Sterling e-Invoicing

IBM

Implementation

1.4, for Sterling B2B Integrator 5.2.2

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To implement Sterling e-Invoicing in IBM® Sterling B2B Integrator, you must have purchased an e-Invoicing license for use with Sterling B2B Integrator and you must complete some set up and configuration tasks:.

Implementing Sterling e-Invoicing

About this task

IBM Sterling e-Invoicing enables you to use electronic invoices (e-Invoices) while also maintaining the requisite legal compliance. This enables elimination of paper trails that companies have to maintain for compliance with Value Added Tax (VAT) laws, including complying with all the audit requirements for tax purposes.

Sterling e-Invoicing uses the e-signature method of compliance, which uses digital signatures to allow the seller to sign an invoice digitally using keys approved by the government of the seller's country or region. The signature is then verified by the buyer and these signatures can be verified in future tax audits for their authenticity and integrity by re-verifying the signatures on archived invoices. The e-signature method of compliance is the preferred option of the tax authorities because it provides an unequivocal technical guarantee of the authenticity and integrity of the invoice.

IBM has partnered with TrustWeaver™ to provide e-signature signing and verification through its on-demand service. All other e-Invoice functionality is created by IBM. TrustWeaver offers products and on-demand services that support all of the necessary hardware and certificate authorities.

This documentation describes how to implement Sterling e-Invoicing.

The following are prerequisites to using Sterling e-Invoicing:

- The audience using this software should be familiar with IBM Sterling B2B Integrator, e-Invoicing, TrustWeaver, and Value Added Tax (VAT) compliance regulations.

Note: This documentation is not intended to explain e-Invoicing or how to use TrustWeaver software.

- You must have purchased an e-Invoicing license for use with Sterling B2B Integrator.

To implement Sterling e-Invoicing, you must complete the following tasks:

Procedure

1. Prior to using Sterling e-Invoicing, if you want to use the Integrated Archive you must execute the e-Invoice Archive Install script to create the necessary archive database configurations. This step is not necessary if you will be using an external or custom/trading partner archive. See "Installing the e-Invoice Archive Install Script on a non-i-Series Operating System" on page 7 for more information.
2. Obtain and check in the necessary certificates. See "Credentials Fulfillment" on page 2 for more information.

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3. Ensure that you have the correct VAT ID from the Central European Union database (URL: http://ec.europa.eu/taxation_customs/vies/vieshome.do?selectedLanguage=EN). Verifying that you have the VAT ID correct is your legal responsibility. This database does not identify the country or region but verifies that a European Union VAT ID is a valid code.

   Note: The VAT ID is a required field. If you do not have a VAT ID, you must enter a unique value. This unique value is necessary for processing.

4. Configure global e-Invoicing parameters.

5. Assign the appropriate permissions for those users performing e-Invoicing tasks.

6. Verify whether you currently have business processes using the same names as the predefined e-Invoicing business processes and, if so, rename those business processes.

7. Set the queue number for the TrustWeaverEInvoicing business process.

8. Create the necessary maps to translate your invoice format to the canonical format used by Sterling e-Invoicing.

   Note: You may need to keep the canonical maps for archival purposes so that they can be inspected by an auditor.

9. Create an identity for each trading relationship.

10. Create an agreement to describe each relationship between you and your trading partners.

11. Update outbound envelopes or set the size limit for interchanges and transactions in the customer_overrides.properties file.

Customer Support

IBM fosters long-term business partnerships with its customers. Committed to customer satisfaction and quality support, IBM Customer Support has a world-wide staff providing support 24 hours per day, 365 days per year. For assistance with installation, implementation, usage, or for enhancement information, contact Customer Support. Check your maintenance contract for details about the type of support you have purchased for your product.

Note: Customer Support cannot validate or certify VAT compliance or recommend how to maintain compliance. Contact Sales and Professional Services for information on maintaining compliance. Customer Support is a technical resource, not a business resource.

Additionally, our Web site (http://www.sterlingcommerce.com) provides a wealth of information at your fingertips. The site includes information about e-commerce, a solutions database, document tracking tools, an issue tracking system, fix information, product and service documentation, workshop information, contact information, sunset and retirement schedules, and ordering information.

Before contacting Customer Support, we recommend that you review the documentation provided with your product. The documentation may help you to identify or resolve the problem you are experiencing.

Credentials Fulfillment

For Sterling e-Invoicing, you need to obtain credentials that establish your identity and authorize your install of Sterling B2B Integrator to connect with the

TrustWeaver server. Before you obtain a copy of Sterling e-Invoicing, you must provide an e-mail address and fax number for your technical contact to Sales.

IBM will provide this contact information to TrustWeaver and TrustWeaver uses this contact information to send you the information you need to obtain credentials. This information will be provided in two parts for security purposes. The first part will be in an e-mail addressed to your technical contact, and the second part will be faxed to you from TrustWeaver. You will need both parts of this information to download the necessary digital certificates from a link that TrustWeaver will provide you in the e-mail they send to you. TrustWeaver will also add the e-mail address you provide to its list of subscribers, so they can notify you of critical product alerts and system status updates. For this reason, we recommend you provide an e-mail alias or group account that can be managed long-term, independent from an e-mail address of an individual employee.

To use these credentials, you must complete these tasks in sequential order:

Step Number	Task	For More Information
1	Provide Sales with your contact information. When your order is fulfilled, you will receive an e-mail and a fax from TrustWeaver. The e-mail will include a password and the fax will contain your Control Code. **Note:** You must retain this information in a secure place because you will need it when you pick up renewed certificates two years after your initial install.	If you do not receive the e-mail and fax from TrustWeaver, contact your account representative. If you are having trouble downloading the necessary certificates after receiving the e-mail and fax from TrustWeaver, open a Support Case with IBM Customer Support.
2	Download the CA and PKCS12 digital certificates (for authentication with the TrustWeaver server) from TrustWeaver.	To download the digital certificate, follow the instructions provided in "Obtaining Digital Certificates from TrustWeaver."
3	Check in the CA and PKCS12 certificates to Sterling B2B Integrator.	"Checking In Digital Certificates" on page 4
4	Configure the Check Expire service so you will be warned using your preferred output method at least 14 days prior to when your certificates expire, to avoid the risk of downtime when these certificates expire. We recommend that you use e-mail as the output method for alerts.	See *Managing Services and Adapters* for more information on configuring the Check Expire service.

Obtaining Digital Certificates from TrustWeaver
About this task

You can get digital certificates from TrustWeaver.

To obtain digital certificates from TrustWeaver:

Procedure

1. Contact TrustWeaver and register for credential download.

    You will receive notification from TrustWeaver with a web link to the location from which you can download the certificates. The link will contain an email code, which is half of the certificate password. The other half of the password, the Control Code, will be faxed to you at the fax number you supply during registration.

2. Once you have the link and your Control Code, you use the link to access the TrustWeaver web page from which you can download the CA certificate and the PKCS12 certificate. Download both certificates.

3. Rename the .p12 file that you downloaded from step 2 to use the file extension .pfx.

4. Continue with the instructions for Checking In Digital Certificates.

Checking In Digital Certificates

About this task

To check in the CA and PKCS12 digital certificates so your invoices can be securely transported to and from TrustWeaver:

Procedure

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

2. In Sterling B2B Integrator, from the **Administration** menu, select **Trading Partner** > **Digital Certificates** > **CA.**

3. Next to Check in New Certificate, click **Go!** to check in the CA certificate.

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

5. Verify the name of the 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, Sterling B2B Integrator 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.

6. 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 for the validity period of the certificate to check if they 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.

7. 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.

8. Click **Finish** to check the CA certificate in to Sterling B2B Integrator.

9. In Sterling B2B Integrator, from the **Administration** menu, select **Trading Partner** > **Digital Certificates** > **System**.

10. Next to Check in PKCS12 Certificate, click **Go!** to check in the new PKCS12 certificate.

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

   Field   Description

   Certificate Name
   > Type a unique and meaningful name for the PKCS12 certificate. Required

   Private Key Password
   > Type the private key password. This is the password used to encrypt the PKCS12 certificate. Required.
   >
   > **Note:** The **Private Key Password** and **Key Store Password** are the same, and they are the concatenation of the email code and control code from "Obtaining Digital Certificates from TrustWeaver" on page 3. For example, if your password is xYKt and Control Code is A5hzTXpM, the concatenation of both is xYKtA5hzTXpM. You must retain the password and control code information because you will need it when you pick up renewed certificates two years after your initial install.

