
PeopleSoft FSCM 9.2: Electronic Data Interchange

July 2013

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Preface

Understanding the PeopleSoft Online Help and PeopleBooks

The PeopleSoft Online Help is a website that enables you to view all help content for PeopleSoft Applications and PeopleTools. The help provides standard navigation and full-text searching, as well as context-sensitive online help for PeopleSoft users.

PeopleSoft Hosted Documentation

You access the PeopleSoft Online Help on Oracle's PeopleSoft Hosted Documentation website, which enables you to access the full help website and context-sensitive help directly from an Oracle hosted server. The hosted documentation is updated on a regular schedule, ensuring that you have access to the most current documentation. This reduces the need to view separate documentation posts for application maintenance on My Oracle Support, because that documentation is now incorporated into the hosted website content. The Hosted Documentation website is available in English only.

Locally Installed Help

If your organization has firewall restrictions that prevent you from using the Hosted Documentation website, you can install the PeopleSoft Online Help locally. If you install the help locally, you have more control over which documents users can access and you can include links to your organization's custom documentation on help pages.

In addition, if you locally install the PeopleSoft Online Help, you can use any search engine for full-text searching. Your installation documentation includes instructions about how to set up Oracle Secure Enterprise Search for full-text searching.

See *PeopleTools 8.53 Installation* for your database platform, "Installing PeopleSoft Online Help." If you do not use Secure Enterprise Search, see the documentation for your chosen search engine.

Note: Before users can access the search engine on a locally installed help website, you must enable the Search portlet and link. Click the Help link on any page in the PeopleSoft Online Help for instructions.

Downloadable PeopleBook PDF Files

You can access downloadable PDF versions of the help content in the traditional PeopleBook format. The content in the PeopleBook PDFs is the same as the content in the PeopleSoft Online Help, but it has a different structure and it does not include the interactive navigation features that are available in the online help.

Common Help Documentation

Common help documentation contains information that applies to multiple applications. The two main types of common help are:

- Application Fundamentals

- Using PeopleSoft Applications

Most product lines provide a set of application fundamentals help topics that discuss essential information about the setup and design of your system. This information applies to many or all applications in the PeopleSoft product line. Whether you are implementing a single application, some combination of applications within the product line, or the entire product line, you should be familiar with the contents of the appropriate application fundamentals help. They provide the starting points for fundamental implementation tasks.

In addition, the *PeopleTools: PeopleSoft Applications User's Guide* introduces you to the various elements of the PeopleSoft Pure Internet Architecture. It also explains how to use the navigational hierarchy, components, and pages to perform basic functions as you navigate through the system. While your application or implementation may differ, the topics in this user's guide provide general information about using PeopleSoft Applications.

Field and Control Definitions

PeopleSoft documentation includes definitions for most fields and controls that appear on application pages. These definitions describe how to use a field or control, where populated values come from, the effects of selecting certain values, and so on. If a field or control is not defined, then it either requires no additional explanation or is documented in a common elements section earlier in the documentation. For example, the Date field rarely requires additional explanation and may not be defined in the documentation for some pages.

Typographical Conventions

The following table describes the typographical conventions that are used in the online help.

<i>Typographical Convention</i>	<i>Description</i>
Bold	Highlights PeopleCode function names, business function names, event names, system function names, method names, language constructs, and PeopleCode reserved words that must be included literally in the function call.
<i>Italics</i>	Highlights field values, emphasis, and PeopleSoft or other book-length publication titles. In PeopleCode syntax, italic items are placeholders for arguments that your program must supply. Italics also highlight references to words or letters, as in the following example: Enter the letter <i>O</i> .
Key+Key	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For Alt+W, hold down the Alt key while you press the W key.
Monospace font	Highlights a PeopleCode program or other code example.
... (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.

<i>Typographical Convention</i>	<i>Description</i>
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe ().
[] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object. Ampersands also precede all PeopleCode variables.
⇒	This continuation character has been inserted at the end of a line of code that has been wrapped at the page margin. The code should be viewed or entered as a single, continuous line of code without the continuation character.

ISO Country and Currency Codes

PeopleSoft Online Help topics use International Organization for Standardization (ISO) country and currency codes to identify country-specific information and monetary amounts.

ISO country codes may appear as country identifiers, and ISO currency codes may appear as currency identifiers in your PeopleSoft documentation. Reference to an ISO country code in your documentation does not imply that your application includes every ISO country code. The following example is a country-specific heading: "(FRA) Hiring an Employee."

The PeopleSoft Currency Code table (CURRENCY_CD_TBL) contains sample currency code data. The Currency Code table is based on ISO Standard 4217, "Codes for the representation of currencies," and also relies on ISO country codes in the Country table (COUNTRY_TBL). The navigation to the pages where you maintain currency code and country information depends on which PeopleSoft applications you are using. To access the pages for maintaining the Currency Code and Country tables, consult the online help for your applications for more information.

Region and Industry Identifiers

Information that applies only to a specific region or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in the PeopleSoft Online Help:

- Asia Pacific
- Europe
- Latin America

- North America

Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in the PeopleSoft Online Help:

- USF (U.S. Federal)
- E&G (Education and Government)

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Using and Managing the PeopleSoft Online Help

Click the Help link in the universal navigation header of any page in the PeopleSoft Online Help to see information on the following topics:

- What's new in the PeopleSoft Online Help.
- PeopleSoft Online Help accessibility.
- Accessing, navigating, and searching the PeopleSoft Online Help.
- Managing a locally installed PeopleSoft Online Help website.

PeopleSoft FSCM Related Links

Financial and Supply Chain Management information for Secure Enterprise Search (SES) can be found in PeopleSoft Application Fundamentals documentation. For application specific information, see the "Understanding Search Pages within Components (*PeopleSoft FSCM 9.2: Application Fundamentals*)" topic.

[My Oracle Support](#)

[PeopleSoft Information Portal on Oracle.com](#)

[PeopleSoft Training from Oracle University](#)

[PeopleSoft Video Feature Overviews on YouTube](#)

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Send us your suggestions Please include release numbers for the PeopleTools and applications that you are using.

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Chapter 1

Getting Started with Electronic Data Interchange

Navigating PeopleSoft SCM Documentation

PeopleSoft SCM provides powerful integration technology. You can integrate to specific application suppliers or share transaction or definitional data directly with suppliers or customers. Resources for technical information are located in the Enterprise Integration section of the PeopleSoft Enterprise Components documentation, PeopleSoft Integration Broker documentation and Enterprise Integration Repository. There are also specific overview sections and examples in the PeopleSoft SCM Integration documentation.

Implementation

In the planning phase of your implementation, take advantage of all PeopleSoft sources of information, including the installation guides, table-loading sequences, data models, and business process maps. A complete list of these resources appears in the documentation *PeopleSoft Application Fundamentals*, with information about where to find the most current version of each.

See the product documentation for *PeopleSoft Application Fundamentals*

Related Product Documentation

The *PeopleSoft Electronic Data Interchange* provides you with implementation and processing information for your PeopleSoft system. However, additional, essential information describing the setup and design of your system resides in companion documentation. The companion documentation consists of important topics that apply to many or all PeopleSoft applications across the Financials, Enterprise Service Automation, and PeopleSoft Supply Chain Management product lines. You should be familiar with the contents of this documentation.

The following companion documentation apply specifically to Electronic Data Interchange:

- *PeopleSoft Application Fundamentals*
- *PeopleTools : Integration Tools*
- *PeopleSoft Enterprise Components*

Understanding Electronic Data Interchange

PeopleSoft Electronic Data Interchange

Electronic Data Interchange is a method companies use to exchange data and transact business electronically. For example, using EDI a company can submit an order to a supplier, and the supplier can acknowledge and fulfill the order without paper changing hands or any contact between company representatives.

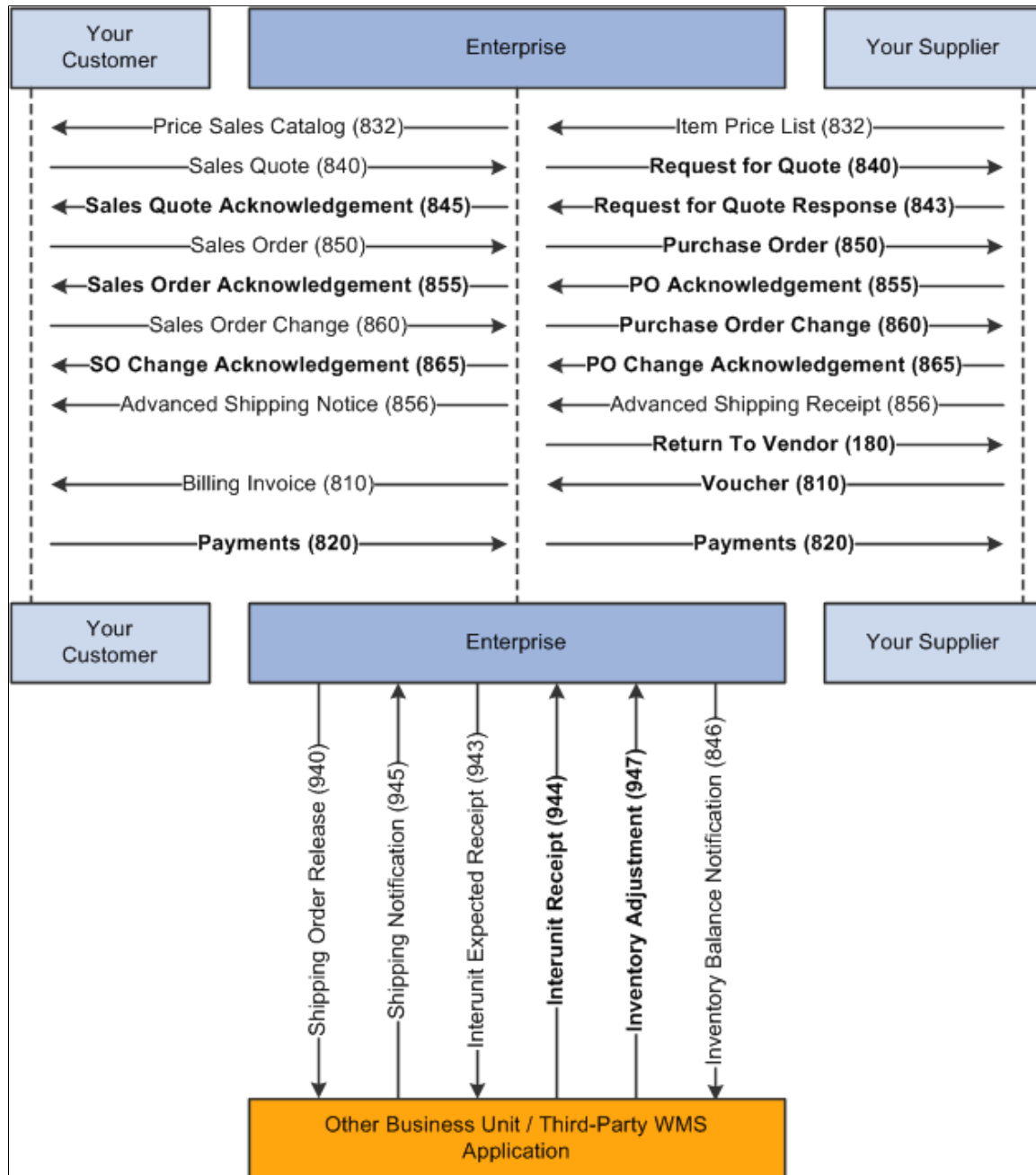
EDI provides a standard format for transaction data, allowing trading partners to communicate in a common language. As such, it is an important part of an electronic commerce strategy. Electronic commerce is a means to extend business processes to include suppliers, customers, and employees in a fully integrated supply chain. It can yield shorter cycle times, more efficient inventory management, and better knowledge sharing throughout your extended enterprise. To see these benefits, you need an integrated enterprise application system that you can extend and customize for your supply chain, while still maintaining enterprise information integrity.

EDI is a crucial part of business-to-business commerce. When computers exchange data using EDI, the data is transmitted in EDI Standard format so that it is recognizable by other systems using the same EDI Standard format. Companies who use EDI have their own translator software package to convert the data

from the EDI Standard format to their computer system's format. Companies that exchange EDI data are called trading partners.

Image: PeopleSoft supported EDI transactions, both inbound and outbound

The following diagram illustrates the inbound and outbound EDI transactions used by PeopleSoft.



Common EDI Terms

Archive

To store data for possible future reference.

Data element	An individual piece of information within an EDI Standard document. You group data elements to form data segments.
EDI Standard	<p>A standardized format that defines the syntax, structure, and content of the inbound and outbound document data.</p> <ul style="list-style-type: none"> • ANSI ASC X12 - Cross-industry standard • WINS - Warehouse industry • UCS - Grocery industry • TRADACOMS - Retail - UK • EDIFACT - Commercial export and transport - international • ODETTE - Motor and component suppliers - Europe <p>In recent years, a United Nations committee has been working to reconcile ANSI ASC X12 with EDIFACT to further standardize EDI on an international basis.</p>
Electronic Commerce	A business environment that includes computer-to-computer, application-to-application, and person-to-person exchange of information.
Electronic Data Interchange (EDI)	Electronic Data Interchange (EDI) is the paperless, computer-to-computer exchange of business transactions, such as purchase orders and invoices, in a standard format with standard content.
Inbound document	A document that you receive from your trading partner using EDI. Also referred to as an inbound transaction.
Mapping	The process of converting information from one table structure to another. The translation software performs this process.
Outbound document	A document that you send to your trading partner using EDI. Also referred to as an outbound transaction.
Segment	A predefined set of functionally related data elements.
Standard document	An EDI document that you exchange with your trading partner, such as a purchase order or sales order. Also called a transaction set in the ANSI ASC X12 or a message in the EDIFACT EDI standards.
Trading partner	A company (usually a customer or supplier) with whom you exchange EDI documents.
Translator software	<p>The software that converts data from an application table format to an EDI Standard format, and from EDI Standard Format to application table format.</p> <p>The data is exchanged in an EDI Standard format, such as ANSI ASC X12, EDIFACT, UCS, or WINS.</p>

EDI Standards

To exchange documents with trading partners, you must convert the data to and from EDI Standard formats. EDI standards are the requirements for the format and content of EDI business documents. EDI standards determine the correct order and location of the units of data in an EDI document. All EDI transactions are defined by EDI standards.

EDI standards developers design and publish EDI Standard formats for various kinds of documents, such as purchase orders or invoices, that you might exchange with your trading partners.

All EDI standards include the following components:

Element	The smallest component in an EDI Standard.
Segments	Groups of elements.
Transaction sets	Also called messages, transaction sets are groups of segments.

EDI Standard format is comparable to the language that you speak. For instance, an element of the EDI Standard can be compared to a word. A segment in the EDI Standard is comparable to a sentence. A transaction set in the EDI Standard is comparable to a paragraph or a document. In the EDI Standard, just as in the language that you speak, elements (or words) are combined to form a segment (or a sentence). Segments (or sentences) are combined to create a Transaction set (or paragraph or document).

Two commonly used EDI standards are:

- EDI for Administration, Commerce, and Transport (EDIFACT) - generic international.
- American National Standards Institute/Accredited Standards Committee X12 (ANSI ASC X12) - generic.

Both ANSI ASC X12 and EDIFACT also contain subgroups, including:

- Automotive Industry Action Group (AIAG).
- Chemical Industry Data Exchange (CIDX).
- Electronics Industry Data Exchange (EIDX).
- Voluntary Interindustry Communications Standards (VICS).
- Textile/Apparel Manufacturing Communications (TAMCS).
- Sundries and Apparel Findings Linkage Council (SAFLINC).
- U.S. government.

Paper Documents Compared with EDI Standard Documents

Image: Example of a paper purchase order (paper document)

Information from a paper document corresponds to information in an EDI Standard document. The following example illustrates a paper purchase order.

Sold to: XYZ Company 123 Main Street Fairview, CA 94618			Purchase Order Number: 4768 Date: 4/10/05	
Line Number	Quantity	Units of Measure	Price	Product ID
1	100	Each EA	27.65	331896-42
Total Items: 1			Total Quantity: 100	

Image: Example of a purchase order in EDI Standard format

The following example illustrates the purchase order in EDI Standard format.

```

ST*850*1001 ☐
BEG*00*SA*4768*65*050410 ☐
N1*123 MAIN STREET ☐
N4*FAIRVIEW*CA*94618 ☐
PO1*1*100*EA*27.65**VN*331896-42☐
CTT*1*100 ☐
SE*8*1001 ☐

Legend:
ST*Transaction Set ID*Transaction Set Control Number
BEG*Transaction Set Purpose*Purchase Order Date
Number*Release Number*Purchase Order Date
N1*Name Type*Name
N3*Address
N4*City*State*Zip Code
P01*Line Number*Quantity Ordered*Unit of Measure*Price*Price
Basis*Product ID
Qualifier*Product ID
CTT*Number of Line Items*HashTotal
SE*Number of Included Segments*Transaction Set Control Number
  
```

PeopleSoft Supported EDI Transactions

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Advanced Shipping Notice (X.12 856)	Outbound	Application message Flat file (FLO)	Inventory	See "EIPs for Fulfillment Transactions (<i>PeopleSoft FSCM 9.2: Inventory</i>)".	File Layout Definition: ADVANCED_SHIPPING_NOTICE Message Name: ADVANCED_SHIPPING_NOTICE Queue: ADVANCED_SHIPPING_NOTICE Handler: N/A Batch Publish Rule: DVANCED_SHIPPING_NOTICE File Rule: N/A
Advanced Shipping Receipt (X.12 856)	Inbound	Application message Flat file (FLO)	Purchasing	See "Understanding the Receiving Business Process (<i>PeopleSoft FSCM 9.2: Purchasing</i>)".	File Layout Definition: ADVANCED_SHIPPING_RECEIPT Message Name: ADVANCED_SHIPPING_RECEIPT Queue: ADVANCED_SHIPPING_NOTICE Handler: AdvancedShippingReceipt Batch Publish Rule: N/A File Rule: SCM_INBOUND_EDI

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Billing Invoice (X.12 810)	Outbound	Application message Flat file (FLO)	Billing	See "Understanding EDI Transactions (PeopleSoft FSCM 9.2: Billing)".	File Layout Definition: BILLING_INVOICE_NOTICE Message Name: BILLING_INVOICE_NOTICE Queue: BILLING_INVOICE Handler: ROUTERSENDHDLR Batch Publish Rule: BILLING_INVOICE_NOTICE File Rule: N/A
Interunit Expected Receipt (X.12 943)	Outbound	Application message Flat file (FLO)	Inventory	See "EIPs for Fulfillment Transactions (PeopleSoft FSCM 9.2: Inventory)". See ."General WMS Integration Issues (PeopleSoft FSCM 9.2: Supply Chain Management Integration)".	File Layout Definition: INTERUNIT_EXPECTED_RECEIPT Message Name: INTERUNIT_EXPECTED_RECEIPT Queue: INTERUNIT_EXPECTED_RECEIPT Handler: ROUTERSENDHDLR Batch Publish Rule: INTERUNIT_EXPECTED_RECEIPT File Rule: N/A

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Interunit Receipt (X.12 944)	Inbound	Application message Flat file (FLO)	Inventory	See "Understanding Receiving and Putaway Processing (PeopleSoft FSCM 9.2: Inventory)".	File Layout Definition: INTERUNIT_RECEIPT Message Name: INTERUNIT_RECEIPT Queue: INTERUNIT_RECEIPT Handler: InterunitReceipt Batch Publish Rule: N/A File Rule: <ul style="list-style-type: none"> • SCM_INBOUND_ED • Electronic Data Collection Feature Data Rules

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Inventory Adjustment (X.12 947)	Inbound	Application message Flat file (FLO)	Inventory	See "Understanding Stock Quantity Adjustments and Transfers in a Business Unit (PeopleSoft FSCM 9.2: Inventory)"	File Layout Definition: INVENTORY_ADJUSTMENT Message Name: INVENTORY_ADJUSTMENT Queue: INVENTORY_MANAGEMENT Handler: InventoryAdjustment Batch Publish Rule: N/A File Rule: <ul style="list-style-type: none">• SCM_INBOUND_EDI• Electronic Data Collection Feature Data Rules

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Inventory Balance Notification (X.12 846)	Outbound	Application message Flat file (FLO)	Inventory	See "EIPs for Fulfillment Transactions (<i>PeopleSoft FSCM 9.2: Inventory</i>)". See. "Understanding Consigned Purchases in Inventory Management (<i>PeopleSoft FSCM 9.2: Inventory</i>)".	File Layout Definition: <ul style="list-style-type: none"> INV_BAL_NOTIF_BUS_UNIT INV_BAL_NOTIF_VENDOR Message Name: <ul style="list-style-type: none"> INV_BAL_NOTIF_BUS_UNIT INV_BAL_NOTIF_VENDOR Queue: INV_BALANCE_NOTIFICATION Handler: N/A Batch Publish Rule: <ul style="list-style-type: none"> INV_BAL_NOTIF_BUS_UNIT INV_BAL_NOTIF_VENDOR File Rule: N/A

