Oracle® Procurement

Punchout and Transparent Punchout Guide for Oracle iProcurement and Oracle Exchange

Release 11*i*

Part No. A92190-03

April 2003

ORACLE®

Oracle Procurement Punchout and Transparent Punchout Guide for Oracle iProcurement and Oracle Exchange, Release 11*i*

Part No. A92190-03

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Preface

This guide describes how to use the punchout or transparent punchout capability of Oracle iProcurement and Oracle Exchange to provide access to remote catalogs.

Note: This guide covers Oracle iProcurement Release 11.5.9 (Family Pack I) and Oracle Exchange Release 6.2.4.

Intended Audience

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

Structure

This manual describes the following:

Chapter 1: Overview

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

Chapter 2: Buyer Setup

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

Chapter 3: Supplier Setup

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

Chapter 4: Troubleshooting

This chapter describes common implementation problems and solutions.

Appendix A: Detailed Punchout and Transparent Punchout Process

This chapter expands on the overview of each punchout and transparent punchout model by describing how the 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 and transparent punchout, descriptions of the fields used in the XML documents for those DTDs, and examples of punchout and transparent punchout documents.

Appendix C: Authentication, Security, and Encoding

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

Appendix D: Maximum Field Lengths

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

Related Documents

For additional information on installing and implementing Oracle Exchange and Oracle 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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1

Overview

This chapter covers the following topics:

- Punchout and Transparent Punchout on page 1-1
- Punchout on page 1-4
- Transparent Punchout on page 1-17

Note: This guide covers Oracle iProcurement Release 11.5.9 (Family Pack I) and Oracle Exchange Release 6.2.4.

Punchout and Transparent Punchout

The following sections will help you understand and choose between a punchout and a transparent punchout.

Punchout

Punchout enables buyers to click a link that goes to a supplier's catalog, search for items on the supplier's site, and return those items directly to the buyer's shopping cart. If punching out from Oracle Exchange, buyers add the supplier's items to their shopping cart on Oracle Exchange. If punching out from Oracle iProcurement, requesters add the external items to their shopping cart in Oracle iProcurement.

Punchout offers seven models:

- Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)
- Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)

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

Transparent Punchout

A transparent punchout (also known as a distributed search) allows requesters to search for items on an external site without leaving Oracle iProcurement. Unlike punchout, requesters do not access the site directly. Instead, when the requester searches for items, the transparent punchout works in the background to access the external site and return the matching items directly to the **Search Results** page. Requesters do not necessarily know the items came from an external site. From the **Search Results** page, requesters add the items returned from the transparent punchout to their shopping cart just as they would any other item in the local catalog.

Transparent punchout offers two models:

- Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)
- Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)

Benefits of Punchout and Transparent Punchout

The ability to access remote catalogs using punchout or transparent punchout benefits both the supplier and the buyer. It enables suppliers to maintain and host their own catalog information, while buyers can search for items from within their own Oracle iProcurement or Oracle Exchange system. The burden of maintaining the hosted catalog is removed from the buying organization, reducing catalog maintenance and data storage costs. In addition to the local catalog, both punchout and transparent punchout provide a single point of entry to catalog content regardless of where the content resides.

Remote catalogs are 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 (local) 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).

Remote catalogs may not suit every commodity type or supplier, however. The following table shows the kinds of catalog items remote catalogs are ideal for, as compared to local 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; items for which blanket purchase agreements and quotations already exist in Oracle Purchasing; and strategic maintenance, repair, and operation (MRO) items (such as packing material).
Punchout or Transparent Punchout to Oracle Exchange	Best suited for indirect material (such as office supplies); standard MRO items; and products with stable pricing. (You can also link contract purchase agreements in Oracle Purchasing to items on Oracle Exchange.)
Punchout to Supplier	Best suited for products requiring a high degree of configuration (such as computer hardware or office furniture) and specialized services (such as printing or media services). Also good for products with fluctuating prices, or extremely large or specialized catalogs such as chemical supplies. (In an XML punchout, the supplier can also link its items to contract purchase agreements in Oracle Purchasing.)
Transparent Punchout to Supplier	Best suited for products with fluctuating prices, or extremely large or specialized catalogs, such as chemical supplies. (The supplier can also link its items to contract purchase agreements in Oracle Purchasing.)

Note: A local catalog allows all searching methods: standard, expanded, and advanced searching; filtering and sorting search results; browsing categories; and adding to favorites lists. A transparent punchout catalog allows standard searching and sorting by price. (A punchout catalog uses whatever search capabilities and tools the external site provides.)

Punchout supports both cXML and Oracle native XML standards, depending on the punchout model used. Transparent punchout supports Oracle native XML only. (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.

Choosing Between Punchout and Transparent Punchout

Punchout and transparent punchout offer the same basic benefits—mainly, the benefit of the supplier maintaining its own item information, reducing maintenance costs for the buyer and supplier, and a single point of access to catalog content regardless of where it resides.

The main distinctions between punchout and transparent punchout are as follows:

- With transparent punchout, the requester does not visibly access the supplier site. Transparent punchout accesses the site in the background and returns the items directly to Oracle iProcurement, with no changes to the requester's user interface. Requesters perform no additional navigation to return to Oracle iProcurement.
- Whereas transparent punchout is ideally suited for products with fluctuating prices, punchout is ideally suited for configurable products. In addition, the supplier's site may have special features unique to the industry or to the buyer-supplier relationship that a punchout can take advantage of.

In a transparent punchout, the supplier sets up integration with its search engine to properly return search results to Oracle iProcurement. In a punchout, the supplier sets up integration to access its catalog and provide a mechanism for returning the requester to Oracle iProcurement. (If the supplier has already implemented a punchout, the supplier can leverage some of that setup when implementing a transparent punchout.)

Punchout

The following sections provide an overview of punchout.

Punchout Models and Comparisons

Oracle iProcurement and Oracle 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 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 or group pricing (the ability to create prices visible only to a specified buyer or group), pricing approval by the buyer, price breaks, price effective dates, and automated catalog loading by the supplier.

Table 1–2 Punchout Model Benefits

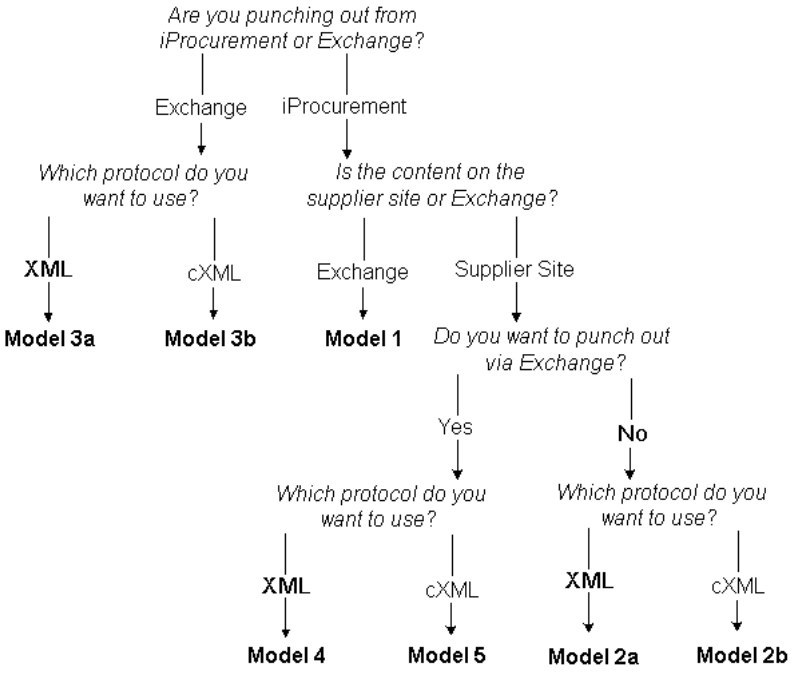
Model	Buyer Benefits	Supplier Benefits
Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)	This model offers a unique, point-to-point solution between the buyer and supplier.	Supplier closely manages the content. Supplier can control access by allowing 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.) Suppliers already maintaining cXML catalogs can continue to use those.
Models 3a and 3b: 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 and reach multiple customers. 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 and take advantage of the special pricing features of Exchange. (See the benefits for Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) above.) 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.	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 Oracle iProcurement to Oracle Exchange, then from Oracle Exchange to the supplier. In a double punchout, the requester clicks a punchout link to Oracle Exchange and shops on Oracle Exchange; the 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 3a or 3b: 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* Oracle Exchange or *from* Oracle 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 Oracle Exchange is one (visible) step, and punching out from Oracle 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
Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)	Table 2–2 in Chapter 2	Table 3–2 in Chapter 3
Models 3a and 3b: 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 Oracle 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 Oracle Exchange (cXML)	Table 2–5 in Chapter 2	Table 3–5 in Chapter 3

Punchout Flow

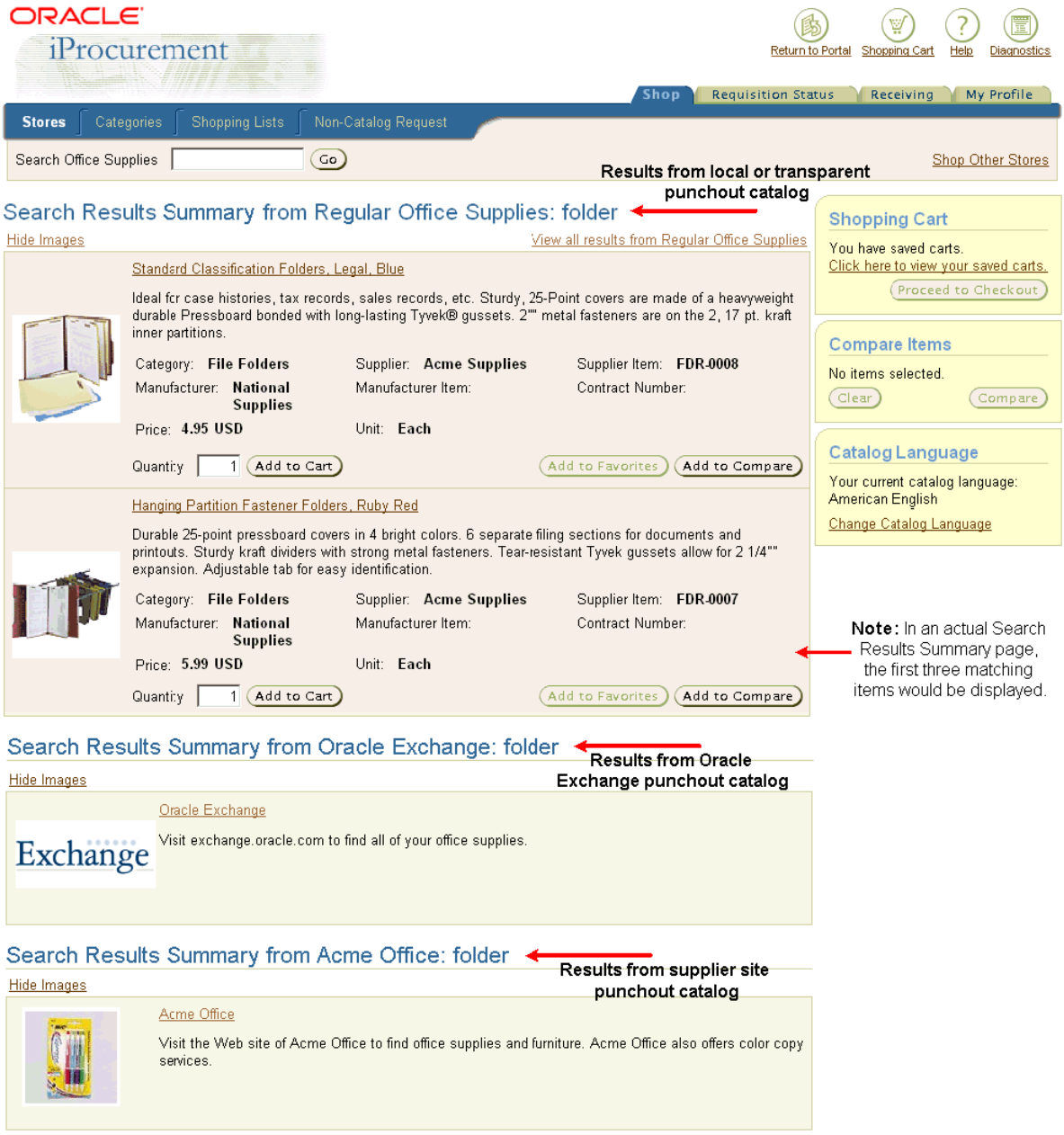
At certain steps in the punchout process, the details differ by model, but the basic flow is the same:

1. The requester in Oracle iProcurement or buyer in Oracle Exchange clicks a punchout link to the external catalog site.

   In Oracle iProcurement, punchout links are available from the following pages:

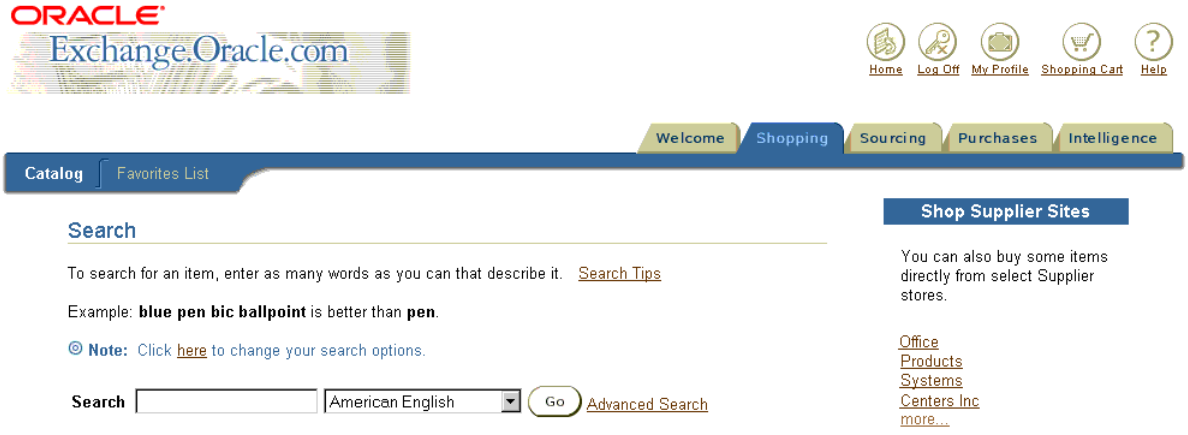
   - **Search Results Summary** page when a punchout matches the search keywords.
   - **Shop Store** page when the requester clicks a store that contains a punchout catalog.
   - **Shop** home page when the requester clicks a store whose only catalog is a punchout.

   The following illustration shows a punchout from Oracle iProcurement on the **Search Results Summary** page:


ORACLE
iProcurement
Return to Portal
Shopping Cart
Help
Diagnostics
Shop
Requisition Status
Receiving
My Profile
Stores
Categories
Shopping Lists
Non-Catalog Request
Search Office Supplies
Go
Shop Other Stores
Results from local or transparent punchout catalog
Search Results Summary from Regular Office Supplies: folder
Hide Images
View all results from Regular Office Supplies
Standard Classification Folders, Legal, Blue
Ideal for case histories, tax records, sales records, etc. Sturdy, 25-Point covers are made of a heavyweight durable Pressboard bonded with long-lasting Tyvek® gussets. 2"" metal fasteners are on the 2, 17 pt. kraft inner partitions.
Category: File Folders
Supplier: Acme Supplies
Supplier Item: FDR-0008
Manufacturer: National Supplies
Manufacturer Item:
Contract Number:
Price: 4.95 USD
Unit: Each
Quantity 1
Add to Cart
Add to Favorites
Add to Compare
Hanging Partition Fastener Folders, Ruby Red
Durable 25-point pressboard covers in 4 bright colors. 6 separate filing sections for documents and printouts. Sturdy kraft dividers with strong metal fasteners. Tear-resistant Tyvek gussets allow for 2 1/4"" expansion. Adjustable tab for easy identification.
Category: File Folders
Supplier: Acme Supplies
Supplier Item: FDR-0007
Manufacturer: National Supplies
Manufacturer Item:
Contract Number:
Price: 5.99 USD
Unit: Each
Quantity 1
Add to Cart
Add to Favorites
Add to Compare
Shopping Cart
You have saved carts.
Click here to view your saved carts.
Proceed to Checkout
Compare Items
No items selected.
Clear
Compare
Catalog Language
Your current catalog language: American English
Change Catalog Language
Note: In an actual Search Results Summary page, the first three matching items would be displayed.
Search Results Summary from Oracle Exchange: folder
Results from Oracle Exchange punchout catalog
Hide Images
Oracle Exchange
Exchange
Visit exchange.oracle.com to find all of your office supplies.
Search Results Summary from Acme Office: folder
Results from supplier site punchout catalog
Hide Images
Acme Office
Visit the Web site of Acme Office to find office supplies and furniture. Acme Office also offers color copy services.

In Oracle Exchange, the punchout links to supplier sites display in the Shop Supplier Sites box on the **Shopping** home page. These links also appear in other areas of Oracle Exchange.

The following illustration shows a punchout from Oracle Exchange:

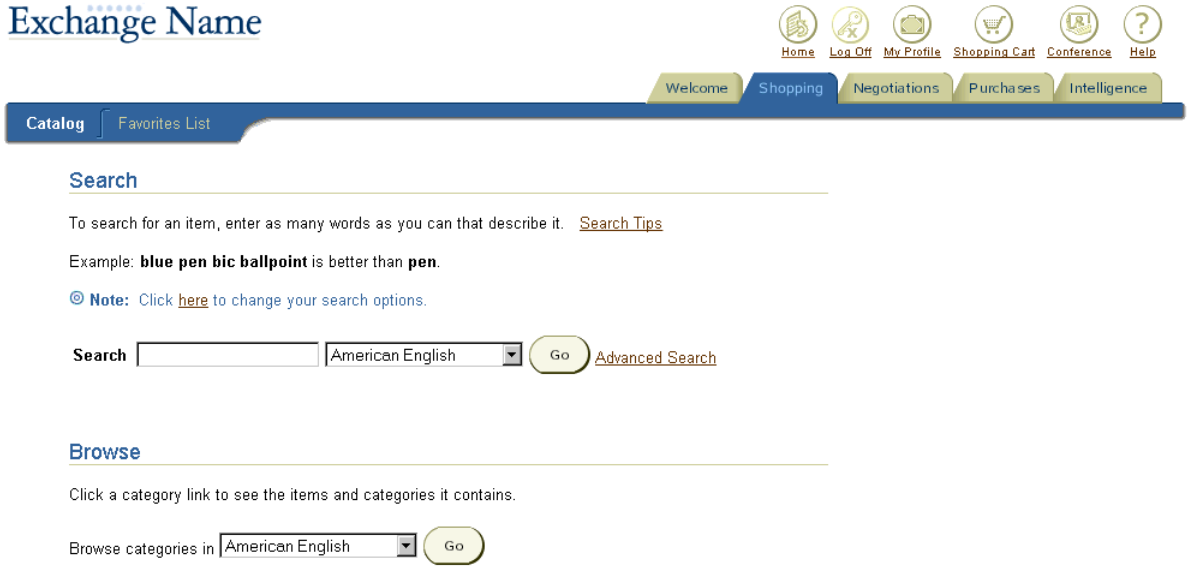


2. The *punchout from* application (Oracle iProcurement or Oracle Exchange) sends the login request to the catalog site.
3. The *punchout to* application (Oracle Exchange or the supplier site) authenticates the requester or buyer.
4. The *punchout from* application redirects the requester's or buyer's 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.

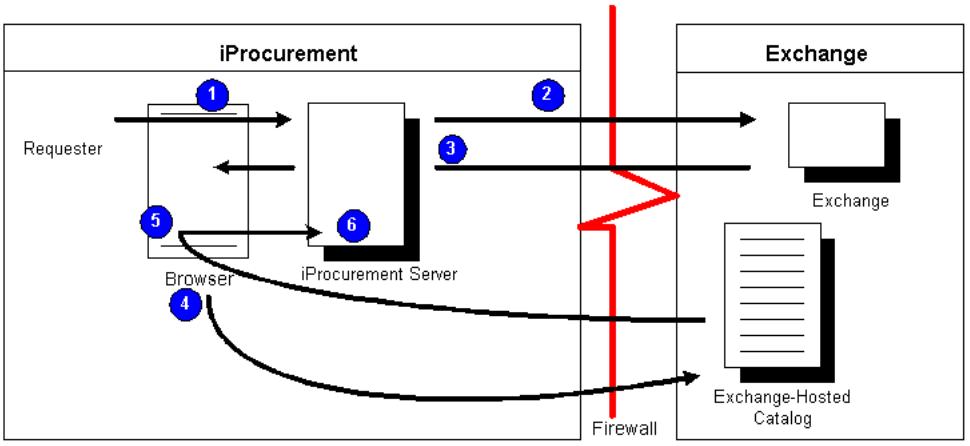
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)

In this model, the supplier loads its catalog items directly to the Oracle Exchange catalog, the Oracle iProcurement administrator sets up Oracle iProcurement to use Oracle Exchange as the punchout hub, and requesters see a punchout link to Oracle Exchange displayed in their search results.

After clicking the punchout link to Oracle Exchange, the requester sees the Oracle Exchange **Shopping** home page, shown in the following illustration:



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



In the illustration above:

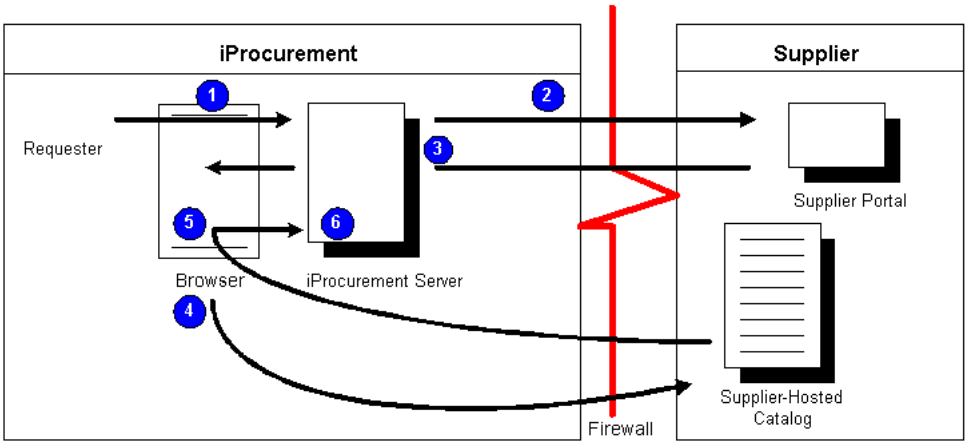
1. The requester logs on to Oracle iProcurement.
2. From Oracle iProcurement, the requester clicks a punchout link to Oracle Exchange.
3. Oracle Exchange authenticates the requester and returns a response.
4. Oracle iProcurement redirects the requester's browser to Oracle Exchange for shopping.
5. When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

For detailed descriptions of each step, see Appendix A.

Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)

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

The following diagram shows the basic flow for Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML).



In the illustration above:

1. The requester logs on to Oracle iProcurement.
2. From Oracle iProcurement, the requester clicks a punchout link to the supplier site.
3. The supplier authenticates the requester and returns a response.
4. Oracle 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 Oracle iProcurement via the requester's browser.
6. The requester completes the checkout process, and Oracle iProcurement processes the order.

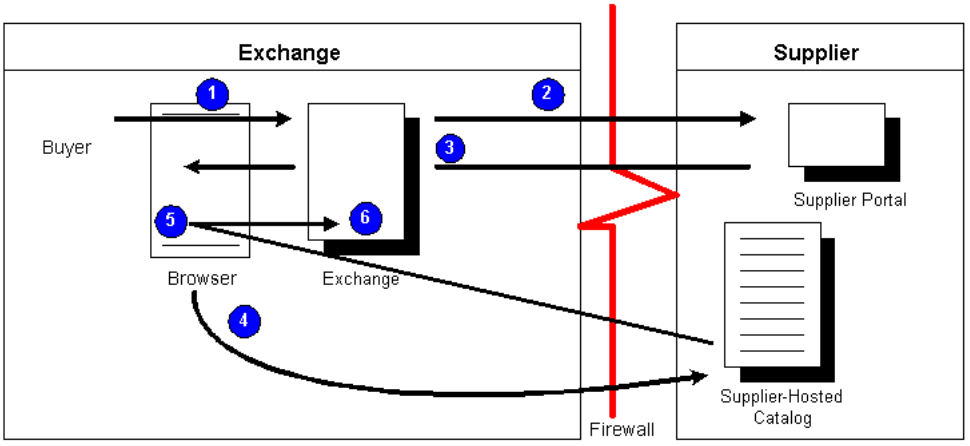
For detailed descriptions of each step, see Appendix A.

Models 3a and 3b: 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 Oracle Exchange see a punchout link to the supplier site from the **Shopping** home page or **Search Results** page on Oracle Exchange. In addition to

providing punchouts to Oracle Exchange registrants, suppliers often use this model to test a punchout to their site before buyers implement any of the other models.

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



In the illustration above:

1. The buyer logs on to Oracle Exchange.
2. On Oracle Exchange, the buyer clicks a punchout link to the supplier site.
3. The supplier authenticates the buyer.
4. Oracle 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 Oracle Exchange via the buyer's browser.
6. The buyer completes the checkout process, and Oracle Exchange processes the order.

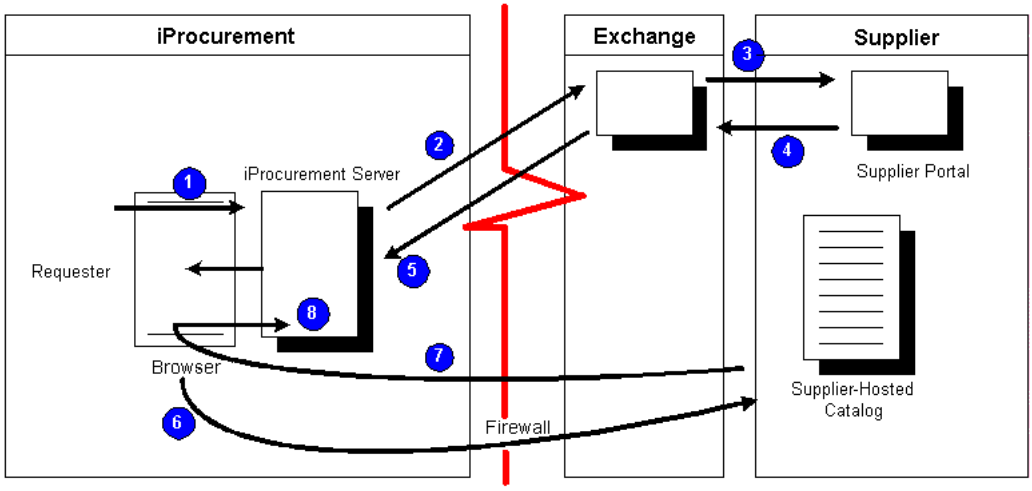
For detailed descriptions of each step, see Appendix A.

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

In this model, the supplier hosts the catalog at its own site or Web store, which the requester in Oracle iProcurement accesses (invisibly) via Oracle Exchange. Using

Oracle 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 Oracle Exchange to its Web store. The Oracle iProcurement administrator, using the eContent Manager in Oracle iProcurement, must download the supplier's punchout definition from Oracle Exchange.

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



In the illustration above:

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

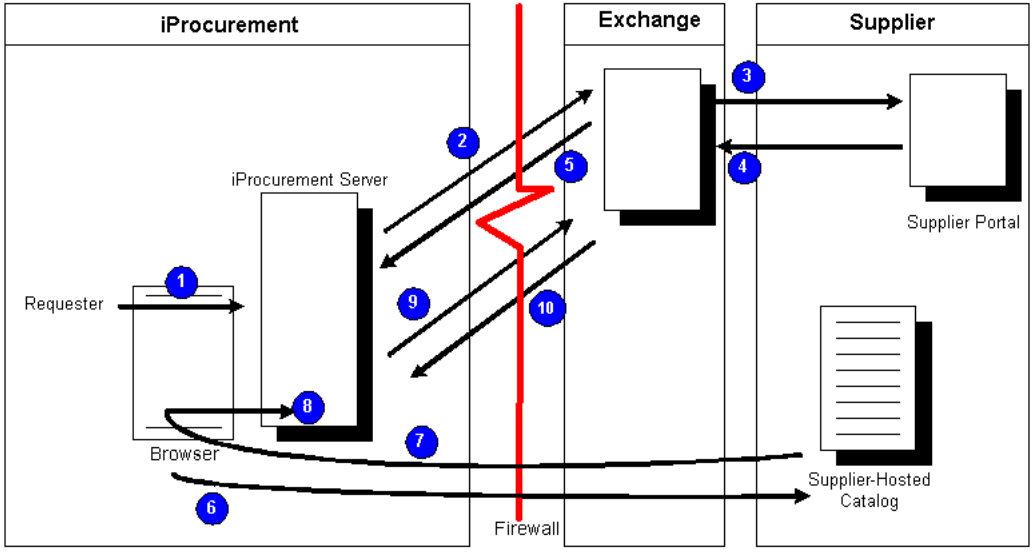
7. When the requester finishes shopping, the supplier site returns the shopping cart items to Oracle iProcurement via the requester's browser.
8. The requester completes the checkout process, and Oracle iProcurement processes the order.

For detailed descriptions of each step, see Appendix A.

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

In this model, the supplier hosts a cXML catalog at its own site or Web store, which the requester in Oracle iProcurement accesses (invisibly) via Oracle Exchange. Using Oracle 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 Oracle Exchange to its Web store. The Oracle iProcurement administrator, using the eContent Manager in Oracle iProcurement, must download the supplier's punchout definition from Oracle Exchange.

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



In the illustration above:

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

For detailed descriptions of each step, see Appendix A.

Transparent Punchout

The following sections provide an overview of transparent punchout.

Transparent Punchout Models and Comparisons

Oracle iProcurement supports two transparent punchout models. The following table compares the models:

Table 1–4 Transparent Punchout Model Benefits

Model	Buyer Benefits	Supplier Benefits
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Requesters have access to all supplier catalog items defined on Oracle Exchange.	Suppliers load their catalog items once on Oracle Exchange and reach many Oracle iProcurement customers in addition to the buyers already registered on Exchange. The Exchange catalog supports features such as buyer or group pricing (the ability to create prices visible only to a specified buyer or group), pricing approval by the buyer, price effective dates, and automated catalog loading by the supplier. **Note:** Transparent punchout does not honor price breaks the supplier created on Oracle Exchange.
Model 2: Transparent Punchout from Oracle iProcurement 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 changes such as the site's URL's changing, however, must be communicated to all buyer organizations.)

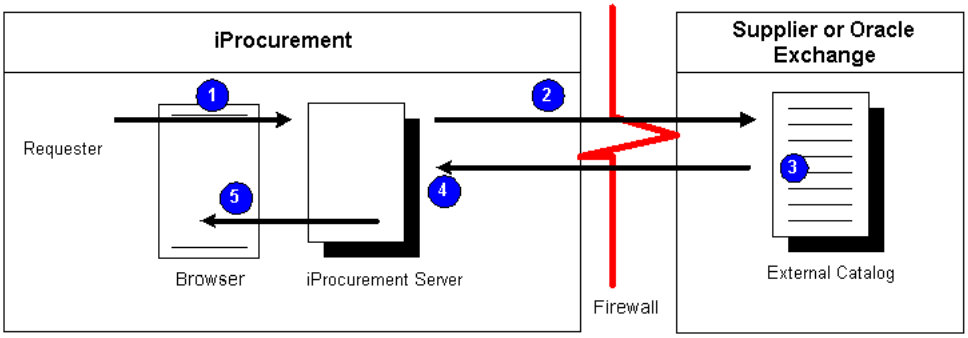
Choosing Your Transparent Punchout

Whether to conduct a transparent punchout to Oracle Exchange or to the supplier depends on whether the supplier's catalog content exists on Oracle Exchange or its own site. For example, for more dynamic pricing and item information, the supplier may choose to host the content on its own site.

If the supplier chooses to host its content on Oracle Exchange, the supplier does not have to implement its own transparent punchout; Oracle Exchange has the transparent punchout capability built in. Oracle Exchange also provides buyer and group pricing, pricing approval by the buyer, and price effective dates. If the supplier's site does not offer these features, the buyer and supplier can decide to use a transparent punchout to Oracle Exchange.

Transparent Punchout Flow

The following diagram shows the basic flow of transparent punchout:



The basic flow is as follows:

1. The requester in Oracle iProcurement conducts a search.

   If you have configured stores in the eContent Manager, the requester selects a store before searching. Otherwise, the requester enters a search term into My Favorite Store, as shown in the following illustration.

2. If the store includes a transparent punchout catalog, Oracle iProcurement sends a search request XML document to the external site with which the transparent punchout has been set up.
3. The external site authenticates the request, processes the request, and generates search results.
4. The external site returns a search results XML document to Oracle iProcurement.
5. Oracle iProcurement parses the search results XML document from the external site to display search results, as shown in the following illustration.

After viewing the transparent punchout results, the requester clicks Add to Cart for the desired items. The requester then completes the checkout process for the items in the shopping cart, and Oracle iProcurement processes the order.

For detailed descriptions of each step, see Appendix A.

2

Buyer Setup

This chapter contains the following topics:

- Implementation Considerations on page 2-1
- Checklists for Setting Up Punchout on page 2-2
- Checklists for Setting Up Transparent Punchout on page 2-6
- Setup Steps on page 2-8
- Updates on page 2-83
- Contract Numbers on page 2-88

Implementation Considerations

The main considerations for buyers implementing punchout or transparent punchout include the following:

- It is important to decide on the model that you and your supplier want to use. See Chapter 1.
- Depending on the model, some data mapping may be required. Decide which data mapping you and the supplier will need to do. See Understand Data Mapping on page 2-65.
- If the site that you are accessing uses secure socket layer (SSL) to authenticate the buyer, then you should review Prerequisites on page 2-8.
- For punchout, it is recommended that suppliers use UTF-8 encoding when sending the punchout documents. For transparent punchout, suppliers *must* use UTF-8 encoding when sending transparent punchout documents. See Encoding on page C-4.

- Oracle iProcurement has requirements for item information. Ensure the supplier reads Appendix B to understand item requirements as described by the document type definitions (DTDs). For example, all items in Oracle iProcurement must have a numeric price; if not, the requester cannot add the item to the cart.
- The more transparent punchouts you place in a single store in Oracle iProcurement, the longer it may take to search for items in that store, depending on factors such as network and Internet traffic and the external site's performance. (A store is a grouping of catalogs that the catalog administrator can optionally create using the eContent Manager in Oracle iProcurement. See the online Help in the eContent Manager for more information on stores.)
- Consider security issues. Will the supplier implement user authentication to control who accesses its site or items? As the buyer, you can also use realms to control different requesters' access to the catalog. If you do, develop an access strategy up front. See Use Realms to Control Access on page 2-57.

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

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

Checklists for Setting Up Punchout

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

> **Note:** Some 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.

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 2-8	Review Required
2	Register Buying Organization on Oracle Exchange on page 2-10	Required
3	Register Users on Oracle Exchange on page 2-15	Required
4	Associate Contract Numbers with Oracle Exchange Items on page 2-21	Optional
5	Set Up Data Mapping on Oracle Exchange on page 2-23 See also Understand Data Mapping on page 2-65.	Optional
6	Set Profile Options in Oracle iProcurement on page 2-30	Review Required
7	Define Oracle Exchange Punchout in Oracle iProcurement on page 2-33	Required
8	Add Catalog to Store on page 2-54	Required
9	Use Realms to Control Access on page 2-57	Optional
10	Set Up Supplier and Site Mapping on page 2-69	Optional
11	Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78 See also Understand Data Mapping on page 2-65.	Required

Use the following table as your checklist if you are setting up Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML):

Table 2–2 Buyer Setup Steps for Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)

Step Number	Step	Required?
1	Prerequisites on page 2-8	Review Required
2	Set Profile Options in Oracle iProcurement on page 2-30	Review Required

Table 2–2 Buyer Setup Steps for Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)

Step Number	Step	Required?
3	Define Supplier Punchout in Oracle iProcurement on page 2-41	Required
4	Add Catalog to Store on page 2-54	Required
5	Use Realms to Control Access on page 2-57	Optional
6	Set Up Supplier and Site Mapping on page 2-69	Optional
7	Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78 See also Understand Data Mapping on page 2-65.	Required

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

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

Step Number	Step	Required?
1	Prerequisites on page 2-8	Review Required
2	Register Buying Organization on Oracle Exchange on page 2-10	Required
3	Register Users on Oracle Exchange on page 2-15	Required
4	Understand Data Mapping on page 2-65	Optional
5	Control Punchout Access on Oracle Exchange on page 2-28	Required

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

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

Step Number	Step	Required?
1	Prerequisites on page 2-8	Review Required

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

Step Number	Step	Required?
2	Register Buying Organization on Oracle Exchange on page 2-10	Required
3	Register Users on Oracle Exchange on page 2-15	Required
4	Control Punchout Access on Oracle Exchange on page 2-28	Required
5	Set Profile Options in Oracle iProcurement on page 2-30	Review Required
6	Define Oracle Exchange Punchout in Oracle iProcurement on page 2-33	Required
7	Download Punchout Suppliers from Oracle Exchange on page 2-38	Required
8	Add Catalog to Store on page 2-54	Required
9	Use Realms to Control Access on page 2-57	Optional
10	Set Up Supplier and Site Mapping on page 2-69	Optional
11	Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78 See also Understand Data Mapping on page 2-65.	Required

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

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

Step Number	Step	Required?
1	Prerequisites on page 2-8	Review Required
2	Register Buying Organization on Oracle Exchange on page 2-10	Required
3	Register Users on Oracle Exchange on page 2-15	Required
4	Set Up Data Mapping on Oracle Exchange on page 2-23 See also Understand Data Mapping on page 2-65.	Optional
5	Control Punchout Access on Oracle Exchange on page 2-28	Required

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

Step Number	Step	Required?
6	Set Profile Options in Oracle iProcurement on page 2-30	Review Required
7	Define Oracle Exchange Punchout in Oracle iProcurement on page 2-33	Required
8	Download Punchout Suppliers from Oracle Exchange on page 2-38	Required
9	Add Catalog to Store on page 2-54	Required
10	Use Realms to Control Access on page 2-57	Optional
11	Set Up Supplier and Site Mapping on page 2-69	Optional
12	Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78 See also Understand Data Mapping on page 2-65.	Required

Checklists for Setting Up Transparent Punchout

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: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML):

Table 2–6 Buyer Setup Steps for Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)

Step Number	Step	Required?
1	Prerequisites on page 2-8	Review Required
2	Register Buying Organization on Oracle Exchange on page 2-10	Required
3	Register Users on Oracle Exchange on page 2-15	Required
4	Associate Contract Numbers with Oracle Exchange Items on page 2-21	Optional

Table 2–6 Buyer Setup Steps for Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)

Step Number	Step	Required?
5	Set Up Data Mapping on Oracle Exchange on page 2-23 See also Understand Data Mapping on page 2-65.	Optional
6	Set Profile Options in Oracle iProcurement on page 2-30	Review Required
7	Define Transparent Punchout in Oracle iProcurement on page 2-48	Required
8	Add Catalog to Store on page 2-54	Required
9	Use Realms to Control Access on page 2-57	Optional
10	Set Up Supplier and Site Mapping on page 2-69	Optional
11	Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78 See also Understand Data Mapping on page 2-65.	Required

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

Table 2–7 Buyer Setup Steps for Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)

Step Number	Step	Required?
1	Prerequisites on page 2-8	Review Required
2	Set Profile Options in Oracle iProcurement on page 2-30	Review Required
3	Define Transparent Punchout in Oracle iProcurement on page 2-48	Required
4	Add Catalog to Store on page 2-54	Required
5	Use Realms to Control Access on page 2-57	Optional
6	Set Up Supplier and Site Mapping on page 2-69	Optional
7	Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78 See also Understand Data Mapping on page 2-65.	Required

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 or transparent punchout.
- If the supplier's site is secure, verify your access to secure sites.