   Key Store Password
   > Type the key store password. This is the password for the PKCS12 object. It may be the same as the private key password. Required.
   >
   > **Note:** The **Private Key Password** and **Key Store Password** are the same, and they are the concatenation of the email code and control code from "Obtaining Digital Certificates from TrustWeaver" on page 3. For example, if your password is xYKt and Control Code is A5hzTXpM, the concatenation of both is xYKtA5hzTXpM. You must retain the password and control code information because you will need it when you pick up renewed certificates two years after your initial install.

   Filename (.pfx)
   > Type the filename of the certificate or click **Browse** to select the file name of the PKCS12 certificate. Required.

12. 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 for the validity period of the certificate to check if they 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.

13. If there is more than one PKCS12 certificate in the file you selected, you can check in each certificate by selecting the check box next to it.

14. Click **Finish** to check the PKCS12 certificate in to Sterling B2B Integrator.

Picking Up Renewed Certificates in Two Years

You can download the CA and PKCS12 digital certificates again at any time if you retain the information provided to you in the e-mail and fax you receive from TrustWeaver.

Additionally, two years after you have downloaded the digital certificates for the first time, you will need to pick up the renewed certificates. TrustWeaver automatically makes these certificates available for you to pick up sixty days prior to the expiration of the certificates, and TrustWeaver will e-mail your registered contact to inform you that the renewed certificates are available for you to pick up.

You need to pick up the renewed certificates from TrustWeaver, and then either you can check in the certificates or SCI Professional Services can assist you with checking in the certificates.

Configuring the Check Expire Service

The Sterling B2B Integrator Check Expire service alerts you when certificates are about to expire, or have expired. The Check Expire service runs on a schedule (by default it runs daily at 2:30 AM), and reviews each checked-in certificate to compare its expiration date against the value set in Sterling B2B Integrator (the default is 14 days). Any certificates that have already expired or will expire within the specified number of days are listed on your Admin Console Home page in **System Alerts**, **System Alerts** on **Dashboard**, and the **Event Viewer** under the **Operator** menu. These alerts remain in the system for 60 days.

Note: You need to configure the Check Expire service so you will be warned using your preferred output method at least 14 days prior to when your certificates expire, to avoid the risk of downtime when these certificates expire. We recommend that you use e-mail as the output method for alerts. See *Managing Services and Adapters* for more information about configuring the Check Expire service.

If Your Technical Contact Information Changes

If your technical contact information changes (specifically, your e-mail address or fax number), open a Support Case requesting a change of record through Support on Demand. IBM will verify that you are authorized to obtain credentials.

If You Lose the Password And/Or Control Code

If you ever lose the password and/or control code information sent to you by TrustWeaver, open a Support Case requesting a replacement through Customer Support. IBM will verify that you are authorized to obtain credentials.

Maintenance Updates
About this task

If TrustWeaver updates its software, IBM may need to provide an update to Sterling e-Invoicing. If an update is necessary, it will be posted on Support on Demand like standard maintenance patches are posted.

To use the Support on Demand Web site (free of charge):

Procedure

1. Open your Internet browser and go to http://www.sterlingcommerce.com.
2. Select **Customer Support.**
3. In the Support on Demand box, click **LOGIN**.
4. Type your E-mail address and password.

   If you do not have a Support on Demand password, follow the instructions on Support on Demand to request one.
5. Click **Login** and follow the online instructions.

Installing the e-Invoice Archive Install Script on a non-i-Series Operating System

About this task

Prior to using Sterling e-Invoicing, you must execute a script to create the necessary archive database configurations.

Note: This script is available when you install Sterling e-Invoicing.

Note: If Sterling B2B Integrator is installed on the iSeries operating system, then only the native iSeries DB2® database can be used for the integrated archive.

Complete the following instructions to install the e-Invoice Archive Install Script on a UNIX or Windows operating system:

Note: If the same database product will be used for both the Sterling B2B Integrator database and the Sterling e-Invoicing archive database, the same version of that database product must be used. For example, if Microsoft SQL Server will be used for both databases, and the Sterling B2B Integrator database will use Microsoft SQL Server 2008, then the Sterling e-Invoicing archive database must also use Microsoft SQL Server 2008.

Procedure

1. Install or upgrade Sterling B2B Integrator by following the *Installation* documentation.
2. From the **Administration** menu, select **Operations** > **System** > **Troubleshooter**.
3. Click **Stop the System.**

   Sterling B2B Integrator displays the warning, This will shut down the whole environment and end your session. Do you want to continue?
4. To shut down Sterling B2B Integrator, click **OK**. Sterling B2B Integrator must be shut down because the Archive Install Script will be making modifications to properties files.
5. Change to the **<Sterling B2B Integrator Installation Directory>/bin/** directory.
6. Install the **setupeInvoiceArchive** file using the following commands:
   - If you are installing on a UNIX operating system, type `setupEInvoiceArchive.sh`
   - If you are installing on a Windows operating system, type `setupEInvoiceArchive.cmd`

7. *For clustered environments only,* is this the primary node of the cluster? Type **yes** and press **Enter** if you are running on the primary node of the cluster. Otherwise (if you are not running the script on the primary node of a cluster), type **no** and press **Enter**.

   Note: The e-Invoice Archive Setup script must be executed on each node of the cluster.

8. Are you upgrading an existing database to the current version of Sterling B2B Integrator?

   Note: Select **Yes**, if you are executing the script to set up e-Invoicing on an already existing database. Existing data is preserved if you select **Yes**.

9. Which database do you want to use?

   Note: Supported databases are MySQL, Microsoft SQL Server, Oracle, and DB2. For a full list of supported database version and supported JDBC drivers, please refer to the Sterling B2B Integrator *Installation Requirements* documentation. If MySQL is used, the default table type must be **InnoDB**. This can be specified by adding the line **default-storage-engine=innodb** to the **[mysqld]** section of the **my.cnf** configuration file.

   - When you are prompted to enter the database username, type the username for the archive database and press **Enter**.
   - When you are prompted to enter the database password, type the password for the archive database and press **Enter**.
   - When you are prompted to enter the database name, type the database name for the archive database and press **Enter**.

   Note: The archive database must be different than the Sterling B2B Integrator database or any other archive database. If the application is installed on the iSeries operating system, then only the native iSeries DB2 database can be used for the integrated archive.

   - When you are prompted to enter the database host name, type the host name or IP for the archive database and press **Enter**.
   - When you are prompted to enter the database host port, type the port to use for the archive database and press **Enter**.
   - When you are prompted to enter the full path of the JDBC drivers, type the path for the JDBC driver to use and press **Enter**.

   Note: See the Sterling B2B Integrator *Installation Requirements* documentation for the list of supported driver versions.

   - When you are prompted to enter the version of the JDBC drivers, type the version of the driver being used and press **Enter**.

10. If you are not installing in a clustered environment, you have finished the install procedure. If you are installing in a clustered environment, use the following commands:

    Note: The startCluster command must be executed on each node of the cluster.

    - If you are installing in a clustered environment on a UNIX operating system, type `./startCluster.sh <node_number>`
    - If you are installing in a clustered environment on a Windows operating system, type `startCluster.cmd <node_number>`

For example, if you are installing on Node 1 on a UNIX operating system, you would type ./startCluster.sh 1

11. If you are running the script in a clustered environment, the script asks you if this instance is your primary node. If the instance is not your primary instance, the script will not create new tables in the primary node archive database.

   Note: Once your archive database is installed, under no circumstances should you ever directly delete or update rows in your production integrated archive database.

Executing the Archive Install Script on an iSeries Operating System

About this task

Prior to using Sterling e-Invoicing, you must execute a script to create the necessary archive database configurations.

Note: This script is available when you install Sterling e-Invoicing.

Note: If Sterling B2B Integrator is installed on the iSeries operating system, then only the native iSeries DB2 database can be used for the integrated archive.