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Item Price List (X.12 832)	Inbound	Application message Flat file (FLO)	Inventory	See "Understanding Item Price List and Item Master EIPs (<i>PeopleSoft FSCM 9.2: Managing Items</i>)".	File Layout Definition: ITEM_PRICELIST_LOAD Message Name: ITEM_PRICELIST_LOAD Queue: ITEM_CATALOG_PRICE Handler: ItemPriceListLoad Batch Publish Rule: N/A File Rule: SCM_INBOUND_EDI
Payments (X.12 820)	Inbound	Application message Flat file (FLO)	Receivables	See "Understanding Electronic Payment Processing (<i>PeopleSoft FSCM 9.2: Receivables</i>)".	File Layout Definition: PAYMENT_LOAD Message Name: PAYMENT_LOAD Queue: PAY_AND_REMIT Handler: PaymentLoad Batch Publish Rule: N/A File Rule: N/A
Payments (X.12 820)	Outbound	EDI Manager	Payables	See "Understanding Voucher Build Processing (<i>PeopleSoft FSCM 9.2: Payables</i>)".	N/A

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Price Sales Catalog (X.12 832)	Outbound	Application message Flat file (FLO)	Order Management		File Layout Definition: PRODUCT_PRICELIST_SYNC Message Name: PRODUCT_PRICELIST_SYNC Queue: N/A Handler: N/A Batch Publish Rule: PRODUCT_PRICELIST_CUSTOMER_ID File Rule: N/A
Purchase Order Acknowledgement and Purchase Order Change Acknowledgement (X.12 855, 865)	Inbound	Application message Flat file (FLO)	Purchasing	See "Understanding the Purchase Order Business Process (PeopleSoft FSCM 9.2: Purchasing)".	File Layout Definition: PURCHASE_ORDER_ACKNOWLEDGEMENT Message Name: PURCHASE_ORDER_ACKNOWLEDGEMENT Queue: PURCHASE_ORDER Handler: PurchaseOrder Acknowledgement Batch Publish Rule: N/A File Rule: SCM_INBOUND_IDI

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Purchase Order and Purchase Order Change (X.12 850, 860)	Outbound	Application message Flat file (FLO)	Purchasing	See "Understanding the Purchase Order Business Process (<i>PeopleSoft FSCM 9.2: Purchasing</i>)"	File Layout Definition: PURCHASE_ORDER_DISPATCH Message Name: PURCHASE_ORDER_DISPATCH Queue: PURCHASE_ORDER Handler: N/A Batch Publish Rule: PURCHASE_ORDER_DISPATCH_BU File Rule: N/A
Request for Quote (X.12 840)	Outbound	Application message Flat file (FLO)	Purchasing	See "Understanding RFQs in PeopleSoft Purchasing (<i>PeopleSoft FSCM 9.2: Purchasing</i>)".	File Layout Definition: PO_REQUEST_FOR_QUOTE Message Name: PO_REQUEST_FOR_QUOTE Queue: PO_REQUEST_FOR_QUOTE Handler: N/A Batch Publish Rule: PO_REQUEST_FOR_QUOTE_BU File Rule: N/A

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Request for Quote Response (X.12 843)	Inbound	Application message Flat file (FLO)	Purchasing	See "Understanding RFQs in PeopleSoft Purchasing (PeopleSoft FSCM 9.2: Purchasing)".	File Layout Definition: PO_REQUEST_FOR_QUOTE_RESPONSE Message Name: PO_REQUEST_FOR_QUOTE_RESPONSE Queue: PO_REQUEST_FOR_QUOTE Handler: PoRequestForQuoteResponse Batch Publish Rule: N/A File Rule: SCM_INBOUND_EDI
Return to Supplier (X.12 180)	Outbound	Application message Flat file (FLO)	Purchasing	See "Understanding the RTV Business Process (PeopleSoft FSCM 9.2: Purchasing)".	File Layout Definition: RETURN_TO_VENDOR Message Name: RETURN_TO_VENDOR Queue: RETURN_TO_VENDOR Handler: N/A Batch Publish Rule: <ul style="list-style-type: none"> RETURN_TO_VENDOR_BU RETURN_TO_VENDOR_VENDOR File Rule: N/A

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Sales Order (X.12 850)	Inbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)"	File Layout Definition: SALES_ORDER_LOAD Message Name: SALES_ORDER_LOAD Queue: SALES_ORDER_LOAD Handler: SalesOrderLoad Batch Publish Rule: N/A File Rule: SCM_INBOUND_EDI
Sales Order (X.12 850)	Inbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)".	File Layout Definition: EDI_TXN_850 Message Name: EDI_TXN_850 Queue: SALES_ORDER_LOAD Handler: N/A Batch Publish Rule: N/A File Rule: EDI_TXN_850

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Sales Order Acknowledgement (X.12 855)	Outbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)".	File Layout Definition: SALES_ORDER_ACKNOWLEDGEMENT Message Name: SALES_ORDER_ACKNOWLEDGEMENT Queue: SALES_ORDER_ACKNOWLEDGEMENT Handler: ROUTERSENDHDLR Batch Publish Rule: SALES_ORDER_ACK_CUSTOMER_ID File Rule: N/A
Sales Order Change (X.12 860)	Inbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)".	File Layout Definition: SALES_ORDER_CHANGE_LOAD Message Name: SALES_ORDER_CHANGE_LOAD Queue: SALES_ORDER_CHANGE_LOAD Handler: SalesOrderChangeLoad Batch Publish Rule: N/A File Rule: SCM_INBOUND_EDI

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Sales Order Change Acknowledgement (X.12 865)	Outbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)".	File Layout Definition: SALES_ORDER_CHANGE_NOTICE Message Name: SALES_ORDER_CHANGE_NOTICE Queue: SALES_ORDER_CHANGE_NOTICE Handler: ROUTERSENDHDLR Batch Publish Rule: SALES_ORDER_CHG_CUSTOMER_ID File Rule: N/A
Sales Quote (X.12 840)	Inbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)".	File Layout Definition: SALES_QUOTE_LOAD Message Name: SALES_QUOTE_LOAD Queue: SALES_QUOTE_LOAD Handler: SalesQuoteLoad Batch Publish Rule: N/A File Rule: SCM_INBOUND_EDİ

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Sales Quote (X.12 840)	Inbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)".	File Layout Definition: EDI_TNX_840 Message Name: EDI_TNX_840 Queue: SALES_ORDER_LOAD Handler: N/A Batch Publish Rule: N/A File Rule: EDI_TNX_840
Sales Quote Acknowledgement (X.12 845)	Outbound	Application message Flat file (FLO)	Order Management	See "Understanding Sales Order and Quotation EIPs in PeopleSoft Order Management (<i>PeopleSoft FSCM 9.2: Order Management</i>)".	File Layout Definition: SALES_QUOTE_NOTICE Message Name: SALES_QUOTE_NOTICE Queue: SALES_QUOTE_NOTICE Handler: ROUTERSENDHDLR Batch Publish Rule: SALES_QUOTE_NOTICE_CUSTOMER_ID File Rule: N/A

EDI Transaction	Inbound or Outbound	Technology	PeopleSoft Application	documentation Reference (Application Setup)	Integration Broker Information
Shipping Notification (X.12 945)	Inbound	Application message Flat file (FLO)	Inventory	See "EIPs for Fulfillment Transactions (PeopleSoft FSCM 9.2: Inventory)". .	File Layout Definition: SHIPPING_NOTIFICATION Message Name: SHIPPING_NOTIFICATION Queue: SHIPPING_NOTIFICATION Handler: ShippingNotification Batch Publish Rule: N/A File Rule: SCM_INBOUND_EDI
Shipping Order Release (X.12 940)	Outbound	Application message Flat file (FLO)	Inventory	See "EIPs for Fulfillment Transactions (PeopleSoft FSCM 9.2: Inventory)". .	File Layout Definition: SHIPPING_ORDER_RELEASE Message Name: SHIPPING_ORDER_RELEASE Queue: SHIPPING_ORDER_RELEASE Handler: ROUTERSENDHDLR Batch Publish Rule: SHIPPING_ORDER_RELEASE File Rule: N/A
Vouchers (X.12 810)	Inbound	EDI Manager	Payables	See "Understanding Voucher Build Processing (PeopleSoft FSCM 9.2: Payables)"	N/A

EIP Examples

PeopleSoft provides you with the following EIP setup and processing examples:

- Sales Order Inbound
- Sales Order Acknowledgement
- Purchase Order Dispatch
- Advanced Shipping Notice
- Billing Invoice

Using Electronic Data Interchange Integration with PeopleSoft

Understanding EDI Integration with PeopleSoft

PeopleSoft allows you to process EDI transactions using integration broker, which offers a more automated, timely, and efficient way to send data across systems than was previously available. The service-oriented architecture of the PeopleSoft Integration Broker technologies enables more zero-latency data transmittal, direct business-to-business communication, and Extensible Markup Language (XML) adoption.

You can process EDI transactions using flat files or using XML. You can use a middleware product to convert from the EDI format to the PeopleSoft format, or you can use Integration Broker to transform the EDI format directly into PeopleSoft format without using a middleware product.

This section provides an overview for:

- Inbound and outbound flat file EDI transaction processes using either a middleware product to convert from the EDI format to the PeopleSoft format, or Integration Broker to transform EDI format directly into PeopleSoft format.
- Inbound and outbound XML-based EDI transaction processes using either a middleware product to convert from the EDI format to the PeopleSoft format, or Integration Broker to transform EDI format directly into PeopleSoft format.

Understanding Inbound and Outbound Flat File EDI Transaction Processes

This overview section provides information about:

- Inbound flat file EDI transactions using the PeopleSoft format.
- Inbound flat file EDI transactions using X.12 EDI format.
- Outbound flat file EDI transactions using the PeopleSoft format.
- Outbound flat file EDI transactions using X.12 EDI format.

Processing Inbound Flat File EDI Transactions Using the PeopleSoft Format

A flat file that uses the PeopleSoft format can be generated by a third-party system in this PeopleSoft format or generated by a third-party system and then converted to the PeopleSoft format by a middleware product. A flat file could also come from another PeopleSoft system. The PeopleSoft inbound file publish utility converts the data from a flat file to an XML file using the PeopleSoft format. The inbound data is

then placed in the message queue, checked for errors, and then moved to the inbound staging tables to be processed by the individual PeopleSoft application.

Image: Inbound flat file EDI transaction process using the PeopleSoft format (1 of 2)

The following diagrams 1 and 2 illustrate the inbound flat file EDI transaction process using the PeopleSoft format. The transaction process is initiated from a business process and is completed once the data is loaded into the PeopleSoft application database. Diagram 1:

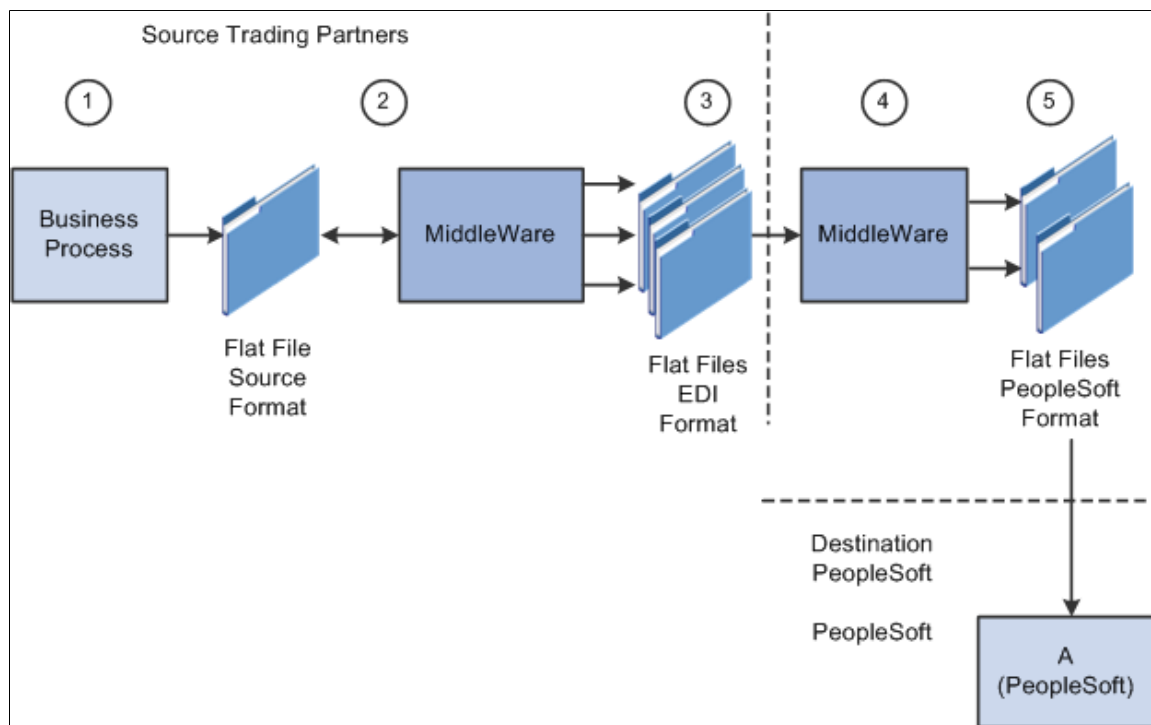
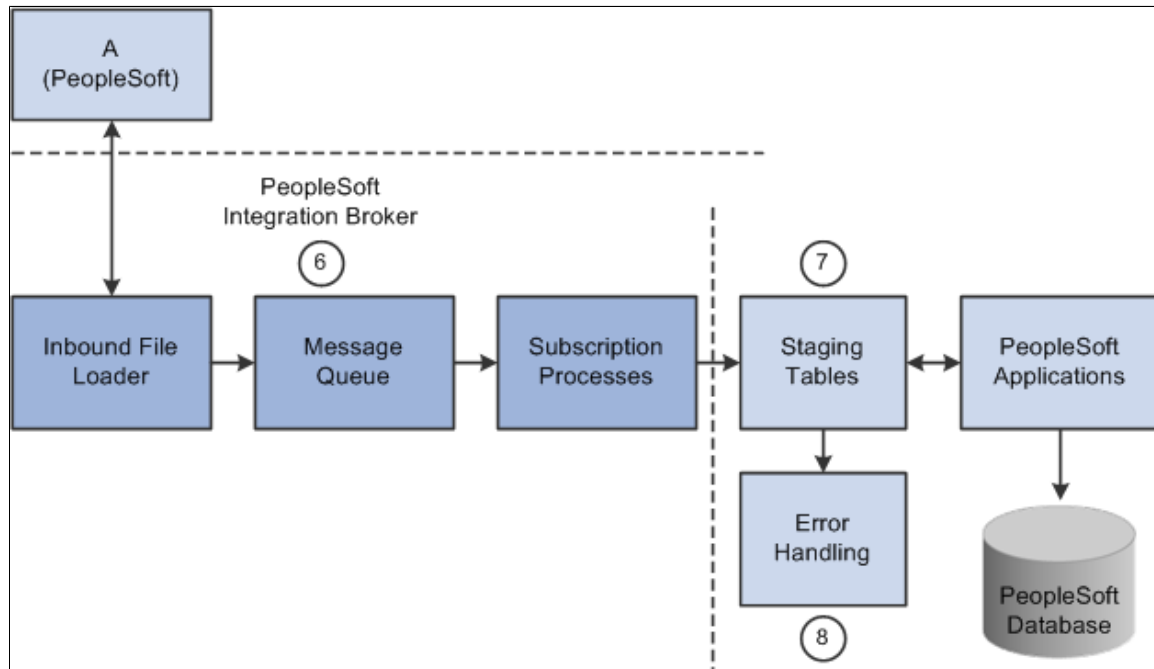


Image: Inbound flat file EDI transaction process using the PeopleSoft format (2 of 2)

Diagram 2:



To process inbound flat file EDI transactions:

1. The source trading partner initiates a process that generates a flat file containing EDI transactions in the sources format.
2. The file is passed to a middleware translation tool that generates an outbound file in the appropriate EDI format (X.12, EDIFACT and so on).

Depending on the relationship with various trading partners' data mapping, transformations may occur at this point to meet trading partner-specific mapping requirements. The formatted file is then sent on to the source trading partner's VAN—a private network used for exchanging EDI transactions. However, networks can also be the Internet, a dedicated link, or a sole-source provider.

3. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.

The source trading partner and destination trading partner can use the same VAN.

4. The destination trading partner receives the flat file from the VAN.

A middleware tool is used to convert the source file into the appropriate PeopleSoft Business Document file format. This process includes a conversion from the sources EDI format (X.12, EDIFACT and so on). Additional translation requirements may be required if the source trading partner is sending a generic file that does not meet the destination trading partner's data requirements.

5. The destination trading partner performs the Inbound File Publish process that changes the flat file transactions to XML and then writes them to a message queue.

The Inbound File Publish process inputs the electronic data flat file, translates the data using the PeopleSoft File Layout Definition and rules, and then publishes the data to the PeopleSoft Integration Broker as XML transactions.

6. PeopleSoft Integration Broker subscription processes (OnNotify Handlers) are automatically executed that retrieve the data from the message queue and write it to stage tables.
7. PeopleSoft applications then read the transactions from the staging tables, perform validations, and load the data to the actual PeopleSoft application database.

If any errors are found in the transactions, use error handling to fix the errors and to resubmit the transactions.

Processing Inbound Flat File EDI Transactions Using X.12 EDI Format

An inbound flat file can be generated by a third-party system in this X.12 EDI flat file format or generated by a third-party system and then converted to the X.12 EDI flat file format by a middleware product. An EDI flat file could also come from another PeopleSoft system. Once received by your PeopleSoft system, the PeopleSoft Integration Broker uses transforms to convert the data from an X.12 EDI flat file format to the PeopleSoft format. The inbound PeopleSoft-formatted XML data is then placed in the message

queue, checked for errors, and then moved to the inbound staging tables to be processed by the individual PeopleSoft application.

Image: Inbound flat file EDI transaction process using X.12 EDI format (1 of 2)

The following diagrams illustrate the inbound flat file EDI transaction process using the X.12 EDI format.

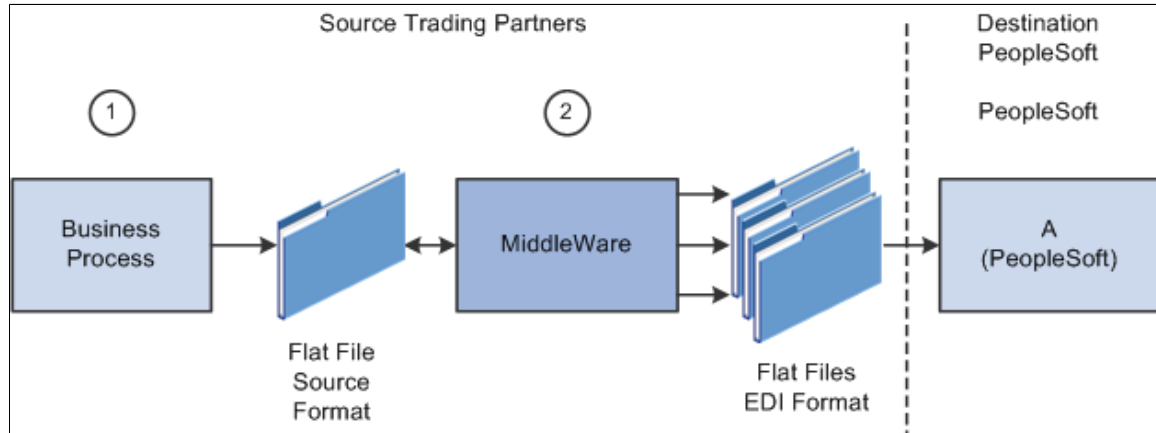
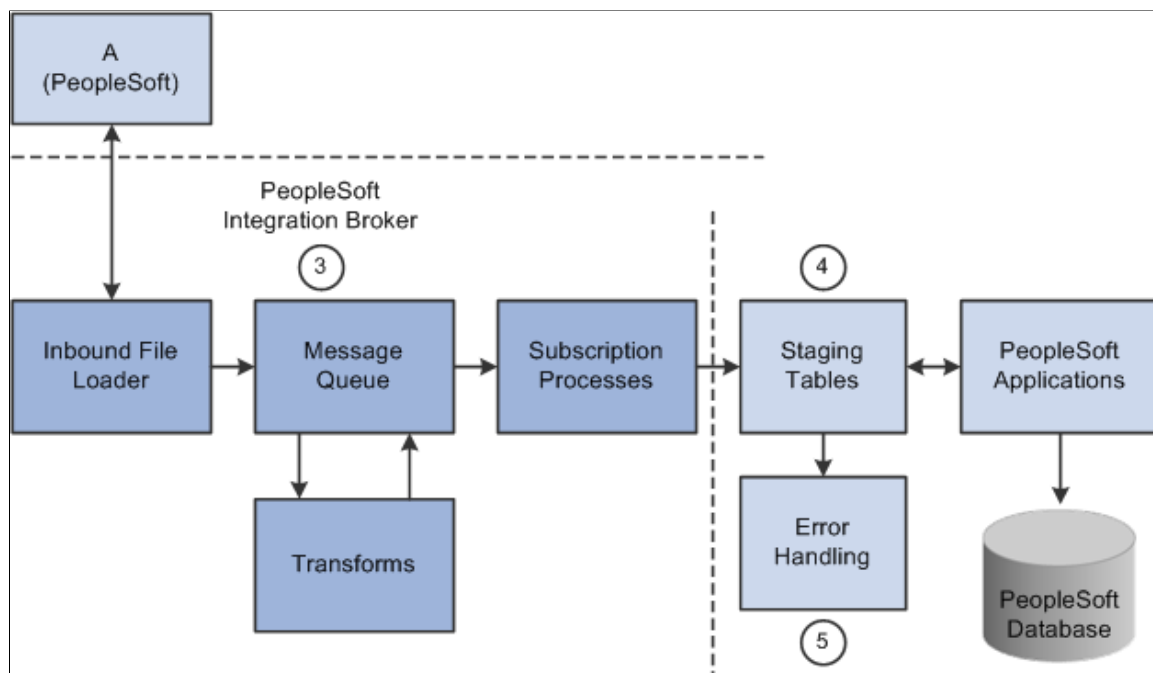


Image: Inbound flat file EDI transaction process using X.12 EDI format (2 of 2)

The following diagrams illustrate the inbound flat file EDI transaction process using the X.12 EDI format.