Make Sure Supplier Supports Punchout or Transparent 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, or if you are conducting a transparent punchout to Oracle Exchange or 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.

Certification Authorities List Accessing a secure site involves making sure the site is on the accessing application's certification authorities list:

- For Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML), the certification authority that Oracle Exchange uses must be on the ca-bundle.crt file in Oracle iProcurement.
- For Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML), the supplier's certification authority needs to be on the ca-bundle.crt file in Oracle iProcurement.
- For Models 3a and 3b: 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 Oracle 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), Oracle Exchange's certification

authority needs to be on the ca-bundle.crt file in Oracle iProcurement; the supplier's certification authority needs to be on the pomdigcrt.txt file in Oracle Exchange. As the buyer, your only concern is that Oracle Exchange's certification authority is on the ca-bundle.crt file.

- For Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML), the certification authority that Oracle Exchange uses must be on the ca-bundle.crt file in Oracle iProcurement.
- Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML), the supplier's certification authority needs to be on the ca-bundle.crt file in Oracle iProcurement.

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 Oracle 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 Oracle 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 Oracle Exchange, depending on the setup, this is typically located in `<root directory of Oracle installation>/admin/pomdigcrt.txt`, where the root directory of the Oracle installation is defined in the $APPL_TOP environment variable.

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

Java Class Path Accessing a secure site from Oracle iProcurement also involves making sure the classpath in Oracle iProcurement contains the correct secure socket layer (SSL) library files. For all versions of Java Developer Kit (JDK), use the following SSL library files:

- wrapper.classpath=<your Internet Application Server (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.

Library Path Accessing a secure site from Oracle iProcurement also requires verifying the library path. Verify that the following environment variables contain an absolute path directory name (not just the file name) for libnjssl8.so (for Unix-based systems) or libnjss8.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)

The library path directory name is <your Oracle Application Server installation path>/iAS/lib.

Register Buying Organization on Oracle Exchange

Perform this step for the following models:

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

To enable buyers to access sites in any of the above models, the buying company must exist as a registered company on Oracle 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) or Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML), and you have a multiple organizations setup in Oracle iProcurement that you want to mimic on Oracle Exchange (for example, you want the operating unit in Germany to be able to access only items supplied by Supplier A on Oracle Exchange, and the US operating unit to access only items supplied by Supplier B), see Multiple Organization Punchout or Transparent Punchout to Oracle Exchange on page 2-63.

To register with Oracle 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 or transparent punchout buyers 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.

To make sure you are assigned the proper system tasks:

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

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

1. Log on to Oracle 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.

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 and transparent punchouts on Oracle 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 from Oracle Exchange.
   - 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 Oracle Exchange during the punchout.

- View All Items, View Items with Preferred Pricing, or View Items with Buyer-Restricted Pricing—typically contained in Buyer job functions, unless the Exchange Operator modified them. These system tasks enable buyers to search for items on Oracle Exchange. View All Items displays all matching items in the search results. View Items with Preferred Pricing displays only the buyer price in the search results when both buyer and list prices exist for an item; however, if only a list price exists, it displays the list price. View Items with Restricted Pricing displays only buyer prices in the search results, never list prices; if a buyer price does not exist for an item, the item does not display in the search results.
- Review and Approve Price Changes—typically contained in the Purchasing Manager job function unless the Exchange Operator modified this job function. This system task allows you to view and approve supplier price lists, which contain prices created specifically for your company. You should be assigned this system task for the following models:

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

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

  Note: By default, suppliers' prices require your approval before the items are available on Oracle Exchange. When implementing a punchout or transparent punchout to Oracle Exchange, make sure to approve the prices to make the items available. (Alternatively, you can lift the approval requirement.) See the Purchasing Manager online Help on Oracle Exchange for more information.

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 Oracle Exchange through a punchout or transparent 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 Oracle 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 Oracle Exchange

Perform this step for the following models:

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

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

Registering users consists of two steps:

1. Register users on Oracle Exchange.

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

2. Approve users on Oracle Exchange.

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

To register users on Oracle Exchange:

1. On the **Home** page, click the "Registration" or "Sign me up!" link.

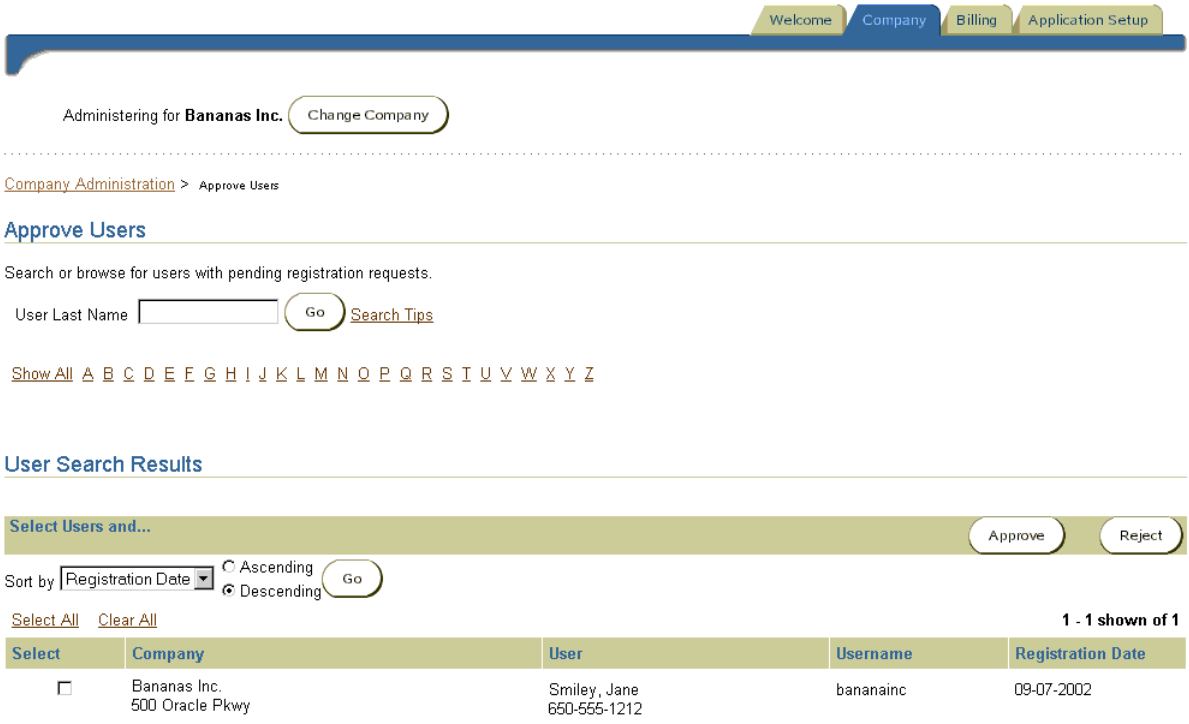
2. Select "I think my company is already registered, and I want to register myself as a new user."
3. Search for your company name and click Go.
4. Select the company and click Next.
5. Enter information for the user, including user name and password. For a proxy user, you may want to specify a name 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 Oracle 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 Oracle iProcurement requesters to have different privileges on Oracle Exchange by assigning them different job functions or if you want to use realms, you could create more than one proxy user. (See Use Realms to Control Access on page 2-57.)

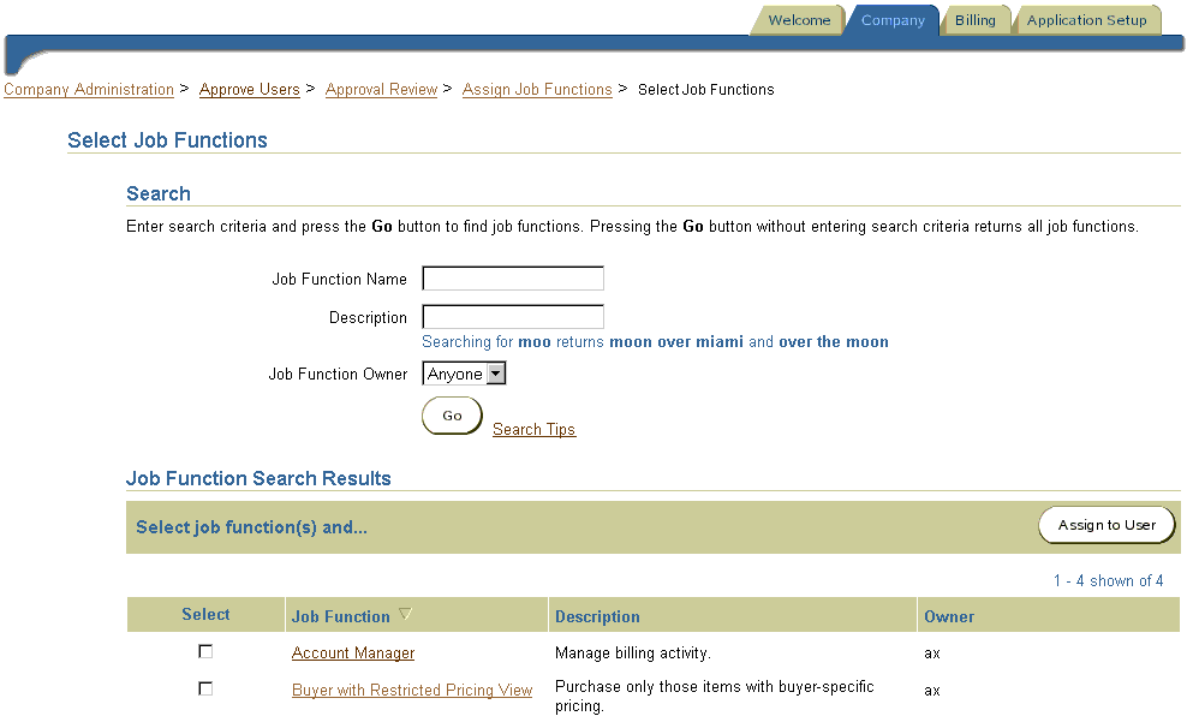
To approve users on Oracle Exchange:

1. Log in to the Exchange as the Company Administrator, using the user name and password you created in Register Buying Organization on Oracle Exchange on page 2-10.
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.



5. Select the user again and click Assign Job Functions.
6. On the **Assign Job Functions** page, click "Select and assign 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.



7. Click a job function to see what system tasks it contains.
8. Assign a job function (or job functions) to the user that contains the relevant system tasks. These system tasks were described in the previous step:
   - Punch Out to Supplier Sites (used by punchout)
   - Create Add-to-Cart Order (used by punchout)
   - View All Items, View Items with Preferred Pricing, or View Items with Buyer-Restricted Pricing (used by punchout and transparent punchout)
   - Review and Approve Price Changes (used by punchout and transparent punchout for users who will perform the Purchasing Manager function on Oracle Exchange)

   The prices and items that users in your company see are based on the job functions they are assigned. For example, a user assigned a job function for

viewing buyer-restricted prices only sees prices that a supplier created for your company on Oracle Exchange.

> **Note:** *If you are implementing transparent punchout:* The system task View Items with Preferred Pricing provides the user the ability to view both buyer-specific and Exchange-wide (list) prices. On Oracle Exchange, the buyer-specific price is marked as the "negotiated" price. This distinction is not returned to Oracle iProcurement in a transparent punchout. Therefore, the requester may see the same item in the search results with different prices. To avoid this situation, it is recommended that you assign the job junction that contains the View Items with Buyer-Restricted Pricing system task so that only negotiated prices are returned.

For more information on job functions and system tasks, including a list of them, see the *Company Administration Guide* on Oracle 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 Oracle iProcurement requesters who conduct a punchout or transparent punchout from Oracle iProcurement using that proxy user.

9. Select the desired job function or functions and click Assign to User.
10. On the **Assign Job Functions** page, click OK.
11. 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 Oracle 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 Oracle Exchange activities. The Exchange Operator can hide any or all of the following pages from a punchout buyer:

- **Home** page. The Oracle iProcurement requester always punches out directly to the **Shopping** page on Oracle Exchange. The **Home** page contains links to other 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, which includes all of the Oracle 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 Oracle iProcurement to Oracle Exchange. (A punchout flag in the software alerts Oracle Exchange whether the buyer logged in via punchout.)

Associate Contract Numbers with Oracle Exchange Items

Perform this step for the following models:

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

Perform this step if you want to associate contract purchase agreements in Oracle Purchasing with supplier's items in Oracle Exchange. If a supplier on Oracle Exchange has created price lists, which contain prices created specifically for your company, you can view and approve those price lists on Oracle Exchange. While viewing or approving the price lists, you can also associate a contract purchase agreement in Oracle Purchasing with the items on the price list.

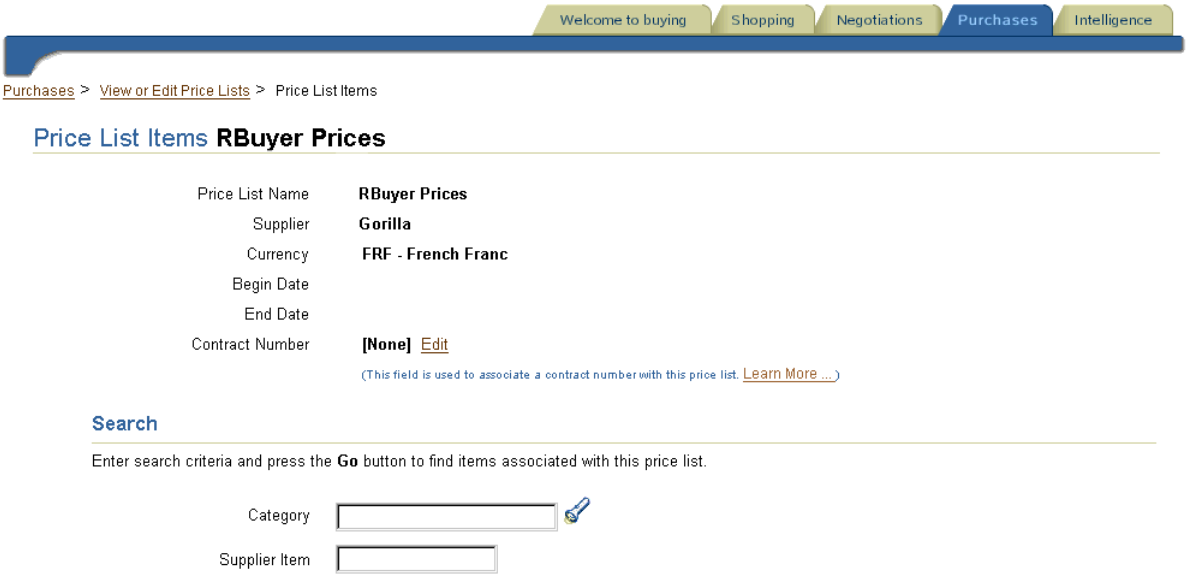
Online Help: For more information on viewing and approving price lists on Oracle Exchange, click the Help icon on Oracle Exchange: Buying and Selling > Purchasing Management > Managing Price Lists.

For a description of how the contract number gets carried from the item, to Oracle iProcurement, and onto the purchase order, see Contract Numbers on page 2-88.

To associate a contract number with Oracle Exchange items on a price list:

1. Log on to Exchange using a logon that is assigned the Review and Approve Price Changes system task.
2. On the **Home** page, click the "Buying" link.
3. Click the Purchases tab, then the "View or Edit Price Lists" link.

   You can also enter a contract number while approving price lists, when you click the "Approve Price Changes" link.
4. Select the price list.
5. On the **Price List Items** page, click "Edit" next to the Contract Number field. (A contract number field does not display for trading group price lists.)



6. Enter the contract number.

   This contract number applies to all items on the price list. You can also change or delete the number. No change a supplier makes to the price list affects the contract number. The supplier does not see the contract number.
7. Click Apply.

Set Up Data Mapping on Oracle 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 Oracle Exchange (cXML)	Optional
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Optional

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

- UOM
- Currency
- Supplier (known as the trading partner on Oracle Exchange). See Set Up Supplier and Site Mapping on page 2-69.

You can also choose how Oracle Exchange sends category information to you by selecting category mapping preferences.

For an overview of data mapping, see Understand Data Mapping on page 2-65.

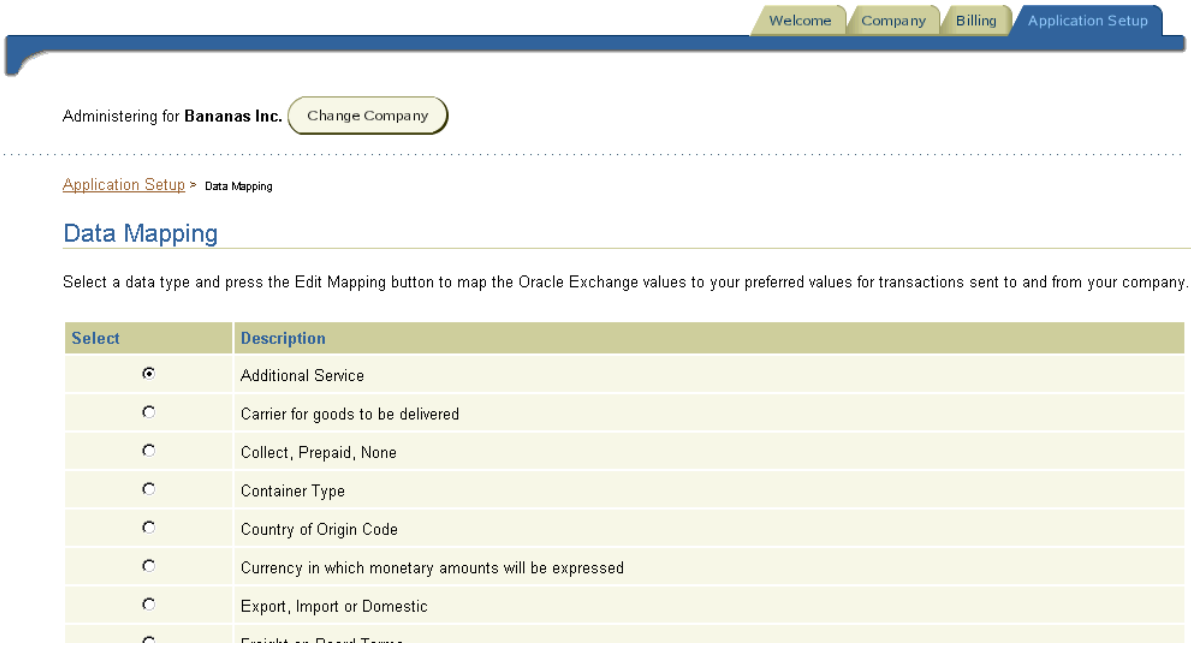
> **Note:** For a punchout or transparent punchout from Oracle iProcurement, you must still map the Oracle Exchange values to the values used by Oracle iProcurement even if you perform mapping on Oracle Exchange. Oracle Exchange mapping determines what values it sends to Oracle iProcurement. Oracle iProcurement still needs to map those values to internal values. See Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78.

Map Currency and UOM Codes

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

To map currency and UOM codes:

1. Access Oracle 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.
5. Click Edit Mapping.



6. 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.

7. 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 or transparent punchout, you 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 CSE as the UOM code for *case* while Oracle Exchange uses CS. In this case, you would enter CSE in the Exchange to My Company field.

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

9. Click Apply Changes.

Choose Category Mapping Preferences

Use this step to select what value Oracle Exchange returns to Oracle iProcurement to identify a category. The value you choose is the one that Oracle Exchange returns to Oracle iProcurement; it is this value upon which Oracle iProcurement performs category mapping.

A category on Oracle Exchange is defined by its name, key, or description. For example, to create a category, the Exchange Operator could use the United Nations Standard Product and Service Code (UNSPSC) name as the category name, SQID number as the category key, and UNSPSC code as the category description, as follows:

- Category Name: Calculators
- Category Key: 004404
- Category Description: 44101801

If you choose the Category Description in the example above, Oracle Exchange populates 44101801 in the <categoryCode> field in the punchout shopping cart document or the <CategoryCode> field in the transparent punchout response document. Oracle iProcurement then maps 44101801 to a category name in Oracle Applications.

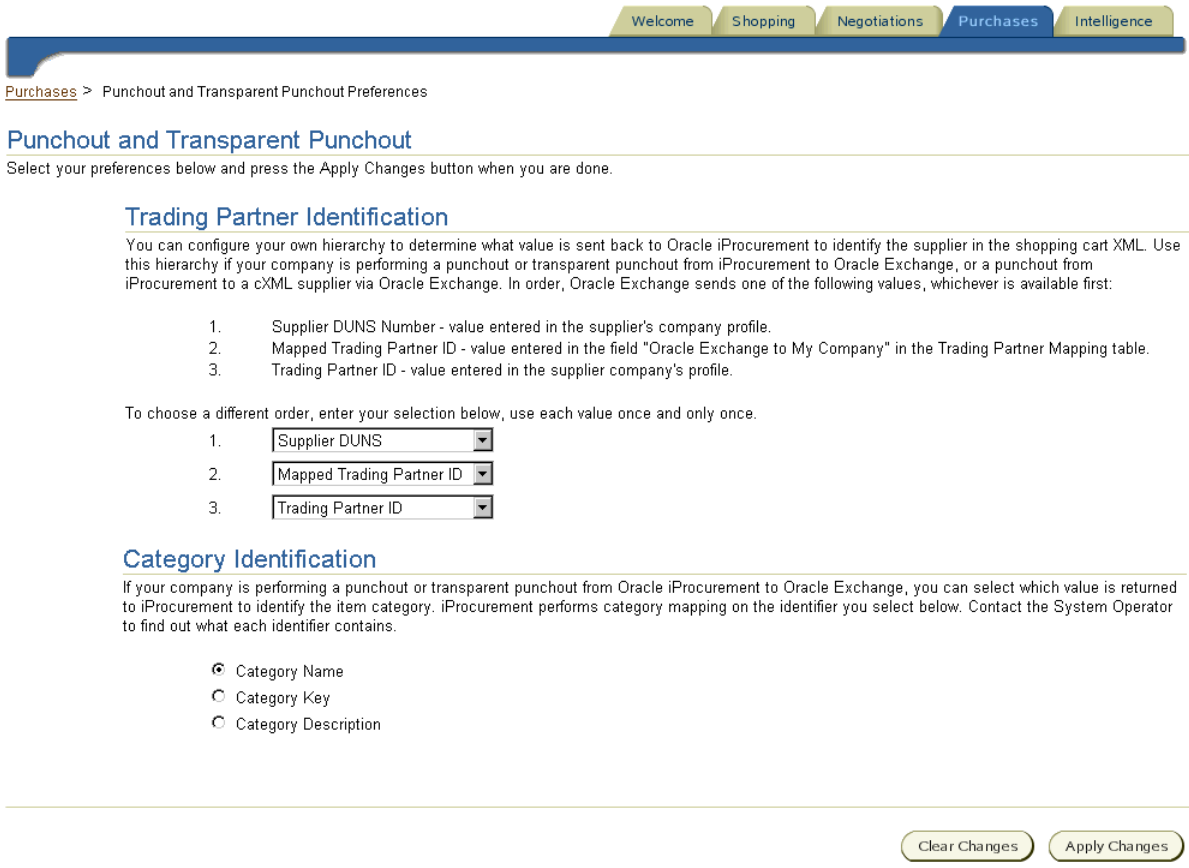
You may need to contact the Exchange Operator to find out category names, keys, and descriptions. (The Contact Us link at the bottom of any page, or some other link the Operator provides, may provide contact information for the Operator.)

> **Note:** If you choose name or description, the value is returned to Oracle iProcurement in the base language of Oracle Exchange. (When Oracle Exchange is installed, it is installed in a primary, also known as the base, language.) The category key, however, is the same in all languages. Since the category key is independent of language, choosing the category key is recommended to simplify mapping.

For more information on UNSPSC codes, see http://www.eccma.org/unspsc/.

To select the category identifier:

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 and Transparent Punchout Preferences" link.
5. On the **Punchout and Transparent Punchout** page, specify a category identification of name, key, or description.



The Trading Partner Identification section is described in Set Up Supplier and Site Mapping on page 2-69.

6. Click Apply Changes.

Control Punchout Access on Oracle Exchange

Perform this step for the following models:

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

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

Buyers do not have access to punchouts on or via Oracle 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 Oracle Exchange on page 2-10.

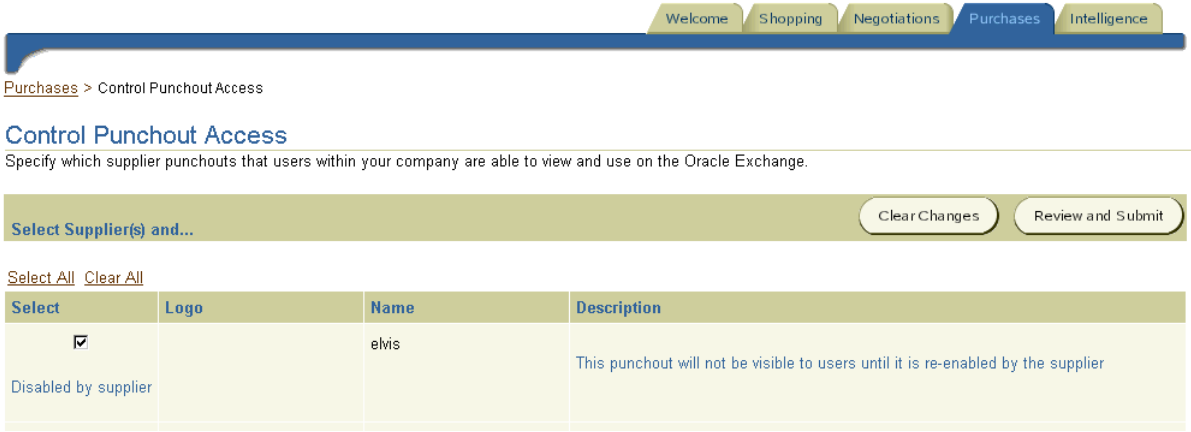
To control punchout access to supplier catalogs:

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.

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

About Disabled Punchouts

A supplier can use Oracle Exchange to disable an Oracle Exchange punchout, preventing the punchout from being accessed by anyone on Oracle 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.



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 Oracle iProcurement

Perform this step for the following models:

Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Review Required
Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)	Review Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	Review Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML)	Review Required
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Review Required
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	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 *Oracle Applications 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 Oracle 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 Oracle 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.

Note: If you are accessing a punchout or transparent punchout catalog outside the firewall (usually you would be) and the firewall does not allow outgoing traffic without a proxy server, then you use proxy servers and you must enter your proxy information in the proxy profile options.

Any time you change the proxy profile options, you must restart the middle-tier server for the change to take effect.

POR : CA Certificate File Name

If you are accessing 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 Oracle 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 <root directory where application server is installed>/Apache/conf/ssl.crt/ca-bundle.crt.

POR: Transparent Punchout Timeout Limit

Set this site-level profile option if you are setting up transparent punchout. Enter the number of time, in seconds, after which you want transparent punchout catalogs to time out if the search takes longer than this time to complete. For example, if you enter 30 and a transparent punchout catalog takes longer than 30 seconds to return results, Oracle iProcurement displays a message after 30 seconds that the Web site is not responding.

By default, if this profile option is left blank, the system assumes a timeout of 60 seconds.

POR: Default Currency Conversion Rate Type

Every organization that sets up Oracle iProcurement has a functional currency associated with it. For example, an item obtained through a punchout or transparent punchout has a price of 400 JPY. When converted to the requester's organization's functional currency, the price is 3.30 USD. The functional currency price is calculated because a currency conversion rate exists in Oracle Applications that converts 400 JPY to 3.30 USD. The conversion is done when the items are added to the requester's cart.

Oracle iProcurement uses the default currency conversion rate type in the POR: Default Currency Conversion Rate Type profile option to determine the conversion rate for punchout or transparent punchout items. Punchout and transparent punchout require the following:

- This profile option must be set to Corporate or Spot (not User).
- The rate type selected for this profile option needs to include a currency conversion rate that will convert the foreign currency price used for the punchout or transparent punchout item to the functional currency price.

If the above conditions are not met, the requester will not be able to add the foreign currency priced item to the shopping cart. (The requester will get an error message after clicking Proceed to Checkout that no exchange rate exists between the foreign currency and the base, or functional, currency.) If the profile option is set to User, Oracle iProcurement cannot add the item to the cart because punchout and transparent punchout items cannot be associated with a specific (User) rate or rate type. Therefore, if the profile option is set to User, punchout or transparent punchout items in a foreign currency will always fail to be added to the shopping cart.

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

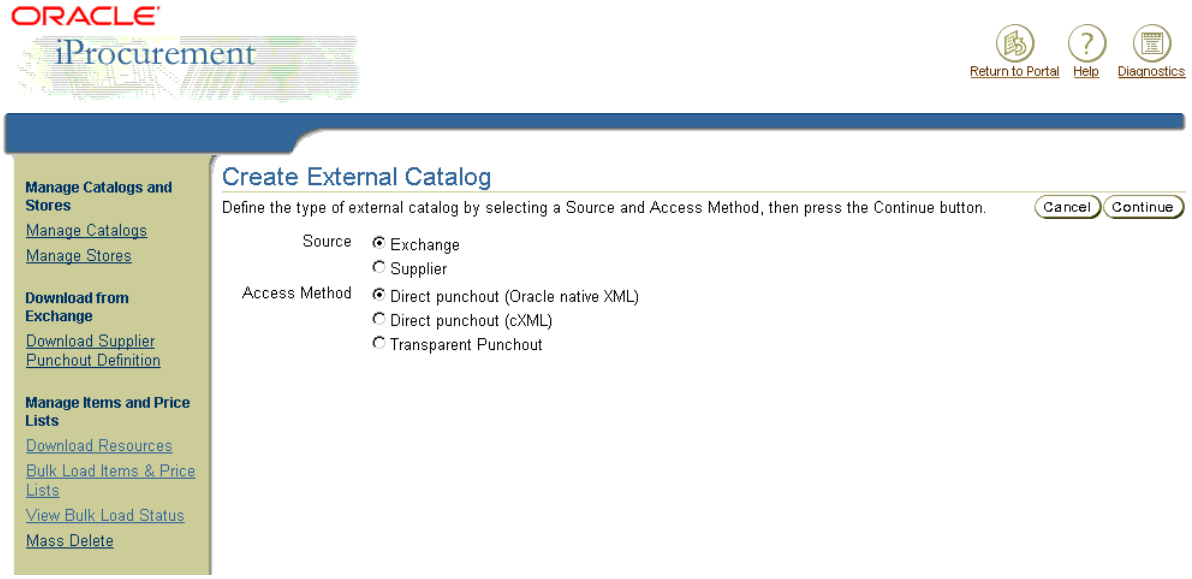
In this step, the Oracle iProcurement administrator creates a punchout link to Oracle Exchange, also known as the supplier *hub*. After completing this step, requesters will see a link to Oracle Exchange in Oracle iProcurement.

This step is also required before you can download punchout suppliers from Oracle Exchange in Download Punchout Suppliers from Oracle Exchange on page 2-38.

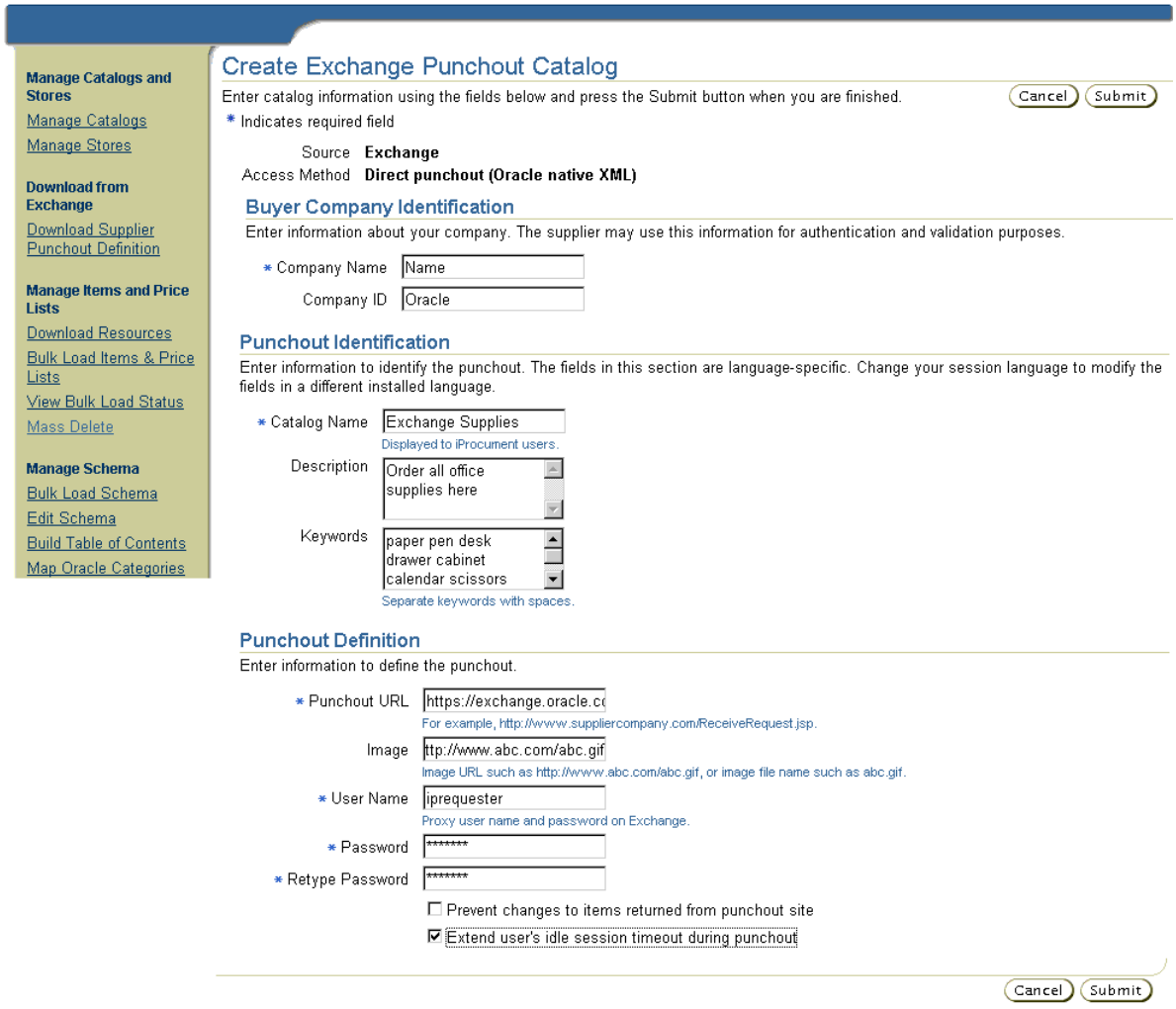
> **Note:** The setup in this step applies to all operating units.

To define the Oracle Exchange punchout:

1. Log on to Oracle iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link.
3. In the navigation bar at the left, click the "Manage Catalogs" link.
4. On the **Manage Catalogs** page, click Create.
5. On the **Create Catalog** page, select the "Punchout catalog" option and click Continue.
6. On the **Create External Catalog** page:
   - Select a Source of Exchange.
   - Select an Access Method of Direct Punchout (Oracle Native XML).



7. Click Continue.



8. On the **Create Exchange Punchout Catalog** page, fill in the following information.

Table 2–8 Oracle Exchange Punchout Setup

Field Name	Required?	Description
Company Name	Yes	Enter your company name if you will be identifying yourself by your company name. The name you enter is sent to the Exchange in the loginRequest XML document, in the <companyName> field.
Company ID	No	Enter a unique identifier (ID) for your company, if any. This ID is sent in the <companyDUNS> field in the loginRequest XML document.
Catalog Name *	Yes	Enter a name for the punchout catalog. This name appears on the **Search Results Summary** and **Search Results** pages after the requester conducts a search, to identify the source of the items. For example, if you enter *Acme Co.*, the search results pages will title results from this catalog as *Search Results Summary from Acme Co.* or *Search Results from Acme Co.*
Description *	No	Enter a description of the catalog. This description displays if the requester clicks a store before searching. If so, Oracle iProcurement displays (below the Search field) a list of the catalogs (names and descriptions) in the store.
Keywords *	No	Any words entered in this field will be included when a requester searches for items. For example, if you enter *fruit* as a keyword for this hub, any time the requester performs a search on *fruit* in Oracle iProcurement, a punchout link to Oracle Exchange will be displayed in the search results along with any other search results. The keyword limit is 4,000 bytes. Oracle iProcurement returns a link to the punchout catalog if the search that the requester enters matches any part of the keywords. For example, if you enter the keywords *legal size paper*, Oracle iProcurement returns the punchout catalog if the requester's search includes the words *legal* or *paper* or *size*. If you want this punchout to always be included in the search results, use the "Manage Stores" link in the eContent Manager. When setting up the store that includes this catalog, indicate that you always want to display the catalog in the search results for any search on the store. For instructions on setting up and editing stores, click the Help icon in the eContent Manager.
Punchout URL	Yes	The URL that Oracle iProcurement will use to log in to Oracle Exchange. For any Oracle Exchange, the URL should be <http or https>://<Exchange name URL>/orders/LinkinLogin.jsp Example: https://exchange.oracle.com/orders/LinkinLogin.jsp

Table 2–8 Oracle Exchange Punchout Setup

Field Name	Required?	Description
Image	No	Image file name or URL you want to display next to this catalog. The image displays on the **Search Results Summary** page. If you enter an image name (such as abc.gif) rather than a full URL (such as http://www.abc.cm/abc.gif), make sure the image exists in the directory specified in POR: Hosted Images Directory. If you specify no image, the catalog displays its name and description only. See the search results illustration in Punchout Flow on page 1-8 to see how the catalog images look. (Behind the scenes, the catalog displays a blank image file if you specify no image. If desired, you can change this default blank image file to always display a standard "no catalog image" file or message. See the image management section of the *Oracle iProcurement Implementation Guide*). **Note:** If *Hide thumbnail images* is selected in a requester's My Profile, the requester will not see the catalog's image.
User Name	Yes	The user name of the proxy user created on Oracle Exchange. This user name will be used each time an Oracle iProcurement user punches out to Oracle Exchange. Oracle Exchange validates that it is a registered user name.
Password	Yes	The password for the proxy user account created on Oracle Exchange. This is used in combination with the User Name to establish the punchout session.
Retype Password	Yes	Retype the password.
Prevent changes to items returned from punchout site	No	If selected, the requester will not be allowed to modify the quantity of shopping cart items returned from the external site before submitting the cart. If you want the requester to be able to modify the quantity for items added from this external site, do not select this option.
Extend user's idle session timeout during punchout	No	Setup in Oracle iProcurement includes establishing an idle time—a period of inactivity after which Oracle iProcurement logs out the user. (This setup is performed using the ICX:Session Timeout profile option.) While the requester is shopping on Oracle Exchange, Oracle iProcurement is considered idle. If you select this option, the browser accesses the Oracle iProcurement server every time the requester opens an Oracle Exchange Web page, to keep the connection alive without logging out the requester. This option is used in a punchout to, but not via, Oracle Exchange. If you do not select this option and the session times out, when the requester returns to Oracle 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.