Complete the following instructions to install the e-Invoice Archive Install Script on an iSeries operating system:

Note: If the same database product will be used for both the Sterling B2B Integrator database and the Sterling e-Invoicing archive database, the same version of that database product must be used. For example, if Microsoft SQL Server will be used for both databases, and the Sterling B2B Integrator database will use Microsoft SQL Server 2008, then the Sterling e-Invoicing archive database must also use Microsoft SQL Server 2008.

Note: When you execute the archive install script on an iSeries, the installation log is located at **< Sterling B2B Integrator Installation Directory>/installeinv.log**

Prior to using Sterling e-Invoicing, you must execute a script to create the necessary archive database configurations.

Note: This script is available when you install Sterling e-Invoicing.

Note: If Sterling B2B Integrator is installed on the iSeries operating system, then only the native iSeries DB2 database can be used for the integrated archive.

Procedure

1. Install or upgrade Sterling B2B Integrator by following the *Installation* documentation.
2. From the **Administration** menu, select **Operations** > **System** > **Troubleshooter**.
3. Click **Stop the System.**
   Sterling B2B Integrator displays a warning that this will shut down the whole environment and end your session. Do you want to continue?

4. To shut down Sterling B2B Integrator, click **OK**. Sterling B2B Integrator must be shut down because the Archive Install Script will be making modifications to properties files.
5. Log on to your iSeries using your Sterling B2B Integrator user profile.
6. Is there a saved file named INSTEINV in QGPL on your iSeries?
   - If yes, clear the save file by typing `CLRSAVF FILE(QGPL/INSTEINV)`.
   - If no, type `CRTSAVF FILE(QGPL/INSTEINV)` to create a save file on your iSeries.
7. Copy the insteinv.savf file from **<Sterling B2B Integrator Installation Directory>/bin/insteinv.savf** to the save file created in QGPL by typing: `CPYFRMSTMF FROMSTMF(˜`**<Sterling B2B IntegratorInstallation Directory>/bin/insteinv.savf**`) TOMBR(˜'/QSYS.LIB/QGPL.LIB/INSTEINV.FILE') MBROPT(*REPLACE) CVTDTA(*NONE)`
8. Type `RSTLIB SAVLIB(INSTEINV) DEV(*SAVF) SAVF(QGPL/INSTEINV)` to restore the installation objects.
9. Type `ADDLIBLE LIB(INSTEINV)` from an iSeries command line to add the installation programs to your library list.
10. Create a collection (library) to hold the e-Invoice archive database. You can use an existing non-Sterling B2B Integrator library, provided that it has a system-created journal and journal receiver, or you can create a new collection. To create a new collection, type `STRSQL` from an iSeries command line to bring up an interactive SQL session.
11. Type `create collection libname` and press Enter (where **libname** is the new library that you want to create). This creates the library and system journal and journal receiver.
12. Once created, press **F3** to exit and press **Enter** to exit the session.
13. To run the installation script, type `INSTEINV` and press **Enter** from an iSeries command line.
14. Type the installation directory of your Sterling B2B Integrator instance and press **Enter**.
15. You are prompted to enter the connection information for the database you want to use for the e-Invoice archive.

   Note: The e-Invoice archive database must be different from your Sterling B2B Integrator database. The only supported database for an iSeries installation is iSeries DB2, on the same machine where you are running Sterling B2B Integrator.
   - When you are prompted to enter the database username, type the username for the archive database user and press **Enter**.
   - Type in the value for the following parameters and when complete, click **Enter**.
     Enter the Database User ID - type the name of the iSeries User profile.

   Note: This should be the same user that created the collection in step 8, or should be the owner of the library if an existing collection is being used.
   - Enter the Database User Password - type the password that corresponds to the user profile entered.
   - Re-enter the password on the Verify Database User Password parameter.
   - Enter the Database Name - type the name of the collection that will hold your e-invoicing archive.

- Enter the Database Host Name - type the host name or IP address for the archive database.

  Note: Once your archive database is installed, under no circumstances should you ever directly delete or update rows in your production integrated archive database.

Configuring the eInvoice Archive Service

Now you can configure and implement the eInvoice Archive service. The eInvoice Archive service is used to archive e-Invoices. Depending on the type of archive you select, this service either archives the e-Invoices in a canonical format to a database or provides the archive information to an external system through a business process. This service enables you to update the status of an invoice stored in the e-Invoicing archive, during normal processing, after it has already been signed or verified by TrustWeaver. This service also updates the status of an e-Invoice when errors occur during normal processing. See *eInvoice Archive Service* for more details.

Setting Global Configuration Parameters for e-Invoicing

About this task

Sterling e-Invoicing enables you to set global parameters to limit the maximum number of connections that can be established by Sterling e-Invoicing with TrustWeaver and the maximum size of invoices that can be sent to the TrustWeaver Server for processing. You need to set these parameters or accept the defaults to ensure that the TrustWeaver Server is not overloaded when you send data for signing or verification.

To set the global parameters:

Procedure

1. From the **Administration** menu, select **eInvoicing** > **Configuration**.
2. Next to **Edit Configuration Parameters,** click **Go!**.
3. Complete the following TrustWeaver Configuration parameters.

   Parameter
   > **Definition**

   TrustWeaver Host
   > The name of the TrustWeaver Server. Required.

   TrustWeaver URI
   > The name of the TrustWeaver Universal Resource Indicator representing incoming requests. Required.

   CA Certificate
   > The digital security certificate used to provide authentication to TrustWeaver. Required.
   >
   > **Note:** The client certificate must be valid. A client certificate is only required by the Sign method.

   System Certificate
   > The system certificate contains the private key the SSL server will use to communicate with TrustWeaver. Required.

Note: To access information from TrustWeaver Server, you must establish an encrypted channel (SSL) to the server to ensure that only the intended client can read the information sent to and from the server. SSL is also used to authenticate the server, and a client authenticates the server through the SSL server certificate.

4. Click **Next**.

5. Complete the following EInvoice Configuration Parameters or accept the defaults:

Parameter	Definition	Default Value
Maximum Invoice Size (MB)	The Maximum size of the invoice message that can be sent to the TrustWeaver Server. Required. **Note:** If the size of the SOAP request created by the TrustWeaver Request service (when it retrieves the primary document from process data) is greater than the value specified here, the process is stopped and an error is generated.	4
Maximum Open Connections	The maximum number of open connections that can be made with TrustWeaver Server. This parameter is used to ensure that the TrustWeaver Server is not overloaded with invoice messages. Required. **Note:** The number of open connections is limited by the Semaphore service.	5
Immediate Retry	Number of retries allowed when a self-correcting, transient error (essentially a hiccup in the processing, which is not expected to be repeated, or not expected to last for long) is returned by the TrustWeaver Server. This parameter specifies the number of times to loop with a small pause between each loop. Required.	3
Delayed Retry	Number of retries allowed when a delaying error (a self-correcting, transient error, but an error that is expected to take some time to resolve) is returned by the TrustWeaver Server. This parameter specifies the number of times to loop with a pause between each loop. Required.	24
Immediate Retry Wait (sec)	Number of seconds to pause before retrying when a self-correcting, transient error occurs. Required.	200
Delayed Retry Wait (min)	Number of minutes to pause before retrying when an error occurs (and the error is transient and self-correcting but not immediately fixable). Required. **Note:** If a TrustWeaver error occurs while processing an invoice, then all the processes involving the buyer and supplier countries or regions is paused for the time period specified in this parameter. For example, if an error occurs while processing an invoice from UK to PL, all processing of invoices to and from UK, and to and from PL is paused for this interval.	60
Time to wait for an available connection (sec)	The maximum number of seconds to wait to get a connection with the TrustWeaver Server. **Note:** This allows for a controllable amount of access as required by Sterling B2B Integratoror resources. This may be useful for performance implications, because of limited resources or any other reason.	300

6. Click **Next**.

7. Click **Finish** to set the global parameters.

Setting the Queue Number for the TrustWeaverEInvoicing Business Process

About this task

For the predefined business process TrustWeaverEInvoicing, you need to set the queue number and then update the appropriate properties in the **tuning.properties** file so the queue will not release its thread until after 100 steps occurred in the business process.

