

Oracle® iProcurement and Oracle® Exchange

Punchout Guide

Release 11*i*

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Oracle iProcurement and Oracle Exchange Punchout Guide, Release 11i

Part No. A92190-02

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Preface

This guide describes how to use the punchout capability of Oracle iProcurement and Oracle Exchange to provide access to supplier-hosted catalogs.

Note: This guide covers iProcurement Release 11.5.8 (Family Pack H) and Exchange Release 6.2.3.

Intended Audience

This guide is intended for suppliers who wish to set up punchout access to their local catalogs and for purchasing managers or administrators who wish to enable and control punchout capability from iProcurement or Exchange.

Structure

This manual describes the following:

Chapter 1: Overview

This chapter explains what a punchout is, describes the different punchout models and the benefits of each, and helps buyers and suppliers choose a punchout model.

Chapter 2: Buyer Setup

This chapter explains the process a buyer uses to implement a punchout.

Chapter 3: Supplier Setup

This chapter explains the process a supplier uses to implement a punchout.

Chapter 4: Troubleshooting

This chapter describes common implementation problems and solutions.

Appendix A: Detailed Punchout Process

This chapter expands on the overview of each punchout model by describing how the punchout process works behind the scenes, at a more detailed level.

Appendix B: DTDs, XML Documents, and Descriptions

This chapter displays all of the DTDs used by punchout, descriptions of the fields used in the XML documents for those DTDs, and example XML and cXML punchout documents.

Appendix C: Authentication, Security, and Encoding

This chapter provides a basic overview of the authentication and security features iProcurement and Exchange provide, and explains how these applications handle encoding in the punchout XML documents.

Appendix D: Maximum Field Lengths

This appendix provides the maximum fields lengths that iProcurement and Exchange support for the transfer of data.

Related Documents

For additional information on installing and implementing Exchange and iProcurement, see the following manuals:

- *Oracle iProcurement for Release 11i Installation Guide*
- *Oracle iProcurement for Release 11i Implementation Guide*
- *Oracle Exchange Installation Guide*
- *Oracle Exchange and Oracle Sourcing Company Administration Guide*

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This chapter covers the following topics:

- [Benefits](#) on page 1-1
- [Punchout Models and Comparisons](#) on page 1-2
- [Choosing Your Punchout](#) on page 1-4
- [Punchout Flow](#) on page 1-5

Note: This guide covers iProcurement Release 11.5.8 (Family Pack H) and Exchange Release 6.2.3.

Benefits

Punchout enables buyers to connect to a supplier's catalog and search for items directly on the supplier's site:

- Requesters in Oracle iProcurement can connect to the supplier's catalog directly, connect to the supplier's catalog via Oracle Exchange, or connect to Exchange directly.
- Buyers can register on Exchange and connect to suppliers' catalogs from there.

When the requester or buyer selects items in the supplier's catalog, the punchout functionality returns the item information to iProcurement or Exchange (from wherever the punchout was initiated).

Punchout benefits both the supplier and the buyer. Punchout enables suppliers to maintain and host their own catalog information, while buyers can search for items from within their own iProcurement or Exchange system. The burden of

maintaining the hosted catalog is removed from the buying organization, reducing catalog maintenance and data storage costs.

Punchout is particularly useful for products that are configurable or include highly variable or dynamic items and pricing. These products are difficult and costly to maintain in a buyer-hosted catalog. Catalogs with these kinds of items are better maintained by the supplier, to ensure the latest content and pricing are available and to eliminate inefficiencies (such as purchase order revisions to correct pricing).

Punchout may not suit every commodity type or supplier. The following table shows the kinds of catalog items punchout is ideal for, as compared to Exchange and local (buyer-hosted) catalog items:

Table 1–1 Catalog Models

Model	Commodity (Catalog Items)
Local Catalog	Best suited for direct material (such as mass-produced mechanical parts); products with prenegotiated or stable prices; and strategic maintenance, repair, and operation (MRO) items (such as packing material).
Exchange Catalog	Best suited for indirect material (such as office supplies); standard MRO items; and products with stable pricing.
Punchout Catalog	Best suited for products requiring a high degree of configuration (such as computer hardware or office furniture), specialized services (such as printing or media services), products with fluctuating prices, or extremely large or specialized catalogs (such as chemical supplies).

Punchout supports both cXML and Oracle native XML standards, depending on the punchout model used. (The model descriptions indicate whether the model supports XML, cXML, or both.)

Oracle native XML is XML that Oracle has adapted to today’s business needs, as shown by the document type definitions (DTDs) and XML samples in this guide. For more information on cXML, see <http://www.cxml.org>.

Punchout Models and Comparisons

iProcurement and Exchange support various punchout models. It is important for buyers and suppliers to decide on the model they want to use before implementing the punchout.

The following table compares the punchout models:

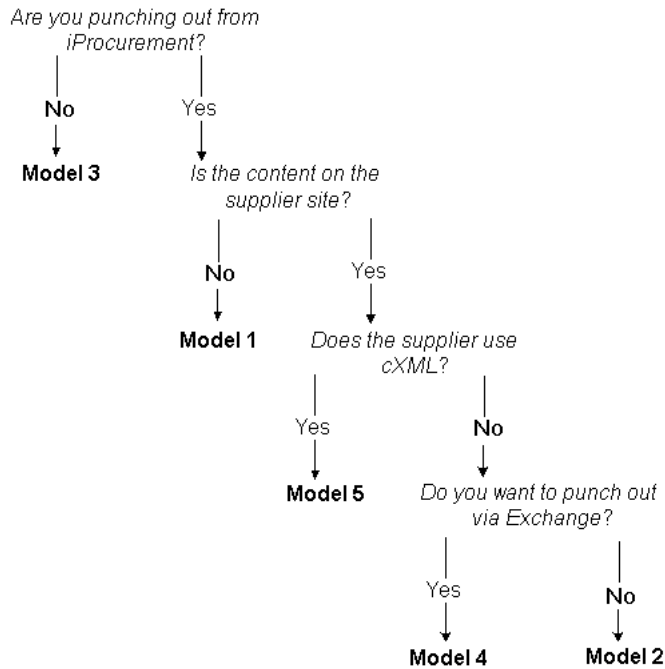
Table 1–2 Punchout Model Benefits

Model	Buyer Benefits	Supplier Benefits
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	iProcurement requesters have access to all supplier catalogs defined on Exchange. They can comparison shop among suppliers on Exchange. They have a similar user interface experience as in iProcurement.	Suppliers load their catalog items once on Exchange and reach many iProcurement customers in addition to the buyers already registered on Exchange. The Exchange catalog supports features such as buyer pricing (the ability to create prices visible only to a specified buyer), price breaks, and price effective dates.
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	This model offers a unique, point-to-point solution between the buyer and supplier.	Supplier closely manages the content. Supplier can control access by allowing only certain buyers to access the site. (Any punchout changes such as the catalog URL's changing, however, must be communicated to all buyer organizations.)
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Buyers have access to a centralized collection of punchouts simply by registering with Exchange. Purchasing Managers on Exchange can control buyer access to specific punchouts using the Control Punchout Access page.	Suppliers only have to define their punchouts on Exchange once, rather than configuring punchout separately for each iProcurement customer. Suppliers can control the visibility of their punchout definitions by publishing or unpublishing the punchout on Exchange. Instead of or in addition to creating a punchout link on Exchange, the supplier can also load catalog items directly to Exchange, which supports buyer pricing (the ability to create prices visible only to a specified buyer). Suppliers already maintaining cXML catalogs can continue to use those.
Models 4 and 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML or cXML)	iProcurement requesters have access to a centralized collection of punchouts. iProcurement administrator does not have to configure a punchout for each supplier, but can just download the supplier's punchout definition from Exchange. The punchout's passing via Exchange is transparent to the requester. Exchange translates cXML to XML seamlessly.	Suppliers only have to define their punchouts on Exchange once, rather than configuring punchout separately for each iProcurement customer. Suppliers can control the visibility of their punchout definitions by publishing or unpublishing the punchout on Exchange. Suppliers already maintaining cXML catalogs can continue to use those.

An additional punchout option is the *double punchout*. A double punchout goes from iProcurement to Exchange, then from Exchange to the supplier. In a double punchout, the requester clicks a link to Exchange and shops on Exchange; Exchange itself contains punchout links to suppliers directly, and the requester can additionally click any of these. The details and setup for the double punchout are the same as those for Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML), plus Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML). The double punchout is sometimes used as a diagnostic tool for the via-Exchange punchouts, to see whether a particular problem is happening during the punchout *to* Exchange or *from* Exchange. The only difference between a double punchout and a via-Exchange punchout is that in a via-Exchange punchout, the via-Exchange step is invisible to the requester; in a double punchout, the punchout to Exchange is one (visible) step, and punching out from Exchange to a supplier's catalog is a second visible step.

Choosing Your Punchout

If you need more help choosing a punchout model, use the following diagram:



After you have selected your model, use the following table to direct you to the correct setup steps:

Table 1–3 Buyer and Supplier Reference by Model

Model	Buyer, see ...	Supplier see ...
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Table 2–1 in Chapter 2	Table 3–1 in Chapter 3
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Table 2–2 in Chapter 2	Table 3–2 in Chapter 3
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Table 2–3 in Chapter 2	Table 3–3 in Chapter 3
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Table 2–4 in Chapter 2	Table 3–4 in Chapter 3
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Table 2–5 in Chapter 2	Table 3–5 in Chapter 3

Punchout Flow

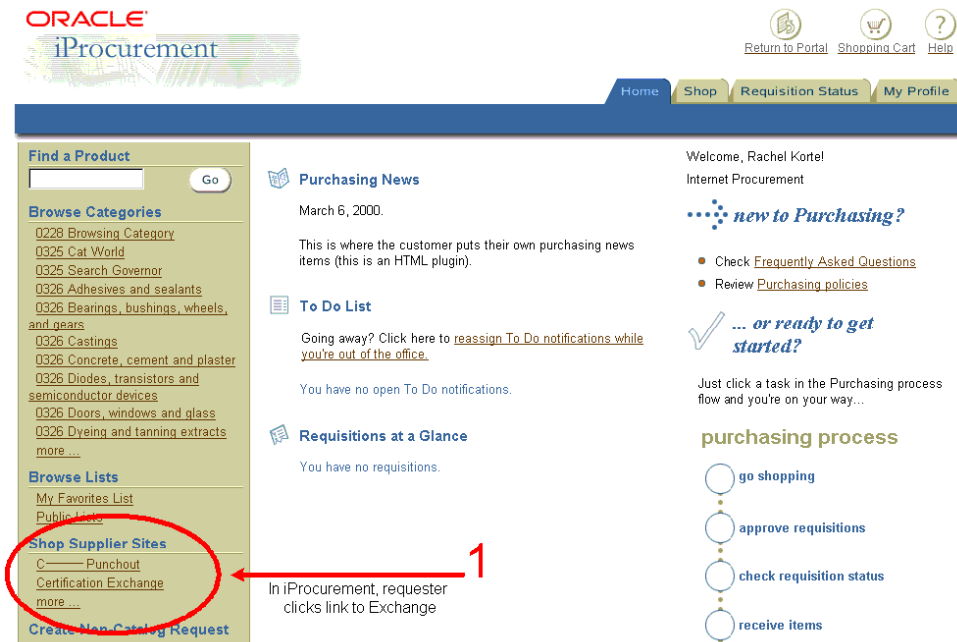
At certain steps in the punchout process, the details differ by model, but the basic flow is the same:

1. The requester in iProcurement or buyer in Exchange clicks a link to the external catalog (punchout) site. Punchout links are available from the **Shopping** home and **Search Results** pages.
2. The *punchout from* application (iProcurement or Exchange) sends the login request to the catalog site.
3. The *punchout to* application (Exchange or the supplier site) authenticates the requester or buyer.
4. The *punchout from* application redirects the requester's or buyer's browser to the catalog site.
5. The requester or buyer browses or searches for items on the external catalog site and completes shopping on the site.
6. Via the requester's or buyer's browser, the *punchout to* application returns the shopping cart with the items to the *punchout from* application.
7. The requester or buyer completes the checkout process for the items in the shopping cart, and the *punchout from* application processes the order.

Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)

In this model, the supplier loads its catalog items directly to the Exchange catalog, the iProcurement administrator sets up iProcurement to use Exchange as the punchout hub, and requesters see a link to Exchange displayed on the iProcurement home page.

The following illustration shows the punchout links to Exchange displaying in the lower left of the **Home** page in iProcurement. These links also appear in the shopping and search pages.



After clicking a supplier site link to Exchange, the requester sees the Exchange **Shopping** home page, shown in the following illustration:

Exchange Name

Home Log Off My Profile Shopping Cart Conference Help

Welcome Shopping Negotiations Purchases Intelligence

Catalog Favorites List

Search

To search for an item, enter as many words as you can that describe it. [Search Tips](#)

Example: **blue pen bic ballpoint** is better than **pen**.

Note: Click [here](#) to change your search options.

Search American English [Advanced Search](#)

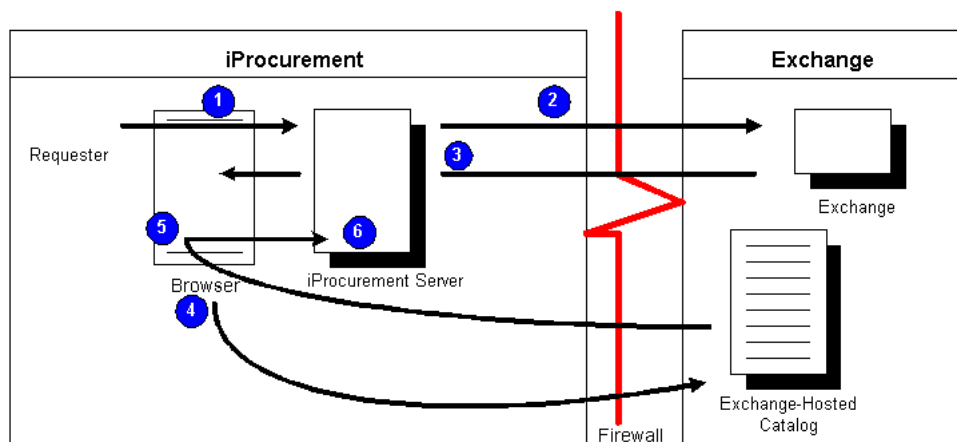
Browse

Click a category link to see the items and categories it contains.

Browse categories in American English

← 2
Requester comes to Shopping home page on Exchange

The following diagram shows the basic flow for Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML).



In the illustration above:

1. The requester logs on to iProcurement.
2. From iProcurement, the requester clicks a link to Exchange.

3. Exchange authenticates the requester and returns a response.
4. iProcurement redirects the requester's browser to Exchange for shopping.
5. When the requester finishes shopping, Exchange returns the shopping cart items to iProcurement via the requester's browser.
6. The requester completes the checkout process, and iProcurement processes the order.

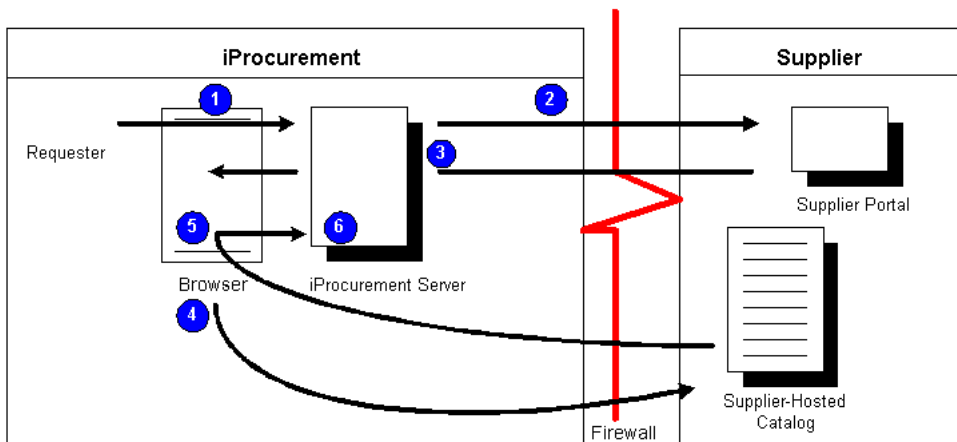
For detailed descriptions of each step, see [Appendix A](#).

Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)

In this model, the supplier hosts the catalog at its own site or Web store, the iProcurement administrator sets up iProcurement to use the supplier as a punchout site, and requesters see a link to the supplier site displayed on the iProcurement home page.

See the Oracle iProcurement illustration for [Model 1: Punchout from Oracle iProcurement to Oracle Exchange \(XML\)](#) on page 1-6 to see how the punchout links look to the requester.

The following diagram shows the basic flow for Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).



In the illustration above:

1. The requester logs on to iProcurement.
2. From iProcurement, the requester clicks a link to the supplier site.
3. The supplier authenticates the requester and returns a response.
4. iProcurement redirects the requester's browser to the supplier site for shopping.
5. When the requester finishes shopping, the supplier site returns the shopping cart items to iProcurement via the requester's browser.
6. The requester completes the checkout process, and iProcurement processes the order.

For detailed descriptions of each step, see [Appendix A](#).

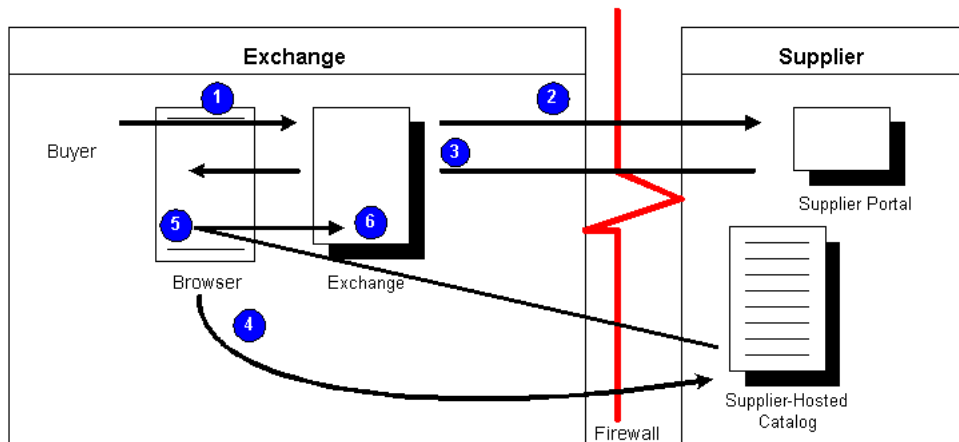
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)

In this model, the supplier hosts the catalog at its own site or Web store, and buyers registered on Exchange see a link to the supplier site from the **Shopping** home page or **Search Results** page on Exchange. In addition to providing punchouts to Exchange registrants, suppliers often use this model to test a punchout to their site before buyers implement any of the other models.

The following illustration shows the punchout links to supplier sites displaying in the Shop Supplier Sites box on the **Shopping** page of Oracle Exchange. These links also appear in other areas of Exchange.



The following diagram shows the basic flow for Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML).



In the illustration above:

1. The buyer logs on to Exchange.
2. On Exchange, the buyer clicks a link to the supplier site.
3. The supplier authenticates the buyer.
4. Exchange redirects the buyer's browser to the supplier site for shopping.
5. When the buyer finishes shopping, the supplier site returns the shopping cart items to Exchange via the buyer's browser.
6. The buyer completes the checkout process, and Exchange processes the order.

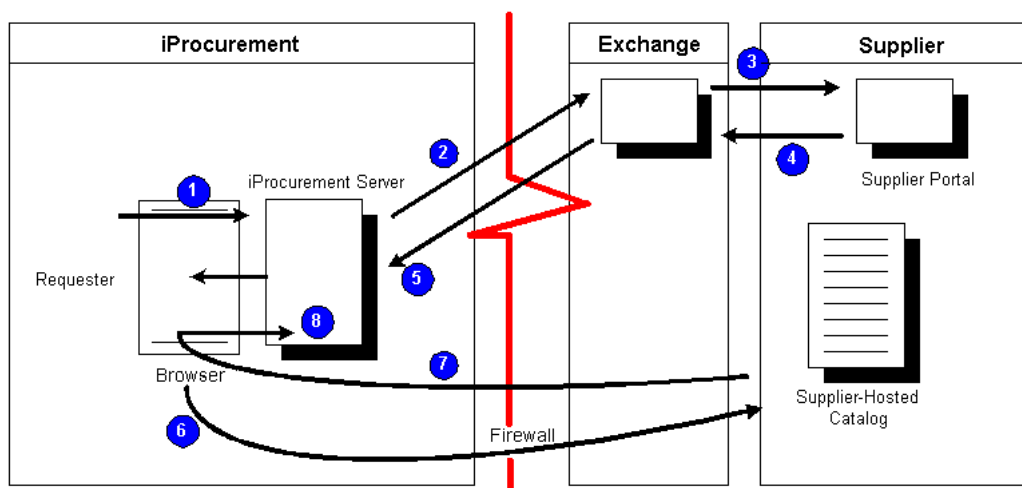
For detailed descriptions of each step, see [Appendix A](#).

Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)

In this model, the supplier hosts the catalog at its own site or Web store, which the requester in iProcurement accesses (invisibly) via Exchange. Using Exchange for the punchout simplifies the initial setup process and the authentication and maintenance of the punchout. The supplier must set up a punchout from Exchange to its Web store. The iProcurement administrator, using the eContent Manager in iProcurement, must download the supplier's punchout definition from Exchange.

See the Oracle iProcurement illustration for [Model 1: Punchout from Oracle iProcurement to Oracle Exchange \(XML\)](#) on page 1-6 to see how the punchout links look to the requester.

The following diagram shows the basic flow for Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML).



In the illustration above:

1. The requester logs on to iProcurement.
2. From iProcurement, the requester clicks a link to the supplier site.
3. Exchange authenticates the requester and sends a punchout request to the supplier.
4. The supplier site responds to Exchange.
5. Exchange forwards the supplier site response to iProcurement.
6. iProcurement redirects the requester's browser to the supplier site for shopping.
7. When the requester finishes shopping, the supplier site returns the shopping cart items to iProcurement via the requester's browser.

8. The requester completes the checkout process, and iProcurement processes the order.

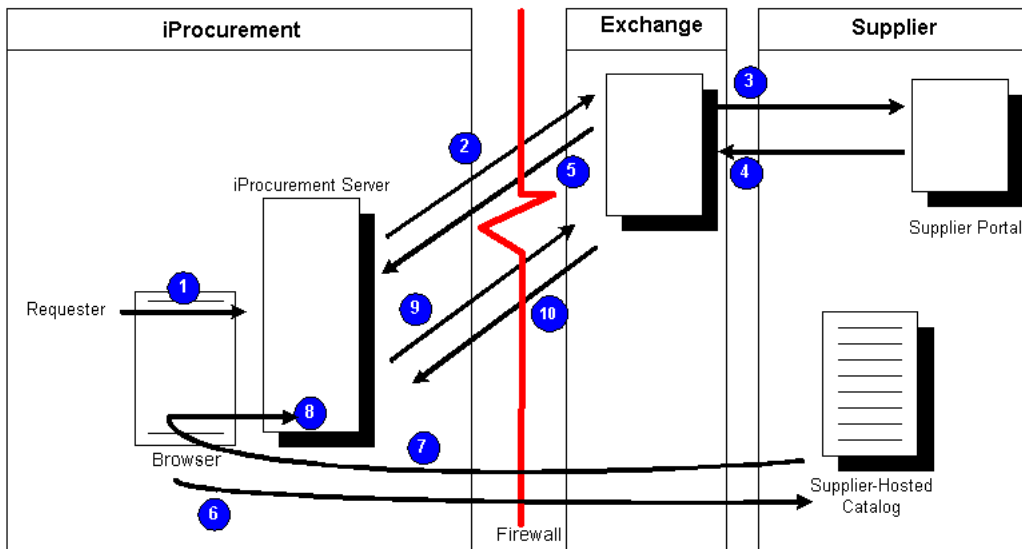
For detailed descriptions of each step, see [Appendix A](#).

Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

In this model, the supplier hosts a cXML catalog at its own site or Web store, which the requester in iProcurement accesses (invisibly) via Exchange. Using Exchange for the punchout simplifies the initial setup process and the authentication and maintenance of the punchout. The supplier must set up a punchout from Exchange to its Web store. The iProcurement administrator, using the eContent Manager in iProcurement, must download the supplier's punchout definition from Exchange.

See the Oracle iProcurement illustration for [Model 1: Punchout from Oracle iProcurement to Oracle Exchange \(XML\)](#) on page 1-6 to see how the punchout links look to the requester.

The following diagram shows the basic flow for Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML).



In the illustration above:

1. The requester logs on to iProcurement.
2. From iProcurement, the requester clicks a link to the supplier site.
3. Exchange authenticates the requester and sends a punchout request to the supplier.
4. The supplier site responds to Exchange.
5. Exchange forwards the supplier site response to iProcurement.
6. iProcurement redirects the requester's browser to the supplier site for shopping.
7. When the requester finishes shopping, the supplier site returns the shopping cart items to iProcurement.
8. The shopping cart goes to iProcurement via the requester's browser.
9. iProcurement redirects the shopping cart to Exchange for cXML-to-XML conversion.
10. Exchange converts the shopping cart from cXML to XML and returns it to iProcurement.

For detailed descriptions of each step, see [Appendix A](#).

Buyer Setup

This chapter contains the following topics:

- [Implementation Considerations](#) on page 2-1
- [Checklists](#) on page 2-2
- [Setup Steps](#) on page 2-5
- [Updating Punchout Setup](#) on page 2-56

Implementation Considerations

The main considerations for buyers implementing punchout include the following:

- It is important to decide on the model that you and your supplier want to use before implementing the punchout. See [Chapter 1](#).
- If you want to set up data mapping, decide how you want to do it—whether to use the Exchange or e-Commerce Gateway and which values to map. See [Understand Data Mapping](#) on page 2-39.
- If the site that you are punching out to uses secure socket layer (SSL) to authenticate the buyer, then you should review [Prerequisites](#) on page 2-5.
- Note that suppliers should use UTF-8 encoding when sending punchout documents. See [Encoding](#) on page C-4.

Licensed iProcurement customers can use the Oracle Exchange site for their punchouts. See <https://exchange.oracle.com/>. Look for information about catalogs and Oracle customers.

Only the models that use the Exchange require the buyer and supplier to join the Exchange. If the buyer punches out to the supplier directly, the Exchange is not required.

Checklists

In the following tables, Review Required means you should read the step to see if it applies to you.

Use the following table as your checklist if you are setting up Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML):

Table 2–1 Buyer Setup Steps for Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)

Step Number	Step	Required?
1	Prerequisites on page 2-5	Review Required
2	Register Buying Organization on the Exchange on page 2-8	Required
3	Register Users on the Exchange on page 2-11	Required
4	Set Profile Options in iProcurement on page 2-18	Review Required
5	Define Exchange Punchout in iProcurement on page 2-19	Required
6	Resequenece Punchout Display in iProcurement on page 2-30	Optional
7	Use Realms to Control Punchout Access on page 2-32	Optional
8	Set Up Supplier and Site Mapping on page 2-43	Optional
9	Use either the Exchange or e-Commerce Gateway to do data mapping: <ul style="list-style-type: none"> ▪ Set Up Data Mapping on Exchange on page 2-49 ▪ Set Up Data Mapping in e-Commerce Gateway on page 2-51 e-Commerce Gateway is recommended. See Understand Data Mapping on page 2-39.	Required

Use the following table as your checklist if you are setting up Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML):

Table 2–2 Buyer Setup Steps for Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)

Step Number	Step	Required?
1	Prerequisites on page 2-5	Review Required
2	Set Profile Options in iProcurement on page 2-18	Review Required
3	Define Supplier Punchout in iProcurement on page 2-26	Required
4	Resequence Punchout Display in iProcurement on page 2-30	Optional
5	Use Realms to Control Punchout Access on page 2-32	Optional
6	Set Up Supplier and Site Mapping on page 2-43	Optional
7	Set Up Data Mapping in e-Commerce Gateway on page 2-51 See also Understand Data Mapping on page 2-39.	Required

Use the following table as your checklist if you are setting up Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML):

Table 2–3 Buyer Setup Steps for Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)

Step Number	Step	Required?
1	Prerequisites on page 2-5	Review Required
2	Register Buying Organization on the Exchange on page 2-8	Required
3	Register Users on the Exchange on page 2-11	Required
4	Understand Data Mapping on page 2-39	Optional
5	Control Punchout Access on Exchange on page 2-16	Required

Use the following table as your checklist if you are setting up Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML):

Table 2–4 Buyer Setup Steps for Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)

Step Number	Step	Required?
1	Prerequisites on page 2-5	Review Required
2	Register Buying Organization on the Exchange on page 2-8	Required
3	Register Users on the Exchange on page 2-11	Required
4	Control Punchout Access on Exchange on page 2-16	Required
5	Set Profile Options in iProcurement on page 2-18	Review Required
6	Define Exchange Punchout in iProcurement on page 2-19	Required
7	Download Punchout Suppliers from Exchange on page 2-24	Required
8	Resequence Punchout Display in iProcurement on page 2-30	Optional
9	Use Realms to Control Punchout Access on page 2-32	Optional
10	Set Up Supplier and Site Mapping on page 2-43	Optional
11	Set Up Data Mapping in e-Commerce Gateway on page 2-51 See also Understand Data Mapping on page 2-39.	Required

Use the following table as your checklist if you are setting up Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML):

Table 2–5 Buyer Setup Steps for Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

Step Number	Step	Required?
1	Prerequisites on page 2-5	Review Required
2	Register Buying Organization on the Exchange on page 2-8	Required
3	Register Users on the Exchange on page 2-11	Required
4	Control Punchout Access on Exchange on page 2-16	Required
5	Set Profile Options in iProcurement on page 2-18	Review Required

Table 2-5 Buyer Setup Steps for Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

Step Number	Step	Required?
6	Define Exchange Punchout in iProcurement on page 2-19	Required
7	Download Punchout Suppliers from Exchange on page 2-24	Required
8	Resequence Punchout Display in iProcurement on page 2-30	Optional
9	Use Realms to Control Punchout Access on page 2-32	Optional
10	Set Up Supplier and Site Mapping on page 2-43	Optional
11	Use either the Exchange or e-Commerce Gateway to do data mapping: <ul style="list-style-type: none"> ■ Set Up Data Mapping on Exchange on page 2-49 ■ Set Up Data Mapping in e-Commerce Gateway on page 2-51 e-Commerce Gateway is recommended. See Understand Data Mapping on page 2-39.	Required

Note: If setting up a punchout from iProcurement, some of the setup steps require basic knowledge of using windows in Oracle Applications, including how to query, add, or delete records. If you need help, see the *System Administrator's Guide* or click the Help (?) icon in any application window.

Setup Steps

The following sections describe the buyer setup steps in detail. Refer to the tables in the previous section for the list and order of the setup steps, depending on the model.

Prerequisites

For all models, make sure of the following prerequisites:

- Make sure the supplier supports the punchout.
- If the supplier's site is secure, verify your access to secure sites.

Make Sure Supplier Supports Punchout

Make sure the supplier has set up access to its catalog using the instructions in [Chapter 3](#).

