1.0 About This Guide

The purpose of this document is to guide our clients through the process of implementing secure electronic transactions with IBM. This guide describes IBM’s capabilities, what to expect during the implementation, and includes best practices gained from working with a wide range of clients. As we work through the process together, you’ll have the full support of IBM.

To meet our client requirements, IBM has a B2B gateway for connectivity with individual comp, supplier networks and IBM Business Partners. With this guide you’ll better understand the technical details, prerequisites and the connectivity data necessary to implement an electronic connection with IBM’s gateway. You’ll have a fuller understanding of the steps within the process and the pros and cons of options to consider for Catalogue and Order Management. The focus of this guide is eProcurement systems and supplier networks that support cXML, OCI, xCBL, Oracle OAG, SAP EBP, SAP SRM and SAP XML IDOC.

2.0 Best Practices for a Successful Project

2.1 IBM’s Commitment to Success

We are committed to providing you an accurate and efficient ePurchasing process -- one that provides your users with a personalized and user-friendly experience with IBM. Your ibm.com Representative is your primary point of contact and will work closely with you, IBM’s Boarding Team, and your technical team, to streamline your ordering experience with IBM. The IBM Boarding Team provides technical guidance across multiple topics such as: punchout catalogues, local catalogues, special local catalogues, purchase orders / purchase order responses, and invoices. They also have expertise in formed messages and the order management flow within IBM’s fulfillment system.

2.2 Your Commitment to Success

Feedback from our clients highlighted that internal commitment was key to a successful implementation. We recommend that each client secure commitment for:

- A technical team with whom we can work on your implementation
- A mutually-agreed project schedule with key dates that we work toward together.

For customers wishing a closed-loop Purchase-to-Pay process, then process owners for the complete cycle are recommended.
2.3 Business Assumption
A prerequisite is agreed terms for electronic purchases with IBM. We can assist in evaluating whether current terms are mutually acceptable, and if additions required, establish an appropriate contract addendum.

2.4 Technical Assumptions
To exchange electronic documents we assume that the following base capabilities are in place:

- HTTPS capability to access ‘punchout catalogues’ using OCI, cXML, and Oracle or local catalogue capabilities
- Ability to submit electronic orders using an industry format (cXML, xCBL, SAP XML, SAP EBP, Oracle OAG and RosettaNet)
- Capability to URL-encode requests and messages to the gateway
- Predefined connectivity standards for your company such as connectivity data, sample messages and certificates

Please note: IBM will provide URL and credential information as needed throughout the project

2.5 Best Practice: Punchout Catalogue/Electronic Order Routing
Having worked with clients in multiple sectors, locations and companies of various sizes, there is a common theme: our clients want to optimize and automate the entirety of their purchasing process to reduce costs. To achieve that objective, we recommend a fully automated solution characterized by low maintenance and ‘touch less’ order flows. Our Punchout Catalogue/Electronic Order implementation offers the best solution for our clients and we encourage all of our clients to pursue this automated solution. We will work diligently with you to achieve this best practice and its associated benefits.

Punchout Catalogue: With a punchout catalogue, your company will receive a dynamic real-time catalogue that contains detailed product information, pricing and product images.

Electronic Order Routing: By choosing electronic order routing over email routing, your company benefits from a fully automated order flow where manual touch points are minimized and order fulfillment is as efficient as possible.

The IBM gateway provides the supporting infrastructure for this best practice and acts as the interface for a range of electronic interactions and integration with the business systems of IBM and our trading partners. It has two primary components: Punchout Gateway and Order Management.

Punchout Gateway: this component enables a client to access their IBM Catalogue securely and reliably from their own eProcurement system.

Order management: this component accepts client’s purchase orders, performs automated verifications, and routes the orders to IBM’s internal fulfillment system.
3.0 Catalogue Options

IBM can accommodate either a catalogue that IBM provides for you within our infrastructure (supplier-hosted) as a best practice or one that your company hosts (buyer-hosted).

3.1 Punchout Catalogue (Supplier-Hosted)

With a supplier-hosted catalogue, IBM provides you with a website that can communicate directly with your eProcurement application using cXML, OCI or OAG. This process of shopping on the IBM website, by clicking on a button within your eProcurement application is commonly referred to as “Punchout”, “Roundtrip”, or “Link out”.

“Punchout” or “Roundtrip” is IBM’s recommended method of catalogue delivery. Punchout catalogues are live, interactive catalogues that are hosted on the IBM website. Clients have the ability to link to these catalogues over the Internet using their eProcurement systems. Your company designated employees can shop the IBM catalogue, configure and price products, and add IBM services before importing the shopping cart into your company’s eProcurement system. Once the shopping cart is in your company’s eProcurement system it is within your control for activities such as routing and approvals. The shopping cart is ultimately converted to an electronic order that can then be transferred to IBM. Details of the Punchout catalogue process for your eProcurement system are explained in documentation provided by your provider.