To set the queue number for TrustWeaverEInvoicing:

Procedure

1. From the **Administration** menu, select **Business Process** > **Manager**.
2. In the Search section, next to **Process Name,** type **TrustWeaverEInvoicing** and click **Go!**.
3. On the Business Process Manager page, click **Source Manager**.
4. On the **Source Manager** page, click **edit**.
5. Type a description of the version of the business process (for example, setqueue) and click **Next**.
6. On the Process Levels page, select **3** for **Set Queue** and click **Next**.
7. On the Deadline Settings page, click **Next**.
8. On the Lifespan page, click **Next**.
9. On the Default Version page, select the version of the business process that you just created and click **Next**.
10. On the Confirm page, click **Finish** to set the parameter.

Setting the Tuning Properties
About this task

To set the appropriate tuning properties so that queue number 3 will not release its thread until after 100 steps of the business process are processed:

Procedure

1. In the *install_dir*/properties directory, locate the **tuning.properties** file.
2. Open the **tuning.properties** file in a text editor.
3. Change the following properties, using the following format:
   ```
   NOAPP.EXEC_CYCLE_3=100
   NOAPP.MAX_POOL_SIZE_3=10
   NOAPP.MIN_POOL_SIZE_3=10
   ```

   Note: You need to set the NOAPP.MAX_POOL_SIZE_3 and NOAPP.MIN_POOL_SIZE_3 properties to the same value you configured for your **Maximum Open Connections** parameter in your global configuration. See "Setting Global Configuration Parameters for e-Invoicing" on page 11 for more information on setting and viewing the value of the Maximum Open Connections parameter.
   Be sure that you use the tuning.properties file to make any changes to the tuning settings. Do not use the customer_overrides.properties file to change tuning settings.

4. Save and close the **tuning.properties** file.
5. Run setupfiles.sh (on a Unix operating system) or setupfiles.cmd (on a Windows operating system).
6. Stop and restart Sterling B2B Integrator to use the new values.

Implementing e-Invoice Partner Relationships

To effectively set up trading partners that implement e-Invoicing, you must configure Sterling e-Invoicing with specific message data settings for the standard you are using. Additionally, you need to set up an agreement to administer e-Invoice data sent to and received from your partners. This section provides an overview of the steps to set up trading partner information, along with the specific configuration settings that enable you to meet your e-Invoicing data exchange requirements.

Before You Begin

Before you configure an e-Invoicing identity, agreement, and envelopes, and to simplify the tasks you must perform, collect and prepare the following information about your organization and trading partners, which includes:

* The standard you are using to exchange messages with your trading partners.
* Trading partner name and address information, including:
    - DUNS numbers
    - Contact information, such as addresses, telephone numbers, e-mail addresses
* Transport information, including:
    - HTTP URLs
    - CA certificates for trading partner if using SSL
* Security information, digital signatures, and encryption and certificates (for example, certificates used to encrypt and decrypt).
* If you are using digital certificates, check in the appropriate certificate.
* Your VAT ID or lookup identifier. (If you do not have a VAT ID, you must enter a unique value).
* E-mail address to which error notifications can be sent.
* Your lookup identifier.

Setting Up e-Invoicing Trading Profiles
About this task

When setting up trading profiles for e-Invoicing, you must perform the following tasks:

Note: The VAT ID is a required field. If you do not have a VAT ID, you must enter a unique value. This unique value is necessary for processing.

Procedure
1. Create an identity record for your organization, indicating your organization as the base identity. Alternatively, you can reuse an existing identity and just edit it to add the necessary VAT IDs.
2. Create an identity record for each of your trading partners. Alternatively, you can reuse an existing identity and just edit it to add the necessary VAT IDs.
3. Create an agreement for each trading partner.

Note: Determine whether you want to allow duplicate invoices for this partner and set the appropriate option.

4. Update your existing envelopes or create new envelopes for use with e-Invoices.

Implementing e-Invoice Identity Records

Every trading partner is represented by at least one record, referred to as an *identity*. An identity record describes the trading partner and contains information referenced when a business process involving the trading partner is executed. A trading partner can have more than one identity to represent the different ways it does business. For example, a company's central office procurement organization might be very different from its manufacturing supplies procurement organization, and in this case you need a separate identity record for each organization within the company.

A base identity is a regular identity that you can use as a starting point to create a new identity. The base identity maintains a link to the identity that inherited its properties. If you modify the base identity, all related identities (that is, ones that inherited the base identity properties) change, as well. When you create an identity record using a base identity, everything in the new identity is the same as in the base identity, except the identity name, description, and other unique parameters, such as unique identification numbers.

Note: If you plan to create many identities using the base identity, do not use the base identity in production. You should record the identities that are related to the base identity.

You must create an identity before you can create a transport, document exchange, delivery channel, packaging, profile, and (when required) a contract. Each of these components references an identity. For Sterling e-Invoicing, only an identity record is mandatory; the transport, document exchange, delivery channel, packaging, profile, and contract are only necessary if the standard you are using requires them.

Creating an Identity Record for Your Organization
About this task

When setting up your trading profile, consider that your organization is the base identity.

To create an identity record:

Procedure
1. From the **Administration** menu, select **Trading Partners** > **Advanced** > **Identities**.
2. Next to Create New Identity, click **Go!** or type an existing identity name into Search by Identity Name and click **Go!**.
3. In the Base Identity page, for Select Base Identity, verify that **No Base Identities Available** is selected, and click **Next**.
4. In the Information page, complete the following fields and click **Next**:

   Name   Name of your organization. Required.

Reference URL
Internet address of your organization. Optional.

DUNS
Unique 9-13 character identification number of your organization, as issued by Dun & Bradstreet Corporation. Optional.

Identifier
Primary ID of your organization. Use DUNS number. Required.

Address Line 1
Conventional mailing address of your organization. Required.

Address Line 2
Additional mailing address information of your organization. Optional.

City City where your organization is located. Required.

State or Province
State or province where your organization is located. Optional.

Zip or Postal Code
ZIP Code or postal code where your organization is located. Optional.

E-mail Address
E-mail address of your organization. Optional.

Telephone Number
Telephone number of your organization. Optional.

Time Zone
Time zone where your organization is located. Optional.

Country or Region
Country or region where your organization is located. Optional.

VAT ID
The VAT transaction tax identifier. If you do not have a VAT ID, you must enter a unique value. Required.

Note: When you add VAT IDs to an identity, an associated permission ID is created, and the user is assigned that permission ID.

Internal Notification E-Mail
The internal e-mail address to which you want error notifications to be sent. Optional.

Lookup ID
The identifier used to look up the e-Invoice agreement. Optional.

Lookup ID Comments
Any comments regarding the identifier used to look up the e-Invoice agreement. Optional.

Include ISO20022 Extensions
Whether to include ISO20022 Extensions. Default is unchecked (do not include the extensions). Optional - currently used for SWIFTNet only. If you select this parameter, the ISO20022 page is displayed.

5. Click **Next** to access the Confirm page.
6. Click **Finish** to add the identity.

Creating an Identity Record for Your Trading Partner

About this task

For each trading partner with which you are exchanging e-Invoices, you must create an identity record.

To set up an identity record for your trading partner:

Procedure

1. From the **Administration** menu, select **Trading Partners** > **Advanced** > **Identities**.
2. Next to Create New Identity, click **Go!** or type an existing identity name into Search by Identity Name and click **Go!**.
3. In the Base Identity page, for Select Base Identity, select the name of the identity record that you created for your organization, and click **Next**.
4. In the Information page, complete the following fields and click **Next**:

Field **Description**

Name Name of your trading partner. Required.

Reference URL
    Internet address of your trading partner. Optional.

DUNS
    Unique 9-13 character identification number of your trading partner, as issued by Dun & Bradstreet Corporation. Optional.

Identifier
    Primary ID of your trading partner. Use DUNS number. Required.

Address Line 1
    Conventional mailing address of your trading partner. Required.

Address Line 2
    Additional mailing address information of your trading partner. Optional.

City City where your trading partner is located. Required.

State or Province
    State or province where your trading partner is located. Optional.

Zip or Postal Code
    ZIP Code or postal code where your trading partner is located. Optional.

E-mail Address
    E-mail address of your trading partner. Optional.

Telephone Number
    Telephone number of your trading partner. Optional.

Time Zone
    Time zone where your trading partner is located. Optional.

Country or Region
    Country or region where your trading partner is located. Optional.

