interchange – For the search query, display results from the interchange level. ◆ Group – For the search query, display results from the group level. ◆ Transaction – For the search query, display results from the transaction level.
Test Mode	Mode of the Application system where documents that contain the EDI correlations were created.	Select one of the following options: ◆ Any (default) ◆ Test ◆ Production ◆ Information ◆ Interchange is a test ◆ Syntax only test ◆ Echo request ◆ Echo response
Direction	Flow of the documents that contain the EDI correlations.	Select one of the following options: ◆ Any (default) ◆ Inbound ◆ Outbound
Sender ID	ID for the organization that is sending documents.	Type the identifier of the sender.
Receiver ID	ID for the receiving organization.	Type the identifier of the receiver.
Sender ID Qualifier	Qualifier used with the Sender ID to define the organization that is sending documents.	Type the qualifier of the sender.
Receiver ID Qualifier	Qualifier used with the Receiver ID for the receiving organization.	Type the qualifier of the receiver.
Start Date	Documents in progress or completed after the specified start date and time.	Using the following formats, type a starting date and time range and select **AM** or **PM**: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.

Field	Description	Action
End Date	Documents in progress or completed before the specified end date and time.	Using the following formats, type an end date and time range and select **AM** or **PM**: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
Interchange Level Options		
Interchange Control Number	Sequential number, located at the beginning and end of an interchange, used to verify that all interchanges sent have been received and that the information in the interchange is complete.	Type the control number that references the interchange.
Standard	EDI standard you agree to use for a trading partnership.	Type the name of the standard (including CHIPS or Fedwire).
Acknowledge-ment Status	Status of an expected acknowledgement at the interchange level.	Select one of the following options: ◆ Any (default) ◆ Waiting ◆ Accepted ◆ Accepted with Errors ◆ Rejected ◆ OverDue ◆ Received ◆ None ◆ Manually Accepted
Compliance Status	Status of compliance checking at the interchange level.	Select one of the following options: ◆ Any (default) ◆ OK ◆ NOT OK
Start Date	EDI correlations generated or completed for documents at the interchange level after the specific start date and time. This date is compared with the interchange date/time in the data.	Using the following formats, type a starting date and time range and select **AM** or **PM**: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.

Field	Description	Action
End Date	EDI correlations generated or completed for documents at the interchange level before the specific end date and time. This date is compared with the interchange date/time in the data.	Using the following formats, type an end date and time range and select **AM** or **PM**: ♦ Date – MM/DD/YYYY ♦ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
Group Level Options		
Functional Group ID	ID of the functional group indicated in the document.	Type the ID of the functional group.
Group Control Number	Sequential number, used to verify that all groups sent have been received and that the information in the group is complete.	Type the control number that references the group.
Acknowledge-ment Status	Status of an expected acknowledgement at the group level.	Select one of the following options: ♦ Any (default) ♦ Waiting ♦ Accepted ♦ Accepted with Errors ♦ Rejected ♦ OverDue ♦ Received ♦ None ♦ Manually Accepted ♦ Partially Accepted
Compliance Status	Status of compliance checking at the functional group level.	Select one of the following options: ♦ Any (default) ♦ OK ♦ NOT OK
Start Date	EDI correlations generated or completed for documents at the group level after the specific start date and time. This date is compared with the group date/time in the data.	Using the following formats, type a starting date and time range and select A.M. or P.M.: ♦ Date – MM/DD/YYYY ♦ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.

Field	Description	Action
End Date	EDI correlations generated or completed for documents at the group level before the specific end date and time. This date is compared with the group date/time in the data.	Using the following formats, type an end date and time range and select A.M. or P.M.: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
Transaction Level Options		
Transaction Set ID	ID of the transaction set indicated in the document.	Type the ID of the transaction set.
Compliance Status	Status of compliance checking at the transaction set level.	Select one of the following options: ◆ Any (default) ◆ OK ◆ NOT OK
Message Repair Status	Status of message repair (for SWIFT documents only).	Select one of the following options: ◆ Any ◆ Ready for Edit ◆ Ready for Resend ◆ Aborted ◆ Resent

3. Click **Go!** to display the EDI correlation records that match your search criteria.

4. In the EDI Correlation Interchange Results page, click ⓘ **info** in the Detail column for the AS2 interchange for which you want to view details.

5. In the EDI Correlation Interchange/Group/Transaction Detail Results page, click ⓘ **info** to the right of Document Correlations.

6. For SWIFT documents, on the EDI Correlation Transaction Results page, click ⓘ **info** in the Detail column for the document you want to edit.

7. In the Document Correlation Details page, view details about the AS2 message you selected, and to see the correlation between the AS2 message and corresponding EDI document or data. The details available include:

  ◆ time stamp

  ◆ scope

  ◆ process ID

  ◆ document name

  ◆ data value

Managing Digital Certificates in AS2 Edition

The AS2 Edition uses digital certificates to securely transport documents between system components. Before you add your trading partners' information to the AS2 Edition, you must obtain and check in any digital certificates.

To help you manage your digital certificates, the AS2 Edition includes the Certificate Wizard, a stand-alone tool that enables you to generate:

✦ Private and public keys protected with a passphrase

✦ A certificate signing request (CSR) to send to a trusted certificate authority (CA)

After the CA authorizes the CSR and issues a digitally-signed certificate, you can then use the Certificate Wizard to generate and validate a key certificate that you check in to the AS2 Edition.

This section covers the following topics:

About Digital Certificates in the AS2 Edition

Public key cryptography is based on the concept of key pairs. A key pair contains a public component that is intended to be published to others and a private component that must remain secret and known only to its owner.

Digital certificates are a mechanism for managing public keys. A digital certificate contains at a minimum a public key, identity information, and one or more signatures to provide a chain of verification and to prevent tampering.

Note: If you receive a digital signature that contains extra data at the end of it, you may receive a warning message stating that the ContentInfo, the signature decoder, is done and is throwing away # bytes from the signature. The # is the number of bytes being thrown out. Processing should not be affected and you can ignore the warning message.

Digital Certificate Types in the AS2 Edition

Digital certificates can be either self-signed or CA-signed. The difference is the key used to sign the digital certificate.

✦ A *self-signed certificate* is a digital certificate that is signed with the private key that corresponds to the public key in the certificate, demonstrating that the issuer has the private key that corresponds to the public key in the certificate.

✦ A *CA-signed certificate* is a digital certificate that is signed using keys maintained by certificate authorities. Before issuing a certificate, the CA does some vetting of a certificate requestor. The rigor of this vetting usually depends on the nature of the certificate to be issued. Vetting may be relatively limited for a personal email certificate and very complex for a certificate that can be used to issue other certificates and CRLs

The AS2 Edition associates digital certificates with trading profiles and recognizes three types of digital certificates:

✦ CA certificate – Digital certificate issued by a CA for verifying trusted certificates.

✦ Trusted certificate – End-user digital certificate that is trusted by the AS2 Edition and for which the AS2 Edition does not have the private key.

Note: Both the CA certificate and the trusted certificate are stored in *distinguished encoding rules (DER)* format, which is a set of rules for encoding certificates.

✦ System certificates – Digital certificate for which the private key is maintained in the AS2 Edition. System certificates are stored with the private key in a secure format.

For more information about trading profiles, see Chapter 3, *Configuring Organization and Trading Partner Information in the AS2 Edition*.

For more information about digital certificates, see:

✦ RSA, www.rsasecurity.com

✦ Verisign, www.verisign.com

About System Certificates in the AS2 Edition

A *system certificate* is a digital certificate for which the private key is maintained in the AS2 Edition. System certificates are stored with the private key in a secure format.

Searching for a System Certificate in the AS2 Edition

After you create a system certificate, you can search for that system certificate to view the certificate or edit the certificate name.

To search for a system certificate:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, and complete one of the following actions:

    ◆ Under Search in the **by Certificate Name** field, type either a portion of the name or the entire name of the system certificate you are searching for, and click **Go!** The System Certificates page opens, listing all of the system certificates containing the full or partial name you typed.

    ◆ Under **List in the Alphabetically field**, select **ALL** or the letter that begins the name of the system certificate you are searching for. Selecting ALL lists all of the system certificates in the AS2 Edition. Click **Go!** The System Certificates page opens, listing all of the system certificates that match your search criteria.

3. Depending on your task, complete one of the following actions:

    ◆ To edit the system certificate, click **edit**. For more information, see *Editing a System Certificate Name in the AS2 Edition* on page 29.

    ◆ To view the system certificate, click the name of the system certificate in the Name column.

Editing a System Certificate Name in the AS2 Edition

A system certificate name is not part of the content of the certificate. Certificates should have meaningful names, according to your file-name conventions or preference, because the AS2 Edition identifies the certificates by name in the interface.

To edit a system certificate name:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, locate the system certificate you want to edit by using either the Search or List option.

    For more information, see *Searching for a System Certificate in the AS2 Edition* on page 29.

3. In the System Certificates page, click **edit** next to the system certificate you want to edit.

4. Change the system certificate name as appropriate and click **Next**.

5. In the Confirm page, verify the information and click **Finish** to save your changes.

About CA Certificates in the AS2 Edition

A *CA certificate* is a certificate issued by a certificate authority (CA) to verify trusted certificates. A CA certificate contains a public key corresponding to the private key, which the CA owns and uses to sign the certificates it issues.

Caution: Although CA certificates are public documents, you should be careful about who has rights to add them to the AS2 Edition. Someone could maliciously add a false CA certificate in order to verify false end-user certificates.

Checking In a CA Certificate in the AS2 Edition

The AS2 Edition stores CA certificates separately from trusted certificates. To enable the AS2 Edition to validate a trusted certificate issued by a CA, you must first check in the issuing certificate for the CA.

To check in a CA certificate:

1. Save the CA certificate to a file on your local computer.

2. From the File Tracking page, select **Certificates**.

3. In the System Certificates page, click **CA Certificates**.

4. Next to Check in New Certificate, click **Go!**

5. In the **Filename** field, type or browse to the file name of the CA certificate and click **Next**.

6. Verify the name of the CA certificate you are checking in.

Note: For each certificate in the file you selected, the Certificate Name field contains a suggested name built out of the issuer relative distinguished name (RDN) and serial number of the certificate. Following the name is a summary of the identifying information in the certificate. For convenience, the AS2 Edition records the name of the certificate in its database. You can change the name to fit your file name conventions or to something easier to remember.

7. Next to Validate When Used, if you want to validate your certificate using one of the following options, select the appropriate validation options:

   ◆ Validity – Verifies dates in the validity period of the certificate are still in effect. If the dates are not in effect, the certificate is not used.

   ◆ Auth Chain – Constructs a chain of trust for certificates that are not self-signed. If a chain of trust cannot be constructed using valid certificates, the certificate is not used. If the certificate is self-signed, this option verifies only the certificate signature.

