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cXML Punchout Integration Plugin - User Guide

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1. Introduction

The cXML Punchout Integration Plugin enables seamless integration between your Magento store and client eProcurement systems. This extension supports standard cXML protocol for punchout sessions, order creation, invoice transmission, and shipment notifications.

2. Initial Setup and Client Configuration

2.1 Accessing Punchout Client Management

1. Navigate to your Magento admin panel
2. Go to **Takeoff → Manage Punchout Clients**

3. Click **Add New Client** to begin configuration

Note: A "client" refers to the organization or entity that will connect to your store through their eProcurement system.

2.2 Client Configuration

Complete the following fields in the Client Configuration section:

Customer Name

Enter the client's company name (e.g., "ACME Ltd").

Website ID

Select the Magento website where this client integration will be active.

Customer Group

Choose the customer group to which punchout users will be automatically assigned upon login.

2.3 Punchout Credentials

Configure the authentication credentials for the cXML connection:

From Domain

The client's domain identifier (e.g., "acme").

From Identity

The client's identity credential (e.g., "acme").

To Domain

Your store's domain identifier (e.g., "magentostore").

To Identity

Your store's identity credential (e.g., "magentostore").

Sender Domain

The domain from which punchout requests originate (typically matches From Domain).

Sender Identity

The identity from which punchout requests originate (typically matches From Identity).

Shared Secret

A secure password for authenticating the punchout connection (e.g., "Acme123$£@DS"). This must be configured identically in both systems.

Client Unique URL Parameter

A unique identifier for this client's URLs (e.g., "acmeltd"). This parameter will be used in all punchout endpoints.

2.4 Punchout URLs

After configuration, provide the following URLs to your client:

Punchout Login URL:

```
YOUR_STORE_URL/takeoff/punchout/login/client/CLIENT_UNIQUE_URL_PARAM
```

Order Submission URL:

```
YOUR_STORE_URL/takeoff/punchout/po/client/CLIENT_UNIQUE_URL_PARAM
```

2.5 Order Import Configuration

Configure how orders received from the client's eProcurement system will be processed:

Payment Method Code

The payment method to assign to punchout orders.

Delivery Method Code

The shipping method to assign to punchout orders.

Order Status

The initial status for newly created punchout orders.

These settings can be customized to meet specific business requirements.

2.6 cXML Item Configuration

Configure product data formatting for cXML documents:

Unit of Measure Default

Default unit of measure value (e.g., "EA" for "Each") used when no product-specific value is available.

UNSPSC Classification Default

Default UNSPSC classification code (e.g., "463261321") used when no product-specific classification exists.

Unit of Measure Product Attribute

The Magento product attribute code that stores unit of measure data (e.g., "product_uom"). Leave empty to always use the default value.

UNSPSC Classification Product Attribute

The Magento product attribute code that stores UNSPSC classification data (e.g., "product_classification"). Leave empty to always use the default value.

> **Logic Flow:** When generating cXML documents, the system first checks if the product has the specified attribute. If the attribute exists and contains a value, it is used. Otherwise, the system falls back to the configured default value.

2.7 Extrinsic Data Configuration

Extend cXML documents with custom data fields:

Extrinsic Data for ItemIn

Add custom fields to line item data. Values can be sourced from:

- Default static values
- Product attributes
- Quote item table columns

Extrinsic Data for Order Header

Add custom fields to order header data. Values can be sourced from:

- Default static values
- Product attributes
- Quote table columns

These configurations allow you to pass additional business-specific data to client eProcurement systems.

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Magento Admin

← Back   Delete   Reset   **Save**

Punchout Client Details

Client Configuration

Customer Name *	ACME Ltd
Website *	Main Website
Store *	Default Store View
Customer Group *	General

Punchout Credentials

From Domain *	acme
From Identity *	acme
To Domain *	test
To Identity *	test
Sender Domain *	acme
Sender Identity *	acme
Shared Secret *	Sswed1QRAwYUhCRQ6nvm
Client Unique URL Param *	acmeltd

Order Import Configuration

Default Payment Method *	Check / Money order
Dynamic Delivery Method	Yes
Default Delivery Method *	[freeshipping] Free
Order Status *	Processing

cXML Item Configuration

Unit Of Measure Default *	EA
UNSPSC Classification Default *	46173282
Unit Of Measure Product Attribute *	uom_attribute_code
UNSPSC Classification Product Attribute *	unspsc_attribute_code

Extrinsic Data for Itemin

Add line-value pairs for extrinsic data that will be included in the punchout request. Priority: from_quote_item > attribute > value. from_quote_item = quote_item table column, attribute = product attribute, value = static/default value.

