

Oracle® Telecommunications Billing Integrator

Implementation Guide

Release 12.2

Part No. E49151-01

September 2013

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Contents

Send Us Your Comments

Preface

1 Introduction to Telecommunications Billing Integrator

Telecommunications Billing Integrator Overview.....	1-1
Telecommunications Billing Integrator Features.....	1-2
Publishing Information to the Billing Applications.....	1-3
Products Used in TBI.....	1-5
Enhancements.....	1-5
Grouped Sales Order Message.....	1-6
Publish Bill To Accounts for a Sales Order.....	1-6
Additional TCA Events for Account Update Message.....	1-6
Enhancements to Account Message.....	1-7
Enhancements to Sales Order Message	1-7
Uptake of JMS Compliant Queues in XML Gateway.....	1-8

2 Implementing Telecommunications Billing Integrator

Implementation Considerations.....	2-1
TBI with TSO.....	2-1
Middleware in TBI.....	2-2
External Billing Applications.....	2-2

3 Implementation Tasks for Oracle Telecommunications Billing Integrator

Implementation Tasks.....	3-2
Setting Up XML Gateway.....	3-3

Defining XML Gateway Profile Values.....	3-3
Defining UTL_FILE_DIR Parameters.....	3-3
Defining XML Standards.....	3-3
Defining a Hub.....	3-4
Defining Hub Users.....	3-4
Defining Transactions.....	3-5
Internal and External Transactions in XML Gateway.....	3-5
Transactions Enabled for TBI.....	3-9
Defining Trading Partners.....	3-10
Setting Up Oracle Collaboration History.....	3-10
Defining Collaboration History Profile Values.....	3-11
Defining Lookup Values for Collaboration.....	3-11
Setting Up Collaboration Events.....	3-12
Setting up the Final Collaboration Event.....	3-12
Checking Status of Agent Listeners.....	3-13
Setting Up Bill Summary UI.....	3-13
Defining Bill Summary UI Profile Options.....	3-13
Providing Access and Enabling the Bill Summary UI.....	3-14
Personalizing Oracle Contact Center for TBI.....	3-15
Accessing the Bill Summary UI from Oracle Contact Center.....	3-16
Loading Bill Summary Data.....	3-16
Integration with Order Management Workflow Processes.....	3-16
Integrating Workflow Process for Publishing Account Information.....	3-16
Integrating Workflow Process for Publishing Sales Order Information	3-17
Defining Sales Order Line Profile Option.....	3-18
Creating the Workflow Function.....	3-19
Integrating Workflow Process for Publishing Group Sales Order Information	3-19
Setting Up and Running the Item Publish Concurrent Program.....	3-19
Item Batch Export Profile Values.....	3-20
Submitting the Item Publish Request.....	3-21
Subscribing to Account Update Events.....	3-21
Supported Events.....	3-22
Configuring the Middleware.....	3-23

A Configuring Oracle Applications InterConnect

Oracle Applications InterConnect Overview.....	A-1
Setting Up OAI Hub.....	A-2
Setting up OAI Adapter for Advanced Queues.....	A-3
Dropping the Hub Schema.....	A-4
Importing OAI Maps to the Repository.....	A-5

B APIs in Telecommunications Billing Integrator

Bill Summary Bulk Insert APIs.....	B-1
Procedure: INSERT_ROW_BATCH	B-1
Procedure: UPDATE_ROW_BATCH.....	B-2
Bill Summary Public Table Type: BILL_SUMMARIES_TABLE.....	B-3
Bill Summary Public Record Type: BILL_SUMMARIES_REC.....	B-3

C Message Maps and DTDs for XML Gateway

Maps and DTDs Overview.....	C-1
Loading and Deleting Maps.....	C-3
Loading and Deleting DTDs.....	C-3

D XML Messages in TBI

XML Message Overview	D-1
Outbound and Inbound BOD.....	D-2
XML Message Format.....	D-2
Outbound Messages	D-2
Inbound Messages	D-4
Seeded XML Messages.....	D-7
Message Specifications for Account Information.....	D-7
Message Specifications for Sales Order Line.....	D-20
Message Specifications for Product/Item.....	D-30
Message Specifications For Group Sales Order Line	D-32

Glossary

Index

Send Us Your Comments

Oracle Telecommunications Billing Integrator Implementation Guide, Release 12.2

Part No. E49151-01

Oracle welcomes customers' comments and suggestions on the quality and usefulness of this document. Your feedback is important, and helps us to best meet your needs as a user of our products. For example:

- Are the implementation steps correct and complete?
- Did you understand the context of the procedures?
- Did you find any errors in the information?
- Does the structure of the information help you with your tasks?
- Do you need different information or graphics? If so, where, and in what format?
- Are the examples correct? Do you need more examples?

If you find any errors or have any other suggestions for improvement, then please tell us your name, the name of the company who has licensed our products, the title and part number of the documentation and the chapter, section, and page number (if available).

Note: Before sending us your comments, you might like to check that you have the latest version of the document and if any concerns are already addressed. To do this, access the new Oracle E-Business Suite Release Online Documentation CD available on My Oracle Support and www.oracle.com. It contains the most current Documentation Library plus all documents revised or released recently.

Send your comments to us using the electronic mail address: appsdoc_us@oracle.com

Please give your name, address, electronic mail address, and telephone number (optional).

If you need assistance with Oracle software, then please contact your support representative or Oracle Support Services.

If you require training or instruction in using Oracle software, then please contact your Oracle local office and inquire about our Oracle University offerings. A list of Oracle offices is available on our Web site at www.oracle.com.

Preface

Intended Audience

Welcome to Release 12.2 of the *Oracle Telecommunications Billing Integrator Implementation Guide*.

This guide is intended for implementers and administrators of the Telecommunications Billing Integrator application. This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Oracle Telecommunications Billing Integrator
- Oracle XML Gateway

To learn more about Oracle XML Gateway, see the *Oracle XML Gateway User's Guide*.

- Oracle Workflow

To know more about Oracle Workflow, see the *Oracle Workflow Administrator's Guide*.

See Related Information Sources on page x for more Oracle E-Business Suite product information.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Structure

- 1 Introduction to Telecommunications Billing Integrator**
- 2 Implementing Telecommunications Billing Integrator**
- 3 Implementation Tasks for Oracle Telecommunications Billing Integrator**
- A Configuring Oracle Applications InterConnect**
- B APIs in Telecommunications Billing Integrator**
- C Message Maps and DTDs for XML Gateway**
- D XML Messages in TBI**
- Glossary**

Related Information Sources

Oracle Telecommunications Billing Integrator shares business and setup information with other Oracle Applications products. Refer to other guides when you set up and use Oracle Telecommunications Billing Integrator. You can read the guides online by choosing Library from the expandable menu on your HTML help window, by reading from the Oracle Applications Document Library CD included in your media pack, or by using a Web browser with a URL that your system administrator provides.

If you require printed guides, you can purchase them from the Oracle Store at <http://oraclestore.oracle.com>.

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

You can navigate to the Oracle Integration Repository through Oracle E-Business Suite Integrated SOA Gateway.

Online Documentation

All Oracle E-Business Suite documentation is available online (HTML or PDF).

- **PDF** - See the Oracle E-Business Suite Documentation Library for current PDF documentation for your product with each release. The Oracle E-Business Suite Documentation Library is also available on My Oracle Support and is updated frequently
- **Online Help** - Online help patches (HTML) are available on My Oracle Support.
- **Release Notes** - For information about changes in this release, including new features, known issues, and other details, see the release notes for the relevant product, available on My Oracle Support.
- **Oracle Electronic Technical Reference Manual** - The Oracle Electronic Technical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for each Oracle E-Business Suite product. This information helps you convert data from your existing applications and integrate Oracle E-Business Suite data with non-Oracle applications, and write custom reports for Oracle E-Business Suite products. The Oracle eTRM is available on My Oracle Support.

Guides Related to All Products

Oracle E-Business Suite User's Guide

This guide explains how to navigate, enter data, query, and run reports using the user interface (UI) of Oracle E-Business Suite. This guide also includes information on setting user profiles, as well as running and reviewing concurrent programs.

You can access this guide online by choosing "Getting Started with Oracle Applications" from any Oracle E-Business Suite product help file.

Guides Related to This Product

Oracle Telecommunications Service Ordering Process Guide

The Oracle Telecommunications Service Ordering solution enables the organization or its customers to create or update online existing configurations of telecommunication equipment and services by moving, adding, changing, or disconnecting a customer's services and equipment. It enables you to track the full life cycle of a telecommunication item from order creation to order fulfillment across multiple orders.

Installation and System Administration

Oracle Alert User's Guide

This guide explains how to define periodic and event alerts to monitor the status of your Oracle E-Business Suite data.

Oracle E-Business Suite Concepts

This book is intended for all those planning to deploy Oracle E-Business Suite Release 12.2, or contemplating significant changes to a configuration. After describing the Oracle E-Business Suite architecture and technology stack, it focuses on strategic topics, giving a broad outline of the actions needed to achieve a particular goal, plus the installation and configuration choices that may be available.

Oracle E-Business Suite CRM System Administrator's Guide

This manual describes how to implement the CRM Technology Foundation (JTT) and use its System Administrator Console.

Oracle E-Business Suite Developer's Guide

This guide contains the coding standards followed by the Oracle E-Business Suite development staff. It describes the Oracle Application Object Library components needed to implement the Oracle E-Business Suite user interface described in the *Oracle E-Business Suite User Interface Standards for Forms-Based Products*. It also provides information to help you build your custom Oracle Forms Developer forms so that they integrate with Oracle E-Business Suite. In addition, this guide has information for customizations in features such as concurrent programs, flexfields, messages, and logging.

Oracle E-Business Suite Installation Guide: Using Rapid Install

This book is intended for use by anyone who is responsible for installing or upgrading Oracle E-Business Suite. It provides instructions for running Rapid Install either to carry out a fresh installation of Oracle E-Business Suite Release 12.2, or as part of an upgrade to Release 12.2.

Oracle E-Business Suite Maintenance Guide

This guide contains information about the strategies, tasks, and troubleshooting activities that can be used to help ensure an Oracle E-Business Suite system keeps running smoothly, together with a comprehensive description of the relevant tools and utilities. It also describes how to patch a system, with recommendations for optimizing typical patching operations and reducing downtime.

Oracle E-Business Suite Security Guide

This guide contains information on a comprehensive range of security-related topics, including access control, user management, function security, data security, and auditing. It also describes how Oracle E-Business Suite can be integrated into a single sign-on environment.

Oracle E-Business Suite Setup Guide

This guide contains information on system configuration tasks that are carried out either after installation or whenever there is a significant change to the system. The activities described include defining concurrent programs and managers, enabling Oracle Applications Manager features, and setting up printers and online help.

Oracle E-Business Suite User Interface Standards for Forms-Based Products

This guide contains the user interface (UI) standards followed by the Oracle E-Business Suite development staff. It describes the UI for the Oracle E-Business Suite products and tells you how to apply this UI to the design of an application built by using Oracle Forms.

Other Implementation Documentation

Oracle Diagnostics Framework User's Guide

This guide contains information on implementing, administering, and developing diagnostics tests for Oracle E-Business Suite using the Oracle Diagnostics Framework.

Oracle E-Business Suite Flexfields Guide

This guide provides flexfields planning, setup and reference information for the Oracle E-Business Suite implementation team, as well as for users responsible for the ongoing maintenance of Oracle E-Business Suite product data. This guide also provides information on creating custom reports on flexfields data.

Oracle E-Business Suite Integrated SOA Gateway Implementation Guide

This guide explains the details of how integration repository administrators can manage and administer the entire service enablement process based on the service-oriented architecture (SOA) for both native packaged public integration interfaces and composite services - BPEL type. It also describes how to invoke Web services from Oracle E-Business Suite by working with Oracle Workflow Business Event System, manage Web service security, and monitor SOAP messages.

Oracle E-Business Suite Integrated SOA Gateway User's Guide

This guide describes how users can browse and view the integration interface definitions and services that reside in Oracle Integration Repository.

Oracle E-Business Suite Multiple Organizations Implementation Guide

This guide describes how to set up multiple organizations and the relationships among them in a single installation of an Oracle E-Business Suite product such that transactions flow smoothly through and among organizations that can be ledgers, business groups,

legal entities, operating units, or inventory organizations. You can use this guide to assign operating units to a security profile and assign this profile to responsibilities such that a user can access data for multiple operating units from a single responsibility. In addition, this guide describes how to set up reporting to generate reports at different levels and for different contexts. Reporting levels can be ledger or operating unit while reporting context is a named entity in the selected reporting level.

Oracle Workflow Administrator's Guide

This guide explains how to complete the setup steps necessary for any Oracle E-Business Suite product that includes workflow-enabled processes. It also describes how to manage workflow processes and business events using Oracle Applications Manager, how to monitor the progress of runtime workflow processes, and how to administer notifications sent to workflow users.

Oracle Workflow Developer's Guide

This guide explains how to define new workflow business processes and customize existing workflow processes embedded in Oracle E-Business Suite. It also describes how to define and customize business events and event subscriptions.

Oracle Workflow User's Guide

This guide describes how Oracle E-Business Suite users can view and respond to workflow notifications and monitor the progress of their workflow processes.

Oracle XML Gateway User's Guide

This guide describes Oracle XML Gateway functionality and each component of the Oracle XML Gateway architecture, including Message Designer, Oracle XML Gateway Setup, Execution Engine, Message Queues, and Oracle Transport Agent. It also explains how to use Collaboration History that records all business transactions and messages exchanged with trading partners.

The integrations with Oracle Workflow Business Event System, and the Business-to-Business transactions are also addressed in this guide.

Training and Support

Training

Oracle offers a complete set of training courses to help you and your staff master Oracle Projects and reach full productivity quickly. These courses are organized into functional learning paths, so you take only those courses appropriate to your job or area of responsibility.

You have a choice of educational environments. You can attend courses offered by Oracle University at any of our many Education Centers, you can arrange for our

trainers to teach at your facility, or you can use Oracle Learning Network (OLN), Oracle University's online education utility. In addition, Oracle training professionals can tailor standard courses or develop custom courses to meet your needs. For example, you may want to use your organization structure, terminology, and data as examples in a customized training session delivered at your own facility.

Support

From on-site support to central support, our team of experienced professionals provides the help and information you need to keep Oracle Projects working for you. This team includes your Technical Representative, Account Manager, and Oracle's large staff of consultants and support specialists with expertise in your business area, managing an Oracle server, and your hardware and software environment.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle **STRONGLY RECOMMENDS** that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

Introduction to Telecommunications Billing Integrator

This chapter covers the following topics:

- Telecommunications Billing Integrator Overview
- Telecommunications Billing Integrator Features
- Publishing Information to the Billing Applications
- Products Used in TBI
- Enhancements
- Grouped Sales Order Message
- Publish Bill To Accounts for a Sales Order
- Additional TCA Events for Account Update Message
- Enhancements to Account Message
- Enhancements to Sales Order Message
- Uptake of JMS Compliant Queues in XML Gateway

Telecommunications Billing Integrator Overview

Telecommunications Billing Integrator (TBI) provides a seamless integration between Oracle E-Business Suite (EBS) and one or more external billing applications to assist in customer management and enhance business benefits.