Verify Access to Secure Sites

Verify access to secure sites, if you are punching out to or via Oracle Exchange (which is a secure site) or to a secure supplier site. Contact your network administrator for more information on connecting to secure sites. See also [Appendix C](#) for more information on punching out to secure sites.

Punching out to a secure site involves making sure the site is on the *punchout from* application's certification authorities list:

- For Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML), the certification authority that the Exchange uses must be on the *ca-bundle.crt* file in iProcurement.
- For Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML), the supplier's certification authority needs to be on the *ca-bundle.crt* file in iProcurement.
- For Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), the supplier's certification authority needs to be on the *pomdigcrt.txt* file in the Exchange. The supplier should have made sure of this when setting up access to its Web catalog as described in [Chapter 3](#).
- For Models 4 and 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML or cXML), the Exchange's certification authority needs to be on the *ca-bundle.crt* file in iProcurement; the supplier's certification authority needs to be on the *pomdigcrt.txt* file in the Exchange. As the buyer, your only concern is that the Exchange's certification authority is on the *ca-bundle.crt* file.

Both *ca-bundle.crt* and *pomdigcrt.txt* come with various certification authorities already. If the supplier's certification authority is a common one, it may already be on the *ca-bundle.crt* and *pomdigcrt.txt* files.

Note: The POR : CA Certificate File Name profile option in iProcurement can be set to use some other certification authority file besides the default ca-bundle.crt file. (This profile option is described later in the setup.)

In the Exchange, the Exchange Operator should access the **Software Setup** page in the Configuration tab and make sure the Certifying Authority Certificate Location field contains a file path and name for a valid certification authority (CA) bundle file. In the Exchange, depending on the setup, this is typically located in \$APPL_TOP/admin/pomdigcert.txt.

In iProcurement, the ca-bundle.crt file should be readable and accessible from the middle tier. If the iProcurement implementation has multiple Java Virtual Machines (JVMs), the ca-bundle.crt file should be accessible from all the JVMs.

Punching out from iProcurement to a secure site also involves making sure the classpath in iProcurement contains the following secure socket layer (SSL) library files:

- For Java Developer Kit (JDK) version 1.3 and later use the following SSL library files:
 - wrapper.classpath=<your Internet Application Server (iAS) installation path>/iAS/jlib/jssl-1_2.jar. For example:
/u06/app/oracle/devora/iAS/jlib/jssl-1_2.jar.
 - wrapper.classpath=<your iAS installation path>/iAS/jlib/javax-ssl-1_2.jar.
For example: /u06/app/oracle/devora/iAS/jlib/javax-ssl-1_2.jar.
- For Java Developer Kit (JDK) versions earlier than 1.3, use the following SSL library files:
 - wrapper.classpath=<your iAS installation path>/iAS/jlib/jssl_1_1.jar. For example: /u06/app/oracle/devora/iAS/jlib/jssl_1_1.jar.
 - wrapper.classpath=<your iAS installation path>/iAS/jlib/javax-ssl-1_1.jar.
For example: /u06/app/oracle/devora/iAS/jlib/javax-ssl-1_1.jar.

Punchout out from iProcurement to a secure site also requires verifying the library path. Verify that the following environment variables contain an absolute path directory name (not just the file name) for libnjsl8.so (for Unix-based systems) or libnjsl8.dll (for Microsoft-based systems):

- LD_LIBRARY_PATH (used by Sun Unix systems)
- SHLIB_PATH (used by HP Unix systems)
- LIBPATH (used by AIX-based systems)
- PATH (used by Microsoft-based systems)

Register Buying Organization on the Exchange

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

To enable buyers to access punchout sites in any of the above models, the buying company must exist as a registered company on the Exchange. If your company is already registered with the Exchange, no additional or special type of registration is necessary.

If you are implementing Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML), and you have a multiple organizations setup in iProcurement that you want to mimic on the Exchange (for example, you want the operating unit in Germany to be able to punch out and shop only for items supplied by Supplier A, and the US operating unit to punch out and shop only for items supplied by Supplier B), see [Multiple Organization Punchout to Exchange](#) on page 2-37.

To register with the Exchange:

1. Access the Exchange with which you wish to participate.

Oracle Exchange exists at <https://exchange.oracle.com/>. Oracle Exchange may also exist as a branded Exchange at other sites.

2. Browse the site to see if there are any special requirements or other information for punchout buyers before registering.

ORACLE
Exchange.Oracle.com

Log On My Profile Shopping Cart

Oracle Exchange English • Deutsch • Français • Nederlands • 日本語 • Español Latinoamericano

Username

Password

[Lost password?](#)

[Registration](#)
[Check Registration Status](#)

Oracle's Unique Sourcing Solution

SUPPORT the complete business process
Integrate sourcing with your extended enterprise

MANAGE complex negotiations efficiently
Support all negotiation types with robust buyer and supplier tools

IDENTIFY savings & supplier improvement opportunities
Spend, supplier performance, and productivity analysis

SOURCE for best value
Multi-attribute weighted bidding and analysis

iProcurement Solution

The catalog solution for Oracle iProcurement customers
There are several ways for Oracle iProcurement customers to access supplier catalogs via Exchange.Oracle.com:

- Centralized repository of supplier-maintained content
- Punchout directory for a range of supplier sites
- Supplier catalog downloads into iProcurement

Supply Chain Solution

How collaborative is your supply chain?
Do you use the Internet to plan for your needs? Imagine knowing ahead of time who will be supplying you with the resources that you need.

Oracle Supply Chain Collaboration helps enterprises to operate collaboratively month-by-month, year-by-year across global supply chains.

3. On the **Home** page, click the "Registration" or "Sign me up!" link.
4. Select "I want to register my company as an independent entity" and click Proceed to Registration. (You could also register as an affiliate.)
5. Follow the guidance on the registration pages to complete your registration.

If you are unsure what to enter in some fields, you can change most of your registration choices later, after your registration is approved, by using the My Profile icon or the Company Administration application.

6. Once you submit your registration, the **Registration Confirmation** page appears. After review, you will be notified of your registration acceptance or rejection by the Exchange Operator.

How long the approval takes depends on the Operator. Most Exchanges provide a registration status link on the login page for you to check.

To make sure you are assigned the proper system tasks:

System tasks are used by the Exchange to control which pages and links Exchange registrants have access to. You should check that you are assigned system tasks that enable you to administer and set up punchout.

To check whether you are assigned the appropriate system tasks after the Exchange Operator approves your registration:

1. Log on to the Exchange with the user name and password you created when registering your company in the previous steps.
2. Click the "Company Admin" link on the **Home** page.
3. Click the Application Setup tab, then the "Manage Job Functions" link.

System tasks are contained in job functions. The job functions assigned to your company are listed on the **Manage Job Functions** page.

Exchange Name

Home Log Off My Profile Shopping Cart Conference Help

Welcome Company Billing Application Setup

Application Setup > Manage Job Functions

Manage Job Functions

Job Functions are the mechanism for granting users access to System Tasks

- [Create a new Job Function](#)
- [Set default Job Functions to assign when approving users](#)
- [Set default Job Function to delegate when approving affiliate companies](#)

Job Function Search Results

1 - 7 shown of 7

Job Function	Description	Owner	Update
Account Manager	Manage billing activity.	ax	
Buyer	Purchase any item, link out to supplier catalogs to purchase items, bid in seller negotiations, and create buyer negotiations.	ax	
Buyer with Restricted Pricing View	Purchase only those items with buyer-specific pricing.	ax	

4. On the **Manage Job Functions** page, click each job function to view the system tasks within it.
5. Be sure that the system tasks include the following:
 - **Manage Punchout Access**—typically contained in the Purchasing Manager job function, unless the Exchange Operator modified this job function. This system task enables you to set up and manage punchouts on the Exchange.
 - **Punch Out to Supplier Sites**—typically contained in Buyer job functions, unless the Exchange Operator modified them. This system task enables buyers to perform a punchout.

- Create Add-to-Cart Order—typically contained in Buyer job functions, unless the Exchange Operator modified them. This system task enables buyers to shop on the Exchange.

If you are not assigned these system tasks (some of which you will assign to users in your company in the next step), then users in your company may not be able to access the punchout. If you are not assigned the appropriate system tasks, contact the Exchange Operator. (The Contact Us link at the bottom of the page, or some other link the Operator provides, may provide contact information for the Operator.)

For more information on job functions and system tasks, including a list of them, see the *Company Administration Guide* on the Exchange. To access the guide:

- Make sure you are logged in as the Company Administrator.
- Click the "Company Admin" link on the **Home** page.
- Click the "Download Company Administration Guide" link.

Register Users on the Exchange

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Once the Exchange Operator approves your company's registration, create a proxy user on the Exchange for your company. The proxy user is required for punching out from iProcurement to or via the Exchange. (In iProcurement, you will need to use this proxy user information in the punchout setup described later in this chapter.) If you are punching out from the Exchange directly, your buyers must also be registered users on the Exchange.

Registering users on the Exchange consists of two steps:

1. Register users on the Exchange.

If you are punching out from iProcurement, the iProcurement administrator should register proxy users. If you are punching out from the Exchange directly, you as the Company Administrator may ask your buyers to register themselves.

2. Approve users on the Exchange.

The Company Administrator (typically the person who registered the buying company on the Exchange in the previous step) next must approve the users.

To register users on the Exchange:

1. On the **Home** page, click the "Registration" or "Sign me up!" link.
2. Select "I think my company is already registered, and I want to register myself as a new user."
3. Search for your company name and click Go.
4. Select the company and click Next.
5. Enter information for the user, including user name and password. For a proxy user, you may want to specify a name such as iProcurement User, Proxy User, or some variation. You may want to provide your own e-mail address for the proxy user. (Any notifications the Exchange sends to the user, including notification of registration approval, are sent to this e-mail address.)

Remember the user name and password.

6. The licensing agreement should have been reviewed and accepted on behalf of the company during the company registration. It is provided during the user registration for informational purposes. Click Next to continue.
7. Review the information and click Submit.
8. Create as many users as you need.

Typically you need only yourself (which you already registered when you registered your company above) and one other proxy user; however, if you want different iProcurement requesters to have different privileges on the Exchange by assigning them different Exchange job functions, you could create more than one proxy user.

To approve users on the Exchange:

1. Log in to the Exchange as the Company Administrator, using the user name and password you created in [Register Buying Organization on the Exchange](#) on page 2-8.

2. On the **Home** page, click the "Company Admin" link.
3. Click the Company tab, then the "Approve Users" link.
4. On the **Approve Users** page, select the user (you can also search for users) and click Approve.

Administering for **Bananas Inc.** [Change Company](#)

[Company Administration](#) > [Approve Users](#)

Approve Users

Search or browse for users with pending registration requests.

User Last Name [Go](#) [Search Tips](#)

[Show All](#) [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

User Search Results

Select Users and... [Approve](#) [Reject](#)

Sort by [Registration Date](#) [Ascending](#) [Descending](#) [Go](#)

[Select All](#) [Clear All](#) 1 - 1 shown of 1

Select	Company	User	Username	Registration Date
<input type="checkbox"/>	Bananas Inc. 500 Oracle Pkwy	Smiley, Jane 650-555-1212	bananainc	09-07-2002

5. Select the user again and click Assign Job Functions.
6. On the **Assign Job Functions** page, click "Select and add existing job functions."
The job functions that you see on the **Select Job Functions** page are those that the Exchange Operator assigned to your company.

Welcome Company Billing Application Setup

Company Administration > Approve Users > Approval Review > Assign Job Functions > Select Job Functions

Select Job Functions

Search

Enter search criteria and press the **Go** button to find job functions. Pressing the **Go** button without entering search criteria returns all job functions.

Job Function Name

Description

Searching for moo returns moon over miami and over the moon

Job Function Owner

[Search Tips](#)

Job Function Search Results

Select job function(s) and...

1 - 4 shown of 4

Select	Job Function	Description	Owner
<input type="checkbox"/>	Account Manager	Manage billing activity.	ax
<input type="checkbox"/>	Buyer with Restricted Pricing View	Purchase only those items with buyer-specific pricing.	ax

7. Assign a job function (or job functions) to the user that contains at least one of the following system tasks. These system tasks were described in the previous step.
 - Punch Out to Supplier Sites
 - Create Add-to-Cart Order

For more information on job functions and system tasks, including a list of them, see the *Company Administration Guide* on Exchange. To access the guide:

- Make sure you are logged in as the Company Administrator.
- Click the "Company Admin" link on the **Home** page.
- Click the "Download Company Administration Guide" link.

If you cannot find job functions with the system tasks that you need, contact the Exchange Operator.

Note: Any job functions assigned to a proxy user are available to all iProcurement requesters that punch out from iProcurement using that proxy user.

8. Select the desired job function and click Assign to User.
9. On the **Assign Job Functions** page, click OK.
10. On the **Approve Users** page, click Submit.

To create customized job functions:

If you need to create a customized job function to better suit your company's needs, perform the following steps:

1. On the **Home** page, click the "Company Admin" link.
2. Click the Application Setup tab, then the "Manage Job Functions" link.
3. On the **Manage Job Functions** page, click the "Create a New Job Function" link.
4. On the **Create Job Function** page, enter a Name and Description for your customized job function.

5. Click the appropriate link at the bottom of the page. Either create the job function out of the existing system tasks that are assigned to your company, or create the job function by copying and modifying an existing one.

You can add only those system tasks that are already assigned to your company. Contact the Exchange Operator if you cannot find a task you need.

6. Follow the guidance on the job functions pages to complete your modification.
7. Follow the previous steps to assign the job function to your user.

If you need more help registering and approving users and assigning job functions, download the *Company Administration Guide* from Exchange:

1. Make sure you are logged in as the Company Administrator.
2. On the **Home** page, click the "Company Admin" link.
3. Click the "Download Company Administration Guide" link.

If you are implementing Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML), the Exchange Operator can hide certain pages from the punchout buyer so that the punchout experience is more focused on buying than on other Exchange activities. The Exchange Operator can hide any or all of the following pages from a punchout buyer:

- **Home** page. The iProcurement requester always punches out directly to the **Shopping** page on Exchange. The **Home** page contains links to other Exchange pages that the requester may not need.

My Profile icon and pages. These pages contain personal information for the user, including the user's password. For the proxy user you created in previous steps, this information is not always relevant to the punchout buyer and should not be changed by the buyer.

Note: If you want to prevent the My Profile icon from displaying the profile pages (if the Operator has not already done so), create a customized job function that removes the View My Profile system task and assign that job function to the punchout buyer. See the steps above for creating customized job functions.

- **Online Help.** The Exchange Operator may not want to display online Help for all of the Exchange features to punchout buyers who only use the shopping features.
- **Contact Us link.** The Exchange Operator may not want your company's users to contact the Operator directly.

These pages are still available to you as the Company Administrator. If hidden, they are hidden only from users in your company who punch out from iProcurement to Exchange. (A punchout flag in the software alerts Exchange whether the buyer logged in via punchout.)

Control Punchout Access on Exchange

Perform this step for the following models:

Model	Required?
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Many suppliers can publish punchout definitions on Exchange. Use this step to control which punchout supplier catalogs you want to give your buyers access to from Exchange. Even if you are punching out via Exchange, you must perform this step to display the punchouts in iProcurement.

Buyers do not have access to punchouts on or via Exchange until you give them access as described in this step.

Prerequisite

You need to be assigned the Manage Punchout Access system task to perform this step. See the information about system tasks in [Register Buying Organization on the Exchange](#) on page 2-8.

To control punchout access to supplier catalogs:

1. Log on to Exchange using a logon that is assigned the Manage Punchout Access system task.
2. On the **Home** page, click the "Buying" link.
3. Click the Purchases tab, then the "Control Punchout Access" link.
4. On the **Control Punchout Access** page, select the suppliers to whom you will give your buyers access.

Purchases > Control Punchout Access

Control Punchout Access

Specify which supplier punchouts that users within your company are able to view and use on the ap905sun.us.oracle.com.

Select Supplier(s) and... Clear Changes Review and Submit

Select All Clear All

Select	Logo	Name	Description
<input type="checkbox"/>		Catálogo IPC	Link para Catálogo Externo
<input type="checkbox"/>		F-T Zone	F-T Zone, A Service of P-M Inc.
<input type="checkbox"/>		Ferry Ltd	Ferry trips.
<input type="checkbox"/>		AUTSeller Company 1178	

5. Click Review and Submit.
6. On the **Review Selected Suppliers** page, click Submit.

About Disabled Punchouts

A supplier can use Exchange to disable an Exchange punchout, preventing the punchout from being accessed by anyone on Exchange. If a supplier disables a punchout *that you had previously selected* on the **Control Punchout Access** page, the punchout continues to appear on the **Control Punchout Access** page, but it will be identified as having been disabled by the supplier as shown below.

[Welcome](#) [Shopping](#) [Negotiations](#) [Purchases](#) [Intelligence](#)

Purchases > Control Punchout Access

Control Punchout Access

Specify which supplier punchouts that users within your company are able to view and use on the ap905sun.us.oracle.com.

Select Supplier(s) and... [Clear Changes](#) [Review and Submit](#)

[Select All](#) [Clear All](#)

Select	Logo	Name	Description
<input checked="" type="checkbox"/>		elvis	This punchout will not be visible to users until it is re-enabled by the supplier

Disabled by supplier

Once you deselect the disabled punchout links on the **Control Punchout Access** page and save the change, the links are not available for reselection until the supplier re-enables the punchout.

Set Profile Options in iProcurement

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Review Required
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Review Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Review Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Review Required

The system administrator should set the following profile options by logging into Oracle Applications with the System Administrator responsibility.

For help and instructions on setting profile options, see the *System Administrator's Guide* or click the Help (?) icon after logging on to Oracle Applications.

Depending on your network setup, you may need to set one or more of the profile options listed below. Set these profile options at the site level.

POR : Proxy Server Name

Enter the proxy server (Web server) name if your iProcurement implementation has a proxy setup. The proxy server name is typically the same as the proxy server that is set up in people's browsers in your company—for example, www-proxy.company.com.

POR : Proxy Server Port

Enter the proxy server port on which the proxy server listens, if your iProcurement implementation has a proxy setup. The port is typically the same as the port that is set up in people's browsers in your company—for example, 80.

POR : CA Certificate File Name

If you are punching out to a secure site (including punching out via a secure site), enter the absolute file path of the certificates file that stores the certificates' names that your company will accept. The file should be readable and accessible from the middle tier. If the iProcurement implementation has multiple JVMs, the file should be accessible from all the JVMs. If you want to use the default ca-bundle.crt certificates file, which already includes certificates from various signing authorities, the default absolute path name is \$APACHE_TOP/ Apache/conf/ssl.crt/ca-bundle.crt.

Define Exchange Punchout in iProcurement

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required

Model	Required?
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

In this step, the iProcurement administrator creates a punchout link to Exchange, also known as the supplier *hub*. After completing this step, requesters in iProcurement will see a link to the Exchange in iProcurement.

This step is also required before you can download punchout suppliers from Exchange in [Download Punchout Suppliers from Exchange](#) on page 2-24.

Note: The setup in this step applies to all operating units.

To define the supplier hub:

1. Log on to iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link to access the **Catalog Authoring Home** page.
3. On the **Catalog Authoring Home** page, click the "Maintain Supplier Hubs" link.
4. On the **Maintain Supplier Hubs** page, click Create New.

Bulk Load

[Catalog Authoring Home](#)

[Download Bulk Load Resources](#)

[Bulk Load Catalog Structure](#)

[Bulk Load Items & Price Lists](#)

[View Bulk Load Status](#)

Schema Editing

[Map Categories](#)

[Build Table of Contents](#)

[Map Special Orders](#)

[Schema Editing](#)

Punchout Management

Create New Supplier Hub

A new Supplier Hub can be added by completing the following form and then clicking the Create button.

Note: This feature can only be used with the out-of-the box integration functionality available in Oracle Exchange version 6.1 C and later.

* Indicates a required field

* Supplier Hub Name

Hub Description

* URL

Image URL

* Username

* Password

(The username/password entered above shall be used as the site level username/password on the hub)

* Retype Password

Keywords

Separate keywords with spaces

Always display this hub with search results

Items added to shopping cart from external punchout sites can be modified in

5. On the **Create New Supplier Hub** page, fill in the following information.

Table 2–6 Supplier Hub Setup

Field Name	Required	Description
Supplier Hub Name *	Yes	The name that will be displayed on the iProcurement home page, Supplier Sites page, or search results that include items at this punchout site.
Hub Description *	No	Description displayed when the requester clicks the "more ..." link for Supplier Sites to view the entire list of punchout links and their descriptions (on the Supplier Sites page).
URL	Yes	The URL that iProcurement will use to log in to Exchange. For any Oracle Exchange, the URL should be http://www.<exchangename>.com/orders/LinkinLogin.jsp Example: https://exchange.oracle.com/orders/LinkinLogin.jsp

Table 2–6 Supplier Hub Setup

Field Name	Required	Description
Image URL	No	<p>Web address of the Exchange logo, if you want the logo to display next to the punchout link in iProcurement. The logos display only on the Supplier Sites page, when the requester clicks a link to display all punchout supplier sites. For Oracle Exchange, the URL should be <code>http://www.<exchangenname>.com/brands/<Operator short name>/marketing/<language code>/logo.gif</code>.</p> <p>Example: <code>https://exchange.oracle.com/brands/ox/marketing/US/logo.gif</code></p> <p>Ask the Exchange Operator for the correct URL.</p>
Username	Yes	The user name of the proxy user created on the Exchange. This user name will be used each time an iProcurement user punches out to the Exchange. The Exchange validates that it is a registered Exchange user name.
Password	Yes	The password for the proxy user account created on the Exchange. This is used in combination with the Username to establish the punchout session.
Retype Password	Yes	Retype the password.
Keywords *	No	<p>Any words entered in this field will be included when an iProcurement requester searches for items. For example, if you enter <i>fruit</i> as a keyword for this hub, any time the requester performs a search on <i>fruit</i> in iProcurement, a link to this supplier hub will be displayed in the search results along with any other search results.</p> <p>iProcurement returns the link to this supplier hub if the search that the requester enters matches any part of the keywords. For example, if you enter the keywords <i>legal size paper</i>, iProcurement returns the supplier hub if the requester's search includes the words <i>legal</i> or <i>paper</i> or <i>size</i>.</p>
Always display this hub with search results	No	If selected, this supplier hub will be displayed in the search results for any search performed in iProcurement.

Table 2–6 Supplier Hub Setup

Field Name	Required	Description
Items added to shopping cart from external punchout sites can be modified in iProcurement	No	If selected, the iProcurement requester will be allowed to modify the quantity of shopping cart items returned from the external site before submitting the cart. If you do not want the requester to modify the quantity for items added from this external site, do not select this option.
Send optional user and company information when connecting to the hub site	No	Not used for punchouts to or via Exchange.
Extend user's idle session timeout during punchout	No	<p>Setup in iProcurement includes establishing an idle time—a period of inactivity in iProcurement after which iProcurement logs out the user. (This setup is performed using the ICX:Session Timeout profile option.) While the requester is shopping on the Exchange, iProcurement is considered idle.</p> <p>If you select this option, the browser accesses the iProcurement server every time the requester opens an Exchange Web page, to keep the connection alive without logging out the requester. This option is used in a punchout to, but not via, Exchange.</p> <p>If you do not select this option and the session times out, when the requester returns to iProcurement, iProcurement prompts the requester to log in again, resumes the session, and retains the requester's shopping cart items. The requester can continue adding items to the cart or checking out the items.</p>

* These fields can be language-specific in a multiple language installation of iProcurement. To create language-specific versions, change your session language (click Return to Portal and, if your logon responsibility includes access to this function, click "Preferences" then "Change Session Language") and reenter the data in that language. For example, you have three languages installed—English, French, and Japanese. The first time you enter these fields, your session language is English. The data you enter, such as the keyword *apple*, is propagated to French and Japanese as well as English. Any change you make in English, such as adding *orange* to the keyword list, is made in all languages; however, once you change your session language to one other than the language in which you first entered the data, you must maintain that language separately. For example, you change your session language to French and change *apple* to *pomme*. Later, you change your session language to English and add *banana* to the keyword list. That addition is now made only in English and Japanese. The application detects that you already made a language-specific

change to the French version, and no longer propagates changes to French, unless your session language is currently French. Changes made in the "initial" language (the language in which you first entered the data) are propagated to *all* languages *until* you access another session language and change the data. Note that if the catalog data does not exist in French (for example), the French keywords will not find it.

6. Click Create to finish the setup

Download Punchout Suppliers from Exchange

Perform this step for the following models:

Model	Required?
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Once the supplier has defined its punchout on Exchange, use this step to download the supplier's punchout definition to iProcurement.

Note: The setup in this step applies to all operating units.

Prerequisite

Perform the step [Define Exchange Punchout in iProcurement](#) on page 2-19.

To download punchout suppliers from Exchange:

1. Log on to iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link to access the **Catalog Authoring Home** page.
3. On the **Catalog Authoring Home** page, click the "Download Punchout-Enabled Suppliers from Hub" link.
4. On the **Download Punchout-Enabled Suppliers from Hub** page, select a Supplier Hub Name to view a list of suppliers available on that Exchange hub.

You will be presented with a list of suppliers that have set up a punchout on the selected Exchange.

If you have trouble accessing the hub (Exchange), you may not be connecting successfully to the Exchange. (iProcurement connects to the Exchange to download the suppliers.) See [Chapter 4](#).

5. On the **Supplier Web Stores** page, select the suppliers whose punchout definitions you want to download to iProcurement. Each supplier represents one punchout.

Exchange Name

Home Edit ap905sup.us.oracle.com My Profile Shopping Cart Conference Help

Welcome Shopping Negotiations Purchases Intelligence

Catalog

Search [Search Tips](#)

[Advanced Search](#)
[Browse Categories](#)
[Edit Search Options](#)


Supplier Web Stores

Supplier Web Stores

Select Supplier(s) for synchronization with iProcurement and...

[Select All](#) [Clear All](#)

Previous 1 - 25 shown of 74 Next

Select	Logo	Company Name	Company Description
<input type="checkbox"/>		FSD Ltd	Ferry trips.
<input type="checkbox"/>		OEX 6.2	OEX to OEX Linkout.
<input type="checkbox"/>		R Holdings Ltd	Rental property company

Each supplier you select will be displayed to iProcurement requesters as an external supplier site in iProcurement.

6. Click Synchronize Suppliers.

The page will return you to iProcurement and display a confirmation message letting you know the punchout definitions for the suppliers you selected were successfully saved.

7. If you want to edit the punchout name or description, keywords, or other information for the downloaded punchouts, select the downloaded supplier on the **Maintain Punchout Suppliers** page and edit the fields that are available.

See the following section, [Define Supplier Punchout in iProcurement](#) on page 2-26, for information on the fields.

Define Supplier Punchout in iProcurement

Perform this step for the following model:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required

After the supplier has set up punchout access to its Web store, use this step to create a link in iProcurement to the supplier's site. The supplier must have followed the steps in [Chapter 3](#) to be able to accept a punchout request from iProcurement.

Note: The setup in this step applies to all operating units.

To create a punchout link directly to the supplier's site:

1. Log on to iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link to access the **Catalog Authoring Home** page.
3. On the **Catalog Authoring Home** page, click the "Create Direct Punchout Suppliers" link.

ORACLE
iProcurement

[Return to Portal](#) [Help](#)

Create Direct Punchout Supplier

New Punchout Suppliers can be added by completing the following form and clicking the Create button.

* Indicates a required field

* Punchout Supplier

Description

* URL

Image URL

* Company Name

* Password

(The password entered above shall be used as the site level password at the supplier site)

* Retype Password

Keywords

Separate keywords with spaces

Always display this supplier with search results

4. On the **Create Direct Punchout Supplier** page, enter the following information:

Table 2–7 Direct Punchout Setup

Field Name	Required	Description
Punchout Supplier *	Yes	The name that will be displayed on the iProcurement home page, Supplier Sites page, and search results that include items at this punchout site.
Description *	No	Description displayed when the requester clicks the "more ..." link for Supplier Sites to view the entire list of punchout links and their descriptions (on the Supplier Sites page).
URL	Yes	The URL that iProcurement will use to log in to the supplier site. It should include not only the URL, but the program name that will receive and process the login request from iProcurement. Example: <code>http://www.suppliersite.com/buyerLogin.jsp</code>
Image URL	No	Web address of the supplier's logo, if you want the logo to display next to the punchout link in iProcurement. The logos display only on the Supplier Sites page, when the requester clicks a link to display all punchout supplier sites. Example: <code>http://www.suppliersite.com/logo.gif</code>

Table 2–7 Direct Punchout Setup

Field Name	Required	Description
Company Name	Yes	Your company name or ID. If the supplier validates this name or ID when iProcurement requesters access the punchout, the supplier needs to provide you with the value. If the supplier does not validate a company name or ID, enter any value.
Password	Yes	The password required by the supplier. The password will be used as a site-level password to access the supplier site. The supplier needs to provide you with the value.
Retype Password	Yes	Retype the password.
Keywords *	No	<p>Any words entered in this field will be included when an iProcurement requester searches for items. For example, if you enter <i>fruit</i> as a keyword for this supplier site, any time the requester performs a search on <i>fruit</i> in iProcurement, a link to this supplier site will be displayed in the search results along with any other search results.</p> <p>iProcurement returns the link to this supplier site if the search that the requester enters matches any part of the keywords. For example, if you enter the keywords <i>legal size paper</i>, iProcurement returns the supplier site if the requester's search includes the words <i>legal</i> or <i>paper</i> or <i>size</i>.</p>
Always display this supplier with search results	No	If selected, this supplier site will be displayed in the search results for any search performed in iProcurement.

Table 2–7 Direct Punchout Setup

Field Name	Required	Description
Items added to shopping cart from external punchout sites can be modified in iProcurement	No	If selected, the iProcurement requester will be allowed to modify the quantity of shopping cart items returned from the external site before submitting the cart. If you do not want the requester to modify the quantity for items added from this external site, do not select this option.
Send optional user and company information when connecting to the supplier site	No	<p>If selected, the SupplierLoginRequest XML document will include additional user information when it is sent to the supplier site. It is up to the supplier to decide whether or how to use this information to perform additional validation of the user.</p> <p>The SupplierLoginRequest XML document always sends basic user information fields, such as operatingUnit, userEmail, and appUserName. If you select this option, the SupplierLoginRequest XML document sends additional user and company information, such as workPhone, title, manager, and functional currency. For a complete list, see SupplierLoginRequest on page B-8; look for the fields described as "optional extended data."</p>
Extend user's idle session timeout during punchout	No	<p>Setup in iProcurement includes establishing an idle time—a period of inactivity in iProcurement after which iProcurement logs out the user. (This setup is performed using the ICX:Session Timeout profile option.) While the requester is shopping on the supplier site, iProcurement is considered idle.</p> <p>This option works only if the supplier site is set up to access the iProcurement server every time the requester opens a Web page on the supplier's site, to keep the connection alive without logging out the requester.</p> <p>If you do not select this option (or if the supplier site is not set up to make use of this option) and the session times out, when the requester returns to iProcurement, iProcurement prompts the requester to log in again, resumes the session, and retains the requester's shopping cart items. The requester can continue adding items to the cart or checking out the items.</p>

* These fields can be language-specific in a multiple language installation of iProcurement. To create language-specific versions, change your session language (click Return to Portal and, if your logon responsibility includes access to this function, click "Preferences" then "Change Session Language") and reenter the data in that language. For example, you have three languages installed—English, French, and Japanese. The first time you enter these fields, your session language is English. The data you enter, such as the keyword *apple*, is propagated to French and Japanese as well as English. Any change you make in English, such as adding *orange* to the keyword list, is made in all languages;

however, once you change your session language to one other than the language in which you first entered the data, you must maintain that language separately. For example, you change your session language to French and change *apple* to *pomme*. Later, you change your session language to English and add *banana* to the keyword list. That addition is now made only in English and Japanese. The application detects that you already made a language-specific change to the French version, and no longer propagates changes to French, unless your session language is currently French. Changes made in the "initial" language (the language in which you first entered the data) are propagated to *all* languages *until* you access another session language and change the data. Note that if the catalog data does not exist in French (for example), the French keywords will not find it.