IBM’s punchout catalogue capabilities offer buyers within your company many features that are associated with shopping via the Internet such as:

- Simple navigation to browse products and prices, configure IBM systems, build and save a shopping cart, as well as initiate online transactions
- Choices of payment methods included purchase orders and credit cards
- Tailored catalogue content with your company’s pricing information and choices of offerings that your company pre-selects for purchase or lease directly from IBM

Additional unique features are available, for example, IBM can integrate your company’s approved standards into the catalogue limiting buyers in your organization to only those your company wishes to support. We can also provide suggested configurations to assist your buyers. Finally we can structure access levels with you to protect against unauthorized users from performing certain tasks within the site.

Benefits for choosing our supplier-hosted catalogues:

1. Punchout catalogues are simple to navigate via user-friendly catalogue and search functions
2. Detailed product information and specifications are provided
3. Order placed from the supplier-hosted catalogue have a higher degree of accuracy
4. Minimized maintenance for both you and IBM
5. Your company’s eProcurement system investment is maximized through the consolidation of the shopping experience and order submission processes into one consistent process.

6. Products can be configured within the shopping experience.

7. IBM will build and maintain the punchout catalogue to contain your entitled products with negotiated pricing.

8. Content within the punchout catalogue is updated on a real-time basis.

9. Configured products can be placed into the shopping cart and saved for later use or repeat purchases.

10. Your company’s users can be limited to the set of navigational hyperlinks determined by your organization.

Please note: Appendix B contains the information to access a demonstration punchout catalogue for each of the IBM-supported protocols.

3.2 Local Catalogue (Buyer-Hosted)

Buyer-hosted catalogues (also known as local catalogues) are an alternative to the Punchout catalogue. Local catalogues are flat files or spreadsheets that are either hosted within your company’s eProcurement system or the supplier network your company has chosen to work with. The local catalogue can be provided in a variety of formats, including CIF 3.0, spreadsheet, delimited text.
The Catalog Interchange Format (CIF) catalog is the standard format that can be provided by IBM. CIF is a general-purpose catalog description format that is commonly used by many types of procurement systems. In either a spreadsheet or a comma delimited form, the CIF catalog can be delivered for upload into your company’s eProcurement system on a monthly, quarterly, annual or on demand basis.

Please note: The CIF Catalog format can be found in Appendix D.

If your company requires a format other than CIF, IBM may be able to build a specialized solution for you. This option should be discussed with your ibm.com Representative.

Please note: We are happy to provide 6 and 8-digit UNSPSC commodity codes with our products, and can provide you with a list of UNSPSC codes that are commonly included in a customer catalogue. However, we are unable to provide a complete list of the UNSPSC codes to be in your catalogue until it is built per your product selections.

4.0 Order Management Process

To begin shopping, users within your company log into your company’s eProcurement system and begin to shop the IBM catalogue of offerings (using either the pre-established punchout or local catalogue). Once the user has selected products, your company’s eProcurement system receives a shopping cart and performs any preset approval routing your company may have in place. The gateway can then receive the electronic purchase order directly from your company's eProcurement application or via a supplier network your company may work with such as:

- Ariba Supplier Network (ASN)
- SciQuest
- Quadrem
- IBX
- Oracle Exchange
- Hubwoo

IBM can also receive orders via email, fax, and EDI. In some cases IBM can also provide order status and advance ship notice for orders that were sent successfully via XML. These XML transactions are sent back to the supplier network or to a URL that you can specify.

4.1 Electronic Orders

In most cases, transactions can be seen as an interaction between two trading partners. In the case of the gateway, the buyer (IBM client) initiates the transaction and the seller (IBM) is the one who is fulfilling a purchase order. In a typical flow, the transaction progresses through six steps.
and checks and accepts only those documents that are valid and adhere to the Document Type Definition (DTD) for each message type (cXML, xCBL, Oracle, SAP, etc).

4.2 Email Orders
An email order is an alternate solution to the electronic order process and is an interim approach to the automated process. The catalogue shopping experience can either be through the punchout or the local catalog process. However, the order submission method is via email. The supplier network will be configured with IBM’s B2B email address and all email orders will be routed to the specified email. Once the order has been submitted via email, a Customer Service Representative follows a predetermined process for entering the order into the IBM fulfillment system for processing and fulfillment. This is not considered a best practice and precludes the ability to further automate the purchase-to-pay process.

4.3 Reports
Most leading supplier networks provide robust reporting capabilities to support your business across multiple suppliers. At this time IBM does not seek to duplicate that capability or provide additional reporting. You can review your supplier network documentation for the reporting capabilities offered.

1. The buyer starts a transaction by sending a purchase order request to IBM from the supplier network or eProcurement system.

2. The supplier network or eProcurement system transmits the purchase order to the gateway via a secure URL associated with purchase orders.

3. Upon receiving the request, the gateway authenticates the supplier network, trading partner, order, performs initial message format verification, and sends an acknowledgment back to the supplier network or eProcurement system.

