



White Paper

# XML Integration with Oracle's WMS and MSCA

How to Automatically Print Labels  
from Oracle Applications

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## Introduction

This white paper explains how Oracle's WMS and MSCA can be integrated with BarTender to automatically print labels.

## Overview

### ***Label Printing Integration with Oracle Warehouse Management and Oracle Mobile Supply Chain***

Oracle Warehouse Management (WMS) and Oracle Mobile Supply Chain (MSCA) are logistics management software products within the Oracle E-Business Suite. Both WMS and MSCA offer integration capabilities that allow for automatic label printing when used with the right external software products, such as the Enterprise Print Server edition of BarTender from Seagull Scientific.

There are two primary tasks that must be completed in order to implement this label printing integration:

- **Configuring Oracle's WMS and MSCA Applications.** Label printing integration with Oracle's WMS and MSCA is based on the generation of an XML file (called an "XML label request") containing all of the information needed to describe a label job. These applications must be configured to create the desired XML file and place it in the proper folder. The steps to do this are not documented here but can be found in the "WMS Implementation Guide," available online to Oracle partners and customers from <http://metalink.oracle.com>. Oracle is responsible for helping users get to the point where they are properly generating these XML files. For additional information on Oracle WMS/MSCA and label integration, please see [For More Information](#), below.
- **Configuring Commander and BarTender.** To handle XML label requests, Commander must be configured both to monitor the folder in which the XML files will be created and then respond by executing the desired print job. This white paper documents the steps necessary to accomplish that.

### ***Seagull Scientific's Commander Utility***

Commander is a utility provided with all BarTender Enterprise editions that allows BarTender to automatically print label jobs in response to certain triggering events from other software. One of these events can be the generation of a "trigger file" (such as an XML label request) in a particular file folder. When a file of a given name or type is detected, Commander reads commands and/or data from that file and passes them on to BarTender, which executes the print job. Commander can also be triggered by and process data sent over a TCP/IP socket.

For more extensive information about using the Commander utility, please see the Commander white papers at:

<http://www.seagullscientific.com/aspx/whitepapers.aspx>

## ***Differences in Commander Editions***

*Oracle XML print requests can only be processed by the Enterprise Print Server edition of Commander.* This is because the Enterprise Print Server edition of Commander provides some functionality that is not available with the RFID Enterprise and base Enterprise editions.

## ***Enhanced Capabilities with the Enterprise Print Server Edition***

In addition to detecting file and e-mail triggers, such as that for Oracle XML print requests, the Enterprise Print Server edition of Commander can also trigger based on TCP/IP socket communications.

Also, the Enterprise Print Server edition supports transformation of incoming XML data into other formats using XSL. The XSL-based conversion process built into the Print Server Edition of Commander is a fast and direct way to convert XML. For the special case of converting Oracle XML Print Requests into BarTender XML Script, Commander includes an XSL style sheet designed for this purpose.

Performance in heavy utilization environments is facilitated with the Enterprise Print Server edition of Commander, as it can launch and communicate with multiple instances of BarTender.

## ***Included Files***

Several files are installed with the Enterprise Print Server edition of BarTender to make integration with Oracle applications easier.

## ***Label Formats***

When the Enterprise Print Server edition of BarTender installs Commander, it installs a set of label formats that implement Oracle's 10 "Seeded Label Formats." The format names and a brief description are listed below:

1. LPN (License plate information)
2. LPN Content (LPN plus details about contents)
3. LPN Summary (LPN plus nested contents summarized)
4. Material (Item, quantity, lot, and revision details)

5. Serial (Material plus serial details)
6. Location (Organization, subinventory, and locator)
7. Shipping (Customer and address)
8. Shipping Contents (Shipping plus content information)
9. WIP Contents (Discrete manufacturing details)
10. Flow Contents (Flow manufacturing plus customer information)

### ***Commander Task List***

The Enterprise Print Server edition of Commander installs with a “Task List” dedicated to Oracle XML integration.