To process inbound flat file EDI transactions:

1. The source trading partner initiates a process that generates a flat file containing EDI transactions in the sources format.
2. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.

The source trading partner and destination trading partner can use the same VAN.

3. The destination trading partner performs the Inbound File Loader process which changes the X.12 EDI formatted flat file to an X.12 EDI formatted XML transaction and publishes it to the Integration

Broker. A pre-defined file layout definition is used by the Inbound File Loader when generating the X.12 EDI XML transaction. The Integration Broker, using pre-defined transform routines then generates an XML transaction in PeopleSoft's format.

Pre-defined file layout definitions and Transformation examples are provided for the inbound 840 (Sales Quote Load) and 850 (Sales Order Load) X.12 EDI formats.

Note: These examples require customizations for individual trading partner requirements. Other inbound X.12 EDI transactions can be supported by creating transforms using the same concepts provided in the example transform programs.

4. PeopleSoft Integration Broker subscription processes (OnNotify Handlers) are automatically executed that retrieve the data from the message queue and writes the data to stage tables.
5. If any errors are found in the transactions, use error handling to fix the errors and to resubmit the transactions.

Processing Outbound Flat File EDI Transactions Using the PeopleSoft Format

PeopleSoft can generate a PeopleSoft-formatted flat file. This flat file can be received by a third-party system or processed by a middleware product and then received by a third-party system.

Image: Outbound flat file EDI transaction processing using the PeopleSoft format (1 of 2)

The following diagrams 1 and 2 illustrate the outbound flat file EDI transaction process using the PeopleSoft format. The transaction process includes the retrieval of the data from the PeopleSoft database and the processes involved until the flat file is loaded into the business application system. Diagram 1:

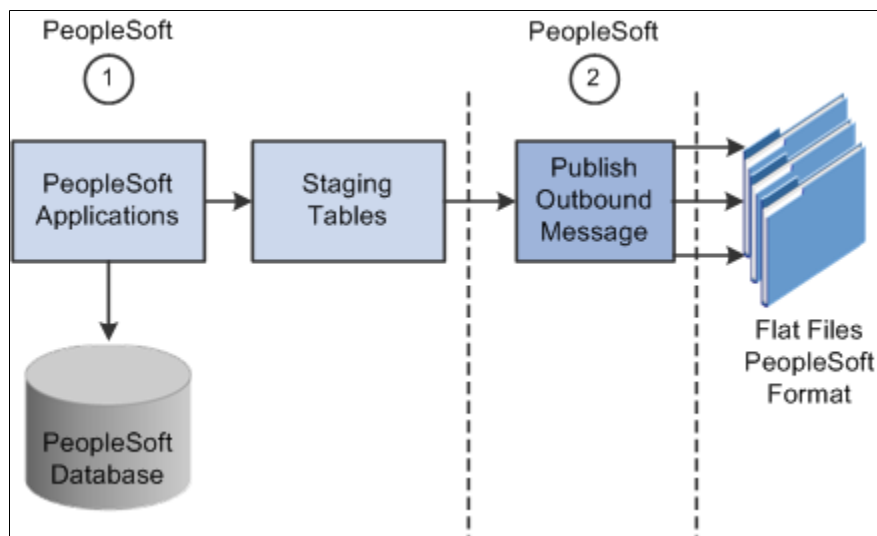
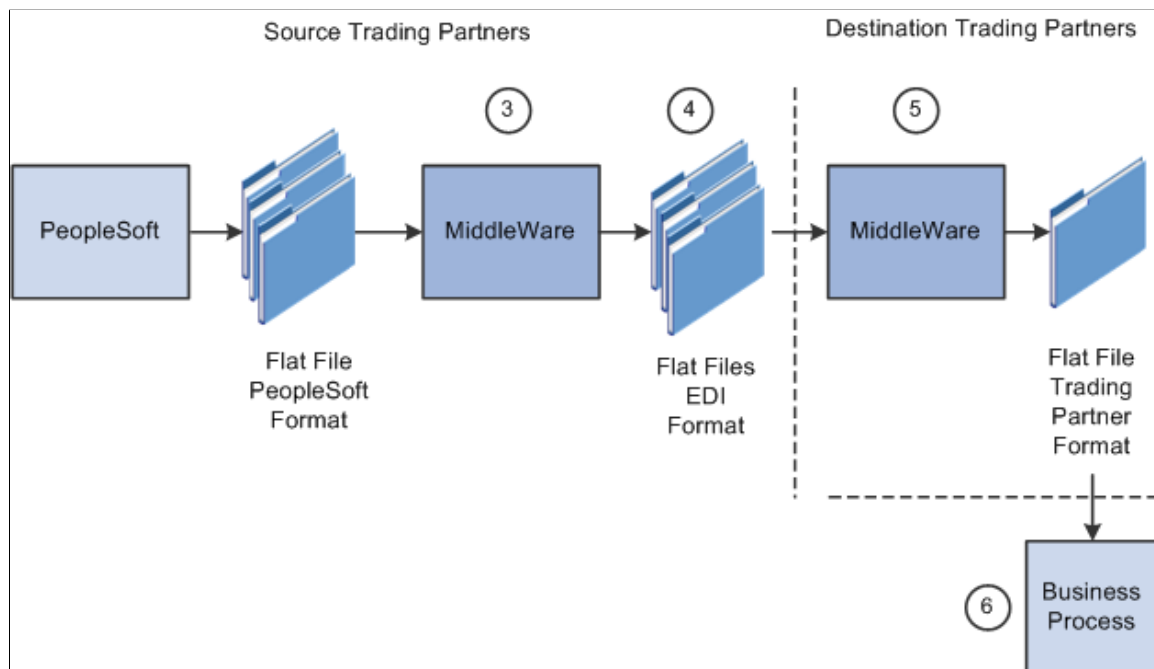


Image: Outbound flat file EDI transaction processing using the PeopleSoft format (2 of 2)

Diagram 2:



To process outbound flat file EDI transactions using the PeopleSoft format:

1. The source trading partner initiates a PeopleSoft application process that retrieves the transactional data from the PeopleSoft application database tables and loads those EDI transactions into PeopleSoft staging tables, or prepares the data so it can be picked up by the Publish Outbound Message process.
2. The source trading partner performs the Publish Outbound Message process that retrieves the transactions from the staging tables or application tables and creates a flat file.

The Outbound File Publish process reads the staging tables, translates the data using the PeopleSoft File Layout Definition and rules, and generates a flat file. The flat file is then sent to the VAN.

3. The file is passed to a middleware translation tool that generates an outbound file in the appropriate EDI format (X.12 EDI, EDIFACT and so on).
4. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.
5. The destination trading partner receives the flat file from the VAN.

A middleware tool is used to convert the source file into the format required for the destination trading partner's business application software.

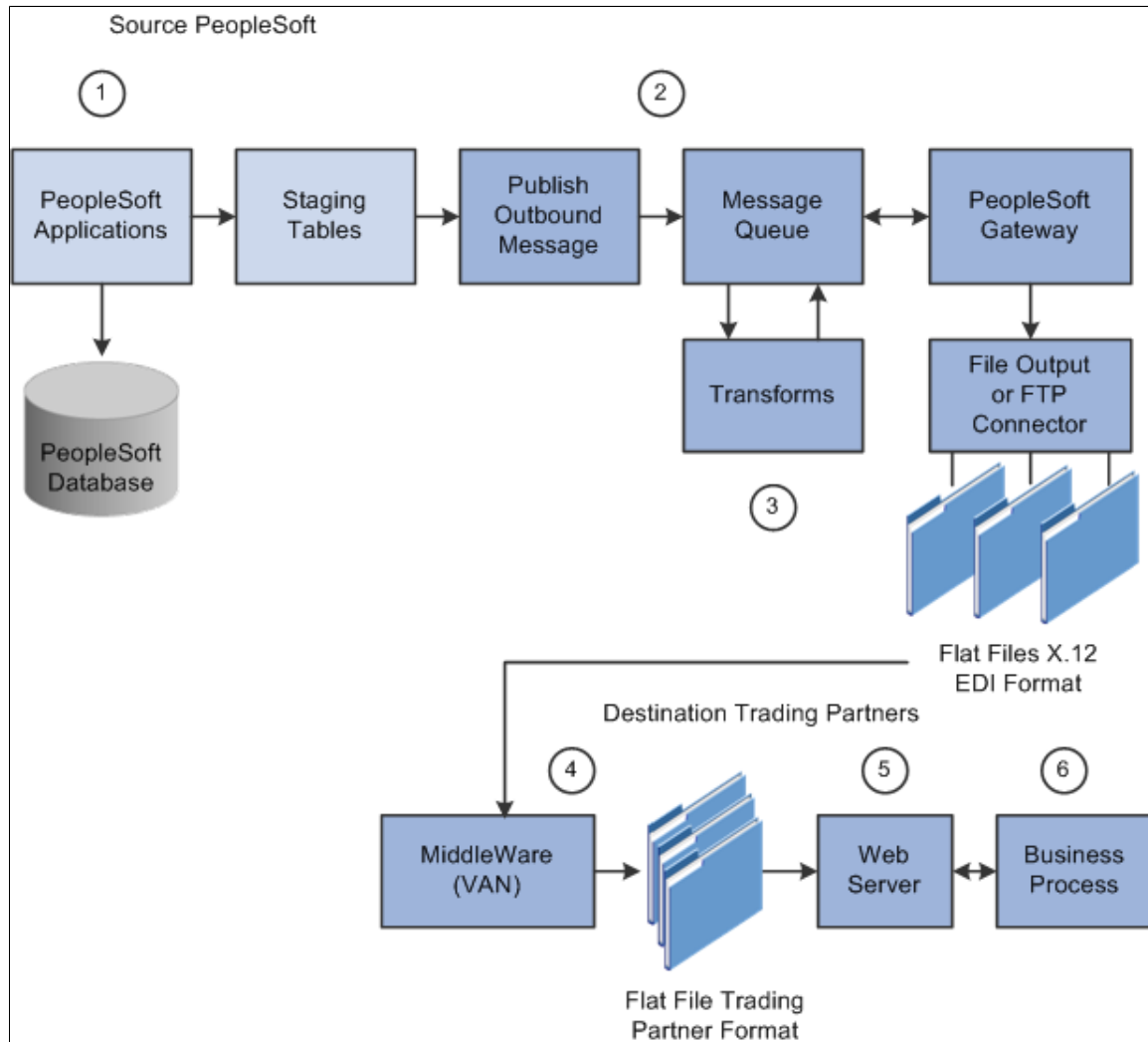
6. The destination trading partner loads the flat file into its business application system.

Processing Outbound Flat File EDI Transactions Using X.12 EDI Format

PeopleSoft can generate a X.12 EDI formatted flat file.

Image: Outbound flat file EDI transaction processing using X.12 EDI format

The following diagrams illustrate the outbound flat file EDI transaction process using the X.12 EDI format.



To process outbound flat file EDI transactions using X.12 EDI format:

1. The source trading partner initiates a PeopleSoft application process that retrieves the transactional data from the PeopleSoft application database tables and loads those EDI transactions into PeopleSoft staging tables, or prepares the data so it can be picked up by the Publish Outbound Message process.
2. The source-trading partner performs the Publish Outbound Message process that reads the staging tables or application tables, and publishes the data as XML to the Integration Broker, based on the options set in the batch publish rules (XML options).
3. The Integration Broker then transforms the data as specified on the active routings for the service operation and delivers the transformed data using the connector designated on the routing or node. For X.12 EDI data, this connector will often write a file to a directory or FTP server, but could be sent directly to a trading partner's gateway.

Transformation examples are provided for the outbound 810 (Billing Invoice), 845 (Sales Quote Notice), 855 (Sales Order Acknowledgement), and the 856 (Advanced Shipping Notice).

Note: These examples require customizations for individual trading partner requirements. Other outbound X.12 EDI transactions can be supported by creating transforms using the same concepts provided in the example transform programs.

4. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.
5. The destination trading partner receives the flat file from the VAN. A middleware tool is used to convert the source file into the format required for the destination trading partner's business application software.
6. The destination trading partner loads the flat file into its business application system.

Understanding Inbound and Outbound XML-Based EDI Transaction Processes

This overview section provides information about:

- Inbound XML-based EDI transactions using the PeopleSoft format.
- Inbound XML-based EDI transactions using the X.12 format.
- Outbound XML-based EDI transactions using the PeopleSoft format.
- Outbound XML-based EDI transactions using the X.12 format.

In a perfect world, the source trading partner and the destination trading partner would use the exact same format for the XML (EDI transactions) that they exchange between themselves, whether the XML is inbound or outbound. In this case, no mapping of the XML to the other trading partner's format would be required. XML would be exchanged between trading partners utilizing their web servers.

In a more realistic scenario, trading partners would still use XML to exchange information between each other, but one side would have to perform a transformation of the XML using their middleware product, such as that traditionally provided by VANs or, starting with PeopleSoft 9, using the mapping capabilities provided with the PeopleSoft Integration Broker.

In either of the scenarios above, the processing of EDI transactions utilizing XML eliminates a lot of system processing and offers a more direct exchange of information. The XML method provides for quicker turn around of information between trading partners and reduces logistics and control issues inherent in flat file processing.

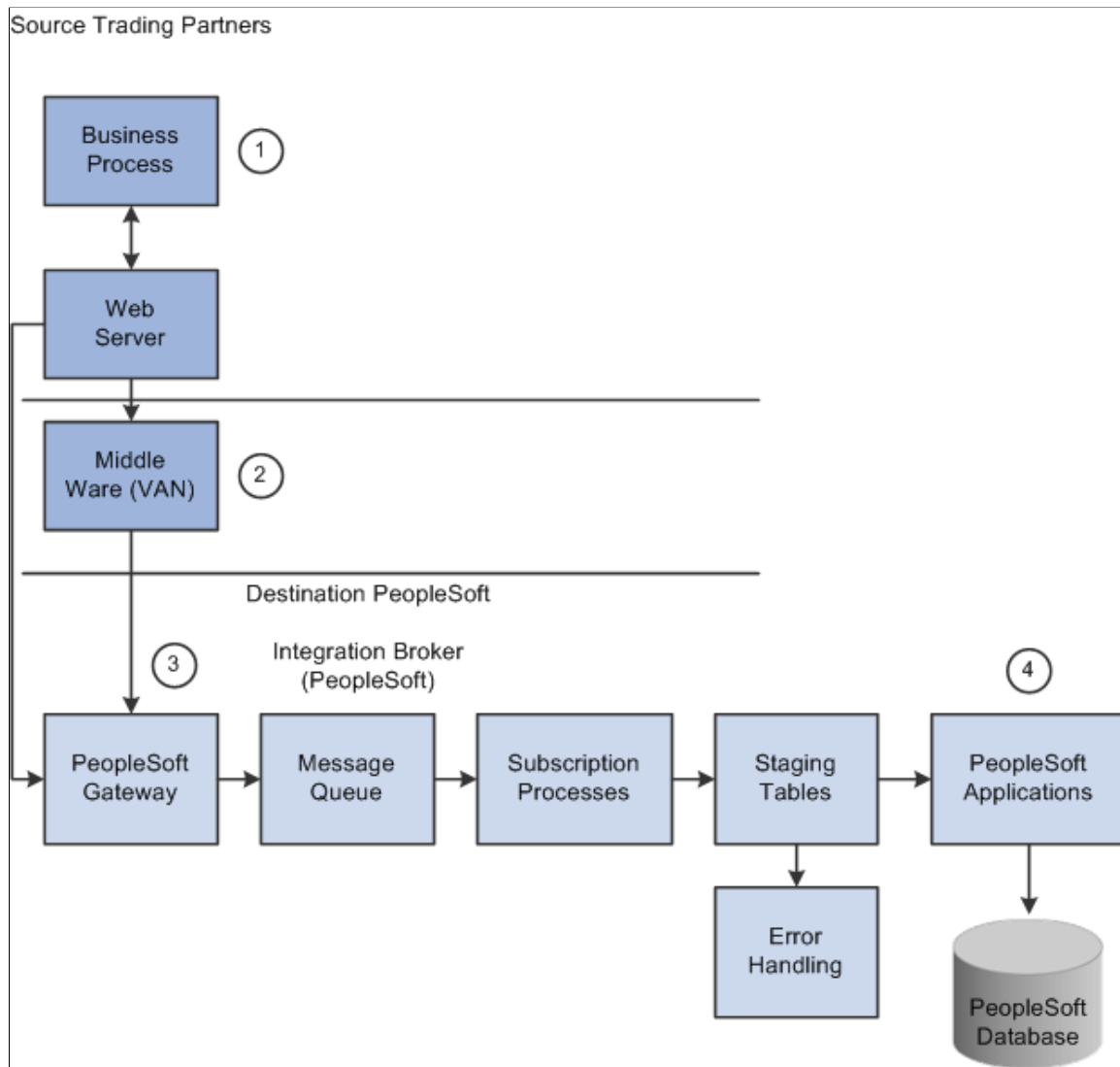
Processing Inbound XML-Based EDI Transactions Using the PeopleSoft Format

An XML file can be generated by another PeopleSoft system, generated by a third-party system in this PeopleSoft XML format, or generated by a third-party system and then converted to the PeopleSoft XML format by a middleware product. Once received by your PeopleSoft system, the inbound data is placed in

the message queue, checked for errors and then moved to the inbound staging tables to be processed by the individual PeopleSoft application.

Image: XML-Based EDI inbound transaction process using the PeopleSoft format

The following diagram illustrates the inbound XML-based EDI transaction process using the PeopleSoft format.



To process inbound XML transactions using PeopleSoft format:

1. The source trading partner publishes data to PeopleSoft's Integration Broker Gateway.

If one of the industry standard connectors compatible with PeopleSoft's Integration Broker Gateway is being used and the data is compatible with PeopleSoft's XML format, then it may be sent directly from the source site's gateway to the destination's (PeopleSoft system) gateway. If a compatible connector is not available then communications must be made using a middleware supplier that provides this connector. Also, if the data is not in PeopleSoft's XML format a transformation (data mapping) to PeopleSoft's XML format must be made either at the source site or at the destinations site.

Note: Transformations to and from the trading partner formats can be performed using the PeopleSoft Integration Broker.

2. If a middleware transformation is being performed, transform the source XML format to the destination PeopleSoft system's XML format.

Note: Many middleware products can convert from standard EDI formats (X.12 EDI or EDIFACT) to XML and then post to the PeopleSoft system. When using these products, you can still eliminate the use of flat files coming in and out of the PeopleSoft system even when working with trading partners that are not ready to move to the new technology. When utilizing this approach, flat files would still be used between the middleware product and the trading partner.

3. PeopleSoft subscription processes (OnNotify Handlers) are automatically executed that retrieve the XML from the message queue and then load the information into staging tables.
4. Different PeopleSoft applications read the transactions from the staging tables and load the data to the actual PeopleSoft application database.