VAT ID
    The VAT transaction tax code. If you do not have a VAT ID, you must enter a unique value. Required.

> **Note:** When you add VAT IDs to an identity, an associated permission
> ID is created, and the user is assigned that permission ID.

Error Notification E-Mail
> The e-mail address to which you want error notifications to be sent.
> Optional.

Lookup ID
> The identifier used to look up the e-Invoice agreement. Optional.

Lookup ID Comments
> Any comments regarding the identifier used to look up the e-Invoice
> agreement. Optional.

Include ISO20022 Extensions
> Whether to include ISO20022 Extensions. Default is unchecked (do not
> include the extensions). Optional - currently used for SWIFTNet only. If
> you select this parameter, the ISO20022 page is displayed.

5. Click **Next** to access the Confirm page.
6. Click **Finish** to add the identity of this trading partner.

Results

You are now ready to create an agreement for this trading partner.

Implementing e-Invoice Agreements

About this task

An agreement is a configurable object that relates two e-Invoice parties (the
"supplier" and the "buyer"), and stores their e-Invoice processing options
(including any "on behalf" options). It is linked to the Sterling e-Invoicing identity.

Note: The agreement is a relationship object that enables the necessary legal
separation of supplier and buyer e-Invoicing steps.

You must create an e-Invoice agreement for each trading partner with whom you
will be exchanging e-Invoices.

To create an e-Invoice agreement:

Procedure

1. From the Administration menu, select **eInvoicing** > **Agreements**.
2. In the Agreements page, in the **Create** section next to **New Agreement**, click
   Go!.
3. In the New Agreement page, complete the following parameters, as
   appropriate, and click **Next**.

Results

Field   Description

Name   Unique name of the agreement. Required.

Comments
> A brief description of the agreement being created. Required.

Supplier Identity
> Identity of the Supplier. Optional.

Note: You must have already created this identity in Sterling e-Invoicing.

Buyer Identity
Identity of the Buyer. Optional.

Note: You must have already created this identity in Sterling e-Invoicing.

Message Type
Type of message. This parameter enables you to specify the type of message exchanged if you have multiple agreements with the same supplier/buyer information but use different message types. Optional.

Supplier Processing Option
Indicates which process option is used by the supplier. Optional. The valid values are:

- No Processing

Note: If you select No Processing for the supplier, this processing option will not be available for the buyer.

- Sign and Archive (integrated)
- Sign and Archive (external)
- Sign and Archive (custom)

Business Process for Supplier Custom Archive (if applicable)
Business process to be executed. Optional.

Note: This parameter is only valid if you selected **Sign and Archive (custom)** for **Supplier Processing Option**.

Buyer Processing Option
Indicates which process option is used by the buyer. Optional. The valid values are:

- No Processing

Note: If you select No Processing for the buyer, this processing option will not be available for the supplier.

- Verify Signature and Archive (integrated)
- Verify Signature and Archive (external)
- Verify Signature and Archive (custom)

Business Process for Buyer Custom Archive (if applicable)
Business process to be executed. Optional.

Note: This parameter is only valid if you selected **Sign and Archive (custom)** for **Buyer Processing Option**.

Business Process for Post-Processing
This is the business process to run after the e-Invoicing business process is executed.

Note: For example, if prior to implementing Sterling e-Invoicing, you would create invoices using one of the enveloping services (X12 Enveloping service, EDIFACT Enveloping service, Generic Envelope service, and so forth) and the invoice envelope definition would contain a business process that would run after the enveloping was finished (to send the invoices to your trading partner). That business process is considered to be your "post- process." For e-Invoicing, the "post-process" is replaced

by the e-Invoicing process. This parameter allows you to specify that the regular post process will be automatically run after the e-Invoicing process.

Document Format

Document format for this agreement. Optional. The valid values are:

- GENERIC (default)
- PDF
- XML
- EANCOM
- CXML
- FACTURAE

Note:

The country or region code of both the Supplier and Buyer should be CH for EANCOM invoices. Once you select EANCOM as the **Document Format** on the **Agreement** page (from the **Administration** menu, select **eInvoicing > Agreements** and then click **Go!** in the Create section to create a new agreement), the Supplier and Buyer Identities are filtered to show only those identities that have a VAT code starting with country or region code CH.

This selection is driven by two properties that were added to the einvoicing.properties file.

```
#######Country or Region Codes for EANCOM###########
einvoicing.EANCOM.suppliercountrycode = CH
einvoicing.EANCOM.buyercountrycode = CH
```

The country or region code of both the Supplier and Buyer should be ES for FACTURAE invoices. Once you select FACTURAE as the **Document Format** on the **Agreement** page (from the **Administration** menu, select **eInvoicing > Agreements** and then click **Go!** in the Create section to create a new agreement), the Supplier and Buyer Identities are filtered to show only those identities that have a VAT code starting with country or region code ES.

This selection is driven by two properties that were added to the einvoicing.properties file.

```
#######Country or Region Codes for FACTURAE###########
einvoicing.FACTURAE.suppliercountrycode = ES
einvoicing.FACTURAE.buyercountrycode = ES
```

Digital Signature Format

The format of the digital signature used. Optional. The valid values are:

- PKCS7 (default)
- PKCS7D
- PDF
- SMIME
- XMLSIG
- XMLCON
- IDEAL
- AECOC
- FACTURAE

Note: Use the XMLCON format if you need to produce XML signatures that support a double-signature (for example, signatures for two countries or regions). We recommend you use XMLCON format instead of XMLSIG. The XMLCON and XMLSIG signature formats are not valid with PDF or GENERIC document formats; it is only valid with XML-formatted documents.

Test / Production Indicator
Whether the e-Invoice process is in test or production mode. Optional. The valid values are:

- Test
- Production (default)

Map for Translation to Canonical Format
The map used to translate the invoice to the canonical format. Optional.

Notify Internal Contact on Supplier-side Error
Whether to notify the internal contact when supplier-side errors occur. Valid values are: Yes (notify - this is the default) and No (do not notify).

Notify Internal Contact on Buyer-side Error
Whether to notify the internal contact when buyer-side errors occur. Valid values are: Yes (notify - this is the default) and No (do not notify).

Accept Duplicate Supplier Invoices
Whether to allow duplicate invoices from this partner. Default value is not selected (reject). Select the checkbox to indicate that you want to accept duplicate supplier invoices. Optional.

Implementing Envelopes for Sterling e-Invoicing

About this task

The documents that you are sending to be signed can be in the format of any of the standards supported in Sterling B2B Integrator (for example, ASC X12, EDIFACT, TRADACOMS, and VDA). You may be sending documents that already exist but will now have the additional step of being signed by TrustWeaver, before sending them on to be processed normally in Sterling B2B Integrator. Or, you may be creating documents to be signed by TrustWeaver. In either case, you will use the same Sterling B2B Integrator envelopes as you would if you were not sending documents to TrustWeaver, and you will either update existing envelopes with new e-Invoicing-specific parameters or create envelopes like they normally would for the standard(s) you currently use (with the additional step of setting the size limit required by TrustWeaver).

Note: The only envelopes to which you can add the size limit are outbound envelopes for standards that use interchanges.

Alternatively, you can set the size limit directly by setting properties using the **customer_overrides.properties** file. In the **enveloping.properties** file there is a property for each supported standard, as well as specific properties for each message type (for example, 810 for an ASC X12 invoice) that can override the standard property. If you add properties to the customer_overrides.properties file, you are specifying global properties, and then you are able to specify in each envelope whether to use the global properties or to override specific properties.

To set global e-Invoicing envelope properties:

Procedure

1. In the **install_dir/properties** directory, locate (or create, if necessary) the **customer_overrides.properties** file.
2. Open the **customer_overrides.properties** file in a text editor.
3. If desired, add interchange size limit properties, using the following format:

   ```
   enveloping.enveloping.<standard>.MaxInterchangeSize=[size_in_bytes]
   ```

   For example:

   ```
   enveloping.enveloping.X12.MaxInterchangeSize=30
   ```

4. If desired, add interchange size limit properties for specific message types, using the following format:

   ```
   enveloping.enveloping.<standard>.<transaction set>.MaxInterchangeSize=
   [size_in_bytes]
   ```

   For example:

   ```
   enveloping.enveloping.X12.810.MaxInterchangeSize=30
   ```

   Note: When you choose to specify a maximum value, the value entered is checked to make sure it is at least a specific number of bytes based on the standard:
   EDIFACT: 173
   TRADACOMS: 354
   VDA: 456
   X12: 249
   These values are based on the header and trailer size (in bytes) for the given standard.