   ◆ CRL Cache – Checks the Certificate Revocation List (CRL) in the CRL cache to ensure that the certificate is not revoked or in a held state.

Note: To use the CRL Cache option, you must have the CRL feature enabled and create business processes to download CRLs. The CRL Cache option displays only for certificates issued by a CA and does not display if you use a self-signed certificate.

8. If there is more than one CA certificate in the file you selected, you can check in each certificate by selecting the check box next to it.

9. Click **Finish** to check in the CA certificate.

Searching for a CA Certificate in the AS2 Edition

After you check in a CA certificate, you can search for that CA certificate, so you can view the CA certificate or edit the CA certificate name.

To search for a CA certificate:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, click **CA Certificates**, and complete one of the following actions:

   ◆ Under Search in the **by Certificate Name** field, type either a portion of the name or the entire name of the CA certificate you are searching for, and click **Go!** The CA Digital Certificates page opens, listing all of the CA certificates containing the full or partial name you typed.

   ◆ Under **List in the Alphabetically field**, select **ALL** or the letter that begins the name of the CA certificate you are searching for. Selecting ALL lists all of the CA certificates in the AS2 Edition. Click **Go!** The CA Digital Certificates page opens, listing all of the CA certificates that match your search criteria.

3. Depending on your task, complete one of the following actions:

   ◆ To edit the CA certificate, click **edit**. For more information, see *Editing a CA Certificate Name in the AS2 Edition* on page 31.

   ◆ To view the CA certificate, click the name of the CA certificate in the Name column.

Editing a CA Certificate Name in the AS2 Edition

A CA certificate name is not part of the content of the certificate. Certificates should have meaningful names, according to your file-name conventions or preference, because the AS2 Edition identifies them by name in the interface.

To edit a CA certificate name:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, click **CA Certificates**.

3. In the CA Certificates page, locate the CA certificate you want to edit by using either the Search or List option.

   For more information, see *Searching for a CA Certificate in the AS2 Edition* on page 30.

4. In the CA Digital Certificates page, click **edit** next to the CA certificate you want to edit.

5. Change the CA certificate name as appropriate and click **Next**.

6. In the Confirm page, verify the information and click **Finish** to save your changes.

About Trusted Certificates in the AS2 Edition

Trusted certificates are end-user certificates that are trusted by the AS2 Edition. Trusted certificates provide your public key to your trading partners and provide the public keys of trading partners to you. Generally, the AS2 Edition users receive trusted certificates from their trading partners.

Checking In a Trusted Certificate in the AS2 Edition

Before you can use these certificates in the AS2 Edition, you must check them in to the to store these certificates for use.

To check in a trusted certificate:

1. Save the trusted certificate to a file on your local computer.

2. From the File Tracking page, select **Certificates**.

3. In the System Certificates page, click **Trusted Certificates**.

4. Next to Check in New Certificate, click **Go!**

5. In the **Filename** field, type or browse to the file name of the trusted certificate and click **Next**.

6. Verify the name of the trusted certificate you are checking in.

Note: For each certificate in the file you selected, the Certificate Name field contains a suggested name built out of the issuer relative distinguished name (RDN) and serial number of the certificate. Below the name is a summary of the identifying information in the certificate. For convenience, the AS2 Edition records the name of the certificate in its database. You can change the name to fit your file name conventions or to something easier to remember.

7. Next to Validate When Used, if you want to validate your certificate using one of the following options, select the appropriate validation options:

    ◆   Validity – Verifies dates in the validity period of the certificate are still in effect. If the dates are not in effect, the certificate is not used.

    ◆   Auth Chain – Constructs a chain of trust for certificates that are not self-signed. If a chain of trust cannot be constructed using valid certificates, the certificate is not used. If the certificate is self-signed, this option verifies only the certificate signature.

    ◆   CRL Cache – Checks the Certificate Revocation List (CRL) in the CRL cache to ensure that the certificate is not revoked or in a held state.

Note: To use the CRL Cache option, you must have the CRL feature enabled and create business processes to download CRLs. The CRL Cache option displays only for certificates issued by a CA and does not display if you use a self-signed certificate.

8. If there is more than one trusted certificate in the file you selected, you can check in each certificate by selecting the check box next to it.

9. Click **Finish** to check the trusted certificate in to the Application.

Searching for a Trusted Certificate in the AS2 Edition

After you check in a trusted certificate, you can search for that trusted certificate to view or edit the certificate.

To search for a trusted certificate:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, click **Trusted Certificates**, and complete one of the following actions:

◆ Under Search in the **by Certificate Name** field, type either a portion of the name or the entire name of the trusted certificate you are searching for, and click **Go!** The Trusted Digital Certificates page opens, listing all of the trusted certificates containing the full or partial name you typed.

◆ Under **List in the Alphabetically field**, select **ALL** or the letter that begins the name of the trusted certificate you are searching for. Selecting ALL lists all of the trusted certificates in the AS2 Edition. Click **Go!** The Trusted Digital Certificates page opens, listing all of the trusted certificates that match your search criteria.

3. Depending on your task, complete one of the following actions:

◆ To edit the trusted certificate, click **edit**. For more information, see *Editing a Trusted Certificate Name in the AS2 Edition* on page 33.

◆ To view the trusted certificate, click the name of the trusted certificate in the Name column.

Editing a Trusted Certificate Name in the AS2 Edition

A trusted certificate name is not part of the content of the certificate. Certificates should have meaningful names, according to your file name conventions or preference, because they are identified in the AS2 Edition by name.

To edit a trusted certificate name:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, click **Trusted**.

3. In the Trusted Certificates page, locate the trusted certificate you want to edit by using either the Search or List option.

   For more information, see *Searching for a Trusted Certificate in the AS2 Edition* on page 32.

4. In the Trusted Digital Certificates page, click **edit** next to the trusted certificate you want to edit.

5. Change the trusted certificate name, as appropriate, and click **Next**.

6. In the Confirm page, verify the information and click **Finish** to save your changes.

Creating a Self-Signed Certificate in the AS2 Edition

The AS2 Edition enables you to create your own certificates. When you create a self-signed certificate, the AS2 Edition generates a key pair and embeds the public key from the key pair in the certificate. The private key and associated certificate are stored securely in an encrypted format.

To create a self-signed certificate:

1. From the File Tracking page, select **Certificates**.

   The System Certificates page opens.

2. Under Create, next to Self-signed Certificate, click **Go!**

3. In the Self-Signed System Certificate page, complete the following fields and click **Next**:

Field	Description
Name	Name of the self-signed certificate. Required.
	It is recommended that you not use any spaces or special characters in the name of the certificate. Naming your certificate this way allows you to extract the system certificate private key from the Application server when you are unable to start up Application services.
	If you do use spaces or special characters in the name, you should back up your certificates to ensure that you have access to them when Application is not running.
Organization	Name of the originating organization. Required.
Country	Country or origin of the self-signed certificate.
E-mail	E-mail address of the person responsible for certificates in the organization.

4. In the Specification page, complete the following fields and click **Next**.

Field	Description
Serial Number	Serial number of the self-signed certificate. You can assign any number you want to be the serial number. Required.
Duration	Number of days that the self-signed certificate is valid. Required.
Key Length	Length of the key. Select 512, 1024, or 2048 from the list.
	Note: The key length 1024 provides a good balance between security, interoperability, and efficiency. The key length 2048 is the most secure, but also the slowest, and may not work with some applications.
Validate When Used	Verifies that the certificate is valid for use with the system and that the certificate is still in effect. The following are validation options:
	◆ Validity – Verifies dates in the validity period of the certificate are still in effect. If the dates are not in effect, the certificate is not used.
	◆ Auth Chain – Verifies the certificate signature.

5. In the Confirm page, verify that the information is correct and click **Finish.**

The self-signed certificate is added to the Application.

About the Certificate Wizard in the AS2 Edition

You can use the Certificate Wizard to generate:

✦ *Certificate signing requests (CSRs)* – File sent to a certificate authority to request an X.509 certificate.

✦ *Key certificates* – Combination of an ASCII-encoded certificate and an ASCII-encoded PKCS5 encrypted private key.

After you create the key certificates, you can check them in to the AS2 Edition.

The Certificate Wizard is a Web-deployed application included with the Application. To ensure proper deployment of the wizard, the AS2 Edition uses Java™ Web Start. If you have not downloaded Java Web Start—for example, when you install the Graphical Process Modeler, you also download Java Web Start—you must download it before you can access the wizard.

Downloading Java Web Start in the AS2 Edition

To download Java Web Start to access the Certificate Wizard, you must log in to the AS2 Edition using a login ID that has permission to create and maintain trading partner certificates.

To download Java Web Start:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, next to Java Web Start, click **Download**.

3. In the **File Download** dialog box, select the **Save** option and click **OK**.

4. In the **Save as** dialog box, select a directory on your client computer and click **Save** to begin downloading Java Web Start.

Note: The download may require several minutes, depending on the speed of your connection.

5. When the download is complete, close the **Download** dialog box if it remains open.

6. Open the directory where you downloaded the file for Java Web Start.

7. Double-click the file **javaws-1_0_1_02-win-int-rt.exe** to begin the installation process.

8. After reading the license agreement, click **Accept**.

9. In the **Installation Directory** dialog box, either accept the default directory or click **Browse** to select another directory to install Java Web Start, and then click **Next**.

10. When you receive a message that setup was unable to detect a usable Java 2 Runtime Environment, either accept the default installation directory or click **Browse** to select another installation directory, and then click **OK**.

    The **Installing Files** dialog box opens and displays the in-progress installation. When the installation is complete, the setup program prompts you to read the Readme file.

You can now access the Certificate Wizard.

Starting the Certificate Wizard in the AS2 Edition

You can start the Certificate Wizard within the AS2 Edition, or you can start the wizard offline without logging in to the AS2 Edition.

Note: Initial startup may require several minutes, depending on the speed of your connection.

Starting the Certificate Wizard Online in the AS2 Edition

To access the Certificate Wizard (and Java Web Start):

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, next to Run Certificate Wizard, click **Go!**

Starting the Certificate Wizard Offline in the AS2 Edition

To start the Certificate Wizard offline through Java Web Start:

1. From the Windows **Start** menu, select **Programs** > **Java Web Start** > **Java Web Start**.

2. From the **View** menu, select **Downloaded Applications** to view the installed wizard application (or installed instances of the Certificate Wizard).

3. Select the Certificate Wizard application and click **Start**.

Exiting the Certificate Wizard in the AS2 Edition

Whether you have started the Certificate Wizard online through the AS2 Edition or offline through Java Web Start, you exit the wizard in the same way.

To exit the Certificate Wizard, click **Exit**.

Removing the Certificate Wizard in the AS2 Edition

If you have several instances of the Certificate Wizard installed—for example, if you have installed an instance to use for testing and an instance to use for production—you can remove an instance of the wizard using the Java Web Start Manager.