* These fields can be language-specific in a multiple language installation of Oracle 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.

9. Click Submit, then OK, to complete the punchout catalog definition.
10. To activate the catalog, include it in a store. See Add Catalog to Store on page 2-54.

Download Punchout Suppliers from Oracle Exchange

Perform this step for the following models:

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

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

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

Prerequisite

Perform the step Define Oracle Exchange Punchout in Oracle iProcurement on page 2-33.

To download punchout suppliers from Oracle Exchange:

1. Log on to Oracle iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link.
3. In the navigation bar at the left, click the "Download Supplier Punchout Definition" link.
4. On the **Download Supplier Punchout Definition** page, click the Download icon for the Exchange from which you want to download the definition.

   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 Exchange, you may not be connecting successfully. (Oracle 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 Oracle iProcurement. Each supplier represents one punchout.

6. Click Synchronize Suppliers.

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

7. If you want to edit the punchout name, description, or keywords for the downloaded punchouts:

   - Click the "Manage Catalogs" link in the navigation bar to the left.
   - On the **Manage Catalog** page, click the Edit icon for the downloaded supplier catalog. (The Access Method for downloaded punchouts is always Punchout via Oracle Exchange.)

- See Updating Punchout Setup on page 2-83.

Define Supplier Punchout in Oracle iProcurement

Perform this step for the following models:

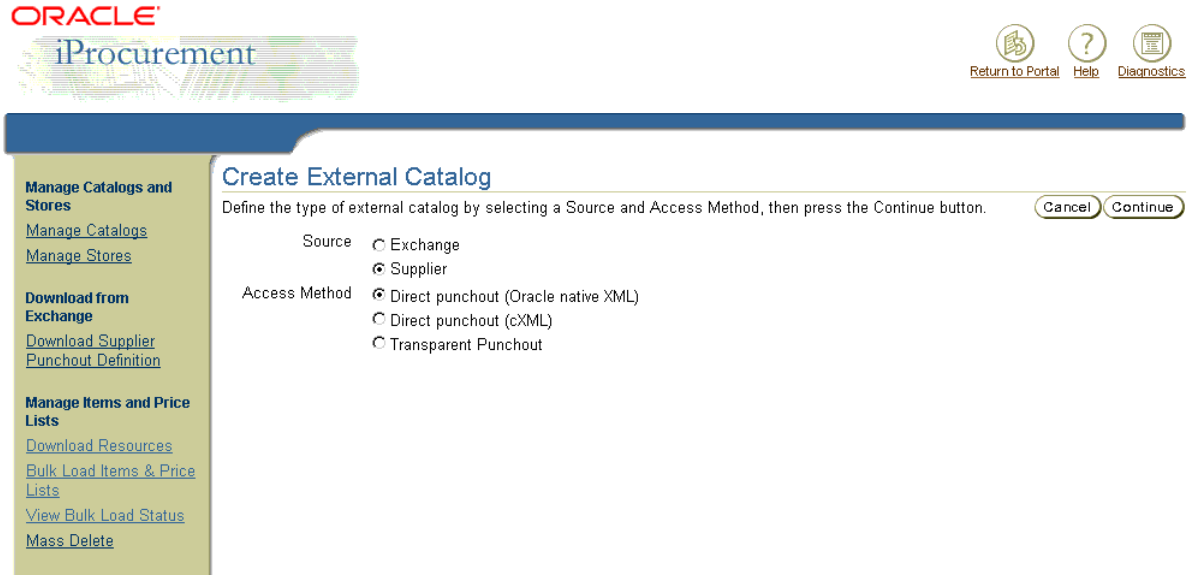
Model	Required?
Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Required
Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML)	Required

After the supplier has set up punchout access to its Web store, use this step to create a punchout link in Oracle 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 Oracle iProcurement.

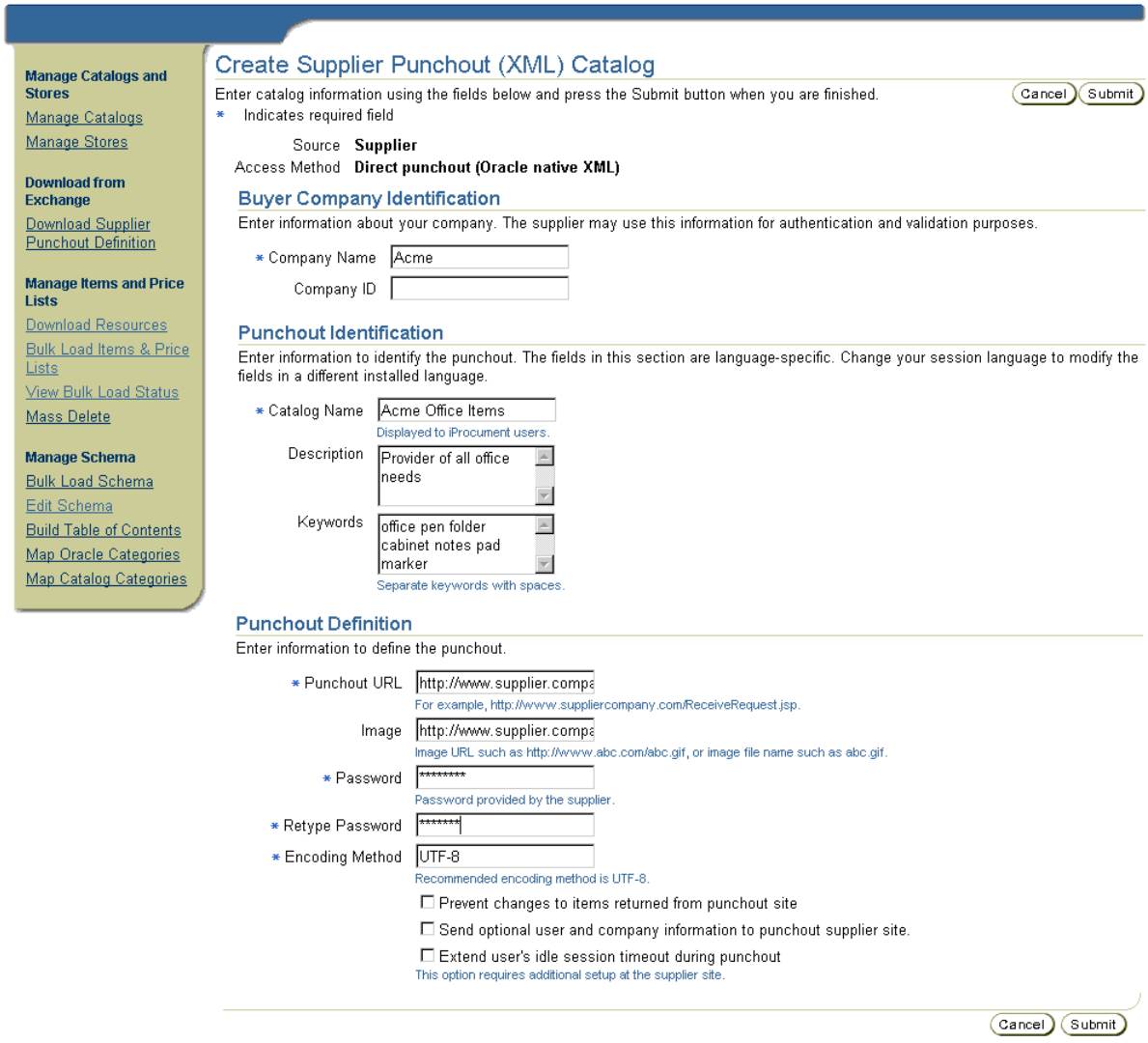
Note: The setup in this step applies to all operating units.

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

1. Log on to Oracle iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link.
3. In the navigation bar at the left, click the "Manage Catalogs" link.
4. On the **Manage Catalogs** page, click Create.
5. On the **Create Catalog** page, select "Punchout catalog" and click Continue.
6. On the **Create External Catalog** page:
   - Select a Source of Supplier.
   - Select an Access Method of Direct Punchout (Oracle native XML) if you are setting up a punchout to a supplier using XML. Select Direct Punchout (cXML) if you are setting up a punchout to a supplier who uses cXML.



7. Click Continue.



The **Create Supplier Punchout (XML) Catalog** page or **Create Supplier Punchout (cXML) Catalog** page displays depending on whether you chose the XML or cXML option.

8. On the **Create Supplier Punchout Catalog** page, enter the following information:

Table 2–9 Direct Punchout Setup

Field Name	Required?	cXML or XML?	Description
Company Name	Yes	XML	Your company name. If the supplier validates this name when requesters access the punchout, the supplier needs to provide you with the value. If the supplier does not validate a company name, enter any value. This value is sent in the <companyName> field in the loginRequest XML document.
Company ID	No	XML	Your company's unique identifier (ID), if any. If the supplier validates a company ID when requesters access the punchout, the supplier needs to provide you with the value. If the supplier does not validate a company ID, enter any value or leave this field blank. This ID, if provided, is sent in the <companyDUNS> field in the loginRequest XML document
Domain	Yes	cXML	Enter the method by which you will be identifying yourself (the buying company). For example, enter DUNS if you will be identifying yourself by a DUNS number. Enter Name if you will be identifying yourself by your name. The domain you enter is sent to the supplier in the PunchOutSetupRequest cXML document in the domain attribute of the <From><Credential> and <Sender><Credential> fields.
Identity	Yes	cXML	Enter the value you will use to identify yourself (the buying company). For example, enter your DUNS number if you entered DUNS for the domain. Enter your company name if you entered Name for the domain. The identity you enter is sent to the supplier in the PunchOutSetupRequest cXML document in the <From><Credential><Identity> and <Sender><Credential><Identity> fields. The supplier may use this field to identify and authenticate the buying company. If the supplier validates your identity, the supplier needs to provide you with the value. If the supplier does not validate your identity, enter any value.
Catalog Name *	Yes	Both	Enter a name for the punchout catalog. This name appears on the **Search Results Summary** and **Search Results** pages after the requester conducts a search, to identify the source of the items. For example, if you enter *Acme Co.*, the search results pages will title results from this catalog as *Search Results Summary from Acme Co.* or *Search Results from Acme Co.*

Table 2–9 Direct Punchout Setup

Field Name	Required?	cXML or XML?	Description
Description *	No	Both	Enter a description of the catalog. This description displays if the requester clicks a store before searching. If so, Oracle iProcurement displays (below the Search field) a list of the catalogs (names and descriptions) in the store.
Keywords *	No	Both	Any words entered in this field will be included when a requester searches for items. For example, if you enter *fruit* as a keyword for this supplier site, any time the requester performs a search on *fruit* in Oracle iProcurement, a punchout link to this supplier site will be displayed in the search results along with any other search results. The keyword limit is 4,000 bytes. Oracle 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 *legal size paper*, Oracle iProcurement returns the supplier site if the requester's search includes the words *legal* or *paper* or *size*. If you want this punchout to always be included in the search results, use the "Manage Stores" link in the eContent Manager. When setting up the store that includes this catalog, indicate that you always want to display the catalog in the search results for any search on the store. For instructions on setting up and editing stores, click the Help icon in the eContent Manager.
Supplier Name	Yes	cXML	Enter the name of the supplier. This name must match the Key 1 field in Oracle e-Commerce Gateway to perform UOM and category mapping. This name is also sent in the <To><Credential><Identity> field in the PunchOutSetupRequest cXML document.
Supplier ID	No	cXML	Enter the code, if any, by which you identify the supplier. This field is used by the EDI Location field in the Supplier Sites window to perform supplier and supplier site mapping. If provided, the Supplier ID is also sent in the <To><Credential><Identity> field in the PunchOutSetupRequest cXML document instead of the Supplier Name. **Note:** The Supplier Name and Supplier ID fields have two purposes. In one, either the name or ID is sent in the PunchOutSetupRequest cXML document to the supplier. In the other, the name field is also used by Oracle e-Commerce Gateway for UOM and category mapping, and the ID field is used by the EDI Location field for supplier and site mapping.

Table 2–9 Direct Punchout Setup

Field Name	Required?	cXML or XML?	Description
Punchout URL	Yes	Both	The URL that Oracle 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. Example: http://www.suppliersite.com/buyerLogin.jsp
Image	No	Both	Image file name or URL you want to display next to this catalog. The image displays on the **Search Results Summary** page. If you enter an image name (such as abc.gif) rather than a full URL (such as http://www.abc.cm/abc.gif), make sure the image exists in the directory specified in POR: Hosted Images Directory. If you specify no image, the catalog displays its name and description only. See the search results illustration in Punchout Flow on page 1-8 to see how the catalog images look. (Behind the scenes, the catalog displays a blank image file if you specify no image. If desired, you can change this default blank image file to always display a standard "no catalog image" file or message. See the image management section of the *Oracle iProcurement Implementation Guide*). **Note:** If *Hide thumbnail images* is selected in a requester's My Profile, the requester will not see the catalog's image.
Password	Yes	Both	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	Both	Retype the password.
Encoding Method	Yes	XML	Character set in which to send the XML login request document. The method you enter is sent in the encoding field of the XML document. The recommended encoding to enter is UTF-8; however, if the supplier's middle-tier server uses an encoding other than UTF-8, enter that encoding here (for example, SHIFT-JIS). See Encoding on page C-4 for more information.

Table 2–9 Direct Punchout Setup

Field Name	Required?	cXML or XML?	Description
Prevent changes to items returned from punchout site	No	Both	If selected, the requester will not be allowed to modify the quantity of shopping cart items returned from the external site before submitting the cart. If you want the requester to be able to modify the quantity for items added from this external site, do not select this option.
Send optional user and company information to punchout supplier site	No	XML	If selected, the loginRequest 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. The loginRequest XML document always sends basic user information fields, such as operatingUnit, userEmail, and appUserName. If you select this option, the loginRequest XML document sends additional user and company information, such as workPhone, title, manager, and functional currency. For a complete list, see loginRequest on page B-9; look for the fields described as "optional extended data."
Extend user's idle session timeout during punchout	No	XML	Setup in Oracle iProcurement includes establishing an idle time—a period of inactivity after which Oracle 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, Oracle iProcurement is considered idle. This option works only if the supplier site is set up to access the Oracle 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. 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 Oracle 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.

* These fields can be language-specific in a multiple language installation of Oracle 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.

9. Click Submit, then OK, to complete the punchout catalog definition.
10. To activate the catalog, include it in a store. See Add Catalog to Store on page 2-54.

Define Transparent Punchout in Oracle iProcurement

Perform this step for the following models:

Model	Required?
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Required

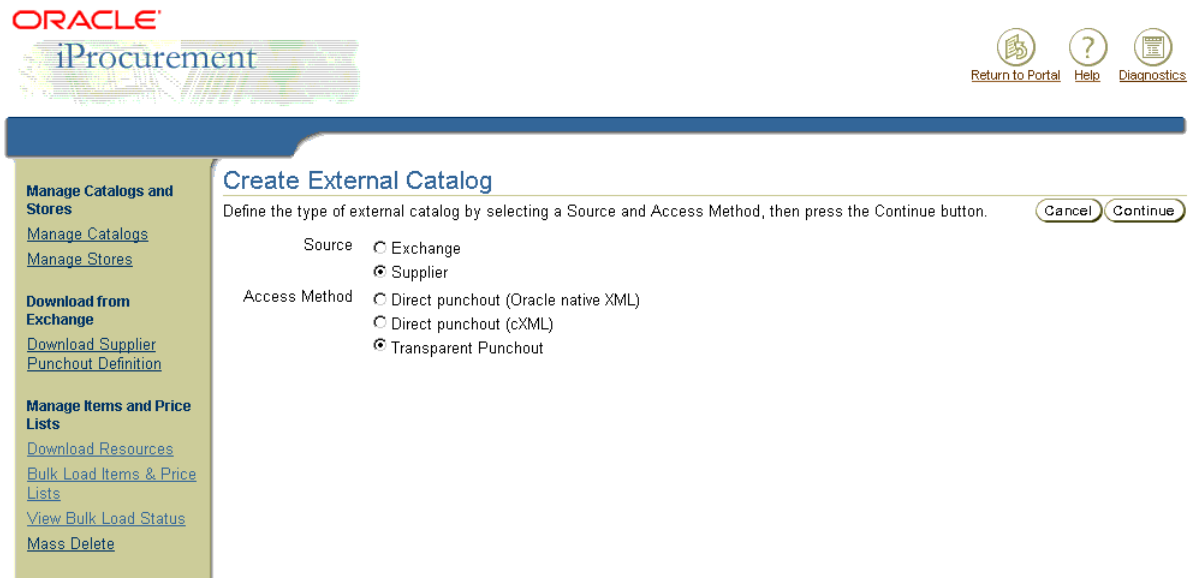
After the supplier has enabled transparent punchout support for its Web store, use this step to create your transparent punchout access to the store. The supplier must have followed the transparent punchout setup steps in Chapter 3 to be able to accept a transparent punchout request from Oracle iProcurement.

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

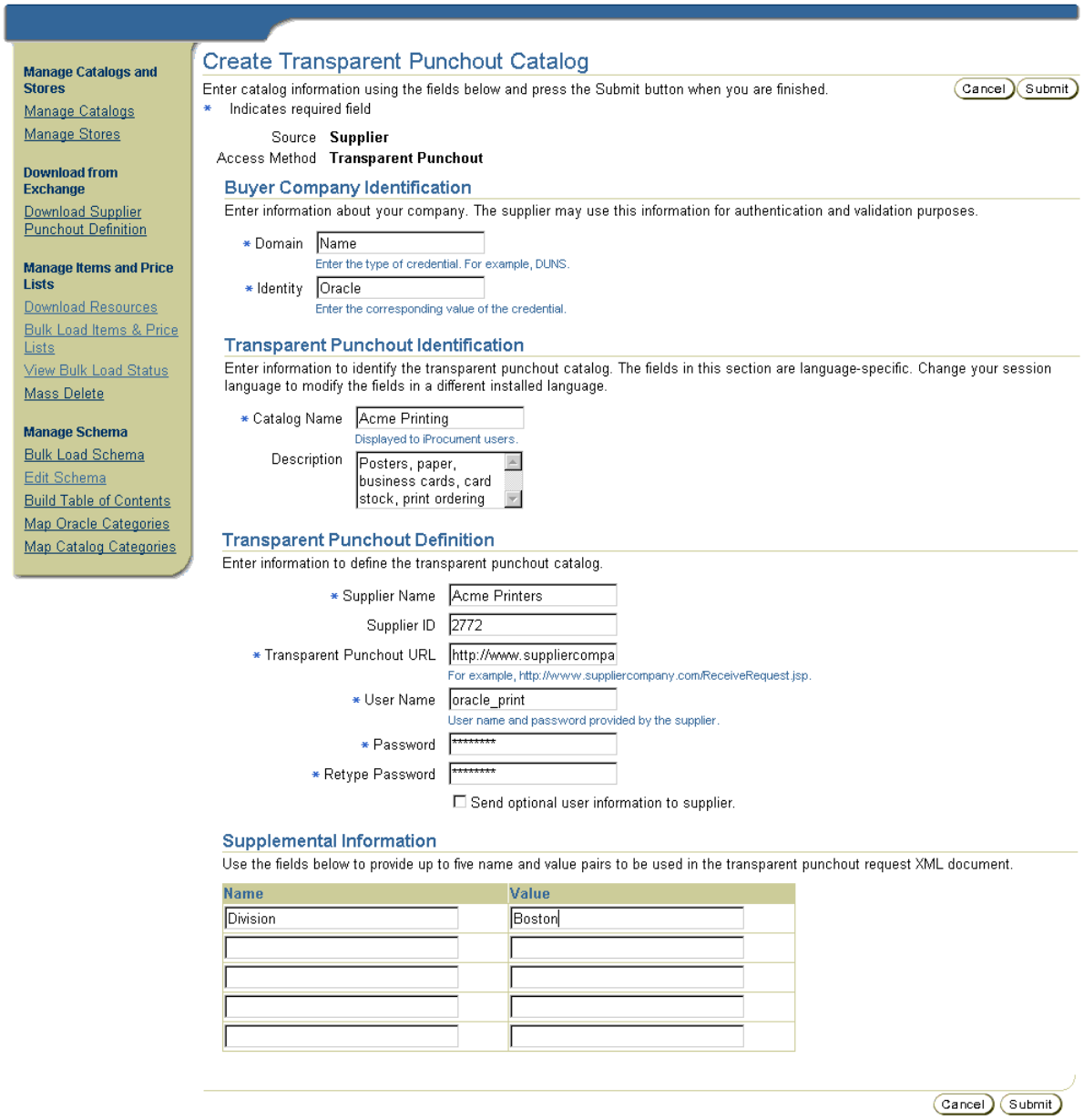
To create a transparent punchout catalog:

1. Log on to Oracle iProcurement using the Catalog Administration responsibility.

2. Click the "eContent Manager" link.
3. In the navigation bar at the left, click the "Manage Catalogs" link.
4. On the **Manage Catalogs** page, click Create.
5. On the **Create Catalog** page, select the "Punchout catalog" option and click Continue.
6. On the **Create External Catalog** page:
   - Select a Source of Exchange if implementing a transparent punchout to Oracle Exchange. Select Supplier if implementing a transparent punchout directly to a supplier.
   - Select an Access Method of Transparent Punchout.



7. Click Continue.


Manage Catalogs and Stores
Manage Catalogs
Manage Stores
Download from Exchange
Download Supplier Punchout Definition
Manage Items and Price Lists
Download Resources
Bulk Load Items & Price Lists
View Bulk Load Status
Mass Delete
Manage Schema
Bulk Load Schema
Edit Schema
Build Table of Contents
Map Oracle Categories
Map Catalog Categories
Create Transparent Punchout Catalog
Enter catalog information using the fields below and press the Submit button when you are finished.
Cancel
Submit
* Indicates required field
Source Supplier
Access Method Transparent Punchout
Buyer Company Identification
Enter information about your company. The supplier may use this information for authentication and validation purposes.
* Domain Name
Enter the type of credential. For example, DUNS.
* Identity Oracle
Enter the corresponding value of the credential.
Transparent Punchout Identification
Enter information to identify the transparent punchout catalog. The fields in this section are language-specific. Change your session language to modify the fields in a different installed language.
* Catalog Name Acme Printing
Displayed to iProcument users.
Description Posters, paper, business cards, card stock, print ordering
Transparent Punchout Definition
Enter information to define the transparent punchout catalog.
* Supplier Name Acme Printers
Supplier ID 2772
* Transparent Punchout URL http://www.suppliercompa
For example, http://www.suppliercompany.com/ReceiveRequest.jsp.
* User Name oracle_print
User name and password provided by the supplier.
* Password ********
* Retype Password ********
Send optional user information to supplier.
Supplemental Information
Use the fields below to provide up to five name and value pairs to be used in the transparent punchout request XML document.
Name
Value
Division
Boston
Cancel
Submit

8. On the **Create Transparent Punchout Catalog** page, enter the following information:

Table 2–10 Transparent Punchout Setup

Field Name	Required	Description
Domain	Yes	Enter the method by which you will be identifying yourself (the buying company). For example, enter DUNS if you will be identifying yourself by a DUNS number, or enter Name if you will be identifying yourself by your company name. The domain you enter is sent to the supplier or Oracle Exchange in the ItemSearchRequest XML document in the domain attribute of the <From><Credential> field.
Identity	Yes	Enter the value you will use to identify yourself (the buying company). For example, enter your DUNS number if you entered DUNS for the domain. The identity you enter is sent to the supplier or Oracle Exchange in the ItemSearchRequest XML document in the <From><Credential><Identity> field. The supplier may use this field to identify and authenticate the buying company. If the supplier validates your identity, the supplier needs to provide you with the value. If the supplier does not validate your identity, enter any value by which you want to identify your company.
Catalog Name *	Yes	Enter a name for the transparent punchout catalog. This name appears on the **Search Results Summary** and **Search Results** pages after the requester conducts a search, to identify the source of the items. For example, if you enter *Acme Co.*, the search results pages will title results from this catalog as *Search Results Summary from Acme Co.* or *Search Results from Acme Co.*
Description *	No	Enter a description of the catalog. This description displays if the requester clicks a store before searching. If so, Oracle iProcurement displays (below the Search field) a list of the catalogs (names and descriptions) in the store.
Supplier Name or Exchange Name	Yes	If implementing a transparent punchout to a supplier directly, enter the Supplier Name. If implementing a transparent punchout to Oracle Exchange, enter the Exchange Name. This name must match the Key 1 field in Oracle e-Commerce Gateway to perform UOM and category mapping. This name is also sent in the <To><Credential><Identity> field in the ItemSearchRequest document.

Table 2–10 Transparent Punchout Setup

Field Name	Required	Description
Supplier ID	No	If implementing a transparent punchout to a supplier directly, enter the code, if any, by which you identify the supplier. The code is used by Oracle e-Commerce Gateway to perform supplier and supplier site mapping. If provided, the Supplier ID is also sent in the <To><Credential><Identity> field in the ItemSearchRequest document instead of the Supplier Name. **Note:** The Supplier (or Exchange) Name and Supplier ID fields have two purposes. In one, either the name or ID is sent in the ItemSearchRequest document to the supplier. In the other, the name field is also used by Oracle e-Commerce Gateway for UOM and category mapping, and the ID field is used by the EDI Location field for supplier and site mapping.
Transparent Punchout URL	Yes	The URL that Oracle iProcurement will use to access the supplier site. It should include not only the URL, but the program name that will receive and process the ItemSearchRequest. Example: http://www.suppliersite.com/buyerLogin.jsp
User Name	Yes	The user name required by the supplier. The user name will be used as a site-level user name to access the supplier site. The supplier needs to provide you with the value. If implementing a transparent punchout to Oracle Exchange, enter the user name of the proxy user created on Oracle Exchange. This user name will be used each time an Oracle iProcurement user accesses Oracle Exchange via transparent punchout. Oracle Exchange validates that it is a registered Exchange user name.
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. If implementing a transparent punchout to Oracle Exchange, enter the password for the proxy user account created on Oracle Exchange. This is used in combination with the User Name to establish the transparent punchout session.

Table 2–10 Transparent Punchout Setup

Field Name	Required	Description
Retype Password	Yes	Retype the password.
Send optional user information to supplier	No	If selected, the ItemSearchRequest 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. This field is not available for a transparent punchout to Oracle Exchange. The ItemSearchRequest XML document always sends basic user information. If you select this option, the ItemSearchRequest XML document also sends the appUserName. See ItemSearchRequest on page B-36 for a description.
Supplemental Information	No	If implementing a transparent punchout to a supplier directly, enter supplemental information you want to send in the ItemSearchRequest XML document (in the UserArea field) to the supplier. For example, if the supplier offers special prices for your division, the supplier may request that you provide your division name. If so, enter a Name of Division and a Value of (for example) Boston Group—or however the supplier requires.

* These fields can be language-specific in a multiple language installation of Oracle 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 is propagated to French and Japanese as well as English. Any change you make in English 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* in a catalog description. Later, you change your session language to English and add *banana* to the description. 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.

9. Click Submit, then OK, to complete the transparent punchout catalog definition.

10. To activate the catalog, include it in a store. See Add Catalog to Store on page 2-54.

Add Catalog to Store

Perform this step for the following models:

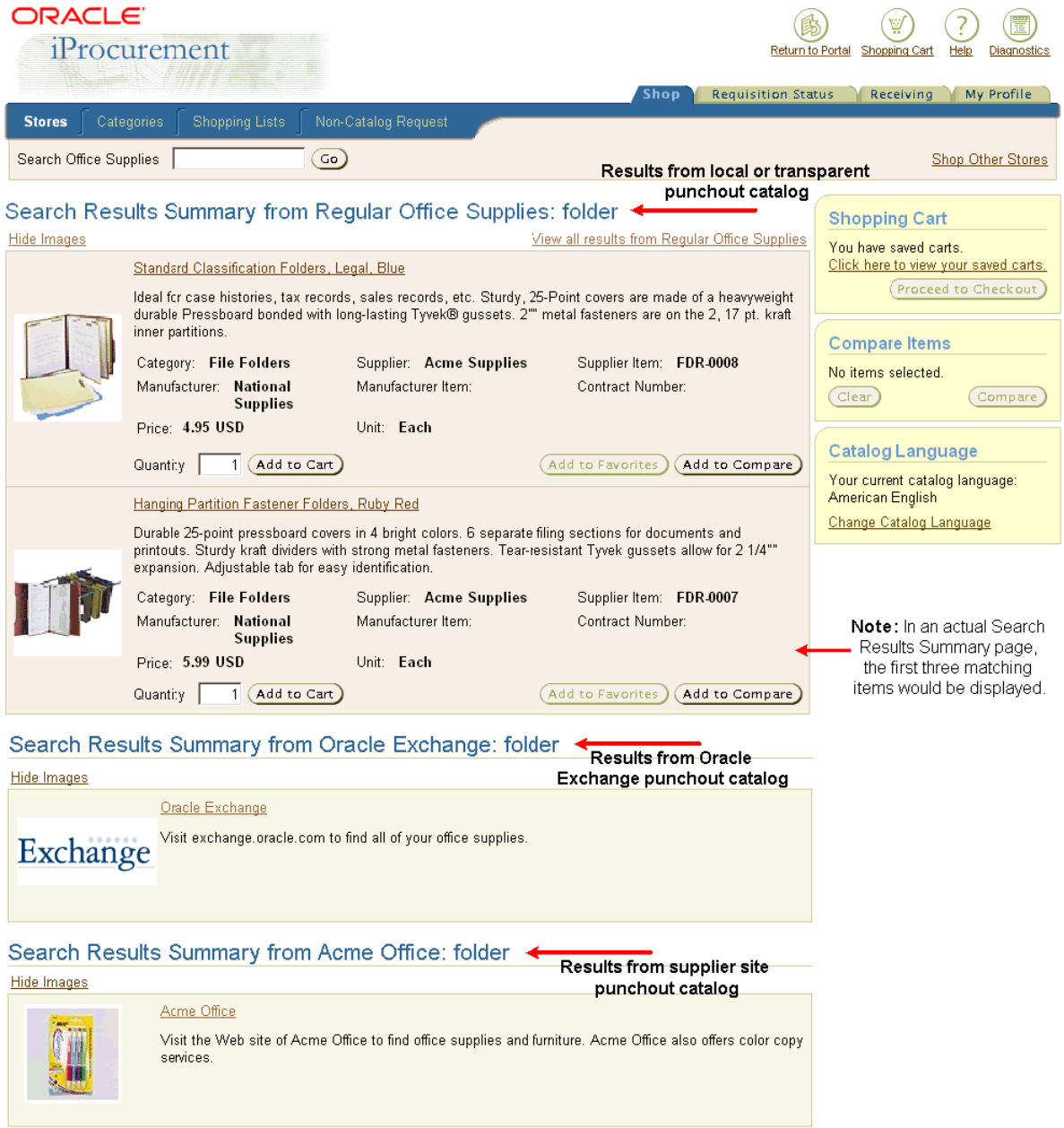
Model	Required?
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Required
Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	Required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

Any catalog you create must be assigned to a store to be searchable. Once your punchout or transparent punchout catalog is ready for use, assign it to a store.

While assigning catalogs to a store, you can also optionally use the resequencing feature to change the order in which multiple catalogs in a store display to requesters on the Oracle iProcurement search pages.

The following example shows that the catalogs display in the search results in the following order:

1. Regular Office Supplies
2. Oracle Exchange
3. Acme Office


ORACLE
iProcurement
Return to Portal
Shopping Cart
Help
Diagnostics
Shop
Requisition Status
Receiving
My Profile
Stores
Categories
Shopping Lists
Non-Catalog Request
Search Office Supplies
Go
Shop Other Stores
Results from local or transparent punchout catalog
Search Results Summary from Regular Office Supplies: folder
Hide Images
View all results from Regular Office Supplies
Standard Classification Folders, Legal, Blue
Ideal for case histories, tax records, sales records, etc. Sturdy, 25-Point covers are made of a heavyweight durable Pressboard bonded with long-lasting Tyvek® gussets. 2"" metal fasteners are on the 2, 17 pt. kraft inner partitions.
Category: File Folders
Supplier: Acme Supplies
Supplier Item: FDR-0008
Manufacturer: National Supplies
Manufacturer Item:
Contract Number:
Price: 4.95 USD
Unit: Each
Quantity 1
Add to Cart
Add to Favorites
Add to Compare
Hanging Partition Fastener Folders, Ruby Red
Durable 25-point pressboard covers in 4 bright colors. 6 separate filing sections for documents and printouts. Sturdy kraft dividers with strong metal fasteners. Tear-resistant Tyvek gussets allow for 2 1/4"" expansion. Adjustable tab for easy identification.
Category: File Folders
Supplier: Acme Supplies
Supplier Item: FDR-0007
Manufacturer: National Supplies
Manufacturer Item:
Contract Number:
Price: 5.99 USD
Unit: Each
Quantity 1
Add to Cart
Add to Favorites
Add to Compare
Shopping Cart
You have saved carts.
Click here to view your saved carts.
Proceed to Checkout
Compare Items
No items selected.
Clear
Compare
Catalog Language
Your current catalog language: American English
Change Catalog Language
Note: In an actual Search Results Summary page, the first three matching items would be displayed.
Search Results Summary from Oracle Exchange: folder
Results from Oracle Exchange punchout catalog
Hide Images
Oracle Exchange
Exchange
Visit exchange.oracle.com to find all of your office supplies.
Search Results Summary from Acme Office: folder
Results from supplier site punchout catalog
Hide Images
Acme Office
Visit the Web site of Acme Office to find office supplies and furniture. Acme Office also offers color copy services.

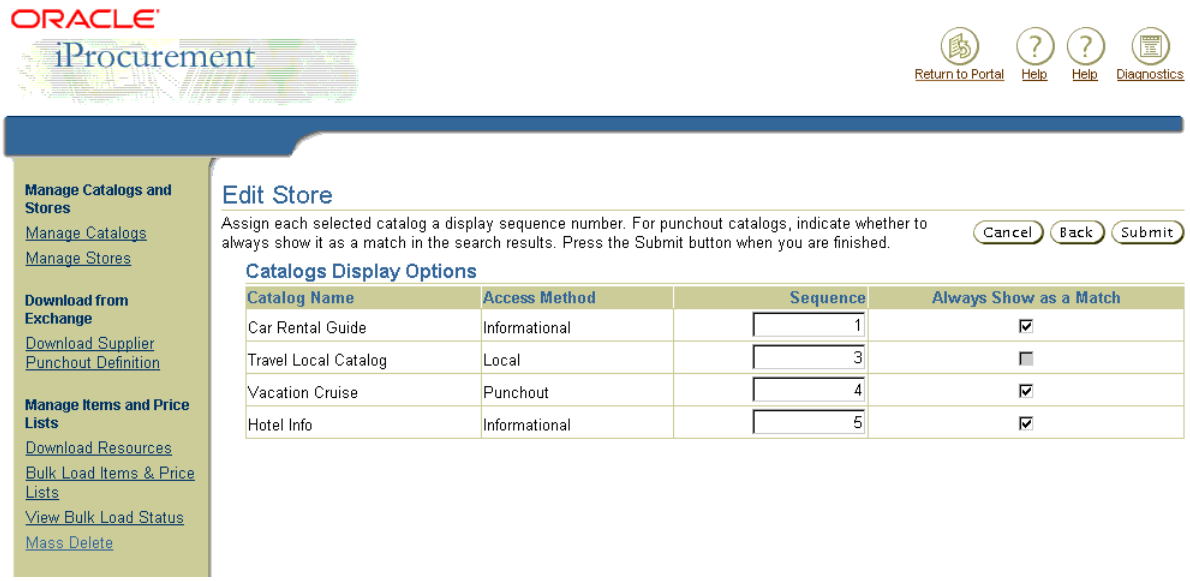
To add catalog to a store (required) and sequence it (optional):

1. Log on to Oracle iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link.
3. In the navigation bar on the left, click the "Manage Stores" link.
4. On the **Manage Stores** page, do either of the following:
   - Click a store's Edit icon to add the catalog to an already-created store.
   - Click Create to create your own store and add the catalog to it.

   Follow the guidance online and in the Help icon if you need more help creating and editing stores.

   Note: The Update Sequence button is for sequencing stores on the **Shop** home page, not for sequencing catalogs within a store. Click a store's Edit icon to resequence the catalogs within a store.

5. Once you have selected the catalogs you want to include in the store, click Continue.
6. Sequence the order in which multiple catalogs display on the **Search Results Summary** page; otherwise, the stores display in a system-specified order.



You can reuse a sequence number or use decimals. Those catalogs with the same sequence number will display at that sequence. Within the list of them, however, they will display in the default Oracle iProcurement order.

7. Click Submit to save your list.
8. Click OK to confirm the change.

Use Realms to Control Access

Perform this step for the following models:

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

Model	Required?
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Optional
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Optional

Use realms to assign punchout or transparent punchout (remote) catalogs to certain Oracle Applications responsibilities or requesters (users). Realms control remote catalog access at the responsibility and user level only. (A responsibility determines which applications and functions a user can access. For example, you may create a responsibility called Desktop Requisitioner - North America, which gives access to Oracle iProcurement.)

For example, assume the following remote catalogs are defined in Oracle iProcurement:

- Exchange.Oracle.com (transparent punchout)
- Office Supplies Unlimited (transparent punchout)
- Computer Components Corporation (punchout site)

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 remote catalogs 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 remote catalogs defined in Oracle iProcurement. Once you assign a realm, the affected user or users have access only to remote catalogs in the assigned realm.

Realms are *additive*. For example, when 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.

In the following example, all users assigned the Internet Procurement responsibility have access to the Exchange.Oracle.com catalog. Additionally, User 2 has access to the Computer Components catalog.

Realm 1	Realm 2	Responsibility: Internet Procurement	User 1	User 2	Result
Includes Exchange. Oracle.com	Includes Computer Components	Assigned to Realm 1	Not assigned additional realms	Assigned to Realm 2	User 1 has access to Exchange.Oracle.com. User 2 has access to Exchange.Oracle.com and Computer Components.

Note: If you restrict a user's access, using realms, to all catalogs in a store, the store does not display at all to the requester.