5. Save and close the **customer_overrides.properties** file.
6. Stop and restart Sterling B2B Integrator to use the new values.
7. Test your changes to ensure that the overrides give the desired results. If you have problems, contact IBM Customer Support for assistance.

Creating a New Envelope
About this task

You can create an envelope.

To create a new envelope:

Procedure

1. From the **Administration** menu, select **Trading Partner** > **Document Envelopes** > **Envelopes**.
2. Under Create, next to New Envelope, click **Go!**
3. On the Envelope Standards page, select one of the following and click **Next**:
   - ACH
   - CHIPS
   - CII
   - EDIFACT
   - FEDWIRE
   - RND
   - SWIFT
   - TRADACOMS
   - VDA

- ASC X12

  Note: To create an envelope using the ODETTE or AUTACK standard, select EDIFACT.

4. Select the level of envelope you want to create, including whether it is inbound or outbound, and click **Next**.

5. Do one of the following:
   - To create this envelope from a base envelope, select the Base envelope from the Select Envelope list, and click **Next**.

     Note: All the properties are pre-filled but you can update them as needed.
   - To create a new envelope, select the Not Applicable from the Select Envelope list, and click **Next**.

6. On the Name page, type a unique name for the envelope, and a description or comments, then click **Next**.

7. Complete the properties for the envelope as necessary and click **Next** after each page until you reach the confirm page. Required fields are highlighted in blue.

   Note: For standards that use interchanges, you will be able to specify limits for interchange size on the outbound interchange and transaction envelopes. For performance reasons, the size is estimated for some components of the interchange (for example, control numbers) when determining the size. For this reason, the actual enforced size limit is slightly smaller than the value you specify.
   If you choose to specify a maximum value, the value you specify is checked to make sure it is a specific number of bytes (based on the header and trailer size for that standard).

8. Click **Finish** to add the envelope.

9. Click **Return** to continue.

Updating Envelope Properties
About this task

To update envelope properties if you already created envelopes and just need to specify e-Invoicing information:

Procedure

1. From the **Administration** menu, select **Trading Partner** > **Document Envelopes** > **Envelopes**.

2. Find the envelope using the Search or List function.

3. From the list of envelopes, click **source manager** next to the envelope you want to update.

4. Click **edit** next to the envelope you want to update.

5. Update envelope properties and settings as necessary, clicking **Next** to continue.

   Note: For standards that use interchanges, you will be able to specify limits for interchange size on the outbound interchange and transaction envelopes. For performance reasons, the size is estimated for some components of the interchange (for example, control numbers) when determining the size. For this reason, the actual enforced size limit is slightly smaller than the value you specify.

6. Click **Finish** to update the envelope.

7. Click **Return** to continue.

Setting e-Invoice Permissions

Sterling B2B Integrator requires system passwords for administrative functions and uses role-based security to provide different levels of access to different users within the organization. This role-based security provides access to certain files, business processes, Web templates, services, and product features, according to the permissions associated with the user account.

A user account contains the groups the user belongs to, the permissions associated with each group or user, and the password policy applied to the user. Groups are collections of permissions and other groups that are required by a user for access to different modules. Permissions provide access to the different modules within Sterling B2B Integrator and are the foundation of role-based security. Password policies are sets of security decisions that you make and apply to different user accounts according to security policies in your company.

Each user account is linked to a Sterling B2B Integrator user name and password. Each time you log in, Sterling B2B Integrator verifies you as a valid user and grants access to only the areas you are allowed to use according to the permissions assigned to you by the system administrator.

For Sterling e-Invoicing, permissions ensure the security of your data and provide the legal separation of who can view e-Invoice data. Access to invoices in the archive will be restricted based on permissions. Permissions control which legal entities a user may access and what functions they can perform on the invoices.

Note: A Tax Auditor user is denied access to the non-e-Invoicing operations of Sterling B2B Integrator user interface unless you explicitly grant the Tax Auditor user the necessary permissions.

The user group **commandlineuser** is included with Sterling e-Invoicing. This user group has all the needed permissions to perform import and export operations from the command line. The permissions associated with this user group can also be changed to deny import and export operations from the command line.

The e-Invoicing-specific permissions enable users to:
* View invoices
* Revalidate invoices
* Download invoices
* Create and edit agreements
* Perform operations on behalf of all legal entities.
* Perform operations on behalf of a specific legal entity (requires separate permission to be set up per entity, by the operator of all the entities).

Note: To perform an operation on behalf of a buyer or a supplier, the VAT ID of the buyer or the supplier must be used to create this permission.

The specific preloaded e-Invoice permissions in Sterling e-Invoicing are as follows:

Permission Name
    Action(s) Permission Allows

eInvoicing

Displays the eInvoicing menu in the Sterling B2B Integrator user interface.

eInvoicing Configuration

Displays the Configuration option in the eInvoicing menu.

eInvoicing Archive

Displays the Integrated Archive option in the eInvoicing menu.

eInvoicing DELETE AGREEMENTI

Delete agreements.

Note: This permission works in conjunction with the UI OPERATIONS permission to enable a user to delete agreements.

eInvoicing DOWNLOAD INVOICE

Download raw invoices and evidence.

eInvoicing CREATE/EDIT AGREEMENT

Create and edit agreements.

eInvoicing REVALIDATE INVOICE

Revalidate invoices.

eInvoicing VIEW AGREEMENT

View the Agreements menu link and user interface, and view agreements.

eInvoicing VIEW INVOICE

View raw invoices, evidence, and audit entries.

eInvoicing IDENTITY_[identity] VAT_[VAT_ID]

Access the VAT ID for the specified identity.

Note: To create and edit identities, a user must also be assigned the permission **UI Advanced Trading Profile Setu**p. Each agreement must reference a pair of identities with valid VAT IDs.

eInvoicing ALL SUPPLIERS

View all supplier-side invoices in the search result page and view, create, edit, and delete agreements.

Note: This permission works in conjunction with eInvoicing ALL BUYERS to enable a user to view any VATs.

eInvoicing ALL BUYERS

View all buyer-side invoices in the search result page and view, create, edit, and delete agreements.

Note: This permission works in conjunction with eInvoicing ALL SUPPLIERS to enable a user to view any VATs.

Managing role-based security for Sterling e-Invoicing includes the following sequential tasks to create user accounts and assign the appropriate permissions:

- Create permissions according to the modules the users require access to.
- Create groups according to the permissions you created.
- Create a password policy to assign to user.
- Create the user account using the permissions, groups, and password policy you created.

Creating Permissions for Sterling e-Invoicing Users

About this task

When you create a permission, you set access to a Sterling B2B Integrator module that can be assigned to different users.

To create a permission:

Procedure

1. From the **Administration** menu, select **Accounts** > **Permissions**.
2. In the Create section, next to Create a new Permission, click **Go!**
3. In the Permissions page, complete the following fields and click **Next**.

   Parameter
   > **Definition**

   Permission ID
   > Permission ID for the permission you are creating. Permission ID is the name of the business process, XSLT document, Web template, or resource for which you are setting the permission. Include the extension for the resource after the ID. Required.

   Permission Name
   > Name of the permission you are creating. Required.

   Permission Type
   > Select **eInvoicing Entity** as the permission type of the permission you are creating. Required.
4. Click **Finish** to create the permission.

Creating Groups for Sterling e-Invoicing Users

About this task

Groups allow you to maintain access permissions for several users from a single place. Groups minimize the amount of work involved with maintaining accounts, especially when several users perform the same job function. You can associate many permissions to different users by creating groups for each job function instead of each user. At a minimum, you need to create the following groups:

- Group for buyers
- Group for suppliers

You must have already created an identity for the e-Invoice buyer and e-Invoice supplier.

To create the necessary groups:

Procedure

1. From the **Administration** menu, select **Accounts** > **Groups**.
2. In the Create section, next to Create a new Group, click **Go!**
3. In the Permissions page, complete the following fields and click **Next**.