4. The IBM gateway passes the transaction to IBM’s internal fulfillment system.

5. The IBM fulfillment system processes, ships, and invoices the order.

6. Order confirmation is sent back to the your supplier network or eProcurement system.

Electronic Order Validation, Checking and Acceptance: The gateway will send Order Acknowledgments (200 OK) or error messages (400, 500, etc) in response to orders received. We utilize standard HTTP codes highlighted in Appendix E: HTTP Return Codes. The gateway authenticates the message and checks and accepts only those documents that are valid and adhere to the Document Type Definition (DTD) for each message type (cXML, xCBL, Oracle, SAP, etc).
5.0 Boarding Plan and Schedule

5.1 What Does It Mean to “Board”
By using the term “board”, we are referring to the completion of the necessary steps to enable electronic transactions with IBM. Connectivity between many leading supplier networks and the gateway is already in place. If the connection with the supplier network your company has chosen is already in place, IBM will work with you to ‘board’ your company within your established and IBM-enabled supplier network. However, if connectivity with the supplier network your company uses is not yet in place we’ll work to establish this connectivity by ‘boarding’ the supplier network as well as ‘boarding’ your company. In most cases we can work with your supplier network and your company to accomplish both in parallel.

Our approach to boarding encompasses three major steps to ensure the secure, accurate and reliable exchanges of electronic messages between us.

1. Your IBM catalogue (local, punch-out or both) is set-up properly
2. You have the ability to successfully navigate your catalogue and shop for IBM products
3. The capability is in place for us to communicate and exchange messages through your eProcurement system, supplier network and the gateway.

Should any of your needs change after the boarding takes place, such as an upgrade or change in your company eProcurement technology, relationship with supplier networks or relationship with IBM, we’ll work with you on the changes, or — at your request — remove the connections between us.

5.2 Support from IBM’s Boarding Team
IBM has an experienced boarding team in place to provide you with technical support and guidance throughout the boarding process. The team’s first step will be to work with the appropriate counterparts in your company to share data necessary to set-up the connection between your company’s punchout and order management process and the gateway. The team will help establish and exercise a rigorous test plan with your company to check all the elements of the connection and implementation. If additional technical development is needed within IBM or your company, IBM will work to define and validate the specific technical requirements with IBM’s developers - and with your company as appropriate. The boarding team will follow the boarding process and participate in the ‘move to production’ activities. They ensure that the systems are interacting properly with orders successfully sent from your company and received/acknowledged by IBM.
The boarding team's activities span the following:

- Exchange, share and evaluate connectivity data
- Act as a technical liaison to establish and confirm connectivity
- Provide the tasks and schedule to support the project
- Coordinate and set-up the test plan
- Support test cases and testing status
- Coordinate and set-up of the move to production activities
- Monitor the systems and the initial order(s)
- Manage any required security certificates
- Manage the updates of any needed client profiles

5.3 Overview of the 10-Step Boarding Process
IBM has refined a 10-step boarding process to enable your company (the buyer) initiating the transaction and IBM (the supplier) fulfilling the transaction. They include:

1. Business gap analysis
2. Technical gap analysis
3. Client boarding
4. Set-up of the supplier network/eProcurement system
5. Set-up of client information
6. Set-up supporting product catalogues
7. Set-up error-handling
8. Testing the process
9. Move to production
10. Validation of initial orders

5.4 Test Phases
As part of the boarding project with you, IBM will develop and a proposed master test plan describing our recommended test strategy for connectivity, catalogue access, and order flow. Its purpose is to answer questions you may have such as ‘What will be tested? How will it be tested? Who will do it and when?’ The plan documents system objectives, test objectives, test team roles and responsibilities, resource requirements, the test strategy, methods, and standards to be used for testing. It can be used as a vehicle to build a mutually agreeable test phase and act as a communication vehicle within your organization to describe how the process between your company and IBM will be tested. We propose, as a best practice, that we have three phases of testing: connectivity, message testing, and catalogue testing

Connectivity Testing: This test phase will ensure that there is constant link — a handshake — between your company’s supplier network and IBM.
Test cases will be performed to ensure that purchase orders sent from the supplier network or eProcurement system to the gateway are successfully received and that messages are recorded accurately in a log. In turn, we test to ensure the gateway returns a receipt acknowledgment that confirms that the message has been received.

**Well-Formed Message Testing:** These test cases validate the purchase order format and adherence to the message standards. The gateway is designed to accept messages that meet the respective cXML, xCBL, OCI, Oracle, and SAP standards. These test cases will focus on IBM’s ability to accept and process the messages without exceptions. If there are issues with the validity and structure of the message, the gateway will return the appropriate error code.

Once the Gateway has received and passed the message for structure validity, it must successfully transmit the message to the IBM order fulfillment system. These tests ensure that your company’s purchase order or message flows through the IBM infrastructure successfully and without error. Once the purchase order or message is received and processed by the IBM fulfillment system, an order response will be sent back to your supplier network or eProcurement system. The IBM fulfillment system will also return shipment notices and Invoices, as appropriate.

**Punchout Catalogue Testing:** These test cases will ensure that the IBM punchout URL within your company’s supplier network or eProcurement system is properly set, the security between the systems is in place and that the catalogue functions properly. Once the punchout setup has been validated, tests will be conducted to confirm that, from within your systems, you arrive as intended at your catalogue. At this stage you should be able to navigate through the catalogue, perform shopping steps, and create a shopping cart. You’ll also have the opportunity to visually inspect that elements on the pages are correct such as the logo, header, footer, product selection, and the overall design elements of the catalogue have displayed correctly.