Telecommunications service providers use Oracle EBS to create and maintain data. They use external billing applications to bill the customers for the services and products ordered through Oracle EBS. Oracle TBI is an interface between Oracle EBS and the external billing applications. Oracle TBI enables exchange of information between Oracle EBS and the billing applications to ensure that data essential for billing purposes is made available to the external billing application.

TBI depends on the Oracle Telecommunications Service Ordering (TSO) solution. The TSO solution leverages multiple components in the Oracle E-Business Suite (EBS) to enable telecommunications service providers to add, change, move or disconnect telecommunication services.

Telecommunications service providers also use Oracle EBS to conduct post-sale interactions with customers, such as processing service requests and billing inquiries. Oracle EBS provides information on customers, accounts, products and sales orders which is replicated and synchronized in the external billing applications. Oracle TBI provides the customer care agent with the bill summary information and actual customer bill images from the billing application. It provides bill summary data in Oracle Contact Center. Oracle TBI thus addresses the need for fast and efficient access to billing information and EBS data.

Telecommunications Billing Integrator Features

The key features of TBI are:

- **Information Exchange:** TBI enables exchange of information between Oracle EBS and external billing applications. TBI publishes details on accounts, products, and sales orders to the external billing applications and Oracle EBS receives acknowledgements for the published messages.
- **Integration with multiple billing systems:** TBI can integrate with multiple heterogeneous billing applications simultaneously.
- **Status Tracking:** TBI integrates with the Oracle Collaboration History to monitor communication between EBS and the billing applications. TBI uses Collaboration History to:
 - Support integration with multiple heterogeneous billing systems. TBI uses Collaboration History to determine if each of the billing application has successfully created accounts and orders. It checks the account messages and sales order messages in Collaboration History.
 - Ensure that order information is published to billing systems only after each billing system has successfully created a party and account.
 - Publish updates to party and account relevant to the billing system.
 - Track the status of each message that is published to the external billing application.
 - Allow users to query for specific collaborations by account numbers, order numbers, or product/item numbers. Users can view the contents of the messages being published and the history of the events.

For more information, see *Setting Up Collaboration History*, page 3-10.

- **Middleware independent:** TBI requires a middleware as an integration point to billing applications for messaging, transforming, and routing the XML messages. TBI can integrate with any middleware that has a native AQ or JMS adapter. TBI has been tested and certified using Oracle Applications InterConnect (OAI 9.0.4). For information on configuring Oracle Applications InterConnect (OAI 9.0.4), see *Configuring Oracle Applications InterConnect*, page A-1.
- **Display bill summary and bill image:** TBI provides access to the bill summary data through Oracle Contact Center. The Bill Summary UI displays the bill summary for a single account number. The customer service agents can view the bill summary from the 'Bill Summary' option in Oracle Contact Center. The bill number provided in the bill summary UI is linked to the image data supplied by the billing application. To enable the 'Bill Summary' option in Oracle Contact Center, see *Setting up Bill Summary UI*, page 3-13.
- **Business Event Enabled:** Business Event System is a real-time notification system. The Business Event System notifies TBI when an account or sales order is created or updated. For account update, the TBI users can choose the TCA events they wish to subscribe to. For more information, see *Subscribing to Account Update Events*, page 3-21.

Publishing Information to the Billing Applications

TBI publishes information on the following EBS entities to the external billing applications:

- New Account
- Account Update
- Item/Product
- Sales Order
- Grouped Sales Order

Publishing New Account Details

Account information is maintained in Oracle Trading Community Architecture (TCA) and is published to the external billing application only when an order is booked for the first time for an account.

For more information, see *Integrating Workflow Process for Publishing Account Information*, page 3-16 and *Message Specifications for Account*, page D-7.

Publishing Account Update Details

TBI subscribes to a set of TCA events related to account updates. TBI generates and publishes an account message to the billing system when changes relevant to the billing

system are made to accounts in TCA.

The updated information is marked in the message. For example: If the credit classification information of an account (relevant to the billing system) is changed in TCA, TBI publishes the account message with the Credit Classification section marked as "U" (Updated).

If multiple changes are made to an account in TCA, TBI publishes multiple account messages.

For more information, see *Subscribing to Account Update Events*, page 3-21 and *Message Specifications for Account*, page D-7.

Publishing Item/Product Details

TBI provides a concurrent manager program to synchronize the product catalog in Oracle EBS with the billing system. Synchronization helps in maintaining accurate pricing and billing information. To synchronize a large number of items between EBS and the billing system, the concurrent program generates an XML or CSV file for all EBS product catalog items that must be uploaded to the billing system. For synchronizing small additions, the concurrent program can generate and asynchronously publish an XML message of items from the EBS product catalog to the billing system.

For more information, see *Setting up and Running the Item Publish Concurrent Program*, page 3-19 and *Message Specifications for Item/Product*, page D-30

Publishing Sales Order Details

Sales order information is created and maintained in Oracle Order Management. Sales orders with multiple order lines are created in Oracle Order Management when:

- A new telecommunications service (example: wireless service) is ordered
- New features (example: voice mail) are added to a service
- Changes are made to features (example: number of rings before voice mail is activated)
- Changes (upgrade/downgrade) are made to price packages
- Provisioning actions (example: service is suspended, resumed, moved or disconnected) are performed on an active service.

In the TSO solution, each order line includes a provisioning action, an item (example: service, feature, price package, one-time charge, recurring charge), pricing, address, and other information. The billing system requires all the information in the order. TBI publishes an XML message for each sales order line, to the billing system after each order line is fulfilled (provisioned).

The sales order is published after confirming that the account that created the sales order is also published. If the account is published, the sales order flow continues to

publish the sales order message. If the account is not published, the account is published before publishing the sales order message.

For more information, see Integrating Workflow Process for Publishing Sales Order Information., page 3-17

Publishing Group Sales Order Message Details

A Group Sales Order message is a consolidated sales order XML message which contains all the order lines published to the third party billing application instead of order lines as individual message. TBI allows you to publish a single message for each line or a single grouped sales order message for all the lines in a sales order. Both of these options are mutually exclusive.

Products Used in TBI

TBI uses the following Oracle applications that provide the underlying technology stack, schema, and structure for TBI.

- Oracle Telecommunications Service Ordering (TSO)
- Oracle Collaboration History
- Oracle Contact Center
- Oracle Workflow Business Systems
- Oracle XML Gateway
- Oracle Advanced Queuing

Enhancements

The enhancements are as follows:

- Creation of a Grouped Sales Order message that includes all the lines of an order.
- Publish Bill-To account information for a sales order.
- Additional TCA events for Account Update Message.
- Enhancements to the Account Message.
- Enhancements to the Sales Order Message.
- Uptake of JMS compliant queues in XML Gateway.

Grouped Sales Order Message

This feature provides a single XML message that includes all the lines of an order. This enables the billing system to initiate the billing process for the entire order at the same time. The complete sales order message is grouped by order number and published to the billing application. A single message per order ensures that the dependencies and relationships across order lines are maintained when the message is delivered to the billing system and the billing system can initiate the billing process for the entire order at the same time.

A group sales order message is useful when an order contains different parts or order lines that are provisioned at the same time and the billing also happens at the same time. For example: An order for provisioning Wireless Service, Voice Mail and SMS for an account. These services are activated immediately and do not have a long waiting time. These services also can be billed immediately.

In the earlier version of TBI, three separate messages would have been created for each of the services provided. With group sales order message, billing information for all these three items can be sent in a single message. The group sales order message is generated after all the billable lines in the order have been successfully fulfilled and the products and services on the order are reflected in the customer's installed base.

Note: Group sales order and sales order line messages are mutually exclusive.

Publish Bill To Accounts for a Sales Order

The Bill To account (payee account) for each order line is published to the billing application. The Bill To accounts are published separately as independent account messages.

Additional TCA Events for Account Update Message

The TCA events added to the existing Account Update message are:

- `oracle.apps.ar.hz.Person.update`: This event is triggered when there are changes to personal information about a person.
- `oracle.apps.ar.hz.Organization.update`: This event is triggered when there are changes to information related to an organization.
- `oracle.apps.ar.hz.CustomerProfile.update`: This event is triggered when there are changes to information about the credit characteristics of a single customer account, customer account site or a party.

- oracle.apps.ar.hz.ContactPoint.update: This event is triggered when there are changes to information about how to communicate to parties or party sites using electronic media such as Electronic Data Interchange (EDI), e-mail, telephone, telex, and the Internet.

Enhancements to Account Message

The information added to the account message is:

- Customer profile amount for the account.
- Credit classification details of the account.

Obsolete Billing Preference Events

The obsolete Billing Preference Events are as follows:

- oracle.apps.ar.hz.BillingPreference.create
- oracle.apps.ar.hz.BillingPreference.update

Obsolete Billing Preference Information

The obsolete billing preference information is as follows:

- BILL_DISPATCH_METHOD
- BILL_FORMAT
- BILL_LANGUAGE
- BILL_TYPE
- BILL_CURRENCY

Enhancements to Sales Order Message

The following enhancements have been added to a sales order message:

- Ship To Address of the Order Line: Include Ship To address details like Address (Street, City, County, Zip Code, Country), Contact Name (Salutation, First Name, Middle Name, Last Name), Contact Phone Number (Primary) and Contact E-mail Address (if available) for each order line
- Ship To Contact of the Order Line: Include the Ship to Contact details

- **Payment Term for the Order Line:** Include the payment terms. This information is used to calculate when a payment is due and factor in any discounts that are given for early payment.
- **Periodicity Details of the Order Line:** Include periodicity details to indicate how often a service is charged.

Uptake of JMS Compliant Queues in XML Gateway

XML Gateway generates XML messages in JMS format. There are two new JMS enabled AQs: WF_JMS_OUT and WF_JMS_IN that can be setup to directly process outbound and inbound JMS messages.

In outbound transactions, XML Gateway generates the XML message directly in the JMS format and enqueues the messages onto the queue WF_JMS_OUT. The middleware should be configured to connect to the WF_JMS_OUT queue so that it can dequeue the message and utilize it for further processing.

The Inbound transaction is similar to the outbound transaction. The Middleware enqueues the message onto WF_JMS_IN, which is the inbound AQ provided by XML Gateway. The XML Gateway dequeues this message and processes it.

Implementing Telecommunications Billing Integrator

This chapter covers the following topics:

- Implementation Considerations
- TBI with TSO
- Middleware in TBI
- External Billing Applications

Implementation Considerations

Consider the following implementation points before implementing Oracle TBI:

- TBI with TSO, page 2-1
- Middleware in TBI, page 2-2
- External Billing Applications, page 2-2

TBI with TSO

Oracle TBI depends on the Oracle Telecommunications Service Ordering (TSO) solution.

The TSO solution leverages multiple components of the Oracle EBS to enable telecommunications service providers to order new telecommunications services for their customers and to order updates to existing telecommunications service configurations. All products, accounts, and orders for telecommunications services captured in EBS are synchronized with the third party billing system(s) that rate and generate bills for the services ordered.

Refer *Oracle Telecommunications Service Ordering Process Guide* for details.

Middleware in TBI

TBI integrates with any middleware that has a native AQ or JMS adapter. TBI has been tested and certified with Oracle Applications InterConnect (OAI 9.0.4). For details, see *Configuring the Middleware.*, page 3-23

External Billing Applications

TBI provides a robust two-way integration which enables exchange of information between Oracle E-Business Suite and the external billing applications.

Routing rules in the middleware allow integration with multiple heterogeneous billing applications. Middleware tracks the billing applications and the E-Business Suite communicates with the middleware.

Implementation Tasks for Oracle Telecommunications Billing Integrator

This chapter covers the following topics:

- Implementation Tasks
- Setting Up XML Gateway
- Defining XML Gateway Profile Values
- Defining UTL_FILE_DIR Parameters
- Defining XML Standards
- Defining a Hub
- Defining Hub Users
- Defining Transactions
- Internal and External Transactions in XML Gateway
- Transactions Enabled for TBI
- Defining Trading Partners
- Setting Up Oracle Collaboration History
- Defining Collaboration History Profile Values
- Defining Lookup Values for Collaboration
- Setting Up Collaboration Events
- Setting up the Final Collaboration Event
- Checking Status of Agent Listeners
- Setting Up Bill Summary UI
- Defining Bill Summary UI Profile Options
- Providing Access and Enabling the Bill Summary UI

- Personalizing Oracle Contact Center for TBI
- Accessing the Bill Summary UI from Oracle Contact Center
- Loading Bill Summary Data
- Integration with Order Management Workflow Processes
- Integrating Workflow Process for Publishing Account Information
- Integrating Workflow Process for Publishing Sales Order Information
- Defining Sales Order Line Profile Option
- Creating the Workflow Function
- Integrating Workflow Process for Publishing Group Sales Order Information
- Setting Up and Running the Item Publish Concurrent Program
- Item Batch Export Profile Values
- Submitting the Item Publish Request
- Subscribing to Account Update Events
- Supported Events
- Configuring the Middleware

Implementation Tasks

Implementing Oracle TBI involves the following:

1. Setting Up XML Gateway, page 3-3
2. Setting Up Collaboration History, page 3-10
3. Starting Agent Listeners, page 3-13
4. Setting Up Bill Summary UI, page 3-13
5. Integration with Order Management Workflow Processes, page 3-16
6. Setting Up and Running the Item Publish Concurrent Program, page 3-19
7. Subscribing to Account Update Events, page 3-21
8. Configuring the Middleware, page 3-23

Setting up Profile Values

To set up profile values in TBI, select the TBI administrator responsibility.

Navigation: TBI setup > profile system values.

Notes

Unless otherwise mentioned, use the TBI administrator responsibility to complete the setups mentioned in this chapter.

Setting Up XML Gateway

You must have the TBI Administrator responsibility to access Oracle XML Gateway database and forms. Setting up XML Gateway or TBI involves the following:

1. Defining XML Gateway Profile Values, page 3-3
2. Defining UTL_FILE_DIR Parameters, page 3-3
3. Defining XML Standards, page 3-3
4. Defining a Hub, page 3-4
5. Defining Transactions, page 3-5
6. Defining Trading Partners, page 3-10

Defining XML Gateway Profile Values

To set the profile options, login to Oracle Forms with the System Administrator responsibility.

Navigation: TBI Setup > Profile System Values

For details on the XML gateway profile values to be set, refer *Oracle XML Gateway User's Guide*.

Defining UTL_FILE_DIR Parameters

Oracle XML Gateway uses the UTL_FILE package to read and write to the server. To use Oracle XML Gateway, create folders to store the XML message process logs and the XSLT style sheets.

Use the utl_file_dir parameter in the \$ORACLE_HOME/dbs/init<SID>.ora file to define folders. Each folder is indicated as "utl_file_dir = directory_name" in this file. The folder name must be the same as the value defined for the Oracle XML Gateway profile ECX_UTL_LOG_DIR file path (ECX:Log File Path).