Name	Value	Attribute	From Quote Item	Actions
Color		color		🗑
Category	supplies			🗑
Logo			logo_file	🗑

Add Data

Extrinsic Data for Order Header

Add line-value pairs for extrinsic data that will be included in the order header. Priority: from_quote > attribute > value. from_quote = quote table column, attribute = customer attribute, value = static/default value.

Name	Value	Attribute	From Quote	Actions
Gender		gender		🗑
Company	ACME Ltd			🗑
IP_Address			remote_ip	🗑

Add Data

studio@takeoffdigital.co.uk   https://takeoffdigital.co.uk

3. Invoice Transmission Configuration

This section configures automatic invoice transmission from your system to the client's eProcurement platform using the cXML invoice format.

Configuration Fields

Enable Invoice Sending

Toggle this setting to enable or disable automatic invoice transmission. When enabled, invoices are automatically sent to the configured endpoint URL upon generation.

Invoice Endpoint URL

The client's system URL that receives cXML invoice documents. This endpoint must be provided by the client's eProcurement administrator and must accept POST requests containing cXML-formatted invoice data.

Invoice Sender Identity

Your system's unique identifier as the invoice sender. This value must match the credentials configured in your sender profile.

Invoice To Identity

The client system's unique identifier as the invoice recipient. This value must be provided by the client.

Invoice From Domain

The domain qualifier for the From credential, typically using standards such as DUNS (Data Universal Numbering System) or NetworkID.

Invoice From Identity

Your company's unique identifier within the client's system, used for matching invoices to purchase orders.

Invoice To Domain

The domain qualifier for the To credential, using standards such as DUNS or NetworkID.

Invoice Shared Secret

A secure authentication token used to validate invoice transmissions. This must match the value configured in the client's system. Maintain confidentiality and rotate periodically according to security policies.

Transmission Methods

Invoices are transmitted automatically via scheduled cron jobs. Additionally, you can trigger transmissions manually using Magento CLI commands:

```
# Check order and invoice status php bin/magento takeoff:punchout:check-orders #
Manually send invoices php bin/magento takeoff:punchout:send-invoices
```

Monitor transmission status in the **Transmission Log** menu (see Section 6).

Invoice Configuration ✎

Enable Invoice Sending	🔘 Yes
	Automatically send invoices to this client's system
Invoice Endpoint URL	https://eprocurement.com/invoice/endpoint
	Corporate system URL for receiving cXML invoices
Invoice Sender Identity	takeoff
	Your system identifier for invoice sender
Invoice To Identity	eproc
	Client system identifier for invoice recipient
Invoice From Domain	takeoff
	Domain for From credential (e.g. DUNS, NetworkID)
Invoice From Identity	takeoff
	Your company identifier in client's system
Invoice To Domain	eproc
	Domain for To credential (e.g. DUNS, NetworkID)
Invoice Shared Secret	$£@@CSA432$£@432dsadsadas
	Authentication secret for invoice transmission

4. Shipment Transmission Configuration

This section configures automatic shipment notice transmission from your system to the client's eProcurement platform using the cXML shipment notice format (Advanced Shipping Notice/ASN).

Configuration Fields

Enable Shipment Sending

Toggle this setting to enable or disable automatic shipment notice transmission. When enabled, shipment notifications are automatically sent upon shipment creation or dispatch.

Shipment Endpoint URL

The client's system URL that receives cXML shipment notice documents. This endpoint must be provided by the client's eProcurement administrator and must accept POST requests containing cXML-formatted shipment data.

Shipment Sender Identity

Your system's unique identifier as the shipment sender. This value must match the credentials configured in your sender profile.

Shipment To Identity

The client system's unique identifier as the shipment recipient. This value must be provided by the client.

Shipment From Domain

The domain qualifier for the From credential, typically using standards such as DUNS or NetworkID.

Shipment From Identity

Your company's unique identifier within the client's system, used for matching shipment notices to purchase orders.

Shipment To Domain

The domain qualifier for the To credential, using standards such as DUNS or NetworkID.

Shipment Shared Secret

A secure authentication token used to validate shipment notice transmissions. This must match the value configured in the client's system. Maintain confidentiality and rotate periodically according to security policies.

Transmission Methods

Shipment notifications are transmitted automatically via scheduled cron jobs. Additionally, you can trigger transmissions manually using Magento CLI commands:

```
# Check order and shipment status php bin/magento takeoff:punchout:check-orders #
Manually send shipment notices php bin/magento takeoff:punchout:send-ship-notices
```

Monitor transmission status in the **Transmission Log** menu (see Section 6).