   Parameter
   > **Definition**

   Group ID
   > Unique identifier for the group you are creating. Required.

Group Name

Name of the group you are creating. Required.

Note: You need to create one group for buyers and one group for suppliers.

Owner

Name of the owner for the group. The group owner has two primary roles:

- Administrative contact for the group when changes to the group are needed. The owner contacts the system administrator to request changes.
- Routing device. For example, if a group is created for a development department and all development department employees send time sheets using Sterling B2B Integrator, the Owner field can be used to route all of the time sheets to the departmental manager.

Required.

Identity

Select the identity you created for buyers or for suppliers. Required.

4. In the Assign Subgroups page, if you want to filter groups by name, under Filter Data in the **By Name** field, type either a portion of the name or the entire name of the group you want to filter for and click the filter button to the right of the field. If you do not want to filter groups by name, select the group or groups you want to assign to this user group.

5. Complete one of the following actions and click **Next**.
   - Click the right double-arrow to move all groups from the Available pane to the Assigned pane.
   - Click the right single-arrow to move selected groups to the Assigned pane.
   - Click the left double-arrow to move all groups from the Assigned pane to the Available pane.
   - Click the left single-arrow to move selected groups to the Available pane.

6. In the Assign Permissions page in the Available pane, select the permission or permissions you want to assign to this group.

   Note: If you want to filter by e-Invoicing Entity type to include the permission you just created, select **eInvoicing Entity** and click the filter button to the right of the field.

7. Complete one of the following actions and click **Next**.
   - Click the right double-arrow to move all permissions from the Available pane to the Assigned pane.
   - Click the right single-arrow to move selected permissions to the Assigned pane.
   - Click the left double-arrow to move all permissions from the Assigned pane to the Available pane.
   - Click the left single-arrow to move selected permissions to the Available pane.

   Note: By default, the permissions associated with the subgroups assigned to this group are already selected. The associated permissions do not display in the available column; the associated permissions display in the confirm page.

8. In the Confirm page, review the permission settings, and click **Finish** to save the new group.

9. Complete steps 2 through 8 for each group you need to create.

Creating a Password Policy

About this task

You create a password policy to assign the policy to user accounts to simplify your security operations when adding new users. You do not need to associate a password policy with a user account, but it helps you to manage your security. A user account cannot have more than one password policy associated with it.

To create a password policy:

Procedure

1. From the **Accounts** menu, select **Password Policy**.
2. In the Password Policy page, next to **Create a new Password Policy**, click **Go!**
3. In the Password Policy page, complete the following fields and click **Next**.

Field   Description

Policy ID
> Identifier that identifies the password policy in the database.

Policy Name
> User-friendly name that displays in the user interface when any reference is made to the password policy.

Number of days valid
> Number of days that a user password is valid. The user is prompted to change the password when this time period expires. The default is 0, which means the password never expires. You can change this number to any number you want; there is no maximum. The expiration countdown starts the first time a user logs in to the application after a password is assigned to the user account.

Minimum Length
> Minimum length that the password must be. Required. Valid values are any numerals. This number must be set to at least the number 6. The default value is 6. If no policy is applied, the application enforces a minimum length of 6.

Maximum Length
> Maximum length that the password can be. Required. Valid values are any numerals. This number must be set to at least the same number as the minimum length. The default value is 28

Number of passwords kept in history
> Number of passwords to keep in the PWD_HISTORY table in the database for a user. After this number of passwords is exceeded, the oldest password is removed from the table and can be re-used by the user. The default value is 5.

Password required to contain special characters
> Specifies that the password must contain at least one special character. Valid values include numerals, capital letters, !, @, #, $, %, ^, &, or *.

Required password change on first login attempt
> Specifies that the user must change the default password after the initial login. This prompts the user to change the password after logging in for the first time.

4. In the Confirm page, review the password policy settings and click **Finish**.

Creating User Accounts with e-Invoicing Permissions
About this task

User accounts work with permissions to provide security for Sterling e-Invoicing and your organization. These features make it possible to regulate which users have access to each feature in Sterling e-Invoicing and the functions each user can perform.

When you create a user account, you specify a login ID and password, permissions, and contact information for a specific user.

The way in which User Permissions are configured consists of certain dependencies. For example if a user was assigned permissions to only view invoices, the set of permissions to be assigned to that user account is as follows:

- eInvoicing
- eInvoicing Archive
- eInvoicing View Invoice

In addition, this user must also be given permissions for entity level permissions, which are permissions that are automatically created when a user entity (supplier or buyer) is created. These permissions are in the format **eInvoicing IDENTITY_[identity] VAT_[VAT_ID]**.

To create a user account and assign it the proper Sterling e-Invoicing permissions:

Procedure
1. From the Accounts menu, select **User Accounts**.
2. In the Create section, next to **Create a new Account**, click **Go!**
3. In the New Account page, select the type of authentication for the user:
   - Local - Authentication is completed against the Sterling B2B Integrator database and Sterling e-Invoicing archive database.
   - External - Authentication is completed against an LDAP server. External authentication does not require the Sterling B2B Integrator LDAP adapter, which is used with business processes and enables Sterling B2B Integrator to communicate with local or remote LDAP servers using a Java™ Naming Directory Interface (JNDI).
4. Complete the following fields and click **Next**.

   Field   Description

   User ID
   > User ID for the user account you are creating. The user ID must be at least five characters long. Required

   Password (Local only)
   > Password for the user account you are creating. The password must be at least six characters long. Required for local users. This field does not display for external users.

   Confirm Password (Local only)
   > Type the password a second time. Required for local users. This field does not display for external users.

Policy (Local only)
Password policy to associate with this user account. From the list, select from the policy you want to associate. Optional. This field does not display for external users. Sterling B2B Integrator calculates the expiration date from the first date that the user logs on with this password.

Authentication Host (External only)
The Lightweight Directory Access Protocol (LDAP) server on which the user is being authenticated. The server(s) listed in this field are specified in the authentication_policy.properties.in file.

SSH Authorized User Key
Public key used to authenticate remote users. Obtain this key from your trading partner. Key must be checked in prior to creating the user account, then select the correct one from the list.

Session Timeout
Amount of time that you cannot interact with Sterling B2B Integrator before you have to log in again. Time is in minutes. Required.

Accessibility
Portion of the dashboard user interface that the user account has access to. Optional.

The following are accessibility options:
- Admin UI - Access to only the Admin Console pane in the Sterling B2B Integrator dashboard.
- AS2 UI - Access to only the AS2 Edition interface.
- Dashboard UI - Access to dashboard interface. You refine this choice by choosing a dashboard theme below.

Dashboard Theme
Predefined dashboard that the user account has access to. Required if accessibility is set as Dashboard UI.

The following are dashboard theme options:
- Operator
- Participant
- Participant Sponsor
- Sponsor

5. In the Groups page, complete one of the following actions and click **Next**.
   - Click the right double-arrow to move all groups from the Available pane to the Assigned pane.
   - Click the right single-arrow to move selected groups from the Available pane to the Assigned pane.
   - Click the left double-arrow to move all groups from the Assigned pane to the Available pane.
   - Click the left single-arrow to move selected groups from the Assigned pane to the Available pane.

6. In the Permissions page, complete one of the following actions and click **Next**.
   - Click the right double-arrow to move all permissions from the Available pane to the Assigned pane.
   - Click the right single-arrow to move selected permissions from the Available pane to the Assigned pane.

- Click the left double-arrow to move all permissions from the Assigned pane to the Available pane.
- Click the left single-arrow to move selected permissions from the Assigned pane to the Available pane.

Note: By default, the permissions associated with the groups this user is assigned to are already selected. You can assign to the user permissions not associated with a group.

7. In the User Information page, complete the following fields and click **Next**.

Field   Description

Given Name
    User's given name. Required.

Surname
    User's surname. Required.

E-mail User's e-mail address.

Pager   User's pager number.

Preferred Language
    User's preferred language. English or Japanese.

Manager ID
    Identifier of the user manager.

Identity
    Identity of the trading partner to associate with the user account. This is an identity you have already created.

    Note: Only one trading partner can be associated with a user account. A user account can be associated with many groups, each with its own trading partner identity association. This enables a user account to be associated with more than one trading partner. The Identity field is used for routing messages in Mailbox.