For details, refer *Oracle XML Gateway User's Guide*.

Defining XML Standards

Define Open Applications Group (OAG) as the XML standard.

Navigation: Oracle XML Gateway Setup > Define XML Standards.

Notes

Standard Code: This is the name or code for the standard body of the XML messages.
Enter 'OAG'

Standard Type: Enter 'XML'.

Defining a Hub

A hub is defined as an integration point within your network.

Navigation: Oracle XML Gateway Setup > Define Hubs.

Notes

Name: Enter 'XNB_HUB'.

Protocol Type: Select JMS. This value identifies the type of messages that are passed through the hub and provides a method for inbound and outbound agent listeners to filter the messages from a common queue. If this value is not available in the LOV, it must be enabled for the XML Gateway. To enable the values:

1. Select XML Gateway Setup > Define Lookup Values.
2. Query for the lookup type 'COMM_METHOD'.
3. Locate the lookup value with code 'JMS' and enable it.

Protocol Address: Enter 'WF_JMS_OUT'. This is the outbound queue to process outbound transactions.

Note: Middleware should be configured accordingly, so that it picks up the outbound messages from WF_JMS_OUT and enqueues the inbound messages to WF_JMS_IN.

Defining Hub Users

A hub user represents an application that takes part in the message exchange.

To define middleware as a hub user, enter XNB as the user name and the hub entity code.

To define the billing application as a hub user, enter the name of the billing application as the user name and hub entity code.

- The names representing the billing applications setup in the hub must be unique.

- Hub entity code values for the various billing applications must be same as the key value from BSR.SENDER.COMPONENT.

Defining Transactions

Internal transactions are used by the XML Gateway Execution Engine. Internal transactions are associated with the trading partner in the trading partner setup. Each internal transaction is associated with a number of external transactions that participate in the integration.

For more information about defining transactions, see the *Oracle XML Gateway User's Guide*.

Navigation: Oracle XML Gateway Setup > Define Transactions.

Notes

Queue: The standard inbound queue used in TBI is APPS.ECX_IN_OAG_IN. The field is disabled for outbound messages. Default queues are defined during installation.

Standard Code: Select 'OAG'.

Transaction Type: This is the product short name for the base Oracle Application. Enter 'XNB', which is the product short code for TBI.

Transaction Subtype: This refers to particular transaction within the application specified by the Transaction Type. The last letter of the code represents the direction of the transaction, that is, "I" for inbound and "O" for outbound. The combination of the Transaction Type and the Transaction Subtype identifies an Oracle transaction with which the message is associated.

External Transaction Type: Enter a primary external identifier for the XML message.

External Transaction Subtype: Enter a secondary external identifier for the XML message.

Internal and External Transactions in XML Gateway

The following internal transactions have associated external transactions in XML Gateway:

- Account Outbound, page 3-6
- Sales Order Outbound, page 3-6
- Group Sales Order Outbound, page 3-7
- Inventory Item Outbound, page 3-8

- Confirm BOD Inbound, page 3-8

Account Outbound Internal Transaction

The following table lists the attributes and values for the account outbound transaction.

Account Outbound Transaction Values

Attribute	Value
Party Type	Customer
Transaction Type	XNB
Transaction Subtype	AO
Transaction Description	XNB TCA Account Outbound

External Transactions for Account Outbound

The following table lists the details of the external transactions for account outbound message.

External Transactions for Account Outbound

STD CODE	DIR	EXT. TXN. TYPE	EXT. TXN. SUBTYPE	QUEUE
OAG	OUT	ACCOUNT	SYNC	-

Internal Transaction for Sales Order Outbound

Sales Order Outbound

Attribute	Value
Party Type	Customer
Transaction Type	XNB
Transaction Subtype	SOO

Attribute	Value
Transaction Description	XNB OM Sales Order Outbound

External Transactions for Sales Order Outbound

External Transactions for Sales Outbound

STD CODE	DIR	EXT. TXN. TYPE	EXT. TXN. SUBTYPE	QUEUE
OAG	OUT	SALESORDER	ADD	-

Internal Transactions for Group Sales Order Outbound

Group Sales Order Outbound

Attribute	Value
Party Type	Customer
Transaction Type	XNB
Transaction Subtype	GSOO
Transaction Description	XNB OM Group Sales Order Outbound

External Transactions for Group Sales Order Outbound

External Transactions for Group Sales Order Outbound

STD CODE	DIR	EXT. TXN. TYPE	EXT. TXN. SUBTYPE	QUEUE
OAG	OUT	GRP_SALESOR DER	ADD	-

Internal Transactions for Inventory Item Outbound

Inventory Item Outbound

Attribute	Value
Party Type	Customer
Transaction Type	XNB
Transaction Subtype	IO
Transaction Description	XNB Inventory Item Outbound

External Transactions for Inventory Item Outbound***External Transactions for Inventory Item Outbound***

STD CODE	DIR	EXT. TXN. TYPE	EXT. TXN. SUBTYPE	QUEUE
OAG	OUT	ITEM	SYNC	-

Internal Transaction for Confirm BOD Inbound***Confirm BOD Inbound***

Attribute	Value
Party Type	Customer
Transaction Type	XNB
Transaction Subtype	CBODI
Transaction Description	XNB Confirm BOD Inbound

External Transactions for Confirm BOD Inbound

External Transactions for Confirm BOD Inbound

STD CODE	DIR	EXT. TXN. TYPE	EXT. TXN. SUBTYPE	QUEUE
OAG	IN	BOD	CONFIRM	APPS.ECX_IN_OAG_Q

Transactions Enabled for TBI

The following table lists the transactions enabled for TBI. A (XNB, CBODI) transaction must be enabled for each hub user representing a billing application with the correct Source Trading Partner Location Code. All transactions must be set as ENABLED.

Transactions Enabled for TBI

TXN TYPE	TXN SUB TYPE	MAP	CONN/HUB	USER NAME	SRCT P LOC CODE	DOC CONF
XNB	AO	XNB_TCA _ACCOU T_OAG72_ OUT	XNB_HUB	XNB	XNB	2
XNB	SOO	XNB_OM_ SALESOR DER_OAG 72_OUT	XNB_HUB	XNB	XNB	2
XNB	GSO	XNB_OM_ GRPSALES ORDER_O AG72_OU T	XNB_HUB	XNB	XNB	2 (If GSO)
XNB	IO	XNB_INV_ ITEM_OA G72_OUT	XNB_HUB	XNB	XNB	2

TXN TYPE	TXN SUB TYPE	MAP	CONN/HUB	USER NAME	SRCT P LOC CODE	DOC CONF
XNB	CBODI	XNB_CLN _CBOD_O AG72_IN	-	-	<Hub Entity Code of Billing Applicatio ns>	0

Defining Trading Partners

A trading partner is an entity which exchanges messages with the XML Gateway. The trading partner has many transactions enabled for each hub user. The transactions enabled for each hub user determines the type of messages generated and the direction of the message. The Protocol Type is populated for outbound messages from the hub protocol type. Protocol Type is not applicable for inbound messages.

For more information about setting up trading partners, see the *Oracle XML Gateway User's Guide*.

Party and Location for the Hub must be created in TCA. For details, see *Oracle Trading Community Architecture User Guide*.

Navigation: XML Gateway Setup > Define Trading Partners.

Notes

Company Admin Email: Enter the System Administrator's e-mail ID. The System Administrator will receive notifications regarding warnings and errors

Connection/Hub: Enter 'XNB_HUB'. This is required only for outbound messages.

Destination Trading Partner Location Code: Leave this field blank.

Document Confirmation: Specifies if the trading partner would like to send or receive a confirmation. Select 2 (Always send a confirmation) for outbound messages and select 0 (Never send a confirmation) for inbound messages.

Setting Up Oracle Collaboration History

Oracle Collaboration History maintains a history or record of the communication between EBS and the billing applications. Using Collaboration History, you can track all the events and messages exchanged during a collaboration including exceptions and the XML Payloads where available. Setting up Oracle Collaboration History involves the following:

1. Defining Collaboration History Profile Values, page 3-11
2. Defining Lookup Values, page 3-11
3. Setting up Collaboration Events, page 3-12
4. Setting up Final Collaboration Event, page 3-12

Defining Collaboration History Profile Values

Log into Oracle Forms and navigate to TBI Setup > Profile System Values and set up profile values for Collaboration History.

Notes

The profile values for Collaboration History are:

1. CLN: Enable_History_Tracking
2. CLN: Debug Level
3. CLN: Debug Log Directory

Defining Lookup Values for Collaboration

Lookup values are used to integrate XML Gateway with the Supply Chain Trading Connector to enable Collaboration History Tracking. Use the applications Developer responsibility to define the lookup values

Navigation: Application : Lookups > Application Object Library

Notes

The following table lists the lookup values.

Lookup Types

Lookup Type	Lookup Code	Description	Enabled?
CLN_APPLICATION_ID	881	Oracle Telecommunications Billing Integrator	Y
CLN_COLLABORATION_TYPE	XNB_ITEM	TBI Item	Y

Lookup Type	Lookup Code	Description	Enabled?
CLN_COLLABORATION _TYPE	XNB_ACCOUNT	TBI Account	Y
CLN_COLLABORATION _TYPE	XNB_SALESORDER	TBI Sales Order	Y
CLN_COLLABORATION _DOC_TYPE	XNB_SYNC_ITEM	TBI Sync Item	Y
CLN_COLLABORATION _DOC_TYPE	XNB_SYNC_ACCOUNT	TBI Sync Account	Y
CLN_COLLABORATION _DOC_TYPE	XNB_ADD_SALESORDE R	TBI Add Sales Order	Y

Note: After updating the lookup values, bounce the Apache server on the environment only if the values are not reflected in the Collaboration Setup UI.

Setting Up Collaboration Events

A Collaboration Event represents a system component acting on information in a message or XML Payload.

Navigation: Workflow Administrator : Collaboration Monitor : SetUp > Collaboration Event Definition

Notes

Application: Select the Oracle Application that owns the collaboration.

Document Type: Select the Document Message Payload identified for the event.

Setting up the Final Collaboration Event

The final collaboration event must be set up in Collaboration History to record the final status of the overall collaboration. The final event is generally the occurrence of an inbound or outbound message in the XML Gateway. After the collaboration is created or updated from the business flow, the collaboration can be tracked using the Collaboration History function.

Navigation: Workflow Administrator : Collaboration Monitor : SetUp > Collaboration

Checking Status of Agent Listeners

The following Agent Listeners must be running for TBI to function:

- Workflow Deferred Agent Listener
- Workflow Deferred Notification Agent Listener
- Workflow Error Agent Listener
- Workflow Inbound Notifications Agent Listener
- Workflow Inbound JMS Agent Listener

Navigation: Workflow Administrator : Oracle Applications Manager > Workflow Manager. Click the Agent listeners icon.

Setting Up Bill Summary UI

The Bill Summary UI is integrated with Oracle Contact Center and can be accessed from Oracle Contact Center through a special menu. Oracle TBI uses the OA Framework for Bill Summary UI.

Setting up Bill Summary UI involves the following:

1. Defining Bill Summary UI Profile Options, page 3-13
2. Providing Access to Bill Summary UI to a Responsibility, page 3-14
3. Personalizing the Form, page 3-15
4. Accessing the Bill Summary UI from Oracle Contact Center, page 3-16
5. Loading Bill Summary Data, page 3-16

Defining Bill Summary UI Profile Options

The following table lists the profile values for Bill Summary UI.

Bill Summary UI Profiles Values

Profile Option	Value
XNB: Bill Image Source	<p>Specifies the source of the image displayed on the bill. The values are:</p> <ul style="list-style-type: none">• Application: The source of the bill image is application specific. The billing application provides the URL to the bill details and the bill summary.• File System: The bill image can be retrieved from the file system.
XNB: Bill Image Location	<p>Specifies the location of the bill image in the file system. 'XNB: Bill Image Source' must be set to 'File System'. The path specified must be a relative path accessible to the application web server.</p> <p>The path specified is appended to the \$OA_HTML path of the web server to retrieve the bill image.</p>
XNB: Bill Image Format	<p>Specifies the format of the bill image. This value is used as the file extension for the image name, which is same as the bill number. For example: gif, jpeg.</p>

Providing Access and Enabling the Bill Summary UI

To access Bill Summary UI from Oracle Contact Center, select a responsibility that has access to Oracle Contact Center. Use the System Administrator responsibility.

Navigation: Security : Responsibility > Define

Steps:

1. Query for 'Menu' to identify the root level menu attached to the responsibility.
2. Navigate to Application > Menu. Query for the menu identified in the previous step.
3. Add the seeded function XNB_OA_ACCT_BILL_DETAILS to the menu with the following values:
 - Function: XNB_OA_BILL_DETAILS
 - Description: XNB Account Bill Details OA Page
4. To enable the Bill Summary UI, add the seeded function

XNB_OA_ACCT_BILL_DETAILS to the menu with the following values:

- Function: XNB_OA_ACCT_BILL_SUMMARY
- Description: XNB Account Bill Summary OA Page

Personalizing Oracle Contact Center for TBI

TBI allows personalization in Oracle Contact Center to invoke the Bill Summary UI. You can do this from the Contact Center form

Navigation: Help > Diagnostic > Custom Code > Personalize.

1. Create a Function. Name the function 'Bill Summary Function' or as appropriate.
2. Select the 'Enabled' check box to enable the function.
3. Select the Condition tab and enter the following details.
 - In the Trigger Event field, enter 'WHEN-NEW-FORM-INSTANCE.'
 - In the Processing Mode field, enter 'Not in Enter-Query Mode'.
4. Select the Actions tab and enter the following details.
 - From the Type list, select Menu.
 - From the Menu Entry list, select 'SpecialXX'. XX represents the number that is not used by any other entry.
 - In the Menu Label field, enter Bill Summary.
 - To separate menu items with a line, enable Render Line Before Menu.
5. Create another function. Name the function 'OA Bill Summary Page' or as appropriate.
6. Select the 'Enabled' check box to enable the function.
7. Select the Conditions Tab and enter the following details.
 - Select the Trigger event. It must be same as the one specified in the Menu, SpecialXX.
 - From the Type list, select Builtin.
 - For Builtin Type, select Launch a Function.

- In the Function Code field, enter XNB_OA_ACCT_BILL_SUMMARY.
- In the Parameters field, enter
='AccountNumber='||:CUSTOMER_HEADER_BLK.CUST_ACCOUNT_NUMBER

Accessing the Bill Summary UI from Oracle Contact Center

To access the Bill Summary UI, select an account from Oracle Contact Center. From the Tool or More Tools menu, select the menu that you had set up in the previous procedure. The Bill summary UI appears.

Loading Bill Summary Data

Data must be uploaded at required intervals to the XNB_BILL_SUMMARIES table for billing details to be displayed accurately in the Bill Summary. Load the data at the end of every billing cycle. To upload the data, call the bill summary APIs. Refer Bill Summary Bulk Insert APIs for details, page B-1.