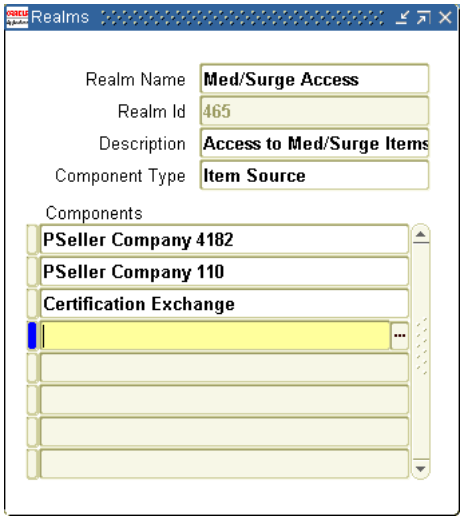
To use realms:

1. Create the realm.
2. Assign the realm to a responsibility.
3. Optionally assign realms to individual users if desired.

   To use realms, you must at a minimum "secure" the responsibility that the users use to access Oracle iProcurement. Securing a responsibility consists of entering ICX_POR_REALM_ID in the Name field for the responsibility as described below. Next, as described below, assign a realm ID to that responsibility, to users in that responsibility, or both, as your needs require.

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 remote catalogs.)

   You cannot define category realms for remote catalogs.

4. In the Components section, use the list of values (LOV) to select the catalog definitions to which anyone assigned this realm has access.

5. Save your changes.

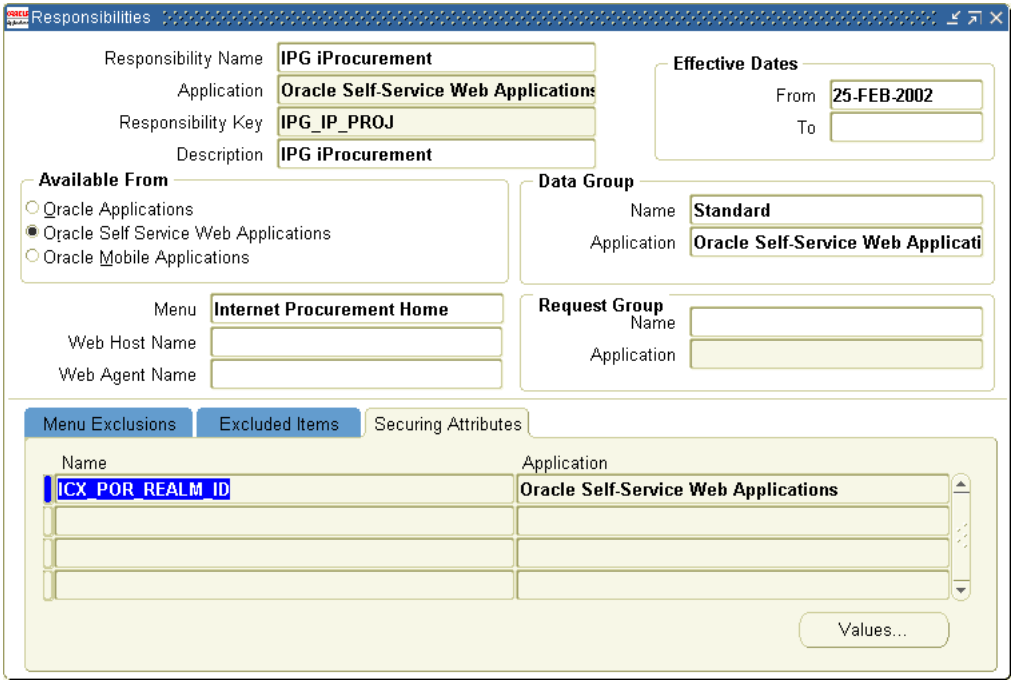
6. Note the Realm ID that is automatically assigned to the realm. You will need to reference this ID later.

To assign the realm to a responsibility:

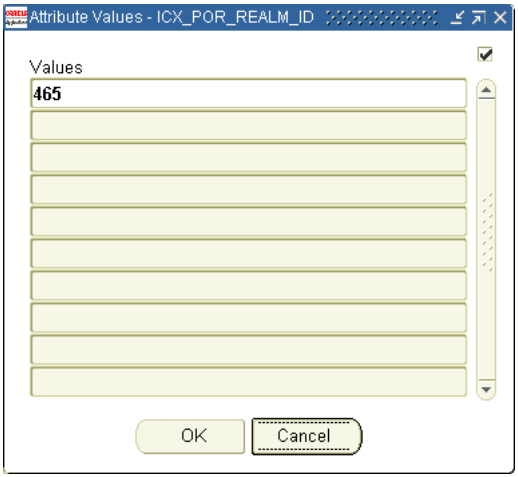
1. Log on to Oracle Applications using the System Administrator responsibility.

2. Open the Responsibilities window using the following navigation path: Security > Responsibility > Define.

3. Query the responsibility to which you will assign the realm.



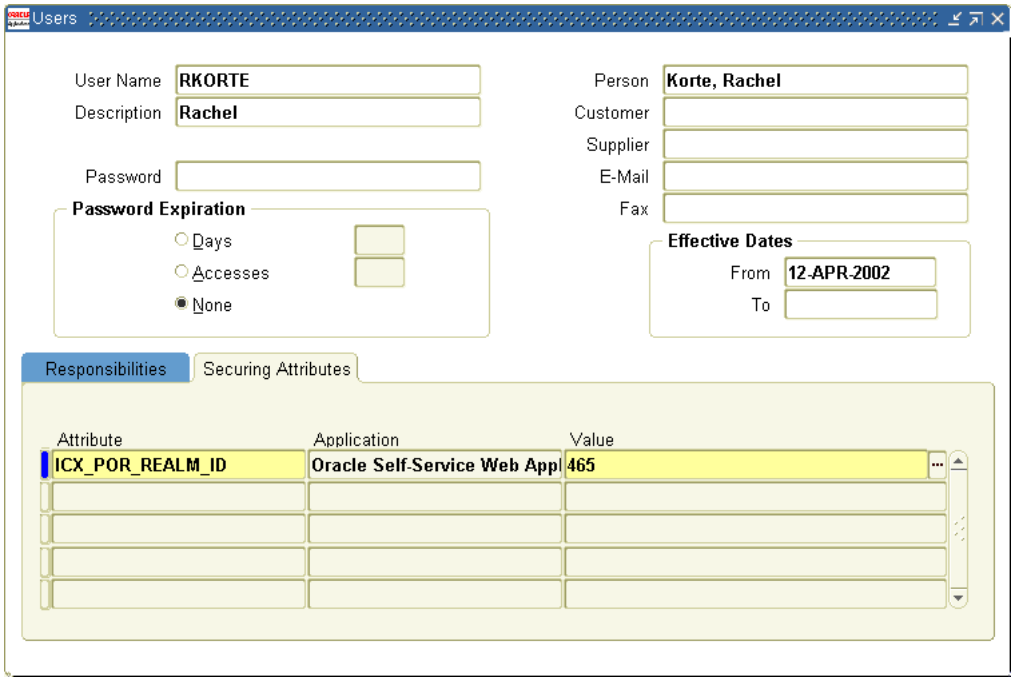
4. In the Securing Attributes tabbed region, in the Name field, use the LOV to select ICX_POR_REALM_ID.
5. Choose the Values button.
6. In the Values fields, enter the Realm ID that you noted earlier for each realm you want to assign to this responsibility.



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 Attribute field, use the LOV to select ICX_POR_REALM_ID.



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 or Transparent Punchout to Oracle Exchange

If you are implementing Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML) or Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML), and you have multiple organizations set up in Oracle Applications, you can configure Oracle 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 accessing Oracle 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 Oracle Exchange:

- When you register your buying company on Oracle Exchange, register two companies—one for Vision Corp. Germany and one for Vision Corp. USA. (See Register Buying Organization on Oracle Exchange on page 2-10.)
- When you register users for your buying company on Oracle 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 Oracle 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 your punchout or transparent punchout for Vision Corp. USA. (See Define Oracle Exchange Punchout in Oracle iProcurement on page 2-33 or Define Transparent Punchout in Oracle iProcurement on page 2-48.) You could name the punchout or transparent punchout catalog Exchange - USA. The user name and password associated with this catalog should be the same as the user name and password associated with the user you registered under Vision Corp. USA on Oracle Exchange.
4. Create a realm for the catalog (Exchange - USA) created in the previous step. See Use Realms to Control Access on page 2-57.
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	Catalog	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

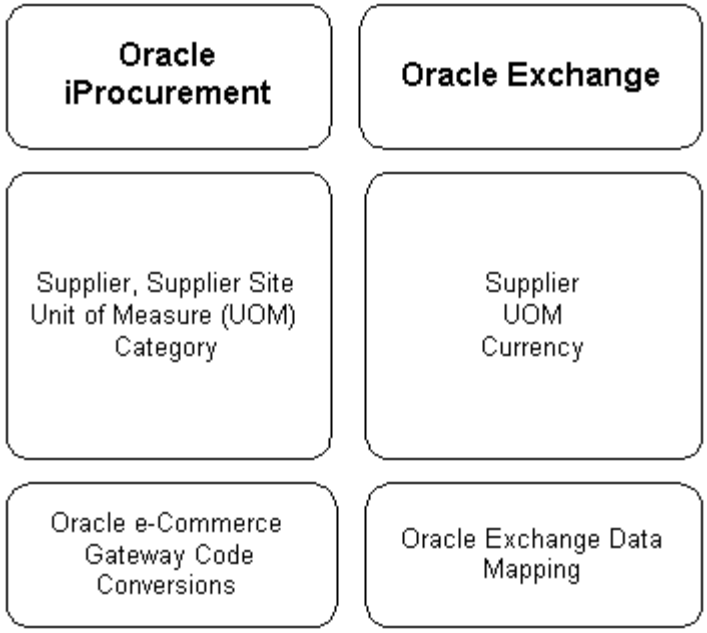
When the supplier loads catalog items and pricing to the Oracle Exchange catalog, it can specify prices specifically for a buying company on Oracle Exchange. For example, Acme 5 will load prices that are visible only to Vision Corp. Germany, and Acme 1 will load prices that are visible only to Vision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

Furthermore, because of the realms configuration, the catalog Exchange - USA is available 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 catalog Exchange - GER is available 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

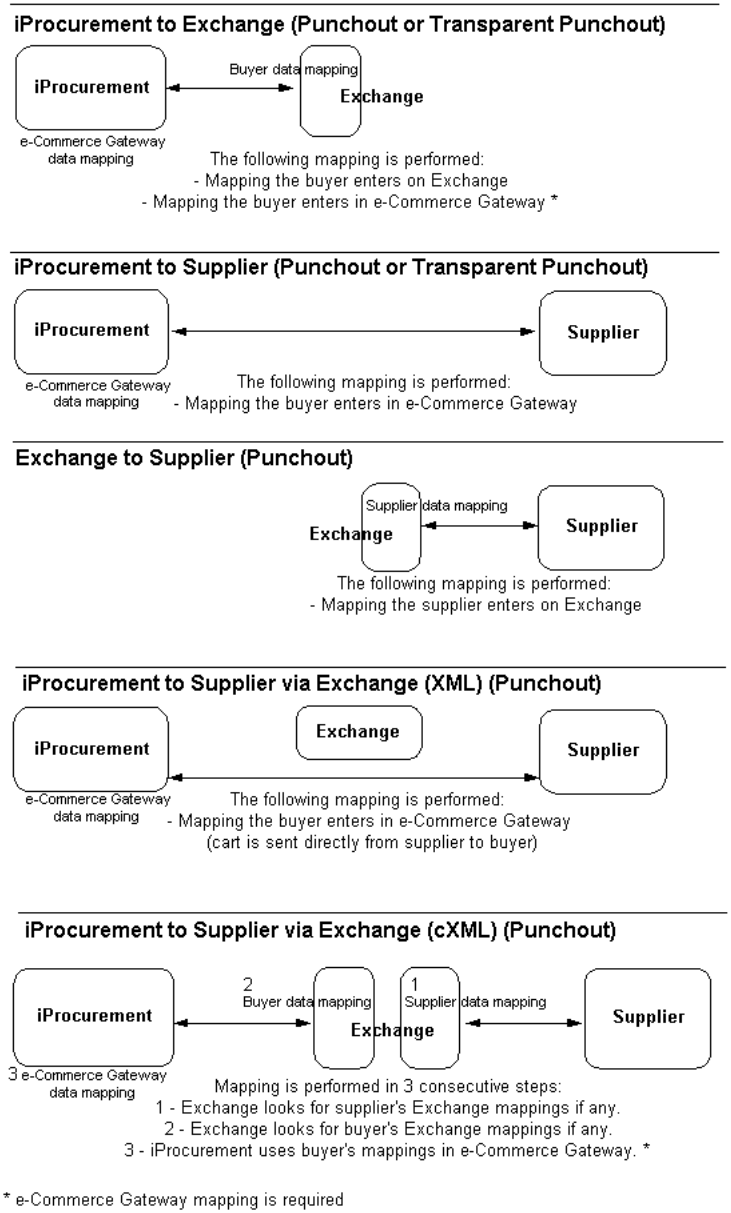
Data mapping enables you to define the conversions between buyer codes and supplier codes. For example, a buyer uses the unit of measure (UOM) code EA for Each. The supplier uses E. You can use either Oracle iProcurement (specifically, Oracle e-Commerce Gateway), or both Oracle iProcurement and Oracle Exchange to map these codes for you, as shown in the following illustration.

Figure 2–1 Data Mapping Overview



At a minimum, category and unit of measure data mapping is required. The following diagram and table summarize the mapping methods by model.

Figure 2–2 Data Mapping Flow by Model



* e-Commerce Gateway mapping is required

The following table describes the diagram above by summarizing which mapping method to use for each model.

Table 2–11 Data Mapping by Model for Punchout

Model	Mapping Methods	Mapping Performed
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Use e-Commerce Gateway. (Optionally, you can perform additional mapping on Exchange; however, you must still use e-Commerce Gateway to map codes sent from Exchange to iProcurement. Also, category mapping, which is required, can be performed only in e-Commerce Gateway. Therefore, e-Commerce Gateway is recommended.)	Exchange performs the mapping after the requester finishes shopping, just before the requester returns to iProcurement. e-Commerce Gateway mapping is performed once the requester brings the cart back iProcurement.
Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)	You can use only e-Commerce Gateway for this model.	e-Commerce Gateway mapping is performed once the requester brings the cart back iProcurement.
Models 3a and 3b: 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 Oracle 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 Oracle Exchange (cXML)	Use e-Commerce Gateway. (Optionally, you can perform additional mapping on Exchange; however, you must still use e-Commerce Gateway to map codes sent from Exchange to iProcurement. Also, category mapping, which is required, can be performed only in e-Commerce Gateway. Therefore, e-Commerce Gateway is recommended.)	Exchange performs the mapping during cXML-to-XML conversion, before the cart is returned to iProcurement in the final step of the flow. e-Commerce Gateway mapping is performed once the requester brings the cart back iProcurement.

Table 2–12 Data Mapping by Model for Transparent Punchout

Model	Mapping Methods	Mapping Performed
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Use e-Commerce Gateway. (Optionally, you can perform additional mapping on Exchange; however, you must still use e-Commerce Gateway to map codes sent from Exchange to iProcurement. Also, category mapping, which is required, can be performed only in e-Commerce Gateway. Therefore, e-Commerce Gateway is recommended.)	Exchange performs the mapping just before the search results are returned to iProcurement. e-Commerce Gateway mapping is performed once the requester adds the item to the cart in iProcurement.
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	You can use only e-Commerce Gateway for this model.	e-Commerce Gateway mapping is performed once the requester adds the items to the shopping cart.

Sometimes supplier and supplier site mapping are not set up in Oracle e-Commerce Gateway, depending on the requirements of the model. See Set Up Supplier and Site Mapping on page 2-69 for more information.

To set up data mapping on Oracle Exchange, see Set Up Data Mapping on Oracle Exchange on page 2-23.

To set up data mapping in Oracle e-Commerce Gateway, see Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78.

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
Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)	Optional
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	Optional
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML)	Optional

Model	Required?
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Optional
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Optional

There are three methods for mapping suppliers and supplier sites:

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

The following tables summarize the recommended supplier and supplier site mapping method for each model:

Table 2–13 Supplier and Site Mapping Methods 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 Oracle Exchange on page 2-73 Enter the EDI Location Field on page 2-76
Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	It is recommended that you use the EDI Location field. (If the supplier sends a <supplierSite>, you can use e-Commerce Gateway, but the EDI Location field is recommended.)	Enter the EDI Location Field on page 2-76 Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78
Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML)	Use the EDI Location field method.	Enter the EDI Location Field on page 2-76
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	It is recommended that you use the EDI Location field. (If the supplier sends a <supplierSite>, you can use e-Commerce Gateway, but the EDI Location field is recommended.)	Enter the EDI Location Field on page 2-76 Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78

Table 2–13 Supplier and Site Mapping Methods by Model

Model	Mapping Methods	Applicable Steps
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML)	Use the Exchange and EDI Location field method. *	Use Oracle Exchange on page 2-73 Enter the EDI Location Field on page 2-76
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Use the Exchange and EDI Location field method. *	Use Oracle Exchange on page 2-73 Enter the EDI Location Field on page 2-76
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Use the EDI Location field method.	Enter the EDI Location Field on page 2-76

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

The following table summarizes how the mapping is performed for each model:

Table 2–14 Supplier and Site Mapping Details

Model	Mapping Details
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Maps the <SupplierDUNS> or <SupplierTradingPartnerCode> value, whichever exists, to the EDI Location field. This value will be the supplier DUNS number, mapped trading partner ID, or Exchange-assigned trading partner ID—whichever you chose in Use Oracle Exchange on page 2-73.
Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Maps <SupplierDUNS> or <SupplierTradingPartnerCode>, whichever exists, to the EDI Location field. If there's no match, it maps <SupplierName> and <SupplierSite> in eCommerce Gateway.
Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML)	Maps the Supplier ID field in the punchout setup to the EDI Location field.
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	Maps <SupplierDUNS> or <SupplierTradingPartnerCode>, whichever exists, to the EDI Location field. If there's no match, it maps <SupplierName> and <SupplierSite> in eCommerce Gateway.

Table 2–14 Supplier and Site Mapping Details

Model	Mapping Details
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML)	Maps the <SupplierDUNS> or <SupplierTradingPartnerCode> value, whichever exists, to the EDI Location field. This value will be the supplier DUNS number, mapped trading partner ID, or Exchange-assigned trading partner ID—whichever you chose in Use Oracle Exchange on page 2-73.
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Maps <SupplierCode> to the EDI Location field. The <SupplierCode> will be the supplier DUNS number, mapped trading partner ID, or Exchange-assigned trading partner ID—whichever you chose in Use Oracle Exchange on page 2-73.
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Maps the Supplier ID field in the punchout setup to the EDI Location field.

If no matches are found in the EDI Location field or Oracle e-Commerce Gateway mapping, Oracle iProcurement populates the Supplier field on the requisition with the value in the following fields:

- The <supplierName> tag, for a punchout XML document.
- The Supplier Name field on the punchout setup page, for a cXML punchout.
- The <SupplierName> tag, for a transparent punchout document.

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.

Setup Summary

To set up supplier and site mapping:

1. Use Table 2–13 above to determine which mapping method to use.
2. If you are using Oracle Exchange, the EDI Location field, or both to do the mapping, follow the steps in Use Oracle Exchange on page 2-73 and Enter the EDI Location Field on page 2-76.
3. If you are using Oracle e-Commerce Gateway to do the mapping, see Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78.

Use Oracle Exchange

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. Oracle Exchange can pass one of the following values to Oracle iProcurement to identify the supplier:

- Supplier DUNS number if the supplier provided one when registering on Oracle 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 Oracle 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 Oracle Exchange assigns to the supplier. (You can find this ID in the Trading Partner Directory, accessible from the Welcome tab in any application on Oracle Exchange.)

By default, Oracle 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.

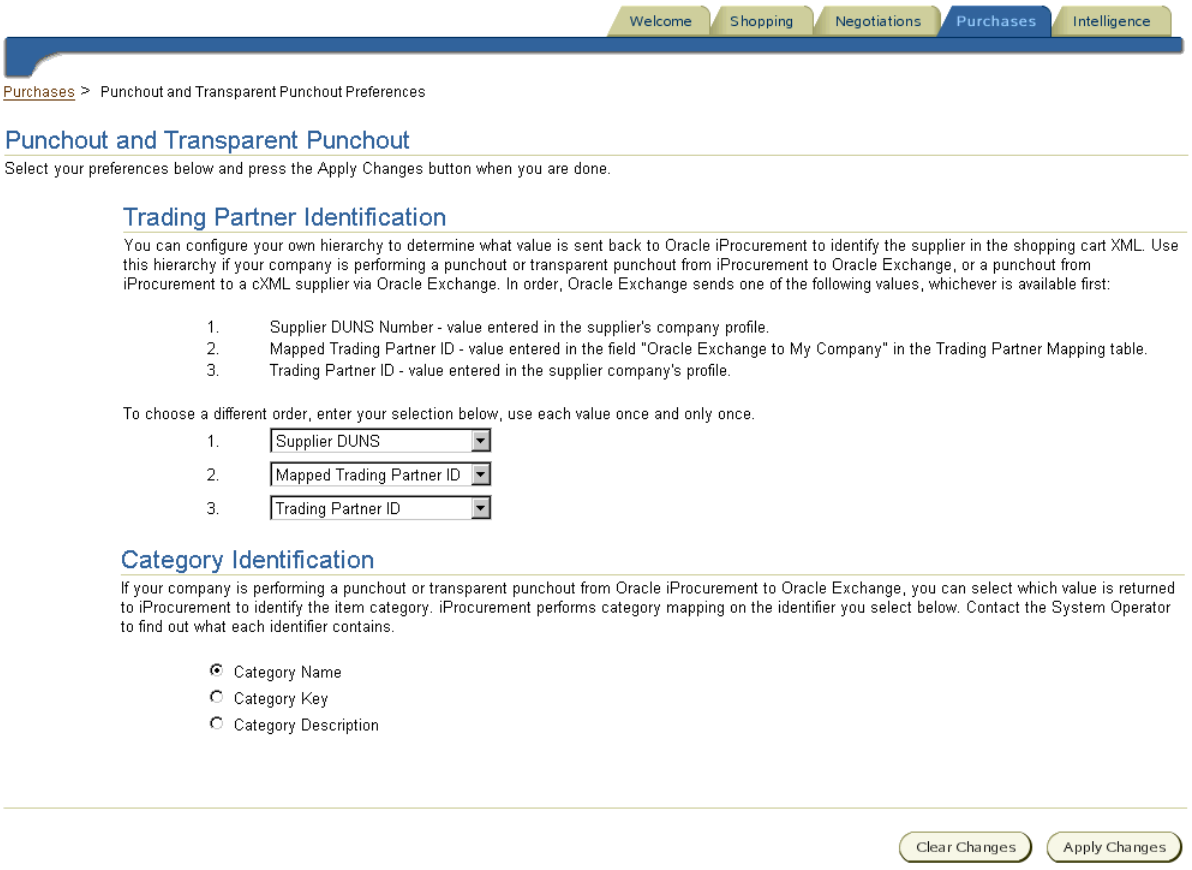
You can change this default order to better suit your system's needs, following the next steps. For example, if the buying company chooses to use the trading partner ID that Oracle Exchange assigns or its own mapped trading partner ID, the supplier can change its DUNS number without affecting the buyer's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

5. On the **Punchout and Transparent Punchout** page, in the Trading Partner Identification section, 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.



The Category Identification section is described in Set Up Data Mapping on Oracle Exchange on page 2-23.

6. Click Apply Changes.

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%

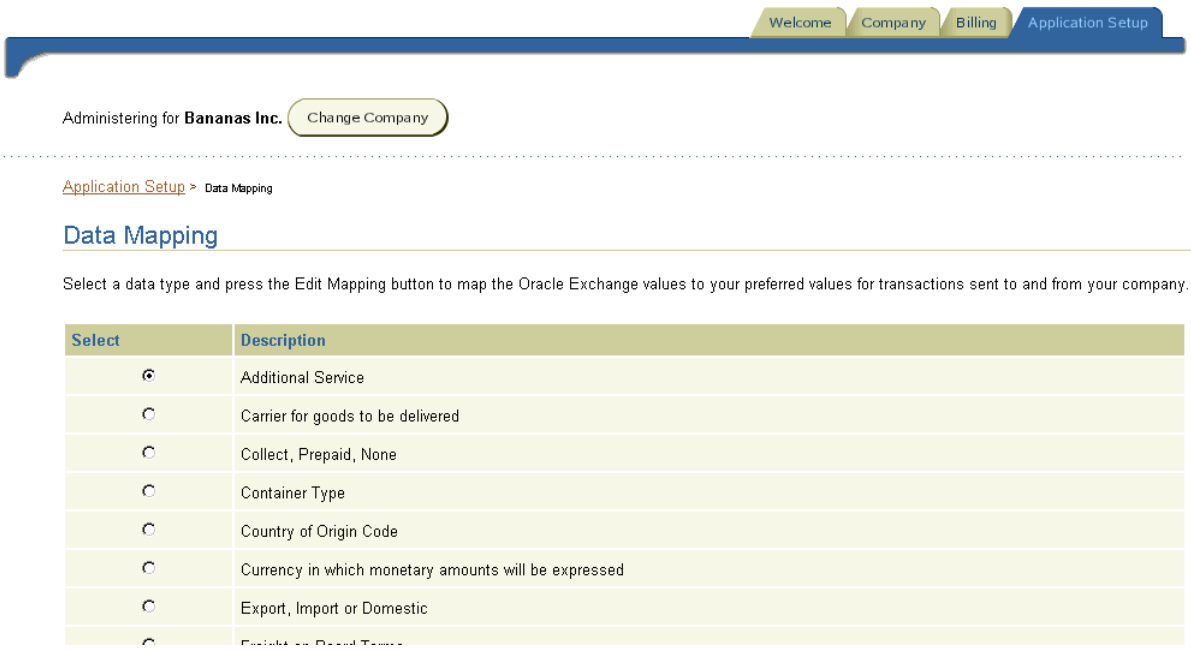
Select Trading Partner and... View Details

Sort by Trading Partner Ascending Descending Go

1 - 18 shown of 18

Select	Trading Partner	Trading Partner Type	DUNS Number	Address	Trading Partner ID
◉	Camilla001		123456789	123 MAIN STREET Annapolis MD United States	15303
○	Godzilla			6969 North South St. Maui HI United States	12552
○	Gorilla			500 Parkway Redwood Shores CA United States	25781

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



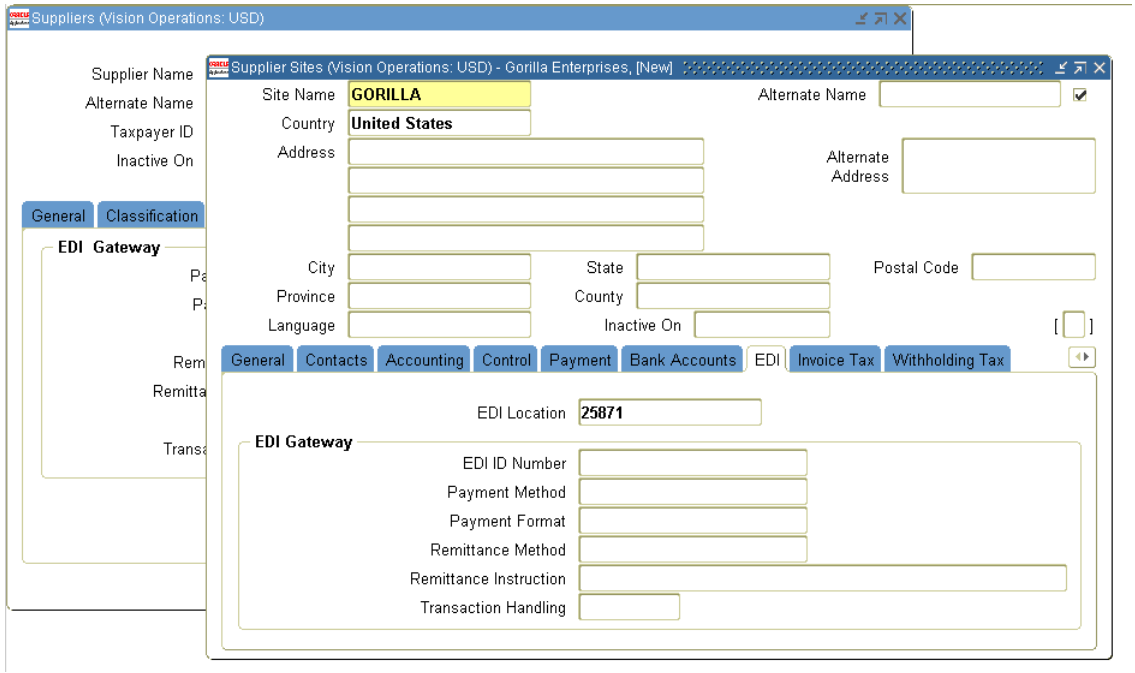
9. Search for the supplier and click Go.
10. Note the value in the Exchange to My Company field (the right-most column) for the supplier.

    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.



4. In the EDI Location field, enter the appropriate value for your model.

   See the Mapping Details in Table 2–14 for a description of what to enter in the EDI Location field. For example, for Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML), you would enter whichever ID Oracle Exchange passes for that supplier as determined by the trading partner hierarchy: DUNS number, mapped trading partner ID, or Exchange-assigned trading partner ID.

5. Save your transaction.

Use Oracle e-Commerce Gateway

If you will be using Oracle e-Commerce Gateway to map the supplier and supplier site, see Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78.

Set Up Data Mapping in Oracle e-Commerce Gateway

Perform this step for the following models:

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

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

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

Punchout and transparent punchout do not use currency mapping in Oracle e-Commerce Gateway, but recognize only the International Standards Organization (ISO) currency codes.

At a minimum, Oracle iProcurement requires that all categories and units of measure sent by the supplier in the punchout shopping cart document or transparent punchout response document be mapped to values 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, even if they use the same name.

For an overview of data mapping, see Understand Data Mapping on page 2-65.

To map the supplier, supplier site, UOM, and category in Oracle 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 or transparent 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 the correct value as given in the following table:

Table 2–15 Key 1 Field Values for Category and UOM Mapping

Model	Key 1 Field Value
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Enter OracleExchange. (The value OracleExchange comes from the <CatalogTradingPartner> field in the XML document that Oracle Exchange sends.)
Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Enter the supplier name from the <CatalogTradingPartner> field in the XML document, if the field exists; otherwise, use the supplier name given in the <SupplierName> field in the XML document.
Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML)	Enter the value from the Supplier Name field on the transparent punchout setup page.
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	Enter the supplier name from the <CatalogTradingPartner> field in the XML document, if the field exists; otherwise, use the supplier name given in the <SupplierName> field in the XML document.

Table 2–15 Key 1 Field Values for Category and UOM Mapping

Model	Key 1 Field Value
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML)	Enter OracleExchange. (The value OracleExchange comes from the <CatalogTradingPartner> field in the XML document that Oracle Exchange sends.)
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Enter the value from the Exchange Name field on the transparent punchout setup page.
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Enter the value from the Supplier Name field on the transparent punchout setup page.

If you have set up punchout or transparent punchout catalogs 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.

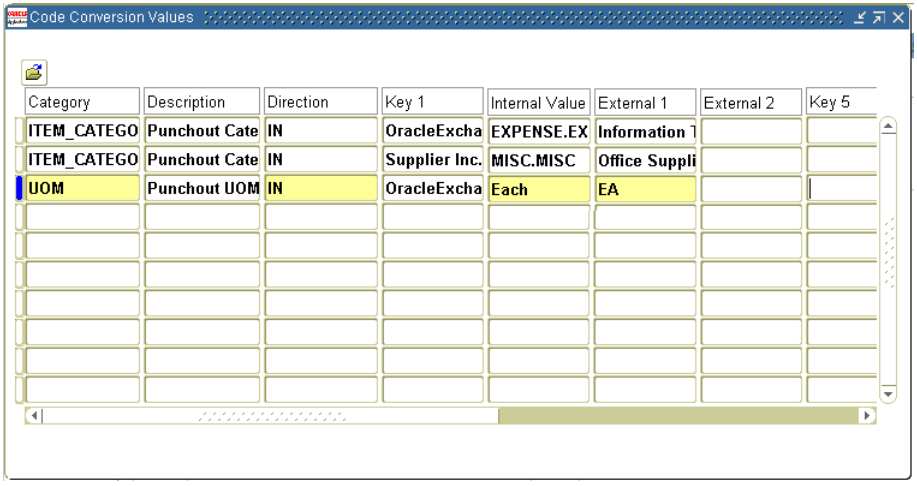
6. Key 2 through Key 5 are not used.
7. For the Internal Value, enter the code that Oracle Applications uses.
8. For the External 1 value, enter the code that Oracle Exchange or the supplier passes to you.

   Recall how mapping is performed for each model:

   - Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML). Enter the code that Oracle Exchange uses. Enter the Exchange code, such as EA for *each*. If you have set up data mapping on Oracle Exchange (though, typically, you would map codes such as UOM *either* in Oracle Exchange or Oracle 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 Oracle Exchange passes to Oracle iProcurement, and you would enter EACH here.
   - Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML). Enter the code the supplier uses.
   - Models 3a and 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML). (Not applicable. The supplier sets up mapping on Oracle Exchange.)
   - Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML). Enter the code the supplier uses.

- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML). Enter the code the supplier uses, unless you have also set up data mapping on Oracle Exchange. Typically you would set up mapping *either* in Oracle Exchange or in Oracle e-Commerce Gateway, but if you performed data mapping on Oracle 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 Oracle iProcurement, and you would enter EACH here.
- Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML). Same as Model 1 above.
- Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML). Same as Models 2a and 2b above.

9. External 2 is used only where indicated in Table 2–16 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.



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

Table 2–16 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 (Category field in the Category Codes window) 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> punchout tag or <CategoryCode> transparent punchout tag. Exchange places the Exchange category name in this tag (unless you used the mapping preferences on Exchange to send the category key or description).	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 name used in Oracle Applications, such as Box. +	External UOM code used by the hub or supplier, such as BX, contained in the <supplierUOMType> punchout tag or <UOMCode> transparent punchout tag.	If the hub or supplier provides a value, such as 12 (for Box of 12) in the <supplierUOM Quantity> punchout 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> punchout tag.	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> punchout tag.	External supplier site name used by the supplier, contained in the <supplierSite> punchout tag.

+ Oracle Applications maps to the original (untranslated, unedited) UOM name, such as Each. (In Oracle Purchasing, use the following navigation to open the Units of Measure window and view the Name field: Setup > Units of Measure > Units of Measure.)

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

Updates

The following sections describe updates you can perform.

Updating Punchout Setup

To maintain downloaded and direct punchout definitions:

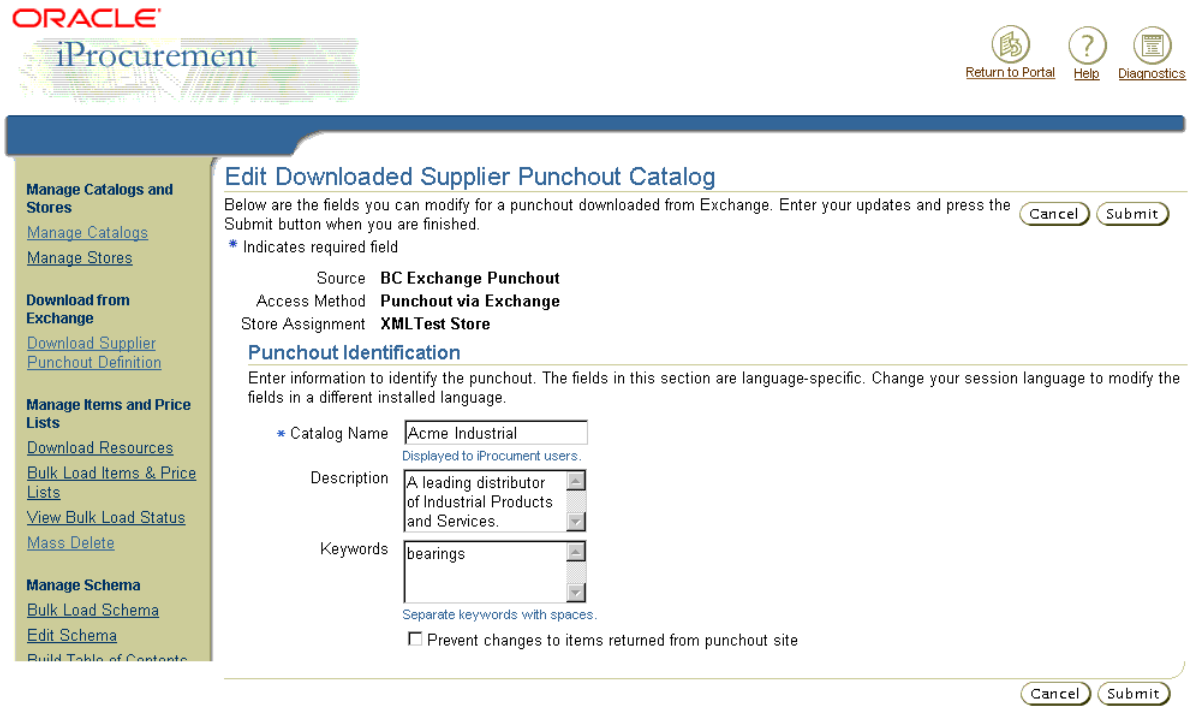
1. Log on to Oracle iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link.
3. In the navigation bar at the left, click the "Manage Catalogs" link.
4. On the **Manage Catalogs** page, click the Edit icon for the catalog you want to edit.

   The page that displays depends on whether you are editing a downloaded punchout or a punchout directly to a supplier.

   The **Edit Downloaded Supplier Punchout Catalog** page displays the following information that you can edit; this information was automatically downloaded with the punchout:

   - Catalog Name of the punchout you downloaded from Oracle Exchange.
   - Description for the punchout you downloaded from Oracle Exchange.
   - 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.
   - Prevent changes to items returned from punchout site. Select this option to prevent requesters from modifying the quantity of the items after they have returned the shopping cart to Oracle iProcurement.

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



The **Edit Supplier Punchout Catalog** page displays the fields you entered while creating the direct punchout link, as shown in the following illustration.

See Define Supplier Punchout in Oracle iProcurement on page 2-41 for information on the fields on the **Edit Supplier Punchout Catalog** page.