When you need to remove the wizard and the resource files associated with the wizard, you must remove all instances of the wizard from the Java Web Start Manager, and then remove both Java 2 Runtime Environment and Java Web Start.

Removing an Instance of the Certificate Wizard in the AS2 Edition

To remove an instance of the Certificate Wizard from the Java Web Start Manager:

1. On the computer where the wizard is installed, from the Windows **Start** menu, select **Programs** > **Java Web Start** > **Java Web Start**.

2. From the **View** menu, select **Downloaded Applications** to view the wizard application (or installed instances of the wizard).

3. Select the Certificate Wizard (or the instance of the wizard) that you want to remove from the application window.

4. From the **Application** menu, select **Remove Applications**.

Removing the Certificate Wizard and Resource Files in the AS2 Edition

To remove the Certificate Wizard and the resources files associated with the wizard:

1. On the computer where the wizard is installed, from the Windows **Start** menu, select **Settings** > **Control Panel**.

2. Double-click **Add/Remove Programs**.

3. In the **Add/Remove Programs Properties** dialog box, select **Java 2 Runtime Environment Standard Edition v1.3.0_02**, and click **Add/Remove**.

4. Follow the remaining instructions to complete the removal process.

Note: See the Microsoft Windows documentation for complete instructions.

5. Return to the **Add/Remove Programs Properties** dialog box, select **Java Web Start** and repeat steps 3 - 4.

Using the Certificate Wizard in the AS2 Edition

A *key certificate* is a combination of ASCII-encoded certificate and ASCII-encoded PKCS5 encrypted key.

The Certificate Wizard provides you with all the components you need to create a key certificate that can be checked into Application.

To create a key certificate that you can check into Application, you must complete the following tasks in order:

1. Generate your private key and certificate signing request (CSR).

2. Send your certificate signing request (CSR) to the CA for authorization.

3. To authorize your CSR, the CA validates the information in the CSR and issues a digitally-signed (X.509 format) certificate as a binary .cer or .crt file, which contains the information in the certificate signing request.

4. Use the certificate from the CA and your private key to create a key certificate.

5. Verify the key certificate is ready for check-in.

For more information about checking in key certificates, see *Checking In a Key Certificate in the AS2 Edition* on page 40.

Generating a Private Key and Certificate Signing Request (CSR) in the AS2 Edition

The Certificate Wizard performs several tasks when generating a CSR:

✦ Creates a private key and writes it to a specified file name

✦ Designates whether the CSR is for a client or a server

✦ Creates the CSR and writes it to a specified file name

✦ Verifies and displays the contents of a certificate

To generate a CSR:

1. Start the Certificate Wizard. For information, see *Starting the Certificate Wizard in the AS2 Edition* on page 35.

2. In the Certificate Wizard, click the **Certificate Request** tab.

3. Complete the following required fields and click **Next**:

Field	Description
Common Name	Name of the client computer. For example, use an e-mail or TCP/IP address.
Country	Your country.
State/Province	Your state or province.
City/Locality	Your city or locality.
Organization/Company Name	Your organization or company name.
Organization Unit	Your unit within your organization or company. For example, a division within a company can represent a unit.

4. In the random number box, type *any* random sequence of characters until processing stops. This enables the pseudo-random number generator (PRNG) to generate a random number for the public/private key pair.

5. In the *The seed value is ready* message dialog box, click **OK**.

6. Complete the following required fields and click **Next**:

Field	Description
Private key Length	Encryption strength of your private key.
Passphrase	Passphrase to use for encrypting the private key of the certificate.
Confirm Passphrase	Passphrase you indicated for encrypting the private key of the certificate.

7. Complete the following required fields and click **Next**:

Field	Description
Key File Name	Either accept the default directory or click **Browse** to select another directory to save the PKCS12-formatted private key (priv.txt is default file name) file.
CSR File Name	Either accept the default directory or click **Browse** to select another directory to save the CSR (csr.txt is default file name) file.

8. In the confirmation page, review the information for accuracy and click **Finish** to complete the CSR.

9. To generate another CSR, click **Start Over**, and repeat steps 1 - 8.

You are now ready to send the CSR (csr.txt) to your CA for authorization.

Creating a Key Certificate in the AS2 Edition

After the CA authorizes the CSR, the CA issues a digitally-signed (X.509 format) certificate, as appropriate. Using the PKCS12-formatted private key and digitally-signed certificate, you can create a key certificate.

To create a key certificate file:

1. In the Certificate Wizard, click the **Generate Keycert** tab.

2. Either type the directory or click **Browse** to select the directory containing the files:

   ◆ PKCS5 encrypted private key (priv.txt)

   ◆ Digitally-signed (.cer or .crt file) certificate from the CA

3. For the key certificate, either accept the default directory or click **Browse** to select another directory to save the key certificate (keycert.txt is default file name) file.

4. To enable the Certificate Wizard to create the key certificate, click **Generate**.

You are now ready to validate the key certificate for check-in.

Validating the Key Certificate in the AS2 Edition

In addition to creating the key certificate, the Certificate Wizard also creates a trusted root (trusted.txt) file and saves the file to same directory as the key certificate (keycert.txt). The trusted root file contains a list of trusted sources that enables the Certificate Wizard to validate a key certificate and ensure a secure connection.

To validate the key certificate:

1. In the Certificate Wizard, click the **Verify Certificate** tab.

2. Complete the following fields:

Field	Description
Passphrase	Passphrase that you indicated for this key certificate when you generated it.
Keycert	Either type or click **Browse** to select the directory to which you have saved the key certificate (keycert.txt file). This field can remain blank if you only want to verify a trusted root certificate file.
Trusted Root File	Either type or click **Browse** to select the directory to which you have saved the key certificate to obtain the trusted root certificate file (trust.txt.file).

3. Click **Verify** to enable the Certificate Wizard to validate the key certificate. A message displays that includes the verification results for each file you selected.

You are now ready to check the PKCS12 certificate (private key) and key certificate in to Application.

Checking In a PKCS12 Certificate in the AS2 Edition

PKCS12 is a common format used by many tools for transport of private keys and associated certificates. Application has the capability to import keys and certificates in this format.

To check in a PKCS12 certificate:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, under Check in, next to PKCS12 Certificate, click **Go!**

3. In the PKCS12 certificates page, complete the following steps:

    a. In the **Certificate Name** field, type the certificate name PKCS12 certificate. This should be a unique and meaningful name.

    b. In the **Private Key Password** field, type the private key password. This is the password used to encrypt the PKCS12 certificate.

    c. In the **Key Store Password** field, type the key store password. This is the password for the PKCS12 object. It may be the same as the private key password.

    d. In the **Filename** field, type or browse to the file name of the PKCS12 certificate.

    e. Click **Next**.

4. In the Validate When Used page, select when to validate and click **Next**. Validation options include:

    ◆ Validity – Verifies dates in the validity period of the certificate are still in effect. If the dates are not in effect, the certificate is not used.

    ◆ Auth Chain – Constructs a chain of trust for certificates that are not self-signed. If a chain of trust cannot be constructed using valid certificates, the certificate is not used. If the certificate is self-signed, this option verifies only the certificate signature.

    ◆ CRL Cache – Checks the Certificate Revocation List (CRL) in the CRL cache to ensure that the certificate is not revoked or in a held state.

Note: To use the CRL Cache option, you must have the CRL feature enabled and create business processes to download CRLs. This option will not appear if the certificate is self-signed. It is only available for certificates issued by certificate authorities.

5. In the Confirm page, verify the information about the PKCS12 certificate you are checking in and click **Finish** to check the PKCS12 certificate in to Application.

Checking In a Key Certificate in the AS2 Edition

Before you check a key certificate in to the AS2 Edition, ensure that you sent a CSR to your CA and the CA has issued a digitally-signed (.cer or .crt) certificate. After obtaining a key certificate, you must check it in to Application. For information about generating CSRs and key certificates, see *Using the Certificate Wizard in the AS2 Edition* on page 37.

To check in a key certificate:

1. From the File Tracking page, select **Certificates**.

2. In the System Certificates page, under Check in, next to Key Certificate, click **Go!**

3. In the **Certificate Name** field, type the key certificate name. This should be a unique and meaningful name.

4. In the **Private Key Password** field, type the private key password. This is the password used to encrypt the private key.

5. In the **Filename** field, type or browse to the file name of the key certificate and click **Next**.

6. In the Validate When Used page, select when to validate and click **Next**. Validation options include:

   ◆ Validity – Verifies dates in the validity period of the certificate are still in effect. If the dates are not in effect, the certificate is not used.

   ◆ Auth Chain – Constructs a chain of trust for certificates that are not self-signed. If a chain of trust cannot be constructed using valid certificates, the certificate is not used. If the certificate is self-signed, this option verifies only the certificate signature.

   ◆ CRL Cache – Checks the Certificate Revocation List (CRL) in the CRL cache to ensure that the certificate is not revoked or in a held state.

Note: To use the CRL Cache option, you must have the CRL feature enabled and create business processes to download CRLs. This option will not appear if the certificate is self-signed. It is only available for certificates issued by certificate authorities.

7. In the Confirm page, verify the information about the key certificate you are checking in and click **Finish** to check the key certificate in to Application.

Checking Out a System Certificate in the AS2 Edition

System certificates are certificates for which the user has the private key in the AS2 Edition. The AS2 Edition users use private keys to sign and decrypt documents.

To export a system certificate from the AS2 Edition, you must check out the certificate.

Note: The following procedure exports only the public certificate, not the private key, and provides you with a public certificate to send to a trading partner.

To check out a system certificate:

1. From the File Tracking page, select **Certificates**.

2. Locate the system certificate you want to check out, using either the Search or List option.

   The AS2 Edition displays a list of system certificates.

3. Next to the system certificate you want to check out, click **Check Out**.

4. Select the **BASE64** or **DER** format for the certificate and click **Go!**

   ◆ BASE64 – Uses BASE64 encoding on the standard DER certificate.

   ◆ DER – Standard format for digital certificates is accepted by most applications.

5. In the **File Download** dialog box, click **Save**.

6. In the **Save As** dialog box select the location where you want to save the certificate and click **Save**.

7. In the **Download Complete** dialog box, click **Close**.

Note: The option to open the certificate is not supported by the AS2 Edition if the certificate is BASE64 encoded. For BASE64 encoded certificates, you must open the certificate from within the Windows operating system. If you receive an error message, *This file is invalid for use as the following: Security Certificate*, open the file in a text editor and delete any blank lines before -----BEGIN CERTIFICATE-----. Save the edited file and windows should open the file.

Configuring Organization and Trading Partner Information in the AS2 Edition

To exchange documents between trading partners, the AS2 Edition uses predefined business processes that link trading partners together. A *trading partner* is a company or business entity that participates in the exchange of business application data. To enable the AS2 Edition to run these business processes, you must provide information about each trading partner participating in the business processes, including your organization.