5.5 Test Scenarios
The testing scenarios in each of the three stages will be provided to you as part of the project. Each test scenario has a clear purpose, lists dependencies, provides instructions to perform the test and provides the results expected after the test scenario is completed. In total, these test scenarios comprehensively cover all aspects to verify the boarding of your company.

5.6 Test Data
IBM will work with your team to identify a list of realistic test data conditions before testing begins. Our experienced systems engineer/data architects will work with you to define, create and load sufficient data to test the system to mutual satisfaction.

5.7 Sample Test Plan

![Client Functional Test Plan](image-url)
5.8 Move to Production
Once testing is complete, IBM will seek your company’s concurrence to move the system to a production-ready state - that is to start using the system for actual ordering. IBM’s technical representatives will provide their assessment of the readiness of the system as part of this process. Once that decision is made we follow these steps to ‘go live’:

• Confirm that IBM’s gateway production certificates have been installed in your company’s systems
• Confirm that your production certificates are installed in IBM’s gateway
• Remove all test indicators (i.e. "-T") from any network IDs or credentials residing on your systems
• Confirm that all orders/messages refer to the Production URL for the gateway (versus the Test URL)
• Notify both IBM Support and IBM fulfillment that your will be ‘going live’
• Confirm that your company has received the proper contact information for support — your IBM Help Desk
• Review of readiness and final decision to proceed with going live — a ‘Go/No-go’ decision
• Perform a ‘cutover’ from testing environment to the live environment during predefined timeframes (maintenance time windows)

6.0 Security

6.1 HTTPS Protocol
In the interest of all of our clients, IBM supports HTTPS (Hypertext Transfer Protocol over Secure Socket Layer) exclusively. This protocol is widely recognized as the secure version of HTTP. The HTTPS protocol provides a secure connection between your company and IBM, over which confidential data can be safely sent using the Internet. HTTPS involves the normal HTTP interaction over an encrypted Secure Sockets Layer (SSL). The HTTPS protocol provides authentication and encrypted communication and is widely used on the Web for security-sensitive information. Most browsers display a small icon in the form of a padlock or key indicating that the transmission of data is encrypted. IBM will provide the HTTPS URL to transmit orders that should be loaded in your eProcurement system.

Please note: HTTPS is different than Secure HTTP to be transmitted over HTTPS. If your company can support HTTP and not HTTPS, please let us know.

6.2 Digital Certificates
HTTPS and SSL support the use of digital certificates from the server so that, if necessary, a user can authenticate the sender. SSL is a unique and effective way to achieve data and eCommerce security. SSL uses a cryptographic system that employ two keys to encrypt data, firstly a public key known to the sender and receiver. The second is a private key known only to the recipient of the message.
To complete the connectivity between us there is a set of five security certificates that are needed for both the testing and actual technical environments: Server Certificate, Root Certificate, Client Certificate, Signature Verification Certificate and Credentials, and Shared Secrets.

Server Certificate: A server certificate is a digital credential that identifies the server that uses the certificate for secure communications. Server certificates contain identifying information about the organization that owns the application, such as the system’s distinguished name. The certificate also contains the system’s public key. A server must have a digital certificate to use the Secure Sockets Layer (SSL) for secure communications.

Client Certificate: A client certificate is a digital credential that identifies the sender. This certificate is a copy of the sender’s private key which is used by the receiver to validate them during client authentication.

Root Certificate: A root certificate can be either a Certificate Authority (CA) or a self-signed certificate. A root certificate is part of a public key infrastructure scheme.

Signature Verification Certificate: A signature verification certificate is a copy of an object-signing certificate without that certificate’s private key. You use the signature verification certificate’s public key to authenticate the digital signature created with an object-signing certificate. Verifying the signature allows you to determine the origin of the object and whether it has been altered since it was signed.

These certificates will be installed during the boarding project and subsequently installed a month prior to expirations. Most certificates expire either annually or semi-annually. The IBM team will alert your company 30 days prior to a certificate’s expiration. We encourage you to provide new certificates promptly to avoid any disruption in business activities.

Credentials and Shared Secrets: In addition to encryption, we have an added level of security using credentials and shared secrets. The IBM gateway authenticates all documents and requests it receives. This authentication process uses unique credentials sent in the message from your company’s eProcurement system. These unique credentials are matched against the unique keys stored in the gateway.

The standard method of securing transactions in cXML is the shared secret. A shared secret is typically an agreed-upon username/password combination that is contained within the message header. If the username/password pair from the user fails the authenticating step, an error message will be returned indicating that the message has been rejected.
The process in place to support technical problems encountered is:

1. Users within your company report the problem to the IBM Help Desk via e-mail or phone (For Severity 1 problems both methods are recommended). If the customer deems a problem to be a critical severity 1 situation, they must call the help desk to provide problem details and their 24-hour contact information; they can follow up with a detailed email.

2. The Help Desk will evaluate whether the problem can be solved immediately or whether additional assistance is required. If the Help Desk is able to solve the problem immediately, they will respond back to the person who reported the problem.

3. If the Help Desk is not able to solve the problem, they will open a problem ticket using IBM’s Problem Management System and route the ticket to the Level 2 support team, or the appropriate alternative support team, for further investigation. When speaking with the IBM Help Desk, you can help direct your problem ticket to their attention by specifying B2B when you report technical issues.
4. The support team will receive the problem ticket, and engage appropriate resources to resolve the issue.