**OracleXML-PrintServer.tl** provides the following:

- Supports reception of XML through a TCP/IP socket
- Takes advantage of the Enterprise Print Server edition of Commander’s support for multiple BarTender processes, which improve performance during heavy usage. (This task list is set to use two processes, but this number can be adjusted)

## ***Configuring Commander for Integration with Oracle WMS/MSCA***

### ***Integration Steps***

1. Install BarTender. When BarTender installation is complete, use the Windows Explorer to browse to the Oracle samples folder, which should be located on your PC at  
  
My Documents\BarTender\Formats\Samples\Oracle
2. Open the “OracleXML-PrintServer.tl” task list in the **Oracle** samples folder.
3. Start detection in Commander. This should cause a folder named “Scan” to appear in the **Oracle** samples folder.

### ***Testing the Commander Configuration***

In order to confirm that you have Commander properly configured, perform the following test:

1. Select one of the sample XML files in the Oracle sample directory and copy this file into the “Scan” folder which appeared when you started detection in Commander.

2. BarTender should respond to the appearance of this XML file by automatically printing a label using data from the XML file.

### ***Finishing the Integration***

Once you have used this procedure to verify that Commander and BarTender are properly responding to the creation of XML files, all that remains is to configure the Oracle application to create the XML file in the Scan folder or send the data through a TCP/IP socket. You may also wish to use BarTender to load and edit some of the included Oracle “Seeded Label Formats” to better meet your specific requirements.

### ***Further Reading: The Two Tasks of OracleXML-PrintServer.tl***

This is an optional section you may want to read to aid your understanding of how the integration works, but it is not required reading in order to set up the integration.

There are two tasks in the OracleXML-PrintServer.tl task list: One that detects file triggers and one that is triggered by TCP/IP socket communications. Either method can be used.

Both tasks use an XSL style sheet to convert any Oracle XML Print Requests found in the trigger into BarTender XML Script. This script contains all of the BarTender commands and label data needed by BarTender to handle a print request. After generation by Commander, it is passed to BarTender’s Automation interface and executed.

Both tasks contained in the OracleXML-PrintServer.tl task list share a single Command Handler that is configured to use two BarTender processes. This helps improve performance when handling multiple simultaneous print requests. If desired, use of additional BarTender processes can be specified.

### ***For More Information***

More information on Oracle WMS and MSCA is available at Oracle’s website:

<http://www.oracle.com>

[http://www.oracle.com/applications/order\\_mgmt/Warehouse.html](http://www.oracle.com/applications/order_mgmt/Warehouse.html)

[http://www.oracle.com/applications/order\\_mgmt/MSCA.html](http://www.oracle.com/applications/order_mgmt/MSCA.html)

More information on the Commander utility is available in the Commander white papers:

<http://www.seagullscientific.com/asp/whitepapers.aspx>

## Available Seagull White Papers

### General White Papers

- The Advantage of Drivers by Seagull
- Choosing the Right BarTender Edition
- Label System Security

### Companion Applications

- Printer Maestro, Part 1: Enterprise Print Management
- BarTender Security Center
- BarTender Web Print Server

### Recent Upgrades

- What's New in the Latest BarTender

### Integration White Papers

- Integration Overview
- Commander
- Commander Examples
- BarTender's .NET SDKs
- BarTender's ActiveX Automation Interface
- Exporting Printer Code Templates
- Using BarTender with Terminal Services and Citrix MetaFrame
- XML Integration with Oracle's WMS and MSCA

### Integration With SAP

- SAP Integration Methods
- Reading SAP IDocs
- SAP Auto Infrastructure Integration with BarTender

### Miscellaneous White Papers

- BarTender Enterprise Licensing
- Printing International Characters Using BarTender
- BarTender Software Activation
- Using BarTender's Application Identifier Wizard
- Optimizing Label Printing Performance
- Status Monitor Overview
- Silent Install

For downloadable versions, visit:

[www.seagullscientific.com/asp/whitepapers.aspx](http://www.seagullscientific.com/asp/whitepapers.aspx)