Before You Begin Using the AS2 Edition

Before you configure information about your organization and trading partners:

✦ Check in digital certificates for the secure transport of data.

✦ Collect the following information about your organization and trading partners:

◆ Name and address information

◆ AS2 identifiers

◆ The following certificates, as appropriate:

System certificates

SSL server certificates

End-user certificates

◆ IP addresses, port numbers, and URLs

◆ Agreed-upon algorithms for signing and encryption

◆ Passwords

Creating an Organization in the AS2 Edition

Before you can create trading partners in your AS2 Edition system, you must create your organization. An *organization* is the company or business entity that administers the AS2 Edition system. You can have only one organization for each AS2 Edition. This organization is comparable to a profile and an identity in Application. AS2 Edition only allows you to create one organization (representing your company) because the AS2 Edition is limited to a "one hub, many spokes" configuration (that is, you can send AS2 documents to many partners and receive AS2 documents from those partners, but a "many-to-many" trading partner scenario is not supported).

To create your organization information:

1. From the File Tracking page, select **Trading Partners**.

2. In the Trading Partners Configurations page, under Create, next to New AS2 partner or organization, click **Go!**

3. In the AS2 Configuration Type page, select **Organization** and click **Next**.

4. In the Organization Details page, complete the following fields, as appropriate, and click **Next**:

Field	Description
Name	Name of your organization. Required. **Note:** You can not enter spaces in this field.
Identifier	AS2 identifier of your organization. It could be a DUNS number, EDI interchange ID, e-mail address, or another unique string. Required.
Exchange Certificate	Name of certificate that your organization is using for decryption. Required.
Signing Certificate	Name of the certificate that your organization is using to sign messages. This certificate can be the same as the certificate that you are using for key exchange. Required.

5. In the Confirm page, verify the information and click **Finish**.

To edit information about your organization, see *Editing Organization and Trading Partner Information in the AS2 Edition* on page 51.

Creating a Trading Partner in the AS2 Edition

You must create a Trading Partner record for each trading partner with whom you will be exchanging AS2 documents. Each time you create a partner using the AS2 wizard, it automatically creates two contracts between that partner profile and the organization—one contract for sending and one for receiving. A contract has a production profile and a consumption profile, and each contract is associated with a business process.

Additionally, each contract has up to four extensions that are used for AS2. These extensions are the identifiers in the contract and may also be the e-mail addresses from the transport mechanism(s). These identifiers are used by the EDIINT Message service and EDIINT Pipeline service to look up contracts.

Note: A contract lookup fails if more than one contract is found for a set of extensions.

Building an AS2 Message

When you build an AS2 message, all the information about security preferences, acknowledgement preferences, and transport is pulled from the consumption profile. The identity identifier and the signing key for the document exchange (if the document is signed) are pulled from the production profile.

Parsing an AS2 Message

When you parse an AS2 message, all the information about security preferences, acknowledgement preferences, and transport is pulled from the production profile. The identity identifier and the exchange key for the transport exchange (if the message is encrypted) are pulled from the consumption profile.

Creating a Trading Partner

To create a trading partner:

1. From the File Tracking page, select **Trading Partners**.

2. In the Trading Partners Configurations page, under Create, next to New AS2 partner or organization, click **Go!**

3. In the AS2 Configuration Type page, select **Partner** and click **Next**.

4. In the Identification page, complete the following fields, as appropriate, and click **Next**:

Field	Description
Name	Name of your trading partner. Required. **Note:** Do not enter spaces in this field.
Identifier	AS2 identifier of your trading partner. Required.
Store AS2 Messages in File System	Stores your AS2 messages in the AS2 Edition directories you choose in step 9 in this procedure. Required.
Store AS2 Messages in Mailbox	Not available. You must have a Mailbox Edition license to access this feature.

5. In the HTTP Communication page, complete the following fields, as appropriate, and click **Next**.

Caution: Because of our continuing efforts to improve services and adapters to align with new technology and capabilities, the B2B HTTP Server adapter and the B2B HTTP Client adapter have entered

the retirement process in Application and are being replaced with the HTTP Server Adapter and HTTP client services, respectively.

Field	Description
End Point	HTTP address or URL to post AS2 messages to for this specific trading partner. For AS2, the end point must be the complete URL to send messages. Contact your trading partner for the value to use in this field. Required.
User ID	User name for HTTP basic authentication, if required to log in to the trading partner system. Optional.
Password	Password that is associated with the User ID identified in the previous field for HTTP basic authentication, if required to log in to the trading partner system. Optional.
Response Timeout (seconds)	Number of seconds the HTTP client adapter waits for a response from the trading partner's server before the system times out. Valid value is number of seconds. Optional. **Note:** To avoid timing out, set both the Response Timeout and Socket Timeout fields to the same value and ensure that the value is greater than 180 seconds. This ensures the socket remains open for a reasonable amount of time, so it can receive responses.
Firewall Proxy	IP address, port number, login ID, and password of your proxy server if you need to use a proxy server to connect outbound to this trading partner. Separate values with a comma. If used, you must specify both the login ID and password. Optional. **Note:** If you connect through a proxy server, but authentication is not required, the IP address and port number routes the outbound message through the specified proxy server.
Firewall Connect Count	Number of attempts that the AS2 Edition can make to connect to the proxy server before timing out. Optional. **Note:** If the proxy server is used heavily, set the Firewall Connect Count to a high number to reduce the number of time outs.
Socket Timeout (seconds)	Number of seconds that the socket connection can idle before timing out. Valid value is any positive number that is optimal for your system. Optional. **Note:** To avoid timing out, set both the Response Timeout and Socket Timeout fields to the same value and ensure that the value is greater than 180 seconds.
SSL	Whether Secure Sockets Layer (SSL) should be active. SSL is a negotiation between the client and the server that establishes the method of encrypting and decrypting data transmissions. Optional. Valid values are: ◆ None – SSL is not used. ◆ Optional – SSL encryption. ◆ Must – Uses this protocol configured for SSL encryption. If you select Optional or Must, the asset protection key must enable SSL for the appropriate protocol.
Key Certificate Passphrase	Type a passphrase to be used with this key certificate. Required if SSL is Optional or Must.

Field	Description
Cipher Strength	Strength of the algorithms used to encrypt data. Only accepts supported algorithm. Required. Valid values are: ◆ ALL – Includes all cipher strengths (weak and strong as listed below). ◆ WEAK – Required for international e-commerce if government regulations prohibit STRONG encryption from being exported. Includes the following strengths: 　◆ Export level RSA 512-bit with 40-bit RC4 and MD5 　◆ Export level RSA 512-bit with 40-bit DES and SHA1 ◆ STRONG – Required if SSL option is anything other than None. Includes the following strengths: 　◆ RSA with 128-bit RC4 with SHA1 　◆ RSA with 128-bit AES with SHA1 　◆ RSA with 256-bit AES with SHA1 　◆ RSA with 3DES with SHA1 　◆ RSA with 128-bit RC4 with MD5 　◆ RSA with DES with SHA1 **Note:** If you are using an older or retired adapter, the 128-bit and 256-bit AES ciphers might not be available. For more information on the phases of the Retiring process, see *Retiring and Removed Services and Adapters*.
Key Certificate (System Store)	Select a key certificate. Optional. Valid values are: ◆ B2BHttp ◆ UIKey ◆ OpsDrv ◆ OpsKey
CA Certificates	Certificate used to validate SSL server authentication of the trading partner. Required if you selected Must or Optional in the SSL field. For information about checking in self-signed CA certificates, see Chapter 2, *Managing Digital Certificates in AS2 Edition*.

6. If you need to set up an additional URL for MDNs (if a trading partner wants MDNs sent to a URL that differs from the main AS2 URL), select **Setup Additional Communication**s and add the URL.

Note: For Application to send AS2 messages, you must have a trading partner profile set up that includes a transport listing any URL to which you need to send AS2 messages (including MDNs). If you need to send asynchronous MDNs to a URL that is different than the trading partner's main URL, you must configure an additional profile (belonging to that trading partner's identity) with the appropriate information.

7. In the Messages page, complete the following fields as appropriate and click **Next**:

Field	Description
Payload Type	Payload is the document at the inner level of the message. The payload type describes the message format for transporting documents. Optional. Valid values are: ◆ Plain Text – Payload is not signed and it is not encrypted. ◆ Signed Detached – Payload is signed with a detached signature, according to the EDIINT specifications. ◆ Encrypted – Payload is encrypted according to the EDIINT specifications. ◆ Signed Detached Encrypted – Payload is signed with a detached signature and then encrypted, according to the EDIINT specifications.
MIME Type	How to package the lowest level of payload content (the document at the inner level of a message) to be sent. MIME type helps to implement the EDIINT specification correctly, and provides some flexibility, because receiving programs might expect a specified MIME type and sub-type. The MIME type value is used as the Content-type value in the header of the payload section of the message. Optional. Valid values are: ◆ Text – For XML or text ◆ Application – For EDI, or any other type of data ◆ Message ◆ Image ◆ Video ◆ Audio
MIME Sub Type	How to package the lowest level of payload content (the document at the inner level of a message) to be sent. The MIME sub type value combined with the MIME type value creates the Content-type values in the header of the payload section of the message. For example, Content-Type: Application/EDI-X12, where Application is a MIME type and EDI-X12 is the MIME sub type. Optional. Valid values are: ◆ EDI-X12 ◆ EDIFACT ◆ EDI-Consent ◆ Octet-stream – For any type of data ◆ XML ◆ Plain

Field	Description
Compress Data	Level to compress the payload. Optional. Valid values are: ◆ None ◆ Low ◆ Medium ◆ High ◆ Default
Exchange Certificate	Name of the trading partner encryption certificate. Use the trusted certificate that this specific trading partner sent to you. You must check in the trading partner certificate prior to setting up the trading profile. Checking in the certificate allows the certificate to display in this drop-down list. Optional.
Signing Certificate	Name of the signing certificate that your trading partner sent you. This certificate can be the same as the exchange certificate, if your trading partner uses the same certificate for both encryption and signing. Use the trusted certificate that this specific trading partner sent to you. You must check in the trading partner certificate prior to setting up the trading profile. Checking in the certificate enables the certificate to display in this list. Required.
Encryption Algorithm	If you selected a payload type requiring encryption, identifies the encryption algorithm to use. ◆ Triple DES 168 CBC with PKCS5 padding ◆ 56-bit DES CBC with PKCS5 padding ◆ 128-bit RC2 CBC with PKCS5 padding ◆ 40-bit RC2 CBC with PKCS5 padding
Signing Algorithm	Algorithm to use to sign messages to the trading partner. Optional. Valid values are MD5 and SHA1 (Secure Hash Algorithm). This field is required if you select a payload type requiring a signature.
MDN Receipt	Whether you request Message Disposition Notifications (MDNs) for messages from your trading partner. Select the check box to view the MDN page. Clear the check box to disable viewing.