5. Click Create to finish the setup.

Resequence Punchout Display in iProcurement

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Optional
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Optional
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Optional
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Optional

Use the resequencing feature in iProcurement to change the order in which multiple punchout links display to requesters on the iProcurement home or search pages. On some pages, only the first few punchout links appear. A "more ..." link displays the rest of the links, if there are more.

The following illustration shows where the punchout links display on the iProcurement home page, in the lower-left corner:

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iProcurement

Return to Portal Shopping Cart Help

Home Shop Requisition Status My Profile

Find a Product
[Search Box] Go

Browse Categories
[0326 Browsing Category](#)
[0325 Cat World](#)
[0325 Search Governor](#)
[0326 Adhesives and sealants](#)
[0326 Bearings, bushings, wheels, and gears](#)
[0326 Castings](#)
[0326 Concrete, cement and plaster](#)
[0326 Diodes, transistors and semiconductor devices](#)
[0326 Doors, windows and glass](#)
[0326 Dyeing and tanning extracts](#)
[more ...](#)

Browse Lists
[My Favorites List](#)
[Public Lists](#)

Shop Supplier Sites
[C — Punchout](#)
[Certification Exchange](#)
[more ...](#)

[Create New Catalog Request](#)

Purchasing News
 March 6, 2000.
 This is where the customer puts their own purchasing news items (this is an HTML plugin).

To Do List
 Going away? Click here to [reassign To Do notifications while you're out of the office.](#)
 You have no open To Do notifications.

Requisitions at a Glance
 You have no requisitions.

Welcome, Rachel Kortel
 Internet Procurement

new to Purchasing?

- Check [Frequently Asked Questions](#)
- Review [Purchasing policies](#)

... or ready to get started?

Just click a task in the Purchasing process flow and you're on your way...

purchasing process

- go shopping
- approve requisitions
- check requisition status
- receive items

You can change the order in which all punchout links display

To resequence punchout links:

1. Log on to iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link to access the **Catalog Authoring Home** page.
3. On the **Catalog Authoring Home** page, click the "Re-sequence Punchout Display" link.

A list of all punchout suppliers enabled in iProcurement is displayed. The following illustration shows an example list of punchout suppliers displayed on the **Maintain Punchout Display Sequence** page.

Maintain Punchout Display Sequence

Define the display sequence in which the punchouts will appear when the search results yield multiple Supplier/Hub punchouts.

Update

Sequence	Punchout	Description	Source
<input type="text" value="4"/>	622RT-Rachel	Rachel's Punchout	
<input type="text" value="5"/>	iP---	iP---	Internal
<input type="text"/>	iP--- elinTest 1	iP--- elinTest 1	Internal
<input type="text" value="5"/>	iP--- ehlin	Evelyn's punchout	Internal
<input type="text" value="1"/>	C---Punchout	C--- Punchout	
<input type="text" value="2"/>	S--- Depot	Customizable stationary	

- Enter the sequence number in the left column, according to how you want the list of suppliers ordered when it is displayed to iProcurement requesters.

You can reuse a sequence number. Those punchouts with the same sequence number will display at that sequence. Within the list of them, however, they will display in the default iProcurement order. Punchouts without a sequence number display at the end, as they are currently ordered.

- Click Update to re-order the list.

Use Realms to Control Punchout Access

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Optional
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Optional
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Optional
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Optional

Use realms to assign punchout links to certain Oracle Applications responsibilities or requesters (users). Realms control punchout access at the responsibility and user level only. (A responsibility determines which applications and functions a user can access. For example, the Internet Procurement responsibility gives access to iProcurement.)

For example, assume the following punchout sites are defined in iProcurement:

- Exchange.Oracle.com
- Office Supplies Unlimited
- Computer Components Corporation

Company policy limits the purchasing of computer hardware to the Information Technology (IT) department. To adhere to this policy and restrict certain users from ordering these types of items, two realms are created. One realm grants access to all of the punchout sites mentioned above and is assigned to members of the IT department. The other realm grants access only to Exchange.Oracle.com and Office Supplies Unlimited. This realm is assigned to all other employees.

Until you assign realms, users have access to all punchouts defined in iProcurement. Once you assign a realm, the affected user or users have access only to punchouts in the assigned realm.

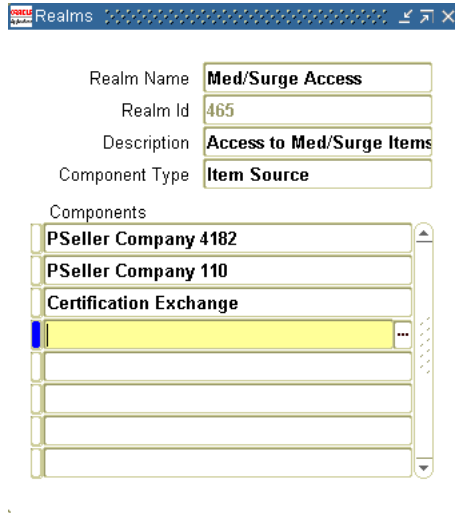
Realms are *additive*. For example, if you assign a realm to a responsibility, all users assigned that responsibility have access to that realm; however, you can assign additional realms to any of these individual users that only they have access to.

There are two steps to setting up realms for punchout access:

1. Create the realm.
2. Assign the realm to a responsibility or user.

To create a realm:

1. Log in to Oracle Purchasing and use the following navigation path to open the Realms window: Setup > E-Catalog Admin > Realms.
2. In the Realms window, enter your own Name and Description for the realm.



3. Select Item Source as the Component Type. (Item Source means you are defining a realm for punchout.)
4. In the Components section, use the list of values (LOV) to select the punchout definitions to which anyone assigned this realm has access.
5. Save your changes.
6. Note the Realm ID that Purchasing automatically assigns to the realm. You will need to reference this ID later.

To assign the realm to a responsibility:

1. Log on to Oracle Applications using the System Administrator responsibility.
2. Open the Responsibilities window using the following navigation path: Security > Responsibility > Define.
3. Query the responsibility to which you will assign the realm.

Responsibilities

Responsibility Name: **IPG iProcurement プロジェクト**

Application: **Oracle Self-Service Web Applications**

Responsibility Key: **IPG_IP_PROJ**

Description: **IPG iProcurement プロジェクト**

Effective Dates: From **25-FEB-2002** To

Available From:

- Oracle Applications
- Oracle Self Service Web Applications
- Oracle Mobile Applications

Menu: **Internet Procurement Home**

Web Host Name:

Web Agent Name:

Data Group:

Name: **Standard**

Application: **Oracle Self-Service Web Applicati**

Request Group:

Name:

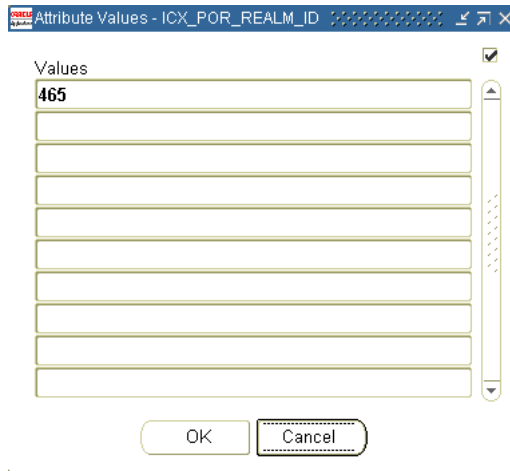
Application:

Menu Exclusions | Excluded Items | **Securing Attributes**

Name	Application
ICX_POR_REALM_ID	Oracle Self-Service Web Applications

Values...

4. In the Securing Attributes tabbed region, in the Name field, use the LOV to select ICX_POR_REALM_ID.
5. Choose the Values button.
6. In the Values fields, enter the Realm ID that you noted earlier for each realm you want to assign to this responsibility.



7. Click OK.
8. Save your changes.
9. Repeat these steps for each responsibility to which you want to assign the realms.

To assign the realm to users:

1. Log on to Oracle Applications using the System Administrator responsibility.
2. Open the Users window using the following navigation path: Security > User > Define.
3. Query the user (person) to whom you want to assign the realm.
4. In the Securing Attributes tabbed region, in the Name field, use the LOV to select ICX_POR_REALM_ID.

The screenshot shows the Oracle Users form for user RKORTE. The form is divided into several sections:

- User Information:** User Name (RKORTE), Description (Rachel), Password (empty), Password Expiration (Days, Accesses, None - None is selected), Person (Korte, Rachel), Customer (empty), Supplier (empty), E-Mail (empty), Fax (empty).
- Effective Dates:** From (12-APR-2002), To (empty).
- Responsibilities:** A tabbed region with "Securing Attributes" selected. It contains a table with the following data:

Attribute	Application	Value
ICX_POR_REALM_ID	Oracle Self-Service Web Appl	465

5. For the Value, enter the Realm ID that you noted earlier for the realm you want to assign to the user.
6. In the Securing Attributes tabbed region, create a line for each realm you want to assign to the user. Select ICX_POR_REALM_ID in the Name field and the Realm ID for each realm.
7. Save your work.

Multiple Organization Punchout to Exchange

If you are implementing Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML), and you have multiple organizations set up in Oracle Applications, you can configure Exchange to mirror the multiple organizations setup.

Assume the following scenario: your multiple organizations that are set up in Oracle Applications include the following two operating units:

- Vision Corp. Germany

- Vision Corp. USA

The supplier Acme 1 supplies goods only to Vision Corp. USA, and the supplier Acme 5 supplies goods only to Vision Corp. Germany. You want requesters (users) associated with the operating unit Vision Corp. Germany to see content only from Acme 5 when punching out to Exchange. You want users associated with the operating unit Vision Corp. USA to see content only from Acme 1.

To accomplish this, perform the following steps on Exchange:

- When you register your buying company on Exchange, register two companies—one for Vision Corp. Germany and one for Vision Corp. USA. (See [Register Buying Organization on the Exchange](#) on page 2-8.)
- When you register users for your buying company on Exchange, register a proxy user for Vision Corp. Germany (you could use the user name USApunchout) and another proxy user for Vision Corp. USA (you could use the user name GERpunchout).

Perform the following steps in Oracle Applications and iProcurement:

1. Create a responsibility called (for example) Requisitioner USA.
2. For the Requisitioner USA responsibility, set the profile option *MO: Operating Unit* to the operating unit Vision Corp. USA. This step associates the Requisitioner USA responsibility with the Vision Corp. USA operating unit.
3. Create a punchout for Vision Corp. USA. (See [Define Exchange Punchout in iProcurement](#) on page 2-19.) You could name the punchout Exchange - USA. The user name and password associated with this punchout should be the same as the user name and password associated with the user you registered under Vision Corp. USA on Exchange.
4. Create a realm for the punchout (Exchange - USA) created in the previous step. See [Use Realms to Control Punchout Access](#) on page 2-32.
5. Assign this realm to the responsibility Requisitioner USA.
6. Repeat these steps for the operating unit Vision Corp. Germany.

When all of these steps are completed, the following data would exist:

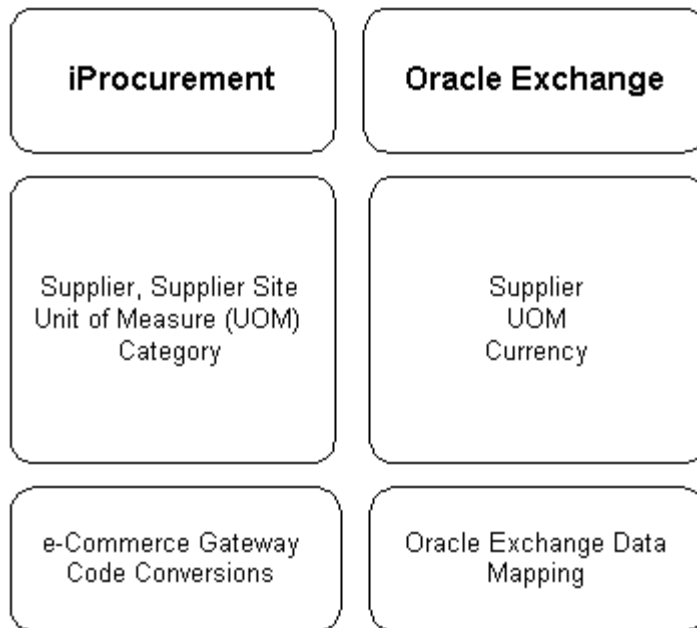
Oracle Applications Operating Unit	Responsibility	Punchout (Supplier Hub)	Exchange Company	Exchange User
Vision Corp. USA	Requisitioner USA	Exchange - USA	Vision Corp. USA	USApunchout
Vision Corp. Germany	Requisitioner GER	Exchange - GER	Vision Corp. Germany	GERpunchout

When the supplier loads catalog items and pricing to the Exchange catalog, it can specify prices specifically for a buying company on Exchange. For example, Acme 5 will load prices that are visible only to Vision Corp. Germany, and Acme 1 will load prices that are visible only to Vision Corp. USA.

Furthermore, because of the realms configuration, the punchout link Exchange - USA is visible only to a requester who is assigned the responsibility Requisitioner USA. This requester has access only to catalog content that Acme 1 loaded for the company Vision Corp. USA. Similarly, the punchout link Exchange - GER is visible only to a requester who is assigned the responsibility Requisitioner GER. This requester has access only to catalog content that Acme 5 loaded for Vision Corp. Germany.

Understand Data Mapping

Data mapping enables you to define the conversions between buyer codes and supplier codes. For example, a buyer uses the unit of measure (UOM) code EA for Each. The supplier uses E. You can use either iProcurement (specifically, e-Commerce Gateway) or Exchange to map these codes for you. Whether you use e-Commerce Gateway or Exchange to do the mapping depends on which model you use.

Figure 2–1 Data Mapping Overview

The illustration above shows that for any punchout model initiated from iProcurement, the buyer can set up e-Commerce Gateway to map the following attributes: supplier, supplier site, UOM, and category. For most punchout models that involve Exchange, the buyer or supplier (or both) can set up Exchange to map the following attributes: supplier, UOM, and currency.

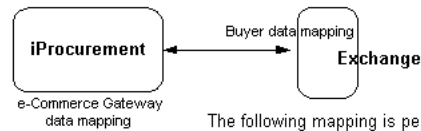
Some models use only one mapping method—either e-Commerce Gateway or Exchange. Other models give you a choice, though one is recommended over the other. The following diagram and table summarize the mapping methods by model.

Setting up data mapping is usually required if the buyer and supplier use different codes to identify the supplier, supplier site, UOMs, or categories.

The following diagram shows which mapping—supplier’s mapping on Exchange, buyer’s mapping on Exchange, or buyer’s mapping in e-Commerce Gateway—is used for each model.

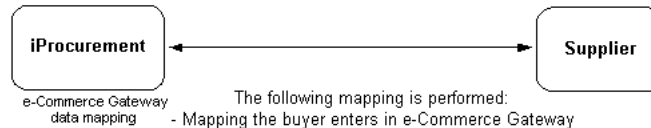
Figure 2–2 Data Mapping Flow by Model

Model 1: iProcurement to Exchange



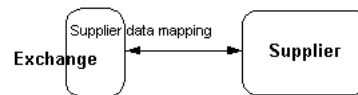
The following mapping is performed:
 - Mapping the buyer enters on Exchange, or
 - Mapping the buyer enters in e-Commerce Gateway *

Model 2: iProcurement to Supplier



The following mapping is performed:
 - Mapping the buyer enters in e-Commerce Gateway

Model 3: Exchange to Supplier



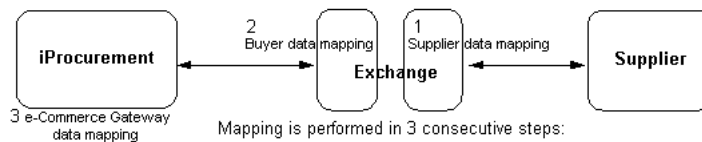
The following mapping is performed:
 - Mapping the supplier enters on Exchange

Model 4: iProcurement to Supplier via Exchange (XML)



The following mapping is performed:
 - Mapping the buyer enters in e-Commerce Gateway
 (cart is sent directly from supplier to buyer)

Model 5: iProcurement to Supplier via Exchange (cXML)



Mapping is performed in 3 consecutive steps:
 1 - Exchange looks for supplier's Exchange mappings if any.
 2 - Exchange looks for buyer's Exchange mappings if any.
 3 - iProcurement uses buyer's mappings in e-Commerce Gateway. *

* e-Commerce Gateway recommended

The following table describes the diagram above by summarizing which mapping

method—e-Commerce Gateway or Exchange—to use for each model.

Table 2–8 Data Mapping by Model

Model	Mapping Methods	Mapping Performed
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Category mapping, which is required, can be performed only in e-Commerce Gateway; therefore, for easier management, it is better to use e-Commerce Gateway; however, you can also use Exchange to perform mapping for codes other than categories.	e-Commerce Gateway mapping is performed once the requester brings the cart back iProcurement. Exchange performs the mapping after the requester finishes shopping, just before the requester returns to iProcurement.
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	You can use only e-Commerce Gateway for this model.	e-Commerce Gateway mapping is performed once the requester brings the cart back iProcurement.
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	You can use only the supplier’s mapping on Exchange for this model.	Exchange performs the mapping after the buyer completes shopping on the supplier site, before the cart is displayed to the buyer in Exchange.
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	You can use only e-Commerce Gateway for this model. (This model bypasses Exchange data mapping.)	e-Commerce Gateway mapping is performed once the requester brings the cart back iProcurement.
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Category mapping, which is required, can be performed only in e-Commerce Gateway; therefore, for easier management, it is better to use e-Commerce Gateway; however, you can also use Exchange to perform mapping for codes other than categories.	e-Commerce Gateway mapping is performed once the requester brings the cart back iProcurement. Exchange performs the mapping during cXML-to-XML conversion, before the cart is returned to iProcurement in the final step of the flow.

Sometimes supplier and supplier site mapping is not set up in e-Commerce Gateway, depending on the requirements of the model. See [Set Up Supplier and Site Mapping](#) on page 2-43 for more information.

To set up data mapping on Exchange, see [Set Up Data Mapping on Exchange](#) on page 2-49.

To set up data mapping in e-Commerce Gateway, see [Set Up Data Mapping in e-Commerce Gateway](#) on page 2-51.

Set Up Supplier and Site Mapping

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Optional
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Optional
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Optional
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Optional

There are three methods for mapping suppliers and supplier sites:

- Use e-Commerce Gateway.
- Use a combination of Exchange and the EDI Location field.
- Use the EDI Location field.

iProcurement maps suppliers and supplier sites in the following manner:

- If the EDI Location field contains a value, iProcurement matches this value to the value in the <supplierDUNS> or <supplierTradingPartnerCode> tags in the XML punchout document, whichever is available.
- If the EDI location field does not contain a value, iProcurement references e-Commerce gateway mapping to look for supplier and site matches to the value in the <supplierName> tag.
- If no matches are found in the EDI Location field or e-Commerce Gateway mapping, iProcurement populates the Supplier field on the requisition with the value in the <supplierName> tag. (If the supplier is defined in Oracle Applications in the Suppliers window, this supplier will also default on to the purchase order; otherwise, the buyer in Oracle Purchasing must enter a defined supplier and site on the purchase order.)

The following table summarizes the recommended supplier and supplier site mapping method for each model:

Table 2–9 Supplier and Site Mapping by Model

Model	Mapping Methods	Applicable Steps
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Use the Exchange and EDI Location field method. *	Use Exchange and EDI Location Field on page 2-44 Enter the EDI Location Field on page 2-48
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	You can use either e-Commerce Gateway or the EDI Location field, but the EDI Location field is preferred because this method maps supplier site information even if the supplier does not send it in the punchout document.	Enter the EDI Location Field on page 2-48 Set Up Data Mapping in e-Commerce Gateway on page 2-51
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	You can use either e-Commerce Gateway or the EDI Location field, but the EDI Location field is preferred because this method maps supplier site information even if the supplier does not send it in the punchout document.	Enter the EDI Location Field on page 2-48 Set Up Data Mapping in e-Commerce Gateway on page 2-51
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Use the Exchange and EDI Location field method. *	Use Exchange and EDI Location Field on page 2-44 Enter the EDI Location Field on page 2-48

* You cannot use e-Commerce Gateway because, in these models, the <supplierSite> information is not passed back to iProcurement for e-Commerce Gateway to map; however, use of the Exchange and EDI Location field method does accomplish the supplier site mapping.

Use Exchange and EDI Location Field

To use the Exchange and EDI Location fields method, perform the following steps below:

1. Decide how to identify the supplier.
2. Define the order of trading partner identification values.
3. Identify the supplier's DUNS number or trading partner ID.
4. Enter the EDI Location field.

To decide how to identify the supplier:

First choose how you want to identify the supplier before you map it. Exchange can pass one of the following values to iProcurement to identify the supplier:

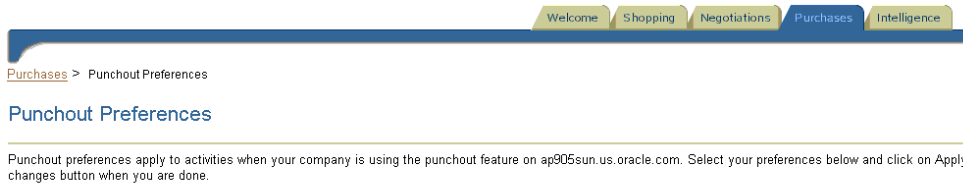
- Supplier DUNS number if the supplier provided one when registering on Exchange. (After registration, the supplier can supply a DUNS number by editing its Company Profile in the Company Administration application.)
- The buyer-mapped trading partner ID on Exchange if the buyer mapped the supplier's trading partner ID to its own ID using the **Data Mapping** page.
- The trading partner ID that Exchange assigns to the supplier. (You can find this ID in the Trading Partner Directory, accessible from the Welcome tab in any application on Exchange.)

By default, Exchange uses the above order to identify the supplier. First, it looks for a DUNS number if any; if none, it looks for a buyer-mapped trading partner ID if any; if none, it uses the Exchange-assigned trading partner ID.

You can change this default order to better suit your system's needs, following the next steps. For example, if the buying company chooses to use the trading partner ID that Exchange assigns or its own mapped trading partner ID, the supplier can change its DUNS number without affecting the buyer's mapping.

To define the order of trading partner identification values:

1. Log on to Exchange using the login user name and password you used while registering your buying organization.
2. Access the Buying application (on the **Home** page, click the "Buying" link).
3. Click the Purchases tab.
4. On the **Purchases** home page, click the "Punchout Preferences" link.
5. On the **Punchout Preferences** page, specify the order in which the three possible identification values listed above should be passed. An order must be defined for each value and each value can be defined only once.



Purchases > Punchout Preferences

Punchout Preferences

Punchout preferences apply to activities when your company is using the punchout feature on ap905sun.us.oracle.com. Select your preferences below and click on Apply changes button when you are done.

Trading Partner Identification

If your company is performing a punchout from Oracle iProcurement application to ap905sun.us.oracle.com or to external cXML supplier via ap905sun.us.oracle.com, you can configure your own hierarchy to determine what value is sent back to Oracle iProcurement to identify the supplier in the shopping cart XML. In order, ap905sun.us.oracle.com sends one of the following values, whichever is available first.

1. Supplier DUNS Number - as given in the supplier's company profile.
2. Mapped Trading Partner ID - as given in the "System to my company" field if your company has done trading partner data mapping for this supplier.
3. Trading Partner ID - as given in the supplier company's profile.

To choose a different order, enter your selection below, use each value once and only once.

1.
2.
3.

To identify the supplier's DUNS number or trading partner ID:

1. Log on to Exchange using the login user name and password you used while registering your buying organization.
2. On the **Home** page, click the "Company Admin" link.
3. In the Welcome tab, click "Trading Partner Directory" in the task bar below the tab.
4. Search for the supplier and click Go.
5. Note the supplier's Trading Partner ID and DUNS Number (if any).

Trading Partner Search Results for %illa%

Select Trading Partner and...

[View Details](#)Sort by Ascending Descending

1 - 18 shown of 18

Select	Trading Partner	Trading Partner Type	DUNS Number	Address	Trading Partner ID
<input checked="" type="radio"/>	Camilla001		123456789	123 MAIN STREET Annapolis MD United States	15303
<input type="radio"/>	Godzilla			6969 North South St. Maui HI United States	12552
<input type="radio"/>	Gorilla			500 Parkway Redwood Shores CA United States	25781

- Return to the **Home** page and click the "Company Admin" link.
- Click the Application Setup tab, then the "Data Mapping" link.
- On the **Data Mapping** page, select Trading Partner and click Edit Mapping.

Welcome Company Billing **Application Setup**

Administering for **Bananas Inc.**

[Application Setup](#) > Data Mapping**Data Mapping**

Select a data type and press the Edit Mapping button to map the ap905sun.us.oracle.com values to your preferred values for transactions sent to and from your company.

Select	Description
<input checked="" type="radio"/>	Additional Service
<input type="radio"/>	Carrier for goods to be delivered
<input type="radio"/>	Collect, Prepaid, None
<input type="radio"/>	Container Type
<input type="radio"/>	Country of Origin Code
<input type="radio"/>	Currency in which monetary amounts will be expressed
<input type="radio"/>	Export, Import or Domestic
<input type="radio"/>	Freight or Road Transit

9. Search for the supplier and click Go.
10. Note the value in the Exchange to My Company field (the right-most column) for the supplier.

This value, if it exists, is the mapped trading partner ID for the supplier.

Enter the EDI Location Field

To use the EDI Location field to map supplier sites, perform these steps:

1. In Oracle Purchasing, use the following navigation to open the Suppliers window: Supply Base > Suppliers.
2. Find the Supplier Name for the supplier, then choose Sites.
3. Find the Site Name for the supplier, then click the EDI tabbed region.

The screenshot shows the Oracle Supplier Sites form for 'GORILLA' in the 'United States'. The 'EDI Gateway' tab is selected, and the 'EDI Location' field contains the value '25871'. Other fields include Site Name, Country, Address, City, State, Postal Code, Province, County, Language, and Inactive On. The form also includes tabs for General, Contacts, Accounting, Control, Payment, Bank Accounts, EDI, Invoice Tax, and Withholding Tax.

4. In the EDI Location field, enter either of the following:

- For Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) or Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML), enter whichever ID Exchange is passing for that supplier as determined by the trading partner hierarchy: DUNS number, mapped trading partner ID, or Exchange-assigned trading partner ID.
- For Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML) or Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML), enter the value the supplier passes in the <supplierDUNS> or <supplierTradingPartnerCode> field.

Use e-Commerce Gateway

If you will be using e-Commerce Gateway to map the supplier and supplier site, see [Set Up Data Mapping in e-Commerce Gateway](#) on page 2-51.

Set Up Data Mapping on Exchange

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Optional
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Optional

Use this step to map the codes that are used in Exchange to the codes that you use, if they are different. Data mapping allows Exchange to recognize codes that are passed to it by the supplier or to send codes to the buyer that the buyer's system recognizes.

You can use Exchange to map the following attributes:

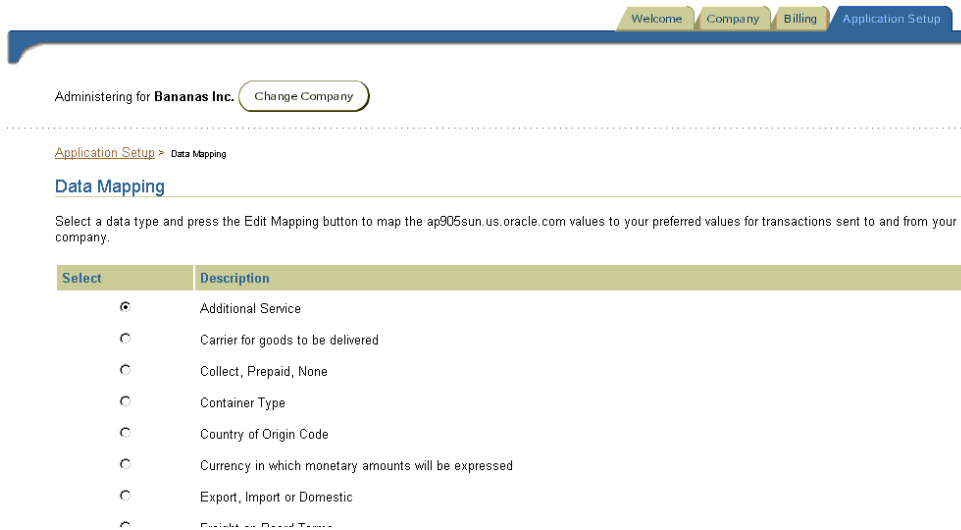
- UOM
- Currency
- Supplier (known as the trading partner on the Exchange)

For an overview of data mapping, see [Understand Data Mapping](#) on page 2-39.

If you perform no mapping on Exchange, the value is passed as is from Exchange to the buyer's system.

To map currency and UOM codes:

1. Access Exchange using a signon that has been assigned the Company Administrator job function. (The user name and password you chose while registering your company is typically assigned the Company Administrator job function.)
2. On the **Home** page, click the "Company Admin" link, then the Application Setup tab.
3. Click the "Data Mapping" link.
4. On the **Data Mapping** page, select the Currency data type to map currency codes or the Unit of Measurement data type to map UOM codes, and click Edit Mapping.



5. On the **Edit Mapping** page, display the code you wish to map by entering the code in the Search field and clicking Go, or by clicking the letter link that corresponds to the first letter of the code. The resulting display shows all codes that matched your search criteria.
6. If your company does not use the code shown in the Exchange Value column, enter the code you use in the Exchange to My Company field to define the correct mapping.

Description	Exchange Value	My Company to Exchange	Exchange to My Company
Description of the code	The value used internally by Exchange.	For punchout, the buyer can leave this value as is.	The value you want Exchange to pass to your system in place of Exchange's value.

For example:

- Your company may use US as the currency code for *US dollars* while Exchange uses USD. In this case, you would enter US in the Exchange to My Company field.
- Your company may use CSE as the UOM code for *case* while Exchange uses CS. In this case, you would enter CSE in the Exchange to My Company field.

7. Repeat these steps for each code you wish to map.

8. Click Apply Changes.

Set Up Data Mapping in e-Commerce Gateway

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Use e-Commerce Gateway to map the following values that the supplier sends to values you use in iProcurement:

- Supplier
- Supplier site
- Unit of measure (UOM)

- **Category**

You cannot map currency codes in e-Commerce Gateway for use with punchout. iProcurement uses the International Standards Organization (ISO) currency codes.