Integration with Order Management Workflow Processes

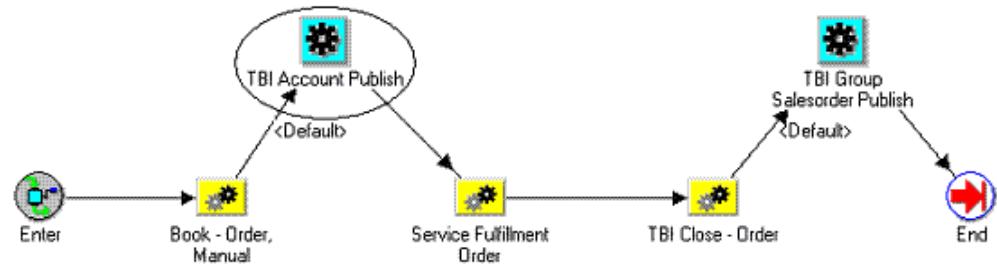
Oracle TBI works in conjunction with the following Order Management Workflow processes:

- XNBFLows.ACCOUNT_PROCESS: Publishes new account information.
- The XNBFLows.SALES_ORDER_PROCESS: Publishes the sales order (line) information.
- XNBFLows.GROUP_SALESORDER_PUBLISH: Publishes the Group Sales Order information.

Integrating Workflow Process for Publishing Account Information

When an order is created for a new account (an account that has not been published to the billing system) in Order Management, the Order Management header flow uses the Business Event System to trigger the TBI account publish process. The TBI account publish process generates the XML and loads it into the AQ. You must create the workflow function for publishing accounts. The figure below shows the workflow process for publishing account information.

Workflow Process for Publishing Account Information



Navigation: In WorkFlow Builder, open the OM Order Header (OEOH) workflow.

Notes

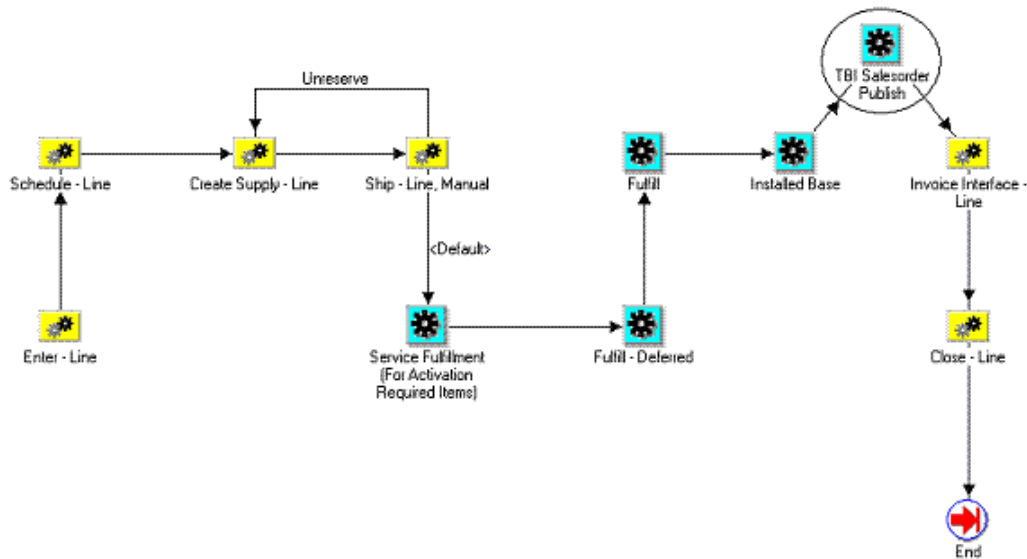
Enter the following parameters:

- **Internal Name:** XNB_ACCOUNT_PUBLISH
- **Display Name:** XNB Account Publish
- **Function Name:** xnb_cmnpvt.publish_account_info

Integrating Workflow Process for Publishing Sales Order Information

When an order is created in Oracle Order Management, the Order Management order line flow uses the Business Event System to trigger the TBI sales order publish process. Each Sales Order line is an individual XML message because each order line corresponds to an item ordered by a customer. The figure below gives the workflow process for publishing sales order information.

Workflow Process for Publishing Sales Order Information



Integrating Workflow Process for Publishing Sales Order Information involves the following:

1. Defining Sales Order Line Profile Values, page 3-18
2. Creating the Workflow Function, page 3-19

Note: GSO and Sales Order Line are mutually exclusive.

Defining Sales Order Line Profile Option

The profile option to set the sales order line is XNB: Account Republish. The values are:

- NEVER: Account information in the sales order line is published only if that account was never published. This is the default value.
- ALWAYS: Account information in the sales order line is published till all the billing applications (in case of multiple Billing Applications) send a confirmation BOD with status SUCCESS to the Oracle E-Business Suite.
- ONERROR: Account information in the sales order line is published only if a failure confirmation BOD with status ERROR was sent by at least one of the billing applications and that billing application has not sent a confirmation BOD with status SUCCESS in the past.

Creating the Workflow Function

Create the workflow function for publishing sales order information.

Navigation: In WorkFlow Builder, open the OM Order Line (OEOL) workflow.

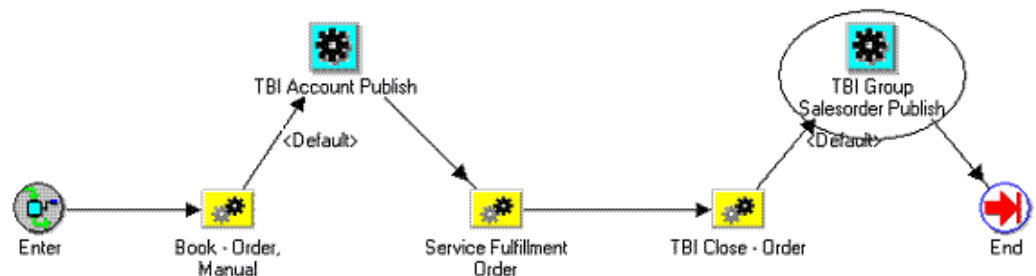
Notes

- **Internal Name:** XNB_SALESORDER_PUBLISH
- **Display Name:** XNB Sales Order Publish
- **Function Name:** xnb_cmnpvt.publish_salesorder_info

Integrating Workflow Process for Publishing Group Sales Order Information

Create the workflow process for publishing group sales order information. The figure below shows the workflow process for publishing Group Sales Order Information.

Workflow Process for Publishing Group Sales Order Information



Navigation: In Workflow Builder, open the OM Order Header (OEOL) workflow.

Notes

Enter the following parameters for the new function:

- **Internal Name:** XNB_GRP_SALESORDER_PUBLISH
- **Display Name:** XNB Group Sales Order Publish
- **Function Name:** xnb_cmnpvt.publish_grpsalesorder_info

Setting Up and Running the Item Publish Concurrent Program

You must have the System Administrator responsibility and the Telecommunications

Billing Integrator Administrator responsibility to setup and run the concurrent program for Oracle TBI.

Setting up and running the item publish concurrent program involves:

1. Defining Item Batch Export Profile Values.
2. Submitting the Item Publish Request.

Item Batch Export Profile Values

The following table lists the profile values for Item Batch Export Profile.

Item Batch Export Profile Values

Profile Option	Value
XNB: Items Batch Message Type	The values are: <ul style="list-style-type: none">• CSV Batch File: Generates a batch file in Comma Separated Values format.• XML Batch File: Generates a batch file in XML format.• XML Message: Generates an XML message for each inventory item and is published through the middleware.
XNB: Items Batch File Location	Name of the folder in which TBI generates the Inventory Items Batch file (XML or CSV). The file is generated by the Item Batch Export Concurrent Request. This is required if the XNB: Items Batch Message Type profile value is set to CSV Batch File or XML Batch File.

The following table lists the seeded values for Item Batch Export concurrent program.

Seeded Values for Item Batch Export Concurrent Program

Name	Value
Program	Telecom Billing Integrator Items Publish

Name	Value
Short Name	XNB_ITEMS_PUBLISH
Application	Telecommunications Billing Integrator
Executable	XNB_ITEMS_PUBLISH

Submitting the Item Publish Request

Update the billing application each time an item is added or updated in the inventory. You can do this in two ways:

1. Use the batch mode which supports CSVs and XML files.
2. Publish the details in a real time asynchronous mode using Item Publish Flow 'XNBFLows.ITEM_PROCESS'. TBI uses the workflow process to publish the item/product information.

For both options, use the Item Batch Export concurrent program. Select the items that need to be published based on the parameters of the concurrent program which initiate the item publish flow. Only the items that are invoiceable (INVOICEABLE_ITEM_FLAG = N) by the external billing applications are published.

Select the TBI Administrator responsibility to submit an item publish request.

Navigation: Requests > Submit Request.

Notes

Request Name: Select 'Telecommunications Billing Integrator Items Publish'.

Billing Application: Name of the hub entity code of the billing application.

From Date: Publishes all items updated between the from date and the current date.

Inventory Organization: Inventory organization of the items to be published/exported.

Inventory Category Set: Inventory category set of the items to be published/exported.

Inventory Category: Inventory category of the items to be published/exported.

Subscribing to Account Update Events

TBI allows you to subscribe to a set of TCA events. When the subscribed event occurs, TBI verifies if the account updated in TCA is relevant to the billing system. If so, TBI publishes the account XML message to the billing system. The qualifier within the XML message is marked with a "U" next to the updated information.

Navigation: TBI Setup > Subscribe to Events > Account Update Events.

Supported Events

The following table lists the supported events.

Sl. No	Event Name	Event Display Name	Description
1	oracle.apps.ar.hz.CustAcctSiteUse.create	CustomerAccount Site Usage Create	Triggered when a new customer account site usage is created.
2	oracle.apps.ar.hz.CustAcctSiteUse.update	CustomerAccount Site Usage Update	Triggered when a customer account site usage is updated.
3	oracle.apps.ar.hz.CustAcctRelate.create	Related Accounts Create	Triggered when a new customer account relation is created.
4	oracle.apps.ar.hz.CustAcctRelate.update	Related Accounts Update	Triggered when a customer account relation is updated.
5	oracle.apps.ar.hz.CustProfileAmt.create	Customer Profile Amounts Create	Triggered when a new customer profile amount is created.
6	oracle.apps.ar.hz.CustProfileAmt.update	Customer Profile Amounts Update	Triggered when a customer profile amount is updated.
7	oracle.apps.ar.hz.CustAccount.update	Customer Account Update	Triggered when a customer account information is updated.
8	oracle.apps.ar.hz.Person.update	Person Update	Triggered when Party Details of type Person is updated.
9	oracle.apps.ar.hz.Organization.update	Organization Update	Triggered when Party Details of type Organization is updated.

Sl. No	Event Name	Event Display Name	Description
10	oracle.apps.ar.hz.CustomerProfile.update	Customer Profile Update	Triggered when Customer Profile details are updated.
11	oracle.apps.ar.hz.ContactPoint.update	Contact Points Update	Triggered when Contact Point details are updated.

Configuring the Middleware

Oracle TBI uses generic XML gateway compatible Advance Queues (AQ) for all outgoing and incoming messages. They are:

1. **WF_JMS_IN:** This inbound queue is used for all inbound messages that are sent to TBI. Once the billing application receives the message, it sends a Confirmation Business Object Document (CBOD) with appropriate status to the Middleware, which queues it onto the WF_JMS_IN. The Workflow Agent configured on the WF_JMS_IN queue picks up the message and calls the workflow handlers to process the message.
2. **WF_JMS_OUT:** This is the JMS Outbound queue that processes outbound transactions. The Account XML message generated in JMS Format is published to the JMS Outbound queue (WF_JMS_OUT). The Collaboration history is updated to reflect the account message publish status.

Note: If Oracle Applications Interconnect (OAI 9.0.4) is used as the middleware, refer Appendix A for details on configuring OAI 9.0.4. If a non-OAI middleware is used, refer to the respective documentation for the configuration details.

Configuring Oracle Applications InterConnect

This appendix covers the following topics:

- Oracle Applications InterConnect Overview
- Setting Up OAI Hub
- Setting up OAI Adapter for Advanced Queues
- Dropping the Hub Schema
- Importing OAI Maps to the Repository

Oracle Applications InterConnect Overview

Oracle Applications InterConnect (OAI 9.0.4) is the middleware for TBI. The components of OAI applicable to TBI are: OAI Hub and OAI Adapter for Advanced Queues (AQ).

The OAI Hub contains all the mapping and transformation data required for integration in its repository. The repository is maintained in an Oracle database on the hub machine. The OAI adapter is attached to an application participating in the integration and is responsible for transfer of data from and to the respective application and the OAI hub. Each adapter performs the necessary data transformation based on the OAI repository metadata.

Configuring OAI as the middleware for TBI involves:

1. Setting Up OAI Hub, page A-2
2. Setting up OAI Adapter for Advanced Queues, page A-3
3. Dropping the Hub Schema, page A-4
4. Importing OAI maps to the Repository, page A-5

Setting Up OAI Hub

Use this procedure to set up the OAI hub.

1. Choose the hub machine.
2. Install Oracle 9iR2 database version 9.2.0.2.1 or higher on the hub machine. Use Oracle Database Configuration Assistant to create an empty database instance to serve as the hub repository. Set the following parameters:
 - HOST: SID: PORT information for the new database instance.
 - Passwords for system and users for the new database instance.
 - TNS name entry for the new database instance.
3. Install Oracle Applications InterConnect Hub version 9.0.4.0.1 on the hub machine. The OAI Hub must be installed in a separate Oracle Home. Provide the following details:
 - Hub DB Parameters: Provide the Host/Port/SID information.
 - Schema Names: Default name for the OAI hub repository schema is 'oaihub904'.
4. Provide the following schema details:
 - Schema: Oaihub904, owf_mgr
 - Schema User Name: oaihub904, Owf_mgr
 - Password: <hub_user_password>, <workflow_user_password>
5. To create database objects in the hub schema, change folder to OAI_HOME/oai/9.0.4/repository.
6. Run the following command: hbschema - create system/<system_user_pwd> <hub_user_pwd> <HubDB_TNS_Name>
7. Run the following script to start the repository service:
`<OAI_HOME>/oai/9.0.4/repository/start`
8. To stop the repository service, use the following command:
`<OAI_HOME>/oai/9.0.4/repository/stop`

Setting up OAI Adapter for Advanced Queues

The Advanced Queuing Adapter (AQ Adapter) allows an instance of E-Business Suite to send or receive information to and from the OAI Hub. The AQ adapter connects to the E-Business Suite database and OAI Hub. It reads and writes into the advanced queues in the E-Business database.

Use this procedure to install and setup the OAI Adapter for Advanced Queues.