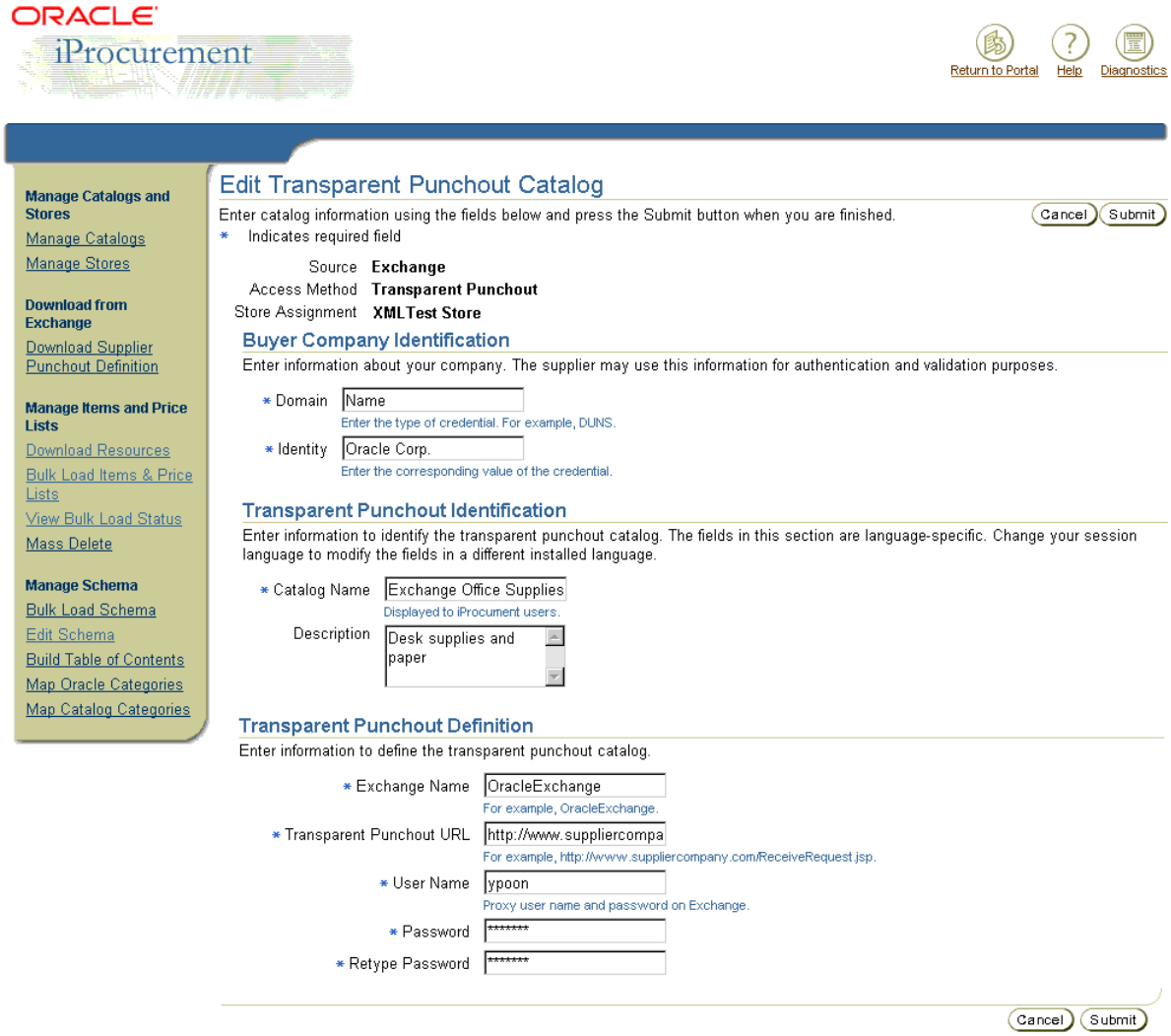
5. Once you have completed your changes, click Submit, then OK.

Updating Transparent Punchout Setup

You can edit any of the fields used when first creating the transparent punchout catalog definition.

To maintain transparent punchout definitions:

1. Log on to Oracle iProcurement using the Catalog Administration responsibility.
2. Click the "eContent Manager" link.
3. In the navigation bar at the left, click the "Manage Catalogs" link.
4. On the **Manage Catalogs** page, select the Edit icon next to the transparent punchout catalog you want to edit.
5. On the **Edit Transparent Punchout Catalog** page, change the desired fields.



See Define Transparent Punchout in Oracle iProcurement on page 2-48 for information on the fields on the **Edit Transparent Punchout Catalog** page.

6. Click Submit.
7. On the **Confirmation** page, click OK.

Changing Store Assignment of Catalogs

Catalogs must be assigned to a store to be searchable. To change the store assignment of a catalog, click the "Manage Stores" link in the navigation bar on the left. Edit the store to add or remove a catalog from it.

Deleting Catalogs

Deleting a catalog deletes the catalog definition. The catalog content still exists on the external site, but you have deleted the capability to access that catalog. Requesters cannot access the catalog, and you cannot access the catalog definition.

Note: If you delete a punchout to Oracle Exchange from which you downloaded punchouts, the downloaded punchouts are also deleted.

Reordering, Saved Carts, Copied Requisitions, and Favorites Lists

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

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

To prevent reordering items with outdated information, you cannot add punchout or transparent punchout items to the Favorites List.

Contract Numbers

In the models and XML fields listed in the table below, either the supplier or the buying company can specify a contract number along with the item information. (For instructions on how the buyer can specify a contract number, see Associate Contract Numbers with Oracle Exchange Items on page 2-21.)

Oracle iProcurement recognizes contract numbers only in an XML (not cXML) punchout.

Model	Who Provides the Contract Number	XML Field
Model 1: Punchout from Oracle iProcurement to Oracle Exchange (XML)	Buying company	<contractNumber>
Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Supplier	<contractNumber>
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	Supplier	<contractNumber>
Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)	Buying company	<BuyerContract>
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	Supplier	<BuyerContract>

If provided, the contract number travels with the requisition for the item. If the contract number matches an approved, effective contract purchase agreement in Oracle Purchasing, the PO Create Documents workflow creates a purchase order against that contract if the workflow attribute "Should contract be used to autocreate the Document?" is set to Yes. (By default, the workflow attribute "Should contract be used to autocreate the Document?" is set to No. For instructions on modifying the attribute, see the *Oracle iProcurement Implementation Guide*.)

On the purchase order, the contract number displays in the Reference Documents tabbed region, in the Contract field for the purchase order line for the item. Oracle Purchasing adds the total amount of the purchase order line to the Released amount on the contract purchase agreement.

The contract must be a valid contract purchase agreement for the supplier. If a supplier site is also given (or derived from the supplier site mapping), the contract must also be valid for the supplier site. The effective, approved contract must not be cancelled, on hold, or finally closed. These validations are performed when the purchase order is created. If the contract is not valid or becomes invalid (for example, is cancelled), it stills travels with the item and the requisition; however, the PO Create Documents workflow will not create the purchase order.

The contract purchase agreement number stays with the item even when the item is added to the favorites list; copied, changed, or resubmitted on a requisition; or saved in the shopping cart. (If you resubmit a withdrawn requisition, the contract number remains on the resubmitted requisition.)

If a contract purchase agreement number is specified for a transparent punchout item, the requester sees the contract number on the **Item Details** page as shown below. (In a punchout, the item in the shopping cart does not display the contract number; the contract number does not display until the purchase order is created.)

3

Supplier Setup

This chapter covers the following topics:

- Implementation Considerations on page 3-1
- Checklists for Setting Up Punchout on page 3-3
- Checklists for Setting Up Transparent Punchout on page 3-7
- Setup Steps on page 3-8

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

Implementation Considerations

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

In a transparent punchout, the supplier sets up integration with its search engine to properly return search results to Oracle iProcurement. In a punchout, the supplier sets up integration to access its catalog and provide a mechanism for returning the requester to Oracle iProcurement. (If the supplier has already implemented a punchout, the supplier can leverage some of that setup when implementing a transparent punchout.)

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 or transparent punchout. Which model you

use depends on where your catalog content resides (your own site or on Oracle Exchange) and whether you use XML or cXML. See Chapter 1.

- If you are implementing Model 3a or 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), and your currency codes differ from the Oracle Exchange codes, you must perform data mapping on Oracle Exchange. See Understand Data Mapping on page 2-65.
- Decide how to validate user access of your site. Look ahead at Process Incoming XML or cXML Request on page 3-16.
- It is strongly recommended that you use UTF-8 encoding when sending punchout documents. For transparent punchout, suppliers *must* use UTF-8 encoding when sending transparent punchout documents. See Encoding on page C-4 for more information.
- Oracle iProcurement has requirements for item information. Read Appendix B to understand item requirements as described by the document type definitions (DTDs). For example, all items in Oracle iProcurement must have a numeric price; if not, the requester cannot add the item to the cart.

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

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

Additional Punchout Considerations

In addition to the general considerations listed above, review these if implementing a punchout:

- The Oracle 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 key to each login made by a user account, using the URL in 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 redirect users to the *punchout from* application (Oracle Exchange or Oracle iProcurement). Look ahead at Determine Method for Returning Buyers to Procurement System on page 3-18.

Additional Transparent Punchout Considerations

In addition to the general considerations listed above, review these if implementing a transparent punchout from Oracle iProcurement directly to your site:

- Consider using the <authenticatedKey> in the ItemSearchResponse XML document. Oracle iProcurement can use this key for subsequent search requests, speeding performance. If your catalog includes a lot of images that you will be returning with the matching items in the search response, using the <authenticatedKey> is recommended. The <authenticatedKey> speeds performance when retrieving images from the database; if your images reside on a Web server, you may not need the <authenticatedKey>. See ItemSearchResponse on page B-42 for more information.
- See ItemSearchRequest on page B-36 and ItemSearchResponse on page B-42 for a complete understanding of the search requirements. For example, to be consistent with Oracle iProcurement behavior, interpret asterisks (*) as wildcards and use AND as the query matching condition among multiple search keywords.

Checklists for Setting Up Punchout

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 Oracle Exchange on page 3-8	Required
2	Load Catalog Items to Oracle Exchange on page 3-10	Required

Use the following table as your checklist if you are implementing Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML).

Table 3–2 Supplier Setup Steps for Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)

Step Number	Step	Required?
1	Install XML Parser on Supplier Site on page 3-14	Required
2	Create URL on Supplier Site to Accept Incoming Documents on page 3-15	Required
3	Process Incoming XML or cXML Request on page 3-16	Required
4	Provide XML or cXML Response on page 3-17	Required
5	Determine Method for Returning Buyers to Procurement System on page 3-18	Required
6	Return Shopping Cart on page 3-20	Required
7	Verify Buyer's Access to Secure Site on page 3-32	Required

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

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

Step Number	Step	Required?
1	Register Company on Oracle Exchange on page 3-8	Required
2	Create Data Mappings on Oracle Exchange on page 3-12	Review Required
3	Install XML Parser on Supplier Site on page 3-14	Required
4	Create URL on Supplier Site to Accept Incoming Documents on page 3-15	Required
5	Process Incoming XML or cXML Request on page 3-16	Required
6	Provide XML or cXML Response on page 3-17	Required
7	Determine Method for Returning Buyers to Procurement System on page 3-18	Required

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

Step Number	Step	Required?
8	Return Shopping Cart on page 3-20	Required
9	Configure Punchout Definition on Oracle Exchange on page 3-23, consisting of the following steps:	—
9-A	■ Configure Punchout Definition (Required) on page 3-25	Required
9-B	■ Test Punchout Definition (Required) on page 3-27	Required
9-C	■ Assign Search Key Words (Optional) on page 3-29	Optional
9-D	■ Enable Punchout Availability (Required) on page 3-30	Required
10	Verify Buyer's Access to Secure Site on page 3-32	Required

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

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

Step Number	Step	Required?
1	Register Company on Oracle Exchange on page 3-8	Required
2	Install XML Parser on Supplier Site on page 3-14	Required
3	Create URL on Supplier Site to Accept Incoming Documents on page 3-15	Required
4	Process Incoming XML or cXML Request on page 3-16	Required
5	Provide XML or cXML Response on page 3-17	Required
6	Determine Method for Returning Buyers to Procurement System on page 3-18	Required
7	Return Shopping Cart on page 3-20	Required
8	Configure Punchout Definition on Oracle Exchange on page 3-23, consisting of the following steps:	—
8-A	■ Configure Punchout Definition (Required) on page 3-25	Required
8-B	■ Test Punchout Definition (Required) on page 3-27	Required

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

Step Number	Step	Required?
8-C	■ Assign Search Key Words (Optional) on page 3-29	Optional
8-D	■ Enable Punchout Availability (Required) on page 3-30	Required
9	Verify Buyer's Access to Secure Site on page 3-32	Required

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

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

Step Number	Step	Required?
1	Register Company on Oracle Exchange on page 3-8	Required
2	Create Data Mappings on Oracle Exchange on page 3-12	Optional
3	Install XML Parser on Supplier Site on page 3-14	Required
4	Create URL on Supplier Site to Accept Incoming Documents on page 3-15	Required
5	Process Incoming XML or cXML Request on page 3-16	Required
6	Provide XML or cXML Response on page 3-17	Required
7	Determine Method for Returning Buyers to Procurement System on page 3-18	Required
8	Return Shopping Cart on page 3-20	Required
9	Configure Punchout Definition on Oracle Exchange on page 3-23, consisting of the following steps:	—
9-A	■ Configure Punchout Definition (Required) on page 3-25	Required
9-B	■ Test Punchout Definition (Required) on page 3-27	Required
9-C	■ Assign Search Key Words (Optional) on page 3-29	Optional
9-D	■ Enable Punchout Availability (Required) on page 3-30	Required
10	Verify Buyer's Access to Secure Site on page 3-32	Required

Checklists for Setting Up Transparent Punchout

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

Table 3–6 Supplier Setup Steps for Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)

Step Number	Step	Required?
1	Register Company on Oracle Exchange on page 3-8	Required
2	Load Catalog Items to Oracle Exchange on page 3-10	Required

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

Table 3–7 Supplier Setup Steps for Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)

Step Number	Step	Required?
1	Install XML Parser on Supplier Site on page 3-14	Required
2	Create URL on Supplier Site to Accept Incoming Documents on page 3-15	Required
3	Process Incoming XML or cXML Request on page 3-16	Required
4	Provide XML or cXML Response on page 3-17	Required
5	Verify Buyer's Access to Secure Site on page 3-32	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 Oracle Exchange

Perform this step for the following models:

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

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

To register with Oracle 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 or transparent 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 Oracle Exchange

Perform this step for the following models:

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

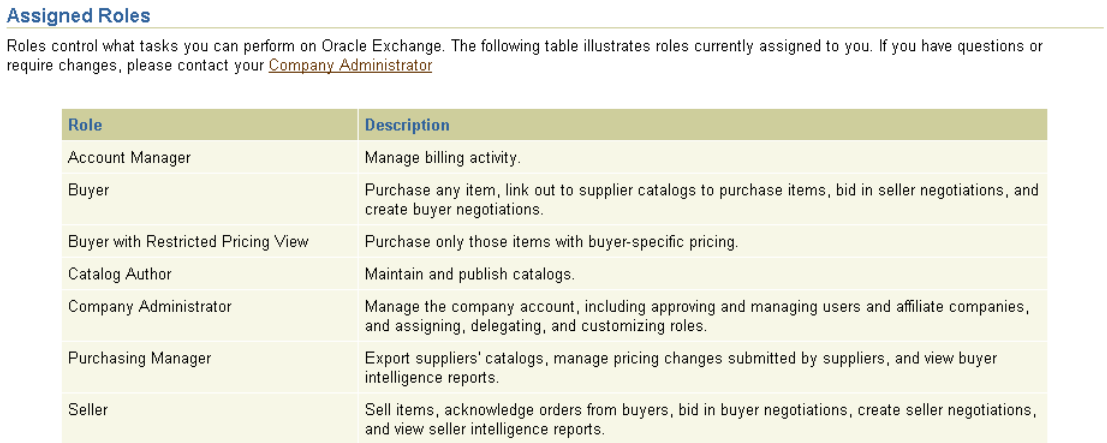
These models typically assume that the supplier loads its catalog items directly to the Oracle Exchange catalog.

To load catalog items to Oracle 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.)

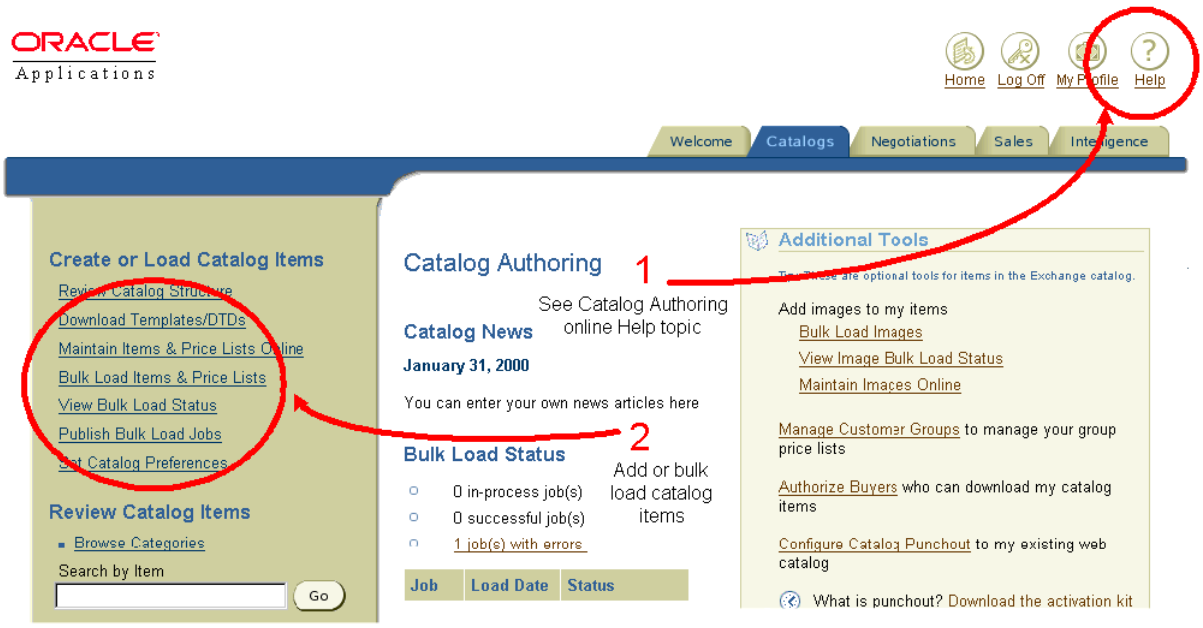


Assigned Roles

Roles control what tasks you can perform on Oracle Exchange. 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 Oracle 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 through online or bulk load methods.
   - Set catalog preferences (control whether you want to review your catalog before publishing it).



See the following section of the online Help in Oracle 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 Oracle Exchange

Perform this step for the following models:

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

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

- Currency codes
- Unit of measurement (UOM) codes

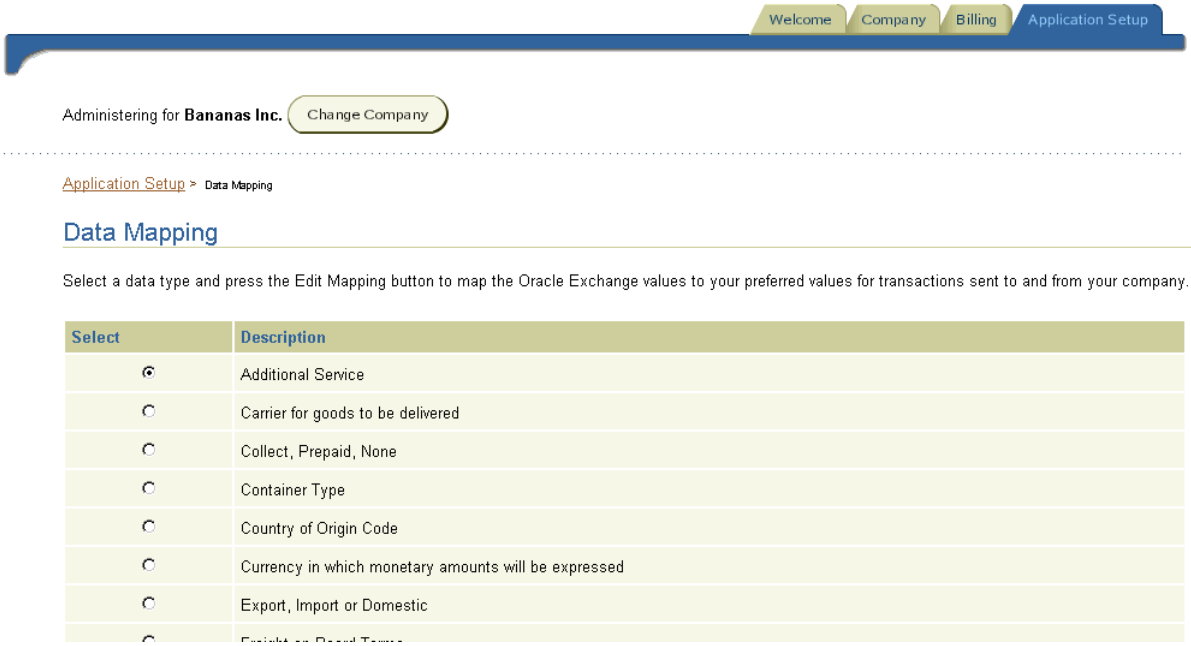
This step is required for Models 3a and 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML) if the supplier's currency codes are different from those that Oracle Exchange uses. For the other models, if you perform no mapping on Oracle Exchange, the value is passed as is from Oracle 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 2-65.

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.

5. Click Edit Mapping.



6. 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.

7. 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 Oracle Exchange uses USD. In this case, you would enter US in the My Company to Exchange field.

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

Install XML Parser on Supplier Site

Perform this step for the following models:

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

Communication between Oracle Exchange or Oracle 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 (version 2.0 or above) 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.

Create URL on Supplier Site to Accept Incoming Documents

Perform this step for the following models:

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

To provide the necessary security, it is recommended that you create a page on a secure HTTPS server to handle the 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 Oracle iProcurement (or Oracle 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.

How to accept the incoming documents depends on whether you are implementing an XML punchout, cXML punchout, or transparent punchout.

As the supplier, you must create a URL to accept the incoming XML loginRequest or cXML PunchOutSetupRequest document if implementing punchout, or XML ItemSearchRequest document if implementing transparent punchout. Oracle Exchange or Oracle 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 document, construct a loginResponse XML document or PunchOutSetupResponse cXML document if implementing punchout, or an ItemSearchResponse XML document if implementing transparent punchout, and send this response back to Oracle Exchange or Oracle iProcurement (depending on the model).

For XML Punchout

For XML punchout 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 loginRequest 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 Punchout or Transparent Punchout

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

Process Incoming XML or cXML Request

Perform this step for the following models:

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

The XML loginRequest or cXML PunchOutSetupRequest punchout document or the XML ItemSearchRequest transparent punchout document that is sent to the supplier's site contains information about the 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 and transparent punchout request documents, to see what data you can or need to process, see Appendix B.

When the buyer sets up punchout or transparent punchout access to your site or when you define a punchout on Oracle Exchange, one of the steps is to provide a password for accessing your site. This password is included in the request documents, and it is used by everyone in the accessing application (Oracle iProcurement or Oracle Exchange). 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 Response

Perform this step for the following models:

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

If the password in the request document is correct, the supplier's portal should respond to Oracle iProcurement or Oracle Exchange with either an XML loginResponse or cXML PunchOutSetupResponse document for a punchout or with an XML ItemSearchResponse document for a transparent punchout.

For examples and descriptions of the XML and cXML punchout and transparent punchout response documents, to see what data you can or need to provide, see Appendix B.

Punchout

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 leaves the supplier's site. The session will also be used to identify the buyer as having navigated to the supplier's site from Oracle iProcurement or Oracle Exchange. In the punchout response document examples in Appendix B, the session is identified with a session key.

Transparent Punchout

For transparent punchout, the supplier can optionally return an authenticated key in the ItemSearchResponse document using the <AuthenticatedKey> field. When Oracle iProcurement receives this key, it includes the key in every subsequent search request to this supplier. The supplier site can validate the key against the key it previously sent and therefore does not need to authenticate the user again. Use of the authenticated key is recommended because it can improve the performance of the transparent punchout.

Errors

If the 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. Oracle iProcurement or Oracle Exchange displays the message. See Chapter 4 for descriptions of errors.

For Punchout If the supplier's site finds an error (for example, the password is invalid), the site should return to Oracle iProcurement or Oracle Exchange a loginResponse XML or PunchOutSetupResponse cXML document indicating an error. See examples in Appendix B. (Once the supplier site sends the response and redirects the buyer to the supplier URL, any errors that occur are displayed by the supplier's system.)

For Transparent Punchout If the supplier's site finds an error (for example, the password is invalid), the site should return to Oracle iProcurement or Oracle Exchange an ItemSearchResponse XML document indicating an error. See examples in Appendix B.

Determine Method for Returning Buyers to Procurement System

Perform this step for the following models:

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

Once buyers have completed browsing the supplier's site, they must return to Oracle iProcurement or Oracle 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 Oracle iProcurement or Oracle Exchange, or some other site. If the supplier accepts buyers from both Oracle iProcurement or Oracle 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 Oracle iProcurement or Oracle Exchange. Alternatively, the supplier's standard Checkout or Complete Order button should detect whether the buyer is an Oracle iProcurement or Oracle Exchange punchout customer and if so, return the buyer to Oracle iProcurement or Oracle 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 Oracle 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.

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 3-20, 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

To return the buyer to Oracle iProcurement or Oracle Exchange, create a link using the return URL.

For example, a return URL to Oracle iProcurement may look like this:

```
http://ap100jvm.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.por.punchout.PunchOutServlet?callBack=shopping
```

A return URL to Oracle 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.

Return Shopping Cart

Perform this step for the following models:

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

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

For Oracle native XML, the URL to which the XML shoppingCart document should be sent is the URL identified by the <returnURL> tag in the original XML loginRequest 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 and cxml-base64 are supported.

Once the document is returned to Oracle iProcurement or Oracle 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 Oracle 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 Oracle iProcurement URL to which the cart is posted.
- The value of the parameter oracleCart is the url-encoded shopping cart data.
- 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 Oracle iProcurement:

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

ACTION="http://ap333jvm.us.oracle.com:4444/oa_
servlets/oracle.apps.icx.punchout.ui.PunchoutCallbackServlet" METHOD="POST"
NAME="orderForm">
<INPUT TYPE="HIDDEN" NAME="oracleCart"

VALUE="%3C%3Fxml+version+%3D+'1.0'+encoding+%3D+'UTF-8'%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++++++++++++++++++++++++%3
C!%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%
5BEA%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%5BGrainger%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>
```

Return Search Response

Perform this step for the following model:

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

Once your site generates the search results, it must send an ItemSearchResponse XML transaction in the HTTP response.

The content type in the response header should be `text/xml`, and the entire ItemSearchResponse document is contained in the body of the HTTP response. The document should be encoded in UTF-8 or, if the contents of the document are all ASCII characters, in ASCII.

For examples and descriptions of the XML ItemSearchResponse document, including how to optionally return images of items, see Appendix B.

Configure Punchout Definition on Oracle Exchange

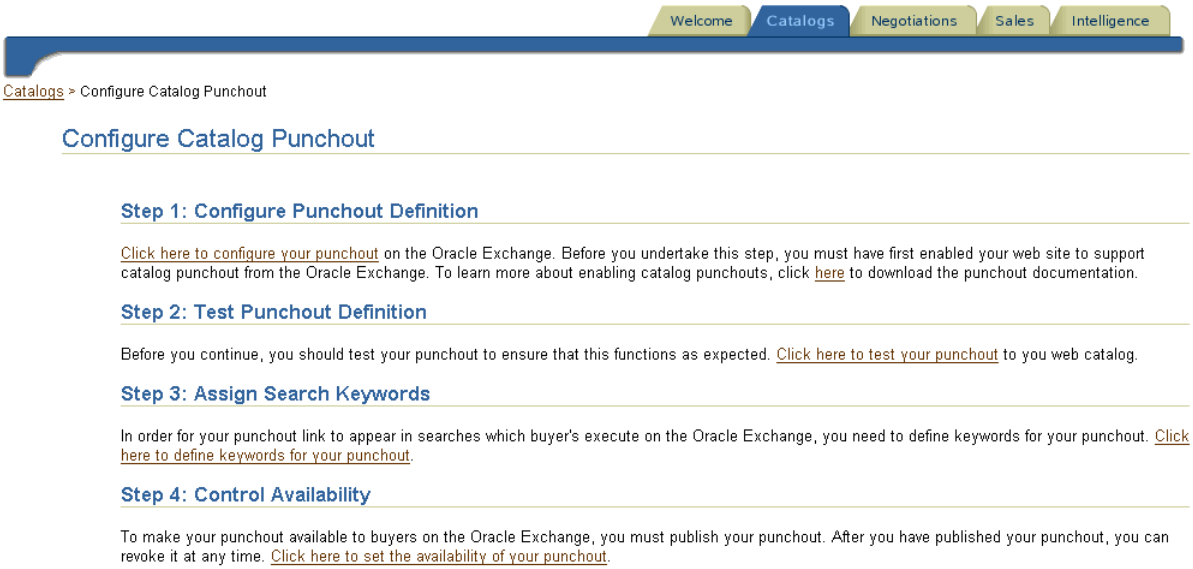
Perform this step for the following models:

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

In this step, you use the **Configure Catalog Punchout** page to define and test your punchout definition on Oracle 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:



Prerequisites

You must be assigned the following Oracle 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.

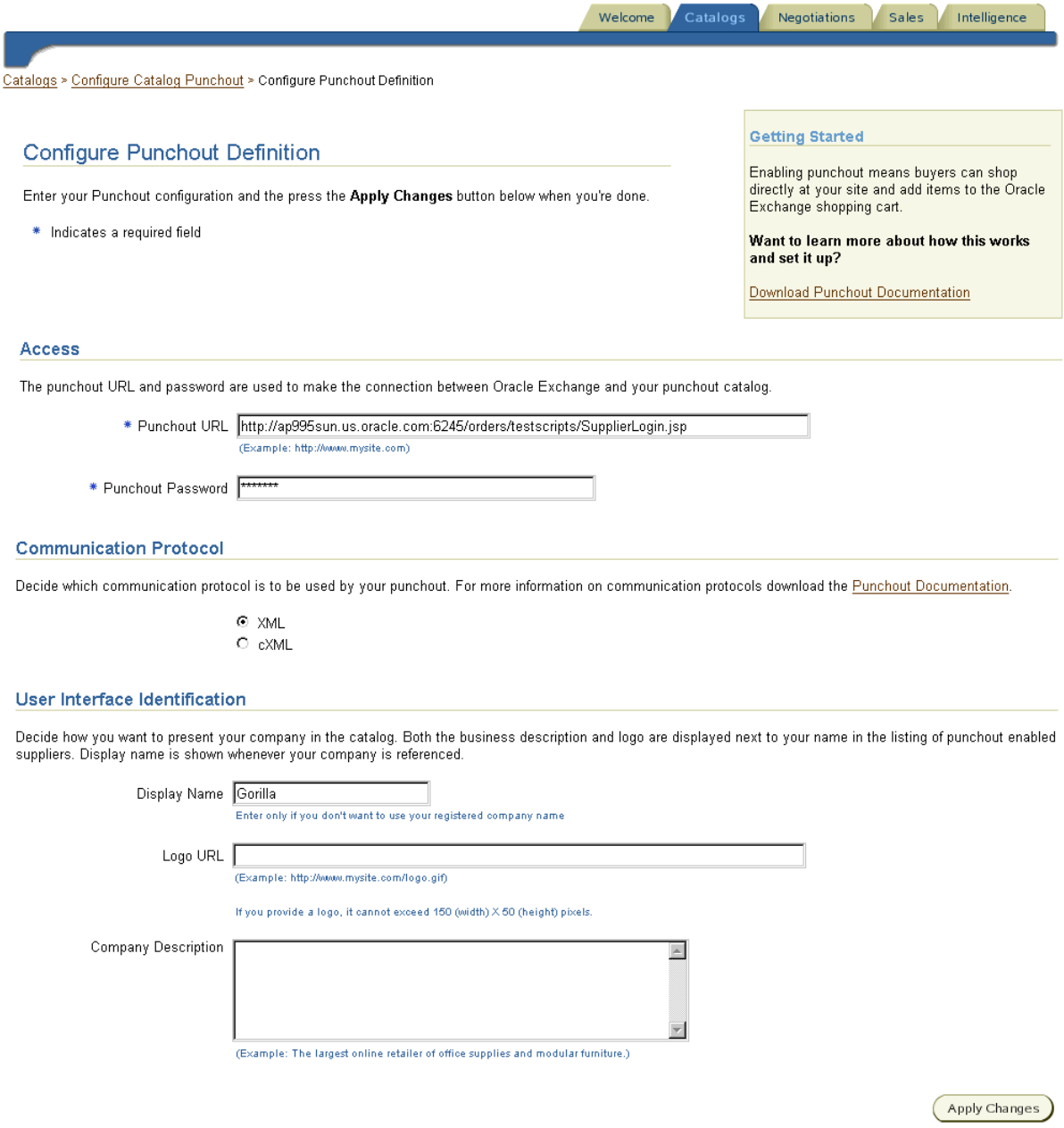
The Exchange Operator assigned job functions when approving your registration. To see whether you are assigned job functions that contain these system tasks, perform these steps:

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 Punchout 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 Oracle 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 Oracle Exchange passes to your Web catalog in the login request document when a buyer accesses your catalog. Your site should validate this password, if you wish to validate the password before allowing access. This is the password that every buyer uses to access your site; you do not need to create separate password accounts for every buyer.


Welcome
Catalogs
Negotiations
Sales
Intelligence
Catalogs > Configure Catalog Punchout > Configure Punchout Definition
Configure Punchout Definition
Enter your Punchout configuration and the 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 Oracle Exchange 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 Oracle Exchange and your punchout catalog.
* Punchout URL
http://ap995sun.us.oracle.com:6245/orders/testscripts/SupplierLogin.jsp
(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.
Display Name
Gorilla
Enter only if you don't want to use your registered company name
Logo URL
(Example: http://www.mysite.com/logo.gif)
If you provide a logo, it cannot exceed 150 (width) X 50 (height) pixels.
Company Description
(Example: The largest online retailer of office supplies and modular furniture.)
Apply Changes

6. Select the communication protocol you want Oracle Exchange to use to send punchout information to you. Oracle 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 Oracle Exchange can access the image.
   - You can add a brief description of your catalog and the items you sell in the Company Description field.

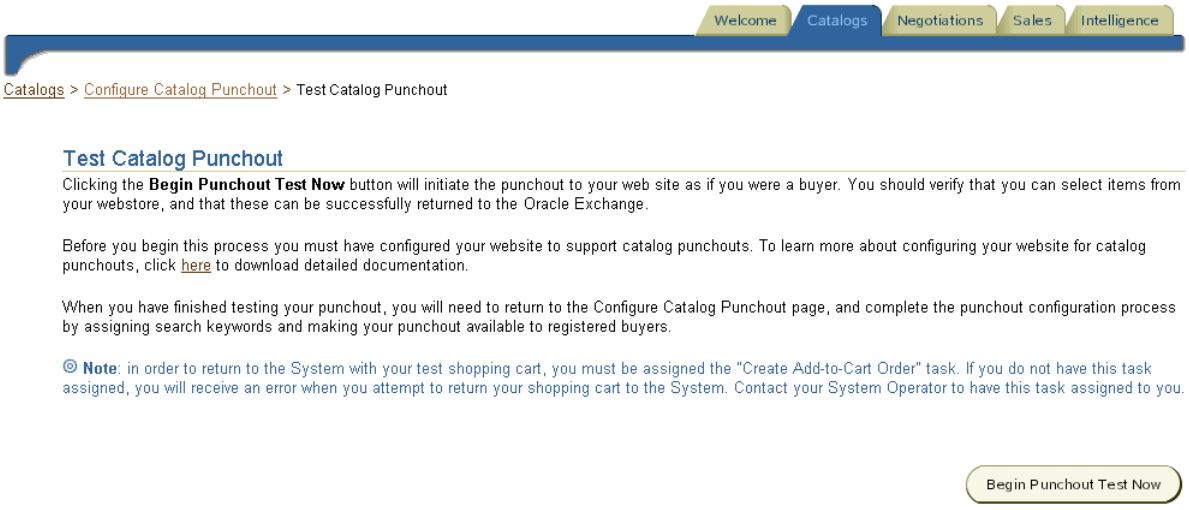
   Note: To provide a name or description in other Oracle Exchange languages, return to the Oracle Exchange **Home** page, click a language to select it (if Oracle Exchange is available in multiple languages, other languages display beneath the tabs), and return to the **Configure Punchout Definition** page to provide the name or description in that language. If you do not provide the name or description in the other languages, Oracle Exchange displays the same name or description you first entered in all languages. (If you left the name blank, Oracle 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 Punchout 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 3-32. See also Chapter 4.
7. Once you have selected several items, return to Oracle 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 Oracle 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 Oracle Exchange are presented with the punchout 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 4,000 bytes 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

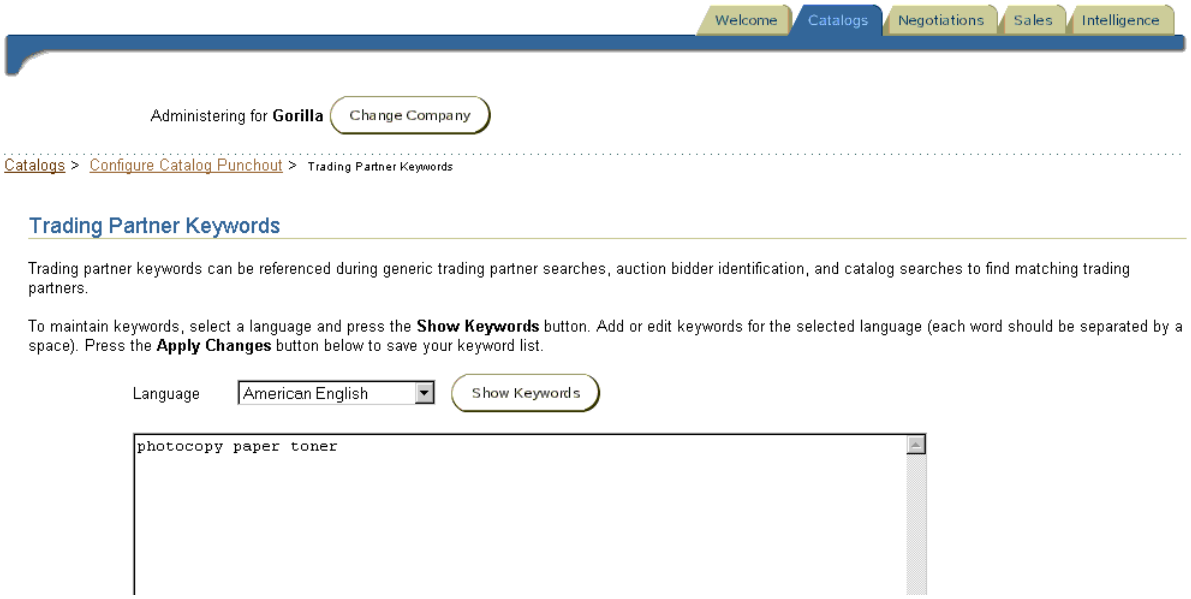
and the following keywords in French:

rame papier enveloppe photocopie A5 A4 A3 A2 A1

If a buyer searches on Oracle Exchange in a foreign language for which you have defined no keywords, no punchout 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 Oracle Exchange:

1. Access Exchange with a signon that has been assigned the Catalog Authoring - Configure Catalog Punchout 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.



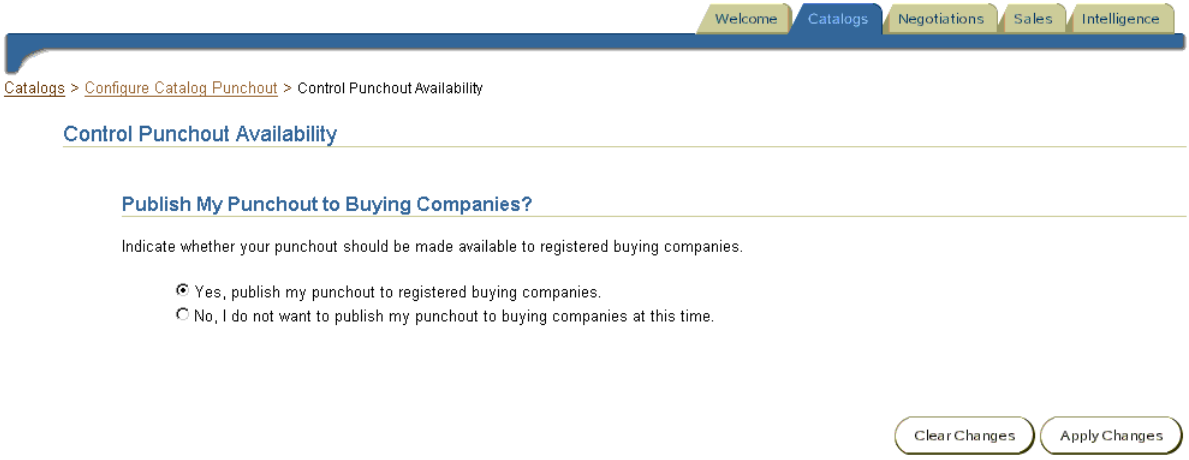
6. Enter all appropriate key words in the text area, separating each word with a space.
7. Click Apply Changes.
8. Repeat these steps for any additional languages your Web catalog supports.

Enable Punchout Availability (Required)

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

To publish your punchout definition:

1. Access Exchange with a signon that has been assigned the Catalog Authoring - Configure Catalog Punchout 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 Oracle Exchange, but cannot be seen and used by buyers. The Purchasing Manager (the buying company's administrator) on Oracle Exchange can still see the punchout definition when choosing which definitions to display to its own buyers, but Oracle 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 (if the site URL begins with HTTPS):

Model	Required?
Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)	Required
Models 3a and 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)	Required
Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML)	Required
Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML)	Required
Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)	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 Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML), the supplier's certification authority needs to be on the ca-bundle.crt file in Oracle iProcurement. The buyer is asked to make sure of this in the buyer's Prerequisites on page 2-8.
- For Models 3a and 3b: 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 Oracle 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 Oracle Exchange, depending on the setup, this is typically located in `<root directory of Oracle installation>/admin/pomdigcrt.txt`, where the root directory of the Oracle installation is defined in the $APPL_TOP environment variable.)
- For Models 4 and 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML or cXML), Oracle Exchange's certification authority needs to be on the ca-bundle.crt file in Oracle iProcurement; the supplier's certification authority needs to be on the pomdigcrt.txt file in Oracle 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 Oracle Exchange, depending on the setup, this is typically located in `<root directory of Oracle installation>/admin/pomdigcrt.txt`, where the root directory of the Oracle installation is defined in the $APPL_TOP environment variable.)

- For Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML), the supplier's certification authority needs to be on the ca-bundle.crt file in Oracle iProcurement.

Both ca-bundle.crt and pomdigcrt.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 pomdigcrt.txt files.

Contact your network administrator for more information. See also Appendix C.

4

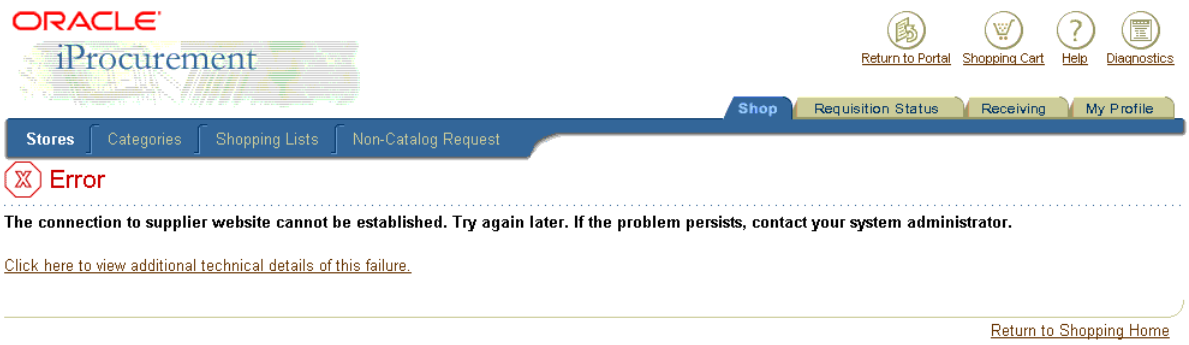
Troubleshooting

This chapter covers the following topics:

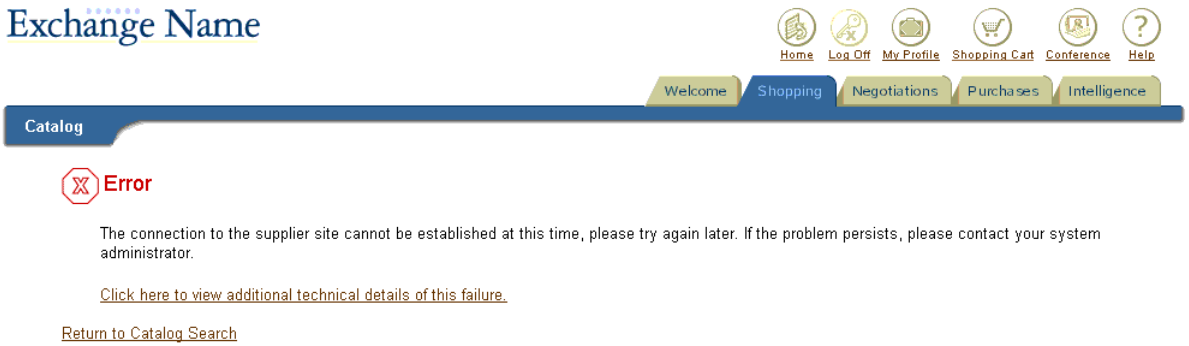
- Punchout and Transparent Punchout Errors on page 4-1
- Punchout or Transparent Punchout Resolutions on page 4-7
- Timeouts on page 4-10
- Location of Log Files on page 4-11
- Location of XML Files on page 4-11

Punchout and Transparent Punchout Errors

If an error occurs during the punchout or transparent punchout, an **Error** page like the following displays:



The illustration above shows the **Error** page in Oracle iProcurement. The same page displays on Oracle Exchange if there is an error during punchout:



To view technical or specific details about the error, click the link at the bottom of the **Error** page to display the detailed **Error** page, as shown in the following illustration:

Error

Additional technical details of this failure are provided below.