8. Complete one of the following steps:

   ◆ If you did not select MDN Receipt, go to step 8.

   ◆ If you selected MDN Receipt, in the Receipt page, complete the following fields, as appropriate, and click **Next**:

Field	Description
Receipt Signature Type	Type of signing algorithm requested on receipts. Valid values are None, MD5, and SHA1. Selection of a value other than None makes the EDIINT Message service request a signed Message Disposition Notification (MDN) when sending messages to the trading partner.
Receipt Timeout	Timeout value in seconds for receipt of expected MDNs. Required.

Field	Description
Retry Interval (sec)	Number of seconds that the AS2 Edition waits before trying again to contact the trading partner after the previous attempt timed out. Zero (0) is invalid. Required.
Delivery Mode	Delivery mode for MDNs. Optional. Valid values are:
	◆ Synchronous – Requests a synchronous receipt.
	◆ Asynchronous HTTP – Request an asynchronous receipt over HTTP. If you select this option, you must put the complete URL identifying where the partner should send the receipt in the Receipt to Address field.
	◆ Asynchronous HTTPS – Request an asynchronous receipt over HTTPS. If you select this option, you must put the complete URL identifying where the partner should send the receipt in the Receipt to Address field.
	◆ Asynchronous SMTP – Request an asynchronous receipt over SMTP. If you select this option, you must put the complete URL identifying where the partner should send the receipt in the Receipt to Address field.
Receipt to Address	If you are using EDIINT AS2 requesting asynchronous MDNs, you must type the complete URL where you want your trading partner to send the MDN. This may be your usual AS2 URL. Optional.
Setup additional Server Communication	Enables you to configure additional transport profiles for a trading partners that requests asynchronous MDNs over HTTP/HTTPS to a URL other than their standard AS2 message URL. Application will not send receipts to URLs that have not been configured in the system. Select this option if your trading partner requests asynchronous HTTP/HTTPS receipts to a URL other than their primary AS2 URL. If you select this, repeat steps 5 through 7 again for each additional transport profile.

9. In the Collection page, complete the following fields, as appropriate, and click **Next**.

Note: The folders identified in this step are created during the installation of AS2 Edition and are found in the *install_dir*/as2partner. By default, an inbound, outbound, and an error folder is created.

Field	Description
Collection folder	Directory that contains incoming (inbound) documents from your trading partner. Required. The default directory is *install_dir*/as2partner/inbound.
Extraction folder	Directory that contains outgoing (outbound) documents to your trading partners. Required. The default directory is *install_dir*/as2partner/outbound.
Error log folder	Directory to which errors are written for outgoing (outbound) documents that contain errors (for example, if the AS2 Edition cannot send a document because of an invalid IP address, the AS2 Edition generates an error log and saves it in this folder). Required. The default directory is *install_dir*/as2partner/error.
Max files to Collect	The number of files that are picked up from the collection folder each time that the scheduled business process executes. Valid values range from 0 to 500. The default value is All.
Run service based on timer every	Hours and minutes for which to run the File System adapter. The default time is five minutes. Required.

Field	Description
Use Message File Name to Save File	Attempts to use the filename specified for the document in the message received from the trading partner to save the file. If your trading partner sends multiple messages with the same included filenames, existing files with the same names (that is, files currently in the inbound directory) may be overwritten.
Include File Name in Message	Includes the name of the file in the message when building messages to send to a trading partner. Valid values are: ◆ None – Does not provide a file name in the message. ◆ File Name Only – Provides only the file name in the message. ◆ Full Path – Provides the full path to the file in the message.

Note: Monitor the document status by accessing the File Tracking page.

10. In the Confirm page, verify the information and click **Finish** to update the AS2 Edition with your trading partner information.

Editing Organization and Trading Partner Information in the AS2 Edition

You can edit the information for your AS2 organization or trading partner after you have entered it. This may be necessary, for example, if you are negotiating a contract and you or your trading partner wants to change some of the information.

Editing Organization Information in the AS2 Edition

To edit your organization information:

1. From the File Tracking page, select **Trading Partners**.
2. In the Trading Partner Configurations page, under List, next to List all configurations, click **Go!**

    In the AS2 Profiles page, a list of trading profiles displays.
3. In the list, locate **profile_ORGANIZATION** and click **edit**.
4. Update your organization information as necessary and click **Next**.
5. Click **Finish** to update the organization.

Editing Trading Partner Information in the AS2 Edition

To edit trading partner information:

1. From the File Tracking page, select **Trading Partners**.
2. In the Trading Partner Configurations page, under List, next to List all configurations, click **Go!**

    In the AS2 Profiles page, a list of trading partners displays.

3. In the list, locate name of the trading partner whose information you want to edit and click **edit**.

4. Update the trading partner information as necessary and click **Next**.

5. Click **Finish** to update the trading partner information with your changes.

Deleting Trading Partner Information in the AS2 Edition

You can delete the trading partner information when it becomes obsolete. This may be necessary, for example, if a trading partner is lost, or when two trading partners merge.

Note: You can delete only trading partner information and not organization information. AS2 Edition will not work without an organization definition.

Deleting Trading Partner Information in the AS2 Edition

To delete trading partner information:

1. From the File Tracking page, select **Trading Partners**.

2. In the Trading Partners page, under List, next to List all configurations, click **Go!**

    In the AS2 Profiles page, a list of trading partners displays.

3. In the list, locate name of the trading partner whose information you want to delete and click **delete**.

4. In the message prompting you to confirm your intent to delete, complete one of the following actions:

    ◆ Click **OK** to continue the deletion.

    ◆ Click **Cancel** to cancel the deletion.

5. In the Delete Resources page, review the information and click **Next**.

Caution: When you click Delete, you completely remove this trading partner from the database. This action cannot be undone.

6. In the Confirm page, click **Delete** to complete the deletion.

Editing the HTTP Server Adapter in the AS2 Edition

Caution: Because of our continuing efforts to improve services and adapters to align with new technology and capabilities, the B2B HTTP Server adapter has entered the retirement process in Application and is being replaced with the HTTP Server adapter.

To modify B2B servlet information, edit the HTTP Server adapter properties:

1. From the File Tracking page, select **Trading Partners**.

2. In the Trading Partner Configurations page, under Edit, next to Edit HTTP Server Adapter, click **Go!**

3. In the Name page, update the following fields as appropriate and click **Next**:

Field	Description
Name	Name of this adapter. No action necessary.
Description	Meaningful description for this adapter, for reference purposes. Required.
Select a Group	Specifies a group to associate with this configuration. Valid values are:
	◆ None – no group association.
	◆ Create New Group – Creates a new group to associate with this configuration.
	◆ Select Group – Select from the list an existing group to associate with this configuration.

4. In the B2B HTTP Connection Properties page, update the following fields, as appropriate, and click **Next**:

Field	Description
B2BIS HTTP Servlet Host Address	Host name of the server where the B2B HTTP servlet is running. Required.
B2BIS HTTP Servlet Listen Port	Port number on which the servlet listens for connections.This number should match the corresponding configuration parameter for the servlet. Required.
System Certificate	Select one from the list of system certificates. The certificate data is sent by the adapter to the servlet to enable the servlet to authenticate the adapter before sending the HTTP request information to it. Required.
User Authentication Required	Select Yes or No. If Yes is selected, then the adapter expects an authentication header (userid:password) from the HTTP client. The client is prompted for authentication. If this header is missing, the adapter responds with an error. Required.
	Note: The system uses user accounts for authentication.

5. In the B2B HTTP Timeout Properties page, update the following field, as appropriate, and click **Next**:

Field	Description
Response Timeout (number of seconds)	Time period, in seconds, that the HTTP servlet waits for a response from the invoked business process. The invoked business process provides a primary document as the response by executing the HTTP Server adapter. Required.
	Note: If you change the Response Timeout field, you must disable and then enable the adapter for the change to be in effect.

6. In the URIs page, complete one of the following steps:

   ◆ To add a new universal resource indicator (URI), click **add** next to New URI.

   ◆ To edit an existing universal resource indicator (URI), click **edit** next to the URI you want to edit.

   ◆ To delete an existing universal resource indicator (URI), click **delete** next to the URI you want to delete and go to step 8.

◆ To take no action on the URIs page, click **Next**.

7. In the URIs: Specification page, update the following fields and click **Next**:

Field	Description
URI	Universal resource indicator representing incoming requests. Required.
Business Process or Contract	Corresponding business process or a contract associated with the URI. Required.
Send Raw Messages	Whether the raw message needs to be presented to the business process. Valid values are Yes and No.
	◆ Yes – Both the HTTP headers and the entity body are copied to the body buffer of the business process document before the business process is started.
	◆ No – Just the HTTP entity body is copied to the body buffer of the business process document.
	Note: Any business process that uses the EDIINT Message service requires raw messages.

8. In the Confirm page, complete the following steps:

   a. Verify the changes you made to the HTTP Server adapter.

   b. Click **Enable Service for Business Processes**, if you want to enable the service for use with business processes.

   c. Click **Finish** to update the AS2 Edition with your changes.

Tracking and Managing Document Exchange in the AS2 Edition

Tracking documents and monitoring predefined business processes, including services, can ensure accurate document processing.

Tracking Documents in the AS2 Edition

The AS2 Edition provides information about inbound and outbound documents and any designated outbound documents that cannot be processed because of an error. Viewing the information about documents can help you determine if further action is necessary.

The Current Documents feature offers the following benefits:

✦ You can monitor document processing to ensure documents are processing successfully, and take corrective action if necessary.

✦ If a problem document is noted, you can view document details with one click to see what happened.

✦ By default, the page is automatically refreshed every minute for the most current information.

✦ You can change the number of documents displayed per page, change the name of the document displayed to something more meaningful—for example, document type—and enable detailed document tracking.

To access Current Documents, go to **Business Processes > Current Documents**. The following information is available on the Current Documents page:

✦ Up to a week of processed documents is displayed. To view documents older than one week, use the **Advanced Search > Documents** feature.

✦ Documents are generally listed in the order received, with the most current documents at the top.

✦ Select **Automatically refresh every minute** to get current information. Deselect this option to disable the automatic refresh.

✦ Last update date and time displays when the page was last refreshed.

Note: To modify file locations, see *Editing Trading Partner Information in the AS2 Edition* on page 51.