5. The support team will update the problem ticket with current status as details change, and ensure the final resolution is included once it has been determined.

6. Once solved, the problem resolution will be communicated to the problem reporter for sign-off.

Severity 1 Problems: All problems are triaged by means of designating the severity of the problem. Severity 1 is the highest level that can be designated and is treated as an emergency with round-the-clock attention to resolve the problem. If you are experiencing a Severity 1 technical issue you can call the help desk directly at either: +1 866-426-2862 or +1 303-262-5686. You’ll be asked to provide the details of the problem and a contact number where you can be reached at any time. IBM will be working on an emergency basis throughout a 24-hour day and will need your contact information also on a 24-hour basis.

Please note: Planned outages and general informational notices that don’t need problem determination can be sent directly to IBM’s Level 2 support team at partinfo@us.ibm.com.

7.2 Level 2 Team for Deeper Technical Support
The Level 2 Team is a specialized team familiar with the gateway and technical connectivity. In most cases, this is the team that will resolve any reported problems.

The Level 2 technical support team operates on a 24x7 schedule with teams in Raleigh, NC USA, Dalian, China, and Bangalore, India. The Raleigh, NC based team has standard scheduled hours between 8:00am – 5:00pm Eastern Standard Time. The China-based team is available from 8:30pm – midnight Eastern Standard Time. The India-based team is available from midnight to 8:00am Eastern Standard Time. In Severity 1 situations, this team is called upon at any hour for emergency problem resolution purposes.
## Appendix A

Supplier Networks and associated external protocols supported

<table>
<thead>
<tr>
<th>Supplier Network Name</th>
<th>Protocol / Format supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ariba</td>
<td>cXML</td>
</tr>
<tr>
<td>IBX</td>
<td>xCBL</td>
</tr>
<tr>
<td>Quadrem</td>
<td>xCBL</td>
</tr>
<tr>
<td>Hubwoo</td>
<td>xCBL</td>
</tr>
<tr>
<td>SAP XML</td>
<td>IDOC</td>
</tr>
<tr>
<td>SAP EBP</td>
<td>EbpXml</td>
</tr>
<tr>
<td>Oracle</td>
<td>cXML</td>
</tr>
<tr>
<td>OAG</td>
<td></td>
</tr>
<tr>
<td>Xign</td>
<td>EDI X12</td>
</tr>
<tr>
<td>Ketera</td>
<td>cXML</td>
</tr>
<tr>
<td>SciQuest</td>
<td>cXML</td>
</tr>
<tr>
<td>Maximo</td>
<td>cXML</td>
</tr>
</tbody>
</table>
Sample data mapping documents:

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Orders</th>
<th>Order Response</th>
<th>Invoice</th>
</tr>
</thead>
<tbody>
<tr>
<td>cXML</td>
<td>📑</td>
<td>📑</td>
<td>📑</td>
</tr>
<tr>
<td>xCBL</td>
<td>📑</td>
<td>📑</td>
<td>📑</td>
</tr>
<tr>
<td>EDI X12</td>
<td>📑</td>
<td>📑</td>
<td>📑</td>
</tr>
<tr>
<td>EDIFACT</td>
<td>📑</td>
<td>📑</td>
<td>📑</td>
</tr>
<tr>
<td>RosettaNet</td>
<td>(Contact your ibm.com representative for more information)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Message type Definitions:

**xCBL Message:**

**A. What is xCBL?**

xCBL is the pre-eminent XML component library for business-to-business e-commerce. xCBL is a set of XML business documents and their components, distributed freely here on xCBL.org. In addition to using the business documents provided, you can also use the component library to build your own documents. Either way, using xCBL promotes interoperability between applications.

**B. IBM Gateway xCBL Standard Support:**

1. The IBM gateway supports xCBL messages wrapped in Mime or MML. We can now support SOAP envelopes and will soon support simple xCBL without envelopes.

2. The version support is xCBL 3.0 and 3.5.

**cXML Message:**

**A. What is cXML?**

cXML is a protocol intended for communication of business documents between procurements applications, e-commerce hubs and suppliers. cXML is based on XML and provides formal XML schemas for standard business transactions, allowing programs to validate documents without prior knowledge of their form.

**B. IBM EGW cXML Requirements:**

1. Some of our products do not have an 8 digit UNSPSC code, so we use the closest 6 digit code and add "00" as the 7th and 8th digits.

2. We do not provide 9th and 10th digit UNSPSC codes.

3. We provide UNUOM (unit of measure) for all of our products. All these unit of measures are "EA" as in "each".

4. We evaluate custom fields on an individual basis.

5. We do not provide images or product detail URLs in our buyer-hosted catalogs.

6. We accept orders that include non-catalog items although these cannot be processed and fulfilled in a touchless manner.