At a minimum, iProcurement requires that all categories sent by the supplier in the punchout shopping cart document be mapped to categories set up in Oracle Applications. Otherwise, creation of the requisition will fail. You cannot create a "catchall" category for any category that has not been mapped. *All* categories that the supplier sends must be mapped to a specific or corresponding category defined in Oracle Applications, following the steps below.

For an overview of data mapping, see [Understand Data Mapping](#) on page 2-39.

To map the supplier, supplier site, UOM, and category in e-Commerce Gateway:

1. In Oracle Applications, access the eCommerce Gateway application and use the following navigation to open the Code Conversion Values window: Setup > Code Conversion > Define Code Conversion Values.

The code conversions you define here apply to all operating units.

2. In the Category field, choose one of the following values:

- ITEM_CATEGORY to map a category
- UOM to map a UOM
- VENDOR_NAME to map the supplier
- VENDOR_SITE to map a supplier site

3. Enter your own Description for the mapping.

4. For the Direction, enter IN or BOTH.

IN means that the mapping applies to incoming codes. BOTH means the mapping applies to both incoming codes and codes that you send if you are using the mapping for purposes outside of punchout. Use IN if there is more than one supplier code value to map to one Oracle Applications code value. (BOTH will not work in this case.)

5. For Key 1, enter OracleExchange (from the <catalogTradingPartner> tag in the punchout documents) if you are doing mapping for the following models:

- Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

Enter the supplier name (from the <supplierName> tag in the punchout documents) if you are doing the mapping for the following models:

- Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)
- Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)

If you have punchouts to multiple Exchanges, you still must enter OracleExchange for each. The mappings you enter for each OracleExchange row apply to all Exchanges.

If you leave Key 1 blank, the mapping applies to all suppliers and Exchanges.

6. Key 2 through Key 5 are not used.
7. For the Internal Value, enter the code that Oracle Applications uses.
8. For the External 1 value, enter the code that Exchange or the supplier passes to you.

Recall how mapping is performed for each model:

- Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML). Enter the code that Exchange uses. Enter the Exchange code, such as EA for *each*. If you have set up data mapping on Exchange (though, typically, you would map codes such as UOM *either* in Exchange or e-Commerce Gateway), enter the mapped code. For example, if you mapped the Exchange UOM code of EA to EACH on Exchange, EACH is the code that Exchange passes to iProcurement, and you would enter EACH here.
- Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML). Enter the code the supplier uses.
- Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML). (Not applicable. The supplier sets up mapping on the Exchange.)
- Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML). Enter the code the supplier uses.
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML). Enter the code the supplier uses, unless you have also set up data mapping on Exchange. Typically you would set up mapping *either* in Exchange or in e-Commerce Gateway, but if you performed data mapping on Exchange, use the mapped code. For example, if you mapped the Exchange UOM code of EA to EACH on Exchange,

EACH is the code that Exchange passes to iProcurement, and you would enter EACH here.

9. External 2 is used only where indicated in [Table 2–10](#) below. External 3 through External 5 are not used.
10. If you want to map a single internal code to more than one supplier code, create a new row for each mapping.

Category	Description	Direction	Key 1	Internal Value	External 1	External 2	Key 5
ITEM_CATEGO	Punchout Cate	IN	OracleExcha	EXPENSE.EX	Information 1		
ITEM_CATEGO	Punchout Cate	IN	Supplier Inc.	MISC.MISC	Office Suppli		
UOM	Punchout UOM	IN	OracleExcha	Each	EA		

The following table, like the illustration above, shows some examples and provides the XML tag for each mapped value:

Table 2–10 Example Mapping and XML Tags

Category	Direction	Key1	Internal Value	External 1	External 2
ITEM_CATEGORY	IN	OracleExchange or supplier name (such as Supplier Inc). See the instructions above for what to enter in the Key 1 field, depending on which model you use.	Internal category code used in Oracle Applications, such as MISC.MISC.	External category code used by the hub or supplier, such as Bond Paper, contained in the <categoryCode> tag in the XML documents.	Not used.
UOM	IN	OracleExchange or supplier name (such as Supplier Inc). See the instructions above for what to enter in the Key 1 field, depending on which model you use.	Internal UOM code used in Oracle Applications, such as BOX.	External UOM code used by the hub or supplier, such as BX, contained in the <supplierUOMType> tag in the XML documents.	If the hub or supplier provides a value, such as 12 (for Box of 12) in the <supplierUOMQuantity> tag, enter that value here. *
VENDOR_NAME	IN	Leave this field blank for VENDOR_NAME.	Internal supplier name defined in the Suppliers window in Oracle Applications, such as Supplier Inc.	External supplier name, used by the hub or supplier, such as Supplier Incorporated, contained in the <supplierName> tag in the XML documents.	Not used.
VENDOR_SITE	IN	Leave this field blank for VENDOR_SITE.	Internal supplier site name defined in the Supplier Sites window in Oracle Applications, such as HQ.	External supplier name used by the hub or supplier, such as Supplier HQ, contained in the <supplierName> tag in the XML documents.	External supplier site name used by the supplier, contained in the <supplierSite> tag in the XML documents.

* If the supplier sends a value in the <supplierUOMQuantity> tag, you must provide an External 2 value; otherwise, the mapping will fail and the item will not be added to the cart.

Updating Punchout Setup

The following sections describe the kinds of updates you might perform to your punchout setup and the effect they might have.

Maintaining Punchout Suppliers

This information applies to the following models:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Optional
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Optional
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Optional

Use the **Maintain Punchout Suppliers** page in iProcurement to maintain the setup for either a direct punchout to a supplier or to suppliers downloaded from the Exchange. The Exchange is also known as the *supplier hub*. (Use the **Maintain Supplier Hubs** page to maintain the setup for a punchout to Exchange directly. See [Define Exchange Punchout in iProcurement](#) on page 2-19.)

To maintain downloaded and direct punchouts:

1. Log on to iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link to access the **Catalog Authoring Home** page.
3. On the **Catalog Authoring Home** page, click the "Maintain Punchout Suppliers" link.

The **Maintain Punchout Suppliers** page displays the following information:

- Supplier—The name of the punchout you downloaded from Exchange or entered when you created the direct punchout link to the supplier.
- Description—The description for the punchout you downloaded from Exchange or entered when you created the direct punchout link to the supplier.

- Source—If the supplier was downloaded from Exchange, the source is the supplier hub name. If you created the punchout link to the supplier directly, the value in this column is Internal.
4. Click the supplier name to open the **Edit Punchout Supplier** page and edit the supplier-specific details:

If editing a punchout downloaded from Exchange, the Punchout Supplier, Description, and Keywords fields on this page were automatically downloaded with the punchout, and you can edit them here. As shown in the illustration below, you can edit the following fields for a downloaded punchout:

- Punchout Supplier
- Description
- Keywords. When you first download the punchout, the keywords shown here, if any, are those the supplier entered for the punchout. You can edit or replace these entirely with your own keywords.
- Always display this supplier with search results
- Items added to shopping cart from external punchout sites can be modified in iProcurement
- Send optional user and company information when connecting to the hub site

Note: Once you modify a downloaded punchout, your changes are preserved and you cannot download the punchout again. (iProcurement detects that it was already downloaded and, to avoid overwriting the one you modified, does not download it again.)

Edit Punchout Supplier

Only certain attributes for downloaded punchout suppliers can be modified.

* Indicates a required field



* Punchout Supplier

Description

Source **exchange.am.com**

Keywords

[Separate keywords with spaces](#)

Always display this supplier with search results

Items added to shopping cart from external punchout sites can be modified in iProcurement

Send optional user and company information when connecting to the hub site



If editing a direct punchout to a supplier, the fields on this page contain the values that you entered while creating the direct punchout link. As shown in the illustration below, you can edit the following fields for a direct punchout:

- Punchout Supplier
- Description
- URL
- Image URL
- Company Name
- Password
- Retype Password
- Keywords
- Always display this supplier with search results

- Items added to shopping cart from external punchout sites can be modified in iProcurement
- Send optional user and company information when connecting to the supplier site
- Extend user's idle session timeout during punchout

Edit Punchout Supplier

Modify the desired fields below and then click on the Update button to process the changes.

* Indicates a required field

Update Cancel

* Punchout Supplier

Description

* URL

Image URL

* Company Name

* Password

(The password entered above shall be used as the site level password at the supplier site)

* Retype Password

Keywords

Separate keywords with spaces

Always display this supplier with search results

Items added to shopping cart from external punchout sites can be modified in iProcurement

Send optional user and company information when connecting to the supplier site

Extend user's idle session timeout during punchout

(Additional changes required at hub or supplier site)

Update Cancel

See [Define Supplier Punchout in iProcurement](#) on page 2-26 for information on the fields on the **Edit Punchout Supplier** page.

5. Once you have completed your changes, click Update.

Reordering from a Punchout

Exchange does not reorder punchout items. If a buyer clicks the Reorder button for an order on Exchange, all items are copied to the new order except the punchout items.

iProcurement preserves punchout items on requisitions or saved carts; however, iProcurement does not retrieve the latest information for the punchout items. For example, if the supplier has since changed the price of the punchout items, the new price is not reflected on the copied requisition.

Supplier Setup

This chapter covers the following topics:

- [Implementation Considerations](#) on page 3-1
- [Checklists](#) on page 3-2
- [Setup Steps](#) on page 3-6

The supplier must perform the steps in this chapter to ready its catalog for punchout. The steps in this chapter apply to both XML and cXML suppliers.

Implementation Considerations

Setting up a punchout requires some expertise in XML or cXML (if the supplier is using cXML), security (deciding whether to use SSL, for example), network topology (for example, proxy servers), and character encoding. How long it takes to implement the punchout depends in part on your expertise in these areas.

Other implementation considerations include the following:

- It is important to decide on the model that you and your buyer want to use before implementing the punchout. Which model you use depends on where your catalog content resides (your own site or on Exchange) and whether you use XML or cXML. See [Chapter 1](#).
- Find out if you and the buyer need to do data mapping—for example, converting supplier UOM or currency codes to those that the buyer’s system can process. If you are implementing Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), and your currency codes differ from the Exchange codes, you must perform data mapping on the Exchange. See [Understand Data Mapping](#) on page 2-39.

- The iProcurement setup for the buyer typically creates one logon user account—a single proxy user name that is used by all requesters in the company to access the supplier site. Therefore, it is recommended that the supplier develop a method that allows multiple buyers with the same login account to access its site at one time. The supplier can accomplish this by making its site *session-aware* (the site assigns a session ID to each login made by a user account, using the <loginURL> tag of the punchout response document) or by using some other method for distinguishing logons to its site. For example, the supplier can use an additional unique identifier sent with the user’s information, in addition to the single login account, to identify the user.
- Decide how to validate user access of your site. Look ahead at [Process Incoming XML or cXML Punchout Request](#) on page 3-14.
- Decide how to redirect users to the *punchout from* application (Exchange or iProcurement). Look ahead at [Determine Method for Returning Buyers to Procurement System](#) on page 3-15.
- It is strongly recommended that you use UTF-8 encoding when sending punchout documents. See [Encoding](#) on page C-4 for more information.

Suppliers of licensed iProcurement customers can use the Oracle Exchange site for their punchouts. See <https://exchange.oracle.com/>. Look for information about catalogs and Oracle customers.

Only the models that use Exchange require the buyer and supplier to join Exchange. If the buyer punches out to the supplier directly, Exchange is not required.

Checklists

In the following tables, Review Required means you should read the step to see if it applies to you.

Use the following table as your checklist if you are implementing Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML):

Table 3–1 Supplier Setup Steps for Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)

Step Number	Step	Required?
1	Register Company on Exchange on page 3-6	Required
2	Load Catalog Items to Exchange on page 3-7	Required

Use the following table as your checklist if you are implementing Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).

Table 3–2 Supplier Setup Steps for Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)

Step Number	Step	Required?
1	Install XML Parser on Supplier Site on page 3-12	Required
2	Create URL on Supplier Site to Accept Incoming Punchout Documents on page 3-12	Required
3	Process Incoming XML or cXML Punchout Request on page 3-14	Required
4	Provide XML or cXML Punchout Response on page 3-14	Required
5	Determine Method for Returning Buyers to Procurement System on page 3-15	Required
6	Return Shopping Cart on page 3-18	Required
7	Verify Buyer's Access to Secure Site on page 3-29	Required

Use the following table as your checklist if you are implementing Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML):

Table 3–3 Supplier Setup Steps for Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)

Step Number	Step	Required?
1	Register Company on Exchange on page 3-6	Required
2	Create Data Mappings on Exchange on page 3-9	Review Required
3	Install XML Parser on Supplier Site on page 3-12	Required
4	Create URL on Supplier Site to Accept Incoming Punchout Documents on page 3-12	Required
5	Process Incoming XML or cXML Punchout Request on page 3-14	Required
6	Provide XML or cXML Punchout Response on page 3-14	Required
7	Determine Method for Returning Buyers to Procurement System on page 3-15	Required
8	Return Shopping Cart on page 3-18	Required

Table 3–3 Supplier Setup Steps for Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)

Step Number	Step	Required?
9	Configure Punchout Definition on Exchange on page 3-21, consisting of the following steps:	—
9-A	<ul style="list-style-type: none"> ■ Configure Punchout Definition (Required) on page 3-23 	Required
9-B	<ul style="list-style-type: none"> ■ Test Punchout Definition (Required) on page 3-25 	Required
9-C	<ul style="list-style-type: none"> ■ Assign Search Key Words (Optional) on page 3-26 	Optional
9-D	<ul style="list-style-type: none"> ■ Enable Punchout Availability (Required) on page 3-28 	Required
10	Verify Buyer’s Access to Secure Site on page 3-29	Required

Use the following table as your checklist if you are implementing Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML):

Table 3–4 Supplier Setup Steps for Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)

Step Number	Step	Required?
1	Register Company on Exchange on page 3-6	Required
2	Install XML Parser on Supplier Site on page 3-12	Required
3	Create URL on Supplier Site to Accept Incoming Punchout Documents on page 3-12	Required
4	Process Incoming XML or cXML Punchout Request on page 3-14	Required
5	Provide XML or cXML Punchout Response on page 3-14	Required
6	Determine Method for Returning Buyers to Procurement System on page 3-15	Required
7	Return Shopping Cart on page 3-18	Required
8	Configure Punchout Definition on Exchange on page 3-21, consisting of the following steps:	—
8-A	<ul style="list-style-type: none"> ■ Configure Punchout Definition (Required) on page 3-23 	Required
8-B	<ul style="list-style-type: none"> ■ Test Punchout Definition (Required) on page 3-25 	Required
8-C	<ul style="list-style-type: none"> ■ Assign Search Key Words (Optional) on page 3-26 	Optional

Table 3–4 Supplier Setup Steps for Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)

Step Number	Step	Required?
8-D	■ Enable Punchout Availability (Required) on page 3-28	Required
9	Verify Buyer’s Access to Secure Site on page 3-29	Required

Use the following table as your checklist if you are implementing Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML):

Table 3–5 Supplier Setup Steps for Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

Step Number	Step	Required?
1	Register Company on Exchange on page 3-6	Required
2	Create Data Mappings on Exchange on page 3-9	Optional
3	Install XML Parser on Supplier Site on page 3-12	Required
4	Create URL on Supplier Site to Accept Incoming Punchout Documents on page 3-12	Required
5	Process Incoming XML or cXML Punchout Request on page 3-14	Required
6	Provide XML or cXML Punchout Response on page 3-14	Required
7	Determine Method for Returning Buyers to Procurement System on page 3-15	Required
8	Return Shopping Cart on page 3-18	Required
9	Configure Punchout Definition on Exchange on page 3-21, consisting of the following steps:	—
9-A	■ Configure Punchout Definition (Required) on page 3-23	Required
9-B	■ Test Punchout Definition (Required) on page 3-25	Required
9-C	■ Assign Search Key Words (Optional) on page 3-26	Optional
9-D	■ Enable Punchout Availability (Required) on page 3-28	Required
10	Verify Buyer’s Access to Secure Site on page 3-29	Required

Setup Steps

The following sections describe the supplier setup steps in detail. Refer to the tables in the previous section for the order of the setup steps, depending on the model.

Register Company on Exchange

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

To enable access to your site or catalog items in these models, you must exist as a registered company on Exchange. If you are already registered with Exchange, no additional or special type of registration is necessary.

To register with Exchange:

1. Access the Exchange with which you wish to participate.

Oracle Exchange exists at <https://exchange.oracle.com/>. Oracle Exchange may also exist as a branded Exchange at other sites.

2. Browse the site to see if there are any special requirements or other information for punchout suppliers before registering.
3. On the **Home** page, click the "Registration" or "Sign me up!" link.

4. Select "I want to register my company as an independent entity" and click Proceed to Registration. (You could also register as an affiliate.)
5. Follow the guidance on the registration pages to complete your registration.
If you are unsure what to enter in some fields, you can change most of your registration choices later, after your registration is approved, by using the My Profile icon or the Company Administration application.
6. Once you submit your registration, the **Registration Confirmation** page appears. After review, you will be notified of your registration acceptance or rejection by the Exchange Operator.

How long the approval takes depends on the Operator. Most Exchanges provide a registration status link on the login page for you to check.

Load Catalog Items to Exchange

Perform this step for the following model:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required

Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) typically assumes that the supplier loads its catalog items directly to the Exchange catalog.

To load catalog items to Exchange:

1. Access Exchange using a signon that has been assigned the Catalog Authoring job function.

To check whether you have been assigned this job function:

- Click the My Profile icon at the top of the page.
- Click the "Edit Personal Information" link.
- Scroll down to the Assigned Roles section. See if Catalog Authoring is listed there. If not, contact the Exchange Operator. (The Contact Us link at the bottom of the page, or some other link the Operator provides, may provide contact information for the Operator.)

Assigned Roles

Roles control what tasks you can perform on ap905sun.us.oracle.com. The following table illustrates roles currently assigned to you. If you have questions or require changes, please contact your [Company Administrator](#).

Role	Description
Account Manager	Manage billing activity.
Buyer	Purchase any item, link out to supplier catalogs to purchase items, bid in seller negotiations, and create buyer negotiations.
Buyer with Restricted Pricing View	Purchase only those items with buyer-specific pricing.
Catalog Author	Maintain and publish catalogs.
Company Administrator	Manage the company account, including approving and managing users and affiliate companies, and assigning, delegating, and customizing roles.
Purchasing Manager	Export suppliers' catalogs, manage pricing changes submitted by suppliers, and view buyer intelligence reports.
Seller	Sell items, acknowledge orders from buyers, bid in buyer negotiations, create seller negotiations, and view seller intelligence reports.

2. Perform the following basic steps to load catalog items to Exchange:
 - Decide how to categorize and describe catalog items. Understand price lists, including buyer, trading group, and customer group price lists, if you use these.
 - Add catalog items online or bulk load them using XML or spreadsheet files.
 - Set catalog preferences (control whether you want to review your catalog before publishing it).

See the following section of the online Help in Exchange for complete details on categorizing, describing, and loading catalog items and prices; setting preferences; using third parties to load items for you; and other catalog authoring features:

Online Help: Buying and Selling > Catalog Authoring

Create Data Mappings on Exchange

Perform this step for the following models:

Model	Required?
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Review Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Optional

Use this step to map the codes that are used in Exchange to the codes that you use, if they are different. Data mapping allows Exchange to recognize codes that are

passed to it by the supplier or to send codes to the buyer that the buyer's system recognizes. For punchout, the supplier can use Exchange to map the following codes:

- Currency codes
- Unit of measurement (UOM) codes

This step is required for Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML) if the supplier's currency codes are different from those that Exchange uses. For the other models, if you perform no mapping on Exchange, the value is passed as is from Exchange to the buyer's system. The buyer may have set up data mapping in its system.

For a complete overview of data mapping, see [Understand Data Mapping](#) on page 2-39.

To map currency and UOM codes:

1. Access Exchange using a signon that has been assigned the Company Administrator job function. (If you just registered your company in the previous step, the signon that you created—and that the Exchange Operator approved— will be assigned the Company Administrator job function.)
2. On the **Home** page, click the "Company Admin" link, then the Application Setup tab.
3. Click the "Data Mapping" link.
4. On the **Data Mapping** page, select the Currency data type to map currency codes or the Unit of Measurement data type to map UOM codes, and click Edit Mapping.

Welcome Company Billing Application Setup

Administering for **Bananas Inc.** Change Company

[Application Setup](#) > Data Mapping

Data Mapping

Select a data type and press the Edit Mapping button to map the ap905sun.us.oracle.com values to your preferred values for transactions sent to and from your company.

Select	Description
<input checked="" type="radio"/>	Additional Service
<input type="radio"/>	Carrier for goods to be delivered
<input type="radio"/>	Collect, Prepaid, None
<input type="radio"/>	Container Type
<input type="radio"/>	Country of Origin Code
<input type="radio"/>	Currency in which monetary amounts will be expressed
<input type="radio"/>	Export, Import or Domestic
<input type="radio"/>	Exchange Brand Terms

- On the **Edit Mapping** page, display the code you wish to map by entering the code in the Search field and clicking Go, or by clicking the letter link that corresponds to the first letter of the code. The resulting display shows all codes that matched your search criteria.
- If your company does not use the code shown in the Exchange Value column, enter the code you use in the My Company to Exchange field to define the correct mapping.

Description	Exchange Value	My Company to Exchange	Exchange to My Company
Description of the code	The value used internally by Exchange to represent the currency or UOM.	The value the supplier passes to Exchange.	For punchout, the supplier can leave this value as is.

For example, your company may use US as the currency code for *US dollars* while Exchange uses USD. In this case, you would enter US in the My Company to Exchange field. Or your company may use CSE as the UOM code for *case* while Exchange uses CS. In this case, you would enter CSE in the My Company to Exchange field.

7. Repeat these steps for each code you wish to map.
8. Click Apply Changes.

Install XML Parser on Supplier Site

Perform this step for the following models:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Communication between Exchange or iProcurement and a supplier's Web catalog makes extensive use of XML processing. As the supplier, you must have an XML parser tool installed to decode the XML documents passed to you. You can use Oracle XML Parser for Java, Apache AML Xerces Java Parser, or another commercially available parser. (It does not have to be a Java parser.)

Look for Oracle XML Parser software, documentation, and installation instructions at the following URL:

<http://technet.oracle.com/>

To download the Apache XML Parser for Java documentation and software, see:

<http://xml.apache.org>

Use the instructions on these Web pages when downloading and installing the parser. Most parser versions should work with the punchout documents.

Create URL on Supplier Site to Accept Incoming Punchout Documents

Perform this step for the following models:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

As the supplier, you must create a URL to accept the incoming XML SupplierLoginRequest or cXML PunchOutSetupRequest document. Exchange or iProcurement will establish a server-to-server communication with this URL and send the request using the HTTP protocol. Your URL will need to receive the HTTP POST punchout document, construct a LoginResponse XML document or PunchOutSetupResponse cXML document, and send this response back to Exchange or iProcurement.

For XML requests, the content type of the HTTP POST in the request header is `application/x-www-form-urlencoded`. The parameter name and value pair in the request body consists of the parameter name `loginRequest`, whose value is the contents of the SupplierLoginRequest XML document. For example, to retrieve the login request using a Java servlet or JSP, use the following command:

```
String xmlDocument = request.getParameter("loginRequest");
```

For cXML requests, the content type of the HTTP POST in the request header is `text/xml`, and the PunchOutSetupRequest cXML contents are in the request body. For more information on processing cXML contents, see the *cXML User's Guide* at <http://www.cxml.org>.

To provide the necessary security, it is recommended that you create a page on an HTTPS server to handle the punchout request. Although you can use an HTTP server for your Web catalog portal, HTTP does not provide a secure connection. Since password information is passed between iProcurement (or Exchange) and your portal, using an unsecure connection may allow the transmission to be intercepted and compromise the security of your site. Digital certificates for the creation of an HTTPS site can be obtained from an established certification authority company. See [Appendix C](#) for more details.

Process Incoming XML or cXML Punchout Request

Perform this step for the following models:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

The XML SupplierLoginRequest or cXML PunchOutSetupRequest document that is sent to the supplier's site contains information about the punchout user and the user's company. As the supplier, you should use this information to validate the proper level of user access.

For examples and descriptions of the XML and cXML punchout request documents, see [Appendix B](#).

When the buyer sets up access to your punchout site or when you define the punchout on Exchange, one of the steps is to provide a password for accessing your site. This password is included in the punchout request documents, and it is used by everyone in the *punchout from* application. (You do not need to register individual password accounts on the supplier site.) If you want to control or protect access to your site, set up your site to validate this password. Your site may also choose to validate other information included in the request document. For example, your site can check the user name and company name if you are hosting buyer-specific content or price breaks.

Provide XML or cXML Punchout Response

Perform this step for the following models:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required

Model	Required?
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

If the password in the request document is correct, the supplier's portal should respond to iProcurement or Exchange with either an XML LoginResponse or cXML PunchOutSetupResponse document.

For examples and descriptions of the XML and cXML punchout response documents, see [Appendix B](#).

Ideally the supplier's portal should create an individual session through which the buyer accesses the site. This method ensures that the buyer's connection is secure because the session closes as soon as the buyer returns to iProcurement or Exchange. The session will also be used to identify the buyer as having navigated to the supplier's site from iProcurement or Exchange. In the response document examples in [Appendix B](#), the session is identified with a session ID.

If the supplier's site finds an error (for example, the password is invalid), the site should return to iProcurement or Exchange a LoginResponse XML document or PunchOutSetupResponse cXML document indicating an error. See examples in [Appendix B](#).

If the login request is refused access to your Web catalog, the buyer will be shown an error message and will be unable to access your Web catalog. iProcurement or Exchange displays the message. See [Chapter 4](#) for descriptions of errors. (Once the supplier site sends the login response and redirects the buyer to the supplier URL, any errors that occur are displayed by the supplier's system.)

Determine Method for Returning Buyers to Procurement System

Perform this step for the following models:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required

Model	Required?
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Once buyers have completed browsing the supplier's site, they must return to iProcurement or Exchange (wherever they initiated the punchout) to complete the purchasing process for the items they added to their shopping cart from the supplier's Web catalog.

Depending on the structure of the supplier's Web catalog, the supplier may need to determine whether a buyer navigated to its site from iProcurement or Exchange, or some other site. If the supplier accepts buyers from both iProcurement or Exchange and other sites, buyers should see a Return or Done Shopping button (or however the supplier wishes to name it) instead of the supplier's standard button for completing an order on the supplier's site. This button should return the buyer to iProcurement or Exchange. Alternatively, the supplier's standard Checkout or Complete Order button should detect whether the buyer is an iProcurement or Exchange punchout customer and if so, return the buyer to iProcurement or Exchange.

The supplier may need to create an additional Return button for buyers who have not placed the supplier's items in the shopping cart. In this case, the buyer is not in the cart. Therefore, the supplier can create a Return button on the supplier's shopping pages (outside the cart) to help the buyer return to iProcurement. Alternatively, the supplier could instruct the buyer to click the Shopping Cart icon and use the Return button there to return an empty cart.

Note: In a punchout from Exchange, the supplier's Return button must return an empty cart.

Creating a Return Button for the Shopping Cart

When the buyer is ready to check out the items, the example shown in the next step, [Return Shopping Cart](#) on page 3-18, demonstrates the output your Return button needs to send to the buyer's browser to successfully return the shopping cart items to the buyer's system.

Creating a Return Button Outside the Shopping Cart

The following information applies to creating a Return button for punchouts initiated from iProcurement.

The LoginRequest document sent by the buyer's system includes the following tags:

- reqToken (in Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML) only)
- returnUrl

These tags are used to generate the session-aware URL for iProcurement or Exchange. The supplier's system needs to store this information and from it, create the return URL button for the buyer. The return URL button should be constructed as follows:

```
<returnURL>+?REQ_TOKEN=<reqToken>
```

For example, a return URL for a requester in iProcurement may look like this:

```
http://ap100jvm.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.por.punchout.PunchOutServlet?callBack=shopping&REQ_
TOKEN=template=tpn* @_action=addToOrder* @_function=addToOrder* @_
reqSessionId=0* @_reqHeaderId=0* @_emergencyReq=N* @_itemSourceId=82
```

A return URL for a buyer in Exchange may look like this:

```
https://exchange.oracle.com/orders/PunchoutCallBack.jsp
```

Since the buyer did not purchase items from the supplier site, the URL does not contain shopping cart information, and the buyer is returned to the buying system.

When constructing the return button, the supplier can either link the button directly to the return URL as shown above, or create code that directs the buyer to the supplier's server, which then returns the buyer to the buyer's system.

The supplier needs to allow for URL parameters (URL strings preceded by a ? mark) in the <returnURL> itself. If the <returnURL> already contains a ? mark, the supplier's return code needs to append the REQ_TOKEN to the existing ? parameter using an & mark, which separates multiple parameters, as shown in the following example:

```
http://ap100jvm:123/AppsManager?sessionID=123&REQ_TOKEN=bd25YZ2
```

For example, Exchange uses the following code to handle the case in which the <returnURL> already contains a ? mark. The variables m_reqToken and m_

returnURL store the <reqToken> and the <returnURL> from the login request document.

```
public String getBackToAppURL() {
    if(m_token != null) {
        if(m_returnUrl.indexOf("?") == -1)
            return m_returnUrl + "?REQ_TOKEN=" + URLEncoder.encode(m_token);
        else
            return m_returnUrl + "&REQ_TOKEN=" + URLEncoder.encode(m_token);
    } else {
        return m_returnUrl;
    }
}
```

Return Shopping Cart

Perform this step for the following models:

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Once the buyer clicks the Return button, your site must send a transaction, via the buyer's browser, to iProcurement or Exchange containing details of all the items the buyer selected from your Web catalog.

For Oracle native XML, the URL to which the XML shopping cart document (OrderLinesDataElements) should be sent is the URL identified by the <returnURL> tag in the original XML SupplierLoginRequest document. The parameter name for the HTTP POST is oracleCart, and the cart should be url-encoded.

For cXML, the URL to which the cXML shopping cart document (PunchOutOrderMessage) should be sent is identified by the <BrowserFormPost> tag in the original cXML PunchOutSetup Request. See the *cXML User's Guide* at

<http://www.cxml.org> for more information. For cXML, cxml-urlencoded (not cxml-base64) is supported.

Once the document is returned to iProcurement or Exchange, the selected items are added to the buyer's shopping cart, and the buyer can complete the purchasing process.

For examples and descriptions of the XML and cXML shopping cart documents, see [Appendix B](#).

Note: For configured items (such as a laptop computer), it is recommended that the supplier return a single line in the shopping cart representing the entire configuration. The supplier must provide enough information in the <itemID> and <itemDescription> XML fields to ensure that the correct configuration will be shipped to the buyer and to allow the buyer to identify the item. (In cXML, the fields are <SupplierPartID> and <Description>.) It is recommended that the ID field contain a code that uniquely identifies the specific configuration and the Description field contain an easily understandable description of the configured item.