To track documents:

Field Name	Description
Status	Green or red traffic light indicates the processing status of the document: ◆ Green status indicates no errors or warnings occurred during processing. ◆ Red status indicates errors or warnings were encountered during processing.
Document	Name of the document processed. This can be changed in the business process so that a meaningful name will appear instead of the default. Most pre-configured business processes already have the document name established. Click the document name to view the contents. **Note:** You can change the meta data for your service to display a more meaningful document name, such as the document type, in Current Documents instead of the default name. The default display is the Body Name, if available, otherwise it is the document ID. Some services, such as EDI documents (EDIFACT, for example), are already configured to display the document type. **Note:** Contents will not be viewable if encrypted or obscured.
Proc. ID	Processing ID assigned by Application as an identification number. Click the Processing ID to view Business Process Details.
Sender ID	ID of the document sender as found in the document. If no ID is found, Sender ID is None.
Receiver ID	ID of the document receiver as found in the document. If no ID is found, Receiver ID is None.
Correlations	Click the Correlations icon to view document correlations.
Details	If document tracking is enabled at the business process level, you can view the document history by clicking on Details from the Current Documents page.

Changing the Number of Documents Displayed

Current Documents displays the most recent 15 documents that have been processed. You can change this and display more than 15 documents per page by making an adjustment on the My Account page.

To change the number of documents displayed:

1. Select **Accounts > My Account**. The My Account page is displayed.

2. In the Preferences section, next to **Page Size for Current Documents**, select the number of documents you want to display on each page. Remember that the larger number you select, the more you will have to scroll to see all of the documents displayed, and the system may take longer to display results.

3. Click **Save**. Your changes are saved. Log out Application and then log back in to see the change in preferences.

Running and Stopping Predefined Business Processes in the AS2 Edition

Predefined business processes associated with a document that contains errors may continue to run unnecessarily. Using the Business Processes page, you can not only obtain general and detailed processing information about predefined business processes, you can also run and stop business process and any subprocesses. After reconciling document errors, you can then use the Business Processes to run the business process again.

To access the Business Processes page and perform activities for predefined business processes:

1. From the **Administration Menu**, select **Business Processes > Manager**.

2. In the Business Processes page, use the following fields and columns to view business process information and perform other activities, as appropriate:

Field/Column	Description
Name	Name of the business process.
Execute	Run the business process and any subprocesses.
Stop All	Stop the business process and any subprocesses waiting to run.
Date	Date and time the business process ran.
Life Span	Expiration time of the business process and archiving details.
Username	User associated with the business process.

Searching for Business Processes and Other Information in the AS2 Edition

In the AS2 Edition, you can use the Central Search pages to perform basic and advanced searches for information about:

✦ Additional live (active), archived, and restored predefined business processes

✦ EDIINT transaction records for business processes that included EDI interchange processing

Searching for Business Process (Basic) in the AS2 Edition

To perform a basic search for a business process:

1. From the **Administration** menu, select **Business Processes** > **Central Search**.

2. In the Central Search page, specify any combination of the following search criteria, and then click **Go!**

- ◆ Business Process – Display business processes by names containing specified characters or strings.

- ◆ Status – Display business processes that resulted with a success or error outcome.

- ◆ Start Date From/Start Date To – Display business processes run within specific start dates and times.

3. In the Central Search Results page, click the number link that indicates the number of matches in the AS2 Edition. The Monitor page opens, listing the business processes that match your search criteria. For information about the Monitor page, see *Viewing General Processing Information in the AS2 Edition* on page 66.

Searching for Business Process (Advanced) in the AS2 Edition

In the AS2 Edition, you can conduct advanced searches for business processes under a variety of characteristics. You can search for:

- ✦ Business Processes in Application
- ✦ EDIINT transactions
- ✦ Correlations

Searching for AS2 Edition Business Processes in Application

The AS2 Edition also enables you to search for business processes by:

- ✦ Location of business process
- ✦ Business process ID
- ✦ Business process name

To conduct an advanced search for a business process in Application:

1. From the **Administration** menu, select **Business Processes** > **Central Search**.

2. In the Central Search page, under Advanced Search, ensure that Application is selected in the list and click **Go!**

3. In the Business Process Monitor Advanced Search page, specify any combination of the following search criteria, as appropriate:

Field	Description	Action
Search Location		

Searching for Business Processes and Other Information in the AS2 Edition

Field	Description	Action
Select the area to search from	Business processes maintained in a specific location.	Select one of the options: ◆ Live Tables – Display live (active) business processes. ◆ Archive Tables – Display data for business processes that are archived in the AS2 Edition. ◆ Restored Tables – Display data for business processes that have been restored from an offline location.

Search Using Business Process ID

Process ID	ID assigned by the AS2 Edition to identify a business process.	Type the ID for the business process.

Search Using Business Process Name

Business Processes	List of business processes currently maintained in the AS2 Edition.	Select a business process from the list.
System Business Processes	The AS2 Edition system business processes (that is, business processes that complete or have completed system operations).	Select a system business process from the list.
State	Current or final state of a business process.	The default value is ALL (displays all business processes). Maintain the default value or select one of the following options: ◆ Completed ◆ Waiting ◆ Active ◆ Halted ◆ Halting ◆ Interrupted_Man ◆ Interrupted_Auto ◆ Terminated

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Field	Description	Action
Status	Current or final status of a business process.	The default value is ALL (displays all business processes). Maintain the default value or select one of the following options: ◆ Success ◆ Error
Start date/time range	Business processes running or completed within the specified start dates and times.	Type a starting date and time range and select **AM** or **PM**

4. Click **Go!** The Monitor page opens, listing the business processes that match your search criteria.

Searching for EDIINT Transaction Records in the AS2 Edition

To search for EDIINT transaction records for business processes that included EDI interchange processing:

1. From the **Administration** menu, select **Business Processes** > **Advanced Search** > **EDIINT**.

2. In the EDIINT Transaction Search page, complete one of the following:

   ◆ Click **Go!** to view all EDIINT transaction records.

   ◆ Search for specific EDIINT transaction records. Specify any combination of the following search criteria and click **Go!**

   Contracts – Display the records whose contract name corresponds to the specified contract.

   Status – Display the records whose status corresponds to the specified status. Statuses include ALL, Processed without errors, Processed with errors, Pending, Expired, and MIC Invalid.

   Type – Display the records whose Internet security protocol type corresponds to the specified type. Search parameters include ALL, AS1, and AS2.

   Start Date From and Start Date To – Display the records generated starting on the specified start dates and time.

   End date/time range – Display the records generated prior to the specified end dates and time.

Searching for Correlations in the AS2 Edition

To search for correlations of business processes or documents that have been configured with name-value pairs (using the Correlation service):

1. From the **Administration** menu, select **Business Processes** > **Advanced Search** > **Correlation**.

2. In the Central Search page, under Advanced Search, select **Correlation**, and then click **Go!**

3. In the Correlation Search page, from the **Type** field, select either Document or Business process.

4. From the **Location** field, select one of the following options:

   ◆ Live Tables – Display correlations of live (active) instances.

   ◆ Archive Tables – Display correlations of instances that you have archived in Application.

   ◆ Restored Tables – Display correlations of instances that you have restored from an offline location.

5. To refine your search, select up to five names. Typically, the following options display:

   ◆ SenderID

   ◆ ReceiverID

   ◆ Standard

   ◆ Version

   ◆ FunctionalID

   ◆ TransactionSetID

   ◆ ControlNumber

   ◆ Date/Time

   ◆ AcknowledgementRequested

   ◆ AcknowledgementStatus

6. In the Value fields, type the value that corresponds with each of the selected names, and then click **Go!**

7. In the Correlation Search Results page, click the number link that indicates the number of matches in Application.

   The Monitor page opens, listing the business process instances that match your search criteria. For information about the Monitor page, see *Viewing General Processing Information in the AS2 Edition* on page 66.

Searching for EDI Correlations in the AS2 Edition

Application enables you to find and correlate an AS2 message with an EDI document or data through a new link added to the EDI Correlation Search details—a **Document Correlation** information link that displays detailed interchange information about AS2 messages.

The Document Correlation link enables customers using AS2 to quickly and easily view interchange details about AS2 messages, and to see the correlation between an AS2 message and a corresponding EDI document or data.

Application enables you to perform an advanced search for EDI correlations (including AS2 message correlations), created when completing document exchange, at the following levels:

✦ All (all levels of document exchange)

✦ Interchange

✦ Group

✦ Transaction

To search for AS2 message correlations:

1. From the **Administration** menu, select **Business Processes** > **Advanced Search** > **EDI Correlation**.

2. In the EDI Correlation Search page, in the Search Option area, specify any combination of the following search criteria, as appropriate:

Note: To use the enhanced functionality, specify options at **All Level** and **Interchange Level**.

Field	Description	Action
All Level Options		
Location	EDI correlations maintained in a specific location.	Select one of the following options: ◆ Live Tables – Display live (active) EDI correlations. ◆ Restored Tables – Display EDI correlations restored from an offline location.
Search Level Type	EDI processing level.	Select one of the following options: ◆ Interchange – For the search query, display results from the interchange level. **Note:** The new functionality is available at the interchange level. ◆ Group – For the search query, display results from the group level. ◆ Transaction – For the search query, display results from the transaction level.
Test Mode	Mode of the Application system where documents that contain the EDI correlations were created.	Select one of the following options: ◆ Any (default) ◆ Test ◆ Production ◆ Information ◆ Interchange is a test ◆ Syntax only test ◆ Echo request ◆ Echo response
Direction	Flow of the documents that contain the EDI correlations.	Select one of the following options: ◆ Any (default) ◆ Inbound ◆ Outbound
Sender ID	ID for the organization that is sending documents.	Type the identifier of the sender.
Receiver ID	ID for the receiving organization.	Type the identifier of the receiver.
Sender ID Qualifier	Qualifier used with the Sender ID to define the organization that is sending documents.	Type the qualifier of the sender.
Receiver ID Qualifier	Qualifier used with the Receiver ID for the receiving organization.	Type the qualifier of the receiver.