Shipping Notification Configuration ✎

Enable Ship Notifications	● Yes
	Send automated shipping notifications to this client
Ship Notice Endpoint URL	
	Corporate system URL for receiving cXML ship notices
Sender Identity (DUNS)	
	Your DUNS number or sender ID
To Identity (NetworkID)	
	Buyer's network/organization ID
From Domain	
	Domain for From credential (e.g. DUNS)
From Identity (DUNS)	
	Your DUNS number for From credential
To Domain	
	Domain for To credential (e.g. NetworkID)
Shared Secret	
	Authentication secret for ship notices

5. Testing and Verification

5.1 Testing Punchout Login

Step 1: Access the cXML Testing Tool

Navigate to the cXML Punchout Tester:
https://punchoutcommerce.com/tools/cxml-punchout-tester#advanced

Step 2: Configure Test Parameters

Enter the following information in the testing tool:

- **Punchout URL:**
  `YOUR_STORE_URL/takeoff/punchout/login/client/CLIENT_UNIQUE_URL_PARAM`

- **From Domain:** Enter the client's domain (as configured in Section 2.3)

- **From Identity:** Enter the client's identity credential

- **To Domain:** Enter your store's domain

- **To Identity:** Enter your store's identity credential

- **Sender Domain:** Enter the sender domain

- **Sender Identity:** Enter the sender identity credential

- **Shared Secret:** Enter the shared secret password

- **Display Option:** Select "No Frame"

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cXML PunchOut Tester

View: Basic | Advanced

URL: https://punchout-cxml.takeoff-dev.co.uk/takeoff/punchout/login/client/acme-ltd/

Variables

FromDomain	=	acmeltd	?
FromIdentity	=	acmeltd	?
ToDomain	=	takeoff	?
ToIdentity	=	acmeltd	?
SenderDomain	=	acmeltd	?
SenderIdentity	=	acmeltd	?
SharedSecret	=	Test321	?
PayloadID	=	1727968451.2437@punchoutcommerce.com	?
Timestamp	=	2024-10-03T15:14:11+00:00	?
BuyerCookie	=	382f271f664e895a39652b0dddbdc42f	?
PunchoutOrderReceiver	=	https://punchoutcommerce.com/tools/cxml-punchout-return	?
SupplierSetupURL	=	https://punchout-cxml.takeoff-dev.co.uk/takeoff/punchout/log	?
User	=	jdoe12345	?
UniqueUsername	=	jdoe12345	?
	=		?

☑ No Frame   Standard (server-side) ▼   **Submit**

Step 3: Submit Test Configuration

Click the **Submit** button to initiate the punchout session.

Step 4: Verify Successful Login

Upon successful authentication, you will be logged into your Magento store. The user session will be established with the configured customer account.

5.2 Testing Cart Transfer

Step 1: Build Shopping Cart

Add products to the shopping cart during the punchout session.

Step 2: Initiate Transfer

Navigate to the shopping cart. Note that the standard "Proceed to Checkout" button is replaced with "Transfer to Punchout."

Step 3: Complete Transfer

Click **Transfer to Punchout** to send the cart contents back to the client's eProcurement system.

Step 4: Verify Transfer

Confirm that the items appear correctly in the client's eProcurement system with accurate pricing, quantities, and product details.

5.3 Testing Order Submission

Step 1: Access the Order Testing Tool

Navigate to the cXML Order Tester:
https://punchoutcommerce.com/tools/cxml-order-tester

Step 2: Configure Order Details

Complete the form with the following information:

- **Order URL:**
  `YOUR_STORE_URL/takeoff/punchout/po/client/CLIENT_UNIQUE_URL_PARAM`

- **From Domain, Identity, To Domain, To Identity, Sender Domain, Sender Identity, Shared Secret:** Enter values matching your configuration

- **Bill-To Email:** Enter the email address of the user account logged in via punchout

- **Item Part Number:** Enter a valid Magento SKU

- **Item Description:** Enter the product description

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cXML Order Tester

Order Details   cXML   Response

Transmission

URL:

https://punchout-cxml.takeoff-dev.co.uk/takeoff/punchout/po/client/acme-ltd/

From Domain:	From Identity:
acmeltd	acmeltd

To Domain:	To Identity:
takeoff	takeoff

Sender Domain:	Sender Identity:	Sender Shared Secret:
acmeltd	acmeltd	Test321

Payload ID:	Timestamp:
1727969119.5553@punchoutcommerce.com	2024-10-03T15:25:19+00:00

Deployment Mode:	Order Number:	Order Date:
test	4324324332	

Step 3: Submit Test Order

Click **Submit** to send the test order to your Magento store.