1. Install Oracle Application Server InterConnect AQ Adapter v.9.0.4. Provide the following details:
 - Hub DB parameters (Host/ Port/ SID): Connection information to the hub database.
 - Password: Password of the hub schema user.
 - App Name: Used to identify an application participating in the integration. Every instance of an AQ adapter is associated with a particular application. Example: ORA_APPS.
 - Application Spoke DB (Host/ Port/ SID): Connection information to the application database on which the advanced queues are configured. This information usually pertains to an applications database instance. For example: (myserver.domain.com:<port number>:mySID).
 - Spoke Application Database User and Password: User name and password to connect to the Application Spoke DB.
 - Consumer: WF_JMS_OUT
2. After installation, ensure that the `aq_bridge_owner` parameter in the `adapter.ini` file is set to the schema name in the Spoke DB (Example: "APPLSYS").
3. Optionally, to configure the adapter after installation, customize the parameters in the `adapter.ini` file. Locate the `adapter.ini` file in `<OAI_HOME>/oai/9.0.4/adapters/<ADAPTER_NAME>` folder on the host. `OAI_HOME` is the Oracle home of OAI and `ADAPTER_NAME` is the application name given to the adapter. Edit the following parameters in `adapter.ini` file:
 - `application`: The application name given to the adapter.
 - `aq_bridge_host`: The host name of the Application Spoke DB.
 - `aq_bridge_port`: The DB port of the Application Spoke DB.
 - `aq_bridge_instance`: The SID of the Application Spoke DB.

- `aq_bridge_username`: The username to connect to the Spoke DB.
 - `encrypted_aq_bridge_password`: The encrypted password of the `aq_bridge_username`. To encrypt a password, use the `OAI_HOME/oai/9.0.4/bin/encrypt` utility from the console. This utility generates cipher text and prints it on the console, which can be copied to the `adapter.ini` file.
 - `aq_bridge_owner`: The name of the schema to which the AQs in the spoke database belongs. This value should be set to a valid schema name before the adapter is started.
4. Optionally, you can configure the following parameters to improve the performance of the adapter:
 - `agent_pipeline_to_hub = false`
 - `agent_pipeline_from_hub = false`
 - `agent_log_level = 0`
 5. Copy the DTDs from `APPL_TOP` at the following location: `$XNB_TOP/xml/oag72`, and place them in the home folder of the adapter on the host file system, i.e. `<OAI_HOME>/oai/9.0.4/adapters/<ADAPTER_NAME>`. The AQ Adapter requires the DTDs of the XML messages that it reads and writes into the AQs.
 6. To start an adapter service, run the following script from the console:


```
<OAI_HOME>/oai/9.0.4/adapters/<ADAPTER_NAME>/start
```
 7. To stop an adapter service, run the following script from the console:


```
<OAI_HOME>/oai/9.0.4/adapters/<ADAPTER_NAME>/stop
```

Note: The following file contains the log of adapter activities:

```
<OAI_HOME>/oai/9.0.4/adapters/<ADAPTER_NAME>/logs/<latest_timestamp>/oailog.txt
```

Dropping the Hub Schema

To drop the hub schema, you must stop the adapters and the repository service. The steps are:

1. Run the following script from the console to stop the adapters:


```
<OAI_HOME>/oai/9.0.4/adapters/<ADAPTER_NAME>/stop
```

2. Run the following script from the console to stop the repository service:

```
<OAI_HOME>/oai/9.0.4/repository/stop
```

3. Run the following script at the command prompt:

```
<OAI_HOME>/oai/9.0.4/repository/hubschema -drop  
system/<system_user_pwd> <hub_user_pwd> <HubDB_TNS_Name>
```

Importing OAI Maps to the Repository

Seeded integration maps are provided as database export files. This metadata must be imported into an existing OAI 9.0.4 hub repository. Before importing the OAI maps to the repository, you must drop the existing Hub Schema.

Use this procedure to import an OAI map.

1. Run the following script at the command prompt:

```
<OAI_HOME>/oai/9.0.4/repository/oaiimport <IntegrationMap_file>  
<hub_user_name> system/<system_user_pwd> <hub_user_pwd>  
<HubDB_TNS_Name>
```

Note: The values are:

- **hub_user_name:** Hub schema owner user name. Default is oaihub904.
 - **IntegrationMap_file:** The path to the database export file containing the map.
 - **HubDB_TNS_Name:** The TNS entry for the database.
2. If the repository service stops, run the following script to start the repository service:

```
<OAI_HOME>/oai/9.0.4/repository/start
```
 3. If the adapter service stops, run the following script from the console to start the adapter service:

```
<OAI_HOME>/oai/9.0.4/adapters/<ADAPTER_NAME>/start
```

APIs in Telecommunications Billing Integrator

This appendix covers the following topics:

- Bill Summary Bulk Insert APIs
- Procedure: INSERT_ROW_BATCH
- Procedure: UPDATE_ROW_BATCH
- Bill Summary Public Table Type: BILL_SUMMARIES_TABLE
- Bill Summary Public Record Type: BILL_SUMMARIES_REC

Bill Summary Bulk Insert APIs

The summary data in the Bill Summary UI is fetched from the XNB_BILL_SUMMARIES table in Oracle E-Business Suite. The XNB_BILL_SUMMARIES_PKG public package provides the API to do a bulk insert in the XNB Bill Summary tables.

Procedure: INSERT_ROW_BATCH

The INSERT_ROW_BATCH procedure is used to insert new bill summary records from external billing applications into Oracle E-Business Suite.

Syntax: XNB_BILL_SUMMARIES_PKG.Insert_Row_Batch(p_api_version, bill_summaries, x_return_status, x_msg_data);

The following table lists the parameters for the procedure.

Procedure: INSERT_ROW_BATCH

Parameter Name	IN /Out	Data Type	Description
p_api_version	IN	NUMBER	Version of the API
p_bill_summaries	IN	bill_summaries_table	PL/SQL table type that contains the record type required for creating bill summaries.
x_return_status	OUT	VARCHAR2	Returns the status of the create operation. The values returned are: <ul style="list-style-type: none">• S: When the operation is a success.• E: When the operation is not a success due to a known error.
x_msg_data	OUT	VARCHAR2	A concatenated string of all the error and warning messages that are put into the message stack.

Procedure: UPDATE_ROW_BATCH

The UPDATE_ROW_BATCH procedure is used to update existing bill summary records from external billing application into Oracle E-Business Suite.

Syntax: XNB_BILL_SUMMARIES_PKG.Update_Row_Batch(p_api_version, bill_summaries, x_return_status, x_msg_data);

The table below lists the parameters for the UPDATE_ROW_BATCH procedure.

Procedure: UPDATE_ROW_BATCH

Parameter Name	In /Out	Data Type	Description
p_api_version	IN	NUMBER	Version of the API
p_bill_summaries	IN	bill_summaries_table	PL/SQL table type that contains the record type required for creating bill summaries.
x_return_status	OUT	VARCHAR2	Returns the status of the update operation. The values returned are: <ul style="list-style-type: none">• S : When the operation is a success.• E: When the operation is not a success due to a known error.
x_msg_data	OUT	VARCHAR2	A concatenated string of all the error and warning messages that are put into the message stack.

Bill Summary Public Table Type: BILL_SUMMARIES_TABLE

The following table lists the specifications for the BILL_SUMMARIES_TABLE.

Specifications for BILL_SUMMARIES_TABLE

Table Type Name	Record Type	Description
bill_summaries_table	TABLE OF bill_summaries_rec	PL/SQL record type that contains all the attributes required for creating bill summaries.

Bill Summary Public Record Type: BILL_SUMMARIES_REC

The following table lists the specifications for BILL_SUMMARIES_REC.

Specifications for BILL_SUMMARIES_REC

Attribute Name	Data Type	Description
Mandatory attributes		
account_number	VARCHAR2(30)	Account Number of the customer that must exist in Oracle E-Business Suite. This field is mandatory for insert record. The foreign key is hz_cust_accounts.account_number.
bill_number	VARCHAR2(30)	Bill reference number. This field is for insert and update record and must be unique.
billing_vendor_name	VARCHAR2 (240)	Name of the billing vendor.
bill_cycle_end_date	DATE	Billing cycle contains an end date of the cycle. This is required for insert API only (not for update API).
Optional Attributes	-	-
total_amount_due	VARCHAR2 (30)	Total amount due for all open bills.
adjustments	VARCHAR2 (30)	Unapplied adjustments or payments up to this bill cycle.
unresolved_disputes	VARCHAR2 (30)	Total amount of open disputes.
bill_cycle_start_date	DATE	Start date of the billing cycle.
due_date	DATE	Timestamp indicating when the bill is due.
new_charges	VARCHAR2 (30)	New charges for this bill.

Attribute Name	Data Type	Description
Payment	VARCHAR2 (30)	Total payment received on this bill up to this billing cycle.
Balance	VARCHAR2 (30)	Balance for this bill, after the payments etc.
previous_balance	VARCHAR2 (30)	-
bill_location_url	VARCHAR2 (240)	Location of the bill online.
due_now	VARCHAR2 (30)	Amount currently due for an account.
created_by	NUMBER (15)	-
last_updated_by	NUMBER (15)	-
last_update_login	NUMBER (15)	-
object_version_number	NUMBER	Used for locking purposes.
attribute_category	VARCHAR2 (30)	Descriptive flexfield structure defining column
attribute1 to attribute 15	VARCHAR2 (150)	Descriptive flexfield segment column

Message Maps and DTDs for XML Gateway

This appendix covers the following topics:

- Maps and DTDs Overview
- Loading and Deleting Maps
- Loading and Deleting DTDs

Maps and DTDs Overview

TBI provides predefined maps and the corresponding DTDs for the XML Gateway. All the maps and DTDs are automatically loaded into the XML Gateway repository during the installation process and attached to the transactions in the XML Gateway.

The map files are located at \$XNB_TOP/patch/115/xml/US. \$XNB_TOP is the top level folder for the TBI related files.

The DTD files for TBI and OAGIS are located in \$XNB_TOP/xml/oag72.

Maps in XML Gateway

The following table lists the maps in XML Gateway.

Maps in XML Gateway

Supported Flow	Map Internal Name
TCA Account Publish (Add and Update)	XNB_TCA_ACCOUNT_OAG72_OUT.xgm
OM Sales Order Publish	XNB_OM_SALESORDER_OAG72_OUT.xgm
Inventory Item Publish	XNB_INV_ITEM_OAG72_OUT.xgm

Supported Flow	Map Internal Name
XNB Confirm BOD	XNB_CLN_CBOD_OAG72_IN.xgm
OM Group Sales Order Publish	XNB_OM_GRP-salesorder_OAG72_OUT.xgm

Note: The names of message maps are based on the internal names of the map and have an .xgm extension. For example, the file name for TCA Account Publish Map is XNB_TCA_ACCOUNT_OAG72_OUT.xgm.

DTDs in XML Gateway

DTDs in XML Gateway

Map Internal Name	DTD	Root Element
XNB_TCA_ACCTUPDATE_OAG72_OUT.xgm	xnb_update_account_001.dtd	CUSTOMER_ACCOUNT_001
XNB_OM_SALESORDER_OAG72_OUT	xnb_add_salesorder_001.dtd	SALES_ORDER_001
XNB_INV_ITEM_OAG72_OUT	xnb_update_item_001.dtd	ITEM_SYNC_001
XNB_CLN_CBOD_OAG72_IN	xnb_002_confirm_bod_004.dtd	CONFIRM_BOD_004
XNB_OM_GRP-salesorder_OAG72_OUT.xgm	xnb_add_grpsalesorder_001.dtd	GRPSALES_ORDER_001

Open Applications Group (OAG) Conforming DTDs

TBI provides the following OAG conforming DTDs:

- oagis_domains.dtd
- oagis_entity_extensions.dtd

- oagis_extensions.dtd
- oagis_fields.dtd
- oagis_resources.dtd
- oagis_segments.dtd

The OAG Integration Specification DTDs are available in \$XNB_TOP/xml/oag72. This folder also contains the XNB-specific DTDs when they are loaded into the XML Gateway repository.

Loading and Deleting Maps

Maps can be reloaded manually into the repository using the XML Gateway Map loader. Run the following command, from the APPL_TOP to load the Map.

```
$ java oracle.apps.ecx.loader.LoadMap <uname> <passwd> <host:port:sid>
<map_name.xgm>
```

To delete maps from the repository, run the following command:

```
$ java oracle.apps.ecx.loader.DeleteMap <uname> <passwd> <host:port:sid>
<map_internal_name>
```

Loading and Deleting DTDs

Every time a patch is applied and the existing DTDs are updated or new DTDs are introduced, the DTDs are automatically loaded to the repository so there is no need to load them manually. For more information on loading DTDs and maps, refer *Oracle XML Gateway User's Guide*. The OAG conformant DTDs need not be loaded into the repository.

Before loading the TBI Specific DTDs, ensure that the OAGIS DTDs are present in the same directory.

To load the DTDs while debugging, open the '\$XNB_TOP/xml/oag72' directory under APPL_TOP and run the following command:

```
$ java oracle.apps.ecx.loader.LoadDTDToClob <uname> <passwd>
<host:port:sid><dtd_name.dtd> <root_element> <runtime_location>
```

To delete the DTD associated with a map, run the following command:

```
$ java oracle.apps.ecx.loader.DeleteDTDFromClob <uname> <passwd>
host:port:sid <dtd_name.dtd> <root_element> <runtime_location>
```

The script values are:

- uname, passwd, host, port, sid: Database connection parameters.
- dtd_name.dtd : TBI specific DTDs.

- `root_element`: root element of the DTD.
- `runtime_location`: Set to `xnb/oag72`

XML Messages in TBI

This appendix covers the following topics:

- XML Message Overview
- Outbound and Inbound BOD
- XML Message Format
- Outbound Messages
- Inbound Messages
- Seeded XML Messages
- Message Specifications for Account Information
- Message Specifications for Sales Order Line
- Message Specifications for Product/Item
- Message Specifications For Group Sales Order Line

XML Message Overview

TBI uses XML Gateway to generate XML messages. The XML messages in TBI conform to the Open Applications Group Integration Specifications (OAGIS) standard and are published as OAG Business Object Documents (BODs) to the external billing applications.

A BOD contains the following:

1. Control Area (CNTRLAREA): This is the header area defining the identification of the message, the purpose, the sender details, and the time stamp information. All BODs have the same structure for the Control Area.
2. Data Area (DATAAREA): The data area contains the business specific data that is being communicated by the BOD. This area defines the actual business object, such as the TCA account or the OM Sales Order. The structure and content of this area

varies based on the DTD for each message.

Outbound and Inbound BOD

TBI provides the XML DTDs for all the messages exchanged between E-Business Suite and the external billing applications. These DTDs must be used to define BODs in the messaging middleware. TBI generates outbound BODs corresponding to:

1. TCA Account (Add and Update)
2. OM Sales Order
3. Inventory Item
4. Grouped Sales Order

There is only one inbound BOD for TBI. This is the ConfirmBOD (CBOD). The CBOD is used by the billing application to return the status of processing the outbound BODs.

Note: The DTDs for BODs must be used along with the OAG based DTDs to define the business objects in the messaging middleware. The OAG based DTDs are modified to include extensions for TBI.

XML Message Format

Oracle XML Gateway generates the TBI outbound messages and they are delivered as Advanced Queue payloads. The inbound messages (CBOD messages) from a billing application must contain information that the E-Business Suite can use to track success or failure of a published outbound message.