Field	Description	Action
Start Date	Documents in progress or completed after the specified start date and time.	Using the following formats, type a starting date and time range and select A.M. or P.M.: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
End Date	Documents in progress or completed before the specified end date and time.	Using the following formats, type an end date and time range and select A.M. or P.M.: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
Interchange Level Options		
Interchange Control Number	Sequential number, located at the beginning and end of an interchange, used to verify that all interchanges sent have been received and that the information in the interchange is complete.	Type the control number that references the interchange.
Standard	EDI standard you agree to use for a trading partnership.	Type the name of the EDI standard.
Acknowledge- ment Status	Status of an expected acknowledgement at the interchange level.	Select one of the following options: ◆ Any (default) ◆ Waiting ◆ Accepted ◆ Accepted with Errors ◆ Rejected ◆ OverDue ◆ Received ◆ None ◆ Manually Accepted
Compliance Status	Status of compliance checking at the interchange level.	Select one of the following options: ◆ Any (default) ◆ OK ◆ Not OK

Field	Description	Action
Start Date	EDI correlations generated or completed for documents at the interchange level after the specific start date and time. This date is compared with the interchange date/time in the data.	Using the following formats, type a starting date and time range and select A.M. or P.M.: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
End Date	EDI correlations generated or completed for documents at the interchange level before the specific end date and time. This date is compared with the interchange date/time in the data.	Using the following formats, type an end date and time range and select A.M. or P.M.: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
Group Level Options		
Functional Group ID	ID of the functional group indicated in the document.	Type the ID of the functional group.
Group Control Number	Sequential number, used to verify that all groups sent have been received and that the information in the group is complete.	Type the control number that references the group.
Acknowledge-ment Status	Status of an expected acknowledgement at the group level.	Select one of the following options: ◆ Any (default) ◆ Waiting ◆ Accepted ◆ Accepted with Errors ◆ Rejected ◆ OverDue ◆ Received ◆ None ◆ Manually Accepted ◆ Partially Accepted
Compliance Status	Status of compliance checking at the functional group level.	Select one of the following options: ◆ Any (default) ◆ OK ◆ Not OK

Field	Description	Action
Start Date	EDI correlations generated or completed for documents at the group level after the specific start date and time. This date is compared with the group date/time in the data.	Using the following formats, type a starting date and time range and select A.M. or P.M.: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
End Date	EDI correlations generated or completed for documents at the group level before the specific end date and time. This date is compared with the group date/time in the data.	Using the following formats, type an end date and time range and select A.M. or P.M.: ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC **Note:** Defaults to a range of the last 24 hours.
Transaction Level Options		
Transaction Set ID	ID of the transaction set indicated in the document.	Type the ID of the transaction set.
Compliance Status	Status of compliance checking at the transaction set level.	Select one of the following options: ◆ Any (default) ◆ OK ◆ Not OK

3. Click **Go!** to display the EDI correlation records that match your search criteria.

4. In the EDI Correlation Interchange Results page, click ⓘ **info** in the Detail column for the AS2 interchange for which you want to view details.

5. In the EDI Correlation Interchange Detail Results page, click ⓘ **info** to the right of Document Correlations.

6. In the Document Correlation Details page, view details about the AS2 message you selected, and to see the correlation between the AS2 message and corresponding EDI document or data. The details available include: time stamp, scope, process ID, document name, and data value.

Searching for BPSS Correlations in the AS2 Edition

To search for BPSS correlations that define a standard structure of the activities within a business process:

1. From the **Administration** menu, select **Business Processes** > **Advanced Search** > **BPSS Correlation**.

2. In the BPSS Tracking page, from the **Location** field, select one of the following options:

   ◆ Live Tables – Display BPSS correlations of live (active) business processes.

   ◆ Archive Tables – Display BPSS correlations of business processes that you have archived in Application.

- ◆ Restored Tables – Display BPSS correlations of business processes that you have restored from an offline location.

3. To refine your search, specify any combination of the following search criteria.

- ◆ Transaction Type – Display the records of the activities that completed the specified transaction.

- ◆ Trading Partner – Display the records of the activities that associated with the trading partner specified.

- ◆ Status – Display the records of the activities that resulted with a success or error transaction.

- ◆ Start date/time range – Display the records of activities completed within the specified start dates and times.

4. Click **Go!** to display the BPSS correlation records that match your search criteria.

Viewing General Processing Information in the AS2 Edition

The Monitor page refreshes automatically and displays the ten most recent business processes to run and their processing information. If a business process does not display in the Monitor page, you can perform a search to locate the business process. For more information, see *Searching for Business Processes and Other Information in the AS2 Edition* on page 57.

When monitoring active and recent business processes, the AS2 Edition uses two status indicators to indicate further action is required:

Status Indicator	Active Business Process	Recent Business Process
	Encountering no errors or warnings at this point of the execution.	Encountered no errors during execution.
	◆ Waiting for other activities to complete before continuing execution. ◆ Encountering errors or warnings during execution.	Encountered errors or warnings during execution.

In the Monitor page, use the following fields and columns to view general processing information about business processes and perform other activities, as appropriate:

Field/Column	Description
Automatically refresh every minute	Default time to refresh the list of the 10 most recent business processes. To disable this feature, clear the check box.
Status	Indicator of the status of an active or recently executed business processes. For more information, see *Viewing EDIINT Duplicate Transaction Detail Information in the AS2 Edition* on page 70.
ID	Number assigned by the AS2 Edition to identify an business processes. Click the number to display the Business Process Details page. For more information, see *Viewing EDIINT Duplicate Transaction Detail Information in the AS2 Edition* on page 70.

Field/Column	Description
Name	Name of an business processes. Click the name to view the BPML code that makes up the business processes.
State	Current state of a business process. The following list shows possible states in the order of precedence during branch processing: ◆ Active/Running ◆ Completed ◆ Terminated ◆ Waiting ◆ Interrupted ◆ Halting/Halted
Started	Date and time a business process started.
Ended	Date and time a business process ended.
Expires	Information about when a business process expires. Click **Info** to display the expiration information, including whether the data for a business process is archived after it expires.
Parent/Child	Parent or child business process that is referenced when running a business process. Click the up arrow to view a parent business process. Click the down arrow to view a child business process.

Viewing Detailed Processing Information in the AS2 Edition

From the Monitor page, you can access the Business Process Detail page. The Business Process Detail page provides you with a step-by-step progress report on a specific business process. From the Business Process Detail page, you can also perform activities, such as stopping or restarting a business processes.

In the Business Process Detail page, use the following fields to review detailed processing information and perform activities, as appropriate:

Field/Column	Description
Name	Name of a business process for which you are viewing details. Click the name to view the BPML code that makes up the business process.
Instance ID	Number assigned by the AS2 Edition to identify a business process.
Status	Current status of a business process. Possible status levels are: ◆ Success ◆ Error

Field/Column	Description
State	Current state of a business process. The following list shows possible states in the order of precedence during branch processing: ◆ Active/Running ◆ Completed ◆ Terminated ◆ Waiting ◆ Interrupted ◆ Halting/Halted
Activities	List of activities to complete for a business process, including an activity to generate an XML report. The activities available in this field are determined by whether a business process is currently active or stopped. Possible activities are: ◆ Restart – Continues running a business process ◆ Stop – Stops running a business process ◆ Terminate – Cancels a business process and all remaining active and waiting subprocesses ◆ XML report – Generates an XML report that describes the business process If you terminate an active business process, the State field may indicate messages in the following order: Halting > Halted > Terminated.
Step	Current step of a business process.
Service	Name of the service running for a current step. Click the service name to view settings for a service in a business process.
Status	Current status of the steps in a business process. Possible status levels are: ◆ Success ◆ Error
Advanced Status	Service details about any errors that occurred for a step in a business process, when applicable. Click the message to display information.
Started	Date and time the step of a business process started.
Ended	Date and time the step of a business process ended.
Status Report	Status report that provides the results of a service. To view the status report, click **info**.
Document	Business process document that this service is processing (that is, the primary document). To view the document, click **info**.
Instance Data	Contents of the process data generated after a specific step in a business process. In addition, this field links to any messages going to or coming from a service. To view the information, click **info**.

Viewing EDIINT Transaction Information in the AS2 Edition

In the EDIINT Transaction Summary page, use the following fields and columns to view general processing information about business processes and perform other activities, as appropriate:

Field/Column	Description
Status	Indicator of the status of the EDIINT transaction.
ID	Number assigned by the AS2 Edition to identify. Click the number to display the Business Process Details page.
Duplicates	Number of messages with duplicate message IDs. Click the number to display the EDIINT Duplicate Transaction Summary page. When a message with a duplicate message ID is received, a record for a duplicate message is created. This record contains the transaction information for the instance of the message prior to reception of the duplicate. The current transaction record is updated with information about the duplicate, which is the latest instance of the message.
Created	Date and time this transaction record was created. Records are created when messages are built or received.
State	Current state of the EDIINT transaction: ◆ Processed with errors - An error occurred processing the message. These are usually EDIINT specific errors returned in MDNs, such as decryption failures. ◆ Processed without errors - The message was processed successfully. ◆ Pending - An acknowledgement has not yet been received for a message. ◆ Expired - An acknowledgement was not received for the message in the required amount of time. ◆ MIC Invalid - The cryptographic hash in an MDN did not match the one calculated by the system when the message was created.
Contract	Contract associated with the EDIINT transaction.
Type	Type of communication protocol used. AS2 indicates AS2 protocol.
Acknowledged	Date and time that the message was acknowledged

Viewing EDIINT Duplicate Transaction Summaries in the AS2 Edition

From the EDIINT Transaction Summary page, click the number in the Duplicates column to access the EDIINT Duplicate Transaction Summary page. The EDIINT Duplicate Transaction Summary page provides you with a list of documents that have duplicate message IDs. From the EDIINT Duplicate Transaction Summary page, you can refine the detail of your search by clicking the ID number for each duplicate document.

In the EDIINT Duplicate Transaction Summary page, use the following fields to review detailed processing information, as appropriate:

Field/Column	Description
Status	Indicator of the status of the EDIINT transaction.
ID	Number assigned by the AS2 Edition to identify an business processes. Click the number to display the Business Process Details page.
Duplicates	Number of messages with duplicate message IDs. Click the number to display the EDIINT Duplicate Transaction Summary page. When a message with a duplicate message-ID is received, a record for a duplicate message is created. This record contains the transaction information for the instance of the message prior to reception of the duplicate.
Created	Date and time this transaction record was created. Records are created when messages are built or received.
State	Current state of the EDIINT transaction: ◆ Processed with errors - An error occurred processing the message. These are usually EDIINT specific errors returned in MDNs, such as decryption failures. ◆ Processed without errors - The message was processed successfully. ◆ Pending - An acknowledgement has not yet been received for a message. ◆ Expired - An acknowledgement was not received for the message in the required amount of time. ◆ MIC Invalid - The cryptographic hash in an MDN did not match the one calculated by the system when the message was created
Contract	Contract associated with the EDIINT transaction.
Type	Type of communication protocol used. AS2 indicates AS2 protocol.
Acknowledged	Date and time that the message was acknowledged

Viewing EDIINT Duplicate Transaction Detail Information in the AS2 Edition

From the EDIINT Duplicate Transaction Summary page, click the ID number to access the EDIINT Duplicate Transaction Detail page. The EDIINT Duplicate Transaction Detail page provides you with additional details about the business process. From the EDIINT Duplicate Transaction Detail page, you can click the Message-ID to view the message, and click the MDN Message-ID to view the MDN.

In the EDIINT Duplicate Transaction Detail page, use the following fields to review detailed process information and perform activities, as appropriate:

Field/Column	Description
ID	Number assigned by the AS2 Edition to identify the EDIINT transaction.
Record created	Date and time that this record was created.