7. We do not accept change orders or cancel orders.

8. We do not accept orders that have attachments.

9. We do not provide market price.

10. We do not accept orders with multiple "bill to" addresses or multiple payment methods per order.

11. We do not provide lease prices in the catalog.

12. We do not accept lease prices in the purchase order.
Appendix B – Punchout Demo Sites

The credential for checking Punchout Demo site are as follows:

A. cXML Protocol


<From>
  <Credential domain="NetworkID"> <Identity>cXMLDemo-T</Identity> </Credential>
</From>

<To>
  <Credential domain="DUNS"> <Identity>009999999-T</Identity> </Credential>
</To>

<Sender>
  <Credential domain="AribaNetworkUserId">
    <Identity>sysadmin@ariba.com</Identity>
    <SharedSecret>ariba2003</SharedSecret>
  </Credential>
  <UserAgent>CatalogTester</UserAgent>
</Sender>

B. OCI Protocol


USERNAME = OCIDemo-T
PASSWORD = demosecret

OCI Protocol punchout sites can be tested using attached backdoor views.


C. Oracle Protocol

Oracle punchout URL

username - OracleDemo-T
password - demosecret

Oracle Protocol punchout sites can be tested using attached backdoor views.

Appendix C – Punchout Catalog Process

The following images are designed to show you the navigation and configurator capability on a typical IBM punchout page. The catalog images provided below represent what will be viewed within the users eProcurement page wrapper that will vary depending on the eProcurement application.

The following sample page provides the user with the ability to do a quick lookup on model numbers, prices and related items. In addition, the “Quick Order” and “ServicePac” capabilities allow for easy product searching by part number and product specific ServicePacs.
By selecting the “Add Options” link for any product will lead you into the “Accessories and Options” page that allows for easy configuration of the selected product. In this particular example, the user is allowed to create and name their configurations, and select among several memory options. Once the user has selected the desired options, a summary of the configured product can be viewed and then added to the shopping cart.

Once the user has selected the desired options, the configured product may then be added to the current user shopping cart.
After clicking on the “Add to Shopping Cart” button, the Shopping Cart page is displayed. Here the user can check order contents, verify the products in the cart, the quantity ordered and the total price.

After clicking Proceed to Checkout, the shopping cart will be transferred back to the user’s e-procurement application.

At this point, the user may change quantity, remove items from the cart, continue shopping, or checkout.

Note: the Requested Delivery Date on the shopping cart page will not be recognized. The Requested Delivery Date entered into your e-procurement application and sent in the XML purchase order will be the only date that is recognized.
Appendix D – Sample CIF Catalog

The following is a sample of a Local Catalog in the CIF format:

CIF_I_V3.0
LOADMODE:F
CODEFORMAT:UNSPSC
CURRENCY:USD
DUNS:TRUE
UNUOM:TRUE
CHARSET:iso-8859-1
COMMENTS:This is a local file for Acme Storm Door Company
ITEMCOUNT:3
FIELDNAMES:Supplier ID,Supplier Part ID,Manufacturer Part ID,Item Description,SPSC Code,Unit Price,Unit of Measure,Lead Time,Manufacturer Name,Supplier URL,Manufacturer URL,Market Price,Supplier Part Auxiliary ID
DATA
153345173,1871D33,1871D33,"Lenovo ThinkPad T43 PM 740 1.73 GHz, 2x512MB, 60GB 7200rpm, Intel 2200abg wireless, DVD/CDRW Combo Drive, XPPro OS",43171801,"1,140.00",EA,14,Lenovo,,,0,"contract=""4995015751" salesOrgID=""9147" salesOffice=""9147"
153345173,2672A43,2672A43,"Lenovo ThinkPad X32 PM 735 1.7GHz, 1GB (2x512), 60GB 5400rpm, Intel 2200abg wireless, USB DVD/CDRW Combo Drive, XPPro OS",4317 1801,"1,320.00",EA,14,Lenovo,,,0,"contract=""4995015751" salesOrgID=""9147" salesOffice=""9147"
153345173,2668C54,2668C54,"Lenovo ThinkPad T43P PM 740, 2GB RAM, 14.1 inch SXGA display, 60GB 7200RPM hard drive, Intel 2200bg wireless, DVD recordable drive, WinXP Pro",43171801,"1,999.00",EA,14,Lenovo,,,0,"contract=""4995015751" salesOrgID=""9147" salesOffice=""9147"
ENDOFDATA

The attributes of a record in a standard Local Catalog (often referred to as CIF) are the following:

• Supplier ID
• Supplier Part ID
• Manufacturer ID
• Item Description
• UNSPSC Code
• Unit Price
• Unit of Measure
• Lead Time
• Manufacturer Name
• Supplier URL
• Manufacturer URL
• Market Price
• Supplier Part Auxiliary ID
### Appendix E – HTTP Return Codes