```
Error Code: 701 Misc Login Failures
Login failed : unable to get supplier login url from login response
Return Code: null
Return Message: null
Supplier Login URL: http://www102.iprint.com
Supplier ID : 761
Supplier Name :
Supplier Admin :
Request String: <?xml version = '1.0' encoding = 'UTF-8'?>
<request>
   <header version="1.0">
      <login>
         <username/>
         <password>*******</password>
      </login>
      <action>shopping</action>
      <language>EN</language>
      <searchLanguage/>
      <userArea>
        <operatingUnit>204</operatingUnit>
        <shipTo>M1- Seattle</shipTo>
        <deliverTo>M1- Seattle</deliverTo>
      </userArea>
  </header>
  <body>
     <loginInfo>
        <exchangeInfo>
           <exchangeName>Oracle iProcurement</exchangeName>
        </exchangeInfo>
        <userInfo>
           <userName>Smith, Jonathan</userName>
           <userContactInfo>
              <userPhone/>
              <userEmail>dsmith@vision.com</userEmail>
           </userContactInfo>
           <appUserName>MFG</appUserName>
           <userCompany>
              <companyName>iPrint</companyName>
              <companyDUNS>IPRINT</companyDUNS>
              <contactName/>
              <contactPhone/>
           </userCompany>
        </userInfo>
        <returnURL>http://qapache.us.oracle.com:4751/oa_servlets/oracle.apps.icx.punchout.ui.PunchoutCallbackServlet</retur
     </loginInfo>
     <partySiteId/>
     <searchKeywords/>
     <icxSessionCallBackURL/>
  </body>
</request>

Login Response XML: <TITLE>Not Found</TITLE><H1>Not Found</H1> The requested object does not exist on this server. The link
you followed is either outdated, inaccurate, or the server has been instructed not to let you have it.
```

The following table shows a complete list of punchout and transparent punchout errors you may receive on the **Error** pages; for errors without a resolution, you may need to contact your database administrator or Oracle Support Services:

Table 4–1 Punchout and Transparent Punchout Errors

Error Code	Error Description	Punchout or Transparent Punchout	Where Error Occurs	Details and Resolution
1xx	**Unexpected Error**	(see specific errors below)	(see specific errors below)	(see specific errors below)
100	Unexpected Error	Both	Exchange or iProcurement	Any error or exception not captured below.
2xx	**Connection Problems**	(see specific errors below)	(see specific errors below)	(see specific errors below)
200	Malformed Supplier Site URL	Both	Exchange or iProcurement	Malformed URL Exception when creating the URL. Check the URL entered during setup.
201	Unable To Reach Supplier Site	Both	Exchange or iProcurement	Exception when opening a URL connection or sending data. Check the connection. See Connectivity Issues (2xx Error Codes) on page 4-7.
202	Supplier Site Does Not Respond	Both	Exchange or iProcurement	Timeout exception (due to POR: Transparent Punchout Timeout Limit) when receiving response data, or no data is received from the server. Check Exchange or the supplier for problems with the site itself.
203	SSL Init Errors	Both	Exchange or iProcurement	Failure to initialize the secure socket layer (SSL) library—for example, inability to read the certification authorities (CA) file. Check security setup. See Verify Access to Secure Sites on page 2-8.
204	Server Side Errors	Both	Exchange or iProcurement	HTTP response code received is not 200. Check Exchange or the supplier for problems with the site itself.
3xx	**Database Problems**	(see specific errors below)	(see specific errors below)	(see specific errors below)
300	Unexpected SQL Exception	Both	Exchange or iProcurement	SQLExcpetion when executing queries or inserts.

Table 4–1 Punchout and Transparent Punchout Errors

Error Code	Error Description	Punchout or Transparent Punchout	Where Error Occurs	Details and Resolution
301	Unable To Retrieve Supplier Information	Punchout	Exchange or iProcurement	Data not found when retrieving punchout information from the database for an item source identifier (ID).
4xx	**XML Format Errors**	(see specific errors below)	(see specific errors below)	(see specific errors below)
400	Invalid XML Format In Login Response Document	Punchout	Exchange or iProcurement	XML parser exception or missing mandatory values. Check Exchange or the supplier for problems with the site.
401	Invalid XML Format In Shopping Cart Document	Punchout	Exchange or iProcurement	XML parser exception or missing mandatory values. Check Exchange or the supplier for problems with the site.
403	Invalid XML Format In Supplier Sync Response Document	Punchout	iProcurement	XML parser exception or missing mandatory values. Check Exchange or the supplier for problems with the site.
420	Invalid XML Format in Item Search Response Document	Transparent punchout	iProcurement	XML parser exception or missing mandatory values. Check Exchange or the supplier for problems with the site.
421	Return Code Missing in Transparent Punchout Response Document	Transparent punchout	iProcurement	XML parser exception or missing mandatory values. Check Exchange or the supplier for problems with the site.
5xx	**Data Mapping Errors**	(see specific errors below)	(see specific errors below)	(see specific errors below)
500	Unexpected Error In Data Mapping	Punchout	Exchange	Any exception during mapping.

Table 4–1 Punchout and Transparent Punchout Errors

Error Code	Error Description	Punchout or Transparent Punchout	Where Error Occurs	Details and Resolution
501	Invalid Supplier Currency	Punchout	Exchange	Currency returned or mapped is invalid on Exchange. Check your currency mapping on Exchange. See Set Up Data Mapping on Oracle Exchange on page 2-23.
7xx	**Login Failures**	(see specific errors below)	(see specific errors below)	(see specific errors below)
700	Authentication Failure	Both	Exchange or iProcurement	Incorrect user name or password; response code in XML loginResponse is A; status code in cXML PunchoutSetupResponse is 401; or status code in ItemSearchResponse is 401. Check the user name and password entered during setup and any additional information in the documents that the supplier authenticates.
701	Misc Login Failures	Both	Exchange or iProcurement	Other login failures; response code in XML loginResponse is anything other than A; status code in cXML PunchoutSetupResponse is anything other than 200 or 401; or status code in ItemSearchResponse is anything other than 200 or 401.
8xx	**Transparent Punchout Failures**	(see specific errors below)	(see specific errors below)	(see specific errors below)
800	Misc Transparent Punchout Errors	Transparent punchout	iProcurement	Miscellaneous transparent punchout error.
801	Sort by Criteria Not available	Transparent punchout	iProcurement	Sort-by criteria is not supported by the search server. Change the sort-by criteria to one supported by the external server that is being accessed by the transparent punchout.
802	Search Language not valid	Transparent punchout	iProcurement	Search language is not supported by the search server. Change the search language to one supported by the external server that is being accessed by the transparent punchout.

Table 4–1 Punchout and Transparent Punchout Errors

Error Code	Error Description	Punchout or Transparent Punchout	Where Error Occurs	Details and Resolution
804	Search Criteria Returns Too Many Matches	Transparent punchout	iProcurement	Search criteria entered by the requester returns too many matching items on the server. Enter more detailed search criteria.
9xx	**Misc Failures**	(see specific errors below)	(see specific errors below)	(see specific errors below)
900	Supplier Site Not Published/ Approved	Punchout	Exchange	The supplier site has not been published on Exchange. Contact the supplier to publish the punchout on Exchange. See Enable Punchout Availability (Required) on page 3-30.

Punchout or Transparent Punchout Resolutions

Try the following tips if you experience problems with punchout or transparent punchout.

Connectivity Issues (2xx Error Codes)

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

If you are conducting the punchout or transparent punchout from Oracle iProcurement and you use proxy servers to access external sites, make sure the following profile options are set to the correct proxy servers:

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

See Set Profile Options in Oracle iProcurement on page 2-30 for more information.

Test Connectivity Using Telnet

Use the telnet command to see if the 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 from Oracle iProcurement. 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 Oracle iProcurement (or Oracle Exchange) and the external site for HTTP and HTTPS. If you do have connectivity but still experience problems connecting—and you have checked the detailed **Error** page—look at the log files to see what else the problem may be.

Check 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.

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 2-8.

Oracle iProcurement Access Issues (7xx Error Codes)

Access issues are problems getting into the supplier Web site. The connection works, but the site is denying the requester access.

Try the following tips if you experience user access issues:

Verify User Name and Password on Oracle Exchange

If you are punching out from Oracle iProcurement to or via Oracle Exchange or conducting a transparent punchout from Oracle iProcurement to Oracle Exchange, make sure the user name and password of the requester accessing the site is valid on Oracle Exchange. Access Oracle Exchange and log in directly using the user name and password entered on the punchout or transparent punchout setup page in Oracle iProcurement.

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 request 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 Models 3a and 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML), Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML), or Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML), you can check the **Control Punchout Access** page on Oracle Exchange. (See Control Punchout Access on Oracle Exchange on page 2-28.) That page will show whether the supplier disabled its punchout.

Other Issues (Other Error Codes)

For other types of errors, see Table 4–1.

If a "Supplier website is not responding" message displays to the requester, the error is likely a connection problem (2xx error codes) or the 800 error code for transparent punchout.

Except for 801, 802, and 804 error codes, which display the corresponding error on the **Search Results Summary** page, transparent punchout errors typically display a "Search results cannot be retrieved" error message. You must then click the error message link to view the details of the error.

Timeouts

Setup in Oracle iProcurement includes establishing an idle time—a period of inactivity after which Oracle iProcurement logs out the user. (This setup is performed using the ICX:Session Timeout profile option.) While the requester is shopping on Oracle Exchange or the external site, Oracle iProcurement is considered idle. If the requester's session times out before finishing shopping at the external site, when the requester returns to Oracle 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 Oracle iProcurement directly to Oracle Exchange, you can set an option to extend the session so that the logout does not occur. See Table 2–8 in Define Oracle Exchange Punchout in Oracle iProcurement on page 2-33. The same option exists when punching out from Oracle iProcurement directly to the supplier (see Table 2–9 in Define Supplier Punchout in Oracle iProcurement on page 2-41); however, the supplier must set up its site to make use of this option. (Oracle Exchange makes use of it automatically when you choose it.)

If Oracle Exchange times out in a punchout from Oracle iProcurement, Oracle Exchange returns the requester to Oracle iProcurement, and the shopping cart is preserved.

Note: In addition to ICX:Session Timeout, there is also a Java server (Jserv) timeout associated with Oracle iProcurement. This timeout is typically longer than the ICX:Session Timeout and is designed for long periods of inactivity (for example, when you log on to Oracle iProcurement, then leave your desk). If the Jserv timeout occurs, the shopping cart is not preserved as described above.

If Oracle Exchange times out in a punchout from Oracle Exchange to a supplier, the shopping cart is not preserved. The Oracle Exchange timeout is a Jserv timeout. The timeout can be changed by the Oracle Exchange installation team, but it is typically 30 minutes.

Location of Log Files

The first place to look for information on errors is the detailed **Error** page; however, if you need further details, you can obtain error and debug information from log files.

In Oracle Exchange, the Exchange Operator can use the following log file to help resolve punchout or transparent problems:

- $APACHE_TOP/logs/exchange_jserv.log

In Oracle iProcurement, the administrator can use the following log files to help resolve punchout 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 log 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.

In Oracle iProcurement, the administrator can use the following to help resolve transparent punchout problems:

- The error.log and debug.log files above for connection problems.
- The Diagnostics icon at the top of the page for other problems. The Diagnostics icon allow you to access debug information similar to that in the debug.log file.

Location of XML Files

If you have problems with the punchout or transparent punchout that you can't solve by using the **Error** pages, it may be helpful to review the XML files.

All punchout and transparent punchout XML files are stored in a directory when debugging is turned on:

- In Oracle Exchange, the XML and cXML files are stored in the `punchout` subdirectory, in the `catalogUploadDir` directory, if the `oexDebugMode` is set to Y in the Jserv properties file. The files are named using the following format: `DOCNAME-[FROM/TO]-PARTYID-TIMESTAMP.xml`. The PARTYID is the Trading Partner ID for the registered company on Oracle Exchange. (In the Welcome tab on Oracle Exchange, click "Trading Partner Directory" in the task bar directly below the tab. Search for the company to find the Trading Partner ID.) The `catalogUploadDir` directory is the Catalog Directory specified on the **Software Setup** page when you log in as the System Operator.
- In Oracle iProcurement, the XML and cXML files are stored in the punchout subdirectory, in the directory specified in the profile option POR: Catalog Bulk Load Directory, if the Debug setting in the ssp_init.txt configuration file is enabled. The files are named using the following format: `DOCNAME-[FROM/TO]-PARTYID-TIMESTAMP.xml`. The PARTYID is the item source ID assigned to the punchout setup.

A

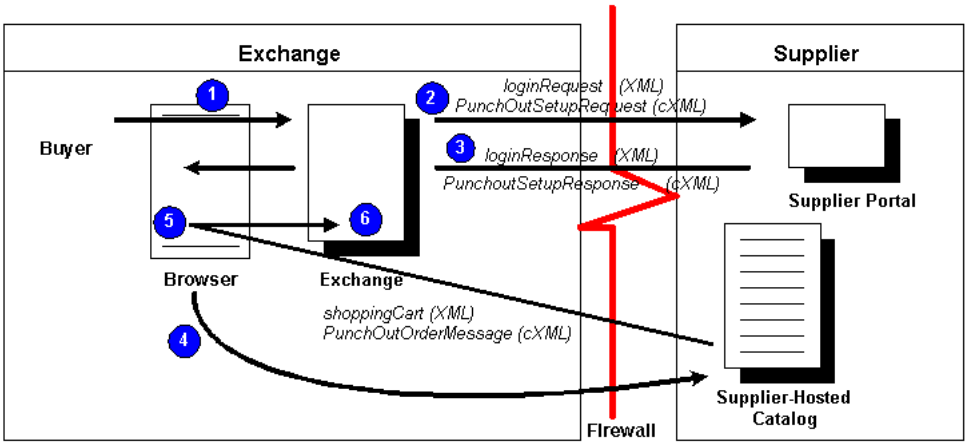
Detailed Punchout and Transparent Punchout Process

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
- Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML) on page A-4
- Models 3a and 3b: 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 Oracle Exchange (XML) on page A-10
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML) on page A-13
- Models 1 and 2: Transparent Punchout to Oracle Exchange or Supplier (XML) on page A-17

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 Oracle iProcurement

The requester logs on to Oracle iProcurement.

2 Requester clicks punchout link to Oracle Exchange

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

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

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

3 Oracle Exchange authenticates requester and returns response

Oracle Exchange receives the loginRequest and authenticates the Oracle 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 Oracle Exchange.) The user name and password used to authenticate the requester are the same as the proxy user name and password that the Oracle iProcurement administrator created when registering the proxy user on Oracle Exchange. (See Register Users on Oracle Exchange on page 2-15.)

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

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

4 Oracle iProcurement redirects browser to Oracle Exchange for shopping

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

Oracle Exchange detects that the shopper is from Oracle 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 Oracle Exchange, Exchange performs the data mapping when the buyer clicks Done Shopping.)

5 Requester finishes shopping; Oracle Exchange returns cart to Oracle iProcurement

When the requester finishes adding items to the cart on Oracle Exchange and clicks Done Shopping, the Oracle Exchange session is dropped and the requester is logged out of Oracle Exchange. Oracle Exchange also returns the shopping cart to the Oracle 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 Oracle

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 Oracle iProcurement sent in the loginRequest document.

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

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

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6 Requester completes checkout; Oracle iProcurement processes order

Oracle iProcurement adds the items to the requisition. It also references Oracle e-Commerce Gateway to see if code conversion (mapping) is set up; if it is, Oracle 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 Oracle 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.

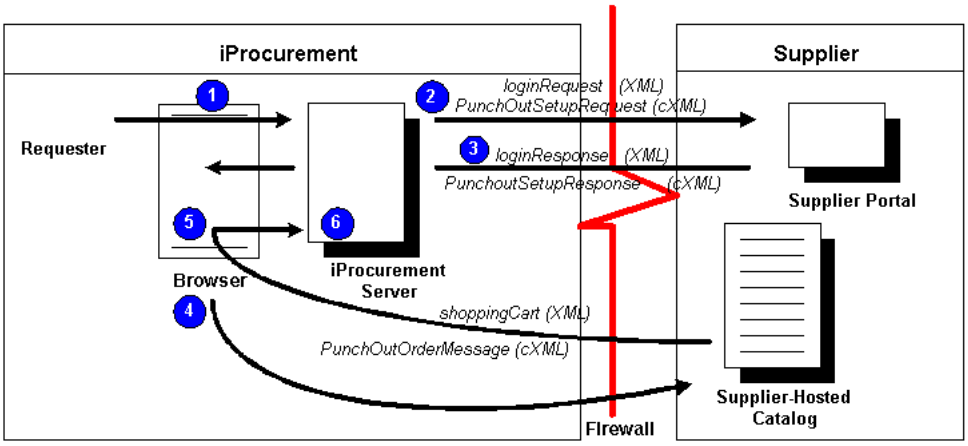
Oracle iProcurement converts the currency in which the items are priced to the functional currency used by Oracle iProcurement.

If the category of the item has an information template associated with it, a link displays next to the item in the cart just before checkout. If the information template has required fields, the requester must click the link to access the template before being allowed to check out.

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

Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML)

The following diagram shows the flow for Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML).



The following sections describe the steps in Models 2a and 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (XML or cXML) in detail.

1 Requester logs on to Oracle iProcurement

The requester logs on to Oracle iProcurement.

2 Requester clicks punchout link to supplier site

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

If punching out to a secure supplier site, the Oracle 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 from the secure supplier site. This digital certificate is compared to certificate authorities stored in the ca-bundle.crt file in Oracle iProcurement.

After the connection is established, Oracle iProcurement generates the *loginRequest* XML document, which includes a base set of user details and the return URL for the Oracle iProcurement instance. (This XML document can contain additional user details if the option in the eContent manager punchout setup pages in Oracle iProcurement was selected to send additional details.) If the supplier uses cXML,

Oracle iProcurement sends the *PunchOutSetupRequest* cXML document to the supplier site. Oracle iProcurement passes the request document to the supplier site in an HTTP request using the POST format.

3 Supplier authenticates requester and returns response

The supplier receives the loginRequest document (or PunchOutSetupRequest cXML document) and authenticates the Oracle 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. If the supplier uses cXML, the supplier generates a response in the form of a *PunchOutSetupResponse* cXML document. The response must be sent in 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 Oracle 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 key to assign to each login made by that account, using the URL in the 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 Oracle iProcurement redirects browser to supplier site for shopping

Now that a secure and trusted connection is established, Oracle 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 cart to Oracle iProcurement

When the requester finishes adding items to the cart on the supplier site, the supplier site returns the shopping cart to the Oracle 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 Oracle 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 Oracle iProcurement sent in the loginRequest 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 *shoppingCart* XML document. If using cXML, the supplier site returns the shopping cart information to Oracle iProcurement in the *PunchOutOrderMessage* cXML document. See the *cXML User's Guide* at http://www.cxml.org for more information on cXML requirements.

6 Requester completes checkout; Oracle iProcurement processes order

Oracle iProcurement adds the items to the requisition. It also references Oracle e-Commerce Gateway to see if code conversion (mapping) is set up; if it is, Oracle 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 Oracle 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.

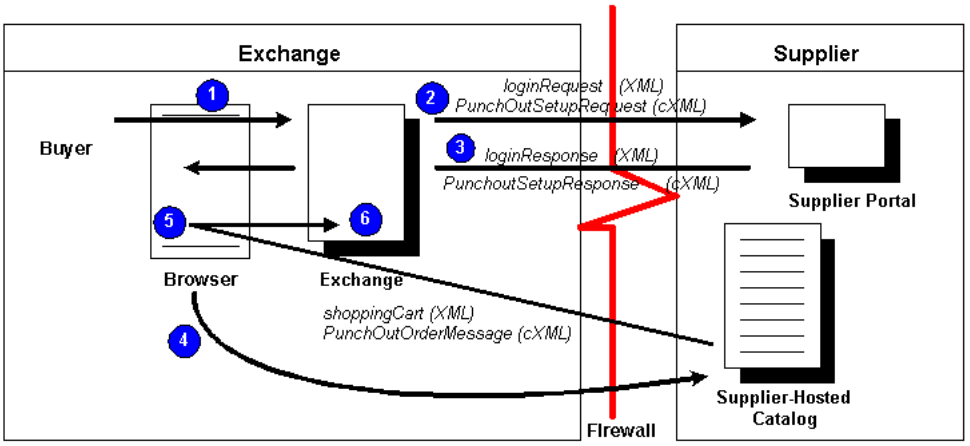
Oracle iProcurement converts the currency in which the items are priced to the functional currency used by Oracle iProcurement.

If the category of the item has an information template associated with it, a link displays next to the item in the cart just before checkout. If the information template has required fields, the requester must click the link to access the template before being allowed to check out.

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

Models 3a and 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML or cXML)

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



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

1 Buyer logs on to Oracle Exchange

The buyer logs on to Oracle Exchange.

2 Buyer clicks punchout link to supplier site

On Oracle Exchange, the buyer clicks a punchout 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 Oracle Exchange server, which establishes a connection to the supplier site.

If the supplier site is a secure site, Oracle 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 from the site. This digital certificate is compared to certificate authorities stored in the pomdigcrt.txt file in Oracle Exchange.

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

3 Supplier authenticates buyer

The supplier receives the loginRequest XML document (or PunchOutSetupRequest cXML document) and authenticates the 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 Oracle 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 in an HTTP response.

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

Now that a secure and trusted connection is established, Oracle 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 cart to Oracle Exchange

When the buyer finishes adding items to the cart on the supplier's site, the supplier site returns the shopping cart to the Oracle 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 Oracle 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 Oracle Exchange sent in the loginRequest 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 *shoppingCart* XML document. If using cXML, the supplier site returns the shopping cart information to Oracle 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 checkout process; Oracle Exchange processes order

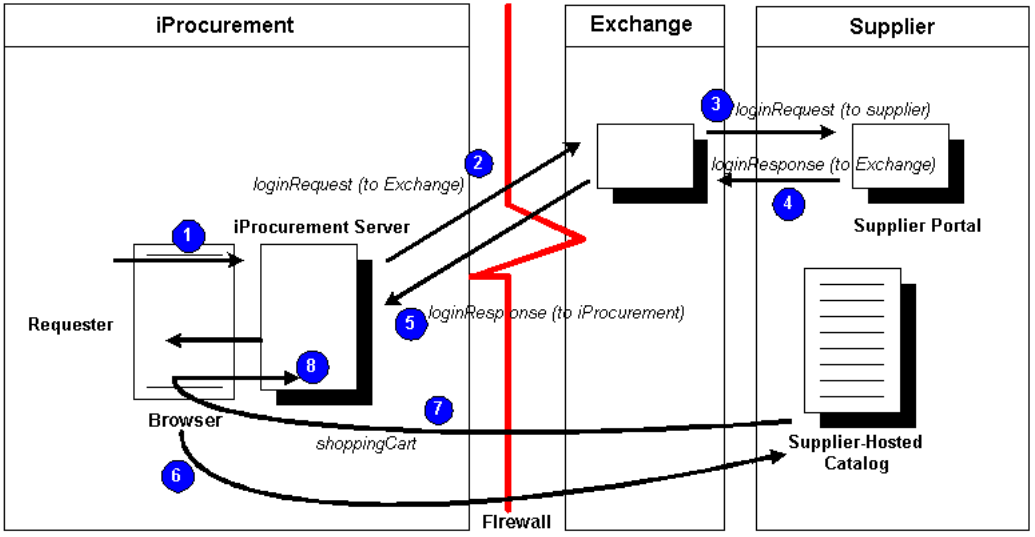
Oracle Exchange adds the items to the order. If the buyer and supplier companies have set up data mapping on Oracle Exchange, Exchange performs data mapping at this step, when the cart is returned to the Oracle Exchange server for processing.

If the items are priced in different currencies, Oracle 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 Oracle Exchange (XML)

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



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

1 Requester logs on to Oracle iProcurement

The requester logs on to Oracle iProcurement.

2 Requester clicks punchout link to supplier site

From Oracle iProcurement, the requester clicks a punchout link to the supplier site. The link goes through Oracle Exchange. When the requester clicks the link, the browser connects to the Oracle iProcurement server, which establishes a secure

connection to Oracle Exchange (if the Exchange is secure) and requests the digital certificate from Oracle Exchange. (Exchange.Oracle.com is a secure site.)

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

After the secure connection is established, Oracle iProcurement generates the *loginRequest* XML document, which includes a base set of user details and the return URL for the Oracle iProcurement instance. Oracle iProcurement passes this XML document to the Oracle Exchange site in 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 Oracle Exchange.

3 Oracle Exchange authenticates requester

Oracle Exchange receives the loginRequest and authenticates the Oracle iProcurement user. The user name and password used to authenticate the requester are the same as the proxy user name and password that the Oracle iProcurement administrator created when registering the proxy user on Oracle Exchange. (See Register Users on Oracle Exchange on page 2-15.)

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

> **Note:** The supplier creates the site-level password on Oracle Exchange. The Oracle 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 Oracle 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 key 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 Oracle 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 Oracle Exchange.

5 Oracle Exchange forwards supplier site response to Oracle iProcurement

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

6 Oracle iProcurement redirects browser to supplier site for shopping

Using the login URL provided in the loginResponse XML document, Oracle iProcurement redirects the Oracle 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 cart to Oracle iProcurement

When the requester finishes adding items to the cart on the supplier site, the supplier site returns the shopping cart to the Oracle 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 Oracle 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 Oracle iProcurement sent in the loginRequest 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 Oracle iProcurement in the *shoppingCart* XML document. This document must be url-encoded.

8 Requester completes checkout; Oracle iProcurement processes order

Oracle iProcurement adds the items to the requisition. It also references Oracle e-Commerce Gateway to see if code conversion (mapping) is set up; if it is, Oracle 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 Oracle Exchange data mapping.) If the Oracle 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.

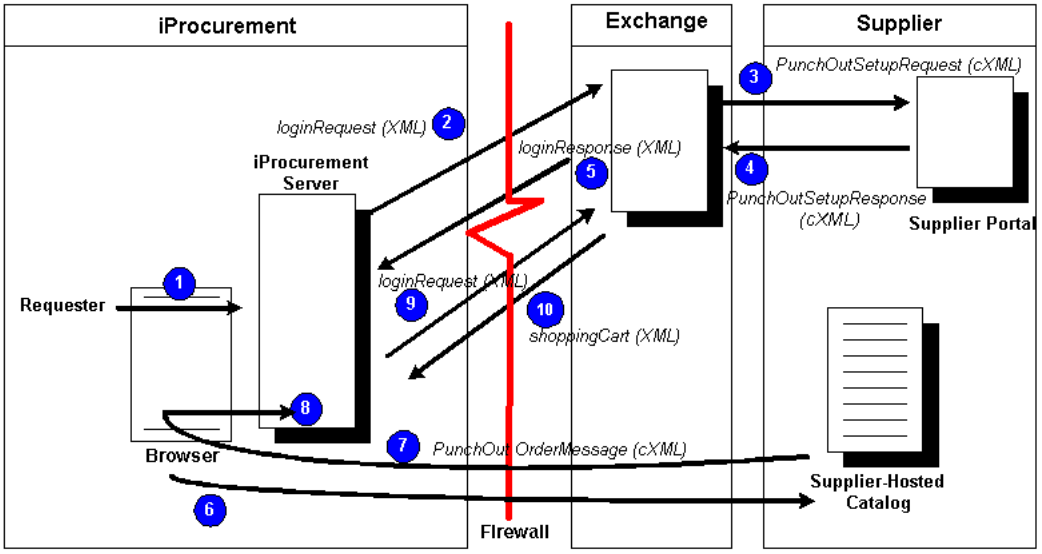
Oracle iProcurement converts the currency in which the items are priced to the functional currency used by Oracle iProcurement.

If the category of the item has an information template associated with it, a link displays next to the item in the cart just before checkout. If the information template has required fields, the requester must click the link to access the template before being allowed to check out.

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

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

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



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

1 Requester logs on to Oracle iProcurement

The requester logs on to Oracle iProcurement.

2 Requester clicks punchout link to supplier site

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

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

After the secure connection is established, Oracle iProcurement generates the *loginRequest* XML document, which includes a base set of user details and the return URL for the Oracle iProcurement instance. Oracle iProcurement passes this XML document to the Oracle Exchange site in 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 Oracle Exchange.

3 Oracle Exchange authenticates requester

Oracle Exchange receives the loginRequest and authenticates the Oracle iProcurement requester. The user name and password used to authenticate the requester are the same as the proxy user name and password that the Oracle iProcurement administrator created when registering the proxy user on Oracle Exchange. (See Register Users on Oracle Exchange on page 2-15.)

Oracle Exchange then uses Oracle SSL APIs to establish a secure connection to the supplier site (if the site requires), opens a connection between itself 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 Oracle iProcurement return URL, and the Oracle iProcurement user and company details that were in the initial loginRequest from Oracle iProcurement to Oracle Exchange.

> **Note:** The supplier creates the site-level password on Oracle Exchange. The Oracle 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 Oracle 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 key to assign to each login made by that account, using the URL in 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 Oracle 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 Oracle Exchange.

5 Oracle Exchange forwards supplier site response to Oracle iProcurement

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

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

Using the login URL provided in the loginResponse XML document, Oracle iProcurement redirects the Oracle 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 cart to Oracle iProcurement

When the requester finishes adding items to the cart on the supplier site, the supplier site returns the shopping cart to the Oracle 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 Oracle iProcurement, using the return URL that Oracle 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 Oracle 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 Oracle iProcurement

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

9 Oracle iProcurement redirects cart to Oracle Exchange for conversion

To convert the PunchOutOrderMessage cXML document to XML, Oracle iProcurement receives and redirects the shopping cart to Oracle Exchange. Oracle iProcurement establishes a secure and trusted connection with Oracle Exchange, then forwards the cXML shopping cart to Oracle Exchange via the *loginRequest* document.

10 Oracle Exchange converts the cart to XML and returns it to Oracle iProcurement

Oracle 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 Oracle Exchange.

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

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

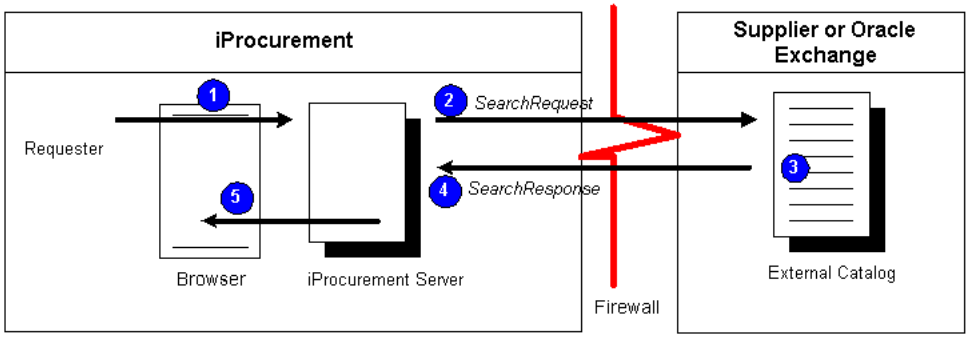
If the category of the item has an information template associated with it, a link displays next to the item in the cart just before checkout. If the information template has required fields, the requester must click the link to access the template before being allowed to check out.

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

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

Models 1 and 2: Transparent Punchout to Oracle Exchange or Supplier (XML)

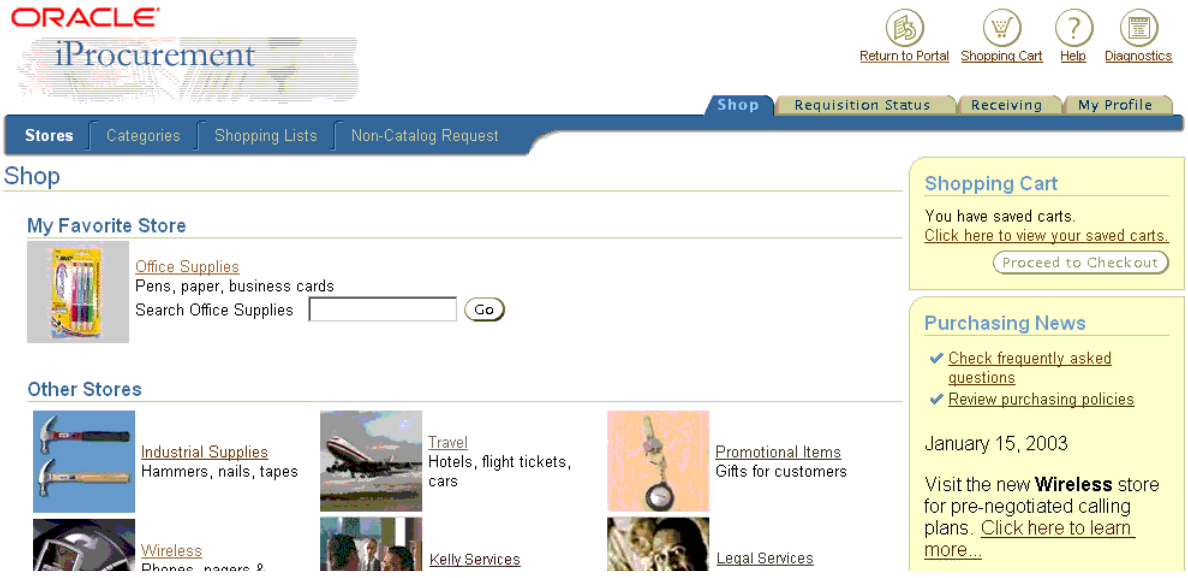
The following diagram shows the flow for Models 1 and 2: Transparent Punchout to Oracle Exchange or Supplier (XML).



The following sections describe the steps in Models 1 and 2: Transparent Punchout to Oracle Exchange or Supplier (XML) in detail.

1 Requester conducts search in Oracle iProcurement

If you have configured stores in the eContent Manager, the requester selects a store before searching. Otherwise, the requester enters a search term into the default or favorite store.



2 Oracle iProcurement sends search request XML document to site

If the store includes a transparent punchout catalog, Oracle iProcurement sends a search request XML document to the external site.

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

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

3 Site processes request and generates search results

The external site receives the ItemSearchRequest document, authenticates the Oracle iProcurement requester, and generates search results.

The supplier can optionally return an authenticated key in the ItemSearchResponse document using the <AuthenticatedKey> field. When Oracle iProcurement receives this key, it includes the key in every subsequent search request to this supplier. The supplier site can validate the key against the key it previously sent and therefore does not need to authenticate the user again. Use of the authenticated key improves the performance of the transparent punchout.

Suppliers with Web stores typically also have a search engine for that store. The supplier site should construct a query from the search criteria in the ItemSearchRequest document and use the search engine to execute the search request. Alternatively, the site can execute the search request on the catalog directly (as long as the search results are returned in the ItemSearchResponse document).

4 Site returns search results XML document to Oracle iProcurement

The site returns the search results XML document to the Oracle iProcurement server in the HTTP response. The supplier site must return the search results information in the *ItemSearchResponse* XML document. See Appendix B for a detailed description of the ItemSearchResponse XML document.

Note: To optimize search performance, transparent punchout does not display the Functional Currency or Functional Currency Price descriptors on the **Search Results** page even if you set them up this way using schema editing.

In a transparent punchout to Oracle Exchange, Oracle iProcurement does not honor price breaks the supplier may have created on Oracle Exchange.

5 Oracle iProcurement displays search results

Oracle iProcurement uses the search results XML document from the external site to display search results in Oracle iProcurement.

Oracle iProcurement displays a set number of search results per page. This number, also known as the Catalog Search Result Set Size, can be set by individual requesters on the **My Profile** page. (By default, the Catalog Search Result Set Size is 7.) Transparent punchout returns two pages of results at a time. For example, if the Catalog Search Result Set Size is 7, transparent punchout returns two pages of search results, each page with seven items.

When the requester clicks the "Next" link on the second page (and every second page thereafter), the system sends a new ItemSearchRequest document to fetch the rest of the results, two pages at a time. This ItemSearchRequest document is identical to the first except the <startResult> value changes. For details, see ItemSearchRequest on page B-36.

Likewise, if the requester sorts the transparent punchout results (you can sort transparent punchout results by Price only), a new ItemSearchRequest document is sent. This ItemSearchRequest document is identical to the first except that it specifies a <sortBy> value. If the supplier can fulfill the sort request, sorted search results are displayed. Otherwise, the supplier can use an ItemSearchResponse error code in the <Status> field to indicate that it was unable to sort the results.

> **Note:** Oracle iProcurement cannot enforce how the supplier interprets the search. For example, Oracle iProcurement cannot verify if the results are sorted correctly.

After viewing the transparent punchout results, the requester clicks Add to Cart for the desired items, and Oracle iProcurement adds the items to the requisition. Oracle iProcurement also references Oracle e-Commerce Gateway to see if code conversion (mapping) is set up; if it is, Oracle 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.

Note: Although a transparent punchout to Oracle Exchange returns To Be Determined (TBD) priced items to Oracle iProcurement, requesters cannot add TBD items to their shopping cart. (Oracle Exchange allows suppliers to specify TBD prices for items; however, items without prices are not permitted in Oracle iProcurement.) When the requester attempts to add a TBD-priced item to the shopping cart in Oracle iProcurement, an error message informs the requester that TBD items cannot be added to the cart. The buyer should be aware that although TBD items present no problems for transparent punchout, the TBD items will be rejected by the shopping cart in Oracle iProcurement. Buyers and suppliers should resolve this together, if required. The supplier could remove items with TBD prices, or the buyer could use the pricing approval feature on Oracle Exchange to reject these prices.

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

The requester then completes the checkout process for the items in the shopping cart, and Oracle iProcurement processes the order. The requisition goes through the normal workflow, approval, and purchase order processes configured in Oracle iProcurement and Oracle Purchasing.

B

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-4
- Mapping Between XML Fields and Oracle iProcurement Descriptors on page B-56
- Mapping Between XML and cXML on page B-57

DTDs and Documents by Model

All the document type definition (DTD) documents used by XML punchout and transparent punchout are displayed in this appendix. 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 and transparent 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
loginRequest on page B-9	OraclePunchout.dtd
loginResponse on page B-19	OraclePunchout.dtd
shoppingCart on page B-21	OraclePunchout.dtd

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

Reference	DTD
loginRequest on page B-9	OraclePunchout.dtd
loginResponse on page B-19	OraclePunchout.dtd
shoppingCart on page B-21	OraclePunchout.dtd

Table B–3 Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML) Documents

Reference	DTD
PunchOutSetupRequest on page B-26	cXML.dtd
PunchOutSetupResponse on page B-31	cXML.dtd
PunchOutOrderMessage on page B-32	cXML.dtd

Table B–4 Model 3a: Punchout from Oracle Exchange to Supplier-Hosted Catalog (XML) Documents

Reference	DTD
loginRequest on page B-9	OraclePunchout.dtd
loginResponse on page B-19	OraclePunchout.dtd
shoppingCart on page B-21	OraclePunchout.dtd

Table B–5 Model 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML) Documents

Reference	DTD
PunchOutSetupRequest on page B-26	cXML.dtd
PunchOutSetupResponse on page B-31	cXML.dtd
PunchOutOrderMessage on page B-32	cXML.dtd

Table B–6 Model 4: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (XML) Documents

Reference	DTD
loginRequest on page B-9	OraclePunchout.dtd
loginResponse on page B-19	OraclePunchout.dtd
shoppingCart on page B-21	OraclePunchout.dtd
supplierSync on page B-34	OraclePunchout.dtd

Table B–7 Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML) Documents

Reference	DTD
loginRequest on page B-9	OraclePunchout.dtd
PunchOutSetupRequest on page B-26	cXML.dtd
PunchOutSetupResponse on page B-31	cXML.dtd
loginResponse on page B-19	OraclePunchout.dtd
PunchOutOrderMessage on page B-32	cXML.dtd
shoppingCart on page B-21	OraclePunchout.dtd
supplierSync on page B-34	OraclePunchout.dtd

Table B–8 Models 1 and 2: Transparent Punchout to Oracle Exchange or Supplier (XML)

Reference	DTD
ItemSearchRequest on page B-36	ItemSearchRequest.dtd
ItemSearchResponse on page B-42	ItemSearchResponse.dtd

DTDs, Documents, and Descriptions

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

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

> **Note:** Also note the DTD structure. For example, a bar (|) between values indicates that you should provide only one of the values.

OraclePunchout.dtd

The OraclePunchout.dtd covers all XML punchout documents used by all XML punchout models:

- loginRequest
- loginResponse
- shoppingCart
- supplierSync

The OraclePunchout.dtd is as follows:

```
<?xml version="1.0" encoding="UTF-8"?>

<!-- Version 1.0 of Oracle Punchout DTD
     User by Oracle Exchange 6.2.4 and Oracle iProcurement Release FPI
 -->

<!-- root elements -->
<!ELEMENT request (header,body)>
<!ELEMENT response (header,body)>

<!-- different possible bodies -->
<!-- loginRequest (request) -->
<!-- loginResponse (response) -->
<!-- shoppingCart (response) -->
<!-- supplierSync (response) -->
<!ELEMENT body (
(loginInfo,searchKeywords?,icxSessionCallBackURL?,partySiteId?,cxmlCart?)|
loginURL|
OrderLinesDataElements|
```

```
supplier*
)>

<!--  START header elements -->
<!ELEMENT header
(requestID?,login?,(action|return),cookies?,language?,searchLanguage?,userArea?)
>
  <!-- version to identify the DTD used, current version is 1.0 -->
  <!ATTLIST header version CDATA #REQUIRED>
  <!-- identifier in an asynchronous request/response communication, for future
use -->
  <!ELEMENT requestID (#PCDATA)>
  <!-- login information. session is for future use -->
  <!ELEMENT login ((username,password)|session)>
    <!ELEMENT username (#PCDATA)>
    <!ELEMENT password (#PCDATA)>
    <!ELEMENT session (sessionID)>
    <!ELEMENT sessionID (#PCDATA)>
  <!-- for request only, to indicate the type of the request -->
  <!ELEMENT action (#PCDATA)>
  <!-- for response only -->
  <!ELEMENT return (returnMessage?)>
    <!-- return code for the request. S = Success, E = Error, U = Unexpected,
        W = Warning and A = Authentication Failure. Exchange and IP only
        uses S, E, and A
    -->
    <!ATTLIST return returnCode (S|E|U|W|A) #REQUIRED>
    <!ELEMENT returnMessage (#PCDATA)>
  <!-- cookies to identify the session, for future use -->
  <!ELEMENT cookies (cookie*)>
    <!ELEMENT cookie (#PCDATA)>
    <!ATTLIST cookie name CDATA #REQUIRED>
  <!-- user's preferred session language only -->
  <!ELEMENT language (#PCDATA)>
  <!-- user's preferred search language only -->
  <!ELEMENT searchLanguage (#PCDATA)>
  <!-- any additional customizable info -->
  <!ELEMENT userArea ANY>
<!-- END header elements -->

<!-- START additional elements in userArea which may be populated by IP,
included for DTD validation -->
<!ELEMENT operatingUnit (#PCDATA)>
<!ELEMENT shipTo (#PCDATA)>
<!ELEMENT deliverTo (#PCDATA)>
```

```
<!ELEMENT fullName (#PCDATA)>
<!ELEMENT workPhone (#PCDATA)>
<!ELEMENT title (#PCDATA)>
<!ELEMENT manager (#PCDATA)>
<!ELEMENT managerEmail (#PCDATA)>
<!ELEMENT managerPhone (#PCDATA)>
<!ELEMENT location (#PCDATA)>
<!ELEMENT dateFormat (#PCDATA)>
<!-- END additional elements in userArea -->

<!-- START login request elements -->
<!ELEMENT loginInfo (exchangeInfo?,userInfo,returnURL)>
  <!-- exchange name if the request is from exchange -->
  <!ELEMENT exchangeInfo (exchangeName)>
    <!ELEMENT exchangeName (#PCDATA)>
  <!ELEMENT userInfo (userName,appUserName,userContactInfo?,userCompany?)>
    <!-- full name of user -->
    <!ELEMENT userName (#PCDATA)>
    <!-- username of user in the application -->
    <!ELEMENT appUserName (#PCDATA)>
    <!ELEMENT userContactInfo (userPhone?,userEmail?)>
      <!ELEMENT userPhone (#PCDATA)>
      <!ELEMENT userEmail (#PCDATA)>
    <!ELEMENT userCompany (companyName,companyDUNS,contactName?,contactPhone?)>
      <!-- name of the user's company -->
      <!ELEMENT companyName (#PCDATA)>
      <!-- DUNS of the user's company -->
      <!ELEMENT companyDUNS (#PCDATA)>
      <!ELEMENT contactName (#PCDATA)>
      <!ELEMENT contactPhone (#PCDATA)>
  <!-- URL the shopping cart will be returned to -->
  <!ELEMENT returnURL (#PCDATA)>
<!-- search text entered by the users -->
<!ELEMENT searchKeywords (#PCDATA)>
<!-- URL which can be pinged constantly to keep IP session alive -->
<!ELEMENT icxSessionCallBackURL (#PCDATA)>
<!-- party id of the supplier to punchout to via OEX -->
<!ELEMENT partySiteId (#PCDATA)>
<!-- CXML shopping cart sent from IP to OEX for mapping -->
<!ELEMENT cxmlCart ANY>
<!-- END login request elements -->

<!-- START login response elements -->
<!ELEMENT loginURL (#PCDATA)>
<!-- END login response elements -->
```

```
<!-- START shopping cart elements -->
<!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|buyerItemNumber),
manufacturerItemNumber?)>
  <!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 -->
<!-- used in shopping cart -->
<!-- used in supplier sync response -->
<!ELEMENT supplier (
((supplierDUNS|supplierTradingPartnerCode), supplierName, supplierSite?,
contactName?, contactPhone?)|
(supplierPartyId, supplierImageUrl, supplierLanguageSpecificInfo*)
)>
<!ELEMENT supplierDUNS (#PCDATA)>
<!ELEMENT supplierTradingPartnerCode (#PCDATA)>
<!ELEMENT supplierName (#PCDATA)>
<!ELEMENT supplierSite (#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)>

<!-- END shopping cart elements -->

<!-- START supplier sync elements -->
<!ELEMENT supplierLanguageSpecificInfo
(language,supplierName,supplierDescription,supplierKeywords)>
<!ELEMENT supplierDescription (#PCDATA)>
<!ELEMENT supplierKeywords (#PCDATA)>
```

```
<!ELEMENT supplierPartyId (#PCDATA)>
<!ELEMENT supplierImageUrl (#PCDATA)>
<!-- END supplier sync elements -->
```

loginRequest

Oracle iProcurement generates a loginRequest after establishing a connection with Oracle 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 Oracle Exchange (XML).
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML).

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

Oracle iProcurement or Oracle Exchange sends a loginRequest to the supplier in the following models:

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

Example loginRequest to Oracle Exchange

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

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<request>
   <header version="1.0">
      <login>
         <username>
            <![CDATA[bcbuyeradmin1]]>
         </username>
         <password>
            <![CDATA[welcome]]>
         </password>
      </login>
```

```
      <action>
         <![CDATA[shopping]]>
      </action>
      <language>
         <![CDATA[US]]>
      </language>
      <searchLanguage/>
      <userArea>
         <operatingUnit>
            <![CDATA[204]]>
         </operatingUnit>
         <shipTo>
            <![CDATA[V1 - New York City]]>
         </shipTo>
         <deliverTo>
            <![CDATA[V1 - New York City]]>
         </deliverTo>
      </userArea>
   </header>
   <body>
      <loginInfo>
         <exchangeInfo>
            <exchangeName>
               <![CDATA[Buyer Corp.]]>
            </exchangeName>
         </exchangeInfo>
         <userInfo>
            <userName>
               <![CDATA[Stock, Pat]]>
            </userName>
            <userContactInfo>
               <userPhone/>
               <userEmail>
                  <![CDATA[pat.stock@vision.com]]>
               </userEmail>
            </userContactInfo>
            <appUserName>
               <![CDATA[OPERATIONS]]>
            </appUserName>
            <userCompany>
               <companyName>
                  <![CDATA[Buyer Corp.]]>
               </companyName>
               <companyDUNS/>
               <contactName/>
```

```
               <contactPhone/>
            </userCompany>
         </userInfo>
         <returnURL>
            <![CDATA[http://qapache.us.oracle.com:4751/oa_
servlets/oracle.apps.icx.punchout.ui.PunchoutCallbackServlet]]>
         </returnURL>
      </loginInfo>
      <partySiteId/>
      <searchKeywords/>
      <icxSessionCallBackURL/>
   </body>
</request>
```

Example loginRequest to Supplier

Below are example loginRequest XML documents sent to the supplier.

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

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<request>
   <header version="1.0">
      <login>
         <username/>
         <password>welcome</password>
      </login>
      <action>shopping</action>
      <language>EN</language>
      <searchLanguage/>
      <userArea>
         <operatingUnit>204</operatingUnit>
         <shipTo>V1 - New York City</shipTo>
         <deliverTo>V1 - New York City</deliverTo>
      </userArea>
   </header>
   <body>
      <loginInfo>
         <exchangeInfo>
            <exchangeName>Buyer Corp.</exchangeName>
         </exchangeInfo>
         <userInfo>
```

```
            <userName>Stock, Pat</userName>
            <userContactInfo>
               <userPhone/>
               <userEmail>pat.stock@vision.com</userEmail>
            </userContactInfo>
            <appUserName>OPERATIONS</appUserName>
            <userCompany>
               <companyName>Buyer Corp.</companyName>
               <companyDUNS>144709193</companyDUNS>
               <contactName/>
               <contactPhone/>
            </userCompany>
         </userInfo>
         <returnURL>http://qapache.us.oracle.com:4751/oa_
servlets/oracle.apps.icx.punchout.ui.PunchoutCallbackServlet</returnURL>
      </loginInfo>
      <partySiteId/>
      <searchKeywords/>
      <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 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML):

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<request>
   <header version="1.0">
      <login>
         <username/>
         <password>welcome</password>
      </login>
      <action>shopping</action>
      <language>EN</language>
      <searchLanguage/>
      <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>Buyer Corp.</exchangeName>
         </exchangeInfo>
         <userInfo>
            <userName>Stock, Pat</userName>
            <userContactInfo>
               <userPhone/>
               <userEmail>pat.stock@vision.com</userEmail>
            </userContactInfo>
            <appUserName>OPERATIONS</appUserName>
            <userCompany>
               <companyName>Buyer Corp.</companyName>
               <companyDUNS>144709193</companyDUNS>
               <contactName/>
               <contactPhone/>
            </userCompany>
         </userInfo>
         <returnURL>http://qapache.us.oracle.com:4751/oa_
servlets/oracle.apps.icx.punchout.ui.PunchoutCallbackServlet</returnURL>
      </loginInfo>
      <partySiteId/>
      <searchKeywords/>
      <icxSessionCallBackURL/>
   </body>
</request>
```

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

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<request>
   <header version="1.0">
      <login>
         <username>_username</username>
         <password>welcome</password>
      </login>
      <action>shopping</action>
```

```
      <language>EN</language>
      <searchLanguage/>
      <userArea>
         <operatingUnit/>
         <shipTo/>
         <deliverTo/>
      </userArea>
   </header>
   <body>
      <loginInfo>
         <exchangeInfo>
            <exchangeName>Oracle Exchange</exchangeName>
         </exchangeInfo>
         <userInfo>
            <userName>Elvis Impersonator</userName>
            <userContactInfo>
               <userPhone>650 633-8239</userPhone>
               <userEmail>elvis@oracle.com</userEmail>
            </userContactInfo>
            <appUserName>ELVIS</appUserName>
            <userCompany>
               <companyName>Elvis Corporation</companyName>
               <companyDUNS>144709193</companyDUNS>
               <contactName>ELVIS</contactName>
               <contactPhone>650 633-8239</contactPhone>
            </userCompany>
         </userInfo>
<returnURL>http://exchange.oracle.com/orders/PunchoutCallback.jsp?app=selling</r
eturnURL>
      </loginInfo>
      <partySiteId/>
      <searchKeywords/>
      <icxSessionCallBackURL/>
   </body>
</request>
```

Field Descriptions

The fields in the loginRequest document are described below.

<username> Required in loginRequest to Oracle Exchange

Oracle Exchange proxy user name assigned to the Oracle iProcurement requester. This field is used only in a loginRequest sent to Oracle Exchange.

<password> Required

In a loginRequest to Oracle Exchange, this is the Oracle Exchange proxy user password assigned to the Oracle iProcurement requester.

In a loginRequest to the supplier, this is the password validated by the supplier site and used by all buyers in the accessing application. The supplier provided this password to the Oracle iProcurement administrator, who set up access to the punchout, or entered this password when defining the punchout on Oracle Exchange.

> **Note:** The password is not encrypted in the XML document. It is up to the transport protocol to encrypt the message to ensure security.

<action> Required

The value is *shopping*, except when downloading a punchout from Oracle Exchange. When downloading a punchout from Oracle Exchange, the action is *suppSync*.

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

<language> Required

In a loginRequest to Oracle Exchange, this is the requester's session language in Oracle iProcurement, using the Oracle Applications language code.

In a loginRequest to the supplier, this is the requester's session language in Oracle iProcurement or Oracle 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 Oracle 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 Oracle 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

In a loginRequest to Oracle Exchange, this is the requester's search language in Oracle iProcurement, using the Oracle Applications language code.

In a loginRequest to the supplier, this is the requester's search language in Oracle iProcurement or Oracle Exchange (wherever the punchout is initiated), using the ISO language code.

The search language can be chosen by clicking the "Change Catalog Language" link on the **Shop** home page. (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 Oracle iProcurement requester's operating unit. This information is passed on to the supplier in Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML) only.

<shipTo> Optional

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

<deliverTo> Optional

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

<fullName> Optional extended data *

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

<title> Optional extended data *

Title of the Oracle 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 Oracle 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

In a punchout from Oracle iProcurement, this is the company name that is trying to log in to the supplier site and that was entered in the Company Name field while defining the punchout. In a punchout from Oracle Exchange, this is the name of the Exchange.

<userName> Required

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

<userPhone> Optional

Oracle iProcurement requester's phone number. This field is present only if a phone number is available. For a punchout initiated from Oracle Exchange, this is the Exchange buyer's phone number.

<userEmail> Optional

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

<appUserName> Required

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

<companyName> Optional

In a punchout from Oracle iProcurement, this is the company name that is trying to log in to the supplier site and that was entered in the Company Name field while defining the punchout. In a punchout from Oracle Exchange, this is the company name on the Exchange.

<companyDUNS> Optional

The buying company's identifier entered in the Company ID field when defining the punchout in Oracle iProcurement. In a punchout initiated from Oracle Exchange, this field contains the DUNS number entered during registration, if any.

<contactName> Optional

In a loginRequest to Oracle Exchange, this field is not used.

In a loginRequest from Oracle Exchange to a supplier, this is the Exchange Company Administrator's name.

This field is not used for Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML).

<contactPhone> Optional

In a loginRequest to Oracle Exchange, this field is not used.

In a loginRequest from Oracle Exchange to a supplier, this is the Exchange Company Administrator's phone number.

This field is not used for Model 2a: Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML).

<returnURL> Required

In a loginRequest to Oracle Exchange, this is the URL in Oracle iProcurement to which Oracle Exchange will ask the browser to post the shopping cart.

In a loginRequest to the supplier, this is the URL in Oracle iProcurement or Oracle Exchange to which the supplier site will ask the browser to post the shopping cart.

<partySiteId> Optional

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

<searchKeywords> Optional

If the Oracle iProcurement requester or Oracle 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 performed a search before accessing the punchout.

In a loginRequest to Oracle Exchange, if the requester already conducted a search with keywords in Oracle iProcurement and clicked the punchout link on the **Search Results** page, Oracle Exchange re-executes the search with those keywords and presents its **Search Results** page.

<cxmlCart> Optional

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

<icxSessionCallBackURL> Optional

URL of the servlet that accesses the Oracle 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.

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

loginResponse

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

Example loginResponse

Below are example loginResponse documents.

Successful Connection The following example loginResponse document shows a successful connection:

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<response>
   <header version="1.0">
      <return returnCode="S"/>
   </header>
   <body>
      <loginURL>
<![CDATA[http://exchange.oracle.com/orders/LinkinCallback.jsp?sessionKey=84vw2wn
uq1.ml0Tah9NrkSIrlaIpR9vmQLz/AbJphDGpQbvp6vJqReUbxaPaK--1733&action=shopping&lan
guage=US&searchKeywords=]]>
      </loginURL>
   </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 = 'UTF-8'?>
<response>
   <header version="1.0">
      <return returnCode="A">
         <returnMessage>
            <![CDATA[Authentication Failure]]>
         </returnMessage>
      </return>
   </header>
   <body>
      <loginURL/>
   </body>
</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.

shoppingCart

The shoppingCart XML document returns the shopping cart information to Oracle iProcurement or Oracle Exchange in all models.

Example shoppingCart

The following is an example shoppingCart document that is sent to Oracle iProcurement from Oracle Exchange:

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<response>
   <header version="1.0">
     <return returnCode="S"/>
   </header>
   <body>
      <OrderLinesDataElements>
         <catalogTradingPartner>
            <![CDATA[OracleExchange]]>
         </catalogTradingPartner>
         <orderLine>
            <contract>
               <buyerContract>
                  <contractNumber>
                     <![CDATA[2345]]>
                  </contractNumber>
               </buyerContract>
            </contract>
            <item lineType="GOODS" quantity="3.0">
               <itemNumber>
                  <supplierItemNumber>
                     <itemID>
                        <![CDATA[P456]]>
                     </itemID>
                  </supplierItemNumber>
               </itemNumber>
               <itemDescription>
```

```
                  <![CDATA[Red Pencil]]>
               </itemDescription>
               <unitOfMeasure>
                  <supplierUnitOfMeasure>
                     <supplierUOMType>
                        <![CDATA[DZ]]>
                     </supplierUOMType>
                     <supplierUOMQuantity>
                        <![CDATA[]]>
                     </supplierUOMQuantity>
                  </supplierUnitOfMeasure>
               </unitOfMeasure>
            </item>
            <category>
               <categoryCode categoryCodeIdentifier="SUPPLIER">
                  <![CDATA[BC Personal Digital Assistants (PDA's) or Pen-Based
Computers]]>
               </categoryCode>
            </category>
            <price>
               <currency>
                  <![CDATA[USD]]>
               </currency>
               <unitPrice>
                  <![CDATA[9.99]]>
               </unitPrice>
            </price>
            <supplier>
               <supplierTradingPartnerCode>
                  <![CDATA[105676]]>
               </supplierTradingPartnerCode>
               <supplierName>
                  <![CDATA[Supplier Corp.]]>
               </supplierName>
            </supplier>
         </orderLine>
      </OrderLinesDataElements>
   </body>
</response>
```

Field Descriptions

The fields in the shoppingCart document are described below.

<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*.

<catalogTradingPartner> Required by the models listed below

Oracle Exchange name value, used by the Key 1 field in Oracle e-Commerce Gateway for mapping. (See Table 2–16 in Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78.) This value, which is populated by Oracle 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 Oracle Exchange (cXML)

<contract> Optional

Beginning of the contract section, which contains the <contractNumber>, <buyerContractLineNumber>, and <catalogType> fields. 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. If this contract number matches an approved, effective contract purchase agreement number in Oracle Purchasing, the purchase order that ultimately gets created for the item will get created against that contract. To map the contract number to a contract purchase agreement in Oracle Purchasing, the parent field must be <buyerContract>. See Contract Numbers on page 2-88 for a full description of the flow.

This field is not used in Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML).

<buyerContractLineNumber> Optional

Not used.

<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 or

omitted. (If this field is not CONTRACTED or omitted, the contractNumber is ignored.) Oracle Exchange omits this field.

<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, contained in the <supplierItemNumber> field.

<manufacturerName> Optional

Name of the manufacturer for this item. This name populates the Manufacturer Name in Oracle iProcurement.

<buyerItemRevision> Optional

Item revision number, contained in the <buyerItemNumber> field.

<itemDescription> Required

Supplier's description of this product. This description populates the Item Description in the Oracle 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. This code is used by the UOM mapping set up in Oracle e-Commerce Gateway.

<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>. The <supplierUOMQuantity> is used by the UOM mapping set up in Oracle e-Commerce Gateway.

<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. This code is used by the ITEM_CATEGORY (category) mapping set up in Oracle e-Commerce Gateway.

<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 Oracle 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, for mapping. See Set Up Supplier and Site Mapping on page 2-69.

<supplierName> Required

Supplier's company name. In a punchout from Oracle iProcurement, this supplier name is used by the Key 1 field in Oracle e-Commerce Gateway for category and UOM mapping if no <catalogTradingPartner> is given. (See Table 2–16 in Set Up Data Mapping in Oracle e-Commerce Gateway on page 2-78.) This supplier name is also mapped to the VENDOR_NAME value in Oracle e-Commerce Gateway if the EDI Location field does not match the <supplierDUNS> or <supplierTradingPartnerCode>.

<supplierSite> Optional

Supplier site name. This supplier site is mapped to the VENDOR_SITE External 2 value in Oracle e-Commerce Gateway if the EDI Location field does not match the <supplierDUNS> or <supplierTradingPartnerCode>.

<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 travel with the requisition.

PunchOutSetupRequest

Oracle Exchange sends the PunchOutSetupRequest document to the supplier in the following models:

- Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML)
- Model 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML)

PunchOutSetupRequest.dtd

See the cXML DTD at http://www.cxml.org/.

Example PunchOutSetupRequest

The following are example PunchOutSetupRequest documents.

PunchOutSetupRequest from Oracle iProcurement to Supplier Directly The following is an example PunchOutSetupRequest document sent from Oracle iProcurement to the supplier directly:

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<cXML version="1.1.007" xml:lang="en-US" payloadID="Sun Jan 12 00:13:01 PST
2003" timestamp="Sun Jan 12 00:13:01 PST 2003">
   <Header>
      <From>
         <Credential domain="DUNS">
            <Identity>123456789</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="DUNS">
            <Identity>987654321</Identity>
         </Credential>
      </To>
      <Sender>
         <Credential domain="DUNS">
            <Identity>123456789</Identity>
            <SharedSecret>welcome</SharedSecret>
         </Credential>
         <UserAgent>Oracle iProcurement</UserAgent>
      </Sender>
   </Header>
   <Request>
      <PunchOutSetupRequest operation="create">
         <BuyerCookie>12345678</BuyerCookie>
         <Extrinsic name="User">OPERATIONS</Extrinsic>
         <BrowserFormPost>
            <URL>http://qapache.us.oracle.com:4751/oa_
servlets/oracle.apps.icx.punchout.ui.PunchoutCallbackServlet</URL>
         </BrowserFormPost>
         <Contact>
            <Name xml:lang="en-US">Stock, Pat</Name>
            <Email>pat.stock@vision.com</Email>
         </Contact>
```

```
         <SupplierSetup>
            <URL>http://abc.com/Gateway/Company/Login.jsp</URL>
         </SupplierSetup>
      </PunchOutSetupRequest>
   </Request>
</cXML>
```

PunchOutSetupRequest from Oracle Exchange to Supplier The following is an example PunchOutSetupRequest document sent from Oracle Exchange to the supplier directly:

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<cXML version="1.1.007" xml:lang="en-US" payloadID="Sun Jan 12 01:22:10 PST
2003" timestamp="Sun Jan 12 01:22:10 PST 2003">
   <Header>
      <From>
         <Credential domain="DUNS">
            <Identity>123456789</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="DUNS">
            <Identity>987654321</Identity>
         </Credential>
      </To>
      <Sender>
         <Credential domain="Oracle Exchange">
            <Identity>exchange.oracle.com</Identity>
            <SharedSecret>welcome</SharedSecret>
         </Credential>
         <UserAgent>Oracle Exchange</UserAgent>
      </Sender>
   </Header>
   <Request>
      <PunchOutSetupRequest operation="create">
         <BuyerCookie>12345678</BuyerCookie>
         <Extrinsic name="User">LIWANG</Extrinsic>
         <BrowserFormPost>
 <URL>http://exchange.oracle.com/orders/PunchoutCallback.jsp?app=selling</URL>
         </BrowserFormPost>
         <Contact>
            <Name xml:lang="en-US">LiWang</Name>
            <Email>liwang@oracle.com</Email>
         </Contact>
         <SupplierSetup>
```

```
            <URL>http://abc.com/Gateway/Company/Login.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 what was entered in the Domain field while defining the punchout. The identity element is what was entered in the Identity field while defining the punchout.

In a punchout from Oracle Exchange, the domain attribute will be either of the following:

- DUNS. If the company has a DUNS number on Oracle 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 Oracle Exchange.

For Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle 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. In a cXML punchout from Oracle Exchange, the identity field will have the DUNS number if the company has a DUNS number on Oracle Exchange. In a cXML punchout to the supplier, DUNS is the Supplier ID on the punchout setup page, if entered.
- NAME. If there is no DUNS number, the identity field will have the name of the company on Oracle Exchange. In a cXML punchout to the supplier, the NAME is the Supplier Name on the punchout setup page.

The identity field is used by the Key 1 field in Oracle eCommerce Gateway for UOM and category mapping.

<Sender> <Credential> Required

In a punchout from Oracle Exchange, the domain attribute identifies the Exchange name. The identity field gives the Exchange site URL, such as exchange.oracle.com. In a punchout from Oracle iProcurement, the <Sender><Credential> values are the same as the <From><Credential> values.

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 Oracle Exchange for Model 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML); user login name of the Oracle iProcurement requester for Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle Exchange (cXML) and Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML).

<BrowserFormPost> <URL> Required

URL where the browser posts the shopping cart cXML document after the supplier sends the shopping cart to the browser.

<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 Oracle Exchange in the following models:

- Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML)
- Model 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle 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="UTF-8"?><!DOCTYPE cXML SYSTEM
"http://xml.cxml.org/schemas/cXML/1.1.010/cXML.dtd"><cXML version="1.1.007"
xml:lang="en-US" payloadID="20030345080300674 9@b2b.euro.com"
timestamp="2003-01-12T08:03:00">
<Response>
     <Status code="200" text="OK"/>
     <PunchOutSetupResponse>
          <StartPage>
<URL>https://abc.com/Gateway/Company/Login.jsp?SessionID=69F49ED9-9BE9-43AE-AD6B
-4F9E54FF7996</URL>
          </StartPage>
          </PunchOutSetupResponse>
     </Response>
</cXML>
```

Unsuccessful Connection The following example document shows that an error, such as an invalid password, occurred during the connection; the status code is a cXML status code:

```
<?xml version="1.0" encoding="UTF-8"?><!DOCTYPE cXML SYSTEM
"http://xml.cxml.org/schemas/cXML/1.1.010/cXML.dtd"><cXML version="1.1.007"
xml:lang="en-US" payloadID="20030345081324701 5@b2b.euro.com"
```

```
timestamp="2003-01-12T08:13:24">
     <Response>
          <Status code="401" text=""/>
     </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 Oracle Exchange in cXML format in the following models:

- Model 2b: Punchout from Oracle iProcurement Directly to Supplier-Hosted Catalog (cXML)
- Model 3b: Punchout from Oracle Exchange to Supplier-Hosted Catalog (cXML)
- Model 5: Punchout from Oracle iProcurement to Supplier-Hosted Catalog via Oracle 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="UTF-8"?>
<cXML payloadID="20030345080932789@euro.com" timestamp="2003-01-12%2008:09:32">
<Header>
     <From>
          <Credential domain="DUNS">
```

```
                <Identity>987654321</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="DUNS">
                <Identity>123456789</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="DUNS">
                <Identity>987654321</Identity>
            </Credential>
<UserAgent/>
        </Sender>
</Header>
<Message>
<PunchOutOrderMessage>
        <BuyerCookie>12345678</BuyerCookie>
        <PunchOutOrderMessageHeader operationAllowed="create">
            <Total>
                <Money currency="GBP">924.00</Money>
            </Total>
        </PunchOutOrderMessageHeader>
        <!-- BASE ITEM  -->
        <ItemIn quantity="1">
            <ItemID>
                <SupplierPartID>2041711,39630</SupplierPartID>
            </ItemID>
            <ItemDetail>
                <UnitPrice>
                    <Money currency="GBP">899.00</Money>
                </UnitPrice>
                <Description xml:lang="en">Jan 1 Promotion - Mainstream Mobility
(C640) 200-17009</Description>
                <UnitOfMeasure>EA</UnitOfMeasure>
                <Classification domain="SPSC">43000000</Classification>
                <Classification domain="UNSPSC">43000000</Classification>
                <ManufacturerPartID>39630</ManufacturerPartID>
                <ManufacturerName>Manufacturer Corporation</ManufacturerName>
            </ItemDetail>
        </ItemIn>
        <!-- DELIVERY -->
        <ItemIn quantity="1">
            <ItemID>
                <SupplierPartID>2041711</SupplierPartID>
```

```
                <SupplierPartAuxiliaryID/>
            </ItemID>
            <ItemDetail>
                <UnitPrice>
                    <Money currency="GBP">25.00</Money>
                </UnitPrice>
                <Description xml:lang="en">Delivery</Description>
                <UnitOfMeasure>EA</UnitOfMeasure>
                <Classification domain="SPSC">43000000</Classification>
                <Classification domain="UNSPSC">43000000</Classification>
                <ManufacturerPartID/>
                <ManufacturerName/>
            </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.

supplierSync

Oracle Exchange sends the supplierSynch document to Oracle iProcurement when you download punchout suppliers from Oracle Exchange for the following models:

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

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

Downloading punchout suppliers from Oracle Exchange is described in Download Punchout Suppliers from Oracle Exchange on page 2-38.