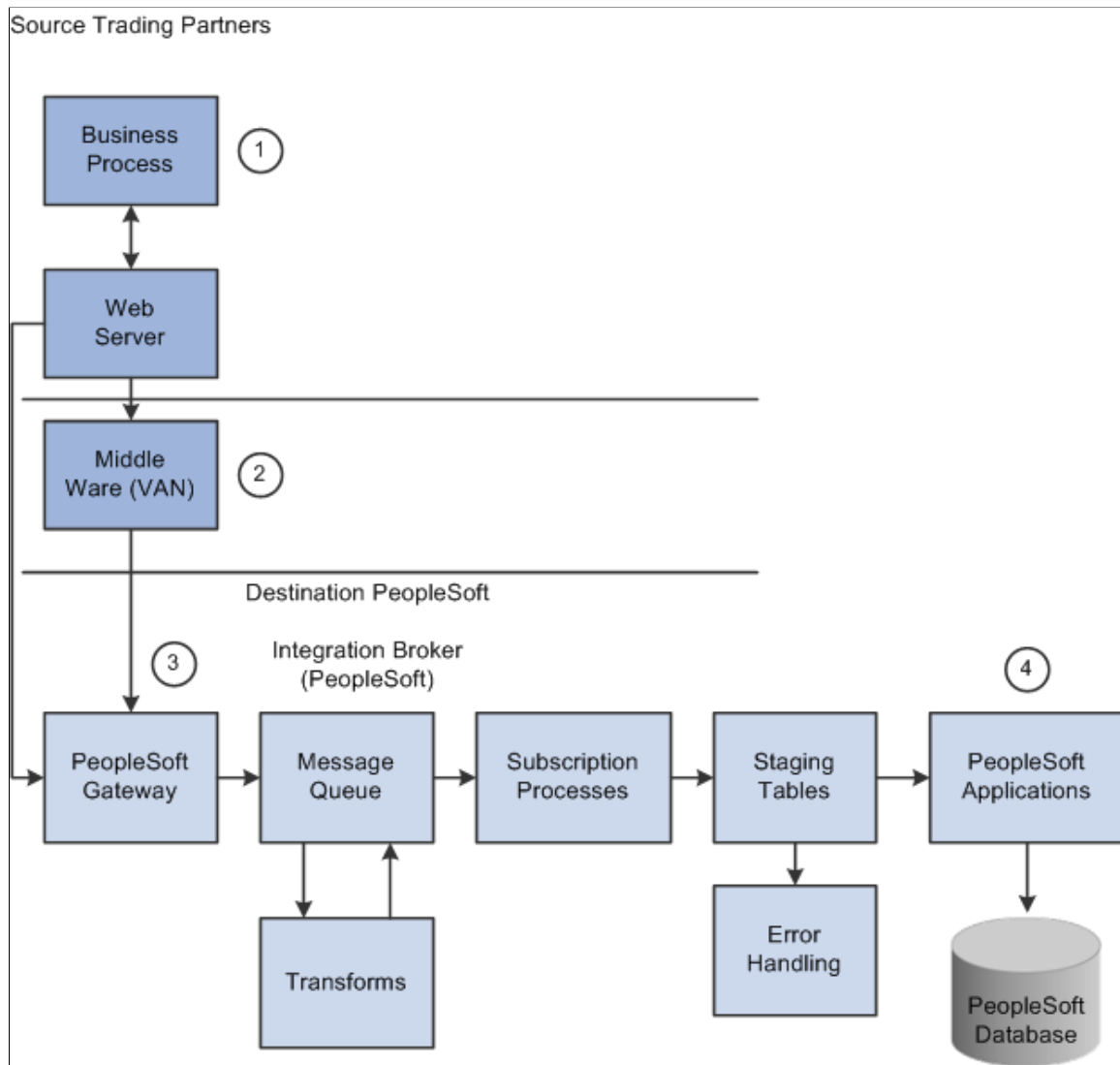
Processing Inbound XML-Based EDI Transactions Using the X.12 Format

An XML file can be generated by a third-party system in this X.12 EDI XML format or generated by a third-party system and then converted to the X.12 EDI XML format by a middleware product. An EDI XML file could also come from another PeopleSoft system. Once received by your PeopleSoft system, the PeopleSoft Integration Broker uses transforms to convert the data from X.12 EDI format to the PeopleSoft format. The inbound PeopleSoft-formatted XML data is then placed in the message

queue, checked for errors, and then moved to the inbound staging tables to be processed by the individual PeopleSoft application.

Image: XML-Based EDI inbound transaction process using the X.12 EDI format

The following diagram illustrates the inbound XML-based EDI transaction process using the X.12 EDI format.



To process inbound XML transactions using X.12 EDI format:

1. The source trading partner publishes data to PeopleSoft's Integration Broker Gateway.

If one of the industry standard connectors compatible with PeopleSoft's Integration Broker Gateway is being used and the data is formatted in a compatible X.12 EDI format, then it may be sent directly from the source site's gateway to the destination's (PeopleSoft system) gateway. If a compatible connector is not available, communications must be made using a middleware supplier that provides this connector. Also, if the data is not in an X.12 EDI format, a transformation (data mapping) to an X.12 EDI format must be provided using a middleware product.

2. If a middleware transformation is being performed, transform the source XML format to X.12 EDI XML format.

3. PeopleSoft Integration Broker processes the data.

Using pre-defined transformations, the PeopleSoft Integration Broker will convert the source trading partner's X.12 EDI XML format to a PeopleSoft XML format, leaving the final product in the message queue.

PeopleSoft subscription processes (On Notify Handlers) are then automatically executed to retrieve the data from the message queue and load it into staging tables.

Inbound transformation examples are provided for the 840 (Sales Quote Load) and 850 (Sales Order Load) X.12 EDI transaction set formats.

Note: These examples require customizations for individual trading partner requirements. Other inbound X.12 EDI transactions can be supported by creating transforms using the concepts provided in the example transform programs.

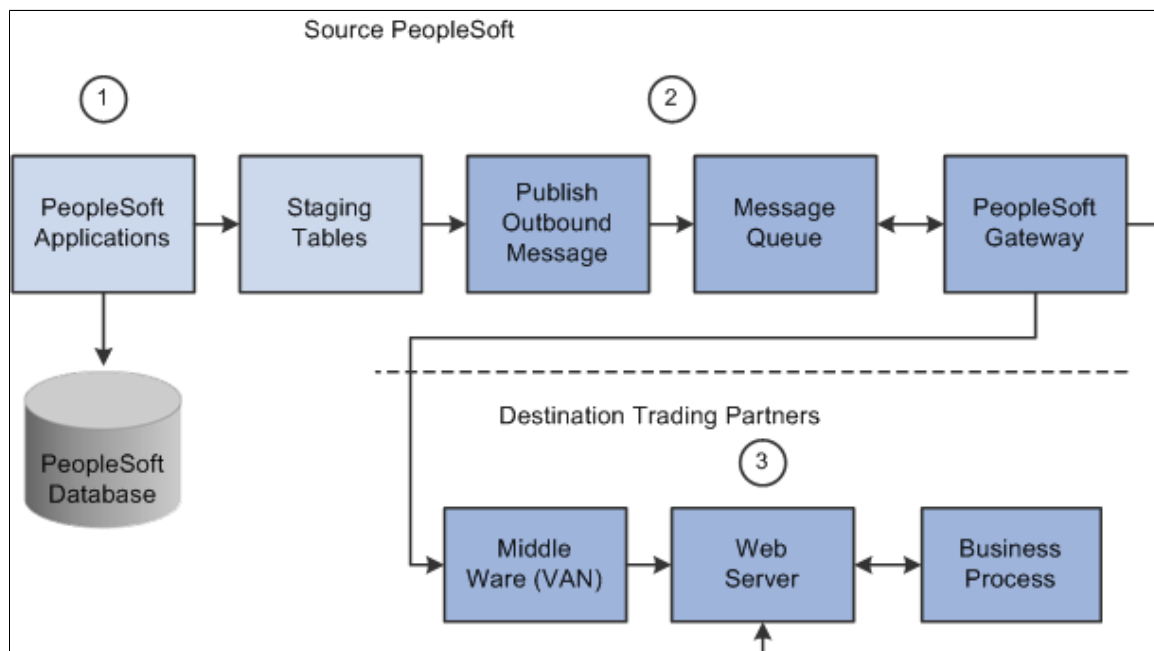
4. Different PeopleSoft applications initiate processes that read the transactions from the staging tables and load the data to the actual PeopleSoft application database tables.

Processing Outbound XML-Based EDI Transactions Using the PeopleSoft Format

PeopleSoft can generate a PeopleSoft-formatted XML file to be received by another PeopleSoft system, such as CRM, or a third-party system with or without conversion by a middleware product.

Image: XML-Based EDI outbound transaction process using the PeopleSoft format

The following diagram illustrates the outbound XML-based EDI transaction process using the PeopleSoft format.



To process outbound XML-based EDI transactions using the PeopleSoft format:

1. The source trading partner initiates a PeopleSoft application process that retrieves the transactional data from the PeopleSoft application database tables and loads those EDI transactions into PeopleSoft staging tables, or prepares the data so it can be picked up by the Publish Outbound Message process.

2. The source trading partner performs the Publish Outbound Message process that retrieves the transactions from the staging tables or application tables, and publishes the data as XML to the Integration Broker, based on the options set in the batch publish rules (XML options).

If one of the industry standard connectors compatible with PeopleSoft's Integration Broker Gateway is being used and the destination's XML format is compatible with PeopleSoft's XML format then it may be sent directly from the source site to the destination's gateway. If a compatible connector is not available then communications must be made using a middleware supplier that provides this connector. Also, if the data is not in PeopleSoft's XML format a transformation (data mapping) "from" PeopleSoft's XML format must be made either at the source site, a middleware site or at the destinations site.

Note: Transformations to and from the trading partner formats can be performed using the Integration Broker. In this situation the Integration Broker can perform the transformation and then with the correct connector can post directly to the destination trading partner's system.

3. If a middleware transformation is being performed, transform the PeopleSoft XML format to the destination's XML format.

If a middleware connector is required the middleware product will post to the destinations gateway or will create a flat file to be received by the trading partner through their VAN.

Note: Many middleware products can convert from the PeopleSoft XML format to standard EDI formats (X.12 or EDIFACT) required by trading partners. When using these products you can still eliminate the use of flat files coming in and out of the PeopleSoft system even when working with trading partners that are not ready to move to the new technology. When utilizing this approach flat files would still be used between the middleware product, VAN and the trading partner.

Note: See PeopleTools documentation for information about PeopleSoft XML formats, PeopleSoft listening connectors, and PeopleSoft target connectors.

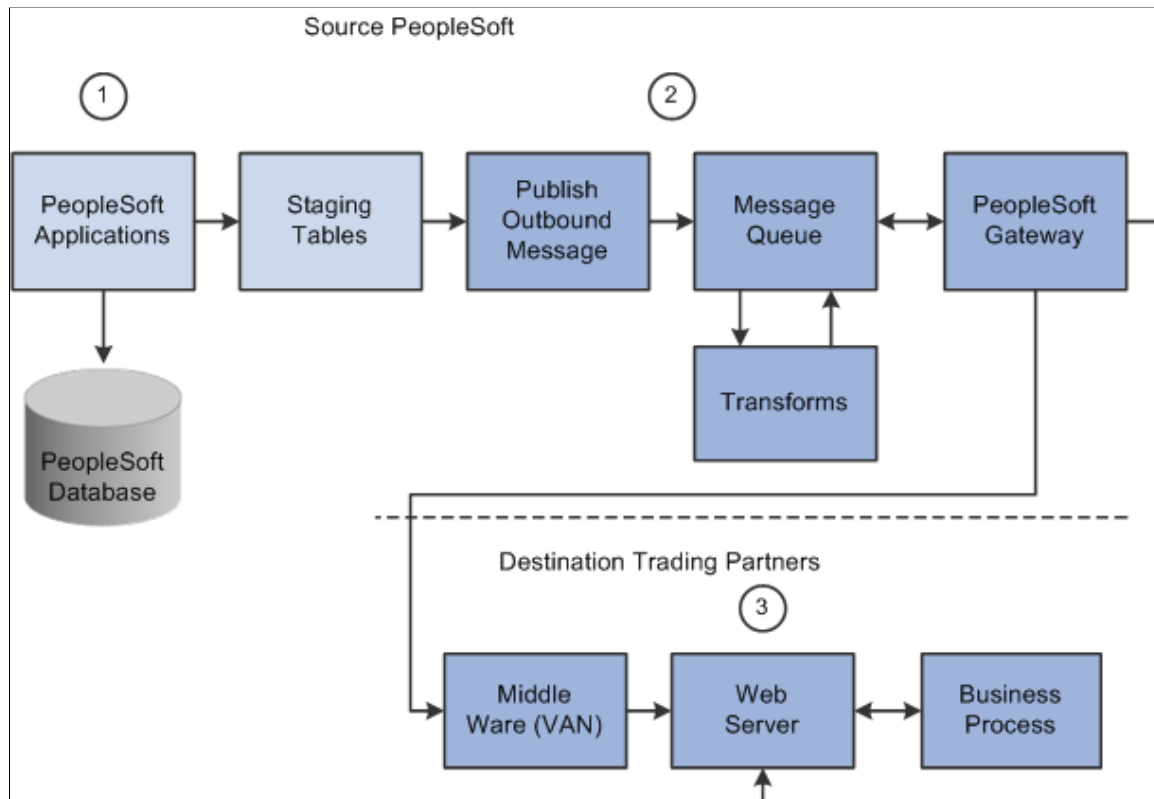
Processing Outbound XML-Based EDI Transactions Using the X.12 EDI Format

PeopleSoft can generate an EDI X.12-formatted XML transaction to be received by a third-party system with or without conversion by a middleware product. As delivered, the outbound EDI service operation routings convert the PeopleSoft-formatted XML data into a X.12 EDI formatted flat file using transform programs; first by converting to an EDI XML format and then to a flat file format. However, by removing

the second transform program from the routing you can change the system to output X.12 EDI data using XML.

Image: XML-based EDI outbound transaction process using X.12 EDI format

The following diagram illustrates the outbound XML-based EDI transaction process using the X.12 EDI format.



To process outbound XML-based EDI transactions using X.12 EDI format:

1. The source trading partner initiates a PeopleSoft application process that retrieves the transactional data from the PeopleSoft application database tables and loads those EDI transactions into PeopleSoft staging tables, or prepares the data so it can be picked up by the Publish Outbound Message process.
2. The source-trading partner performs the Publish Outbound Message process that retrieves the transactions from the staging tables or application tables, and publishes the data as XML to the Integration Broker, based on the options set in the batch publish rules (XML options).
3. The PeopleSoft Integration Broker then transforms the data as specified on the active routings for the service operation and delivers the transformed data using the connector designated on the routing or node.

The Integration Broker posts the X.12 EDI XML to the trading partner's gateway. If the trading partner requires transformations of the X.12 EDI XML into their proprietary format, they will use a middleware product at this point. Otherwise the XML is posted directly into their application system.

Transformation examples are provided for the outbound 810 (Billing Invoice), 845 (Sales Quote Notice), 855 (Sales Order Acknowledgement), and the 856 (Advanced Shipping Notice).

Note: These examples require customizations for individual trading partner requirements. Other outbound X.12 EDI transactions can be supported by creating transforms using the same concepts provided in the example transform programs.

Setting Up EDI Transactions Using Flat Files

This section discusses how to:

- Set up inbound EDI transactions using flat files
- Set up outbound EDI transactions using flat files

Setting Up Inbound EDI Transactions Using Flat Files

To set up an inbound EDI transaction using flat files:

1. If trading partner is not delivering data in PeopleSoft's business document file format, set up mapping software to transform the trading partner's format to the PeopleSoft format.

For a definition of PeopleSoft's business document file format, obtain the file layout for the EDI transaction. For information about obtaining the file layouts, see *Obtaining File Layouts*, which appears later in this document.

For the appropriate file layout definition for each transaction, refer to the table in the *Reviewing PeopleSoft Supported EDI Transactions* section.

2. Perform application specific setup.

Refer to the table in the *Reviewing PeopleSoft Supported EDI Transactions* section for information on locating documentation explaining application-specific setup instructions for each EDI transaction.

3. Perform Integration Broker setup.

You must set up and activate nodes, service operations, handlers and routings before you can begin processing inbound transactions.

- a. Set up nodes.

PeopleSoft delivers a sample external inbound node (PSFT_XINBND) used to deliver sample routing definitions for each service operation. For inbound transactions using flat files you need the default local node only. The default local node (PSFT_EP) is packaged with initial delivery of the system. Unless you are changing the local node, no additional node setup is required. If for auditing purposes you wish to differentiate the node from which transactions are received, you may do so by creating a node definition and inbound file rule for each external trading partner or VAN you plan to integrate with, and specifying the sender node name on each inbound file rule.

- b. Activate Service Operations.

PeopleSoft provides Service Operation definitions for each EDI transaction that you must activate before use.

c. Activate Service Operation Handlers.

OnNotify Service Operation Handlers are subscription processes that are automatically executed by Integration Broker when an inbound asynchronous transaction is received. PeopleSoft provides OnNotify Handlers on each asynchronous service operation that supports inbound integration. You must activate the appropriate OnNotify Handler on each Service Operation before use.

d. Activate Service Operation Routings.

Service Operation Routings define the sending and receiving nodes for an integration, the external name of the integration, and optionally specify inbound and outbound transformations to be invoked on each transaction. The sender node on inbound routings can be specified as "ANY" node allowing transactions to be received from any valid node. For each trading partner or VAN sending data into PeopleSoft, a routing must be activated either from a specific sender node, or from "ANY" node.

4. Set up Inbound File Rule.

For integrations using the PeopleSoft flat-file format, the Enterprise Components Inbound File Publish process uses an inbound file rule to identify information about the source file. Most EDI transactions are already set up on the *SCM Inbound EDI* file rule. If you are processing one of these transactions, then enter the file name on the file rule and activate the file rule.

For integrations using the X.12 EDI flat-file format, the PeopleTools Integration Broker Inbound File Process uses an inbound file loader rule to identify information about the source file. Each sample inbound EDI transaction has been delivered with a sample inbound file loader rule. If you are processing one of these transactions, then enter the file name on the file rule and activate the file rule.

5. When you are ready to process a trading partner's file, run the Inbound File Publish process.

After you run the Inbound File Publish process, run the appropriate application process to validate and load the transactions.

Setting Up Outbound EDI Transactions Using Flat Files

To set up an outbound EDI transaction using flat files:

1. If trading partner does not accept data in a PeopleSoft business document file format, set up mapping software to transform the PeopleSoft format to the trading partner's format.

For a definition of a PeopleSoft business document file format, obtain the file layout for the EDI transaction. For information about obtaining the file layouts, see *Obtaining File Layouts*, which appears later in this document.

For the appropriate file layout definition for each transaction, refer to the table in the *Reviewing PeopleSoft Supported EDI Transactions* section.

2. Perform application specific setup.

Refer to the table in the *Reviewing PeopleSoft Supported EDI Transactions* section for information on locating documentation explaining application-specific setup instructions for each EDI transaction.

3. Perform Integration Broker Setup.

You must set up nodes and activate service operations, handlers and routings before you can begin processing inbound transactions.

a. Set up nodes.

PeopleSoft delivers a sample external outbound node (PSFT_XOUTBND) used to deliver sample routing definitions for each service operation. For each external trading partner or VAN you plan to integrate with, a node definition must be set up and activated.

b. Activate Service Operations.

PeopleSoft provides Service Operation definitions for each EDI transaction that you must activate before use.

c. Activate Service Operation Handlers.

OnRoute Service Operation Handlers are processes that are automatically executed by Integration Broker when an outbound transaction is published. PeopleSoft provides OnRoute Handlers on each asynchronous service operation that supports chunking. For each Service Operation requiring chunking, you must activate the OnRoute Handler before use.

d. Activate Service Operation Routings.

Service Operation Routings define the sending and receiving nodes for an integration, the external name of the integration, and optionally specify inbound and outbound transformations to be invoked on each transaction. For each trading partner or VAN you will be sending data to from PeopleSoft, an outbound routing must be activated.

4. Set up Batch Publish Rules.

The Publish Outbound Message process uses the batch publish rules to identify information about the transaction being published. Batch publish rules have been prepackaged to work with each outbound transaction that is initiated using the Publish Outbound Message process. You must activate these rules and set the intended output format (flat file) before you can use them.

Refer to the table in the Reviewing PeopleSoft Supported EDI Transactions section for information on the names of the batch publish rules associated with outbound EDI transactions.

When using an output format of flat file (PeopleSoft format) on the batch publish rule, the data is never sent to the Integration Broker—the output goes directly to a flat file. Consequently, the node, queue and routings do not need to be set up for outbound transactions published from the Publish Outbound Message process that are going to flat files using the PeopleSoft format. However, you must activate the service operation, as the system performs validations to prevent unexpected transactions from being generated. In all other scenarios, the output format should be set to message.

Note: Batch Publish Rules optionally use a feature called chunking, which enables you to break up data based on unique field values within it. For example, if you were sending purchase orders directly to a trading partner without going through a middleware system (VAN), you must ensure that only that supplier's data is included on the transactions sent to that trading partner. If you were not using chunking, and you had separate nodes set up for each of your trading partners, then every transaction would go to every trading partner. Chunking provides a mechanism to ensure that transactions contain only information for a single trading partner and enables them to be routed to the node of that trading partner.

When using a single middleware product (VAN), you use a single node to identify that product's destination URL; in this scenario, chunking is not required. In this case, all trading partner transactions can be sent together as the segregation and routing by trading partner is performed in the middleware product.

5. When you are ready to generate EDI transactions, run the appropriate application processes.

Refer to the table in the Reviewing PeopleSoft Supported EDI Transactions section for information on where to find the documentation explaining the application specific information for each EDI transaction.

Setting Up EDI Transactions Using XML

This section discusses how to:

- Set up inbound EDI transactions using XML
- Set up outbound EDI transactions using XML

Setting Up Inbound EDI Transactions Using XML

To set up an inbound EDI transaction using XML:

1. If the trading partner is not delivering XML data in a PeopleSoft format, then set up mapping software to transform the trading partner's XML to a PeopleSoft format.
2. Configure the Integration Gateway and identify the connector to use when communicating between gateways.

Use the Integration Broker Gateway for all transactions in and out of the PeopleSoft system. Detailed definitions and setup information can be found in the PeopleTools Integration Broker documentation.

If you use one of the industry standard connectors compatible with Integration Broker, then transactions may be sent directly from the source site's gateway to the PeopleSoft Integration Broker Gateway. If a compatible connector is not available, you can develop a custom connector, or complete communications using a middleware supplier that provides this connector.

3. Perform application specific setup.

Refer to the table in the PeopleSoft Supported EDI Transactions section for information on locating documentation explaining application-specific setup instructions for each EDI transaction.

4. Perform Integration Broker setup.

You must set up and activate nodes, service operations, handlers and routings before you can begin processing inbound transactions.

a. Set up nodes.