8. In the Confirm page, review the user account settings, and click **Finish** to create the user account.

Results

Sterling B2B Integrator creates the user account and displays the message: *The system update completed successfully.*

Creating Maps for Use with Sterling e-Invoicing

Some tax laws require that you must be able to present an e-Invoice in a human-readable format. Other laws or tax authority practices may require that the invoice be machine-readable. In addition, Buyer invoice processing applications may require a machine readable format. Sterling e-Invoicing provides a signed invoice that can be processed by tax authorities and applications by using XML and style sheets.

Note: You may need to keep the canonical maps you create for archival purposes so that they can be inspected by an auditor.

The IBM Sterling B2B Integrator Map Editor enables you to create a map to translate documents from your format to the canonical invoice format required by

TrustWeaver. The Sterling B2B Integrator Map Editor generates a Canonical Invoice Format file layout from the information that is preloaded when you install Sterling B2B Integrator Map Editor.

Note: You need to download the Sterling B2B Integrator Map Editor component to use it.

Our Canonical Invoice Format implementation conforms to the rules of the XML language 1.0 specification, as published by the World Wide Web Consortium (W3C). However, to be more flexible, Sterling B2B Integrator diverges slightly from the W3C base 1.0 XML specification. Our implementation enables you to do the following with XML:

* Specify the number of times that a group can repeat.
* Specify the number of times an element in a mixed group can repeat.
* Repeat an element (with a structure different from the structure of the original element) in a different part of the document.

Sterling B2B Integrator Map Editor allows you to modify the map components by using the Deactivate, Promote, Split, Copy, Cut, and Paste functions.

Note: We provide you with a sample map (X12_810_To_Canonical.mxl). This map is located in the **<Sterling B2B Integrator Map Editor Install Dir>/Samples/maps** directory. You can use this map as an example to create your map for converting your invoice format to the canonical format.

If the translation produces no output, the business process is halted to give you the opportunity to either modify your map or provide a different map, and then resume the business process, if desired.

Canonical Invoice Format Components in the Sterling B2B Integrator Map Editor

The following table lists the components that make up the Canonical Invoice Format layout in the Sterling B2B Integrator Map Editor, the icons that represent the components, and descriptions of the components.

Component
> **Description**

Canonical Invoice Format root element
> The *Canonical Invoice Format root element* represents the Canonical Invoice Format document that Sterling B2B Integrator is mapping. The Canonical Invoice Format root element is a looping structure that contains elements and content particles that repeat in sequence until either the group data ends or the maximum number of times that the loop is permitted to repeat is exhausted. The root element cannot be referenced by standard rules or links.

Element
> An *element* contains related elements and content particles. In addition, an element can contain one pcdata and one attribute container. These objects repeat in sequence until either the element data ends or the maximum number of times that the loop is permitted to repeat is exhausted. A repeating element that contains another repeating element corresponds to a nested looping structure. The Canonical Invoice Format Element object cannot be referenced by standard rules or links.

Abstract element
> An *abstract element* is an inconcrete element from an XML schema (for example, the term "appliance" may be considered an abstract element while "dishwasher" is a concrete one). An abstract element must be substituted with a non-abstract element for a map to be successfully compiled.

Content particle
> A *content particle* contains related subordinate objects that define either a choice, a sequence, or an all. A content particle can contain only one pcdata. If specified, these objects can repeat in sequence until either the content particle data ends or the maximum number of times that the loop is permitted to repeat is exhausted. If you create a content particle that is subordinate to another content particle, the content particle corresponds to a nested looping structure (a loop within a loop). A content particle cannot be referenced by standard rules or links.

Pcdata A *pcdata* contains character data in a Canonical Invoice Format document. Only one pcdata can be defined per element or content particle. Sterling B2B Integrator automatically names the pcdata with the name of the parent element or content particle.

> When a pcdata has a link performed against it, a red check mark appears over the pcdata icon.

> When a pcdata contains an extended rule or a standard rule, an asterisk appears to the right of the pcdata icon.

Attribute container
> An *attribute container* does not correspond to an XML function. Sterling B2B Integrator uses attribute containers to contain the attributes of an element. The attribute container has no properties. When you create the first attribute of an element, the Sterling B2B Integrator Map Editor automatically creates an attribute container object. An element can have only one attribute container, but the attribute container object can enclose many attribute objects.

Attribute
> An *attribute* specifies information associated with an element that further defines the element. The attribute is located within an attribute container. Attributes do not have to occur in sequence in the input data.

> When an attribute has a link performed against it, a red check mark appears over the attribute icon.

> When an attribute contains an extended rule or a standard rule, an asterisk appears to the right of the attribute icon.

Creating a Canonical Invoice Format Map
About this task

When you create a new map, you can either manually create a Canonical Invoice Format layout or you can use a wizard that creates a layout for you based on the Canonical Invoice Format standard. The wizard saves you time and effort and minimizes the risk of having an invalid standard format.

Note: Optionally, you can define the Invoice Identifier in the map. This allows you to decide which fields are used as the criteria to uniquely identify the invoice, and allows you to change the key based upon the particular partner, business division,

and so forth. Typically, this field is a concatenation of fields such as Supplier ID, Buyer ID (or possibly VAT ID), and invoice number. If two invoices have the same Invoice Identifier , they are considered duplicates of each other. The first invoice that is archived is considered a good invoice and any invoice with the same Invoice Identifier and Role that is archived after that is considered to be a duplicate. If this field is not provided in canonical invoice, the combination of the following fields from the canonical invoice are used to uniquely identify the invoice: INVOICE_NUMBER, INVOICE_DATE, SUPPLIER_VAT_ID, BUYER_VAT_ID, and ROLE. Additionally, you need to define an Invoice Identifier Extension in the map. This is an optional field that is typically a concatenation of data (such as EDI control numbers and the date/time stamp from the envelopes) used to uniquely identify one duplicate invoice from another.

To create an Canonical Invoice Format map:

Procedure

1. From the Map Editor **File** menu, select **New**.
2. In the **New Map Wizard**, complete the questions in the first window and click **Next**.

   Note: Be sure that **Sterling B2B Integrator** is selected in the **What kind of map are you creating** list.
3. In the Input Format window (**Create a New Data Format Using this Standard** option) select **your format using one of the following:**
   - Create a new data format using this standard

     Note: This selection allows you to use a preloaded standard (that is, you do not have to load the data format for the standard to the Map Editor).
     – Select the standard and click **Messages**
     – Complete the Map Wizard
   - Load the data format from a saved definition

     Note: This selection allows you to use an existing file format.
     – Type the path and file name of the saved definition (.ddf or .ifd extension).
     – Click **Browse** to display the Open File Definition dialog box.
   - Create a new data format using this syntax

     Note: For your format on the input side of the map, you need to choose whether you want to use a preloaded standard, an existing file format, or want to create a new file format for that side of the map (including selecting from standards that you have previously downloaded to the standards database). The preloaded standards are downloaded when you download the Map Editor to your machine or any optional standards.
4. Click **Finish** to load the message.
5. Click **Next** to select the Output Format.
6. In the Output Format window (**Create a New Data Format Using this Standard** option) select **Sterling Message Format** and click **Messages**.
7. Select the version of the standard (Version 1.0) and the message (Canonical Invoice) you want to use and click **Next**.
8. For the **Choose sub-elements to be included in the map** list, click **Next**.

Note: Do not clear any of the checkboxes. De-selecting critical elements such as Invoice Number or VAT ID may cause Sterling B2B Integrator to not function correctly.

9. Click **Finish** to load the message.

10. Click **Next**.

11. Click **Finish**. The Sterling B2B Integrator Map Editor displays the new map in the Sterling B2B Integrator Map Editor window.

    Note: Prior to opening an .mxl (XML-formatted) file, the Sterling B2B Integrator Map Editor verifies that you have the Microsoft XML Core Services (MSXML) 4.0 installed on the same computer as Sterling B2B Integrator Map Editor. If you do not have the Microsoft XML Core Services (MSXML) 4.0 installed, the Sterling B2B Integrator Map Editor cannot save or load .mxl source files.

12. Map the appropriate components from the input side of the map (your format) to the canonical invoice format. See *Sterling B2B Integrator Map Editor Guide* for more information.

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