Outbound Messages

The outbound messages publish information on the Oracle E-Business Suite objects, such as customers, products, sales orders, and so on to the external billing applications. Messages are delivered to the Outbound AQ: XNB_JMS_OUTBOUND queue and are picked up by the middleware adapters from the queue.

JMS Message Structure

The table below lists the structure of the JMS standard message.

JMS Message Structure

HEADER	Main Header
HEADER.REPLYTO	Reply to Information
HEADER.REPLYTO.NAME	Name of the Application Replied To
HEADER.REPLYTO.ADDRESS	Address of the Application Replied To
HEADER.REPLYTO.PROTOCOL	Protocol Used in Replying
HEADER.USERID	User Id
HEADER.APPID	Application Id
HEADER.GROUPID	Group Id
HEADER.GROUPSEQ	Group Sequence
HEADER.PROPERTIES	Properties
TEXT_LEN	Length of the Payload
TEXT_VC	Has the Payload If TEXT_LEN < 4000 bytes
LOB	Has the Payload If TEXT_LEN > 4000 bytes

JMS Message Header Properties for CBOD

The message properties contains fields that identify the type of message, the standard it uses, the entity that the message refers to, the sender details, the transportation, and the authentication information. In CBOD messages, XML Gateway refers these properties to identify the correct map to execute.

The following table explains the properties that are published in the Advanced Queue message.

Fields in the Advanced Queue Message

Field	Value
ECX_MESSAGE_TYPE	XML
ECX_MESSAGE_STANDARD	OAG
ECX_TRANSACTION_TYPE	BOD
ECX_TRANSACTION_SUBTYPE	CONFIRM
ECX_PARTY_SITE_ID	Sender Billing application
BES_EVENT_NAME	oracle.apps.ecx.jms.receive (Seeded)
BES_EVENT_KEY	Unique key for every run

Inbound Messages

Inbound messages contain acknowledgements for the published messages or information on the bill summary.

The Confirm BOD message generated by a billing application is another BOD and follows the OAG definition for a BOD. This message contains a control area as well as a data area.

- The value of CNTROLAREA.SENDER.COMPONENT in the inbound messages should correspond to the XML Gateway hub user identification (Hub Entity Code) that is set for the respective external billing application. TBI uses this field to identify the billing application that sent a given confirm BOD.
- The DATAAREA.CONFIRM_BOD.CONFIRM.CNTROLAREA field should contain the control area of the message being confirmed. For example, if a CBOD is confirming a TCA account message, this field should contain the control area of the account message. The SENDER.REFERENCEID field is used by the XML Gateway to identify the message being confirmed. The control area of the message being confirmed can be copied exactly in this field.
- The DATAAREA.CONFIRM_BOD.CONFIRM.STATUSLVL field

contains the status of the processing done on the message being confirmed. If the status is '00', it indicates that the processing was successful. If the status is '99', it indicates that the processing was a failure.

Structure of the CBOD XML Message

```
Structure of the CBOD XML Message
<?xml version = ''1.0'' standalone = ''no''?>
  <!DOCTYPE CONFIRM_BOD_004 SYSTEM "xnb_002_confirm_bod_004.dtd">
  <CONFIRM_BOD_004>
    <CNTROLAREA>
      <BSR>
        <VERB value="CONFIRM">CONFIRM</VERB>
        <NOUN value="BOD">BOD</NOUN>
        <REVISION value="004">004</REVISION>
      </BSR>
      <SENDER>
        <LOGICALID>NO_VALUE (SNDR) </LOGICALID>
        <COMPONENT>BILLAPP_1</COMPONENT>
        <TASK>CONFIRM</TASK>
        <REFERENCEID>NO_VALUE (REF) </REFERENCEID>
        <CONFIRMATION>0</CONFIRMATION>
        <LANGUAGE>en</LANGUAGE>
        <CODEPAGE>ISO 8859-1</CODEPAGE>
        <AUTHID>NO_VALUE (AUTHID) </AUTHID>
      </SENDER>
      <DATETIME qualifier="CREATION">
        <YEAR>2004</YEAR>
        <MONTH>05</MONTH>
        <DAY>12</DAY>
        <HOUR>11</HOUR>
        <MINUTE>12</MINUTE>
        <SECOND>39</SECOND>
        <SUBSECOND>1010</SUBSECOND>
        <TIMEZONE>+0000</TIMEZONE>
      </DATETIME>
    </CNTROLAREA>
    <DATAAREA>
      <CONFIRM_BOD>
        <CONFIRM>
          <CNTROLAREA>
            <BSR>
              <VERB value="ADD">ADD</VERB>
              <NOUN value="ACCOUNT">ACCOUNT</NOUN>
              <REVISION value="001">001</REVISION>
            </BSR>
            <SENDER>
              <LOGICALID>ORACLE</LOGICALID>
              <COMPONENT>XNB</COMPONENT>
              <TASK>AAO</TASK>
            </SENDER>
            <REFERENCEID>C12X4MST.US.ORACLE.COM:oracle.apps.xnb.salesorder.create:XB
B:SALESORDER_LINE : 43125:294654</REFERENCEID>
            <CONFIRMATION>2</CONFIRMATION>
            <LANGUAGE>US</LANGUAGE>
            <CODEPAGE>UTF8</CODEPAGE>
            <AUTHID>APPS</AUTHID>
          </SENDER>
          <DATETIME qualifier="CREATION">
            <YEAR>2005</YEAR>
            <MONTH>01</MONTH>
            <DAY>04</DAY>
            <HOUR>21</HOUR>
            <MINUTE>06</MINUTE>
```



```

<SECOND>06</SECOND>
  <SUBSECOND>0000</SUBSECOND>
  <TIMEZONE>+0000</TIMEZONE>
  </DATETIME>
</CNTROLAREA>
  <STATUSLVL>00</STATUSLVL>
  <DESCRIPTN>THE BOD WAS PROCESSED SUCCESSFULLY</DESCRIPTN>
</CONFIRM>
  </CONFIRM_BOD>
</DATAAREA>
</CONFIRM_BOD_004>

```

Seeded XML Messages

TBI provides seeded XML messages for the following:

- Account information
- Sales order information
- Item information
- GSO

Message Specifications for Account Information

The following table lists the message specifications for account information.

Message Specifications for Account

XML Tag	XML Parent Tag	Field in E-Business Suite	Description
ACCOUNT_INFO	DATAAREA	Account information	
CUST_ACCOUNT_ID	ACCOUNT_INFO	HZ_CUST_ACCOUNTS. CUST_ACCOUNT_ID	Customer account identifier.
ACCOUNT_NUMBER	ACCOUNT_INFO	HZ_CUST_ACCOUNTS. ACCOUNT_NUMBER	Account Number.
STATUS	ACCOUNT_INFO	HZ_CUST_ACCOUNTS. STATUS	Customer status flag.

ACCOUNT_NAME	ACCOUNT_INFO	HZ_CUST_ACCOUNTS. ACCOUNT_NAME	Description chosen by external party.
DATETIME	ACCOUNT_INFO	HZ_CUST_ACCOUNTS. ACCOUNT_ESTABLISHED_DATE	Date when the customer account was originally established.
TAX_CODE	ACCOUNT_INFO	HZ_CUST_ACCOUNTS.TAX_CODE	Tax code for this customer.
TAX_HEADER_LEVEL_FLAG	ACCOUNT_INFO	HZ_CUST_ACCOUNTS. TAX_HEADER_LEVEL_FLAG	Indicate if item is tax header or a line item.
HOLD_BILL_FLAG	ACCOUNT_INFO	HZ_CUST_ACCOUNTS. HOLD_BILL_FLAG	Indicates if the bill receivable should be held or not.
ACCOUNT_EXT_ATTRIBUTES	ACCOUNT_INFO	Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	ACCOUNT_EXT_ATTRIBUTES	HZ_CUST_ACCOUNTS.ATTRIBUTE1 to HZ_CUST_ACCOUNTS.ATTRIBUTE15	Descriptive Flexfield segment for Account.
RELATED_ACCOUNTS	DATAAREA	Related Accounts Information	-
RELATED_CUST_ACCOUNT_ID	RELATED_ACCOUNTS	HZ_CUST_ACCT_RELATE_ALLRELATED_CUST_ACCOUNT_ID	Related Customer Account Id
RELATED_CUST_ACCOUNT_NUMBER	RELATED_ACCOUNTS	HZ_CUST_ACCOUNTS.ACCOUNT_NUMBER	Related Customer Account Number.
RELATED_CUST_ACCOUNT_NAME	RELATED_ACCOUNTS	HZ_CUST_ACCOUNTS.ACCOUNT_NAME	Related Customer Account Name

RELATIONSHIP_TYPE	RELATED_ACCOUNTS	HZ_CUST_ACCT_RELATE_ALL. RELATIONSHIP_TYPE	Relationship Type
ORG_ID	RELATED_ACCOUNTS	HZ_CUST_ACCT_RELATE_ALL.ORG_ID	Organization Id
BILL_TO_FLAG	RELATED_ACCOUNTS	HZ_CUST_ACCT_RELATE_ALL.BILL_TO_FLAG	Bill To Relationship Flag
SHIP_TO_FLAG	RELATED_ACCOUNTS	HZ_CUST_ACCT_RELATE_ALL.SHIP_TO_FLAG	Ship To Relationship Flag
TAX_EXEMPTIONS	DATAAREA	Tax Data	-
EXEMPTION_TYPE	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. EXEMPTION_TYPE	Exemptions can be for customers at a location, or for items at a location.
STATUS	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL.STATUS	Approval status for this exemption.
TAX_CODE	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL.TAX_CODE	Tax code that this exemption applies to.
PERCENT_EXEMPT	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. PERCENT_EXEMPT	Percentage that is exempt from tax.
CUSTOMER_EXEMPTION_NUMBER	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. CUSTOMER_EXEMPTION_NUMBER	Exemption certificate number.
DATETIME	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. END_DATE	Last date that this exemption is effective.

DATETIME	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. START_DATE	First date that this exemption is effective.
REASON_CODE	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. REASON_CODE	The reason for this exemption.
EXEMPT_PERCENT1	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. EXEMPT_PERCENT1	Percentage of the exemption to apply to this portion of the Sales Tax Location Flexfield.
EXEMPT_PERCENT2	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. EXEMPT_PERCENT2	Percentage of the exemption to apply to this portion of the Sales Tax Location Flexfield.
EXEMPT_PERCENT3	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. EXEMPT_PERCENT3	Percentage of the exemption to apply to this portion of the Sales Tax Location Flexfield.
EXEMPT_PERCENT4	TAX_EXEMPTIONS	RA_TAX_EXEMPTIONS_ALL. EXEMPT_PERCENT4	Percentage of the exemption to apply to this portion of the Sales Tax Location Flexfield.
RECEIPT_METHODS	DATAAREA	Various Receipt Methods	-
CUST_RECEIPT_METHOD_ID	RECEIPT_METHODS	RA_CUST_RECEIPT_METHODS.CUST_RECEIPT_METHOD_ID	Uniquely identifies the customer receipt method.
RECEIPT_METHOD_ID	RECEIPT_METHODS	RA_CUST_RECEIPT_METHODS.RECEIPT_METHOD_ID	Identifies the receipt method identifier.

RECEIPT_METHOD_NAME	RECEIPT_METHODS	AR_RECEIPT_METHODS. RECEIPT_METHOD_NAME	Receipt Method Name
PRIMARY_FLAG	RECEIPT_METHODS	RA_CUST_RECEIPT_METHODS.PRIMARY_FLAG	Indicates if customer receipt method is primary.
DATETIME	RECEIPT_METHODS	RA_CUST_RECEIPT_METHODS.START_DATE	Start date of the customer receipt methods
DATETIME	RECEIPT_METHODS	RA_CUST_RECEIPT_METHODS.END_DATE	End date of the customer receipt methods
CUSTOMER_INFO	DATAAREA	Customer Personal Information	-
PARTY_NUMBER	CUSTOMER_INFO	HZ_PARTIES.PARTY_NUMBER	Unique identification number for the customer
PARTY_NAME	CUSTOMER_INFO	HZ_PARTIES.PARTY_NAME	Customer Name
PARTY_TYPE	CUSTOMER_INFO	HZ_PARTIES.PARTY_TYPE	The party type can only be Person, Organization, Group or Relationship.
TAX_REFERENCE	CUSTOMER_INFO	HZ_PARTIES.TAX_REFERENCE	Taxpayer registration number, also known as the VAT number.
JGZZ_FISCAL_CODE	CUSTOMER_INFO	HZ_PARTIES.JGZZ_FISCAL_CODE	Taxpayer identification number, a unique identifier of person or organization. This can be: SSN or income taxpayer ID in the US, fiscal code or NIF in Europe.

EMAIL_ADDRESS	CUSTOMER_INFO	HZ_PARTIES.EMAIL_ADDRESS	Email Address
CUSTOMER_NAME	CUSTOMER_INFO	Name of the Customer	-
PERSON_IDENTIFIER	CUSTOMER_NAME	HZ_PARTIES.PERSON_IDENTIFIER	Personal identifier, such as driver's license or passport number.
PERSON_TITLE	CUSTOMER_NAME	HZ_PARTIES.PERSON_TITLE	A professional or family title. For example, Don or The Right Honorable.
PERSON_PRE_NAME_ADJUNCT	CUSTOMER_NAME	HZ_PARTIES.PERSON_PRE_NAME_ADJUNCT	Salutary introduction, such as Mr. or Herr.
PERSON_FIRST_NAME	CUSTOMER_NAME	HZ_PARTIES.PERSON_FIRST_NAME	First name of the person
PERSON_MIDDLE_NAME	CUSTOMER_NAME	HZ_PARTIES.PERSON_MIDDLE_NAME	Middle name of the person
PERSON_LAST_NAME	CUSTOMER_NAME	HZ_PARTIES.PERSON_LAST_NAME	Last or surname of the person
PERSON_NAME_SUFFIX	CUSTOMER_NAME	HZ_PARTIES.PERSON_NAME_SUFFIX	Indicates the place in a family structure. For example, in Tom Jones III, the "III" is the suffix.
SALUTATION	CUSTOMER_INFO	HZ_PARTIES.SALUTATION	Phrase used to address a party in any correspondence.
ADDRESS	CUSTOMER_INFO	Identifying Address	-

ADDRLINE	ADDRESS	CONTACT(HZ_PARTIES.ADDR ESS1; HZ_PARTIES.ADDR ESS2; HZ_PARTIES.ADDR ESS3; HZ_PARTIES.ADDR ESS4)	Identifying Address Line of the Customer
CITY	ADDRESS	HZ_PARTIES.CITY	City
COUNTRY	ADDRESS	HZ_PARTIES.COUN TRY	Country
COUNTY	ADDRESS	HZ_PARTIES.COUN TY	County
STATEPROVN	ADDRESS	HZ_PARTIES.STATE	State
POSTALCODE	ADDRESS	HZ_PARTIES.POSTA L_CODE	Postal code
CUSTOMER_EXT_A TTRIBUTES	CUSTOMER_INFO	Customer Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	CUSTOMER_EXT_ ATTRIBUTES	HZ_PARTIES.ATTRI BUTE1 to HZ_PARTIES.ATTRI BUTE15	Descriptive Flexfield segment for Customer
RELATIONSHIP_INF O	CUSTOMER_INFO	Customer Relationship Information	--
PARENT_PARTY_ID	RELATIONSHIP_INF O	HZ_PARTIES.PARTY _ID	Parent Customer Id
PARENT_PARTY_N AME	RELATIONSHIP_INF O	HZ_PARTIES.PARTY _NAME	Parent Customer Name

PARENT_RELATIONSHIP_TYPE	RELATIONSHIP_INFO	HZ_RELATIONSHIP_S.RELATIONSHIP_CODE	Either a forward or a backward relationship code
DATETIME	RELATIONSHIP_INFO	HZ_RELATIONSHIP_S.END_DATE	Date relationship ends
CUSTOMER_CONTACT_INFO	CUSTOMER_INFO	Customer Contact Information	-
CONTACT_POINT_ID	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.CONTACT_POINT_TYPE	Identifier for the customer contact point.
CONTACT_POINT_TYPE	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.CONTACT_POINT_TYPE	Lookup: CONTACT_POINT_TYPE of phone, fax, e-mail, web, telex, or EDI
PRIMARY	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.PRIMARY_FLAG	Flag to Identify the Primary Contact Information.
EDI_TRANSACTION_HANDLING	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.EDI_TRANSACTION_HANDLING	ANSI standard code for EDI transaction type
EDI_ID_NUMBER	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.EDI_ID_NUMBER	EDI trading partner number for the supplier site
EDI_PAYMENT_METHOD	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.EDI_PAYMENT_METHOD	Indicates how a payment is to be made through EDI. Valid methods are ACH and BOP.