The following example shows how the XML shopping cart information should be sent back to iProcurement via the requester's browser. (For information on returning cXML shopping carts, see the *cXML User's Guide* at <http://www.cxml.org>.) In the example, note the following:

- The line `onload="document.orderForm.submit()"` asks the browser to submit itself.
- `ACTION="..."` is the iProcurement URL to which the cart is posted.
- `REQ_TOKEN`, which is included in the LoginRequest document in Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML), identifies the punchout. iProcurement uses the `REQ_TOKEN` to process the transaction.
- The value of the parameter `oracleCart` is the url-encoded shopping cart data.
- The cart and `REQ_TOKEN` are contained in hidden form fields.
- The + signs in the example below represent spaces in the shopping cart document, demonstrating that the cart is url-encoded. The spaces are created by calling `URLEncoder.encode` on the shopping cart XML. `URLEncoder` can be

found in the java.net package. (The java.net package handles ISO-8859-1 characters only. If multibyte characters are used, look for or write your own URL encoder to handle these.)

The following example returns shopping cart items to iProcurement:

```
<HTML>
<BODY onload="document.orderForm.submit()">
<FORM

ACTION="http://ap333jvm.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.por.punchout.PunchOutServlet?callBack=shopping"
METHOD="POST" NAME="orderForm">
<INPUT type="HIDDEN" NAME="REQ_TOKEN"

value="template=tpn*+_action=addToOrder*_function=addToOrder*_
reqSessionId=0*+_reqHeaderId=0*+_emergencyReq=N*+_itemSourceId=82">
<INPUT TYPE="HIDDEN" NAME="oracleCart"

VALUE="%3C%3Fxml+version+%3D+'1.0'+encoding+%3D+'ISO-8859-1'%3F%3E%0A%3Cresp
onse%3E%0A+++%3Cheader%3E%0A++++%3Caction%3E%0A++++%3C!%5BCDATA%5BSHO
PPING_RESPONSE%5D%5D%3E%0A++++%3C%2Faction%3E%0A+++%3C%2Fheader%3E%0A+++%3
Cbody%3E%0A++++%3COrderLinesDataElements%3E%0A++++%3CcatalogTradingPa
rtner%3E%0A++++%3C!%5BCDATA%5BOracleExchange%5D%5D%3E%0A++++%3C
%2FcatalogTradingPartner%3E%0A++++%3CorderLine%3E%0A++++%3Ccont
ract%3E%0A++++%3CcatalogType%3E%0A++++%3C!%5BCDATA%
5BCONTRACTED%5D%5D%3E%0A++++%3C%2FcatalogType%3E%0A++++%3
C%2Fcontract%3E%0A++++%3Citem+lineType%3D%22GOODS%22+quantity%3D%221
.0%22%3E%0A++++%3CitemNumber%3E%0A++++%3CsupplierIt
emNumber%3E%0A++++%3CitemID%3E%0A++++%3C!%5BCDATA%5B6ZC75%5D%5D%3E%0A++++%3C%2FitemID%3E%0A++++
++++%3C%2FsupplierItemNumber%3E%0A++++%3C%2FitemNumber%3E%
0A++++%3CitemDescription%3E%0A++++%3C!%5BCDATA%5BGe
neral+Duty+Engraving+Pen%2C+9000+RPM+Rotational+Speed%2C+6-5%2F8+inch+Length
%5D%5D%3E%0A++++%3C%2FitemDescription%3E%0A++++%3Cunit
OfMeasure%3E%0A++++%3CbuyerUnitOfMeasure%3E%0A++++
++++%3CbuyerUOMType%3E%0A++++%3C!%5BCDATA%5BEach%5D%5D%
3E%0A++++%3C%2FbuyerUOMType%3E%0A++++%3C%2Fbu
yerUnitOfMeasure%3E%0A++++%3CsupplierUnitOfMeasure%3E%0A++++
++++%3CsupplierUOMType%3E%0A++++%3C!%5BCDATA%5B
EA%5D%5D%3E%0A++++%3C%2FsupplierUOMType%3E%0A++++
++++%3CsupplierUOMQuantity%3E%0A++++%3C!%5BCDATA%5B
%5D%5D%3E%0A++++%3C%2FsupplierUOMQuantity%3E%0A++++
++++%3C%2FsupplierUnitOfMeasure%3E%0A++++%3C%2FunitOfMeasure%3E
%0A++++%3C%2Fitem%3E%0A++++%3Ccategory%3E%0A++++
%3CcategoryCode+categoryCodeIdentifier%3D%22SUPPLIER%22%3E%0A++++
```

```

++++%3C!%5BCDATA%5BImpact+wrenches%5D%5D%3E%0A+++++++%3C%2FcategoryCod
e%3E%0A+++++++%3C%2Fcategory%3E%0A+++++++%3Cprice%3E%0A+++++++
++++%3Ccurrency%3E%0A+++++++%3C!%5BCDATA%5BUSD%5D%5D%3E%0A+++++++
+++++++%3C%2Fcurrency%3E%0A+++++++%3CunitPrice%3E%0A+++++++
++++%3C!%5BCDATA%5B179.08%5D%5D%3E%0A+++++++%3C%2FunitPrice%3E%0A+++
+++++++%3C%2Fprice%3E%0A+++++++%3Csupplier%3E%0A+++++++%3Csupp
lierDUNS%3E%0A+++++++%3C!%5BCDATA%5B005103494%5D%5D%3E%0A+++++++
+++++++%3C%2FsupplierDUNS%3E%0A+++++++%3CsupplierName%3E%0A+++++++
+++++++%3C!%5BCDATA%5BGranger%5D%5D%3E%0A+++++++%3C%2FsupplierNam
e%3E%0A+++++++%3C%2Fsupplier%3E%0A+++++++%3C%2ForderLine%3E%0A+++++++
3C%2ForderLinesDataElements%3E%0A+++%3C%2Fbody%3E%0A%3C%2Fresponse%3E%0A">
</FORM></BODY></HTML>

```

Configure Punchout Definition on Exchange

Perform this step for the following models:

Model	Required?
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

In this step, you use the **Configure Catalog Punchout** page to define and test your punchout definition on Exchange so that buyers can access it. This step consists of the following tasks:

1. Configure punchout definition
2. Test punchout definition
3. Assign search keywords
4. Control availability

The following illustration shows the **Configure Catalog Punchout** page that you will use to perform these tasks:

Welcome Catalogs Negotiations Sales Intelligence

Catalogs > Configure Catalog Punchout

Configure Catalog Punchout

Step 1: Configure Punchout Definition

[Click here to configure your punchout](#) on the ap905sun.us.oracle.com. Before you undertake this step, you must have first enabled your web site to support catalog punchout from the ap905sun.us.oracle.com. To learn more about enabling catalog punchouts, click [here](#) to download the punchout documentation.

Step 2: Test Punchout Definition

Before you continue, you should test your punchout to ensure that this functions as expected. [Click here to test your punchout](#) to your web catalog.

Step 3: Assign Search Keywords

In order for your punchout link to appear in searches which buyer's execute on the ap905sun.us.oracle.com, you need to define keywords for your punchout. [Click here to define keywords for your punchout](#).

Step 4: Control Availability

To make your punchout available to buyers on the ap905sun.us.oracle.com, you must publish your punchout. After you have published your punchout, you can revoke it at any time. [Click here to set the availability of your punchout](#).

Prerequisites

You must be assigned the following Exchange system tasks to complete the punchout definition:

- Catalog Authoring - Configure Catalog Punchout—typically contained in the Catalog Authoring job function, unless the Exchange Operator modified this job function. This system task is needed to perform all of the punchout configuration setup in this section.
- Create Add-to-Cart Order—typically contained in a Buyer job function, unless the Exchange Operator modified the job function. This system task is needed to perform the Test Punchout Definition step, where you will shop and add your site's punchout items to the cart.

The Exchange Operator assigned job functions when approving your registration. To see whether you are assigned job functions that contain these system tasks, perform these steps:

1. Log on to Exchange and click the "Company Admin" link.
2. Click the Application Setup tab.
3. Click the "Manage Job Functions" link.

4. In the Job Function Search Results, click a job function.
5. See if the system task is included in the job function. If not, contact the Exchange Operator. (The Contact Us link at the bottom of the page, or some other link the Operator provides, may provide contact information for the Operator.)

Configure Punchout Definition (Required)

To configure your punchout definition:

1. Access Exchange with a signon that has been assigned the Catalog Authoring - Configure Catalog Linkout system task. (See [Prerequisites](#), above.)
2. On the **Home** page, click the "Selling" link, then the Catalogs tab.
3. On the **Catalog Authoring** page, click the "Configure Catalog Punchout" link.
4. On the **Configure Catalog Punchout** page, click the "Click here to configure your punchout" link.
5. On the **Configure Punchout Definition** page, enter values in the Punchout URL and Punchout Password fields:
 - **Punchout URL.** Address of your Web catalog's portal page. This is the URL you created in a prior step and is the address Exchange will contact when processing a punchout request. For example:
`https://ap999sun.us.oracle.com:6666/orders/testscripts/SupplierLogin.jsp`
 - **Punchout Password.** The value that Exchange passes to your Web catalog in the login request document when a buyer accesses your catalog from Exchange. Your site should validate this password, if you wish to validate the password before allowing access. This is the password that every buyer on Exchange (or iProcurement, depending on the punchout model being implemented) uses to access your site; you do not need to create separate password accounts for every buyer on Exchange or iProcurement.

Configure Punchout Definition

Enter your Punchout configuration and then press the **Apply Changes** button below when you're done.

- Indicates a required field

Getting Started

Enabling punchout means buyers can shop directly at your site and add items to the ap905sun.us.oracle.com shopping cart.

Want to learn more about how this works and set it up?

[Download Punchout Documentation](#)

Access

The punchout URL and password are used to make the connection between ap905sun.us.oracle.com and your punchout catalog.

- Punchout URL
(Example: <http://www.mysite.com>)
- Punchout Password

Communication Protocol

Decide which communication protocol is to be used by your punchout. For more information on communication protocols download the [Punchout Documentation](#).

- XML
- cXML

User Interface Identification

Decide how you want to present your company in the catalog. Both the business description and logo are displayed next to your name in the listing of punchout enabled suppliers. Display name is shown whenever your company is referenced.

6. Select the communication protocol you want Exchange to use to send punchout information to you. Exchange supports both XML and cXML, depending on the model being implemented.
7. You may optionally enter the following additional information in the User Interface Identification section. This information displays to the buyer with your punchout link.
 - You can provide an alternate company name in the Display Name field. This name will be used in place of your company's registered name.
 - You can supply the location of a company logo image in the Logo URL field. This image must be in .gif format and no larger than 125 pixels wide and 25 pixels high. This URL address must be outside your firewall so Exchange can access the image.
 - You can add a brief description of your catalog and the items you sell in the Company Description field.

Note: To provide a name or description in other Exchange languages, return to the Exchange **Home** page, click a language to select it (if Exchange is available in multiple languages, other languages display beneath the tabs), and return to the **Configure Punchout Definition** page to provide the name or description in that language. If you do not provide the name or description in the other languages, Exchange displays the same name or description you first entered in all languages. (If you left the name blank, Exchange assumes the registered company name.)

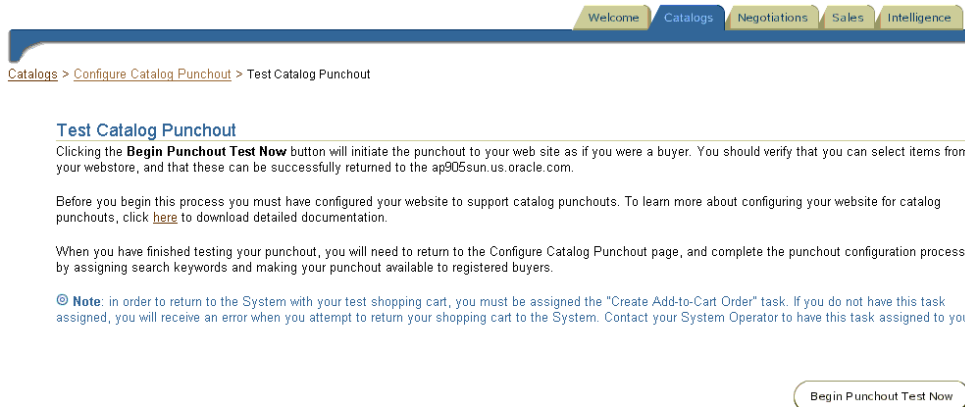
8. Click Apply Changes.
9. On the Confirmation page, click the "Return to Configure Catalog Punchout" link to proceed to testing your punchout definition.

Test Punchout Definition (Required)

If you receive an error message at any point in the following steps, make a note of the message to assist in resolving the problem.

To test your punchout definition:

1. Access Exchange with a signon that has been assigned the Catalog Authoring - Configure Catalog Linkout and Create Add-to-Cart Order system tasks. (See [Prerequisites](#), above.)
2. On the **Home** page, click the "Selling" link, then the Catalogs tab.
3. On the **Catalog Authoring** page, click the "Configure Catalog Punchout" link.
4. On the **Configure Catalog Punchout** page, click the "Click here to test your punchout" link.
5. On the **Test Catalog Punchout** page, click Begin Punchout Test Now.



6. If your definition has been correctly defined, you will be able to punch out to your site and select items from your catalog.

If the connection does not work, see [Verify Buyer's Access to Secure Site](#) on page 3-29. See also [Chapter 4](#).

7. Once you have selected several items, return to Exchange by clicking the Return to Exchange button (or whatever name you used when creating your redirect earlier).
8. Verify your shopping cart contents have been successfully added to the Exchange shopping cart.
9. Select the items and click Delete to empty the cart so you do not create a purchase order accidentally.

Assign Search Key Words (Optional)

Defining appropriate search keywords for items in your Web catalog is important to ensure that buyers browsing Exchange are presented with the link to your catalog. If a buyer's search criteria include at least one of the keywords you define, your Web catalog will be displayed in the list of suppliers presented to the buyer on the **Search Results** page.

Keywords define the items that you have available on your Web catalog, and you can enter up to 2,000 characters of information for each language for which you require keywords. For example, if you sell paper products to both English and

French speaking customers, you may want to include the following keywords in American English:

ream paper photocopy Xerox A5 A4 A3 A2 A1 Letter

and the following keywords in French:

rame papier enveloppe photocopie A5 A4 A3 A2 A1

If a buyer searches on Exchange in a foreign language for which you have defined no keywords, no link to your catalog will be displayed in the search results. In the example above, if the buyer searches for *papel* in Spanish, a link to your catalog is not returned because you defined no keywords for Spanish.

To create search keywords on Exchange:

1. Access Exchange with a signon that has been assigned the Catalog Authoring - Configure Catalog Linkout system task. (See [Prerequisites](#), above.)
2. On the **Home** page, click the "Selling" link, then the Catalogs tab.
3. On the **Catalog Authoring** page, click the "Configure Catalog Punchout" link.
4. On the **Configure Catalog Punchout** page, click the "Click here to define keywords for your punchout" link.
5. On the **Trading Partner Keywords** page, select the Language for which you wish to define keywords.

The screenshot shows the 'Trading Partner Keywords' page. At the top, there is a navigation bar with tabs for 'Welcome', 'Catalogs', 'Negotiations', 'Sales', and 'Intelligence'. Below the navigation bar, the user is logged in as 'Administering for Gorilla' with a 'Change Company' button. The breadcrumb trail is 'Catalogs > Configure Catalog Punchout > Trading Partner Keywords'. The main heading is 'Trading Partner Keywords'. Below the heading, there is a paragraph explaining that trading partner keywords can be referenced during generic trading partner searches, auction bidder identification, and catalog searches to find matching trading partners. Another paragraph states that to maintain keywords, a language should be selected and the 'Show Keywords' button pressed. Below this, there is a 'Language' dropdown menu set to 'American English' and a 'Show Keywords' button. A text area below contains the keywords 'photocopy paper toner'.

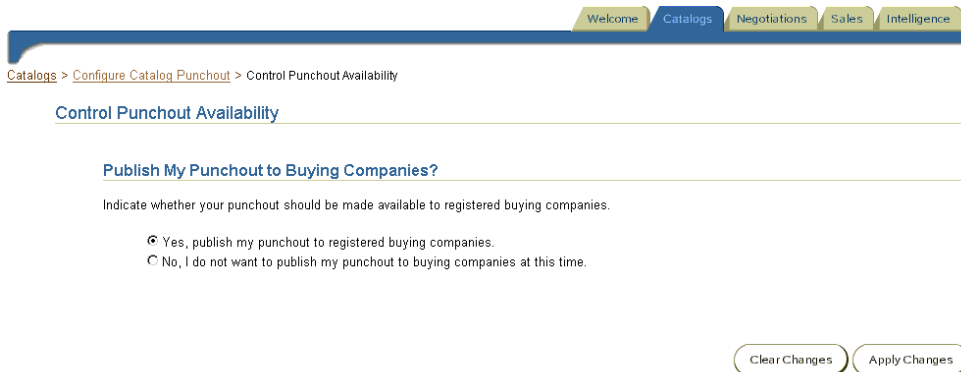
6. Enter all appropriate key words in the text area, separating each word with a space.
7. Click Apply Changes.
8. Repeat these steps for any additional languages your Web catalog supports.

Enable Punchout Availability (Required)

Your punchout definition is not initially available to buyers. You must publish your punchout definition before any buyers can use it.

To publish your punchout definition:

1. Access Exchange with a signon that has been assigned the Catalog Authoring - Configure Catalog Linkout system task. (See [Prerequisites](#), above.)
2. On the **Home** page, click the "Selling" link, then the Catalogs tab.
3. On the **Catalog Authoring** page, click the "Configure Catalog Punchout" link.
4. On the **Configure Catalog Punchout** page, click the "Click here to set the availability of your punchout" link.



5. On the **Control Punchout Availability** page, select "Yes, publish my punchout to registered buying companies."
6. Click Apply Changes.

Your punchout is now available to buyers. Buyers still cannot access the punchout, however, until the buying company's Exchange Purchasing Manager

chooses to display the punchout to buyers in the company. (Displaying punchouts to buyers is described in the buyer setup steps, in [Chapter 2](#).)

As the supplier, you can revoke your punchout definition at any time by clicking "No, I do not want to publish my punchout to buying companies at this time" on the **Control Punchout Availability** page. The punchout will immediately be unavailable for use by any buyer. The punchout definition itself remains on Exchange, but cannot be seen and used by buyers. The Purchasing Manager (the buying company's administrator) on Exchange can still see the punchout definition when choosing which definitions to display to its own buyers, but Exchange will clearly identify the definition as having been disabled by you. (If the Purchasing Manager disallows its buyers' access to the punchout and saves this change, the punchout link is not displayed to the Purchasing Manager again until you re-publish the punchout.)

Verify Buyer's Access to Secure Site

Perform this step for the following models, if your site is secure (the site URL begins with HTTPS):

Model	Required?
Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)	Required
Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)	Required

Typically, the supplier does not need to do anything special to verify that the buyer can access the supplier's secure site; however, the following points summarize what is required for each model when the supplier's site is secure:

- For Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML), the supplier's certification authority needs to be on the ca-bundle.crt file in iProcurement. The buyer is asked to make sure of this in the buyer's [Prerequisites](#) on page 2-5.
- For Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), the supplier's certification authority needs to be on the pomdigcert.txt

file in Exchange. (The Exchange Operator should access the **Software Setup** page in the Configuration tab and make sure the Certifying Authority Certificate Location field contains a file path and name for a valid certification authority (CA) bundle file. In Exchange, depending on the setup, this is typically located in `$APPL_TOP/admin/pomdigcert.txt`.)

- For Models 4 and 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML or cXML), Exchange's certification authority needs to be on the `ca-bundle.crt` file in iProcurement; the supplier's certification authority needs to be on the `pomdigcert.txt` file in Exchange. (The Exchange Operator should access the **Software Setup** page in the Configuration tab and make sure the Certifying Authority Certificate Location field contains a file path and name for a valid certification authority (CA) bundle file. In Exchange, depending on the setup, this is typically located in `$APPL_TOP/admin/pomdigcert.txt`.)

Both `ca-bundle.crt` and `pomdigcert.txt` come with various certification authorities. If the supplier's certification authority is a common one, it may already be on the `ca-bundle.crt` and `pomdigcert.txt` files.

Contact your network administrator for more information. See also [Appendix C](#).

Troubleshooting

This chapter covers the following topics:

- [Location of Log Files](#) on page 4-1
- [Punchouts from iProcurement](#) on page 4-2
- [Punchouts from Exchange](#) on page 4-5
- [Timeouts](#) on page 4-10

Location of Log Files

The buying company can obtain error and debug information from log files.

In Exchange, the Exchange Operator can use the following log file to help resolve problems:

- `$APACHE_TOP/logs/exchange_jserv.log`

In iProcurement, the administrator can use the following log files to help resolve problems:

- `$APACHE_TOP/Apache/logs/error.log`. This log shows errors and exceptions.
- `$APACHE_TOP/Apache/logs/debug.log`. You can use this log only if the `DebugOutput` setting in the `ssp_init.txt` configuration file is set to write to this log. (The name of this file is also determined by the `DebugOutput` value.) This log is useful if you cannot pinpoint the problem using the `error.log` above. The `debug.log` shows you what the system was doing at the time you think the error occurred.

If you are using Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), most errors and debug information are provided on the

punchout detailed **Error** page. This page is presented to the buyer on Exchange when the error occurs. See [Exchange Error Codes](#) on page 4-5.

Punchouts from iProcurement

This section discusses issues related to a punchout initiated from iProcurement.

iProcurement Connectivity Issues

For any punchout initiated from iProcurement, try the following tips if you experience connectivity problems:

Test the Supplier's URL

Obtain the exact catalog site location's URL from the supplier and enter that in your browser to be sure the site itself is not down. If you use proxy servers to access the site, configure the browser (if it isn't already) to access the site through the proxy servers to be sure access via the proxy servers is working.

Make Sure Proxy Profile Options Are Set Correctly

Make sure the following profile options are set to the correct proxy servers, if you use proxy servers to access external sites:

- POR : Proxy Server Name
- POR : Proxy Server Port

See [Set Profile Options in iProcurement](#) on page 2-18 for more information.

Test Connectivity Using Telnet

Use the telnet command to see if the iProcurement server (specifically, the middle tier) can reach the server to which the punchout is being performed.

Note: This procedure does not work if your company uses proxy servers. If you use proxy servers, try the first two tips above.

In the following example, telnet is used to access Oracle Exchange. The port number 443 is given, indicating that this is a secure site on port number 443:

```
telnet exchange.oracle.com 443
```

If you receive feedback like the following (where xxx.xx.xx.xx is a numeric Internet protocol (IP) address), you have connectivity:

```
Trying xxx.xx.xx.xx ...
Connected to www.oracleexchange.com
```

If you do not have connectivity, ask your network administrator to set an outbound server-to-server connection between iProcurement and the external site for HTTP and HTTPS. If you do have connectivity but still experience problems connecting via punchout, look at the log files to see what else the problem may be.

iProcurement Security Issues

If you experience problems connecting to a secure site, you may receive messages that mention SSL, handshake, or other errors relating to accessing a secure site. The following illustration shows an example:



If you receive errors like these, verify that the certificates file, classpath, and library path are set up correctly as described in [Verify Access to Secure Sites](#) on page 2-6.

Access Issues from iProcurement

Access issues are problems getting into the supplier Web site. The connection works, but the site is denying the requester access. The following illustration shows an example error message in that case:



 **Service Unavailable**

The user authentication information is invalid. Please contact your system administrator.

The above message explains that user validation did not succeed.

Try the following tips if you experience user access issues:

Verify User Name and Password on Exchange

If you are punching out from iProcurement to or via Exchange, make sure the user name and password of the requester punching out to the site is valid on Exchange. Access Exchange and log in directly using the user name and password entered on the **Supplier Hub** page in iProcurement. (See [Define Exchange Punchout in iProcurement](#) on page 2-19.)

Make Sure Requester Is an Employee

Make sure that, in Oracle Applications, the requester accessing the punchout is assigned to an employee in the Person field of the Users window. The requester must be assigned to an employee because the LoginRequest document uses the employee information to provide the ship-to and deliver-to location information.

Check if the Punchout Was Disabled

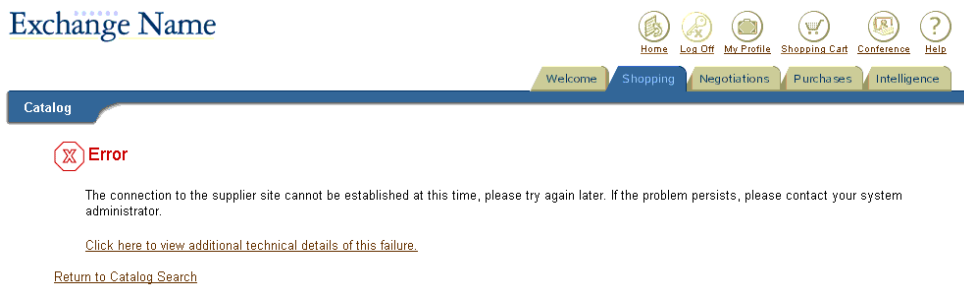
The supplier may have disabled its punchout. Contact the supplier. If you are using Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML), or Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML), you can check the **Control Punchout Access** page on Exchange. (See [Control Punchout Access on Exchange](#) on page 2-16.) That page will show whether the supplier disabled its punchout.

Punchouts from Exchange

This section discusses issues related to a punchout initiated from Exchange.

Exchange Error Codes

If you are using Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), most errors and debug information are provided on a punchout **Error** page, as shown in the following illustration:



This page is presented to the buyer on Exchange when the error occurs.

On the **Error** page, click the error link to see a detailed error log. For example, some error codes may have more than one possible cause. By clicking the error link on the **Error** page, you can view the specific cause. Some of the more common error details are described in the next section. The following illustration shows an example error in detail, when you click the error details link on the **Error** page:



Error

Additional technical details of this failure are provided below.

Error Code: 1

```

Unable to process Login Request.
Supplier Login URL: http://www.freetradezone.com/serlet/PDXLogin
Request String: null
java.lang.Exception: Incorrect Punchout Mode value:
java.lang.Exception: Incorrect Punchout Mode value:
    at oracle.apps.pom.orders.punchout.PunchoutMainBean.performLogin(PunchoutMainBean.java:315)
    at oracle.apps.pom.orders.punchout.ui.PunchoutLoginLogic.processRequest(PunchoutLoginLogic.java:32)
    at _orders._PunchoutLogin._jspService(_PunchoutLogin.java:103)
    at oracle.jsp.runtime.HttpJsp.service(HttpJsp.java:119)
    at oracle.jsp.app.JspApplication.dispatchRequest(JspApplication.java:389)
    at oracle.jsp.JspServlet.doDispatch(JspServlet.java:265)
    at oracle.jsp.JspServlet.internalService(JspServlet.java:184)
    at oracle.jsp.JspServlet.service(JspServlet.java:154)
    at javax.servlet.http.HttpServlet.service(HttpServlet.java:588)
    at org.apache.jserv.JServConnection.processRequest(JServConnection.java:456)
    at org.apache.jserv.JServConnection.run(JServConnection.java:294)
    at java.lang.Thread.run(Thread.java:484)
    
```

The possible errors that the **Error** page displays are listed in the following table:

Table 4–1 Punchout Error Codes

Error Code	Possible Cause	Suggested Action
1	Errors other than all those defined below.	The Exchange Operator may need to contact the Exchange system administrator.
2	Unable to retrieve corresponding supplier information	An error occurred while trying to retrieve supplier information from the database. The Exchange Operator may need to contact the database administrator.
3	Unable to reach supplier site	Contact the supplier.
4	Supplier site does not respond	Contact the supplier.
5	Incorrect supplier site URL	The punchout URL entered in the supplier’s setup is not a valid URL. Contact the supplier.
6	Error in constructing the Login Request Document	Exchange was unable to create the login request document. Contact the Exchange Operator.
7	Incorrect username/password combination	The supplier site is not accepting the password in the login request document. Contact the supplier.

Table 4–1 Punchout Error Codes

Error Code	Possible Cause	Suggested Action
8	Invalid XML format in Login Response document	The supplier has not properly constructed the login response document. Contact the supplier.
9	Unable to receive Login Response document	The supplier site has not sent back the response document properly. Contact the supplier.
10	Invalid XML format in Shopping Cart document	The supplier has not properly constructed the shopping cart document. Contact the supplier.
11	Unable to receive Shopping Cart document	Exchange cannot find the cart information in the HTTP POST. Make sure the supplier has completed the requirements in the steps related to processing punchout documents and returning shopping cart information as described in Chapter 3 .
12	Unable to map the supplier currency	Exchange is having a system problem with mapping. Contact the Exchange Operator.
13	Invalid supplier currency	The supplier currency is one that Exchange does not recognize. The supplier needs to perform data mapping for the currency.
14	Unable to map the supplier unit of measure	Exchange is having a system problem with mapping. Contact the Exchange Operator.

Common Exchange Errors

Some of the more common Exchange punchout errors are provided below. These are some of the detailed error descriptions that appear when you click the error detail link on the **Error** page.

Remote Site Cannot be Reached

This error corresponds to Error Code 3.

If you receive an error like the following when clicking a punchout link, Exchange cannot reach the supplier site; the HTTP or HTTPS connection failed; you should contact the supplier:

```
java.net.NoRouteToHostException: A route to the remote host is not
available.
at java.net.PlainSocketImpl.socketConnect(Native Method)
at java.net.PlainSocketImpl.doConnect(PlainSocketImpl.java:Compiled Code)
at java.net.PlainSocketImpl.connectToAddress(PlainSocketImpl.java:141)
at java.net.PlainSocketImpl.connect(PlainSocketImpl.java:128)
at java.net.Socket.<init>(Socket.java:285)
```

```
at java.net.Socket.<init>(Socket.java:112)
at sun.net.NetworkClient.doConnect(NetworkClient.java:56)
at sun.net.www.http.HttpClient.openServer(HttpClient.java:347)
at sun.net.www.http.HttpClient.openServer(HttpClient.java:534)
at sun.net.www.http.HttpClient.<init>(HttpClient.java:282)
at sun.net.www.http.HttpClient.<init>(HttpClient.java:292)
at sun.net.www.http.HttpClient.New(HttpClient.java:304)
at sun.net.www.protocol.http.HttpURLConnection.connect
(HttpURLConnection.java:393)
at sun.net.www.protocol.http.HttpURLConnection.getOutputStream
(HttpURLConnection.java:440)
at _orders._PunchoutLogin._jspService(_PunchoutLogin.java:184)
```

SSL Handshake Failure

This error corresponds to Error Code 3.

An error like the following indicates that the site being punched out to is not in the certification authority file in Exchange, the site's certificate expired, or the Exchange configuration does not point to the correct certification authority file location:

```
java.io.IOException: javax.net.ssl.SSLException: SSL handshake failed:
X509CertChainIncompleteErr
at oracle.apps.pom.util.HTTPSURL.getSSLConnection(HTTPSURL.java:262)
at oracle.apps.pom.util.HTTPSURL$HTTPSConnection.connect(HTTPSURL.java:456)
at oracle.apps.pom.util.HTTPSURL$HTTPSConnection.getOutputStream
(HTTPSURL.java:450)
at oracle.apps.pom.orders.punchout.processors.HttpPostProcessor.execute
(HttpPostProcessor.java:121)
at oracle.apps.pom.orders.punchout.PunchoutMainBean.performLogin
(PunchoutMainBean.java:341)
at oracle.apps.pom.orders.punchout.ui.PunchoutLoginLogic.processRequest
(PunchoutLoginLogic.java:32)
```

The site being punched out to needs its certification authority to be on the certification authority file in Exchange. The Exchange Operator should also access the **Software Setup** page in the Configuration tab and make sure the Certifying Authority Certificate Location field contains a file path and name for a valid certification authority (CA) bundle file. In Exchange, depending on the setup, this is typically located in \$APPL_TOP/admin/pomdigcert.txt.