Field/Column	Description
Message-ID	Identification string of the message.
State	Current state of the EDIINT transaction: ◆ Processed with errors - An error occurred processing the message. These are usually EDIINT specific errors returned in MDNs, such as decryption failures. ◆ Processed without errors - The message was processed successfully. ◆ Pending - An acknowledgement has not yet been received for a message. ◆ Expired - An acknowledgement was not received for the message in the required amount of time. ◆ MIC Invalid - The cryptographic hash in an MDN did not match the one calculated by the system when the message was created
Acknowledged	Date and time that the message was acknowledged.
MDN Message-ID	Identification string of the MDN.
Disposition	The disposition of the message according to the MDN.
SHA1 MIC	Security string information.
Contract	Contract associated with the message.
Type	Type of transmission protocol used with the message.
Sender	Sender of the message.
Recipient	Recipient of the message.
Output Documents	A link to the business documents extracted from the message, if business documents were extracted from the message. This field does not appear if a document was not extracted from the message. If processing of duplicate messages is not enabled and this transaction is not the first instance of the message, no documents will be extracted from the message.

Viewing EDIINT Duplicate Transaction Messages in the AS2 Edition

From the EDIINT Duplicate Transaction Detail page, click the Message-ID string to access the EDIINT Transaction Message contents. The Message page displays showing the contents of the message sent in the transaction.

Viewing EDIINT Duplicate Transaction MDNs in the AS2 Edition

From the EDIINT Duplicate Transaction Detail page, click the MDN Message-ID string to access the EDIINT Transaction MDN contents. The MDN page displays showing the contents of the MDN sent in the transaction.

Viewing EDIINT Transaction Detail Information in the AS2 Edition

From the EDIINT Transaction Summary page, click the ID number to access the EDIINT Transaction Detail page. The EDIINT Transaction Detail page provides you with additional details about the EDIINT transaction. From the EDIINT Transaction Detail page, you can click the Message-ID to view the message, click the MDN Message-ID to view the MDN, or change the state of the business process.

In the EDIINT Transaction Detail page, use the following fields to review detailed process information and perform activities, as appropriate:

Field/Column	Description
ID	Number assigned by the AS2 Edition to identify the EDIINT transaction.
Record created	Date and time that the record was created.
Message-ID	Identification string of the message.
State	Current state of the EDIINT transaction: ◆ Processed with errors - An error occurred processing the message. These are usually EDIINT specific errors returned in MDNs, such as decryption failures. ◆ Processed without errors - The message was processed successfully. ◆ Pending - An acknowledgement has not yet been received for a message. ◆ Expired - An acknowledgement was not received for the message in the required amount of time. ◆ MIC Invalid - The cryptographic hash in an MDN did not match the one calculated by the system when the message was created
Acknowledged	Date and time that the message was acknowledged.
MDN Message-ID	Identification string of the MDN.
Disposition	Status of the transaction. For example, processed or waiting.
SHA1 MIC	Security string information.
Contract	Contract associated with the message.
Type	Type of transmission protocol used with the message.
Sender	Sender of the message.
Recipient	Recipient of the message.
Input Documents	A link to the business document used to create the message if the transaction is for a message created by this system. This field does not appear if the message was created by a trading partner's system.
Output Documents	A link to the business documents extracted from the message, if business documents were extracted from the message. This field does not appear if no documents were extracted from the message. If processing of duplicate messages is not enabled and this transaction is not the first instance of the message, no documents are extracted from the message

Viewing EDIINT Transaction Messages in the AS2 Edition

From the EDIINT Transaction Detail page, click the Message-ID string to access the EDIINT Transaction Message contents. The Message page displays showing the contents of the message sent in the transaction.

Viewing EDIINT Transaction MDNs in the AS2 Edition

From the EDIINT Transaction Detail page, click the MDN Message-ID string to access the EDIINT Transaction MDN contents. The MDN page displays showing the contents of the MDN sent in the transaction.

Viewing System Logs in the AS2 Edition

You can view system logs to monitor the operational status of the AS2 Edition and its components and the activities occurring within the system.

To view the system logs:

1. From the **Administration Menu**, select **Operations > System > Logs**.

2. In the System Logs page, select the appropriate log file.

   The log opens.

Note: The interface displays only the last 2500 lines of a log file. To view the entire log file, you must have Read permissions for the file system where the log file is located. Open the log file (located at the installation path on your hard drive), with a text editor.

Managing Schedules in the AS2 Edition

Depending on your business needs, you may need to change your service or business process schedules. After you have created a schedule, you can enable, disable, or edit the service schedule when necessary.

Creating a Business Process Schedule in the AS2 Edition

You can schedule a business process to run or you can choose to run the business process manually. If you schedule your business process, you can take advantage of the following advanced scheduling capabilities:

✦ Schedule your business process to run on specific days of the week – Schedule different processes to run on different days, reserving system resources and scheduling business processes around the critical events of your organization. For example, you can run the business process only on Monday through Friday, or Monday, Wednesday, and Friday. This includes the ability to schedule the system resource intensive business processes to run on weekends when network or system traffic is low.

✦ Schedule your business process to run based on specifically selected hours – Much like the ability to run on the weekends or specific days of the week; provides further granularity in scheduling your business processes by selecting specific hours or ranges of hours range of hours to run.

✦ Schedule exclusions – You can set exceptions within the scheduler to exclude peak days or processing hours.

To set up a business process schedule:

1. From the **Administration Menu**, select **Deployment > Schedules**.

2. Next to Schedule a Business Process, click **Go!**

3. In the Select BP page, select the business process for which you want to set up the scheduled run time from the **Business Process** field, and then click **Next**.

4. In the Schedule Settings page, indicate whether to use a 24-hour clock display (that is, Military time numbers 24 hours of the day from 1 to 24, rather than repeating the cycle of 12 hours twice).

5. To specify how you want to schedule your business process to run, complete one of the following steps, and then click **Next**:

   ◆ To set a timer to for running your business process, select **Run based on timer**.

   ◆ To schedule your business process to run on a daily basis, select **Run daily**.

   ◆ To schedule your business process to run on specific weekdays, select **Run based on day(s) of the week**.

   ◆ To schedule your business process to run on specific days during the month, select **Run based on day(s) of the month**.

6. Based on the selections you made in step 5., complete one of the following steps:

   a. If you are setting up a timer:

      In the **Hour(s)** field, type the number of hours in which the business process should run (for example, if you want the business process to run every 2 hours, type 2).

      In the **Min(s)** field, type the number of minutes in which the business process should run (for example, if you want the business process to run every 30 minutes, type 30. However, if you specified 2 in the Hour(s) field and specified 30 in the Min(s) field, the business process runs every 2.5 hours.).

   b. If you are running the business process daily, based on days of the week, or days of the months, and using a timer:

      To specify a time interval, select **Check here to select time interval**.

      In the **From** and **To** fields, type the time to start and end the interval.

      In the **Select Day(s)** field, select the number of days in between intervals. This field is only available if you choose Run based on day(s) of the week or month.

      From **Every**, **Hour(s)**, and **Min(s)** lists, select how long the interval lasts.

      Click **add** to specify the scheduled time you run the business process.

    c.   If you are not using a time interval:

        In the **From** field, type the time to start and end the interval.

        In the **Select Day(s)** field, select the number of days in between intervals.

        From **Every**, **Hour(s)**, and **Min(s)** lists, select how long the interval lasts.

        Click **add** to specify the scheduled time you run the business process.

7. To run the business process at startup, next to the scheduling interval you selected in step 4., ensure that the **At startup** check box is selected, and then click **Next**.

8. To indicate exclusion dates that business process should not run, complete the following steps:

    a.   In the **Months** field, select the month not to run the business process.

    b.   In the **Days** field, select the day of the month in which not to run the business process.

    c.   Click **add** to specify the exclusion dates for the schedule, and then click **Next**.

9. Click **Finish** to add the schedule for the business process to Sterling Integrator.

Searching for a Service Schedule in the AS2 Edition

You can search for a service schedule to verify the schedule information or to edit the service schedule.

To search for a service schedule:

1. From the **Administration Menu**, select **Deployment > Schedules**.

2. In the Schedules page, do you know the name of the service you want to locate?

    ◆   If Yes, under Search, in the **by Name** field, type the name of the service, and then click **Go!**

    ◆   If No, under List, select from the **by Scheduler Type** list a search method, and then click **Go!** Search Methods include:

        All – Lists all services and business processes that have schedules.

        Services – Lists only services that have schedules.

        Business Processes – Lists only business processes that have schedules.

    The Schedules page displays showing a list of the services that matched your search criteria.

Enabling or Disabling a Scheduled Service in the AS2 Edition

After you have created a service schedule you can enable or disable the service schedule depending on your business needs.

To enable or disable a scheduled service:

1. From the **Administration Menu**, select **Deployment > Schedules**.

2. Do you know the name of the service you want to edit?

    ◆   If Yes, under Search, in the **by Name** field, type the name of the service, and then click **Go!**

◆   If No, under List, select from the **by Scheduler Type** list a search method, and then click **Go!**
    Search Methods include:

    All – Lists all services and business processes that have schedules.

    Services – Lists only services that have schedules.

    Business Processes – Lists only business processes that have schedules.

3. In the Schedules page complete one of the following actions:

   ◆   To enable a scheduled service, under Enabled, click the check box next to the service you want to
       enable. Ensure that the check box is selected.

   ◆   To disable a scheduled service, under Enabled, clear the check box next to the service you want to
       disable. Ensure that the check box is cleared.

4. In the message box indicating *Status change will affect only the service associated schedule!*, click
   OK.

Editing a Service Schedule in the AS2 Edition

Predefined services run according to a schedule. You can edit a service schedule to meet your business
requirements.

To edit a service schedule:

1. From the **Administration Menu**, select **Deployment > Schedules**.

2. Do you know the name of the service you want to edit?

   ◆   If Yes, under Search, in the **by Name** field, type the service name. Click **Go!**

   ◆   If No, under List, select from the **by Scheduler Type** list a search method, and then click **Go!**
       Search Methods include:

       All – Lists all services and business processes that have schedules.

       Services – Lists only services that have schedules.

       Business Processes – Lists only business processes that have schedules.

3. In the Schedules page, click **edit** next to the schedule you want to edit.

4. In the Schedule Settings page, do you want the service to use a schedule?

   ◆   If No, select **Do not use schedule**, and then click **Next**.

   ◆   If Yes, select one of the following: **Run service based on timer every**, **Run service daily at**, or
       Run service weekly on, and complete the hour, minute, time of day, or day of week fields,
       appropriate to your selection.

5. Do you want to run the service at startup?

   ◆   If Yes, next to the scheduling interval you selected in step 4, select the **At startup** check box, and
       then click **Next**.

   ◆   If No, next to the scheduling interval you selected in step 4, clear the **At startup** check box (or
       leave the check box clear if not selected), and then click **Next**.

6. In the Confirm page, complete the following steps:

    a. Verify the schedule information. If information is not correct, click **Back**, make the needed corrections.

    b. Select **Enable Service for Business Processes** if you want to enable the service.

    c. Click **Finish** to save the changes to the service schedule.

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