EDI_PAYMENT_FORMAT	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.EDI_PAYMENT_FORMAT	Indicates type of information being transmitted with the funds if using EDI_PAYMENT_METHOD ACH. Valid values are CCD, CCP, CHZ, CTX, PPD, and PPP.
EMAIL_ADDRESS	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.EMAIL_ADDRESS	E-mail address of the contact point
URL	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.URL	Uniform resource locator
PHONE_LINE_TYPE	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_LINE_TYPE	Lookup code for the type of phone line. For example, general, fax, inbound, or outbound.
PHONE_NUMBER	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_NUMBER	A telephone number formatted in the local format. The number should not include area code, country code, or extension
PHONE_COUNTRY_CODE	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_COUNTRY_CODE	International country code for a telephone number. For example, 33 for France.
PHONE_AREA_CODE	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_AREA_CODE	The area code within a country code.
PHONE_EXTENSION	CUSTOMER_CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_AREA_CODE	-

PARTY_GROUP	CUSTOMER_CON TACT _INFO	Party Group Code	-
GROUP	PARTY_GROUP	AST_PARTY_CLASSI FICATION_V.CLASS _CODE	Classification code
BANK_ACCOUNT_I NFO	DATAAREA	Bank Account Information	-
BANK_ACCOUNT _NUMBER	BANK_ACCOUNT_I NFO	IBY_EXT_BANK_AC COUNTS.BANK_AC COUNT_NUM	Bank Account Number
BANK_ACCOUNT_ NAME	BANK_ACCOUNT_I NFO	IBY_EXT_BANK_AC COUNTS. BANK_ACCOUNT_ NAME	Bank Account Name
BANK_BRANCH_ID	BANK_ACCOUNT_I NFO	IBY_EXT_BANK_AC COUNTS. BRANCH_ID	Bank Branch Identifier
CURRENCY_CODE	BANK_ACCOUNT_I NFO	IBY_EXT_BANK_AC COUNTS. CURRENCY_CODE	Currency Code
ACCOUNT_HOLDE R _NAME	BANK_ACCOUNT_I NFO	HZ_PARTIES. PARTY_NAME	Account Holder Name
DATETIME	BANK_ACCOUNT_I NFO	IBY_PMT_INSTR_US ES_ALL. END_DATE	Inactive Date
BANK_NUMBER	BANK_ACCOUNT_I NFO	HZ_ORGANIZATIO N_PROFILES. BANK_OR_BRANCH _NUMBER	Bank Number
ADDRESS	DATAAREA	Bill To Address	-

ADDRLINE	ADDRESS	CONTACT(HZ_LOCATIONS.ADDRESS1;HZ_LOCATIONS.ADDRESS2;HZ_LOCATIONS.ADDRESS3;HZ_LOCATIONS. ADDRESS4)	Bill To Address Line of the Account
CITY	ADDRESS	HZ_LOCATIONS.CITY	City
COUNTRY	ADDRESS	HZ_LOCATIONS.COUNTRY	Country
COUNTY	ADDRESS	HZ_LOCATIONS.COUNTY	County
STATEPROVN	ADDRESS	HZ_LOCATIONS.STATE	State
POSTALCODE	ADDRESS	HZ_LOCATIONS.POSTAL_CODE	Postalcode
CUST_PROFILE_AMTS_INFO	DATAAREA	Customer Profile Amounts Information	-
CUST_ACCT_PROFILE_AMT_ID	CUST_PROFILE_AMTS_INFO	HZ_CUST_PROFILE_AMTS. CUST_ACCT_PROFILE_AMT_ID	Profile Amount Identifier
CURRENCY_CODE	CUST_PROFILE_AMTS_INFO	HZ_CUST_PROFILE_AMTS. CURRENCY_CODE	Currency code
AMOUNT	CUST_PROFILE_AMTS_INFO	HZ_CUST_PROFILE_AMTS. TRX_CREDIT_LIMIT	Transaction Credit Limit

AMOUNT	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. OVERALL_CREDIT_ LIMIT	Over All Credit limit
AMOUNT	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. MIN_DUNNING_A MOUNT	Minimum dunning amount
AMOUNT	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. MIN_DUNNING_IN VOICE_AMOUNT	Minimum invoice amount
MAX_INTEREST_CH ARGE	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. MAX_INTEREST_CH ARGE	Maximum interest charge
AMOUNT	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. MIN_STATEMENT_ AMOUNT	Minimum statement amount
AMOUNT	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. AUTO_REC_MIN_R ECEIPT_AMOUNT	Minimum receipt amount
INTEREST_RATE	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. INTEREST_RATE	Interest rate
AMOUNT	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. MIN_FC_BALANCE_ AMOUNT	Minimum balance amount
AMOUNT	CUST_PROFILE_AM TS_INFO	HZ_CUST_PROFILE_ AMTS. MIN_FC_INVOICE_ AMOUNT	Minimum invoice amount

DATETIME	CUST_PROFILE_AMTS_INFO	HZ_CUST_PROFILE_AMTS. EXPIRATION_DATE	Expiration date
ATTRIBUTE_CATEGORY	CUST_PROFILE_AMTS_INFO	HZ_CUST_PROFILE_AMTS. ATTRIBUTE_CATEGORY	Attribute category
PROFILE_AMTS_EXTENDED_ATTRIBUTES	CUST_PROFILE_AMTS_INFO	Profile Amounts Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	PROFILE_AMTS_EXTENDED_ATTRIBUTES	HZ_CUST_PROFILE_AMTS. ATTRIBUTE1 to ATTRIBUTE15	Extended Attributes
CREDIT_CLASSIFICATION_INFO	DATAAREA	Credit classification information	-
CUST_ACCOUNT_PROFILE_ID	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. CUST_ACCOUNT_PROFILE_ID	Credit Classification identifier
CREDIT_CHECKING	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. CREDIT_CHECKING	Credit checking flag
DATETIME	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. NEXT_CREDIT_REVIEW_DATE	Next credit review date
TOLERANCE	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. TOLERANCE	Tolerance
CREDIT_HOLD	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. CREDIT_HOLD	Credit hold flag
CREDIT_RATING	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. CREDIT_RATING	Credit rating

STANDARD_TERMS	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. STANDARD_TERMS	Standard terms
OVERRIDE_TERMS	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. OVERRIDE_TERMS	Override terms
DATETIME	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. LAST_CREDIT_REVIEW_DATE	Last credit review date
CREDIT_CLASSIFICATION	CREDIT_CLASSIFICATION_INFO	HZ_CUSTOMER_PROFILES. CREDIT_CLASSIFICATION	Credit classification
CREDIT_EXTENDED_ATTRIBUTES	CREDIT_CLASSIFICATION_INFO	Credit classification extended attributes	-
ATTRIBUTE1 to ATTRIBUTE15	CREDIT_EXTENDED_ATTRIBUTES	HZ_CUSTOMER_PROFILES. ATTRIBUTE1 to ATTRIBUTE15	Extended attributes

Message Specifications for Sales Order Line

The following table lists the specifications for sales order line information.

Message Specifications for Sales Order Line

XML TagT	XML Parent Tag	Field in E-Business Suite	Description
ORDER_LINE_INFO	DATAAREA	Sales order line information	-
ORDER_LINE_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. LINE_ID	Primary Key to identify the Order Line

TOP_MODEL_LINE_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. TOP_MODEL_LINE_ID	Identifier of configuration top parent line
LINK_TO_LINE_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. LINK_TO_LINE_ID	Identifier of immediate parent component line
ORDER_NUMBER	ORDER_HEADER_INFO	OE_ORDER_HEADERS_ALL.ORDER_NUMBER	Unique Identifier for Order
SOLD_TO_PARTY_NUMBER	ORDER_HEADER_INFO	HZ_PARTIES.PARTY_NUMBER	Unique Identifier for Customer
SOLD_TO_PARTY_NAME	ORDER_HEADER_INFO	HZ_PARTIES.PARTY_NAME	Customer Name
SOLD_TO_ACCOUNT_NUMBER	ORDER_HEADER_INFO	HZ_CUST_ACCOUNTS. ACCOUNT_NUMBER	Unique Identifier for Account
SOLD_TO_ACCOUNT_NAME	ORDER_HEADER_INFO	HZ_CUST_ACCOUNTS. ACCOUNT_NAME	Account Name
PRICE_LIST_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. PRICE_LIST_ID	Price List
PRICE_LIST_NAME	ORDER_LINE_INFO	QP_LIST_HEADERS_VL.DESCRPTION	Price List Name used to identify the Price List Name
INVENTORY_ITEM_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. INVENTORY_ITEM_ID	Inventory Item Id

INVENTORY_ITEM_NAME	ORDER_LINE_INFO	MTL_SYSTEM_ITEMS_VL.SEGMENT1	Name of the Product
INVENTORY_ITEM_DESCRIPTION	ORDER_LINE_INFO	MTL_SYSTEM_ITEMS_VL.DESCRPTION	Description of the Product
ORG_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. ORG_ID	Operating Unit which performed this transaction
DATETIME	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. PRICING_DATE	Determines effective list and price modifiers
UNIT_SELLING_PRICE	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. UNIT_SELLING_PRICE	Actual price charged to customer
UNIT_LIST_PRICE	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. UNIT_LIST_PRICE	Price List price for the item
QUANTITY	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. ORDERED_QUANTITY	Quantity Ordered
QUANTITY	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. PRICING_QUANTITY	Quantity based on pricing unit of measure
INVOICE_TO_ORG_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. INVOICE_TO_ORG_ID	Invoice To Organization ID

SHIP_TO_ORG_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ ALL. SHIP_TO_ORG_ID	Ship To Organization ID
ACTION	ORDER_LINE_INFO	OE_TRANSACTION _TYPES_TL.ACTION	Type of Service performed on the Order
CURRENCY_CODE	ORDER_LINE_INFO	QP_LIST_HEADERS_ VL.CURRENCY_CO DE	Currency Code
CHARGE_PERIODIC ITY_CODE	ORDER_LINE_INFO	OE_ORDER_LINES_ ALL.CHARGE_PERI ODICITY_CODE	Charge Periodicity Code
CHARGE_PERIODIC ITY_CODE_DESC	ORDER_LINE_INFO	MTL_UOM_CONVE RSIONS.UNIT_OF_M EASURE	Charge Periodicity Code Description
ADDRESS	ORDER_LINE_INFO	OE_ORDER_LINES_ ALL .SHIP_TO_ORG_ID	Ship To Address
ADDRLINE	ADDRESS	CONCAT(HZ_LOCATIONS.AD DRESS1;HZ_LOCATI ONS.ADDRESS2;HZ_ LOCATIONS.ADDRE SS3;HZ_LOCATIONS . ADDRESS4)	Ship To Address Line of the Account
CITY	ADDRESS	HZ_LOCATIONS.CI TY	City
COUNTRY	ADDRESS	HZ_LOCATIONS.CO UNTRY	Country
COUNTY	ADDRESS	HZ_LOCATIONS.CO UNTY	County

STATEPROVN	ADDRESS	HZ_LOCATIONS.STATE	State
POSTALCODE	ADDRESS	HZ_LOCATIONS.POSTAL_CODE	Postalcode
TAX_INFO	ORDER_LINE_INFO	Tax Information	-
TAX_CODE	TAX_INFO	OE_ORDER_LINES_ALL.TAX_CODE	Tax code for the line
TAX_RATE	TAX_INFO	OE_ORDER_LINES_ALL.TAX_RATE	Tax rate in percentage
DATETIME	TAX_INFO	OE_ORDER_LINES_ALL.TAX_DATE	Date for tax calculation
AMOUNT	TAX_INFO	OE_ORDER_LINES_ALL.TAX_VALUE	Tax amount in order currency
PAYMENT_TERM_INFO	ORDER_LINE_INFO	Payment term Information	-
PAYMENT_TERM_ID	PAYMENT_TERM_INFO	OE_ORDER_LINES_ALL.PAYMENT_TERM_ID	Payment Term Identifier
PAYMENT_TERM_NAME	PAYMENT_TERM_INFO	RA_TERMS_VL.NAME	Payment Term Name
DESCRIPTION	PAYMENT_TERM_INFO	RA_TERMS_VL.DESCRPTION	Payment Term Description
EXT_ATTRIBUTES	ORDER_LINE_INFO	Order Line Extended Attributes	-

ATTRIBUTE1 to ATTRIBUTE15	EXT_ATTRIBUTES	OE_ORDER_LINES_ ALL. ATTRIBUTE1 to ATTRIBUTE15	Descriptive Flexfield segments for Order Line
INSTALL_BASE_INF O	DATAAREA	INSTALL_BASE_INF O	-
INSTANCE_ID	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. INSTANCE_ID	Unique ID that identifies an item unit instance
INSTANCE_NAME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES.INSTANCE_DESC RIPTION	Used to describe the Instance Id
DATETIME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. INSTALL_DATE	Installation Date for an Instance.
DATETIME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. ACTIVE_START_DA TE	Activation Start Date
DATETIME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. ACTIVE_END_DATE	Activation End Date
QUANTITY	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. QUANTITY	Quantity
INSTALL_LOCATIO N_ID	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. INSTALL_LOCATIO N_ID	Install Location Identifier