<table>
<thead>
<tr>
<th>Code #</th>
<th>Type</th>
<th>Browser Error Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>Success</td>
<td>OK</td>
<td>This is the normal response where a page has been successfully fetched.</td>
</tr>
<tr>
<td>201</td>
<td>Success</td>
<td>Created</td>
<td>A new address has been created through the use of form posting, perl, cgi, etc.</td>
</tr>
<tr>
<td>202</td>
<td>Success</td>
<td>Accepted</td>
<td>The request has been accepted (keep in mind that the request has been accepted, not completed).</td>
</tr>
<tr>
<td>301</td>
<td>Redirection</td>
<td>Moved Permanently</td>
<td>Page has moved permanently. Usually a response from implementing a 301 redirect.</td>
</tr>
<tr>
<td>302</td>
<td>Redirection</td>
<td>none</td>
<td>Page has moved temporarily</td>
</tr>
<tr>
<td>304</td>
<td>Redirection</td>
<td>none</td>
<td>Page has not been modified since last request (this is an OK response)</td>
</tr>
<tr>
<td>400</td>
<td>Client Error Code</td>
<td>Bad Request</td>
<td>The request could not be understood by the server due to incorrect syntax.</td>
</tr>
<tr>
<td>401</td>
<td>Client Error Code</td>
<td>Unauthorized User</td>
<td>authentication is required.</td>
</tr>
<tr>
<td>403</td>
<td>Client Error Code</td>
<td>Forbidden</td>
<td>The server understood the request, but is refusing to fulfill it.</td>
</tr>
<tr>
<td>404</td>
<td>Client Error Code</td>
<td>Page Not Found</td>
<td>The server has not found anything matching the Request-URI.</td>
</tr>
<tr>
<td>405</td>
<td>Client Error Code</td>
<td>Method Not Allowed</td>
<td>The method specified in the Request-Line is not allowed for the resource identified by the Request-URI.</td>
</tr>
<tr>
<td>406</td>
<td>Client Error Code</td>
<td>Not Acceptable</td>
<td>The server cannot generate a response that the requestor is willing to accept.</td>
</tr>
<tr>
<td>407</td>
<td>Client Error Code</td>
<td>Proxy Authentication Required</td>
<td>This code is similar to 401 (Unauthorized), but indicates that the client must first authenticate itself with the proxy.</td>
</tr>
<tr>
<td>408</td>
<td>Client Error Code</td>
<td>Request Timed Out</td>
<td>The server stopped waiting for a client request.</td>
</tr>
<tr>
<td>409</td>
<td>Client Error Code</td>
<td>Conflict</td>
<td>The request could not be completed due to a conflict with the current state of the resource.</td>
</tr>
<tr>
<td>410</td>
<td>Client Error Code</td>
<td>Gone</td>
<td>The requested resource is no longer available at the server and no forwarding address is known. This condition is similar to 404, except that the 410 error condition is expected to be permanent.</td>
</tr>
</tbody>
</table>
### Appendix E – HTTP Return Codes

<table>
<thead>
<tr>
<th>Code #</th>
<th>Type</th>
<th>Browser Error Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>411</td>
<td>Client Error Code</td>
<td>Length Required</td>
<td>The server requires a content-length in the request</td>
</tr>
<tr>
<td>412</td>
<td>Client Error Code</td>
<td>Precondition Failed</td>
<td>The precondition given in one or more of the request-header fields evaluated to false when it was tested on the server.</td>
</tr>
<tr>
<td>413</td>
<td>Client Error Code</td>
<td>Request Entity Too Large</td>
<td>The server is refusing to process a request because the request entity is larger than the server is willing or able to process.</td>
</tr>
<tr>
<td>414</td>
<td>Client Error Code</td>
<td>Request URL Too Long</td>
<td>The server is refusing to service the request because the Request-URI is longer than the server is willing to interpret.</td>
</tr>
<tr>
<td>415</td>
<td>Client Error Code</td>
<td>Unsupported Media Type</td>
<td>The server is refusing to service the request because the entity of the request is in a format not supported by the requested resource for the requested method.</td>
</tr>
<tr>
<td>500</td>
<td>Server Error Code</td>
<td>Internal Server Error</td>
<td>Internal Web server error</td>
</tr>
<tr>
<td>501</td>
<td>Server Error Code</td>
<td>Not Implemented</td>
<td>Function not implemented in Web server software</td>
</tr>
<tr>
<td>502</td>
<td>Server Error Code</td>
<td>Bad Gateway</td>
<td>Bad gateway; a server being used by this Web server has sent an invalid response.</td>
</tr>
<tr>
<td>503</td>
<td>Server Error Code</td>
<td>Service Unavailable</td>
<td>Service unavailable because of temporary overload or maintenance.</td>
</tr>
<tr>
<td>504</td>
<td>Server Error Code</td>
<td>Gateway Timeout</td>
<td>A server being used by this server has not responded in time.</td>
</tr>
<tr>
<td>505</td>
<td>Server Error Code</td>
<td>HTTP Version Not Supported</td>
<td>The server does not support the HTTP protocol version that was used in the request message.</td>
</tr>
</tbody>
</table>
Appendix F – Help Desk Contact Information

IBM Support

<table>
<thead>
<tr>
<th>Issue</th>
<th>Contact Resources</th>
</tr>
</thead>
</table>
| B2B Catalogue Technical              | International  
Canada and United States Toll Free Help Desk  
[ERCHelp@ca.ibm.com](mailto:ERCHelp@ca.ibm.com) |
|                                      | +1-303-262-5686  
+1-866-426-2862 |
| All Other Issues                     | US: +1-800-IBM-4YOU (1 800 426 4968) or [http://www.ibm.com](http://www.ibm.com)  
Appendix G – Severity and Response Definitions

Inquiries will be responded to within 1 business day, meaning either 'solved' or, as a minimum, an acknowledgement including when an answer or a solution can be expected. Problem Severity definitions and the Response targets follow.