Incorrect XML Document

This error corresponds to Error Code 8.

The following kind of error means that the document is not a valid XML document:

```

<Line 1, Column 6>: XML-0149: (Error) Element 'html' used but not declared.
<Line 1, Column 12>: XML-0149: (Error) Element 'head' used but not declared.
<Line 1, Column 19>: XML-0149: (Error) Element 'title' used but not
declared.
<Line 1, Column 48>: XML-0149: (Error) Element 'LINK' used but not declared.
<Line 1, Column 52>: XML-0137: (Error) Attribute 'rel' used but not
declared.
<Line 1, Column 54>: XML-0125: (Fatal Error) Attribute value should start
with quote.
oracle.xml.parser.v2.XMLParseException: Element 'html' used but not
declared.
at oracle.xml.parser.v2.XMLError.flushErrors(XMLError.java:233)
at oracle.xml.parser.v2.XMLError.error(XMLError.java:133)
at oracle.xml.parser.v2.XMLError.error(XMLError.java:171)
at oracle.xml.parser.v2.NonValidatingParser.parseAttrValue(NonValidating
Parser.java:1323)
at oracle.xml.parser.v2.ValidatingParser.parseAttr(ValidatingParser.java:
504)
at oracle.xml.parser.v2.NonValidatingParser.parseAttributes
(NonValidatingParser.java:1117)
at oracle.xml.parser.v2.NonValidatingParser.parseElement
(NonValidatingParser.java:975)
at oracle.xml.parser.v2.ValidatingParser.parseRootElement
(ValidatingParser.java:123)
at oracle.xml.parser.v2.NonValidatingParser.parseDocument
(NonValidatingParser.java:241)
at oracle.xml.parser.v2.XMLParser.parse(XMLParser.java:232)

```

This error usually happens when the supplier site returns a generic HTML page (for example, in case of an error connecting) instead of a login response document.

Incorrect Shopping Cart XML

This error corresponds to Error Code 10.

An error like the following means that the shopping cart XML document is an invalid XML format:

```

Error Code: 10
Unable to parse the Shopping Cart XML.
XML Parser Type: PUNCHOUT_SHOPPING_CART_XML
DTD Location: /prv6at/app/a_prv6at/115/common/html/templates
XMLParseException
oracle.xml.parser.v2.XMLError.flushErrors(XMLError.java:233)
at oracle.xml.parser.v2.NonValidatingParser.parseDocument

```

```
(NonValidatingParser.java:247)
at oracle.xml.parser.v2.XMLParser.parse(XMLParser.java:232)
at
oracle.apps.pom.orders.punchout.parsers.XMLParser.parse(XMLParser.java:214)
at oracle.apps.pom.orders.punchout.parsers.ShoppingCartXMLParser.parseXML
(ShoppingCartXMLParser.java:61)
```

Timeouts

Setup in iProcurement includes establishing an idle time—a period of inactivity in iProcurement after which iProcurement logs out the user. (This setup is performed using the ICX:Session Timeout profile option.) While the requester is shopping on Exchange or the external site, iProcurement is considered idle. If the requester's session times out before finishing shopping at the external site, when the requester returns to iProcurement, iProcurement prompts the requester to log in again, resumes the session, and retains the requester's shopping cart items. The requester can continue adding items to the cart or checking out the items.

If you are punching out from iProcurement directly to Exchange, you can set an option to extend the session so that the logout does not occur. See [Table 2-6 in Define Exchange Punchout in iProcurement](#) on page 2-19. The same option exists when punching out from iProcurement directly to the supplier (see [Table 2-7 in Define Supplier Punchout in iProcurement](#) on page 2-26); however, the supplier must set up its site to make use of this option. (Exchange makes use of it automatically when you choose it.)

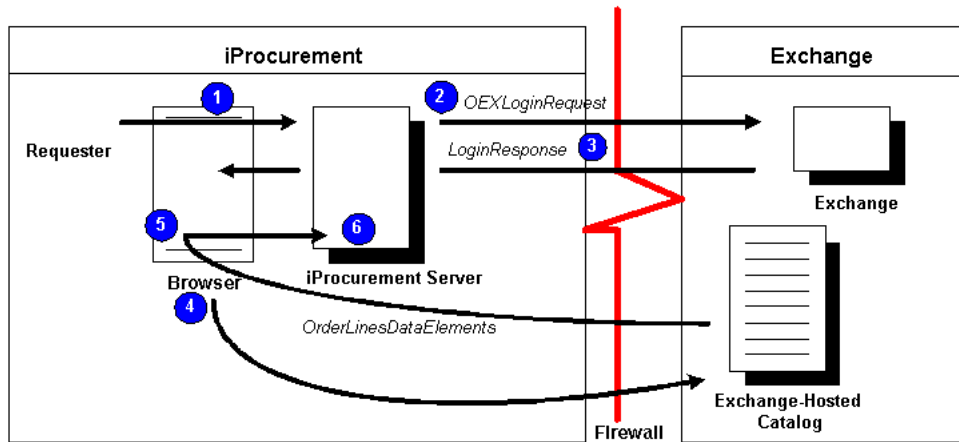
Detailed Punchout Process

This appendix expands on [Chapter 1](#) by describing the punchout process in more detail for each model:

- [Model 1: Punchout from Oracle iProcurement to Oracle Exchange \(XML\)](#) on page A-1
- [Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog \(XML\)](#) on page A-4
- [Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog \(XML or cXML\)](#) on page A-7
- [Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange \(XML\)](#) on page A-9
- [Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange \(cXML\)](#) on page A-13

Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)

The following diagram shows the flow for Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML).



The following sections describe the steps in Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) in detail.

1 Requester logs on to iProcurement

The requester logs on to iProcurement.

2 Requester clicks a link to Exchange

From iProcurement, the requester clicks a link to Exchange. When the requester clicks the link, the browser connects to the iProcurement server.

The iProcurement server first calls Oracle secure socket layer (SSL) application programmable interfaces (APIs) to establish a secure connection with Exchange, if the Exchange is secure. (Exchange.Oracle.com is a secure site.) The APIs request the Certification Authority (CA) digital certificate (public key) from Exchange. This digital certificate is compared to certificate authorities stored in the *ca-bundle.crt* file in iProcurement. (See [Appendix C](#) for more information on how secure connections work.)

After the secure connection is established, the iProcurement server generates the *OEXLoginRequest* XML document, which includes a base set of user details and the return URL for the iProcurement instance. iProcurement passes this XML document to the Exchange site via an HTTP request using the POST format.

3 Exchange authenticates the requester and returns a response

Exchange receives the OEXLoginRequest and authenticates the iProcurement requester. (When the buyer sets up punchout access as described in this guide, this logon is invisible to the requester; the requester does not physically log on again to Exchange.) The user name and password used to authenticate the requester are the same as the proxy user name and password that the iProcurement administrator created when registering the proxy user on Exchange. (See [Register Users on the Exchange](#) on page 2-11.)

Once the requester is authenticated, Exchange generates the *LoginResponse* XML document and sends it to iProcurement via an HTTP response.

Exchange is *session-aware*. Although individual requesters access Exchange with the same proxy user account, Exchange treats each logon as its own session and allows multiple punchout requesters from a single buying company to punch out to Exchange at the same time. The session ID is provided in the <loginURL> tag of the LoginResponse document.

4 iProcurement redirects the requester's browser to Exchange for shopping

Now that a secure and trusted connection is established and the requester has been assigned a session, iProcurement redirects the requester's browser to the shopping page on Exchange. There, the requester is allowed to search for and add items to the shopping cart on Exchange. The Exchange functionality available to the requester is based on the job functions that the iProcurement administrator assigned to the proxy user when registering the proxy user on Exchange.

Exchange detects that the shopper is from iProcurement and provides a Done Shopping button when the requester is finished adding items to the shopping cart. (If the buyer has set up data mapping on Exchange, Exchange performs the data mapping when the buyer clicks Done Shopping.)

5 Requester finishes shopping; Exchange returns the cart to iProcurement

When the requester finishes adding items to the cart on Exchange, Exchange returns the shopping cart to the iProcurement server via the requester's browser. The return to the requester's browser is invisible to the requester. Specifically, the browser uses the HTML FORM POST action to pass the items in the shopping cart to iProcurement using the parameter oracleCart. (The oracleCart parameter contains the entire shopping cart contents.) The cart is contained in a hidden form field. To post the shopping cart items, the FORM POST uses the return URL that iProcurement sent in the OEXLoginRequest document.

Exchange URL-encodes and returns the shopping cart information to iProcurement in the *OrderLinesDataElements* XML document.

Note: Requesters cannot add To Be Determined priced items to their carts when punching out to Exchange. Exchange allows suppliers to specify To Be Determined (TBD) prices for items; however, items without prices are not permitted in iProcurement. Exchange automatically disallows adding TBD items to iProcurement requesters' shopping carts.

6 Requester completes the checkout process; iProcurement processes the order

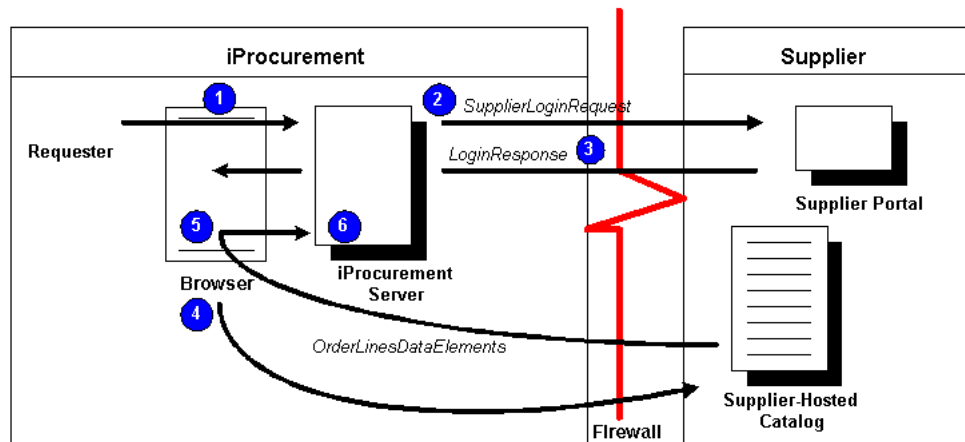
iProcurement adds the items to the requisition. iProcurement also references e-Commerce Gateway to see if code conversion (data mapping) is set up; if it is, e-Commerce Gateway performs the required conversions between the external code values coming from the supplier and the internal code values set up in Oracle Applications. If the iProcurement administrator, in the eContent Manager, set the option to prevent modifications to items for that punchout definition, then the requester cannot make changes to the items returned from the punchout.

iProcurement converts the currency in which the items are priced to the functional currency used by iProcurement.

The requisition then goes through the normal workflow, approval, and purchase order processes configured in iProcurement and Purchasing.

Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML)

The following diagram shows the flow for Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).



The following sections describe the steps in Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML) in detail.

1 Requester logs on to iProcurement

The requester logs on to iProcurement.

2 Requester clicks a link to the supplier site

From iProcurement, the requester clicks a link to the supplier site. When the requester clicks the link, the browser connects to the iProcurement server.

If punching out to a secure supplier site, the iProcurement server first calls Oracle secure socket layer (SSL) application programmable interfaces (APIs) to establish a secure connection with the site. The APIs request the Certification Authority (CA) digital certificate (public key) from the secure supplier site. This digital certificate is compared to certificate authorities stored in the `ca-bundle.crt` file in iProcurement.

After the connection is established, iProcurement generates the *SupplierLoginRequest* XML document, which includes a base set of user details and the return URL for the iProcurement instance. (This XML document can contain additional user details if the option in the eContent manager punchout setup pages in iProcurement was selected to send additional details.) iProcurement passes this XML document to the supplier site via an HTTP request using the POST format.

3 Supplier authenticates the requester and returns a response

The supplier receives the `SupplierLoginRequest` document and authenticates the iProcurement requester. (When the supplier sets up access to its site as described in this guide, this logon is invisible to the requester; the requester does not physically log on again to the supplier site.) Next, the supplier must generate the `LoginResponse` XML document accepting the requester's logon and send the document to iProcurement via an HTTP response.

It is recommended that the supplier site be *session-aware* or have some other method for distinguishing logons to its site. The iProcurement setup for the buyer typically creates one logon user account—a single proxy user name that is used by all requesters in the company to access the supplier site. In this case, the supplier should use a session ID to assign to each login made by that account, using the `<loginURL>` tag of the `LoginResponse` document, or develop some other method to allow multiple users with the same login account to access its site at one time. For example, the supplier can use some other unique identifier sent with the user's information, in addition to the single login account, to identify the user.

4 iProcurement redirects the requester's browser to the supplier site for shopping

Now that a secure and trusted connection is established, iProcurement redirects the requester's browser to the supplier site—to the login URL provided by the supplier. Now the requester is allowed to search for and add items to the shopping cart on the supplier site.

5 Requester finishes shopping; supplier site returns the cart to iProcurement

When the requester finishes adding items to the cart on the supplier site, the supplier site returns the shopping cart to the iProcurement server via the requester's browser. The return to the requester's browser is invisible to the requester. Specifically, the browser uses the HTML FORM POST action to pass the items in the shopping cart to iProcurement. The cart must be contained in a hidden form field. To post the shopping cart items, the FORM POST must use the return URL that iProcurement sent in the `SupplierLoginRequest` document. The parameter for the post should be `oracleCart`. (The `oracleCart` parameter contains the entire shopping cart contents.)

The supplier site must return the shopping cart information in the `OrderLinesDataElements` XML document. This document must be url-encoded.

6 Requester completes the checkout process; iProcurement processes the order

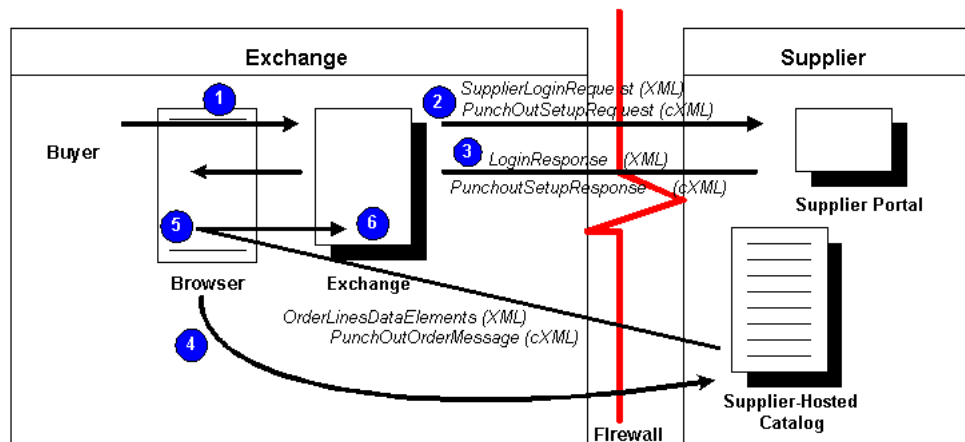
iProcurement adds the items to the requisition. iProcurement also references e-Commerce Gateway to see if code conversion (mapping) is set up; if it is, e-Commerce Gateway performs the required conversions between the external code values coming from the supplier and the internal code values set up in Oracle Applications. If the iProcurement administrator, in the eContent Manager, set the option to prevent modifications to items for that punchout definition, then the requester cannot make changes to the items returned from the punchout.

iProcurement converts the currency in which the items are priced to the functional currency used by iProcurement.

The requisition then goes through the normal workflow, approval, and purchase order processes configured in iProcurement and Purchasing.

Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)

The following diagram shows the flow for Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML).



The following sections describe the steps in Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML) in detail.

1 Buyer logs on to Exchange

The buyer logs on to Exchange.

2 Buyer clicks a link to the supplier site

On Exchange, the buyer clicks a link directly to the supplier site from the **Shopping** home page or **Search Results** page. When the buyer clicks the link, the browser connects to the Exchange server, which establishes a connection to the supplier site.

If the supplier site is a secure site, Exchange first calls Oracle secure socket layer (SSL) application programmable interfaces (APIs) to establish a secure connection with the site. The APIs request the Certification Authority (CA) digital certificate (public key) from the site. This digital certificate is compared to certificate authorities stored in the pomdigcrt.txt file in Exchange.

After the connection is established, Exchange generates the *SupplierLoginRequest* XML document, which includes a base set of user details and the return URL for Exchange. Exchange passes this XML document to the supplier site. If the supplier uses cXML, Exchange passes the *PunchOutSetupRequest* cXML document to the supplier site.

3 Supplier authenticates the buyer

The supplier receives the *SupplierLoginRequest* XML document (or *PunchOutSetupRequest* cXML document) and authenticates the Exchange buyer. (When the supplier sets up access to its site as described in this guide, this logon is invisible to the buyer; the buyer does not physically log on again to the supplier site.) Next, the supplier must generate the *LoginResponse* XML document and send the document back to Exchange to accept the buyer's logon. If the supplier uses cXML, the supplier generates a response in the form of a *PunchOutSetupResponse* cXML document. The response must be sent via an HTTP response.

4 Exchange redirects the buyer's browser to the supplier site for shopping

Now that a secure and trusted connection is established, Exchange redirects the requester's browser to the supplier site—to the login URL provided by the supplier. Now the requester is allowed to search for and add items to the shopping cart on the supplier site.

5 Buyer finishes shopping; supplier site returns the cart to Exchange

When the buyer finishes adding items to the cart on the supplier's site, the supplier site returns the shopping cart to the Exchange server via the buyer's browser. The return to the buyer's browser is invisible to the buyer. Specifically, the browser uses the HTML FORM POST action to pass the items in the shopping cart to the Exchange server. The cart must be contained in a hidden form field. To post the shopping cart items, the FORM POST must use the return URL that Exchange sent in the *SupplierLoginRequest* document. The parameter for the post should be *oracleCart*. (The *oracleCart* parameter contains the entire shopping cart contents.)

The supplier site must return the shopping cart information in a url-encoded *OrderLinesDataElements* XML document. If using cXML, the supplier site returns the shopping cart information to Exchange in the *PunchOutOrderMessage* cXML document. See the *cXML User's Guide* at <http://www.cxml.org> for more information on cXML requirements.

6 Buyer completes the checkout process; Exchange processes the order

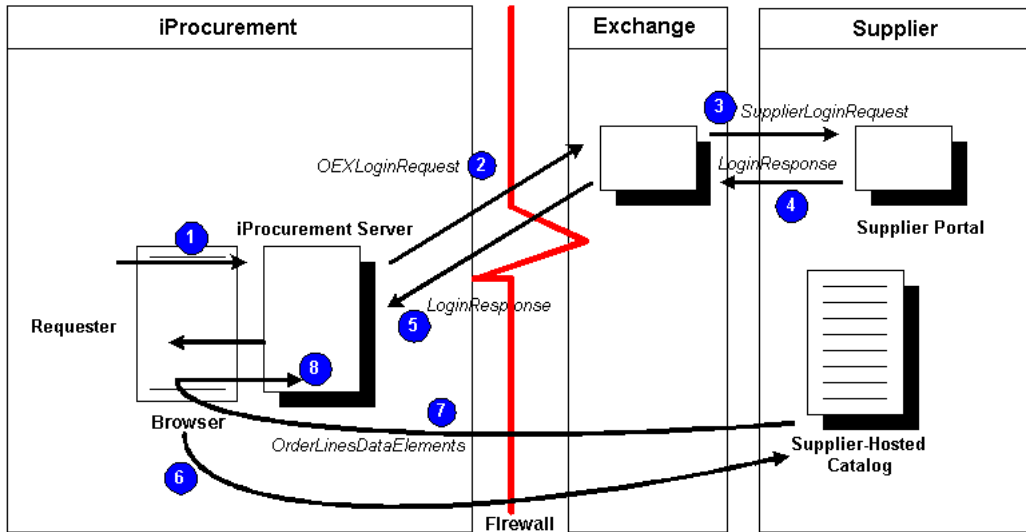
Exchange adds the items to the order. If the buyer and supplier companies have set up data mapping on Exchange, Exchange performs data mapping at this step, when the cart is returned to the Exchange server for processing.

If the items are priced in different currencies, Exchange creates one order for each currency.

The buyer cannot make changes to the punchout items on the order.

Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)

The following diagram shows the flow for Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML).



The following sections describe the steps in Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML) in detail.

1 Requester logs on to iProcurement

The requester logs on to iProcurement.

2 Requester clicks a link to the supplier site

From iProcurement, the requester clicks a link to the supplier site. The punchout link goes through Exchange. When the requester clicks the link, the browser connects to the iProcurement server, which establishes a secure connection to the Exchange (if the Exchange is secure) and requests the digital certificate from Exchange. (Exchange.Oracle.com is a secure site.)

The iProcurement server first calls Oracle secure socket layer (SSL) application programmable interfaces (APIs) to establish a secure connection with Exchange. The APIs request the Certification Authority (CA) digital certificate (public key) from Exchange. This digital certificate is compared to certificate authorities stored in the *ca-bundle.crt* file in iProcurement.

After the secure connection is established, iProcurement generates the *OEXLoginRequest* XML document, which includes a base set of user details and the return URL for the iProcurement instance. iProcurement passes this XML document to the Exchange site via an HTTP request using the POST format. When the punchout is set up as described in this guide, this logon is invisible to the requester; the requester does not physically log on again to Exchange.

3 Exchange authenticates the requester

Exchange receives the *OEXLoginRequest* and authenticates the iProcurement user. The user name and password used to authenticate the requester are the same as the proxy user name and password that the iProcurement administrator created when registering the proxy user on Exchange. (See [Register Users on the Exchange](#) on page 2-11.)

Exchange then uses Oracle SSL APIs to establish a secure connection to the supplier site (if the site requires), opens a connection between Exchange and the supplier site, and generates the *SupplierLoginRequest* XML document via an HTTP request using the POST format. The document includes the site-level password that the supplier requires to access its Web catalog, the iProcurement return URL, and the iProcurement user and company details that were in the initial *OEXLoginRequest* from iProcurement to Exchange.

Note: The supplier creates the site-level password on Exchange. The iProcurement administrator does not need to store or maintain this information.

It is recommended that the supplier site be *session-aware* or have some other method for distinguishing logons to its site. The iProcurement setup for the buyer typically creates one logon user account—a single proxy user name that is used by all requesters in the company to access the supplier site. In this case, the supplier should use a session ID to assign to each login made by that account, using the `<loginURL>` tag of the *LoginResponse* document, or develop some other method to allow multiple users with the same login account to access its site at one time. For example, the supplier can use some other unique identifier sent with the user's information, in addition to the single login account, to identify the user.

4 Supplier site responds to Exchange

The supplier site generates a response in the form of a *LoginResponse* XML document that contains the login URL with session information for the supplier's site.

The supplier site returns the *LoginResponse* document to Exchange.

5 Exchange forwards the supplier site response to iProcurement

Exchange then sends a *LoginResponse* document to iProcurement. The *LoginResponse* XML document contains the URL that the iProcurement requester will use to connect to the supplier site.

6 iProcurement redirects the requester's browser to the supplier site for shopping

Using the login URL provided in the *LoginResponse* XML document, iProcurement redirects the iProcurement requester's browser to the supplier site using the supplier's login URL. The requester is allowed to search for and add items to the shopping cart on the supplier site.

7 Requester finishes shopping; supplier site returns the cart to iProcurement

When the requester finishes adding items to the cart on the supplier site, the supplier site returns the shopping cart to the iProcurement server via the requester's browser. The return to the requester's browser is invisible to the requester. Specifically, the browser uses the HTML FORM POST action to pass the items in the shopping cart to iProcurement. The cart must be contained in a hidden form field. To post the shopping cart items, the FORM POST must use the return URL that iProcurement sent in the *OEXLoginRequest* document. The parameter for the post should be *oracleCart*. (The *oracleCart* parameter contains the entire shopping cart contents.)

The supplier site returns the shopping cart information to iProcurement in the *OrderLinesDataElements* XML document. This document must be url-encoded.

8 Requester completes the checkout process; iProcurement processes order

iProcurement adds the items to the requisition. iProcurement also references e-Commerce Gateway to see if code conversion (mapping) is set up; if it is, e-Commerce Gateway performs the required conversions between the external code values coming from the supplier and the internal code values set up in Oracle Applications. (This model does not use Exchange data mapping.) If the

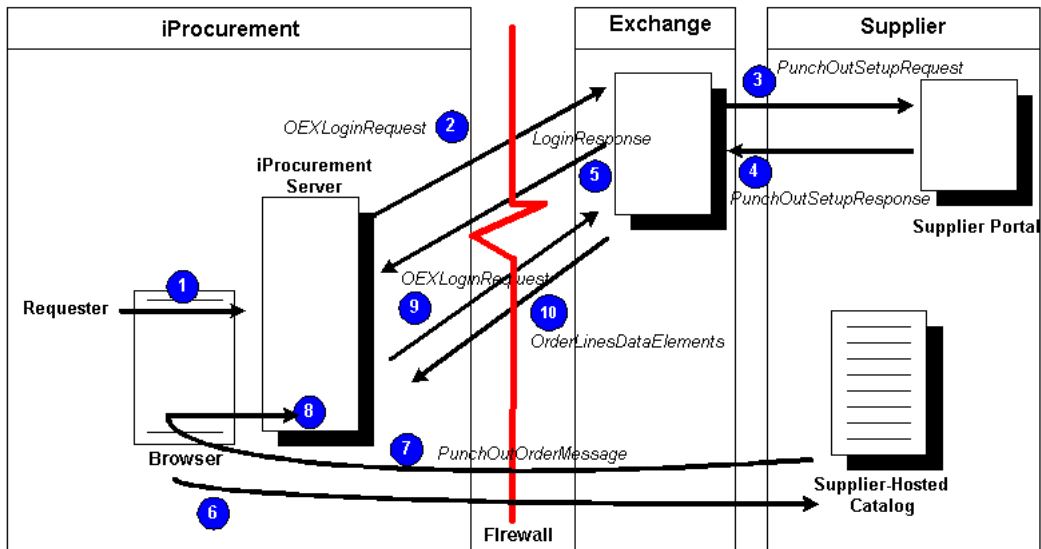
iProcurement administrator, in the eContent Manager, set the option to prevent modifications to items for that punchout definition, then the requester cannot make changes to the items returned from the punchout.

iProcurement converts the currency in which the items are priced to the functional currency used by iProcurement.

The requisition then goes through the normal workflow, approval, and purchase order processes configured in iProcurement and Purchasing.

Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

The following diagram shows the flow for Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML).



The following sections describe the steps in Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML) in detail.

1 Requester logs on to iProcurement

The requester logs on to iProcurement.

2 Requester clicks a link to the supplier site

From iProcurement, the requester clicks a link to the supplier site. The punchout goes through Exchange. When the requester clicks the link, the browser connects to the iProcurement server, which establishes a secure connection to the Exchange (if the Exchange is secure) and requests the digital certificate from Exchange. (Exchange.Oracle.com is a secure site.)

The iProcurement server first calls Oracle secure socket layer (SSL) application programmable interfaces (APIs) to establish a secure connection with Exchange. The APIs request the Certification Authority (CA) digital certificate (public key) from Exchange. This digital certificate is compared to certificate authorities stored in the ca-bundle.crt file in iProcurement.

After the secure connection is established, iProcurement generates the *OEXLoginRequest* XML document, which includes a base set of user details and the return URL for the iProcurement instance. iProcurement passes this XML document to the Exchange site via an HTTP request using the POST format. When the punchout is set up as described in this guide, this logon is invisible to the requester; the requester does not physically log on again to Exchange.

3 Exchange authenticates the requester

Exchange receives the *OEXLoginRequest* and authenticates the iProcurement requester. The user name and password used to authenticate the requester are the same as the proxy user name and password that the iProcurement administrator created when registering the proxy user on Exchange. (See [Register Users on the Exchange](#) on page 2-11.)

Exchange then uses Oracle SSL APIs to establish a secure connection to the supplier site (if the site requires), opens a connection between Exchange and the supplier site, and generates the *PunchOutSetupRequest* cXML document. The document includes the site-level password that the supplier requires to access its Web catalog, the iProcurement return URL, and the iProcurement user and company details that were in the initial *OEXLoginRequest* from iProcurement to Exchange.

Note: The supplier creates the site-level password on Exchange. The iProcurement administrator does not need to store or maintain this information.

It is recommended that the supplier site be *session-aware* or have some other method for distinguishing logons to its site. The iProcurement setup for the buyer typically creates one logon user account—a single proxy user name that is used by all requesters in the company to access the supplier site. In this case, the supplier should use a session ID to assign to each login made by that account, using the <loginURL> tag of the punchout response document, or develop some other method to allow multiple users with the same login account to access its site at one time. For example, the supplier can use some other unique identifier sent with the user's information, in addition to the single login account, to identify the user.

4 Supplier site responds to Exchange

The supplier site then generates a response in the form of a *PunchOutSetupResponse* cXML document, which contains the login URL with session information for the supplier's site. The supplier site returns the *PunchOutSetupResponse* document to Exchange.

5 Exchange forwards the supplier site response to iProcurement

Exchange then uses the *PunchOutSetupResponse* to generate the *LoginResponse* XML document, and sends the *LoginResponse* document to iProcurement. The *LoginResponse* XML document contains the URL that the iProcurement requester will use to connect to the supplier site.

6 iProcurement redirects the requester's browser to the supplier site for shopping

Using the login URL provided in the *LoginResponse* XML document, iProcurement redirects the iProcurement requester's browser to the supplier site using the supplier's login URL. The requester is allowed to search for and add items to the shopping cart on the supplier site.

7 Requester finishes shopping; the supplier site returns the cart to iProcurement

When the requester finishes adding items to the cart on the supplier site, the supplier site returns the shopping cart to the iProcurement server via the requester's browser. The return to the requester's browser is invisible to the

requester. Specifically, the browser uses the HTML FORM POST action to pass the items in the shopping cart to iProcurement, using the return URL that iProcurement sent during the initial punchout. The cart must be contained in a hidden form field. The parameter for the post should be cxml-urlencoded. (The cxml-urlencoded parameter contains the entire shopping cart contents.)

The supplier site returns the shopping cart information to iProcurement in the *PunchOutOrderMessage* cXML document. See the *cXML User's Guide* at <http://www.cxml.org> for more information on cXML requirements.

8 Shopping cart goes to iProcurement

The cxml-urlencoded parameter used to post the shopping cart lets iProcurement know this is a cXML shopping cart.

9 iProcurement redirects the cart to Exchange for cXML-to-XML conversion

Since iProcurement cannot process the *PunchOutOrderMessage* cXML document, iProcurement receives and redirects the shopping cart to Exchange. iProcurement establishes a secure and trusted connection with Exchange, then forwards the cXML shopping cart to Exchange via the *OEXLoginRequest* document.

10 Exchange converts the cart from cXML to XML and returns it to iProcurement

Exchange then converts the shopping cart from cXML to XML and does the code conversions (UOM, currency, and trading partner data mapping), if any, defined on Exchange.