PeopleSoft delivers a sample external inbound node (PSFT_XINBND) used to deliver sample routing definitions for each service operation. For inbound transactions using flat files you need the default local node only. The default local node (PSFT_EP) is packaged with initial delivery of the system. Unless you are changing the local node, no additional node setup is required. If for auditing purposes you wish to differentiate the node from which transactions are received, you may do so by creating a node definition and inbound file rule for each external trading partner or VAN you plan to integrate with, and specifying the sender node name on each inbound file rule.

b. Activate Service Operations.

PeopleSoft provides Service Operation definitions for each EDI transaction that you must activate before use.

c. Activate Service Operation Handlers.

OnNotify Service Operation Handlers are subscription processes that are automatically executed by Integration Broker when an inbound asynchronous transaction is received. PeopleSoft provides OnNotify Handlers on each asynchronous service operation that supports inbound integration. You must activate the appropriate OnNotify Handler on each Service Operation before use.

d. Activate Service Operation Routings.

Service Operation Routings define the sending and receiving nodes for an integration, the external name of the integration, and optionally specify inbound and outbound transformations to be invoked on each transaction. The sender node on inbound routings can be specified as "ANY" node allowing transactions to be received from any valid node. For each trading partner or VAN sending data into PeopleSoft, a routing must be activated either from a specific sender node, or from "ANY" node.

5. When the trading partner sends XML to the PeopleSoft Integration Broker Gateway, it will automatically be processed by a handler.

In most cases the transactions are loaded into staging tables where they wait for you to run the appropriate application process to validate and load them into the PeopleSoft application database.

Setting Up Outbound Transactions Using XML

To set up an outbound EDI transaction using XML:

1. If the trading partner is not accepting XML data in a PeopleSoft format, then set up mapping software to transform the PeopleSoft XML to the trading partner's format.
2. Configure the Integration Gateway and identify the connector to use when communicating between gateways.

Use the Integration Broker Gateway for all transactions in and out of the PeopleSoft system. Detailed definitions and setup information can be found in the PeopleTools Integration Broker documentation.

If you use one of the industry standard connectors compatible with Integration Broker, then transactions may be sent directly from the PeopleSoft Integration Gateway to the destination's gateway. If a compatible connector is not available, you can develop a custom connector, or complete communications using a middleware supplier that provides this connector.

3. Perform application specific setup.

Refer to the table in the PeopleSoft Supported EDI Transactions section for information on locating documentation explaining application-specific setup instructions for each EDI transaction.

4. Perform Integration Broker Setup.

You must set up nodes and activate service operations, handlers and routings before you can begin processing inbound transactions.

a. Set up nodes.

PeopleSoft delivers a sample external outbound node (PSFT_XOUTBND) used to deliver sample routing definitions for each service operation. For each external trading partner or VAN you plan to integrate with, a node definition must be set up and activated.

b. Activate Service Operations.

PeopleSoft provides Service Operation definitions for each EDI transaction that you must activate before use.

c. Activate Service Operation Handlers.

OnRoute Service Operation Handlers are processes that are automatically executed by Integration Broker when an outbound transaction is published. PeopleSoft provides OnRoute Handlers on each asynchronous service operation that supports chunking. For each Service Operation requiring chunking, you must activate the OnRoute Handler before use.

d. Activate Service Operation Routings.

Service Operation Routings define the sending and receiving nodes for an integration, the external name of the integration, and optionally specify inbound and outbound transformations to be invoked on each transaction. For each trading partner or VAN you will be sending data to from PeopleSoft, an outbound routing must be activated.

5. Set up Batch Publish Rules.

The Publish Outbound Message process uses the batch publish rules to identify information about the transaction being published. Batch publish rules have been prepackaged to work with each outbound transaction that is initiated using the Publish Outbound Message process. You must activate these rules and set the intended output format (message) before you can use them.

Refer to the table in the PeopleSoft Supported EDI Transactions section for information on locating documentation explaining application-specific setup instructions for each EDI transaction.

Note: Batch Publish Rules optionally use a feature called chunking, which enables you to break up data based on unique field values within it. For example, if you were sending purchase orders directly to a trading partner without going through a middleware system (VAN), you must ensure that only that supplier's data is included on the transactions sent to that trading partner. If you were not using chunking, and you had separate nodes set up for each of your trading partners, then every transaction would go to every trading partner. Chunking provides a mechanism to ensure that transactions contain only information for a single trading partner and enables them to be routed to the node of that trading partner.

When using a single middleware product (VAN), you use a single node to identify that product's destination URL; in this scenario, chunking is not required. In this case, all trading partner transactions can be sent together as the segregation and routing by trading partner is performed in the middleware product.

6. When you are ready to generate EDI transactions, run the appropriate application processes.

Refer to the table in the Reviewing PeopleSoft Supported EDI Transactions section for information on where to find the documentation explaining the application specific information for each EDI transaction.

Customizing Transforms for Specific EDI Implementations

This section discusses how to:

- Use custom EDI integrations
- Map custom integration requirements
- Create sample EDI transaction files
- Customize sample EDI transaction files
- Customize XSLT transforms
- Customize the EDI file loader utility
- Customize the XML to flat file utility

Understanding Custom EDI Integrations

Each trading partner using integrations conforming to an EDI specification usually has unique integration requirements. These unique requirements are commonly due to codes or data fields unique to a trading partner, or field lengths that do not map well into the EDI specification. Trading partners often vary the format of a transaction set to meet their specific needs. PeopleSoft Integration Broker provides the flexibility required to implement these trading partner specific integrations without requiring a middleware product to transform data.

Customers should expect to perform the following tasks for each trading partner with unique implementation requirements:

1. Identify the integrations to implement for the trading partner.

2. Create a copy of the delivered attribute mapping worksheets and customize the attribute mappings for each integration to match the trading partner's EDI implementation.
3. If the trading partner's implementation requires adding, deleting, or modifying any fields or segments for an integration, create copies of the delivered file layouts and messages for the integration, customize them to match the attribute mappings, and create a message schema.
4. Create a service operation for any new copies of the inbound integrations.
5. For all integrations requiring transformations unique to the trading partner's implementation, create copies of the delivered transforms, and use the graphical mapper or any XSLT editor to customize them to match changes to the delivered attribute mappings.
6. Create a message node for the trading partner.
7. Using the delivered sample routings as a guide, create routing to or from the trading partner's node for each integration, and indicate the transforms to use for each routing.
8. Create and activate a batch publish rule for each outbound integration.
9. Create inbound file rules for each inbound EDI integration.
10. Create run controls (schedules) for inbound and outbound processing.

To better understand how to take advantage of the transformation features available in the PeopleSoft Integration Broker, six of the more common EDI supportive integrations have been delivered with sample transforms to or from native X.12 EDI flat files:

- 810 out: Billing Invoice
- 840 in: Sales Quote Load
- 845 out: Sales Quote Notice
- 850 in: Sales Order Load
- 855 out: Sales Order Acknowledgement
- 856 out: Advanced Shipping Notice

Mapping Custom Integration Requirements

One Excel workbook is delivered in the Excel directory of SCM 9.0 containing a tab (worksheet) for each of the sample EDI X.12 transaction sets that have been mapped to PeopleSoft.

The following figure shows an example from one of the worksheets that shows the relationship between the segments and elements of the transaction set and the segments and fields of the corresponding

PeopleSoft message, and any logic required to transform between them. Each worksheet provides documentation of the delivered XSLT transforms between PeopleSoft and EDI X.12 transaction formats.

Image: Example of a worksheet for EDI X.12 transaction sets

This example illustrates the fields and controls on the Example of a worksheet for EDI X.12 transaction sets. You can find definitions for the fields and controls later on this page.

130 Segment Number	Segment Name	Field Name	Field Number	Description	Type	Length	Required	Corresponding Segment/Field	Transform Logic / Notes
131 00 00	EDI_SEG_ISA	EDI_FLD_01	001	Authorization Information Qual	Char	2	Yes		
132 00 00	EDI_SEG_ISA	EDI_FLD_02	002	Authorization Information	Char	10	Yes		
133 00 00	EDI_SEG_ISA	EDI_FLD_03	003	Security Information Qualifier	Char	2	Yes		
134 00 00	EDI_SEG_ISA	EDI_FLD_04	004	Security Information	Char	10	Yes		
135 00 00	EDI_SEG_ISA	EDI_FLD_05_1	005	Interchange ID Qualifier	Char	2	Yes		
136 00 00	EDI_SEG_ISA	EDI_FLD_06	006	Interchange Sender ID	Char	15	Yes		
137 00 00	EDI_SEG_ISA	EDI_FLD_05_2	007	Interchange ID Qualifier	Char	2	Yes		
138 00 00	EDI_SEG_ISA	EDI_FLD_07	008	Interchange Receiver ID	Char	15	Yes		
139 00 00	EDI_SEG_ISA	EDI_FLD_08	009	Interchange Date	Char	8	Yes		
140 00 00	EDI_SEG_ISA	EDI_FLD_09	010	Interchange Time	Char	4	Yes		
141 00 00	EDI_SEG_ISA	EDI_FLD_065	011	Repetition Separator	Char	1	Yes		
142 00 00	EDI_SEG_ISA	EDI_FLD_011	012	Interchange Control Version Nu	Char	5	Yes		
143 00 00	EDI_SEG_ISA	EDI_FLD_012	013	Interchange Control Number	Sign	8.0	Yes		
144 00 00	EDI_SEG_ISA	EDI_FLD_013	014	Acknowledgment Requested	Char	1	Yes		
145 00 00	EDI_SEG_ISA	EDI_FLD_014	015	Interchange Usage Indicator	Char	1	Yes		
146 00 00	EDI_SEG_ISA	EDI_FLD_015	016	Component Element Separator	Char	1	Yes		
147 00 01 00									
148 00 01 00	EDI_SEG_GS	EDI_FLD_479	001	Functional Identifier Code	Char	2	Yes		
149 00 01 00	EDI_SEG_GS	EDI_FLD_142	002	Application Sender's Code	Char	15	Yes		
150 00 01 00	EDI_SEG_GS	EDI_FLD_124	003	Application Receiver's Code	Char	15	Yes		
151 00 01 00	EDI_SEG_GS	EDI_FLD_373	004	Date	Char	8	Yes		
152 00 01 00	EDI_SEG_GS	EDI_FLD_337	005	Time	Char	8	Yes		
153 00 01 00	EDI_SEG_GS	EDI_FLD_28	006	Group Control Number	Sign	8.0	Yes		
154 00 01 00	EDI_SEG_GS	EDI_FLD_455	007	Responsible Agency Code	Char	2	Yes		
155 00 01 00	EDI_SEG_GS	EDI_FLD_480	008	Version / Release / Industry I	Char	12	Yes		
156 00 01 01 00									
157 00 01 01 00	EDI_SEG_ST	EDI_FLD_143	001	Transaction Set Identifier Cod	Char	3	Yes	810	Invoice
158 00 01 01 00	EDI_SEG_ST	EDI_FLD_329	002	Transaction Set Control Number	Char	9	Yes	0001	
159 00 01 01 00	EDI_SEG_ST	EDI_FLD_1705	003	Implementation Convention Refe	Char	35			
160 00 01 01 01									
161 00 01 01 01	EDI_SEG_B0	EDI_FLD_373_1	001	Date	Char	8	Yes	BL_HDR_TAO INVOICE_DT	Transform INVOICE_DT to YYYYMMDD
162 00 01 01 01	EDI_SEG_B0	EDI_FLD_75_1	002	Invoice Number	Char	22	Yes	BL_HDR_TAO INVOICE	
163 00 01 01 01	EDI_SEG_B0	EDI_FLD_373_2	003	Date	Char	8			
164 00 01 01 01	EDI_SEG_B0	EDI_FLD_324	004	Purchase Order Number	Char	22			
165 00 01 01 01	EDI_SEG_B0	EDI_FLD_328	005	Release Number	Char	30			
166 00 01 01 01	EDI_SEG_B0	EDI_FLD_327	006	Change Order Sequence Number	Char	8			
167 00 01 01 01	EDI_SEG_B0	EDI_FLD_640	007	Transaction Type Code	Char	2		BL_HDR INVOICE_TYPE	RAD to AI, ARB to RE, REG to 33, ACR to
168 00 01 01 01	EDI_SEG_B0	EDI_FLD_353	008	Transaction Set Purpose Code	Char	2			
169 00 01 01 01	EDI_SEG_B0	EDI_FLD_306	009	Action Code	Char	2			
170 00 01 01 01	EDI_SEG_B0	EDI_FLD_76_2	010	Invoice Number	Char	22		BL_HDR CONSOL INVOICE	Need to add to BL_HDR_TAO #

The first step to implementing custom integrations for a trading partner is to create a field-by-field attribute mapping worksheet for each integration. A copy of the relevant sample worksheets should be made for each trading partner, and then modified by a functional analyst to meet the unique needs of the trading partner.

Creating Sample EDI Transaction Files

Sample EDI files have been generated to map the sample EDI File Layouts. The Sample EDI Files contain delimiters for all fields, but do not contain data. This allows adding test data to the sample files without having to remove extraneous data from them. Copies of these sample files should be populated with sample data and used during testing.

The following figure shows the first few lines of a sample EDI file.

Image: The first few lines of a sample EDI file

This example illustrates the fields and controls on the The first few lines of a sample EDI file. You can find definitions for the fields and controls later on this page.

```

ISA*****Q***
GS*****Q**
ST***
BEG*****
CUR***Q*****
REF*****
PER*****
TAX*****
FOB*****
CTP***Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q
PAM**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**Q**
CSH***Q*****Q*
TC2**

```

Customizing Messages and File Layouts

File Layouts and Message definitions have been delivered for each of the X.12 EDI transaction sets. They are named EDI_TXN_xxx where xxx is the EDI transaction set number.

Occasionally, the trading partner's unique implementation will require adding, deleting, or modifying fields or segments for an integration. When this happens, you need to use the PeopleSoft application designer and PIA to create trading partner specific copies of the delivered file layouts and messages for the integration, customize them to match the attribute mappings, and generate a schema for the new message.

Customizing messages and file layouts often requires creating new copies of the EDI records and fields to use in place of the delivered ones. To assist in this process, some background on the process and naming standard should be explained. All records required to create the file layouts and messages have been implemented as derived-work records.

Fields are assigned a unique field number in the X.12 EDI specification, and reused throughout the EDI segments. As one segment can contain many occurrences of the same field, and each occurrence of a field in PeopleSoft record must be unique as multiple copies of each field may exist. Fields will be named EDI_FLD_xxx_yyyyyy where xxx is the EDI field number and yyyyyy is a unique occurrence identifier. Field types will be either numeric or string. Dates will be declared as strings.

These types of records support the needs of the file layouts and messages.

- EDI composites are defined as sub-records and named EDI_SBR_xxx_yyy where xxx is the EDI field number and yyy is a unique occurrence identifier. Similar to fields, composites can occur multiple times in a segment so there may be multiple instances of each composite.
- EDI segments are defined as work records and named EDI_SEG_xxx where xxx is the segment number.

- To support the looping structures defined by the X.12 EDI transaction sets, additional work records have been created and named EDILOOP_XXXXXX where XXXXXX is a unique loop identifier. PeopleTools requires at least one field, so one field exists on these records (DUMMY_FIELD).

Note: It is very important that the file layout and the message definition match exactly. If they do not, the transformation process may fail with unpredictable results.

Customizing XSLT Transforms

XSLT has been delivered for each of the sample EDI integrations to transform XML between the EDI and PeopleSoft message layouts and data values. Application Engine (AE) programs act as a delivery mechanism for each of the transforms. Each AE program is named EDI_XXX_Y where XXX is the EDI transaction set number, and Y is the direction of the transform (either In or Out). This shortened name format allows room for a unique identifier to be appended to the end of the name as users create customized copies of the AE and XSLT for each trading partner with unique transformation needs.

The XSLT for the trading partner must then be modified using the graphical mapper or any XSLT editor to match any changes to the delivered attribute mappings.

Note: This new transform AE will then be used in place of the sample one when creating a service operation routing for the integration to the trading partner.

Customizing the EDI File Loader Utility

The EDI_FileLoader application class is an alternate processing application class that may be specified on an inbound file loader rule to load data formatted using the X.12 EDI specification. It uses the File Layout Definition and Service Operation name specified in the inbound file loader rule to convert the inbound file into XML and publish it to the PeopleSoft Integration Broker for inbound processing.

Note: In rare cases, a trading partner's integration requirements may be so unique as to require some customization of the EDI_FileLoader application class, but that should be done only in cases where the requirements go beyond what can be customized in the layouts and XSLT.

Customizing the XML to File Utility

XML_TO_FILE is a generic AE transform program used in the outbound EDI routings to transform XML to a flat file. It uses a File Layout Definition by the same name as the result message out of the transform to convert the XML into a flat file. The AE uses the XMLtoFlatFile application class to actually do the transformation. The AE is used on the sample outbound EDI service operation routings as a second transformation, resulting in an outbound flat-file as opposed to outbound XML. This approach allows users to direct the flat-file instead of outbound XML. This approach allows users to direct the flat-file to any target connector (file, FTP and so on) as appropriate for the specific implementation at their site.

Note: In rare cases, a trading partner's integration requirements may be so unique as to require some customization of the XMLtoFlatFile application class, but that is not anticipated and should be done only as a last resort.

Processing Error Handling

Most inbound asynchronous transactions, no matter which technology delivers them to the PeopleSoft system, are loaded into staging tables, where they are validated by background routines scanning these staging tables awaiting incoming work. If errors are found, the transaction status in the transaction log is changed to *Error*, and rows are inserted into error tables for each error message.

In PeopleSoft, error messages appear on the Transaction Maintenance page for transactional type data, such as inventory adjustments and purchase order receipts. To review definitional type data, such as item master and bills of material, you can use the Data Definition page correct the erroneous information.

Once you have corrected the information and saved the page, the transaction is ready to be reprocessed.

Some transactions provide functionality to immediately validate and update application tables from subscription processes (OnNotify Handlers). For example, the Consumer and Par Location Count transactions both attempt to update the application tables, but if errors are found, the transactions write the data to the error tables so that corrections can be made.

See the product documentation for

PeopleTools: Integration Broker Service Operations Monitor

Related Links

"Four-Wall Warehousing Functions in a WMS Integration (*PeopleSoft FSCM 9.2: Supply Chain Management Integration*)"

"Understanding Component Issue Methods (*PeopleSoft FSCM 9.2: Manufacturing*)"

"Understanding the Process of Recording Completions and Scrap Using Electronic Data Collection (*PeopleSoft FSCM 9.2: Manufacturing*)"

"PeopleSoft SCM Inbound EIPs (*PeopleSoft FSCM 9.2: Supply Chain Management Integration*)"

Chapter 4

Upgrading PeopleSoft EDI Transactions From PeopleSoft 7.5 to PeopleSoft 9.0

Understanding the PeopleSoft EDI Manager Upgrade

PeopleSoft EDI Manager is a flat file-oriented tool used to import and export data between application tables and third-party systems. The publish-and-subscribe architecture of PeopleSoft Integration Broker enables more zero-latency data transmittal, direct business-to-business communication, and Extensible Markup Language (XML) adoption.

Note: Many customers use PeopleSoft EDI Manager to load legacy data or implement batch interfaces with other applications. PeopleSoft recommends that you use FLOs instead of EDI maps for this purpose. There is no direct upgrade path from the EDI map definition to the File Layout Definition (FLD). But PeopleSoft EDI Manager records can be reused in FLDs, which can be accessed through PeopleCode and PeopleSoft Application Engine. This set of topics addresses the traditional EDI processing, which involves external trading partners and standard EDI formats, such as X.12 or EDIFACT.

Comparing Key Features of PeopleSoft EDI Manager and PeopleSoft Integration Broker in PeopleTools

<i>Feature</i>	<i>PeopleSoft EDI Manager</i>	<i>PeopleTools</i>
Trading partner linkage to internal customer, supplier, bank, setup data	Yes	No.
Transaction preferences by Trading Partner ID (TPID)	Yes	Yes, by nodes, using PeopleSoft Integration Broker.
Data conversion by TPID	Yes	Yes, using PeopleSoft Integration Broker transformation features.
Action code conversion	Yes	Yes, through PSCAMA usage.
Data conversion by map	Yes	Yes, PeopleSoft Integration Broker transformation features.
Special PeopleSoft conversions (SetID, assignment, date/time, operator ID, process instance, aggregate/apportion)	Yes	You can accomplish most of these using either PeopleCode or PeopleSoft Integration Broker transformation features.
Flat file support: Structured	Yes	Yes

Feature	PeopleSoft EDI Manager	PeopleTools
Flat file support: CSV	Yes	Yes
Flat file support: XML	No	Yes
Document routing	Supports writing to different subdirectories by trading partner	<p>Using routing rules or a flat file utility. PeopleSoft EDI Manager routes data to specific trading partners by specifying to which subdirectories to write during processing. PeopleTools offers more processing options. For example, you can dispatch purchase orders to specific suppliers in the following ways:</p> <ul style="list-style-type: none"> • Direct to a web-enabled server. • Dump to a subdirectory accessible by the value-added network (VAN) operating between the trading partners. • Place in an XML file transferred to the supplier using either FTP or HTTP Connector in PeopleSoft Integration Broker. <p>In each of these cases, each transaction is self-contained within a single service operation instance (though a single instance may contain multiple transactions). Each instance becomes a single flat file on the target node when it is configured for file processing, and no index or list file is generated for outbound transactions. If an EDI transaction implementation requires both document routing and target-specific formatting, use a combination of batch publish support and application-specific formatting.</p>
Audit log	Yes	Using the Integration Broker monitor.
Supports writing to multiple files based on record types (for example, header and detail)	No	Yes, with PeopleCode and multiple service operation instances.
Supports multiple document types per file	Yes	Yes. SetFileID method within the FLO.