Severity 1

<table>
<thead>
<tr>
<th>Business impact</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business is immediately impacted resulting in critical loss of revenue and/or critically significant customer impact:</td>
<td>IBM and Client will implement immediate continuous efforts to resolve system problems until the problem is circumvented and/or permanently resolved.</td>
</tr>
<tr>
<td>• Total service is unavailable or unusable for all users</td>
<td>If a severity 1 problem is raised by the Client, it is expected that a contact from the IBM Help Desk is available 24x7 until the problem is solved.</td>
</tr>
<tr>
<td>• Critical service component (infrastructural or application) is unavailable or unusable for all users</td>
<td><strong>Resolution target is 24 hours.</strong> Problem originator must contact the IBM ERC (Level 1) via telephone to provide problem details and their 24-hour contact information. The problem originator can follow up with a detailed e-mail if they desire. The problem reporting template is found in Addendum H of this document.</td>
</tr>
<tr>
<td>• Total failure of network connectivity</td>
<td></td>
</tr>
<tr>
<td>• Critically degraded performance resulting in service being unable to function at a rate required to meet critical business objectives</td>
<td></td>
</tr>
<tr>
<td>• No work around available</td>
<td></td>
</tr>
</tbody>
</table>

Severity 2

<table>
<thead>
<tr>
<th>Business impact</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business is significantly impacted:</td>
<td>IBM and Client will implement efforts to resolve system problems until the problem is circumvented and/or permanently resolved.</td>
</tr>
<tr>
<td>• Total service unavailable to some users</td>
<td><strong>Resolution target is 3 calendar days.</strong> Problem originator must contact the IBM ERC (Level 1) via telephone or via email using the template in Addendum H of this document. The Time flows from the first of these contacts.</td>
</tr>
<tr>
<td>• Non-critical service component (infrastructural or application) is unavailable or unusable for all users</td>
<td></td>
</tr>
<tr>
<td>• Service performance is significantly degraded</td>
<td></td>
</tr>
<tr>
<td>• Problem that would fulfill Sev 1 criteria but for work around being available involving significant effort</td>
<td></td>
</tr>
<tr>
<td>• Problem that has potential to become Sev 1 if not resolved</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix G – Severity and Response Definitions (continued)

<table>
<thead>
<tr>
<th>Severity 3</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business is minimally impacted:</td>
<td>IBM and Client will implement efforts to resolve system problems until the problem is circumvented and/or permanently resolved.</td>
</tr>
<tr>
<td>• Non-critical service component (infrastructural or application) is unavailable or unusable for some users</td>
<td><strong>Resolution target is 7 calendar days.</strong> Problem originator must contact the IBM ERC (Level 1) via telephone or via email using the template in Addendum H of this document. The Time flows from the first of these contacts.</td>
</tr>
<tr>
<td>• Problem that would fulfill Sev 1 criteria but for work around being available involving minimal / no effort</td>
<td></td>
</tr>
<tr>
<td>• Problem that would fulfill Sev 2 criteria but for work around being available involving significant effort</td>
<td></td>
</tr>
<tr>
<td>• Service performance is minimally degraded</td>
<td></td>
</tr>
<tr>
<td>• Problem that has potential to become Sev 2 if not resolved</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity 4</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business is not immediately impacted:</td>
<td>IBM and Trading Partner will implement efforts to resolve system problems until the problem is circumvented and/or permanently resolved.</td>
</tr>
<tr>
<td>• Problem that would fulfill Sev 2 criteria but for work around being available which involves minimal / no effort</td>
<td><strong>Resolution target is 30 calendar days.</strong> Problem originator must contact the IBM ERC (Level 1) via telephone or via email using the template in Addendum H of this document. The Time flows from the first of these contacts.</td>
</tr>
<tr>
<td>• Problem that would fulfill Sev 3 criteria but for work around being available</td>
<td></td>
</tr>
<tr>
<td>• Problem that has potential to become Sev 3 if not resolved</td>
<td></td>
</tr>
<tr>
<td>• Problem record for problem that has been resolved but is awaiting completion of text update</td>
<td></td>
</tr>
</tbody>
</table>
Appendix H – Problem Ticket Template

This B2B Problem Report template is to be used by the Client to report problems of any severity to the applicable IBM Level 1 support team. When speaking with the IBM Help Desk, you can help direct your problem ticket to their attention by specifying B2B when you report technical issues.

Use the following template when opening the Severity 2 ticket:

1. Problem Abstract: Short Description
2. Employee Serial: Your employee serial, if applicable
3. Reporter’s Information:
   - Reporter’s Name:
   - Email address:
   - Contact number(s):
   - If needed – Alternate contact person and number:
4. Application Name / Account ID: e.g., TxHub, CCE, B2B.
5. Workgroup: e.g., EGBNR_SMTXNINFO (TxHub),
   NUS_W_ASCCEWSL2 (CCE), NUS_N_B2BMAINT
   (B2B Level 2)
6. Problem Description: If applicable, use the B2B key word in the problem description. Include supplier, problem recreation steps, screen prints depicting problem, purchase order numbers, master order numbers, error return codes received — as much information as possible.