Exchange then returns the shopping cart in the form of the *OrderLinesDataElements* XML document to iProcurement for processing, approval routing, and purchase order creation.

If the iProcurement administrator has set up data mapping in e-Commerce Gateway, e-Commerce Gateway performs data mapping at this step, when the cart is returned to the iProcurement server for processing.

iProcurement converts the currency in which the items are priced to the functional currency used by iProcurement.

DTDs, Documents, and Descriptions

This chapter covers the following topics:

- [DTDs and Documents by Model](#) on page B-1
- [DTDs, Documents, and Descriptions](#) on page B-3
- [Mapping Between XML and cXML](#) on page B-39

DTDs and Documents by Model

In iProcurement, document type definitions (DTDs) for the XML punchout documents can be found in the following directory:

```
$ICX_TOP/html
```

In Exchange, DTDs for the XML punchout documents can be found in the following directory:

```
$POM_TOP/html/templates
```

For cXML punchout documents, the DTD can be downloaded from the following URL:

```
http://www.cxml.org
```

The following tables list the punchout documents and DTDs used for each model.

For a graphical description of the punchout documents by model, see the illustrations in [Appendix A](#).

Table B–1 Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) Documents

Reference	DTD
OEXLoginRequest on page B-4	OEXLoginRequest.dtd
LoginResponse on page B-16	LoginResponse.dtd (iProcurement) pomlogns.dtd (Exchange)
OrderLinesDataElements on page B-18	OrderLinesDataElements.dtd (iProcurement) pomcarts.dtd, shoppingcart.dtd (Exchange)
Common DTD File (pomxmlrr.dtd) on page B-37	pomxmlrr.dtd

Table B–2 Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML) Documents

Reference	DTD
SupplierLoginRequest on page B-8	SupplierLoginRequest.dtd
LoginResponse on page B-16	LoginResponse.dtd
OrderLinesDataElements on page B-18	OrderLinesDataElements.dtd
Common DTD File (pomxmlrr.dtd) on page B-37	pomxmlrr.dtd

Table B–3 Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML) Documents

Reference	DTD
SupplierLoginRequest on page B-8	pomlognr.dtd
LoginResponse on page B-16 (XML)	pomlogns.dtd
PunchOutSetupRequest on page B-26	cXML.dtd
PunchOutSetupResponse on page B-29 (cXML)	cXML.dtd
OrderLinesDataElements on page B-18	pomcarts.dtd, shoppingcart.dtd
PunchOutOrderMessage on page B-31 (cXML)	cXML.dtd
Common DTD File (pomxmlrr.dtd) on page B-37	pomxmlrr.dtd

Table B–4 Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML) Documents

Reference	DTD
OEXLoginRequest on page B-4	OEXLoginRequest.dtd
SupplierLoginRequest on page B-8	SupplierLoginRequest.dtd (iProcurement) pomlognr.dtd (Exchange)
LoginResponse on page B-16	LoginResponse.dtd (iProcurement) pomlogns.dtd (Exchange)
OrderLinesDataElements on page B-18	OrderLinesDataElements.dtd
SupplierSyncUpResponse on page B-34	SupplierSyncUpResponse.dtd
Common DTD File (pomxmlrr.dtd) on page B-37	pomxmlrr.dtd

Table B–5 Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML) Documents

Reference	DTD
OEXLoginRequest on page B-4	OEXLoginRequest.dtd
PunchOutSetupRequest on page B-26	cXML.dtd
PunchOutSetupResponse on page B-29	cXML.dtd
LoginResponse on page B-16	LoginResponse.dtd (iProcurement) pomlogns.dtd (Exchange)
PunchOutOrderMessage on page B-31	cXML.dtd
OrderLinesDataElements on page B-18	OrderLinesDataElements.dtd (iProcurement) pomcarts.dtd, shoppingcart.dtd (Exchange)
SupplierSyncUpResponse on page B-34	SupplierSyncUpResponse.dtd
Common DTD File (pomxmlrr.dtd) on page B-37	pomxmlrr.dtd

DTDs, Documents, and Descriptions

The following sections provide the DTDs, examples, and descriptions of each punchout document.

The Required or Optional indicators below refer to whether a value in the field is required.

OEXLoginRequest

iProcurement generates the OEXLoginRequest document after establishing a connection with Exchange in the following models:

- Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML).
- Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML).
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML).

The OEXLoginRequest document is also used as the *supplier sync request* when downloading punchouts from Exchange.

OEXLoginRequest.dtd

```
<!ELEMENT % common SYSTEM "pomxmlrr.dtd">
<!ELEMENT % body SYSTEM "<ELEMENT body (loginRequest)>">

<!ELEMENT loginRequest(companyName, userInfo, companyInfo?, userArea?,
partySiteId?, reqToken?, language?, searchKeywords?, cxmlCart?,
returnURL, icxSessionCallBackURL?)>

<!ELEMENT companyName(#PCDATA)>
<!ELEMENT userInfo(userName, appUserName, userContactInfo?)>
<!ELEMENT userName(#PCDATA)>
<!ELEMENT appUserName(#PCDATA)>
<!ELEMENT userContactInfo(userPhone?, userEmail?)>
<!ELEMENT userPhone(#PCDATA)>
<!ELEMENT userEmail(#PCDATA)>
<!ELEMENT companyInfo(companyDUNS?, contactName?, contactPhone?)>
<!ELEMENT companyDUNS(#PCDATA)>
<!ELEMENT contactName(#PCDATA)>
<!ELEMENT contactPhone(#PCDATA)>
<!ELEMENT userArea ANY>
<!ELEMENT partySiteId (#PCDATA)>
<!ELEMENT reqToken(#PCDATA)>
<!ELEMENT language(#PCDATA)>
<!ELEMENT searchKeywords(#PCDATA)>
<!ELEMENT % cxmlCart SYSTEM "cXML.dtd">
<!ELEMENT returnURL(#PCDATA)>
<!ELEMENT icxSessionCallBackURL(#PCDATA)>
```

Example OEXLoginRequest

The following is an example OEXLoginRequest document used by Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML):

```
<?xml version = '1.0' encoding = 'UTF8'?>
<request>
  <header version="1.0">
    <login>
      <username>elvis</username>
      <password>welcome</password>
    </login>
    <action>shopping</action>
    <language>US</language>
    <userArea>
      <operatingUnit>204</operatingUnit>
      <shipTo>M1- Seattle</shipTo>
      <deliverTo>M1- Seattle</deliverTo>
    </userArea>
  </header>
  <body>
    <loginRequest>
      <userInfo>
        <userName>Green, Mr. Terry</userName>
        <appUserName>TGREEN</appUserName>
        <userContactInfo>
          <userEmail>tgreen@vision.com</userEmail>
        </userContactInfo>
      </userInfo>
      <companyInfo/>
      <reqToken>template=tpn* @_action=addToOrder* @_function=addToOrder* @_
reqSessionId=11029194121169* @_reqHeaderId=0* @_emergencyReq=null</reqToken>
      <returnURL>http://ap005jvm.us.oracle.com:15670/oa_
servlets/oracle.apps.icx.por.punchout.PunchOutServlet?callBack=shopping</returnU
RL>
    </loginRequest>
  </body>
</request>
```

Field Descriptions

The fields in the OEXLoginRequest document are described below.

<username> Required

Exchange proxy user name assigned to the iProcurement requester.

<password> Required

Exchange proxy user password assigned to the iProcurement requester.

<action> Required

When shopping, the value is always *shopping*. When downloading a punchout from Exchange, the OEXLoginRequest is also used, but with an action of *suppSync* instead of *shopping*.

For Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML), the value is *shopping* for the initial login request and *mapping* for the conversion of the cXML cart to XML. (When iProcurement sends the cart back to Exchange for conversion, it does so via the OEXLoginRequest.)

<language> Optional

Requester's session language in iProcurement, using the Oracle Applications language code. The session language is the language in which iProcurement is displayed. (It can be changed by using the following navigation from the logon page, if the requester's logon responsibility includes access to this function: Preferences > Change Session Language.)

<searchLanguage> Optional

Requester's search language in iProcurement, using the Oracle Applications language code. The search language can be chosen on the **Search** page before performing a search. (For example, if the session language is English, but catalog items exist only in German, the requester can choose German as the search language.) This field is present only if the requester performed a search before accessing the punchout.

<operatingUnit> Optional

Unique identifier for the requester's operating unit. Not used by Exchange or passed on to the supplier.

<shipTo> Optional

Deliver-to location name for the requester. Not used by Exchange or passed on to the supplier.

<deliverTo> Optional

Deliver-to location name for the requester. Not used by Exchange or passed on to the supplier.

<userName> Required

Full name of the iProcurement requester (for example, Green, Mr. Terry).

<appUserName> Required

Oracle Applications user login name for the iProcurement requester (for example, TGREEN).

<userPhone> Optional

iProcurement requester's phone number. This field is present only if a phone number is available.

<userEmail> Optional

iProcurement requester's e-mail address.

<companyName> Optional

Not used.

<companyDUNS> Optional

Not used.

<contactName> Optional

Not used.

<contactPhone> Optional

Not used.

<partySiteld> Optional

Exchange Trading Partner ID of the supplier being punched out to, used only for a punchout via Exchange.

<reqToken> Optional

Session information sent from iProcurement to Exchange that Exchange will send back to iProcurement with the shopping cart. Used by Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) only.

<searchKeywords> Optional

If the iProcurement requester searched for a particular set of key words prior to the punchout, these keywords are included here. If the requester already conducted a search with keywords in iProcurement and clicked the punchout link on the **Search Results** page, Exchange re-executes the search with those keywords and presents its **Search Results** page. This field is present only if the requester performed a search before accessing the punchout.

<returnURL> Required

URL in iProcurement to which Exchange will ask the browser to post the shopping cart.

<cxmlCart> Optional

cXML shopping cart contents, HTML-encoded, used in Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML) only. (When iProcurement sends the cart back to Exchange for conversion, it does so via the OEXLoginRequest.)

<icxSessionCallBackURL> Optional

URL of the servlet that accesses the iProcurement session to keep the session alive (not idle) while the requester is shopping on the external site. This field is used by Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) only.

SupplierLoginRequest

iProcurement or Exchange sends the SupplierLoginRequest document to the supplier in the following models:

- Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).
- Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML)
- Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)

SupplierLoginRequest.dtd and pomlognr.dtd

The SupplierLoginRequest.dtd in iProcurement and the pomlognr.dtd in Exchange are as follows:

```
<!ENTITY % common SYSTEM "pomxmlrr.dtd">
<!ENTITY % body "<!ELEMENT body (loginInfo,searchKeywords?,
icxSessionCallBackURL?)>">
<!ELEMENT loginInfo (exchangeInfo,userInfo,returnURL)>
<!ELEMENT exchangeInfo (exchangeName)>
<!ELEMENT exchangeName (#PCDATA)>
<!ELEMENT userInfo (userName,appUserName,userContactInfo,userCompany)>
<!ELEMENT userName (#PCDATA)>
<!ELEMENT appUserName(#PCDATA)>
<!ELEMENT userContactInfo (userPhone,userEmail)>
<!ELEMENT userCompany (companyName,companyDUNS,contactName?,contactPhone?)>
<!ELEMENT userPhone (#PCDATA)>
<!ELEMENT userEmail (#PCDATA)>
<!ELEMENT companyName (#PCDATA)>
<!ELEMENT companyDUNS (#PCDATA)>
<!ELEMENT contactName (#PCDATA)>
<!ELEMENT contactPhone (#PCDATA)>
<!ELEMENT returnUrl (#PCDATA)>
<!ELEMENT icxSessionCallBackURL(#PCDATA)>
%common;
%request;
```

Example SupplierLoginRequest

Below are example SupplierLoginRequest XML documents.

Without Optional Extended Data The following is an example SupplierLoginRequest XML document that does not include optional extended user and company information; this example is used by Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML):

```
<?xml version = '1.0' encoding = 'UTF8'?>
<request>
  <header version="1.0">
    <login>
      <password>welcome</password>
    </login>
    <action>shopping</action>
    <language>EN</language>
    <userArea>
      <operatingUnit>204</operatingUnit>
```

```

        <shipTo>V1- New York City</shipTo>
        <deliverTo>V1- New York City</deliverTo>
    </userArea>
</header>
<body>
    <loginInfo>
        <exchangeInfo>
            <exchangeName>Acme Co.</exchangeName>
        </exchangeInfo>
        <userInfo>
            <userName>Impersanator Elvis</userName>
            <userContactInfo>
                <userPhone>324-673-6481</userPhone>
                <userEmail>abc@oracle.com</userEmail>
            </userContactInfo>
            <appUserName>ELVIS</appUserName>
            <userCompany>
                <companyName>elvis presley</companyName>
            </userCompany>
        </userInfo>
        <returnURL>http://qapache.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.por.punchout.PunchOutServlet?callBack=shopping</returnU
RL>
    </loginInfo>
    <searchKeywords>keyword</searchKeywords>
    <icxSessionCallBackURL>http://qapache.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.por.punchout.ICXSessionServlet</icxSessionCallBackURL>
</body>
</request>

```

With Optional Extended Data The following is an example SupplierLoginRequest XML document that includes optional extended user and company information; this example is used by Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML):

```

<?xml version = '1.0' encoding = 'UTF8'?>
<request>
    <header version="1.0">
        <login>
            <password>welcome</password>
        </login>
        <action>shopping</action>
        <language>EN</language>
        <userArea>

```

```

<operatingUnit>204</operatingUnit>
<shipTo>V1- New York City</shipTo>
<deliverTo>V1- New York City</deliverTo>
<fullName>Stock, Ms. Pat</fullName>
<title>MS.</title>
<manager>Brown, Ms. Casey</manager>
<managerEmail>cbrown@vision.com</managerEmail>
<location>V1- New York City</location>
<language>US</language>
<currency>USD</currency>
<dateFormat>DD-MON-RRRR</dateFormat>
</userArea>
</header>
<body>
  <loginInfo>
    <exchangeInfo>
      <exchangeName>Acme Co.</exchangeName>
    </exchangeInfo>
    <userInfo>
      <userName>Impersanator Elvis</userName>
      <userContactInfo>
        <userPhone>324-673-6481</userPhone>
        <userEmail>abc@oracle.com</userEmail>
      </userContactInfo>
      <appUserName>ELVIS</appUserName>
      <userCompany>
        <companyName>elvis presley</companyName>
      </userCompany>
    </userInfo>
    <returnURL>http://qapache.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.por.punchout.PunchOutServlet?callBack=shopping</returnU
RL>
  </loginInfo>
  <searchKeywords>keyword</searchKeywords>
  <icxSessionCallBackURL>http://qapache.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.por.punchout.ICXSessionServlet</icxSessionCallBackURL>
</body>
</request>

```

Sent by Exchange The following is an example SupplierLoginRequest XML document sent by Exchange to the supplier:

```

<?xml version = '1.0' encoding = 'UTF8'?>
<request>

```

```

<header version="1.0">
  <login>
    <username>_username</username>
    <password>welcome</password>
  </login>
  <action>shopping</action>
  <language>EN</language>
  <searchLanguage>EN</searchLanguage>
</header>
<body>
  <loginInfo>
    <exchangeInfo>
      <exchangeName>Spectacular 6.2.4 Dev. Env.</exchangeName>
    </exchangeInfo>
    <userInfo>
      <userName>ImpersanatorrohitKulkarni</userName>
      <userContactInfo>
        <userPhone>324-673-6481</userPhone>
        <userEmail>abc@oracle.com</userEmail>
      </userContactInfo>
      <appUserName>ELVIS</appUserName>
      <userCompany>
        <companyName>elvis presley</companyName>
        <companyDUNS></companyDUNS>
        <contactName>ELVIS</contactName>
        <contactPhone>123-345-6789</contactPhone>
      </userCompany>
    </userInfo>
    <returnURL>http://ap912sun.us.oracle.com:9333/orders/PunchoutCallback.jsp?app=buying</returnURL>
  </loginInfo>
  <searchKeywords>keywords</searchKeywords>
</body>
</request>

```

Field Descriptions

The fields in the SupplierLoginRequest document are described below.

<username> Optional

Not used.

<password> Required

Password validated by the supplier site and used by all buyers in the *punchout from* application. The supplier provided this password to the iProcurement administrator, who set up access to the punchout, or entered this password when defining the punchout on Exchange.

<action> Optional

The value is *shopping*.

<language> Required

Requester's session language in iProcurement or Exchange (wherever the punchout is initiated), using the International Standards Organization (ISO) language code. The session language is the language in which the application is displayed. (From iProcurement, the session language can be changed by using the following navigation from the logon page, if the requester's logon responsibility includes access to this function: Preferences > Change Session Language. From Exchange, the session language can be changed by selecting a language on the **Home** page or the **Edit Personal Information** page in My Profile.)

<searchLanguage> Optional

Requester's search language in iProcurement or Exchange (wherever the punchout is initiated), using the ISO language code. The search language can be chosen on the **Search** page before performing a search. (For example, if the session language is English, but catalog items exist only in German, the requester can choose German as the search language.) This field is present only if the requester or buyer performed a search before accessing the punchout.

<operatingUnit> Optional

Unique identifier for the iProcurement requester's operating unit. This information is passed on to the supplier in Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML) only.

<shipTo> Optional

Deliver-to location name for the iProcurement requester. This information is passed on to the supplier in Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML) only.

<deliverTo> Optional

Deliver-to location name for the iProcurement requester. This information is passed on to the supplier in Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML) only.

<fullName> Optional extended data *

Full name of the iProcurement requester as given in Oracle Applications.

<title> Optional extended data *

Title of the iProcurement requester as given in Oracle Applications.

<manager> Optional extended data *

Name of the requester's manager as given in Oracle Applications.

<managerEmail> Optional extended data *

Requester's manager's e-mail address as given in Oracle Applications.

<location> Optional extended data *

Deliver-to location name for the iProcurement requester.

<language> Optional extended data *

Oracle Applications language code.

<currency> Optional extended data *

Requester's company's functional currency.

<dateFormat> Optional extended data *

Requester's date format from the requester's preferences.

<exchangeName> Required

For Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML), this is the iProcurement company name that is trying to log in to the supplier site. For the other models, this is the name of the Exchange.

<userPhone> Optional

iProcurement requester's phone number. (For a punchout initiated from Exchange, this is the Exchange buyer's phone number.)

<userEmail> Optional

iProcurement requester's e-mail address. (For a punchout initiated from Exchange, this is the Exchange buyer's e-mail address.)

<companyName> Optional

For Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML), this is the iProcurement company name that is trying to log in to the supplier site. For the other models, this is the company name on the Exchange.

<companyDUNS> Optional

The buying company's DUNS number from Exchange. This field is not populated for Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).

<contactName> Optional

Exchange Company Administrator's name. This field is not populated for Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).

<contactPhone> Optional

Exchange Company Administrator's phone number. This field is not populated for Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).

<userName> Required

For a punchout initiated from iProcurement, this is the full name of the iProcurement requester (for example, Green, Mr. Terry). For a punchout initiated from Exchange, this is the full name of the Exchange buyer.

<appUserName> Required

Oracle Applications user login name for the iProcurement requester (for example, TGREEN). For a punchout initiated from Exchange, this is the Exchange buyer's user name.

<returnUrl> Required

URL in iProcurement or Exchange to which the supplier site will ask the browser to post the shopping cart.

<searchKeywords> Optional

If the iProcurement requester or Exchange buyer searched for a particular set of key words prior to the punchout, these keywords are included here. This field is present only if the requester or buyer performed a search before accessing the punchout.

<icxSessionCallbackURL> Optional

URL of the servlet that accesses the iProcurement session to keep the session alive (not idle) while the requester is shopping on the external site.

* Optional extended data sent to the supplier if this option was chosen while defining the punchout in iProcurement. This field is used by Model 2: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML).

LoginResponse

Exchange or the supplier sends the LoginResponse document in response to the punchout request in all models.

LoginResponse.dtd

The LoginResponse.dtd in iProcurement is as follows:

```
<!ENTITY % common SYSTEM "pomxmlrr.dtd">
<!ENTITY % oracle SYSTEM "OrderLinesDataElements.dtd">
<!ENTITY % body "<!ELEMENT body (loginInfo?, OrderLinesDataElements?)>">
<!ELEMENT loginInfo (loginURL)>
<!ELEMENT loginURL (#PCDATA)>
%common;
%response;
%oracle;
```

pomlogns.dtd

The Exchange equivalent of LoginResponse.dtd is pomlogns.dtd:

```
<!ENTITY % common SYSTEM "pomxmlrr.dtd">
<!ENTITY % body "<!ELEMENT body (loginInfo)>">
<!ELEMENT loginInfo (loginURL)>
<!ELEMENT loginURL (#PCDATA)>
%common;
%response;
```

Example LoginResponse

Below are example LoginResponse documents.

Successful Connection The following example LoginResponse document shows a successful connection:

```
<?xml version = '1.0' encoding = 'UTF8'?>
<response>
  <header version="1.0">
    <return returnCode="S"/>
  </header>
  <body>
    <loginInfo>
      <loginURL>
<![CDATA[http://ap912sun.us.oracle.com:9333/orders/LinkinCallback.jsp?sessionKey
=9jqzz2lqg1256&action=shopping]]>
      </loginURL>
    </loginInfo>
  </body>
</response>
```

Unsuccessful Connection The following example LoginResponse document shows that an error, such as an invalid password, occurred during the connection:

```
<?xml version = '1.0' encoding = 'UTF8'?>
<response>
  <header version="1.0">
    <return returnCode="A">
      <returnMessage>
        <![CDATA[Password Incorrect]]>
      </returnMessage>
    </return>
  </header>
</response>
```

Field Descriptions

The fields in the LoginResponse document are described below.

<returnMessage> Optional

Failure message, such as "Password Incorrect."

<return returnCode=""> Required

Valid values include S for *success*, A for *authentication* error (such as invalid password), E for *error*, U for *unexpected*, and W for *warning*.

<loginURL> Required if the connection was successful

URL to which the buyer is directed for shopping. As part of the validation process, a session should have been created that will be used to identify the buyer, and this session should be incorporated into this URL as shown in the successful example above.

OrderLinesDataElements

The OrderLinesDataElements XML document returns the shopping cart information to iProcurement or Exchange in all models.

OrderLinesDataElements.dtd

The OrderLinesDataElements.dtd in iProcurement is as follows:

```
<!-- OrderLinesDataElements.dtd -->
<!ELEMENT OrderLinesDataElements (catalogTradingPartner?, orderLine*)>
<!ELEMENT catalogTradingPartner (#PCDATA)>
<!ELEMENT orderLine (contract?, item, category, price, supplier,
additionalAttributes?)>

<!-- DTD for element CONTRACT -->
<!ELEMENT contract
((supplierContract|buyerContract),buyerContractLineNumber?,catalogType?)>
  <!ATTLIST contract contractNumberIdentifier (KNOWN|UNKNOWN|INFORMATIONAL|NONE)
#IMPLIED>
  <!ELEMENT supplierContract (contractNumber)>
  <!ELEMENT buyerContract (contractNumber)>
  <!ELEMENT contractNumber (#PCDATA)>
  <!ELEMENT buyerContractLineNumber (#PCDATA)>
  <!ELEMENT catalogType (#PCDATA)>

<!-- DTD for element ITEM -->
<!ELEMENT item (itemNumber, itemDescription, unitOfMeasure, hazardClass?)>
  <!ATTLIST item lineType (GOODS|SERVICES_AMOUNT|SERVICES_QUANTITY) #IMPLIED>
  <!ATTLIST item quantity CDATA "1">
  <!ELEMENT itemNumber
(supplierItemNumber|manufacturerItemNumber|buyerItemNumber)>
  <!ELEMENT supplierItemNumber (itemID, supplierReferenceNumber?)>
  <!ELEMENT itemID (#PCDATA)>
```

```
<!ELEMENT supplierReferenceNumber (#PCDATA)>
<!ELEMENT manufacturerItemNumber (itemID, manufacturerName)>
<!ELEMENT manufacturerName (#PCDATA)>
<!ELEMENT buyerItemNumber (itemID, buyerItemRevision?)>
<!ELEMENT buyerItemRevision (#PCDATA)>

<!ELEMENT itemDescription (#PCDATA)>

<!ELEMENT unitOfMeasure (buyerUnitOfMeasure|supplierUnitOfMeasure)>
<!ELEMENT buyerUnitOfMeasure (#PCDATA)>
<!ELEMENT supplierUnitOfMeasure (supplierUOMType,supplierUOMQuantity?)>
<!ELEMENT supplierUOMType (#PCDATA)>
<!ELEMENT supplierUOMQuantity (#PCDATA)>

<!ELEMENT hazardClass (#PCDATA)>

<!-- DTD for element CATEGORY -->
<!ELEMENT category (categoryCode)>
  <!ELEMENT categoryCode (#PCDATA)>
  <!ATTLIST categoryCode categoryCodeIdentifier(SPSC|SUPPLIER|BUYER) #IMPLIED>

<!-- DTD for element PRICE -->
<!ELEMENT price (currency?, unitPrice)>
<!ELEMENT currency (#PCDATA)>
<!ELEMENT unitPrice (#PCDATA)>

<!-- DTD for element SUPPLIER -->
<!ELEMENT supplier ((supplierDUNS|supplierTradingPartnerCode), supplierName,
contactName?, contactPhone?)>
<!ELEMENT supplierDUNS (#PCDATA)>
<!ELEMENT supplierTradingPartnerCode (#PCDATA)>
<!ELEMENT supplierName (#PCDATA | supplierSite)*>
<!ELEMENT supplierSite (#PCDATA)>
<!ELEMENT contactName (#PCDATA)>
<!ELEMENT contactPhone (#PCDATA)>

<!-- DTD for element ADDITIONAL ATTRIBUTES -->
<!ELEMENT additionalAttributes (attribute1?, attribute2?, attribute3?,
attribute4?, attribute5?, attribute6?, attribute7?, attribute8?, attribute9?,
attribute10?, attribute11?, attribute12?, attribute13?, attribute14?,
attribute15?)>
<!ELEMENT attribute1 (#PCDATA)>
<!ELEMENT attribute2 (#PCDATA)>
<!ELEMENT attribute3 (#PCDATA)>
```

```

<!ELEMENT attribute4 (#PCDATA)>
<!ELEMENT attribute5 (#PCDATA)>
<!ELEMENT attribute6 (#PCDATA)>
<!ELEMENT attribute7 (#PCDATA)>
<!ELEMENT attribute8 (#PCDATA)>
<!ELEMENT attribute9 (#PCDATA)>
<!ELEMENT attribute10 (#PCDATA)>
<!ELEMENT attribute11 (#PCDATA)>
<!ELEMENT attribute12 (#PCDATA)>
<!ELEMENT attribute13 (#PCDATA)>
<!ELEMENT attribute14 (#PCDATA)>
<!ELEMENT attribute15 (#PCDATA)>

```

pomcarts.dtd

The Exchange equivalent of OrderLinesDataElements.dtd is pomcarts.dtd and shoppingcart.dtd:

```

<!ENTITY % common SYSTEM "pomxmlrr.dtd">
<!ENTITY % shoppingcart SYSTEM "shoppingcart.dtd">
%shoppingcart;
<!ENTITY % body "<!ELEMENT body (OrderLinesDataElements)">
%common;
%response;

```

shoppingcart.dtd

The Exchange equivalent of OrderLinesDataElements.dtd is pomcarts.dtd and shoppingcart.dtd:

```

<!ELEMENT OrderLinesDataElements (catalogTradingPartner?,orderLine*)>
<!ELEMENT catalogTradingPartner (#PCDATA)>
  <!ELEMENT orderLine
(contract?,item,category,price,supplier?,additionalAttributes?)>
  <!ELEMENT contract ((supplierContract |
buyerContract),buyerContractLineNumber?,catalogType?)>
    <!ATTLIST contract contractNumberIdentifier (KNOWN | UNKNOWN |
INFORMATIONAL | NONE) #IMPLIED>
    <!ELEMENT supplierContract (contractNumber)>
    <!ELEMENT buyerContract (contractNumber)>
    <!ELEMENT contractNumber (#PCDATA)>
    <!ELEMENT buyerContractLineNumber (#PCDATA)>
    <!ELEMENT catalogType (#PCDATA)>

  <!ELEMENT item (itemNumber,itemDescription,unitOfMeasure,hazardClass?)>
  <!ATTLIST item lineType (GOODS | SERVICES_AMOUNT | SERVICES_QUANTITY)

```

```

"GOODS">
  <!ATTLIST item quantity CDATA "1">
  <!ELEMENT itemNumber (supplierItemNumber , manufacturerItemNumber? ,
buyerItemNumber?)>
  <!ELEMENT supplierItemNumber (itemID, supplierReferenceNumber?)>
  <!ELEMENT itemID (#PCDATA)>
  <!ELEMENT supplierReferenceNumber (#PCDATA)>
  <!ELEMENT manufacturerItemNumber (itemID,manufacturerName)>
  <!ELEMENT manufacturerName (#PCDATA)>
  <!ELEMENT buyerItemNumber (itemID,buyerItemRevision?)>
  <!ELEMENT buyerItemRevision (#PCDATA)>
  <!ELEMENT itemDescription (#PCDATA)>
  <!ELEMENT unitOfMeasure (buyerUnitOfMeasure? , supplierUnitOfMeasure)>
  <!ELEMENT buyerUnitOfMeasure (#PCDATA)>
  <!ELEMENT supplierUnitOfMeasure (supplierUOMType,
supplierUOMQuantity?)>
  <!ELEMENT supplierUOMType (#PCDATA)>
  <!ELEMENT supplierUOMQuantity (#PCDATA)>
  <!ELEMENT hazardClass (#PCDATA)>
  <!ELEMENT category (categoryCode)>
  <!ELEMENT categoryCode (#PCDATA)>
  <!ATTLIST categoryCode categoryCodeIdentifier (SPSC | SUPPLIER | BUYER)
#IMPLIED>
  <!ELEMENT price (currency,unitPrice)>
  <!ELEMENT currency (#PCDATA)>
  <!ELEMENT unitPrice (#PCDATA)>
  <!ELEMENT supplier ((supplierDUNS | supplierTradingPartnerCode),
supplierName, contactName?, contactPhone?)>
  <!ELEMENT supplierDUNS (#PCDATA)>
  <!ELEMENT supplierTradingPartnerCode (#PCDATA)>
  <!ELEMENT supplierName (#PCDATA | supplierSite)*>
  <!ELEMENT supplierSite (#PCDATA)>
  <!ELEMENT contactName (#PCDATA)>
  <!ELEMENT contactPhone (#PCDATA)>
  <!ELEMENT additionalAttributes (attribute1?, attribute2?,attribute3?,
attribute4?, attribute5?, attribute6?, attribute7?, attribute8?, attribute9?,
attribute10?, attribute11?, attribute12?, attribute13?, attribute14?,
attribute15?)>
  <!ELEMENT attribute1 (#PCDATA)>
  <!ELEMENT attribute2 (#PCDATA)>
  <!ELEMENT attribute3 (#PCDATA)>
  <!ELEMENT attribute4 (#PCDATA)>
  <!ELEMENT attribute5 (#PCDATA)>
  <!ELEMENT attribute6 (#PCDATA)>
  <!ELEMENT attribute7 (#PCDATA)>

```

```

<!ELEMENT attribute8 (#PCDATA)>
<!ELEMENT attribute9 (#PCDATA)>
<!ELEMENT attribute10 (#PCDATA)>
<!ELEMENT attribute11 (#PCDATA)>
<!ELEMENT attribute12 (#PCDATA)>
<!ELEMENT attribute13 (#PCDATA)>
<!ELEMENT attribute14 (#PCDATA)>
<!ELEMENT attribute15 (#PCDATA)>

```

Example OrderLinesDataElements

The following is an example OrderLinesDataElements document that is sent to iProcurement:

```

<?xml version = '1.0' encoding = 'UTF8'?>
<response>
  <header version="1.0">
    <return returnCode="S"/>
  </header>
  <body>
    <OrderLinesDataElements>
      <catalogTradingPartner>
        <![CDATA[OracleExchange]]>
      </catalogTradingPartner>
      <orderLine>
        <item lineType="GOODS" quantity="1.0">
          <itemNumber>
            <supplierItemNumber>
              <itemID>
                <![CDATA[CG1ITEM2]]>
              </itemID>
            </supplierItemNumber>
          </itemNumber>
          <itemDescription>
            <![CDATA[Publish testing item 2]]>
          </itemDescription>
          <unitOfMeasure>
            <supplierUnitOfMeasure>
              <supplierUOMType>
                <![CDATA[BSK]]>
              </supplierUOMType>
              <supplierUOMQuantity>
                <![CDATA[]]>
              </supplierUOMQuantity>
            </supplierUnitOfMeasure>
          </unitOfMeasure>
        </item>
      </orderLine>
    </OrderLinesDataElements>
  </body>
</response>

```

```

        </unitOfMeasure>
    </item>
<category>
    <categoryCode categoryCodeIdentifier="SUPPLIER">
        <![CDATA[Thick Bond Paper]]>
    </categoryCode>
</category>
    <price>
        <currency>
            <![CDATA[USD]]>
        </currency>
        <unitPrice>
            <![CDATA[20.0]]>
        </unitPrice>
    </price>
    <supplier>
        <supplierTradingPartnerCode>
            <![CDATA[9601]]>
        </supplierTradingPartnerCode>
        <supplierName>
            <![CDATA[sammocorp]]>
        </supplierName>
    </supplier>
</orderLine>
</OrderLinesDataElements>
</body>
</response>

```

Field Descriptions

The fields in the OrderLinesDataElements document are described below.