Note: In PeopleSoft 7.5, the EDI Manager supports the concept of a generic trading partner ID that is linked to customers, suppliers, banks, and so forth. It provides a rudimentary mapping function to link the ID to the internal customer value. Many customers prefer using translation software to map this data. Therefore, inbound data to PeopleSoft requires the actual customer or supplier ID stored within the application tables. If an invalid ID is transmitted, an error condition is reported.

Identifying PeopleSoft EDI Manager Upgrade Paths

When communicating with your trading partners, you have several options for data transportation. You can use value added networks (VANs), direct internet connections, or FTP. You must decide whether to preserve the data in XML format or transform it into a standard EDI format, such as X.12 or EDIFACT.

Note: Manual upgrade steps still exist. Modifications to most of the EDI transactions existing in PeopleSoft 7.5 and prior include additional data elements. Map these new fields within translator products as needed and notify the trading partners. Obtain any necessary adapters directly from transformation suppliers. Find the right syntax of specific service operations (headers, body, trailers, and so on) and other technical and setup specifications of PeopleSoft integrations in the Integration Services Repository (ISR) and the PeopleSoft Software Development Kit documentation.

This section discusses the following upgrade paths:

- Communicate directly with your trading partners using XML.
- Integrate PeopleSoft XML and standard EDI formats, such as X.12 or EDIFACT.
- Continue to exchange flat file information between your EDI translator or FTP system.

Related Links

The Integration Services Repository (ISR)

Communicating Directly With Your Trading Partners Using XML

Work with each trading partner who transmits data using HTTP. Partners accustomed to exchanging EDI transactions using EDI Manager flat files must adapt the PeopleSoft Integration Broker architecture. They may also need to translate between different XML formats.

Note: This path is most useful for bringing new trading partners into your eCommerce network.

Consider the following advantages when using this upgrade path:

- Batch window elimination: transmit data with near-zero latency between trading partners.
- Small- to mid-size trading partners use browser-based forms to exchange XML data directly with internal systems.
- VAN charge elimination.
- Completely internet-based, using generally available tools (for example, parsers and style sheets).

Consider the following disadvantages when using this upgrade path:

- Major impact on trading partners.
- No upgrade path from customer PeopleSoft EDI Manager transactions to XML. However, XML data elements are similar to those in EDI business document files.
- New configuration required to use PeopleSoft Integration Broker technology.

Sending Outbound XML to a Trading Partner

To send outbound XML to a trading partner:

1. If necessary, use PeopleSoft Integration Broker to build a transformation that maps the PeopleSoft XML to the trading partner's XML format.
2. Define a PeopleSoft node to represent the trading partner, and set up the PeopleSoft Integration Broker.

The specified URL points to the trading partner's web server.

3. If the trading partner uses one of the industry-standard connectors packaged with the PeopleSoft Integration Broker, configure the node to use this connector.
4. If the trading partner does not support any industry-standard connectors, build a connector to transport XML data, and register the connector on the PeopleSoft Gateway.
5. Initiate your publish functions within the PeopleSoft applications.

Receiving Inbound XML from a Trading Partner

To receive inbound XML from a trading partner:

1. If necessary, use PeopleSoft Integration Broker to build a transformation that maps the trading partner's XML to the PeopleSoft XML format.
2. Define a node within PeopleSoft to receive this data, and set up the PeopleSoft Integration Broker.
3. If the trading partner uses one of the industry-standard connectors packaged with PeopleSoft Integration Broker, configure the node to use this connector.
4. Configure the trading partner's system so that it posts to the proper connector on the PeopleSoft Gateway.
5. Begin receiving data from your trading partner.

Integrating PeopleSoft XML and Standard EDI Formats Such as X.12 EDI or EDIFACT

In this scenario, PeopleSoft exchanges EDI data utilizing PeopleSoft XML and transformations to or from industry standard EDI formats. Most EDI suppliers now support XML formats and can receive XML, translate the fields to standard EDI field formats, such as X.12 EDI or EDIFACT, and write the data to a flat file (They can also deposit the EDI transactions onto the VAN of your choice). Conversely, they can also receive inbound transactions from the VAN, map the fields to PeopleSoft XML format, and publish to the PeopleSoft Integration Broker Gateway.

Note: This is the best approach for maintaining your investment in translation software while using PeopleSoft Integration Broker architecture. It is not a strong option if your current translation software does not support XML.

Consider the following advantages when using this upgrade path:

- Batch windows reduction: data can be transmitted between PeopleSoft and the translation software with zero latency, then pooled into appropriate batches for transmission to the VAN.

- Preserves investment in EDI standards support, minimizing impact to trading partners because they receive the same basic documents as they did in PeopleSoft 7.5.
- Removes dependency on PeopleSoft EDI Manager.
- Provides a stepping stone to pure XML business-to-business architecture.
- Uses delivered PeopleSoft EDI XML transactions.

Consider the following disadvantages to using this upgrade path:

- Requires major EDI maps rewrite for the translation application or the VAN.
- Still incurs VAN charges.

Converting Existing Outbound Translation Maps to Use XML

To convert existing outbound translation maps to use XML:

1. Customize new EDI maps to convert the XML data into the customer's required format, such as X.12 or EDIFACT.
2. Define a node within PeopleSoft to represent the trading partner, and setup the PeopleSoft Integration Broker.

The specified URL points to the trading partner's web server.

3. If the translator uses one of the industry-standard connectors packaged with PeopleSoft Integration Broker, configure the node to use this connector.
4. If the trading partner does not support any industry-standard connectors, build a connector to transport XML data, and register the connector on the PeopleSoft Gateway.
5. Initiate your publish functions within the PeopleSoft applications.

Converting Existing Inbound Translation Maps to Use XML

To convert existing inbound translation maps to use XML:

1. Customize new EDI maps to convert the customer format to XML data.
2. Define a node within PeopleSoft to receive this data, set up the PeopleSoft Integration Broker.
3. If the translator uses one of the industry-standard connectors packaged with PeopleSoft Integration Broker, configure the node to use this connector.
4. If the trading partner does not support any industry-standard connectors, build a connector to transport XML data, and register the connector on the PeopleSoft Gateway.
5. Configure the trading partner's system so that it posts to the proper connector on the PeopleSoft Gateway.
6. Begin receiving data from your trading partner.

Exchanging Flat File Information Between Your EDI Translator or FTP System

This section discusses setup steps and specific field deltas that occur when translating between PeopleSoft Integration Broker and FLOs.

For outbound transactions, configure the batch publish utility to generate a flat file. Service Operations supporting outbound EDI integration have a file layout definition set up to work with their associated batch publish rules. The flat file is deposited into a subdirectory accessible by the translation software. Most EDI transformation software sweep subdirectories looking for available transaction files. The format of these files closely matches previous PeopleSoft EDI Manager files, minimizing the changes in the process of mapping to the format.

For inbound transactions, you can load data into PeopleSoft using the Inbound File Publish utility. This utility reads a flat file that mimics PeopleSoft EDI Manager format, then publishes it to the PeopleSoft Integration Broker as XML data for inbound processing. Service Operations supporting EDI integration have a file layout definition and file rules already set up. The files generated in this manner follow the same rules as XML, with these exceptions:

- A flat file has the same field sequence as the XML, but every field in the XML has a tag.
- Fields in the flat file do not have a tag, as each field instead has a fixed position in each row within the file.
- Row IDs.

ECFILEROWIDs from EDI maps still exist. These typically follow a pattern, though the pattern may differ from EDI transaction to EDI transaction. The ECFILEROWID is the first field for every record in the definition. The convention is as follows:

```
Level1  000
Level1  100
Level2  200
etc.
```

- Audit action.

The AUDIT_ACTN field is defined on each record in the FLD. The file utilities copy this field between the record and the appropriate PSCAMA on a level-by-level basis. This field is defined as the second field for every record in the FLD. A blank audit action represents a record that did not have any changes to it; this record is included to preserve parent/child relationships. Thus, a lower level record may contain the changed data.

- A "control record" that determines the format of the file's layout exists at the top of each PeopleSoft EDI Manager flat file.

This control record is commonly referred to as the "999" or "998" record. The 999 record specifies the trading partner identifiers related to the document's sender and receiver. These IDs resolve to a specific map format using a database query in PeopleSoft EDI Manager. The 998 record specifies the actual map name and transaction ID.

The new FLO also supports control records. PeopleSoft Application Designer specifies the format of the record, which then instructs the file object processor how to interpret the record data. The convention used for PeopleTools 9 EDI transactions becomes the 998 record.

The following is the record specification:

```
AAAAAAAAAABBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
```

AAAAAAAAAA is the 10-character file layout ID. This is the 998 record.

BBBBB... is the file layout ID name of up to 30 characters.

Note: Two EDI transactions continue to use PeopleSoft EDI Manager in PeopleSoft 9.0: Accounts Payable Voucher (inbound) and Payment (outbound).

Consider the following advantages when using this upgrade path:

- Maintains more legacy investment than other options.
- Minimizes impact to trading partners because standard EDI formats are still transmitted to the partner.
- Requires no additional investment in XML-based software.

Consider the following disadvantages when using this upgrade path:

- Maintains batch processing.
- Reduced performance due to multiple passes through the data (translator, file utility, and Integration Broker).
- Maintains reliance on old PeopleSoft EDI Manager file formats.
- Does not provide direct trading partner communication.
- Still incurs VAN charges.

By providing flat file variations for each of the supported EDI transactions, PeopleSoft 9.0 supports an upgrade path for EDI translator products. The partner products certified for PeopleSoft 7.5 and earlier on PeopleSoft EDI Manager migrate easily to support the new file layout objects. Most transactions retain the basic structure and contain relatively minor field changes.

In turn, the EDI translation software remaps the new versions of these transactions to standard EDI formats and further reduces any deltas. For example, if PeopleSoft has added a new field to a file for an invoice deemed irrelevant for the implementation, the translator can mask the field. Hence, the standard EDI format is generated in the same manner as prior releases.

Converting Standard EDI Flat File Outbound Transactions into PeopleSoft Business Document Flat File Format

To convert standard EDI flat file outbound transactions into PeopleSoft business document flat file format:

1. Modify existing maps making changes for row IDs, audit actions, control records, and any layout changes made in the latest versions.

2. With standard delivered PeopleSoft service operations, update the appropriate batch publish rule to create a flat file, instead of XML.
3. Activate the appropriate service operations.
4. Initiate publish functions within your PeopleSoft applications.

Converting Standard EDI Flat File Inbound Transactions into PeopleSoft Business Document Flat File Format

To convert standard EDI flat file inbound transactions into PeopleSoft business document flat file format:

1. Modify existing maps making changes for row IDs, audit actions, control records, and any layout changes made in the latest versions.
2. Create a file rule to determine the directory that will receive the inbound transaction data, or update an existing file rule that is already associated with the message being transmitted with the destination of the subdirectory.
3. Set up the PeopleSoft Integration Broker.
4. Begin receiving data from your trading partner.

Reviewing the File Layout Definition Properties Dialog Box

The following is an example of a File Layout Definition Properties dialog box. The layout type is fixed, as it was with PeopleSoft EDI Manager.

Image: File Layout Definition Properties dialog box

This example illustrates the fields and controls on the File Layout Definition Properties dialog box. You can find definitions for the fields and controls later on this page.

The screenshot shows a Windows-style dialog box titled "File Layout Definition Properties". It has two tabs: "General" and "Use". The "General" tab is selected. Inside the dialog, there are several labeled fields: "File Layout Name" is set to "PO_REQUEST_FOR_QUO"; "File Layout Type" is set to "FIXED"; "File Layout Format" is a dropdown menu currently showing "FIXED"; "Definition Qualifier" is an empty text box; "Definition Delimiter" is a dropdown menu showing "Comma"; "File Definition Tag" is an empty text box; and "Buffer Size" is a text box containing the number "0". At the bottom right of the dialog are "OK" and "Cancel" buttons.

The EDI transaction's data record structure appears as follows:

```
XXXYYAAABBBBB
```

where:

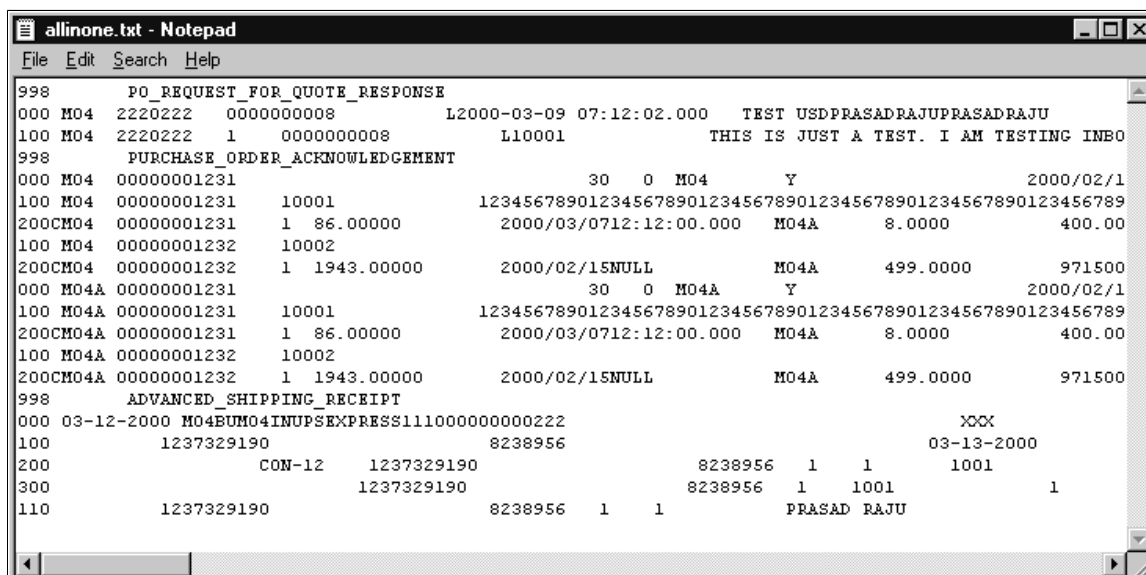
- XXX is the three-character ECFILEROWID.
- Y is the one-character AUDIT_ACTN flag.
- AAABBBBB.... are the fields.

Reviewing File Definitions

The following figure shows a sample file containing three distinct file definitions.

Image: Sample file with distinct file definitions

This example illustrates the fields and controls on the Sample file with distinct file definitions. You can find definitions for the fields and controls later on this page.



For this file definition example, consider the following:

- The PO_REQUEST_FOR_QUOTE_RESPONSE control record has a single transaction.
- The PURCHASE_ORDER_ACKNOWLEDGEMENT record has two transactions.
- The ADVANCED_SHIPPING_RECEIPT has a single transaction.

Reviewing Impacted Fields

Some message definition control fields are discarded during file processing.

PeopleSoft Integration Broker definitions contain record definitions that reuse or point to a record previously defined in PeopleSoft Application Designer. File Layout Designer, however, creates a copy of the record in a new file layout definition and enables you to add additional fields to each record definition. The File Layout Designer record and the original record definition become separated and do not share attributes.

PeopleSoft Integration Broker also implements a control record of its own, called the PeopleSoft Common Application Message Attributes record (PSCAMA). The PSCAMA contains attributes that specify what language code, process instance, message sequence, and audit action is used. The PSCAMA acts as a sibling record to every regular record in the message definition. One primary use of the PSCAMA is to determine whether a particular record of data has been updated, inserted, or deleted (the AUDIT_ACTN field).

Note: The file layout definition does not require a PSCAMA record.

Understanding the Differences Between PeopleSoft 7.5 Flat File EDI Processes and PeopleSoft 9.0 Flat File EDI Processes

There are significant differences between the method you use to process EDI transactions in PeopleSoft 7.5 and the method you use to process in EDI transactions in PeopleSoft 9.0. In PeopleSoft 7.5, you use the EDI Manager to process EDI transactions. In PeopleSoft 9.0, you use the PeopleSoft Integration Broker to process EDI transactions.

The PeopleSoft EDI Manager is a flat file-oriented tool used to import and export data between application tables and third-party systems. PeopleSoft Integration Broker offers a more automated, timely, and efficient way to send data across systems than was previously available. The publish and subscribe architecture of PeopleSoft Integration Broker technologies enables more zero-latency data transmittal, direct business-to-business communication, and Extensible Markup Language (XML) adoption.

In PeopleSoft 9.0, you maintain the ability to process EDI transactions using flat files. This flexibility enables you to transition to the publish and subscribe technology as business requirements and trading partner relationships demand this functionality.

This section provides overviews of:

- The inbound process using flat files in PeopleSoft 7.5 and 9.0.
- The outbound process using flat files in PeopleSoft 7.5 and 9.0.

Note: You can process EDI transactions using multiple methods from a source trading partner to a destination trading partner. This section describes a basic EDI transaction process flow for PeopleSoft 7.5 and PeopleSoft 9.0. There can be many variations on this theme.

Understanding the Inbound Process Using Flat Files in PeopleSoft 7.5 and PeopleSoft 9.0

This section provides overviews of:

- PeopleSoft 7.5 inbound process using flat files.
- PeopleSoft 9.0 inbound process using flat files in the PeopleSoft format.
- PeopleSoft 9.0 inbound process using flat files in X.12 EDI format.

Processing PeopleSoft 7.5 Inbound Flat File EDI Transaction Processes

Image: PeopleSoft 7.5 Inbound Flat File EDI Transaction Process (1 of 2)

The following diagrams 1 and 2 illustrate the PeopleSoft 7.5 inbound flat file EDI transaction process. Diagram 1:

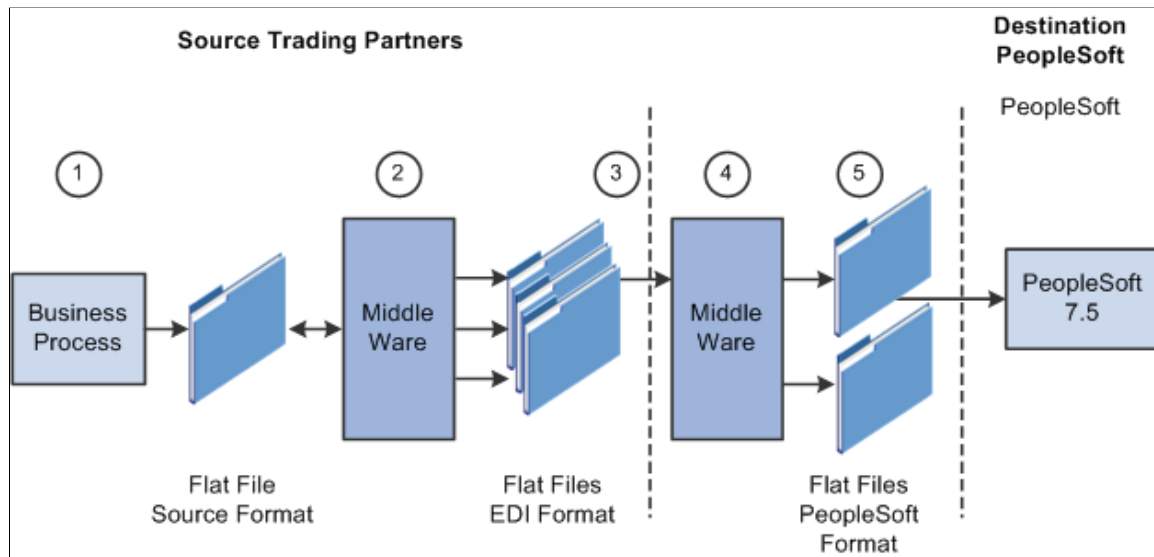
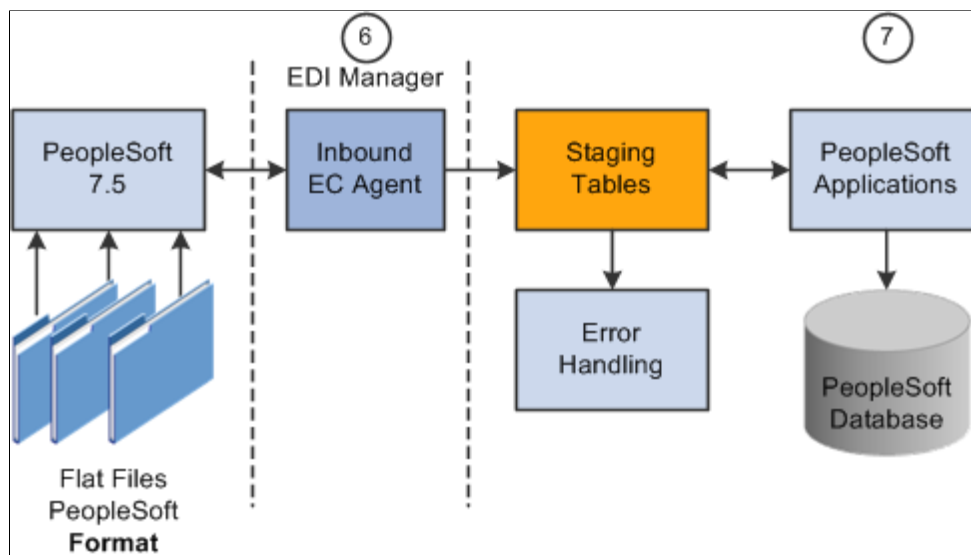


Image: PeopleSoft 7.5 Inbound Flat File EDI Transaction Process (2 of 2)

Diagram 2:



To process inbound flat file EDI transaction in PeopleSoft 7.5:

1. The source trading partner initiates a process that generates a flat file containing EDI transactions in the sources format.
2. The file is passed to a middleware translation tool that generates an outbound file in the appropriate EDI format (X.12, EDIFACT and so on).