Example supplierSync

The following is an example supplierSync document:

```
<?xml version = '1.0' encoding = 'UTF-8'?>
<response>
   <header version="1.0">
     <return returnCode="S"/>
   </header>
   <body>
      <supplier>
         <supplierPartyId>
            <![CDATA[9176]]>
         </supplierPartyId>
         <supplierImageUrl>
            <![CDATA[http://www.mysite.com/logo.gif]]>
         </supplierImageUrl>
         <supplierLanguageSpecificInfo>
            <language>
               <![CDATA[US]]>
            </language>
            <supplierName>
               <![CDATA[Staples]]>
            </supplierName>
            <supplierDescription>
               <![CDATA[]]>
            </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 Oracle Exchange.

<supplierImageUrl> Required

URL pointing to the supplier's logo (entered by the supplier on Oracle Exchange).

<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 Oracle Exchange).

<supplierKeywords> Required

Keywords provided by the supplier when defining the punchout on Oracle Exchange.

ItemSearchRequest

Oracle iProcurement uses the ItemSearchRequest document to conduct a transparent punchout on Oracle Exchange or a supplier site, depending on the transparent punchout model used:

- Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)
- Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)

ItemSearchRequest.dtd

```
<?xml version="1.0" encoding="UTF-8"?>

<!-- Version 1.0 of Oracle Transparent Punchout Item Search Request DTD
     User by Oracle Exchange 6.2.4 and Oracle iProcurement Release FPI
 -->
```

```
<!-- Start Item Search Request DTD -->

<!ELEMENT DistributedSearchXML(Header,Request)>
  <!ATTLIST DistributedSearchXML payloadID CDATA #REQUIRED>
  <!ELEMENT Header(From,To,Login)>
    <!ATTLIST Header version CDATA #REQUIRED>
    <!ELEMENT From (Credential)>
    <!ELEMENT To (Credential)>
      <!ELEMENT Credential (Identity)>
      <!ATTLIST Credential domain CDATA #REQUIRED>
        <!ELEMENT Identity(#PCDATA)>
    <!ELEMENT Login (UserName,Password,AuthenticatedKey?)>
      <!ELEMENT UserName (#PCDATA)>
      <!ELEMENT Password (#PCDATA)>
      <!ELEMENT AuthenticatedKey (#PCDATA)>
  <!ELEMENT Request (ItemSearchRequest)>
    <!ELEMENT ItemSearchRequest (UserInfo?,SearchInfo,UserArea?)>
    <!ATTLIST ItemSearchRequest operation CDATA #IMPLIED>
      <!ELEMENT UserInfo (UserName?,AppsUserName?,UserPhone?,UserEmail?)>
        <!ELEMENT AppsUserName (#PCDATA)
        <!ELEMENT UserPhone (#PCDATA)>
        <!ELEMENT UserEmail (#PCDATA)>
      <!ELEMENT SearchInfo
(SearchLanguage,SearchKeywords,SortBy?,ResultSize,StartResult)>
        <!ELEMENT SearchLanguage (#PCDATA)>
        <!ELEMENT SearchKeywords (#PCDATA)>
        <!ELEMENT SortBy (#PCDATA)>
        <!ATTLIST SortBy order (ASC|DESC) #REQUIRED>
        <!ELEMENT ResultSize (#PCDATA)>
        <!ELEMENT StartResult (#PCDATA)>
      <!ELEMENT UserArea (SupplementalInfo*)>
        <!ELEMENT SupplementalInfo (#PCDATA)>
        <!ATTLIST SupplementalInfo name CDATA #REQUIRED>

<! --- End Item Search Request DTD -->
```

Example ItemSearchRequest

The following is an example ItemSearchRequest document:

```
<?xml version="1.0" encoding="utf-8"?>
<DistributedSearchXML payloadID = "123465678">
   <Header version="1.0">
      <From>
```

```
            <Credential domain="DUNS">
               <Identity>123456789</Identity>
            </Credential>
         </From>
         <To>
            <Credential domain="Name">
               <Identity>Disneyland</Identity>
            </Credential>
         </To>
         <Login>
            <UserName>operations</UserName>
            <Password>welcome</Password>
            <AuthenticatedKey>12345678</AuthenticatedKey>
         </Login>
      </Header>
      <Request>
         <ItemSearchRequest operation="SimpleSearch">
            <UserInfo>
               <UserName></UserName>
               <AppsUserName>ppan</AppsUserName>
               <UserPhone></UserPhone>
               <UserEmail></UserEmail>
            </UserInfo>
            <SearchInfo>
               <SearchLanguage>EN-US</SearchLanguage>
               <SearchKeywords>blue pen</SearchKeywords>
               <SortBy order="DESC">Price</SortBy>
               <ResultSize>15</ResultSize>
               <StartResult>1</StartResult>
            </SearchInfo>
            <UserArea>
               <SupplementalInfo name="Group">OU1</SupplementalInfo>
               <SupplementalInfo name="Division">NorthEast</SupplementalInfo>
            </UserArea>
         </ItemSearchRequest>
      </Request>
</DistributedSearchXML>
```

Field Descriptions

The fields in the ItemSearchRequest document are described below.

<From> <Credential> Required

Identifier for the buying organization. The domain attribute will be what was entered in the Domain field while defining the transparent punchout. The identity element is what was entered in the Identity field while defining the transparent punchout.

<To> <Credential> Required

Identifier for the supplier organization. If conducting a transparent punchout to a supplier:

- If only a Supplier Name (not a Supplier ID) was entered on the transparent punchout setup page, the domain attribute is NAME and the identity is the Supplier Name.
- If a Supplier ID was also entered on the transparent punchout setup page, the domain attribute is DUNS and the identity is the Supplier ID.

If conducting a transparent punchout to Oracle Exchange, the ToCredential is always Oracle Exchange as shown in the following example:

```
<To>
 <Credential domain="">
   <Identity>Oracle Exchange</Identity>
 </Credential>
</To>
```

<Login> <UserName> Required

User name of the Oracle iProcurement requester used for authentication by the external site. For a transparent punchout to Oracle Exchange, this is the proxy user name assigned to the requester. For a transparent punchout to a supplier, the supplier needs to provide the user name to the buying organization. The user name comes from the buying organization's transparent punchout setup.

<Login> <Password> Required

Password of the Oracle iProcurement requester used for authentication by the external site. For a transparent punchout to Oracle Exchange, this is the proxy user password assigned to the requester. For a transparent punchout to a supplier, the supplier needs to provide the password to the buying organization. The password comes from the buying organization's transparent punchout setup.

Note: The password is not encrypted in the XML document. It is up to the transport protocol to encrypt the message to ensure security.

<Login> <AuthenticatedKey> Optional

Key that Oracle iProcurement received from the external site in previous responses. It is recommended that the supplier provide the key for faster performance, since it avoids repeat logins.

<ItemSearchRequest> Required

The operation attribute in this field defines the type of search to perform. The currently supported value is SimpleSearch.

<UserInfo> <UserName> Optional

Full name of the Oracle iProcurement requester. This field is reserved for future use.

<UserInfo> <AppsUserName> Optional extended data *

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

<UserInfo> <userPhone> Optional

Oracle iProcurement requester's phone number. This field is reserved for future use.

<UserInfo> <userEmail> Optional

Oracle iProcurement requester's e-mail address. This field is reserved for future use.

<searchLanguage> Required

Requester's search language in Oracle iProcurement. The search language can be chosen by clicking the "Change Catalog Language" link on the **Shop** home page. (For example, if the session language is English, but catalog items exist only in German, the requester can choose German as the search language.)

The language uses the ISO language and territory codes format—for example, EN-US for United States English.

The supplier should honor the search language and return results in that language. Oracle Exchange returns results in the specified search language, if the supplier

loaded item translations in that language to the Exchange catalog. (If no translations exist in that Exchange language, the search response informs the requester that no results were found.)

<searchKeywords> Required

Search string the requester entered. The search string may include an asterisk (*) if the requester performed a wildcard search. (If the requester used % instead of * to perform the wildcard search, Oracle iProcurement converts % to *.) Therefore, the supplier needs to interpret and support the * wildcard character. For example, the search string *ball** should return all items that start with *ball*. The supplier can interpret the rest of the search string however it wants. If there are multiple words in the search string, it is suggested that the supplier interpret the query matching condition as AND, to make the behavior consistent with Oracle iProcurement. For example, if the search string is *legal paper*, Oracle iProcurement returns all items that contain the words *legal* AND *paper* in their searchable item information.

When conducting a transparent punchout to Oracle Exchange, Oracle Exchange supports the following search operators: *, %, -, and "". If these are included in the search string, Oracle Exchange will use them to conduct the search and return the relevant results.

<SortBy> Optional

Sort-by method. The order attribute indicates whether the sort is ascending (ASC) or descending (DESC). The value indicates what to sort by. The currently supported sort-by value is Price. Step "5 Oracle iProcurement displays search results" on page A-20 provides more information on this process.

<ResultSize> Required

Number of search results requested. This number is based on the requester's user profile (accessed by the My Profile icon), in the Catalog Search Result Set Size field. This number is two times the Catalog Search Result Set Size. For example, if the requester's Catalog Search Result Set Size preference is 7, the <ResultSize> is 14. Step "5 Oracle iProcurement displays search results" on page A-20 provides more information on this process.

<StartResult> Required

Index number to be assigned to the first search result. This number will be used for indexing when fetching additional search results. In the following example, the requester's Catalog Search Result Set Size preference is 7. The first time the request is sent, the <StartResult> is 1 and the <ResultSize> is 15 (two times 7, plus 1).

Thereafter, the <ResultSize> remains 14 (two times 7), and the <StartResult> starts at the beginning of the next result set.

Request	<StartResult>	<ResultSize>
First request	1	15
Second request	16	14
Third request	30	14

Step "5 Oracle iProcurement displays search results" on page A-20 provides more information on this process.

<SupplementalInfo> Optional

Additional elements the buying organization can pass to the external site. The supplier can use this information to further identify the buyer and return search results specific to that buyer—for example, buyer-specific prices for a particular geographical region. Use the name attribute to identify the element, such as Division. Then provide the value in the field, such as NorthEast.

This field is not processed by Oracle Exchange.

* Optional user information sent to the supplier if this option was chosen while defining the transparent punchout in Oracle iProcurement. This field is used by Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML). (If optional user information was not chosen, the UserInfo section is not included.)

ItemSearchResponse

Oracle iProcurement uses the ItemSearchResponse document to conduct a transparent punchout on Oracle Exchange or a supplier site, depending on the transparent punchout model used:

- Model 1: Transparent Punchout from Oracle iProcurement to Oracle Exchange (XML)
- Model 2: Transparent Punchout from Oracle iProcurement to Supplier-Hosted Catalog (XML)

ItemSearchResponse.dtd

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- $Header: ItemSearchResponse_v1_0.dtd 115.1 2003/03/05 22:09:02 sthadaka
noship $ -->
<!-- Version 1.0 of Oracle Transparent Punchout Item Search Response DTD
     User by Oracle Exchange 6.2.4 and Oracle iProcurement Release FPI
 -->

<!-- Start Item Search Response DTD -->

<!ELEMENT DistributedSearchXML (Header,Response)>
  <!ELEMENT Header (From,To,AuthenticatedKey?)>
    <!ATTLIST Header version CDATA #REQUIRED>
    <!ELEMENT From (Credential)>
    <!ELEMENT To (Credential)>
    <!ELEMENT AuthenticatedKey (#PCDATA)>
      <!ELEMENT Credential (Identity)>
      <!ATTLIST Credential domain CDATA #REQUIRED>
        <!ELEMENT Identity (#PCDATA)>
  <!ELEMENT Response (ItemSearchResponse)>
    <!ELEMENT ItemSearchResponse (SearchResultsInfo,Status,ItemInfo*)>
      <!ELEMENT SearchResultsInfo
(ResultsCount,TotalResultsCount?,SearchTime?,SortedBy?)>
        <!ELEMENT ResultsCount (#PCDATA)>
        <!ELEMENT TotalResultsCount (#PCDATA)>
        <!ELEMENT SearchTime (#PCDATA)>
        <!ELEMENT SortedBy (#PCDATA)>
        <!ATTLIST SortedBy order CDATA #REQUIRED>
      <!ELEMENT Status (#PCDATA)>
        <!ATTLIST Status code CDATA #REQUIRED>
      <!ELEMENT ItemInfo
(SupplierPartNum,SupplierInfo,Description,UnitPrice,UOMInfo,
ManufacturerPartNum?, ManufacturerName?, ThumbnailImage?, Image?,
CategoryInfo,CatalogType?,BuyerContract?,ItemAttribute*)>
        <!ATTLIST ItemInfo lineType #CDATA #REQUIRED>
        <!ELEMENT SupplierPartNum (#PCDATA)>
        <!ELEMENT SupplierInfo (SupplierCode,SupplierName)>
           <!ELEMENT SupplierCode (#PCDATA)>
           <!ELEMENT SupplierName (#PCDATA)>
        <!ELEMENT Description (ShortName,LongName?)>
          <!ELEMENT ShortName (#PCDATA)>
          <!ELEMENT LongName (#PCDATA)>
        <!ELEMENT UnitPrice (Money)>
          <!ELEMENT Money (#PCDATA)>
```

```
          <!ATTLIST Money currency CDATA #REQUIRED>
        <!ELEMENT UOMInfo (UOMCode,UOMName?)>
          <!ELEMENT UOMCode (#PCDATA)>
          <!ELEMENT UOMName (#PCDATA)>
        <!ELEMENT ManufacturerPartNum (#PCDATA)>
        <!ELEMENT ManufacturerName (#PCDATA)>
        <!ELEMENT ThumbnailImage (URL)>
        <!ELEMENT Image (URL)>
          <!ELEMENT URL (#PCDATA)>
        <!ELEMENT CategoryInfo (CategoryCode,CategoryName?)>
          <!ELEMENT CategoryCode (#PCDATA)>
          <!ELEMENT CategoryName (#PCDATA)>
        <!ELEMENT CatalogType (#PCDATA)>
        <!ELEMENT BuyerContract (#PCDATA)>
        <!ELEMENT ItemAttribute (#PCDATA)>
          <!ATTLIST ItemAttribute
           name CDATA #REQUIRED
           type CDATA #REQUIRED>

<! --- End Item Search Response DTD -->

<! --- End Distributed Search Response DTD -->
```

Example ItemSearchResponse

Below are example ItemSearchResponse documents.

Successful Response The following example ItemSearchResponse document shows a successful connection:

```
<?xml version = "1.0" encoding = "UTF-8"?>
<DistributedSearchXML>
   <Header version="1.0">
      <From>
         <Credential domain="Name">
            <Identity>DisneyLand</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="DUNS">
            <Identity>123456789</Identity>
         </Credential>
      </To>
      <AuthenticatedKey>12345678</AuthenticatedKey>
   </Header>
```

```
<Response>
   <ItemSearchResponse>
      <SearchResultsInfo>
         <ResultsCount>10</ResultsCount>
         <TotalResultsCount>234</TotalResultsCount>
         <SearchTime>0.75</SearchTime>
         <SortedBy order="desc">Price</SortedBy>
      </SearchResultsInfo>
      <Status code="200">Success</Status>
      <ItemInfo lineType="Goods">
         <SupplierPartNum>CR008521</SupplierPartNum>
         <SupplierInfo>
            <SupplierCode>78789797</SupplierCode>
            <SupplierName>CE Office Supply</SupplierName>
         </SupplierInfo>
         <Description>
            <ShortName>Blue pencil</ShortName>
            <LongName>Cross refills for Selectip Rollerball pens.</LongName>
         </Description>
         <UnitPrice>
            <Money currency="JPY">400</Money>
         </UnitPrice>
         <UOMInfo>
            <UOMCode>EA</UOMCode>
            <UOMName>EA</UOMName>
         </UOMInfo>
         <ManufacturerPartNum>CRO8521</ManufacturerPartNum>
         <ManufacturerName>BIC</ManufacturerName>
         <ThumbnailImage>
            <URL>http://www.image.com/thumbnailimage/5555.gif</URL>
         </ThumbnailImage>
         <Image>
            <URL>http://www.image.com/normalimage/5555.gif</URL>
         </Image>
         <CategoryInfo>
            <CategoryCode>44978878</CategoryCode>
            <CategoryName>Cartridge Pen Ink Refills</CategoryName>
         </CategoryInfo>
         <CatalogType>CONTRACTED</CatalogType>
         <BuyerContract>852</BuyerContract>
         <ItemAttribute name="Ink Color" type="Text">Blue</ItemAttribute>
         <ItemAttribute name="Model" type="Number">21</ItemAttribute>
         <ItemAttribute name="Point Style" type="Text">Fine</ItemAttribute>
      </ItemInfo>
   </ItemSearchResponse>
```

```
   </Response>
</DistributedSearchXML>
```

Unsuccessful Response The following example ItemSearchResponse document shows an unsuccessful connection:

```
<?xml version = "1.0" encoding = "UTF-8"?>
<DistributedSearchXML>
   <Header version="1.0">
      <From>
         <Credential domain="Name">
            <Identity>DisneyLand</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="DUNS">
            <Identity>123456789</Identity>
         </Credential>
      </To>
      <AuthenticatedKey>12345678</AuthenticatedKey>
   </Header>
   <Response>
      <ItemSearchResponse>
         <SearchResultsInfo>
            <ResultsCount>0</ResultsCount>
         </SearchResultsInfo>
         <Status code="401">Authentication Failure</Status>
      </ItemSearchResponse>
   </Response>
</DistributedSearchXML>
```

No Results Found The following example ItemSearchResponse document occurs when no results are found that match the search criteria:

```
<?xml version = "1.0" encoding = "UTF-8"?>
<DistributedSearchXML>
   <Header version="1.0">
      <From>
         <Credential domain="Name">
            <Identity>DisneyLand</Identity>
         </Credential>
      </From>
      <To>
         <Credential domain="DUNS">
            <Identity>123456789</Identity>
```

```
         </Credential>
      </To>
      <AuthenticatedKey>12345678</AuthenticatedKey>
   </Header>
   <Response>
      <ItemSearchResponse>
         <SearchResultsInfo>
            <ResultsCount>0</ResultsCount>
            <TotalResultsCount>0</TotalResultsCount>
            <SearchTime>0.75</SearchTime>
            <SortedBy order="desc"></SortedBy>
         </SearchResultsInfo>
         <Status code="200">Success</Status>
      </ItemSearchResponse>
   </Response>
</DistributedSearchXML>
```

Field Descriptions

The fields in the ItemSearchResponse document are described below.

<From> <Credential> Required

Identifier for the supplier organization. The recommendation is to use the same values the buying company sent in the <To><Credential> fields in the ItemSearchRequest document. Oracle Exchange use the same values the buying company sent in the <To><Credential> fields in the ItemSearchRequest document.

<To> <Credential> Required

Identifier for the buying organization. The recommendation is to use the same values the buying company sent in the <From><Credential> fields in the ItemSearchRequest document. Oracle Exchange use the same values the buying company sent in the <From><Credential> fields in the ItemSearchRequest document. In a transparent punchout to Oracle Exchange, the identity value is used for the Key 1 field in Oracle e-Commerce Gateway for category and UOM mapping.

<AuthenticatedKey> Optional

Key that the external site generates that Oracle iProcurement can use for all future search requests. It is recommended that the supplier provide the key for faster performance, since it avoids repeat logins.

<ResultsCount> Optional

Number of search results returned in this response. For example, the <ResultSize> in the item search request may have requested 20 search results. The <ResultsCount> will therefore be 20 as requested, or it might be less than 20—for example, if only 17 search results remain.

<TotalResultsCount> Optional

Total number of results in the external catalog that matched the search request. Since it can take time for a server to calculate total results, this field is optional. The number can also be approximate, such as 100+. Although Oracle iProcurement does not display the total results count, the supplier may provide a number if desired.

<SearchTime> Optional

Time it took for the external server to conduct the search, in seconds.

<SortedBy> Optional

Actual method the external site used to sort the search results. The order attribute can be used to indicate whether the sort is ascending (ASC or asc) or descending (DESC or desc). The value indicates the sort-by method—for example, by Price. The attribute and value are not validated or used by Oracle iProcurement. The supplier could specify any.

<Status> Required

Indicator of whether the search request was successful. The code attribute contains the status code. The value for this field is the error message, if any. The following status codes are recognized by Oracle iProcurement; if the supplier specifies one of these codes, the corresponding error message is displayed to the requester:

Table B–9 ItemSearchResponse Status Codes

Status Code	Description	Message Displayed to Requester
200	Success. Items should be returned in the response only if the error code is 200.	(No message; search results are displayed.)
400	Bad request. This should be returned if the request XML cannot be parsed or some mandatory fields are missing. The exact cause of the failure should be indicated in the error message.	The supplier website is not responding. Try again later. If the problem persists, contact your system administrator.

Table B–9 ItemSearchResponse Status Codes

Status Code	Description	Message Displayed to Requester
401	Authentication error. This should be returned if the authentication fails. The exact cause of the failure should be indicated in the error message.	The supplier website is not responding. Try again later. If the problem persists, contact your system administrator.
500	Unexpected error. This should be returned if there is any error on the server when handing the request (for example, the database is not available). The exact cause of the failure should be indicated in the error message.	The supplier website is not responding. Try again later. If the problem persists, contact your system administrator.
501	Sort by criteria is not available. This should be returned if the SortBy field in the search request is not supported by the server.	The supplier is unable to sort the results as you have specified.
502	Too many search results.	The search criteria you entered will return too many matching items. Narrow your search by entering more keywords.
503	Search language not valid. This should be returned if the SearchLanguage field in the search request is not supported by the server.	The catalog language you have specified is not available for this search. Select a different catalog language and try again.

Internally, the status codes map to one or more error codes described in Table 4–1 on page 4-4.

<ItemInfo> Required if search results are returned

The lineType attribute currently supports only the following value: goods.

<SupplierPartNum> Required

Supplier part number for the item.

<SupplierCode> Required

Identifier for the supplier. The identifier is not language specific (it does not vary by search language). This identifier is used for mapping the supplier.

<SupplierName> Required

Supplier name. This name is language specific (varies by search language). For example, in a transparent punchout to Oracle Exchange, the Exchange uses the <searchLanguage> in the ItemSearchRequest document to determine which language of the catalog to search and to return results from. The name is used for display purposes only.

<Description> <ShortName> Required

Short description for the item.

<Description> <LongName> Optional

Long description for the item.

<UnitPrice> <Money> Required

Price of the item. The currency attribute in the Money field specifies the currency for the price.

<UOMInfo> <UOMCode> Required

Unit of measure code for the item. The code is not language specific (it does not vary by search language). This code is used for mapping the unit of measure.

<UOMInfo> <UOMName> Optional

Unit of measure name for the item. This name is language specific (varies by search language). For example, in a transparent punchout to Oracle Exchange, the Exchange uses the <searchLanguage> in the ItemSearchRequest document to determine which language of the catalog to search and to return results from. The name is used for display purposes only.

<ManufacturerPartNum> Optional

Manufacturer part number for the item.

<ManufacturerName> Optional

Item manufacturer's name.

<ThumbnailImage> <URL> Optional

Web site address for a thumbnail image of the item. The following illustration shows how the thumbnail images for the items display in the search results.

If you do not specify a thumbnail image, a blank space displays, as shown in the following illustration:

Individual requesters can use their My Profile preferences to disable thumbnail images. If so, the text description of the item fills the entire horizontal space, with no thumbnail image.

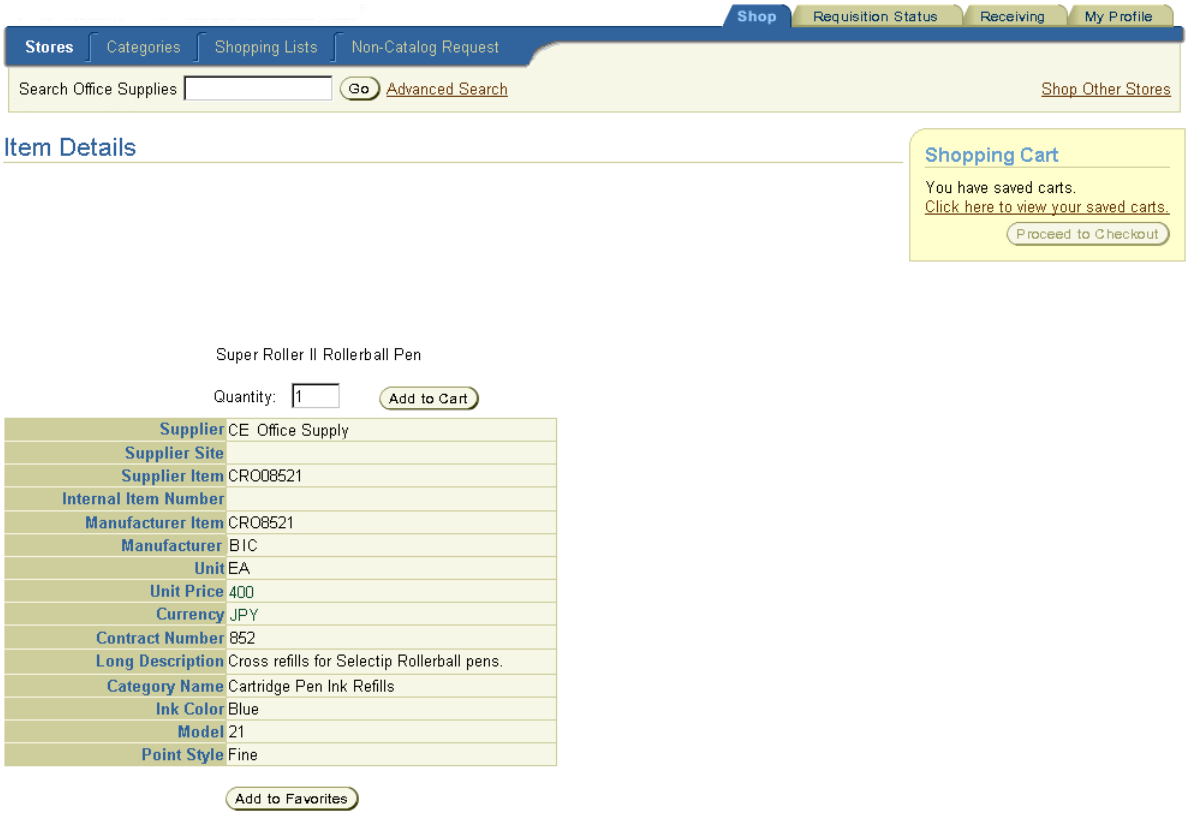
When search results are displayed in the requester's browser, the browser sends an HTTP request to the supplier's Web server for images. For increased security, each image URL can use the <authenticatedKey>; the supplier's Web server can use the key to perform additional authentication of the requester who is accessing the image if desired. (The supplier sends the <authenticatedKey> to Oracle iProcurement, so that the requester's browser can send the key back to the supplier's server to access the image.) If the authentication is successful, the image is retrieved and returned to the browser.

If you do not have thumbnail images but want to use them, specify the same image URL in both the <Thumbnail> and <Image> URL fields. The buyer can use the profile option POR: Thumbnail Width or POR: Thumbnail Height to create a resized version of the image for thumbnail purposes. See the image management section of the *Oracle iProcurement Implementation Guide* for more information.

<Image> <URL> Optional

URL for a full image of the item, displayed on the **Item Details** page. The following illustration shows how the image displays on the **Item Details** page:

If you do not specify a full image of the item, no image displays, as shown in the following illustration:



When search results are displayed in the requester's browser, the browser sends an HTTP request to the supplier's Web server for images. For increased security, each image URL can use the <authenticatedKey>; the supplier's Web server can use the key to perform additional authentication of the requester who is accessing the image if desired. (The supplier sends the <authenticatedKey> to Oracle iProcurement, so that the requester's browser can send the key back to the supplier's server to access the image.) If the authentication is successful, the image is retrieved and returned to the browser.

<CategoryInfo> <CategoryCode> Required

Code for the category. The code is not language specific (it does not vary by search language). This code is used for mapping the category.

<CategoryInfo> <CategoryName> Optional

Name of the category. This name is language specific (varies by search language). For example, in a transparent punchout to Oracle Exchange, the Exchange uses the <searchLanguage> in the ItemSearchRequest document to determine which language of the catalog to search and to return results from. The name is used for display purposes only.

<CatalogType> Optional

Indicator of whether the item is from a contract. If the item is from a contract, enter the value CONTRACTED in this field. Otherwise, leave this field blank.

<BuyerContract> Optional

Contract number if the item is from a contract. If this contract number matches an approved, effective contract purchase agreement number in Oracle Purchasing, the purchase order that ultimately gets created for the item will get created against that contract. See Contract Numbers on page 2-88 for a full description of the flow.

<ItemAttribute> Optional

Use the ItemAttribute fields to specify additional attributes (also known as descriptors) for the item. The type attribute can be Text, Number, Date, or URL; however, Oracle iProcurement treats the attribute values as Text.

See the XML example ItemSearchResponse earlier in this section for example ItemAttribute fields. The illustrations of the **Item Details** page above show how the ItemAttribute fields in this XML example display to the requester. ItemAttribute fields display only on the **Item Details** page. They display at the end, after the other item information.

The ItemAttribute fields can be specific to the search language (the language sent in the <searchLanguage> field in the ItemSearchRequest document). For example, the requester's session language is English. If the supplier returns item information in German, the item information itself displays in German; however, the field names, such as item Description or Manufacturer, display in English. The ItemAttribute fields, however, display exactly how they are sent. If the supplier returns both an ItemAttribute field and its value in German, both the field and its value display in German, regardless of the requester's session language.

When conducting a transparent punchout to Oracle Exchange, any attributes that the Exchange Operator defines, in addition to those such as Price or Manufacturer that Oracle Exchange already provides, are returned in the ItemAttribute fields.

Mapping Between XML Fields and Oracle iProcurement Descriptors

The table below shows the mapping between XML fields and the descriptors that requesters see in the search results or item details.

ItemAttributes fields display in addition to the descriptors below. For example, Lead Time is a default descriptor that Oracle iProcurement provides, but not an XML field in the ItemSearchResponse document. If the supplier specifies Lead Time in the ItemAttributes field, it displays in addition to the default Lead Time descriptor.

Table B–10 Mapping of XML and cXML Fields to Oracle iProcurement Fields

Descriptor in Oracle iProcurement	XML Field in shoppingCart	cXML Field in PunchoutOrderMessage	XML Field in ItemSearchResponse
Category	<categoryCode>	<Classification>	<CategoryName>
Description	<itemDescription>	<Description>	<ShortName>
Unit	<supplierUOMType>	<UnitOfMeasure>	<UOMName>
Unit Price	<unitPrice>	<Money>	<Money currency=>
Currency	<currency>	<currency>	<Money currency=>
Supplier	<supplierName>	*(Supplier name entered in punchout setup definition)*	<SupplierName>
Supplier Item	<supplierItemNumber> <itemID>	<SupplierPartID>	<SupplierPartNum>
Manufacturer	<manufacturerName>	<ManufacturerName>	<ManufacturerName>
Manufacturer Item	<manufacturerItem Number><itemID>	<ManufacturerPartID>	<ManufacturerPartNum>
Image	*(no XML field)*	*(no XML field)*	<Image><URL>
Image URL	*(no XML field)*	*(no XML field)*	<Image><URL>
Thumbnail Image	*(no XML field)*	*(no XML field)*	<ThumbnailImage> <URL>
Long Description	*(no XML field)*	*(no XML field)*	<LongName>

Table B–10 Mapping of XML and cXML Fields to Oracle iProcurement Fields

Descriptor in Oracle iProcurement	XML Field in shoppingCart	cXML Field in PunchoutOrderMessage	XML Field in ItemSearchResponse
UNSPSC Code	*(Supplier can provide UNSPSC code in <categoryCode>, but it does not display in UNSPSC field in iProcurement.)*	*(Supplier can provide UNSPSC code in <Classification>, but it does not display in UNSPSC field in iProcurement.)*	*(Supplier can provide UNSPSC code in <CategoryName>, but it does not display in UNSPSC field in iProcurement.)*
Functional Currency Price	*(Oracle iProcurement populates this field)*	*(Oracle iProcurement populates this field)*	*(Oracle iProcurement populates this field)*
Item Type	<item lineType=>	*(no XML field)*	<ItemInfo lineType=>
Supplier Site	<supplierSite>	*(no XML field)*	*(no specific XML field)*
Contract Number	<buyerContract> <contractNumber>	*(no XML field)*	<BuyerContract>

Mapping Between XML and cXML

When Oracle Exchange converts a supplier's cXML shopping cart to XML in a punchout, 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 Oracle Exchange, for example.)

Table B–11 cXML to XML Conversion of Shopping Cart in Punchout

cXML	XML
quantity	<item quantity=…>
SupplierPartID	<supplierItemNumber> <itemID>
Money	<unitPrice>
currency	<currency>
Description	<itemDescription>
UnitOfMeasure	<supplierUnitOfMeasure> <supplierUOMType>
Classification	<categoryCode>
ManufacturerPartID	<manufacturerItemNumber> <itemID>
ManufacturerName	<manufacturerName>

C

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

Oracle iProcurement and Oracle Exchange come with the capability to access secure sites. If the site the buying company accesses 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 2-8.

> **Note:** Oracle iProcurement and Oracle Exchange do not support client-side certificate authentication. That is, they authenticate the server they are accessing, 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 Oracle iProcurement to the secure Oracle Exchange site as an example, but the information applies to all models where the site being accessed is secure.

Secure Sockets Layer (SSL) Authentication

Oracle iProcurement uses the SSL protocol to establish a secure HTTP connection between the Oracle iProcurement server and the supplier site or Oracle Exchange. The SSL protocol is a set of rules governing authentication and encrypted

communication between servers and clients. Oracle iProcurement and Oracle Exchange call Oracle SSL application programmable interfaces (APIs) to establish a connection to the secure site.

For example, in a punchout from Oracle iProcurement to Oracle Exchange, the Oracle Exchange server responds to Oracle iProcurement, through the SSL connection, with a digital certificate. Oracle iProcurement then authenticates the digital certificate. A digital certificate is proof that a site (Oracle 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 Oracle Exchange, Oracle iProcurement compares the digital certificate to certification authorities stored in the ca-bundle.crt file in Oracle iProcurement.

The steps involved in validating the digital certificate are as follows:

- Check the validity period. For example, in a punchout from Oracle iProcurement to Oracle Exchange, the Oracle iProcurement server checks the validity period on the certificate presented by the Oracle 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 Oracle 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. Oracle iProcurement and Oracle Exchange also support a certification chain. In a certification chain, the supplier site's certification authority may not match the certification authority in Oracle iProcurement or Oracle 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 Oracle iProcurement to Oracle Exchange, the Oracle 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 Oracle Exchange server. The public key is included in the ca-bundle.crt file. Oracle iProcurement and Oracle 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 Oracle iProcurement to Oracle Exchange, the Oracle iProcurement server ensures that

the Oracle Exchange server is on the same network as that stated in the certificate and is not one posing as the Oracle Exchange server.

Once the above checks are performed by the accessing application (Oracle iProcurement or Oracle 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 Oracle Exchange or Oracle iProcurement), and Oracle iProcurement or Oracle Exchange transmit this key, encrypted, back to the catalog site using the catalog site server's public key. All subsequent communication between Oracle Exchange or Oracle iProcurement and the catalog site is encrypted.

Oracle iProcurement and Oracle Exchange use SSL version 3.0.

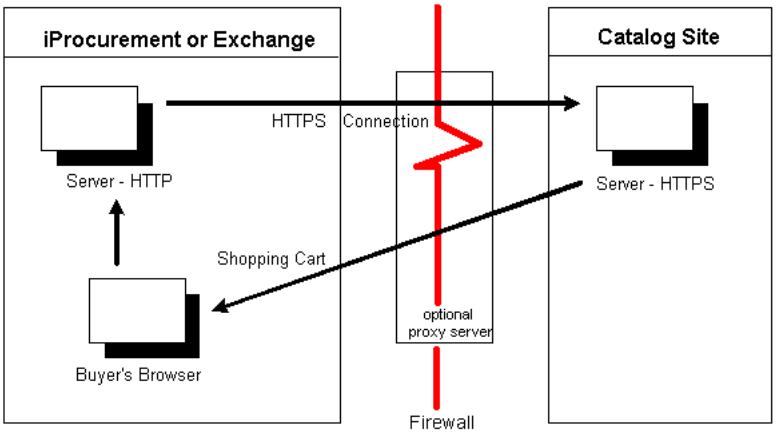
Refer to the following documents for more details on SSL and the public encryption methodologies used in SSL:

- 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 Oracle iProcurement or Oracle Exchange, the external site obtains the URL to which the shopping cart is posted from the <returnURL> field in the login Request document. The external site's server submits the shopping cart to the return URL in Oracle iProcurement via a POST through the requester's browser.

Oracle iProcurement and Oracle Exchange also support SSL connections in a proxy server configuration, if proxy servers are used for outbound connections from the server (for example, the Oracle 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 Oracle 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 and transparent punchout use this encoding (not the XML language tag `<language>`) to interpret the XML.

Oracle Exchange supports only UTF-8 character encoding, and Oracle 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 to avoid problems sending and receiving multibyte characters. If the supplier, however, does use a different

encoding, the buying company should specify this encoding on the punchout setup page. (See Define Supplier Punchout in Oracle iProcurement on page 2-41.)

When performing a punchout or transparent punchout to Oracle Exchange, Oracle iProcurement always uses UTF-8 encoding. When performing a punchout from Oracle Exchange, Oracle Exchange always uses UTF-8 encoding. Other encoding methods are not supported by Oracle Exchange.

In a transparent punchout, the XML document is always encoded in UTF-8 so that the supplier's catalog can be searched and results can be returned in any language. For a transparent punchout, the supplier *must* use UTF-8 encoding.

cXML punchouts to a supplier are expected to use UTF-8 encoding.

For XML punchouts, the cart must be URL encoded. See the example in Return Shopping Cart on page 3-20.

D

Maximum Field Lengths

This appendix contains the following sections:

- Punchout from Oracle Exchange on page D-1
- Punchout from Oracle iProcurement on page D-2
- Transparent Punchout from Oracle iProcurement on page D-4

Oracle Exchange and Oracle iProcurement have some data length limits for fields. When the supplier sends the shopping cart to Oracle Exchange or Oracle 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 *ABmanufacturer30plusCDEitem123456* sent by the supplier becomes *ABmanufacturer30plusCDEitem123* in Oracle iProcurement or Oracle 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.

Punchout from Oracle Exchange

Oracle Exchange has the following maximum character lengths for the shopping cart data when performing a punchout from Oracle Exchange.

Where multiple XML fields are given in the table below, the last field is the one in which the data is contained.

Table D–1 Oracle Exchange Maximum Character Lengths (Punchout)

XML Field	Character Length
<contract> <buyerContractNumber> <contractNumber>	20
<item lineType=Goods quantity=12>	(The quantity is a number.)
<itemNumber> <supplierItemNumber> <itemID>	740
<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.)

Punchout from Oracle iProcurement

Oracle iProcurement has the following maximum character lengths for the shopping cart data.

Where multiple XML fields are given in the table below, the last field is the one in which the data is contained.

Table D–2 Oracle iProcurement Maximum Character Lengths (Punchout)

XML Field	Character Length
<contract> <buyerContractNumber> <contractNumber>	20
<catalogType>	30
<item lineType=Goods quantity=12>	(The quantity is a number.)
<supplierReferenceNumber>	150
<itemNumber> <supplierItemNumber> <itemID>	25
<manufacturerItemNumber> <itemID>	30
<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

Transparent Punchout from Oracle iProcurement

Oracle iProcurement has the following maximum character lengths for item information returned in the search response.

Where multiple XML fields are given in the table below, the last field is the one in which the data is contained.

Table D–3 Oracle iProcurement Maximum Character Lengths (Transparent Punchout)

XML Field	Character Length
<SupplierPartNum>	700
<SupplierCode>	700
<SupplierName>	700
<ShortName>	700
<LongName>	2000
<Money currency=	15
<Money>	(This is a number.)
<UOMCode>	3
<UOMName>	25
<ManufacturerPartNum>	700
<ManufacturerName>	700
<URL>	700
<CategoryCode>	250
<CategoryName>	250
<CatalogType>	10
<BuyerContract>	20

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