<catalogTradingPartner> Required by the models listed below

Exchange name value, used for category mapping. (See [Table 2–10 in Set Up Data Mapping in e-Commerce Gateway](#) on page 2-51.) This value, which is populated by Exchange, is used for mapping in the following models only:

- Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

<contract> Optional

Beginning of the contract section. The <contract> field can contain an optional attribute, `contractNumberIdentifier`, with any of the following values: KNOWN, UNKNOWN, INFORMATIONAL, or NONE.

<contractNumber> Optional

Supplier or buyer contract number, depending on the parent field. This field is contained in the <contract> section.

<buyerContractLineNumber> Optional

Line number of the buyer's contract if any.

<catalogType> Optional

Indicator of whether the item comes from a contract catalog or non-contract catalog. If a buyer `contractNumber` is included, this field should be CONTRACTED.

<item lineType="GOODS" quantity = "1.0"> Required

Beginning of the item section. The <item> field contains the following attributes:

- `lineType`. Possible values are GOODS, SERVICES_AMOUNT, or SERVICES_QUANTITY. GOODS is the default when nothing is specified.
- `quantity`. Number of items ordered. The default is 1. Decimals are allowed.

<itemID> Required

Supplier, buyer, or manufacturer item number, depending on the parent field. If this item is a configured item, the supplier may wish to use this field to provide a unique reference to the configuration that the buyer has selected. This allows the supplier to identify the exact configuration that was originally selected.

<supplierReferenceNumber> Optional

Reference number provided by the supplier for this item or order.

<manufacturerName> Optional

Name of the manufacturer for this item. This name populates the Manufacturer Name in iProcurement.

<manufacturerItemNumber> Optional

Manufacturer's part number.

<buyerItemRevision> Optional

Item revision number.

<itemDescription> Required

Supplier's description of this product. This description populates the Item Description in the iProcurement shopping cart and requisition. If the item is a configured item, the supplier may wish to use this field to provide a reference to the configuration or configuration components. This allows the supplier to identify the exact configuration that the buyer selected.

<buyerUnitOfMeasure> Optional

Buyer's unit of measure code.

<supplierUOMType> Required

Supplier's unit of measure code.

<supplierUOMQuantity> Optional

Supplier's quantity in the specified unit of measure. For example, a Box of 12 would indicate Box for the <supplierUOMType> and 12 for the <supplierUOMQuantity>.

<hazardClass> Optional

Hazard class name for the item, if provided by the supplier.

<category categoryCodeIdentifier="SPSC"> Required

Category used to classify the item. Valid attribute code values are SPSC, SUPPLIER, or BUYER. If a code is not specified, SPSC is assumed.

<categoryCode> Required

Category code value.

<currency> Required

Currency in which the price is specified.

<unitPrice> Required

The price per unit of the item.

<supplierDUNS> Conditionally Required

Supplier's DUNS number, used to retrieve the supplier name and supplier site information in iProcurement. Either a <supplierDUNS> or <supplierTradingPartnerCode> must be provided.

<supplierTradingPartnerCode> Conditionally Required

Either a <supplierDUNS> or <supplierTradingPartnerCode> must be provided. The <supplierTradingPartnerCode> is used if the supplier does not have a DUNS number, and this field should be populated with a unique alphanumeric code that the buyer uses to identify the internal supplier code in Oracle Applications.

<supplierName> Required

Supplier's company name.

<supplierSite> Optional

Supplier site name.

<supplierTradingPartner> Optional

Not used.

<contactName> Optional

Contact name for the supplier.

<contactPhone> Optional

Supplier contact's phone number.

<attribute1>...<attribute15> Optional

Up to 15 additional attributes can be included with each item in the shopping cart. These attributes are used by iProcurement.

PunchOutSetupRequest

Exchange sends the PunchOutSetupRequest document to the supplier in the following models:

- Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML)

- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

PunchOutSetupRequest.dtd

See the cXML DTD at <http://www.cxml.org/>.

Example PunchOutSetupRequest

The following is an example PunchOutSetupRequest document:

```
<?xml version = '1.0' encoding = 'UTF8'?>
<cXML version="1.1.007" xml:lang="en-US" payloadID="Wed Aug 14 10:55:09 JST
2002" timestamp="Wed Aug 14 10:55:09 JST 2002">
  <Header>
    <From>
      <Credential domain="Name">
        <Identity>Memphis Park</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="Name">
        <Identity>elvis presley</Identity>
      </Credential>
    </To>
    <Sender>
      <Credential domain="Spectacular 6.2.4 Dev. Env.">
        <Identity>ap912sun.us.oracle.com</Identity>
        <SharedSecret>welcome</SharedSecret>
      </Credential>
      <UserAgent>Spectacular 6.2.4 Dev. Env.</UserAgent>
    </Sender>
  </Header>
  <Request>
    <PunchOutSetupRequest operation="create">
      <BuyerCookie>12345678</BuyerCookie>
      <Extrinsic name="User">ELVIS</Extrinsic>
      <BrowserFormPost>
        <URL>http://ap912sun.us.oracle.com:9333/orders/PunchoutCallback.jsp?app=buying</
        URL>
      </BrowserFormPost>
      <Contact>
        <Name
xml:lang="en-US">Impersanatorrohit.kulkarni@oracle.comElvis</Name>
        <Email>srmani@oracle.com</Email>
```

```

        </Contact>
        <SupplierSetup>
<URL>http://ap912sun.us.oracle.com:9333/orders/testscripts/CXMLSupplierLogin.jsp
</URL>
        </SupplierSetup>
    </PunchOutSetupRequest>
</Request>
</cXML>

```

Field Descriptions

The following describes some of the fields in the PunchOutSetupRequest document. For complete information, see the *cXML User's Guide* available at <http://www.cxml.org/>.

<From> <Credential> Required

Identifier for the buying organization. The domain attribute will be either of the following:

- DUNS. If the company has a DUNS number on Exchange, the identity element will have the DUNS number.
- NAME. If there is no DUNS number, the identity element will have the name of the company on Exchange.

For Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML), the FromCredential is always the Exchange name and URL as shown in the following example:

```

<From>
  <Credential domain="exchange.oracle.com">
    <Identity>Oracle Exchange</Identity>
  </Credential>
</From>

```

The Exchange URL is taken from the Exchange Operator **Software Setup** page, from the System URL field. The Exchange name is taken from the Exchange Operator **Identification** page, from the System Name field.

<To> <Credential> Required

Identifier for the supplier organization. The domain attribute will be either of the following:

- DUNS. If the company has a DUNS number on Exchange, the identity field will have the DUNS number.
- NAME. If there is no DUNS number, the identity field will have the name of the company on Exchange.

<Sender> <Credential> Required

Exchange identifier. The domain attribute identifies the Exchange name. The identity field gives the Exchange site URL, such as exchange.oracle.com. The shared secret field gives the password validated by the supplier site.

<Sender> <UserAgent> Required

Name of the Exchange, such as Oracle Exchange.

<Extrinsic name="User"> Required

User login name of the buyer on Exchange for Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML); user login name of the iProcurement requester for Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML).

<BrowserFormPost> <URL> Required

URL to which the supplier site will pass the shopping cart cXML document when the buyer exits the supplier's Web catalog.

<Contact> Optional

The buyer name and e-mail fields within the contact element are passed to the supplier.

PunchOutSetupResponse

The cXML supplier sends the PunchOutSetupResponse document to Exchange in the following models:

- Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

PunchOutSetupResponse.dtd

See the cXML DTD at <http://www.cxml.org/>.

Example PunchOutSetupResponse

Below are example PunchOutSetupResponse documents.

Successful Connection The following example document shows a successful connection:

```
<?xml version = '1.0' encoding = 'UTF8'?>
<cXML payloadID="99999" timestamp="2000-08-15">
  <Response>
    <Status code="200" text="OK"/>
    <PunchOutSetupResponse>
      <StartPage>
        <URL>
<![CDATA[http://ap912sun.us.oracle.com:9333/orders/testscripts/SupplierCallb
ack.jsp?sessionID=123]]>
        </URL>
      </StartPage>
    </PunchOutSetupResponse>
  </Response>
</cXML>
```

Unsuccessful Connection The following example document shows that an error, such as an invalid password, occurred during the connection:

```
<?xml version = '1.0' encoding = 'UTF8'?>
<cXML payloadID="99999" timestamp="2000-08-15">
  <Response>
    <Status code="401" text="Unauthorized"/>
    <PunchOutSetupResponse>
      <StartPage>
        <URL/>
      </StartPage>
    </PunchOutSetupResponse>
  </Response>
</cXML>
```

Field Descriptions

For descriptions of the fields in the PunchOutSetupResponse document, see the *cXML User's Guide* available at <http://www.cxml.org/>.

Note: The <StartPage><URL> field, which is required, is the URL to which the buyer will be directed in the supplier's Web catalog. As part of the validation process, a session should have been created that will be used to identify the user, and this session should be incorporated into this URL.

PunchOutOrderMessage

The PunchOutOrderMessage document returns the shopping cart information to Exchange in cXML format in the following models:

- Model 3: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

PunchOutOrderMessage.dtd

See the cXML DTD at <http://www.cxml.org/>.

Example PunchOutOrderMessage

The following is an example PunchOutOrderMessage document:

```
<?xml version = '1.0' encoding = 'UTF8'?>
<cXML version="1.1.007" xml:lang="en-US" payloadID="99999"
timestamp="2000-08-15">
  <Header>
    <From>
      <Credential domain="DUNS">
        <Identity>888</Identity>
      </Credential>
    </From>
    <To>
      <Credential domain="DUNS">
        <Identity>222</Identity>
      </Credential>
    </To>
```

```

<Sender>
<Credential domain="DUNS">
  <Identity>888</Identity>
</Credential>
<UserAgent>Workchairs cXML</UserAgent>
</Sender>
</Header>
<Message>
<PunchOutOrderMessage>
  <BuyerCookie>ICX</BuyerCookie>
  <PunchOutOrderMessageHeader operationAllowed="create">
    <Total>
      <Money currency="USD">112.4</Money>
    </Total>
  </PunchOutOrderMessageHeader>
  <ItemIn quantity="3">
    <ItemID>
      <SupplierPartID>5555</SupplierPartID>
    </ItemID>
    <ItemDetail>
      <UnitPrice>
        <Money currency="USD">763.20</Money>
      </UnitPrice>
      <Description xml:lang="en">Leather reclining chair</Description>
      <UnitOfMeasure>EA</UnitOfMeasure>
      <Classification domain="UNSPSC">513333</Classification>
    </ItemDetail>
  </ItemIn>
  <ItemIn quantity="3">
    <ItemID>
      <SupplierPartID>5556</SupplierPartID>
    </ItemID>
    <ItemDetail>
      <UnitPrice>
        <Money currency="USD">863.20</Money>
      </UnitPrice>
      <Description xml:lang="en">Leather Office chair</Description>
      <UnitOfMeasure>EA</UnitOfMeasure>
      <Classification domain="UNSPSC">513334</Classification>
    </ItemDetail>
  </ItemIn>
  <ItemIn quantity="1000">
    <ItemID>
      <SupplierPartID>7656</SupplierPartID>
    </ItemID>
  </ItemIn>
</Message>

```

```

    <ItemDetail>
      <UnitPrice>
        <Money currency="INR">100000</Money>
      </UnitPrice>
      <Description xml:lang="en">Coconut Chocolates</Description>
      <UnitOfMeasure>BX</UnitOfMeasure>
      <Classification domain="UNSPSC">313334</Classification>
    </ItemDetail>
  </ItemIn>
<ItemIn quantity="500">
  <ItemID>
    <SupplierPartID>3234</SupplierPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="GBP">510</Money>
    </UnitPrice>
    <Description xml:lang="en">SSP-Services</Description>
    <UnitOfMeasure>HR</UnitOfMeasure>
    <Classification domain="UNSPSC">43434</Classification>
  </ItemDetail>
</ItemIn>
<ItemIn quantity="12">
  <ItemID>
    <SupplierPartID>3456</SupplierPartID>
  </ItemID>
  <ItemDetail>
    <UnitPrice>
      <Money currency="JPY">78.92</Money>
    </UnitPrice>
    <Description xml:lang="en">24 Exposure Film</Description>
    <UnitOfMeasure>EA</UnitOfMeasure>
    <Classification domain="UNSPSC">783634</Classification>
  </ItemDetail>
</ItemIn>
</PunchOutOrderMessage>
</Message>
</cXML>

```

Field Descriptions

For descriptions of the fields in the PunchOutOrderMessage document, see the *cXML User's Guide* available at <http://www.cxml.org/>.

Note: The <SupplierPartID>, which is required, is a unique item reference number to identify the item or item configuration. The <SupplierPartAuxillaryID> field, however, is not used. It is therefore necessary to pass a unique reference within the <SupplierPartID> field. If this item is a configured item, the supplier may wish to use the <SupplierPartID> and <Description> fields to provide a unique reference to the configuration that the buyer has selected. This allows the supplier to identify the exact configuration that was originally selected.

SupplierSyncUpResponse

Exchange sends the SupplierSyncUpResponse document to iProcurement when you download punchout suppliers from the Exchange supplier hub for the following models:

- Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (XML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Exchange (cXML)

Downloading punchout suppliers from the Exchange supplier hub is described in [Download Punchout Suppliers from Exchange](#) on page 2-24.

SupplierSyncUpResponse.dtd

```
<!ENTITY % common SYSTEM "pomxmlrr.dtd">
<!ENTITY % body "<!ELEMENT body (supplier*)>">
<!ELEMENT supplier (supplierPartyId, supplierImageUrl,
supplierLanguageSpecificInfo*)>
<!ELEMENT supplierLanguageSpecificInfo
(language, supplierName, supplierDescription, supplierKeywords)>
<!ELEMENT supplierName (#PCDATA)>
<!ELEMENT supplierDescription (#PCDATA)>
<!ELEMENT supplierKeywords (#PCDATA)>
<!ELEMENT supplierPartyId (#PCDATA)>
<!ELEMENT supplierImageUrl (#PCDATA)>
%common;
%response;
```

Example SupplierSyncUpResponse

The following is an example SupplierSyncUpResponse document:

```
<?xml version = '1.0' encoding = 'UTF8'?>
<response>
  <header version="1.0">
    <return returnCode="S"/>
  </header>
  <body>
    <supplier>
      <supplierPartyId>
        <![CDATA[12630]]>
      </supplierPartyId>
      <supplierImageUrl>
        <![CDATA[http://www.....com/portgrphcs/2_A%20logo.gif]]>
      </supplierImageUrl>
      <supplierLanguageSpecificInfo>
        <language>
          <![CDATA[US]]>
        </language>
        <supplierName>
          <![CDATA[Acme Industrial]]>
        </supplierName>
        <supplierDescription>
          <![CDATA[A leading distributor of Industrial Products and
Services.]]>
        </supplierDescription>
        <supplierKeywords>
          <![CDATA[bearings]]>
        </supplierKeywords>
      </supplierLanguageSpecificInfo>
      <supplierLanguageSpecificInfo>
        <language>
          <![CDATA[ZHT]]>
        </language>
        <supplierName>
          <![CDATA[Acme Industrial]]>
        </supplierName>
        <supplierDescription>
          <![CDATA[A leading distributor of Industrial Products and
Services.]]>
        </supplierDescription>
        <supplierKeywords>
          <![CDATA[]]>
        </supplierKeywords>
    </supplier>
  </body>
</response>
```

```

        </supplierLanguageSpecificInfo>
    </supplier>
    <supplier>
        <supplierPartyId>
            <![CDATA[19482]]>
        </supplierPartyId>
        <supplierImageUrl>
            <![CDATA[http://www.....com/art/corp_page/logo_grid.gif]]>
        </supplierImageUrl>
        <supplierLanguageSpecificInfo>
            <language>
                <![CDATA[US]]>
            </language>
            <supplierName>
                <![CDATA[AcmeQuest]]>
            </supplierName>
            <supplierDescription>
                <![CDATA[Leading supplier of medical and laboratory products.]]>
            </supplierDescription>
            <supplierKeywords>
                <![CDATA[medical laboratory]]>
            </supplierKeywords>
        </supplierLanguageSpecificInfo>
        <supplierLanguageSpecificInfo>
            <language>
                <![CDATA[ZHT]]>
            </language>
            <supplierName>
                <![CDATA[AcmeQuest]]>
            </supplierName>
            <supplierDescription>
                <![CDATA[Leading supplier of medical and laboratory products.]]>
            </supplierDescription>
            <supplierKeywords>
                <![CDATA[]]>
            </supplierKeywords>
        </supplierLanguageSpecificInfo>
    </supplier>
</body>
</response>

```

Field Descriptions

The fields in the SupplierSyncUpResponse document are described below.

<supplierPartyId> Required

Supplier's Trading Partner ID on Exchange.

<supplierImageUrl> Required

URL pointing to the supplier's logo.

<language> Required

Language of the information being retrieved.

<supplierName> Required

Supplier's company name in the specified language (the Exchange registered name of the company).

<supplierDescription> Required

Supplier's punchout definition description in the specified language (entered by the supplier on Exchange).

<supplierKeywords> Required

Keywords provided by the supplier when defining the punchout on Exchange.

Common DTD File (pomxmlrr.dtd)

The DTD pomxmlrr.dtd is used by both Exchange and iProcurement. It is a common DTD file that is referenced by most of the other punchout DTDs:

pomxmlrr.dtd

```
<!-- common dtd file for all the request/response dtDs -->
<!ENTITY % message "(header,body)">
  <!-- both response and request are modeled similarly, with a
  header and a body -->
<!ENTITY % body "<!ELEMENT body ANY">
  <!-- any request can override this body element -->
<!ENTITY % request "<!ELEMENT request %message;">
  <!-- request dtd can instantiate the request element and the
  response dtd can instantiate the response element -->
<!ENTITY % response "<!ELEMENT response %message;">
  <!-- see request entity -->
<!ELEMENT header
(requestID?,login?,(action|return),cookies?,language?,searchLanguage?,userArea?)
```

```
>

<!ATTLIST header version CDATA #REQUIRED>
  <!-- version of the particular dtd being used -->
<!ELEMENT requestID (#PCDATA)>

<!ELEMENT login ((username,password)|session)>

  <!-- user name and password or the session details -->
<!ELEMENT action (#PCDATA)>
  <!-- action required from the request -->
<!ELEMENT cookies (cookie*)>
  <!-- cookies set from response. see header element for more info -->
<!ELEMENT cookie (#PCDATA)>
<!ATTLIST cookie name CDATA #REQUIRED>
<!ELEMENT language (#PCDATA)>
<!ELEMENT searchLanguage (#PCDATA)>
<!ELEMENT userArea ANY>
<!ELEMENT username (#PCDATA)>
<!ELEMENT password (#PCDATA)>
<!ENTITY % session "<!ELEMENT session (sessionID)>">
%session;
<!ELEMENT sessionID (#PCDATA)>
<!ELEMENT redirectURL (#PCDATA)>
  <!-- any additional user information can be passed in this element -->
<!ELEMENT return (returnMessage?)>
<!ENTITY % returnMessage "<!ELEMENT returnMessage (#PCDATA)>">
  <!-- returnMessage is made an entity so that if a specific response
       desires to return multiple messages or an xml document itself
       it can override this entity -->
%returnMessage;
<!ATTLIST return returnCode (S|E|U|W|A) #REQUIRED>

%body;
```

Field Descriptions

Descriptions of the pomxmlrr.dtd fields are provided in the previous sections, which document how the fields are used by the specific punchout documents.

Mapping Between XML and cXML

When Exchange converts a supplier's cXML shopping cart to XML, it converts the fields as described in the table below. (These fields represent values that come from the cXML document itself; other values may come from Exchange, for example.)

Table B-6 cXML to XML Conversion of Shopping Cart

cXML	XML
quantity	<item quantity=...>
SupplierPartID	<supplierItemNumber> <itemID>
Money	<unitPrice>
currency	<currency>
Description	<itemDescription>
UnitOfMeasure	<supplierUnitOfMeasure> <supplierUOMType>
Classification	<categoryCode>
ManufacturerPartID	<manufacturerItemNumber> <itemID>
ManufacturerName	<manufacturerName>

Authentication, Security, and Encoding

This chapter covers the following topics:

- [Authentication and Security](#) on page C-1
- [Encoding](#) on page C-4

Authentication and Security

iProcurement and Exchange come with the capability to access secure sites. If the site to which the buying company punches out is secure (the site URL starts with a secure protocol such as `https://` instead of `http://`), then the buying company should review [Prerequisites](#) on page 2-5.

Note: iProcurement and Exchange do not support client-side certificate authentication. That is, they authenticate the server to which they are punching out, but do not allow that server to authenticate them in return (known as client-side authentication). If the supplier's server attempts client-side authentication, the connection will fail.

The discussions below use a punchout from iProcurement to the secure Exchange site as an example, but the information applies to all models where the *punchout to* site is secure.

Secure Sockets Layer (SSL) Authentication

iProcurement punchout uses the SSL protocol to establish a secure HTTP connection between the iProcurement server and the supplier site or Exchange. The SSL protocol is a set of rules governing authentication and encrypted communication

between servers and clients. iProcurement and Exchange call Oracle SSL application programmable interfaces (APIs) to establish a connection to the secure site.

For example, in a punchout from iProcurement to Exchange, the Exchange server responds to iProcurement, through the SSL connection, with a digital certificate. iProcurement then authenticates the digital certificate. A digital certificate is proof that a site (Exchange in this example) is who it says it is. Established and trusted companies or services known as *certification authorities* assign digital certificates to sites who apply for them. To authenticate the digital certificate sent from Exchange, iProcurement compares the digital certificate to certification authorities stored in the `ca-bundle.crt` file in iProcurement.

The steps involved in validating the digital certificate are as follows:

- Check the validity period. For example, in a punchout from iProcurement to Exchange, the iProcurement server checks the validity period on the certificate presented by the Exchange server. If the current date and time is outside the validity period's date range, the authentication process stops.
- Check the certification authority. In iProcurement, a list of trusted certification authorities is maintained on the server in a file called `ca-bundle.crt`, which is part of the standard Oracle Application Server installation. If the name of the certification authority on the certificate that the supplier site sends matches the name of a certification authority in the `ca-bundle.crt` file, the authentication proceeds. iProcurement and Exchange also support a certification chain. In a certification chain, the supplier site's certification authority may not match the certification authority in iProcurement or Exchange, but it references another certification authority that does match.
- Check that the certification authority validates the digital certificate. For example, in a punchout from iProcurement to Exchange, the iProcurement server uses the certification authority's public key (a code that decrypts certificates) to validate the digital signature on the digital certificate sent by the Exchange server. The public key is included in the `ca-bundle.crt` file. iProcurement and Exchange use standard techniques of encrypting and decrypting data using public and private keys.
- Check that the domain name on the digital certificate matches the domain name of the sending server itself. For example, in a punchout from iProcurement to Exchange, the iProcurement server ensures that the Exchange server is on the same network as that stated in the certificate and is not one posing as the Exchange server.

Once the above checks are performed by the *punchout from* application (iProcurement or Exchange), the server authentication of the site where the catalog

resides is complete. Next, the connected servers use the certificate to generate a session key (to be used only for the duration of that connection between the catalog site and Exchange or iProcurement), and iProcurement or Exchange transmit this key, encrypted, back to the catalog site using the catalog site server's public key. All subsequent communication between Exchange or iProcurement and the catalog site are encrypted.

iProcurement and Exchange use SSL version 3.0.

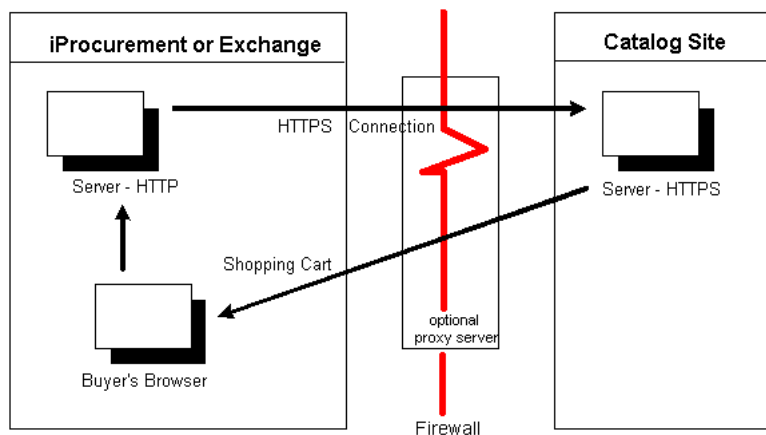
Refer to the following documents for more details on SSL and the public encryption methodologies used in SSL:

- <http://developer.netscape.com/docs/manuals/security/sslin/contents.htm>
- <http://home.netscape.com/security/techbriefs/ssl.html>

Shopping Cart Transfer

When the shopping cart is passed to the *punchout from* application, the *punchout to* application obtains the URL to which the shopping cart is posted from the <returnURL> field in the Login Request document. The *punchout to* server submits the shopping cart to the return URL in iProcurement via a POST through the requester's browser.

iProcurement and Exchange also support SSL connections in a proxy server configuration, if proxy servers are used for outbound connections from the server (for example, the iProcurement server) to the Internet.



The diagram above shows a non-secure buying site accessing a secure supplier site through the buying organization's firewall (and proxy servers, if any). The shopping cart is returned through the firewall to the browser, and from the browser to the buyer's site. In this diagram, the browser uses HTTP to talk to the buying server and HTTPS to talk to the catalog server.

If the implementation of the iProcurement server uses HTTPS, then the requester's browser uses HTTPS to connect and submit the shopping cart to the server. All the SSL authentication details discussed above are valid in this process as well.

Encoding

Encoding is specified in the XML prolog as follows:

```
<?xml version="1.0" encoding="UTF8"?>
```

Punchout uses this encoding (not the XML language tag `<language>`) to interpret the XML.

Exchange supports only UTF-8 character encoding, and iProcurement works best with punchouts directly to suppliers when UTF-8 encoding is used. Therefore, it is strongly recommended that suppliers always use UTF-8 encoding when sending punchout documents in any model. For example, buyers and suppliers may encounter problems sending and receiving multibyte characters if the supplier does not use UTF-8.

For XML punchouts, the cart must be URL encoded. See the example in [Return Shopping Cart](#) on page 3-18.

Maximum Field Lengths

This appendix contains the following sections:

- [Oracle Exchange](#) on page D-1
- [Oracle iProcurement](#) on page D-2

Exchange and iProcurement have some data length limits for fields. When the supplier sends the shopping cart to Exchange or iProcurement, data greater than the column lengths given in this appendix is truncated at that length. For example, the manufacturer item number (itemID) allows 30 maximum characters. A manufacturer item number of *ABmanufacturer30plusCDEitemnumber* sent by the supplier becomes *ABmanufacturer30plusCDEitemnum* in iProcurement or Exchange.

Note: The lengths given below are *character* lengths. If the data is sent in a multibyte language, the number of *multibyte* characters allowed may be fewer than the character lengths given below.

Oracle Exchange

Exchange has the following maximum character lengths for the shopping cart data.

The **bolded** fields are those that contain the data for which the character length is given. Other fields are those in which the data field is contained.

Table D-1 Exchange Maximum Character Lengths

XML Field	Character Length
<contract>	20
<buyerContractNumber>	
< contractNumber >	

Table D-1 Exchange Maximum Character Lengths

XML Field	Character Length
<item lineType=Goods quantity=12 >	(This is a number.)
<itemNumber>	740
<supplierItemNumber> <itemID>	
<manufacturerItemNumber> <itemID>	30
<manufacturerName>	255
<itemDescription>	240
<supplierUOMType>	3
<hazardClass>	40
<categoryCode>	250
<currency>	4
<unitPrice>	(This is a number.)
<supplierDUNS>	(This is a number.)
<supplierName>	360
<supplierTradingPartnerCode>	(This is a number.)

Oracle iProcurement

iProcurement has the following maximum character lengths for the shopping cart data.

The **bolded** fields are those that contain the data for which the character length is given. Other fields are those in which the data field is contained.

Table D-2 iProcurement Maximum Character Lengths

XML Field	Character Length
<contract>	20
<buyerContractNumber> <contractNumber>	
<catalogType>	30

Table D-2 iProcurement Maximum Character Lengths

XML Field	Character Length
<item lineType=Goods quantity=12>	(This is a number.)
<supplierReferenceNumber>	150
<itemNumber>	25
<supplierItemNumber>	
<itemID>	
<manufacturerItemNumber>	30
<itemID>	
<manufacturerName>	30
<itemDescription>	240
<supplierUOMType>	80
<supplierUOMQuantity>	80
<hazardClass>	(This is a number.)
<categoryCode>	80
<currency>	15
<unitPrice>	(This is a number.)
<supplierDUNS>	35
<supplierName>	240
<supplierTradingPartnerCode>	35
<supplierSite>	240
<ATTRIBUTE1> through <ATTRIBUTE15>	150

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