Depending on the relationship with various trading partners' data mapping, transformations may occur at this point to meet trading partner-specific mapping requirements. The formatted file is then sent

on to the source trading partner's VAN—a private network used for exchanging EDI transactions. However, networks can also be the Internet, a dedicated link, or a sole-source provider.

3. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.
4. The source trading partner and destination trading partner can use the same VAN.
5. The destination trading partner receives the flat file from the VAN.

A middleware tool is used to convert the source file into the appropriate PeopleSoft Business Document file format. This process includes a conversion from the source's EDI format (X.12, EDIFACT and so on). Additional translation requirements may be required if the source trading partner is sending a generic file that does not meet the destination trading partner's data requirements.

6. The destination trading partner performs the Inbound EC Agent process (EDI Manager) in PeopleSoft to load the transactions into staging tables.

The Inbound EC Agent process inputs the electronic data flat file, translates the data using the PeopleSoft Business Document layout, and stages the data into the staging tables.

7. PeopleSoft applications initiate processes that read the transactions from the staging tables, perform validations, and load the data to the actual PeopleSoft application database tables.

If errors are found in the transactions, use error handling to fix the errors and resubmit the transactions.

Note: The mapping functions (mapping to and from the standard EDI formats) may be done at the source trading partner's site, the source or destinations VAN, or at the destination trading partner's site, depending on the relationship established with the trading partners and the VANs.

Processing PeopleSoft 9.0 Inbound Flat File EDI Transaction Processes in the PeopleSoft Format

A flat file that uses the PeopleSoft format can be generated by a third-party system in this PeopleSoft format or generated by a third-party system and then converted to the PeopleSoft format by a middleware product. A flat file could also come from another PeopleSoft system. The PeopleSoft inbound file publish utility converts the data from a flat file to an XML file using the PeopleSoft format. The inbound data is

then placed in the message queue, checked for errors, and then moved to the inbound staging tables to be processed by the individual PeopleSoft application.

Image: Inbound flat file EDI transaction process for PeopleSoft 9.0 using the PeopleSoft format (1 of 2)

The following diagrams 1 and 2 illustrate the PeopleSoft 9.0 inbound flat file EDI transaction process using the PeopleSoft format. Diagram 1:

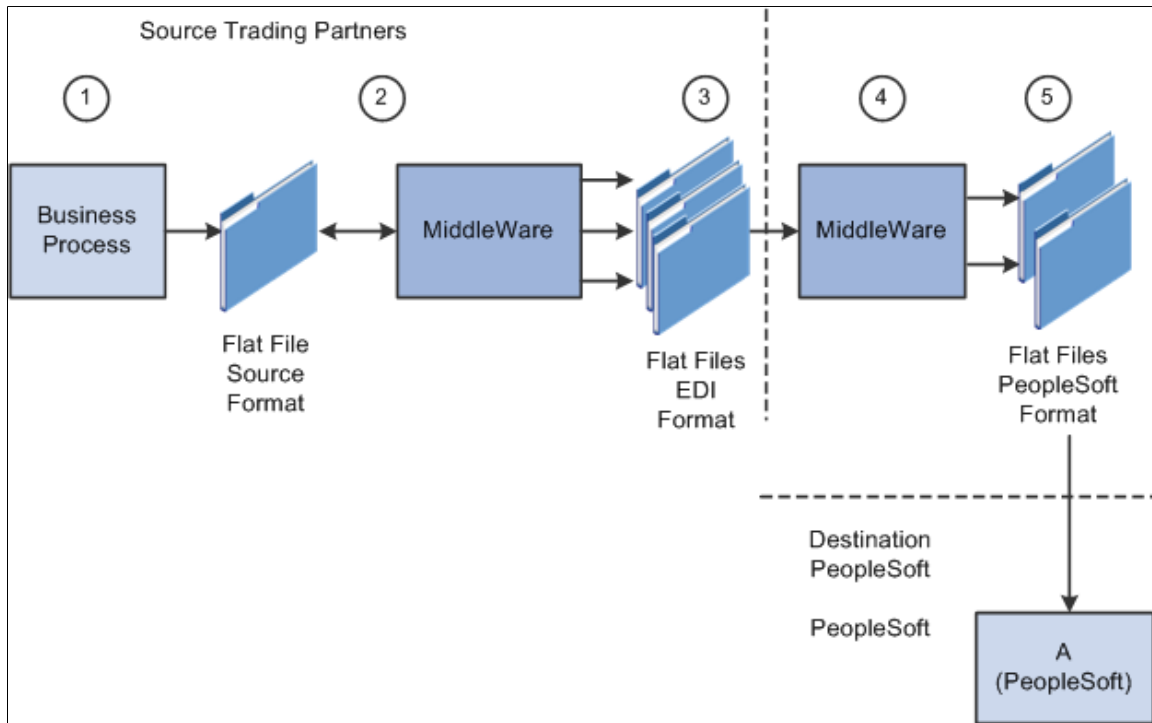
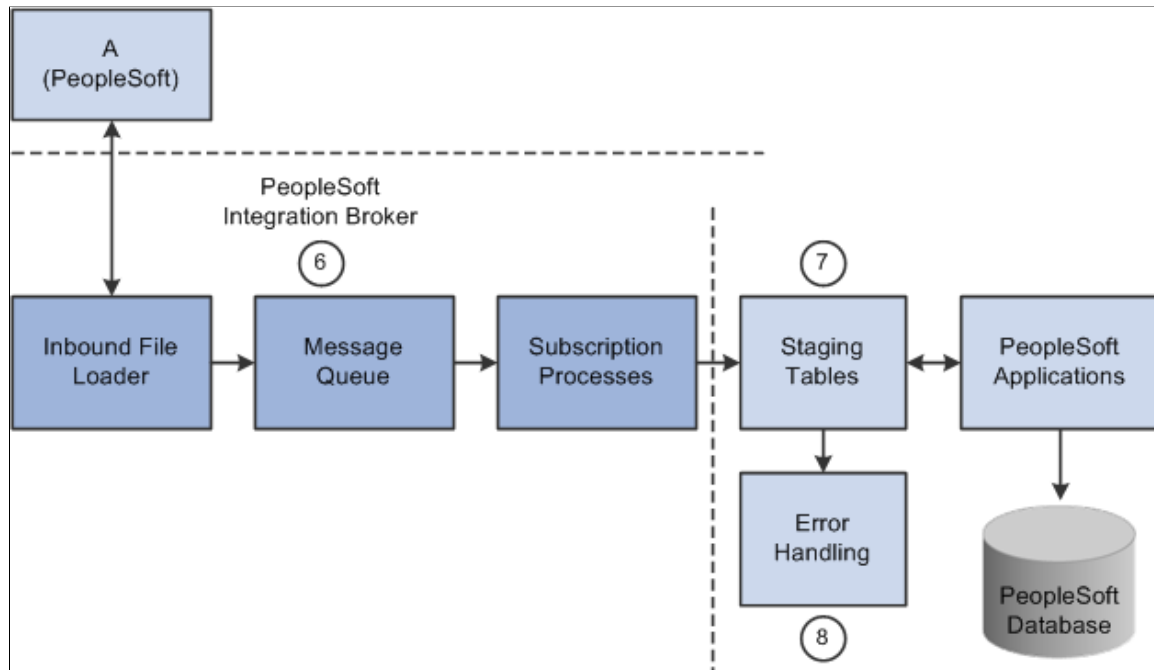


Image: Inbound flat file EDI transaction process for PeopleSoft 9.0 using the PeopleSoft format (2 of 2)

Diagram 2:



To process PeopleSoft 9.0 inbound flat file EDI transactions in the PeopleSoft format:

1. The source trading partner initiates a process that generates a flat file containing EDI transactions in the sources format.
2. The file is passed to a middleware translation tool that generates an outbound file in the appropriate EDI format (X.12, EDIFACT and so on).

Depending on the relationship with various trading partners' data mapping, transformations may occur at this point to meet trading partner-specific mapping requirements. The formatted file is then sent on to the source trading partner's VAN—a private network used for exchanging EDI transactions. However, networks can also be the Internet, a dedicated link, or a sole-source provider.

3. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.

The source trading partner and destination trading partner can use the same VAN.

4. The destination trading partner receives the flat file from the VAN.

A middleware tool is used to convert the source file into the appropriate PeopleSoft Business Document file format. This process includes a conversion from the sources EDI format (X.12, EDIFACT and so on). Additional translation requirements may be required if the source trading partner is sending a generic file that does not meet the destination trading partner's data requirements.

5. The destination trading partner performs the Inbound File Publish process that changes the flat file transactions to XML and then writes them to a message queue.

The Inbound File Publish process inputs the electronic data flat file, translates the data using the PeopleSoft File Layout Definition and rules, and then publishes the data to the PeopleSoft Integration Broker as XML transactions.

6. PeopleSoft Integration Broker subscription processes (OnNotify Handlers) are automatically executed that retrieve the data from the message queue and write it to stage tables.
7. PeopleSoft applications then read the transactions from the staging tables, perform validations, and load the data to the actual PeopleSoft application database.
8. If any errors are found in the transactions, use error handling to fix the errors and to resubmit the transactions.

Processing PeopleSoft 9.0 Inbound Flat File EDI Transaction Processes in X.12 EDI Format

An inbound flat file can be generated by a third-party system in this X.12 EDI flat file format or generated by a third-party system and then converted to the X.12 EDI flat file format by a middleware product. An EDI flat file could also come from another PeopleSoft system. Once received by your PeopleSoft system, the PeopleSoft Integration Broker uses transforms to convert the data from an X.12 EDI flat file format to the PeopleSoft format. The inbound PeopleSoft-formatted XML data is then placed in the message

queue, checked for errors, and then moved to the inbound staging tables to be processed by the individual PeopleSoft application.

Image: Inbound flat file EDI transaction process for PeopleSoft 9.0 using X.12 EDI format (1 of 2)

The following diagrams 1 and 2 illustrate the PeopleSoft 9.0 inbound flat file EDI transaction process using the X.12 EDI format. Diagram 1:

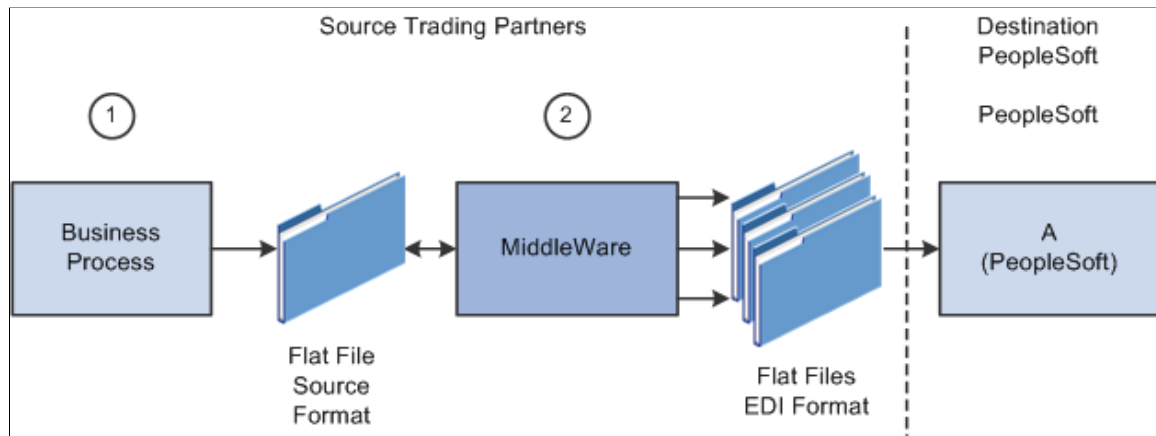
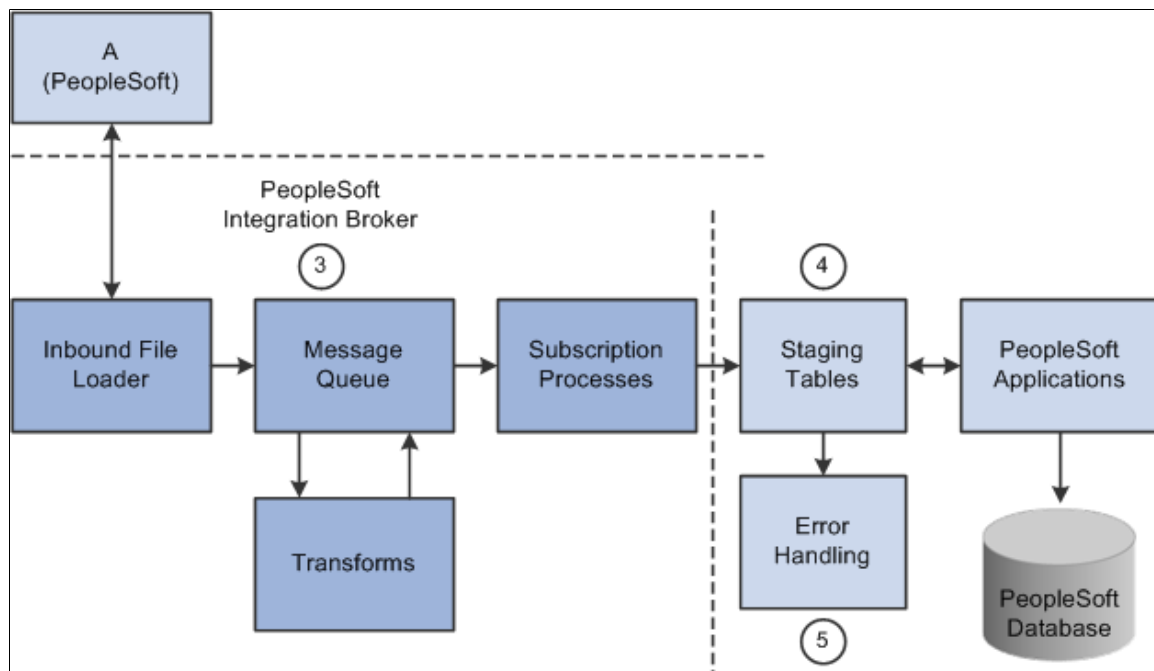


Image: Inbound flat file EDI transaction process for PeopleSoft 9.0 using X.12 EDI format (2 of 2)

Diagram 2:



To process PeopleSoft 9.0 inbound flat file EDI transactions in X.12 EDI format:

1. The source trading partner initiates a process that generates a flat file containing EDI transactions in the sources format.
2. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.

The source trading partner and destination trading partner can use the same VAN.

3. The destination trading partner performs the Inbound File Loader process which changes the X.12 EDI formatted flat file to an X.12 EDI formatted XML transaction and publishes it to the Integration Broker. A pre-defined file layout definition is used by the Inbound File Loader when generating the X.12 EDI XML transaction. The Integration Broker, using pre-defined transform routines then generates an XML transaction in PeopleSoft's format.

Pre-defined file layout definitions and Transformation examples are provided for the inbound 840 (Sales Quote Load) and 850 (Sales Order Load) X.12 EDI formats.

Note: These examples require customizations for individual trading partner requirements. Other inbound X.12 EDI transactions can be supported by creating transforms using the same concepts provided in the example transform programs.

4. PeopleSoft Integration Broker subscription processes (OnNotify Handlers) are automatically executed that retrieve the data from the message queue and writes the data to stage tables.
5. If any errors are found in the transactions, use error handling to fix the errors and to resubmit the transactions.

Understanding the Outbound Process Using Flat Files in PeopleSoft 7.5 and PeopleSoft 9.0

This section provides overviews of:

- PeopleSoft 7.5 outbound process using flat files.
- PeopleSoft 9.0 outbound process using flat files in the PeopleSoft format.
- PeopleSoft 9.0 outbound process using flat files in X.12 EDI format.

Processing PeopleSoft 7.5 Outbound Flat File EDI Transaction Processes

Image: PeopleSoft 7.5 Outbound Flat File EDI Transaction Process (1 of 2)

The following diagrams 1 and 2 illustrate the PeopleSoft 7.5 outbound flat file EDI transaction process. Diagram 1:

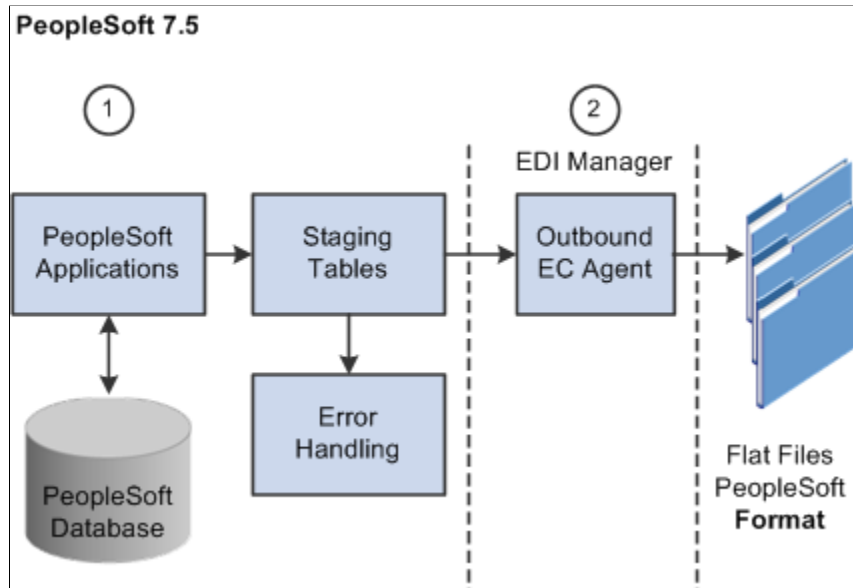
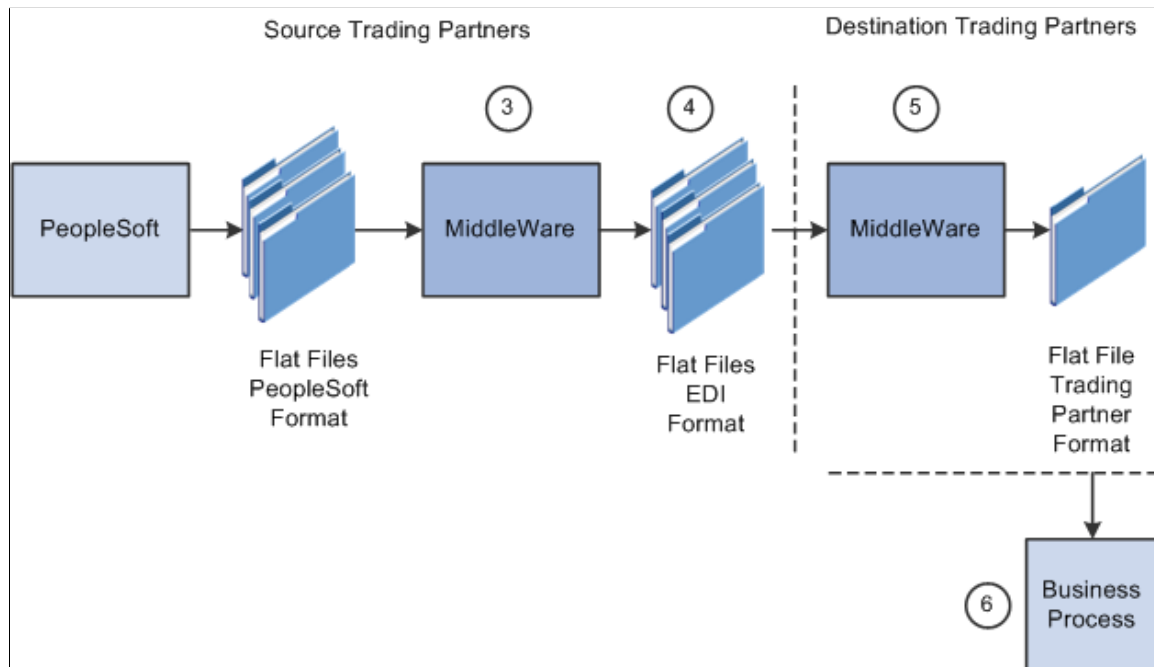


Image: PeopleSoft 7.5 Outbound flat file EDI transaction process (2 of 2)

Diagram 2:



To process PeopleSoft 7.5 outbound flat file EDI transaction processes :

1. The source trading partner initiates a PeopleSoft application process that retrieves the transactional data from the PeopleSoft application database tables and loads the EDI transactions into PeopleSoft staging tables, or prepares the data so it can be picked up by the EDI Manager process.

2. The source trading partner performs the Outbound EC Agent process (EDI Manager) in PeopleSoft to read the EDI transactions from the staging tables and generate a flat file.
3. The Outbound EC Agent process reads the staging tables, translates the data using the PeopleSoft Business Document layout, and generates a flat file.

The file is passed to a middleware translation tool that generates an outbound file in the appropriate EDI format (X.12, EDIFACT and so on). Depending on the trading partner relationship, data mapping transformations may occur at this point to meet a trading partner's specific mapping requirements. The formatted file is then sent on to the source trading partner's VAN.

4. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.
5. The destination trading partner receives the flat file from the VAN.

A middleware tool is used to convert the source file into the format required for the destination trading partner's business application software.

6. The destination trading partner loads the flat file into their business application system.

Processing PeopleSoft 9.0 Outbound Flat File EDI Transaction Processes in the PeopleSoft Format

PeopleSoft can generate a PeopleSoft-formatted flat file. This flat file can be received by a third-party system or processed by a middleware product and then received by a third-party system.

Image: Outbound flat file EDI transaction processing PeopleSoft 9.0 using the PeopleSoft format (1 of 2)

The following diagrams 1 and 2 illustrate the PeopleSoft 9.0 outbound flat file EDI transaction process using the PeopleSoft format. Diagram 1:

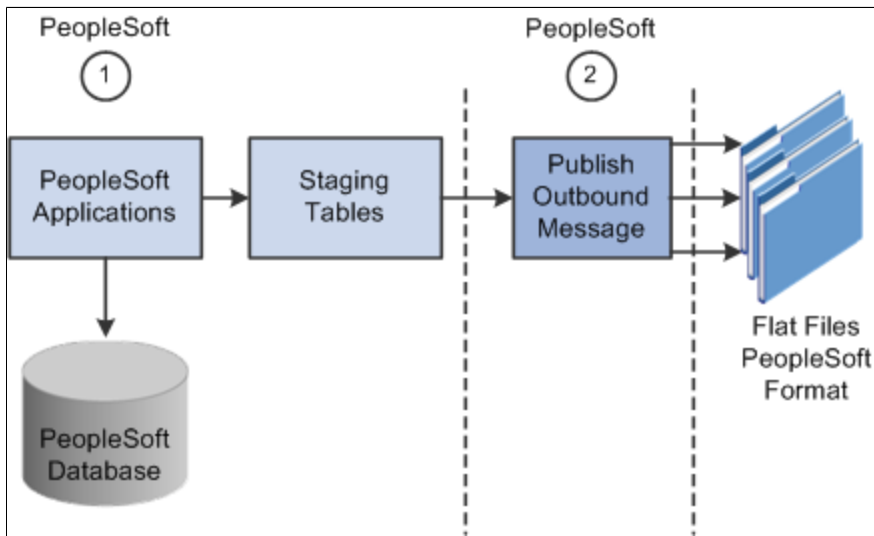
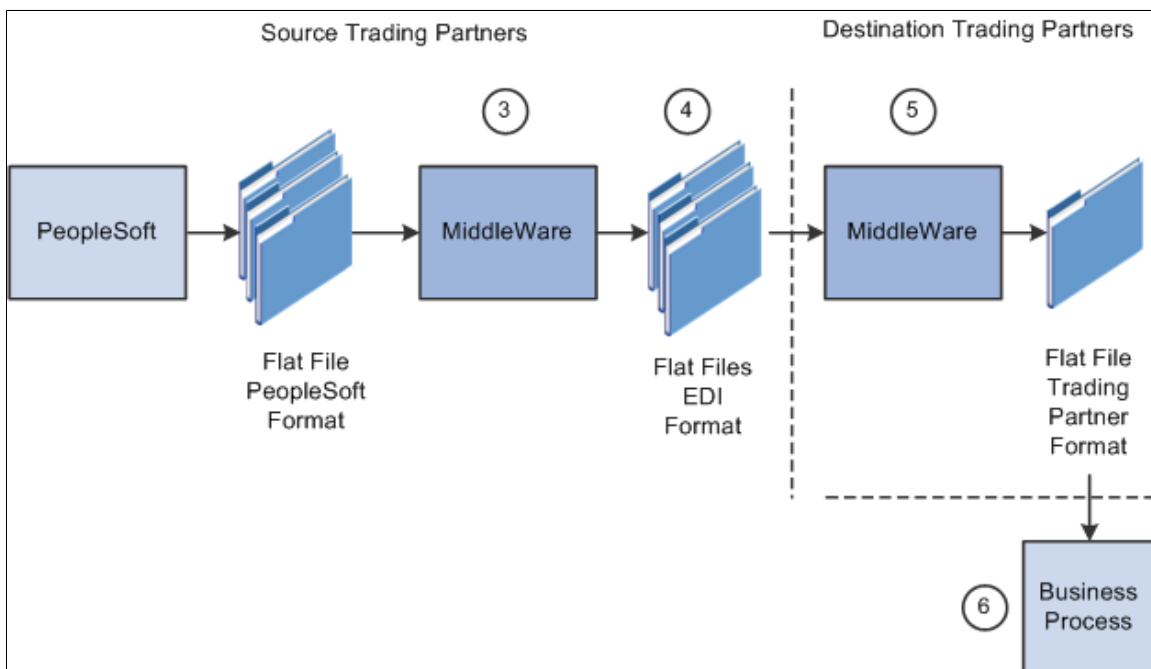


Image: Outbound flat file EDI transaction process for PeopleSoft 9.0 using the PeopleSoft format (2 of 2)

Diagram 2:



To process PeopleSoft 9.0 outbound flat file EDI transactions in the PeopleSoft format:

1. The source trading partner initiates a PeopleSoft application process that retrieves the transactional data from the PeopleSoft application database tables and loads those EDI transactions into PeopleSoft staging tables, or prepares the data so it can be picked up by the Publish Outbound Message process.
2. The source trading partner performs the Publish Outbound Message process that retrieves the transactions from the staging tables or application tables and creates a flat file.

The Outbound File Publish process reads the staging tables, translates the data using the PeopleSoft File Layout Definition and rules, and generates a flat file. The flat file is then sent to the VAN.

3. The file is passed to a middleware translation tool that generates an outbound file in the appropriate EDI format (X.12 EDI, EDIFACT and so on).
4. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.
5. The destination trading partner receives the flat file from the VAN.

A middleware tool is used to convert the source file into the format required for the destination trading partner's business application software.

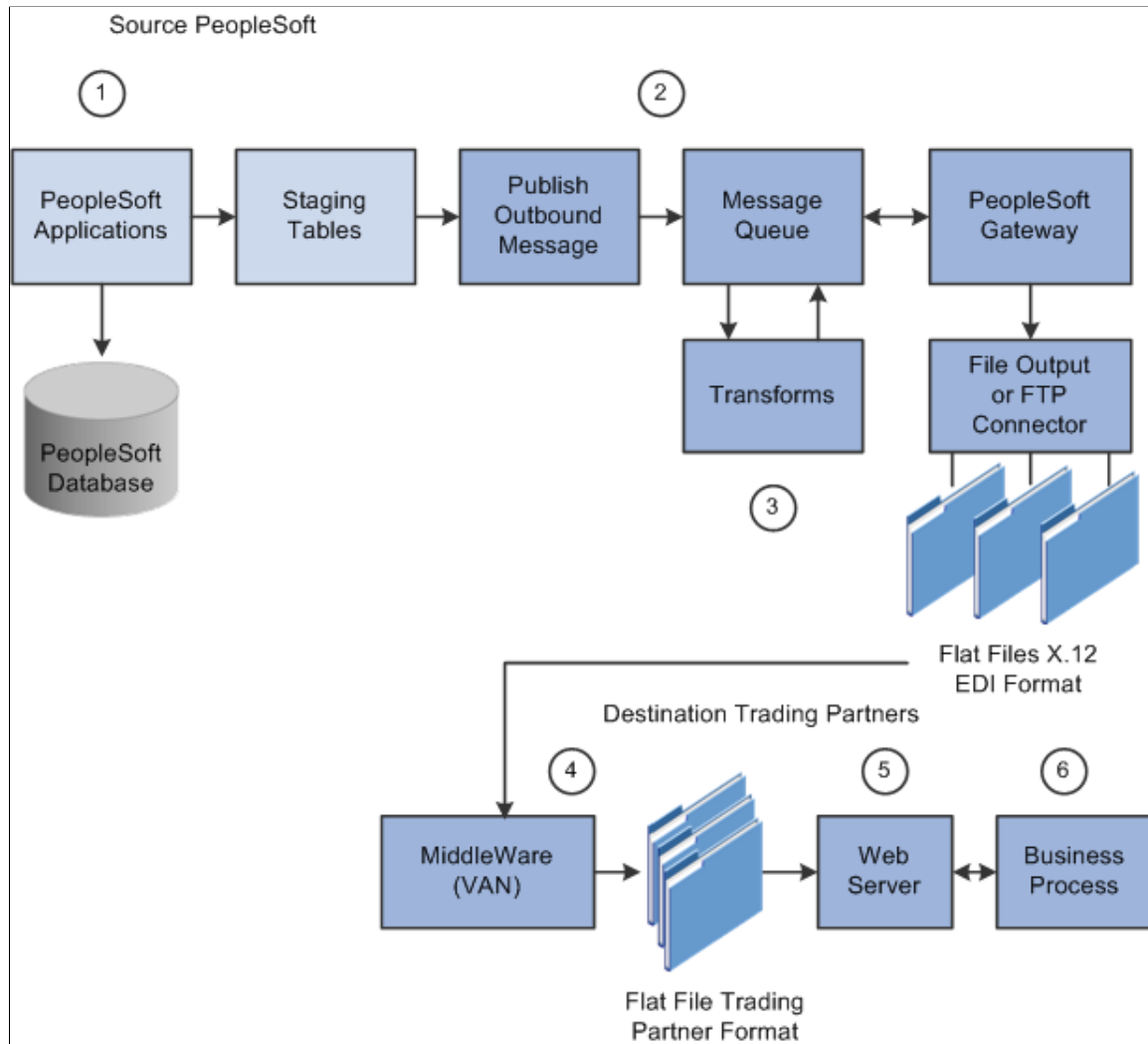
6. The destination trading partner loads the flat file into its business application system.

Processing PeopleSoft 9.0 Outbound Flat File EDI Transaction Processes in X.12 EDI Format

PeopleSoft can generate a X.12 EDI formatted flat file.

Image: Outbound flat file EDI transaction processing PeopleSoft 9.0 using X.12 EDI format

The following diagrams illustrate the PeopleSoft 9.0 outbound flat file EDI transaction process using the X.12 EDI format.



To process PeopleSoft 9.0 outbound flat file EDI transactions in X.12 EDI format:

1. The source trading partner initiates a PeopleSoft application process that retrieves the transactional data from the PeopleSoft application database tables and loads those EDI transactions into PeopleSoft staging tables, or prepares the data so it can be picked up by the Publish Outbound Message process.
2. The source-trading partner performs the Publish Outbound Message process that reads the staging tables or application tables, and publishes the data as XML to the Integration Broker, based on the options set in the batch publish rules (XML options).
3. The Integration Broker then transforms the data as specified on the active routings for the service operation and delivers the transformed data using the connector designated on the routing or node.

For X.12 EDI data, this connector will often write a file to a directory or FTP server, but could be sent directly to a trading partner's gateway.

Transformation examples are provided for the outbound 810 (Billing Invoice), 845 (Sales Quote Notice), 855 (Sales Order Acknowledgement), and the 856 (Advanced Shipping Notice).

Note: These examples require customizations for individual trading partner requirements. Other outbound X.12 EDI transactions can be supported by creating transforms using the same concepts provided in the example transform programs.

4. The source trading partner's VAN distributes the flat file to the destination trading partner's VAN.
5. The destination trading partner receives the flat file from the VAN. A middleware tool is used to convert the source file into the format required for the destination trading partner's business application software.
6. The destination trading partner loads the flat file into its business application system.

Obtaining File Layouts

To obtain the file layout definitions for EDI transactions, view and print the file layouts directly from the PeopleSoft Application Designer.

This section provides an overview for obtaining file layouts, and discusses how to print a file layout for an EDI transaction.

Understanding File Layouts

The File Layout Definition report contains information necessary to assist you with your flat file EDI transaction processing. The report includes all fields in the file layout, the sequence of the fields, the type of field (character and number), the length of the fields, and the starting position of the fields.

Image: File Layout Definition report for the Advanced Shipping Notice EDI transaction generated in the PeopleSoft Application Designer (1 of 2).

The following diagrams 1 and 2 illustrate two examples of a file layout definition report generated for the Advanced Shipping Notice EDI transaction. Diagram 1:

Run Date : 06 May 2002 : 02:23 PM		Database : MG900D\VL PeopleSoft File Layout Definition FileLayout Definition Name : ADVANCED_SHIPPING_NOTICE				Page: 1 of 20	
Definition Name	Format	Definition ID	ID Start Pos	ID Length	File Name	Description	
ADVANCED_SHIPPING_NOTICE	0		0	0		OutboundFile Layout	
Record Name	Max Length	Record ID	ID Start Pos	ID Length	Offset	Description	
IN ASN SHIP HDR	646	000	1	3	0		
Field Name	Seq No	Yes	Field Type	Decimal Pos	Date Format	Date Separator	Field Length
ECFILEROVMD	1	Yes	Character				3
AUDIT_ACTN	2	Yes	Character				1
EIP_CTL_ID	3	Yes	Character				25
BUSINESS_UNIT	4	Yes	Character				5
SHIP_ID	5	Yes	Character				10
BILL_OF_LADING	6	Yes	Character				30
SETID	7	Yes	Character				5
CUST_ID	8	Yes	Character				15
SHIP_TO_CUST_ID	9	Yes	Character				15
ADDRESS_SEQ_NUM	10	Yes	Number	0			3
CARRIER_ID	11	Yes	Character				10
SHIP_TYPE_ID	12	Yes	Character				10
CUST_NAME	13	Yes	Character				40

Image: File Layout Definition report for the Advanced Shipping Notice EDI transaction generated in the PeopleSoft Application Designer (2 of 2).

Diagram 2:

Run Date : 06 May 2002 : 02:26 PM

Database : MG900D\VL
PeopleSoft File Layout Definition
FileLayout Definition Name : ADVANCED_SHIPPING_NOTICE

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Start Pos	Offset	Inherit Record	Inherit Field	Default Value	Description
1	0			000	
4	0				
5	0				
30	0				
35	0				
45	0				
75	0				
80	0				
95	0				
110	0				
113	0				
123	0				
133	0				
173	0				

Printing the File Layout for an EDI Transaction

To print the file layout for an EDI transaction:

1. Open an instance of the Application Designer.

2. Select File, Open.

The Open Definition dialog box appears.

3. In the Definition drop down menu, Select File Layout, enter the EDI transaction name in the Name field, and click Open.

The file layout definition you specified opens.

4. With the file layout definition open, select File, Print Preview.

The File Layout Definition Report appears for the file layout specified. Scroll through the report to view the complete file layout definition online.

5. In print preview mode, click the Print button.

The File Layout Definition Report is routed and printed at the printer you select.

Locating Additional Electronic Data Interchange Documentation

Locating EDI Documentation in the Integration Services Repository (ISR)

The ISR is an online compendium of all EIPs delivered with PeopleSoft, listed from A to Z. It includes EIPs constructed by applications in the PeopleSoft product lines of Financials, Supply Chain Management, Human Resources Management, Customer Relationship Management, and Enterprise Performance Management.

The ISR works in conjunction with the PeopleSoft PeopleTools and Enterprise application documentation to help users and implementation specialists fully explore PeopleSoft integration. It's useful to developers who want to understand the technical structure of an EIP, as well as what technologies and design patterns the EIP uses. The ISR also assists trading partners in determining if a relevant EIP has been developed and is readily available.

Chapter 6

Reviewing Common Questions and Answers

Reviewing Frequently Asked Questions

<i>Question</i>	<i>Answer</i>
Do we need to setup the Web Server Integration gateway for EDI transactions when working with flat files?	Because all inbound EDI flat files are converted to XML and published to the local node, you must set up the Integration Gateway on your web server, in addition to setting up the publication and subscription services on your application server.
Do we need OnRoute handlers when we set up an Operation?	If you are using the chunking features of the Batch Publish utility for outbound integrations, you may want to use an OnRoute Handler to direct different chunks of data to different trading partners. If you are integrating to a single trading partner then you will probably not have a need for this Handler.
On the Routing Definition, do we need to specify a transform?	Most likely you will not need a transform unless you have done your own customizations. Integrations with a service operation version other than the default require a transform to or from the default version. Additionally, in a few of the integrations, transforms are used to convert the default service operation version to or from industry standard formats such as xubl, cxml, or X.12 EDI.
Do we need to set up a location for nodes other than the local node? If so, what should this address be?	If integrating to or from external sources, use the http target connector and enter the URL of the external source in the connector properties. If integrating to another PeopleSoft database, use the PeopleSoft target connector and configure the selected gateway to point to an application server running pub/sub services on the target database.
What is the difference between using the SimpleFileTargetConnector on the gateway or using the Batch Publish Rule's Output Format of "Flat File"?	<p>When using the SimpleFileTargetConnector in integration broker the gateway creates a file in the directory assigned to the node.</p> <p>When using the Flat File option on the batch publish rule, a service operation instance is never published. Instead, the Batch Publish utility generates a flat file in the format designated by the File Layout Definition named the same as the message. The file is placed in the default directory on the process scheduler server running the Outbound File Publish program.</p>

Question	Answer
When generating EDI output files, are the flat files produced from the SimpleFileTargetConnector and the Batch Publish Utility formatted the same?	The delivered routings for outbound EDI 810, 845, 855, and 856 transactions include two transformations on them. The first transforms to XML into the X.12 format, and the second into the native X.12 flat file format. If the second transform is removed from the routing, the output file will contain the X.12 formatted XML. If both transforms are removed from the routing, the output file will contain the PeopleSoft formatted XML. When using the Flat File option on the batch publish rule, the Batch Publish utility generates a flat file in the format designated by the File Layout Definition named the same as the message.
Can I have the files written to a FTP server instead of a directory specified in the properties of the SimpleFileTargetConnector?	Yes, by configuring the FtpTargetConnector on the node definition instead of the SimpleFileTargetConnector.
Are there any examples of how message chunking is used?	<p>Remember that chunking is only needed if you have requirements to break messages up by trading partner. If you are using a middleware product to actually determine trading partner destinations, a single message with all trading partner transactions can usually be sent directly to the middleware product.</p> <p>For an example of how to use Chunking look at the batch publish rules for the ADVANCED_SHIPPING_NOTICE Message. These batch publish rules were provided as examples to show the power of message chunking.</p> <p>In this example, the ADVANCED_SHIPPING_NOTICE rule is the standard rule used without chunking. If you want to chunk by Business Unit just attach the Business Unit chunk rule to the batch publish rule. You would also have to populate the Business Unit to node values in the chunk table and activate the OnRoute Handler on the Service Operation (For more information on Chunking see Introducing Chunking in the PeopleSoft Supply Chain Management Integration documentation; For more information on how to use the Advanced Shipping Notice chunk rules see the Data Rule section of the EIP Catalog for the Advanced Shipping Notice).</p> <p>If you want to chunk by Ship To Customer then activate the ASN_SETID_SHIPTO batch publish rule. In this case you also need to populate the customer chunk rule table and activate the OnRoute Handler.</p> <p>If you want to chunk by Sold To Customer then setup the ASN_SETID_SOLDTO chunk rule, populate the customer chunk rule table and activate the OnRoute Handler.</p>
Starting with PeopleTools 8.48, I cannot view or change properties on my messages in application designer. How do I change or activate messages and any associated PeopleCode?	In PeopleTools 8.48, messages are designed and maintained in PIA instead of the application designer. The status of integrations was moved from the message to the service operation, so you now have to activate the service operation instead of the message. PeopleCode events were also moved to the service operation and renamed to handlers.

Question	Answer
In prior versions I had to attach OnRoute PeopleCode to my message when enabling chunking. Do I use the same PeopleCode as a service operation handler?	The chunking PeopleCode from prior releases will no longer function starting with PeopleTools 8.48. Service operations intended to support chunking are now delivered with an inactive OnRoute handler. This allows a user to activate the chunking PeopleCode from PIA rather than having to create PeopleCode in the application designer.
Starting with PeopleTools 8.48, I cannot find Message Channels. What happened to them?	In PeopleTools 8.48, Message Channels were renamed to Queues.
Starting with PeopleTools 8.48, I cannot find my transactions. Does this mean I no longer have to create or activate them?	In PeopleTools 8.48, Transactions were renamed to Service Operation Routings. Routings must still be activated to enable an integration.
Starting with PeopleTools 8.48, I cannot find my Relationships or relationship transactions. How do I enable transforms?	In PeopleTools 8.48, transforms were moved to the routing definition, and non-default service operation versions. They are now enabled when the routing is activated. Relationships and relationship transactions have been deprecated.
How can I tell what fields are mapped in the sample EDI transforms delivered with FSCM 9.0?	A mapping spreadsheet (EDImap_Samples.xls) is delivered in the Excel subdirectory of the PeopleTools home directory. Each of the sample EDI transforms have been mapped on a separate tab in the workbook. These mapping spreadsheets should serve as a starting point for customizing mappings for each trading partner. Once mappings have been determined on the spreadsheet, they can be implemented in a transform (XSLT) and used in a routing to the trading partner.
Where can I find a sample EDI file to use when testing my customizations specific to a trading partner?	Sample X.12 EDI files have been provided in a zip file (EDI_Txn_Samples.zip) in the data subdirectory of the PeopleTools home directory for the sample EDI transforms delivered with FSCM 9.0. These samples contain no data, so it is always best to obtain samples from the trading partner you will be integrating with.