Shipping Address

Name:
John Doe

Deliver To:
John Doe
Lincoln Elementary School

Street:
123 Main St
Room #308

City:	State:	Postal Code:
Washington	CA	90210

Code:	Country:
US	United States

Email:	Phone:		
jdoe@example.com	1	555	8675309

Billing Address

Name:
Jane Doe

Deliver To:
Jane Doe
Accounts Payable

Street:
456 Park Ave
Suite 794

City:	State:	Postal Code:
Washington	CA	90210

Code:	Country:
US	United States

Email:	Phone:		
jdoe@example.com	1	555	5552424

Description	Part #	Unit Price	Quantity	UOM
24-WB04	24-WB04	45	1	

Manufacturer	Mfg. Part #	Part Auxiliary #	Classification	Domain	
				UNSPSC	Delete

Add Item

Step 4: Verify Response

A successful submission returns an XML response:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cxml.org/schemas/cXML/1.2.040/cXML.dtd"> <cXML
payloadID="[PAYLOAD_ID]" timestamp="[TIMESTAMP]">
<Response> <Status code="200" text="OK">Success</Status> </Response>
</cXML>
```

Step 5: Verify Order Creation

Check your Magento order management system to confirm the order has been created with the correct details, payment method, shipping method, and status as configured in Section 2.5.

6. Transmission Log

The Transmission Log provides a comprehensive audit trail of all cXML document transmissions (invoices and shipment notices) sent from your system to client eProcurement platforms.

Overview

Access the Transmission Log via **Takeoff → Transmission Log**. The log displays all outbound cXML documents with detailed information about each transmission attempt, including status, timestamps, and response codes.

Features

Search and Filtering

Use the keyword search to locate specific transmissions by document number, order number, or client name. Apply filters to narrow results by date range, transmission type, status, or response code.

Column Descriptions

- **ID:** Unique internal identifier for each transmission log entry
- **Type:** Document type (`invoice` or `shipment`)
- **Document #:** Internal document number (invoice number or shipment number)
- **Order #:** Associated purchase order number
- **Client Name:** Name of the receiving client
- **Status:** Current transmission status (`sent`, `pending`, `failed`, `retry`)
- **Attempts:** Number of transmission attempts made
- **Created:** Timestamp when the transmission record was created
- **Sent:** Timestamp when the document was successfully transmitted
- **Response Code:** HTTP response code from the client's endpoint (200 = success, 401 = authentication failure, 500 = server error, timeout = no response)
- **Error Message:** Detailed error information for failed transmissions
- **Client ID:** Internal identifier for the client configuration

Usage Guidelines

Monitoring Successful Transmissions

Filter for `sent` status and `200` response codes to verify successful document delivery.

Troubleshooting Failed Transmissions

Filter for non-200 response codes or `failed` status. Review error messages for specific failure details. Common issues include authentication failures, incorrect endpoint URLs, or network connectivity problems.

Compliance and Audit Trail

Use the log to maintain records of document transmission times, supporting compliance requirements and resolving delivery disputes with clients.

Performance Monitoring

Identify patterns in failed transmissions that may indicate configuration or connectivity issues requiring attention.

7. Punchout Quotes Management

The Punchout Quotes section provides administrators with visibility into items that users have transferred from your store to their eProcurement systems. Access this feature via **Takeoff → Punchout Quotes**.

This view displays:

- Quote ID and creation date
- Customer information
- Items selected during punchout sessions
- Transfer status
- Associated client configuration

Use this information to analyze user behavior, track popular products, and understand purchase patterns across different client organizations.

8. Logging and Troubleshooting

8.1 System Logging

When logging is enabled, all cXML transaction logs are automatically recorded in:

```
var/log/takeoff/
```

Log files capture:

- Punchout login requests and responses
- Cart transfer operations
- Order submissions
- Invoice transmissions
- Shipment notice transmissions

8.2 Security and Privacy

For security purposes, sensitive information such as shared secrets and authentication tokens are automatically redacted from log files. This ensures confidentiality while maintaining useful audit trails for troubleshooting.

8.3 CLI Commands

Use the following Magento CLI commands for manual operations and troubleshooting:

```
# Check status of punchout orders and pending transmissions
php bin/magento takeoff:punchout:check-orders # Manually trigger invoice sending
php bin/magento takeoff:punchout:send-invoices # Manually trigger shipment notice sending
php bin/magento takeoff:punchout:send-ship-notices
```

9. Support

For technical assistance, implementation support, or general inquiries, please contact:

Email: studio@takeoffdigital.co.uk
Website: https://takeoffdigital.co.uk

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