LAST_OE_ORDER_LINE_ID	INSTALL_BASE_INFO	CSI_ITEM_INSTANCES. LAST_OE_ORDER_LINE_ID	Last Order Line Identifier that touched the instance
ADDRESS	INSTALL_BASE_INFO	CSI_ITEM_INSTANCES. INSTALL_AT_ADDRESS	Install At Address
ATTRIBUTE_VALUES	INSTALL_BASE_INFO	Attribute Value Pairs of Install Base	-
ATTRIBUTE_INFO	ATTRIBUTE_VALUES	Attribute Information	-
ATTRIBUTE_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_ID	Attribute Identifier
ATTRIBUTE_LEVEL	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_LEVEL	Attribute Level
MASTER_ORGANIZATION_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.MASTER_ORGANIZATION_ID	Master Organization Identifier
INVENTORY_ITEM_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.INVENTORY_ITEM_ID	Inventory Item Identifier
ITEM_CATEGORY_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ITEM_CATEGORY_ID	Item Category Identifier
ATTRIBUTE_CODE	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_CODE	Attribute Code

ATTRIBUTE_NAME	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_NAME	Attribute Name
ATTRIBUTE_CATEGORY	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_CATEGORY	Attribute Category
DESCRIPTION	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.DESCRPTION	Description
ACTIVE_START_DATE	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ACTIVE_START_DATE	Activation Start Date
ACTIVE_END_DATE	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ACTIVE_END_DATE	Activation End Date
SECURITY_GROUP_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.SECURITY_GROUP_ID	Security Group Identifier
VALUE_INFO	ATTRIBUTE_VALUES	Value Information	-
ATTRIBUTE_VALUE_ID	VALUE_INFO	CSI_IEA_VALUES.ATTRIBUTE_VALUE_ID	Instance Extended Attribute Value Identifier.
ATTRIBUTE_VALUE	VALUE_INFO	CSI_IEA_VALUES.ATTRIBUTE_VALUE	Instance Extended Attribute Value.
ACTIVE_START_DATE	VALUE_INFO	CSI_IEA_VALUES.ACTIVE_START_DATE	Activation Start Date
ACTIVE_END_DATE	VALUE_INFO	CSI_IEA_VALUES.ACTIVE_END_DATE	Activation End Date
BILL_TO_PARTY_INFO	DATAAREA	BILL_TO_PARTY_INFO	-

BILL_TO_OWNER_FLAG	BILL_TO_PARTY_IN FO	HZ_PARTIES.BILL_TO_OWNER_FLAG	Bill To Owner Flag
PRIMARY_BILL_TO_FLAG	BILL_TO_PARTY_IN FO	HZ_PARTIES.PRIMARY_BILL_TO_FLAG	Primary Bill To Flag
BILL_TO_PARTY_NUMBER	BILL_TO_PARTY_IN FO	HZ_PARTIES.PARTY_NUMBER	Unique Identifier of the Customer
BILL_TO_PARTY_NAME	BILL_TO_PARTY_IN FO	HZ_PARTIES.PARTY_NAME	Customer Name
BILL_TO_ACCOUNT_NUMBER	BILL_TO_PARTY_IN FO	HZ_CUST_ACCOUNTS. ACCOUNT_NUMBER	Unique Identifier of the Account
BILL_TO_ACCOUNT_NAME	BILL_TO_PARTY_IN FO	HZ_CUST_ACCOUNTS. ACCOUNT_NAME	Account Name
ADDRESS	BILL_TO_PARTY_IN FO	Bill To Address	-
ADDRLINE	ADDRESS	CONCAT(HZ_LOCATIONS.ADDRESS1;HZ_LOCATIONS.ADDRESS2;HZ_LOCATIONS.ADDRESS3;HZ_LOCATIONS. ADDRESS4)	Bill To Address Line of the Account
CITY	ADDRESS	HZ_LOCATIONS.CITY	City
COUNTRY	ADDRESS	HZ_LOCATIONS.COUNTRY	Country
COUNTY	ADDRESS	HZ_LOCATIONS.COUNTY	County

STATEPROVN	ADDRESS	HZ_LOCATIONS.STATE	State
POSTALCODE	ADDRESS	HZ_LOCATIONS.POSTAL_CODE	Postal code
PARTY_EXT_ATTRIBUTES	BILL_TO_PARTY_INFO	Party Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	PARTY_EXT_ATTRIBUTES	HZ_PARTIES.ATTRIBUTE1 to HZ_PARTIES.ATTRIBUTE15	Descriptive Flexfield segment for Customer
ACCOUNT_EXT_ATTRIBUTES	BILL_TO_PARTY_INFO	Account Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	ACCOUNT_EXT_ATTRIBUTES	HZ_CUST_ACCOUNTS.ATTRIBUTE1 to ATTRIBUTE15	Descriptive Flexfield segment for Account
SHIP_TO_CONTACT_INFO	DATAAREA	Ship to Contact Information	-
CONTACT_NAME	SHIP_TO_CONTACT_INFO	Ship to Contact Name	-
PERSON_IDENTIFIER	CONTACT_NAME	HZ_PARTIES.PERSON_IDENTIFIER	Person Identifier
PERSON_TITLE	CONTACT_NAME	HZ_PARTIES.PERSON_TITLE	Title
PERSON_PRE_NAME_ADJUNCT	CONTACT_NAME	HZ_PARTIES.PERSON_PRE_NAME_ADJUNCT	Pre Name Adjunct
PERSON_MIDDLE_NAME	CONTACT_NAME	HZ_PARTIES.PERSON_MIDDLE_NAME	Middle Name
PERSON_LAST_NAME	CONTACT_NAME	HZ_PARTIES.PERSON_LAST_NAME	Last Name

PERSON_NAME_SUFFIX	CONTACT_NAME	HZ_PARTIES.PERSON_NAME_SUFFIX	Suffix
SALUTATION	SHIP_TO_CONTACT_INFO	HZ_PARTIES.SALUTATION	Salutation
CONTACT_INFO	SHIP_TO_CONTACT_INFO	Ship to Contact Information	-
CONTACT_POINT_TYPE	CONTACT_INFO	HZ_CONTACT_POINTS.CONTACT_POINT_TYPE	Contact Point Type
EMAIL_ADDRESS	CONTACT_INFO	HZ_CONTACT_POINTS.EMAIL_ADDRESS	Email Address
PHONE_LINE_TYPE	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_LINE_TYPE	Phone Purpose
PHONE_COUNTRY_CODE	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_COUNTRY_CODE	Country Code
PHONE_AREA_CODE	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_AREA_CODE	Area Code
PHONE_NUMBER	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_NUMBER	Phone Number
PHONE_EXTENSION	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_EXTENSION	Extension
URL	CONTACT_INFO	HZ_CONTACT_POINTS.URL	Url

Message Specifications for Product/Item

The following table lists the specifications for product.

Message Specifications for Product

XML Tag	Parent Component	Field in E-Business Suite	Description
ITEM_INFO	DATAAREA	Item Information	-
ITEMID	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. INVENTORY_ITEM_ ID	EBS Inventory Item Identifier
ITEM_NAME	ITEM_INFO	MTL_SYSTEM_ITEM S_VL.SEGMENT1	EBS Inventory item
ITEM_TYPE	ITEM_INFO	MTL_SYSTEM_ITEM S_VL.ITEM_TYPE	Inventory Item Type
ITEM_TYPE_DESC	ITEM_INFO	FND_LOOKUP_VAL UES_VL.MEANING	Inventory Item Type Description
BOM_ITEM_TYPE	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. BOM_ITEM_TYPE	E-Business Suite BOM item type code.
BOM_ITYPE_DESC	ITEM_INFO	MFG_LOOKUPS.ME ANING	E-Business Suite BOM item type description.
UOM	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. PRIMARY_UNIT_OF _MEASURE	Primary Unit of Measure for the item in inventory
ITEM_DESCRIPTION	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. DESCRIPTION	Item/ Product description
ITEM_STATUS	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. INVENTORY_ITEM_ STATUS_CODE	Inventory Item status code
ITEM_STATUS_DESC	ITEM_INFO	MTL_ITEM_STATUS. DESCRIPTION	Inventory Item status description

DATETIME	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. START_DATE_ACTI VE	Start date for the item
DATETIME	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. END_DATE_ACTIVE	End date for the item
ITEM_CLASS	ITEM_INFO	MTL_SYSTEM_ITEM S_VL. PRIMARY_UOM_CO DE	Derive from the UOM CLASS. As this is not stored in any entity and it is derived from UOM we need to know all the distinct values of UOM
ATTRIBUTE1 to ATTRIBUTE15	ITEM_INFO	MTL_SYSTEM_ITEM S_VL.ATTRIBUTE1 to ATTRIBUTE15	Descriptive Flexfield segment for Item

Message Specifications For Group Sales Order Line

The following table lists the message specifications for Group Sales Order Line.

Message Specifications for Group Sales Order Line

XML Tag	XML Parent tag	Field in E-Business Suite	Description
ORDER_HEADER_I NFO	DATAAREA	Order Header Information	-
ORDER_NUMBER	ORDER_HEADER_I NFO	OE_ORDER_HEADE RS_ALL.ORDER_NU MBER	Unique Identifier for Order

SOLD_TO_ACCOUNT_	ORDER_HEADER_I	HZ_CUST_ACCOUNTS.	Unique Identifier for Account
NUMBER		ACCOUNT_NUMBER	
SOLD_TO_ACCOUNT_	ORDER_HEADER_I	HZ_CUST_ACCOUNTS.	Account Name
NAME		ACCOUNT_NAME	
SOLD_TO_PARTY_	ORDER_HEADER_I	HZ_PARTIES.	Unique Identifier for Customer
NUMBER		PARTY_NUMBER	
SOLD_TO_PARTY_NAME	ORDER_HEADER_I	HZ_PARTIES.PARTY_NAME	Customer Name
ORDER_LINE	ORDER_HEADER_I	Salesorder Line Informations	-
ORDER_LINE_INFO	ORDER_LINE	Sales order line information	-
ORDER_LINE_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. LINE_ID	Primary Key to Identify the Order Line
TOP_MODEL_LINE_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. TOP_MODEL_LINE_ID	Identifier of configuration top parent line
LINK_TO_LINE_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. LINK_TO_LINE_ID	Identifier of immediate parent component line
PRICE_LIST_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. PRICE_LIST_ID	Price List
PRICE_LIST_NAME	ORDER_LINE_INFO	QP_LIST_HEADERS_VL.DESCRPTION	Price List Name used to identify the Price List Name

INVENTORY_ITEM_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. INVENTORY_ITEM_ID	Inventory Item Id
INVENTORY_ITEM_NAME	ORDER_LINE_INFO	MTL_SYSTEM_ITEMS_VL.SEGMENT1	Name of the Product
INVENTORY_ITEM_DESCRIPTION	ORDER_LINE_INFO	MTL_SYSTEM_ITEMS_VL.DESCRPTION	Description of the Product
ORG_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. ORG_ID	Operating Unit which performed this transaction
DATETIME	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. PRICING_DATE	Determines effective list and price modifiers
UNIT_SELLING_PRICE	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. UNIT_SELLING_PRICE	Actual price charged to customer
UNIT_LIST_PRICE	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. UNIT_LIST_PRICE	Price List price for the item
QUANTITY	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. ORDERED_QUANTITY	Quantity Ordered
QUANTITY	ORDER_LINE_INFO	OE_ORDER_LINES_ALL. PRICING_QUANTITY	Quantity based on pricing unit of measure

INVOICE_TO_ORG_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ ALL. INVOICE_TO_ORG_ID	Invoice To Organization ID
SHIP_TO_ORG_ID	ORDER_LINE_INFO	OE_ORDER_LINES_ ALL. SHIP_TO_ORG_ID	Ship To Organization ID
ACTION	ORDER_LINE_INFO	OE_TRANSACTION _TYPES_TL.ACTION	Type of Service performed on the Order
CURRENCY_CODE	ORDER_LINE_INFO	QP_LIST_HEADERS_ VL.CURRENCY_CO DE	Currency Code
CHARGE_PERIODIC ITY_CODE	ORDER_LINE_INFO	OE_ORDER_LINES_ ALL.CHARGE_PERI ODICITY_CODE	Charge Periodicity Code
CHARGE_PERIODIC ITY_CODE_DESC	ORDER_LINE_INFO	MTL_UOM_CONVE RSIONS.UNIT_OF_M EASURE	Charge Periodicity Code Description
ADDRESS	ORDER_LINE_INFO	OE_ORDER_LINES_ ALL .SHIP_TO_ORG_ID	Ship To Address
ADDRLINE	ADDRESS	CONCAT(HZ_LOCATIONS.AD DRESS1;HZ_LOCATI ONS.ADDRESS2;HZ_ LOCATIONS.ADDRE SS3;HZ_LOCATIONS . ADDRESS4)	Ship To Address Line of the Account
CITY	ADDRESS	HZ_LOCATIONS.CI TY	City
COUNTRY	ADDRESS	HZ_LOCATIONS.CO UNTRY	Country

COUNTY	ADDRESS	HZ_LOCATIONS.COUNTY	County
STATEPROVN	ADDRESS	HZ_LOCATIONS.STATE	State
POSTALCODE	ADDRESS	HZ_LOCATIONS.POSTAL_CODE	Postalcode
TAX_INFO	ORDER_LINE_INFO	Tax Information	-
TAX_CODE	TAX_INFO	OE_ORDER_LINES_ALL.TAX_CODE	Tax code for the line
TAX_RATE	TAX_INFO	OE_ORDER_LINES_ALL.TAX_RATE	The tax rate in percentage
DATETIME	TAX_INFO	OE_ORDER_LINES_ALL.TAX_DATE	It will store the date for tax calculation
AMOUNT	TAX_INFO	OE_ORDER_LINES_ALL.TAX_VALUE	The Tax amount in order currency
PAYMENT_TERM_INFO	ORDER_LINE_INFO	Payment term Information	-
PAYMENT_TERM_ID	PAYMENT_TERM_INFO	OE_ORDER_LINES_ALL.PAYMENT_TERM_ID	Payment Term Identifier
PAYMENT_TERM_NAME	PAYMENT_TERM_INFO	RA_TERMS_VL.NAME	Payment Term Name
DESCRIPTION	PAYMENT_TERM_INFO	RA_TERMS_VL.DESCRPTION	Payment Term Description

EXT_ATTRIBUTES	ORDER_LINE_INFO	Order Line Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	EXT_ATTRIBUTES	OE_ORDER_LINES_ ALL. ATTRIBUTE1	Descriptive Flexfield segment for Order Line
INSTALL_BASE_INF O	ORDER_LINE	INSTALL_BASE_INF O	-
INSTANCE_ID	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. INSTANCE_ID	Unique ID that identifies an item unit instance
INSTANCE_NAME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES.INSTANCE_DESC RIPTION	Used to describe the Instance Id
DATETIME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. INSTALL_DATE	Installation Date for an Instance.
DATETIME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. ACTIVE_START_DA TE	Activation Start Date
DATETIME	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. ACTIVE_END_DATE	Activation End Date
QUANTITY	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. QUANTITY	Quantity
INSTALL_LOCATIO N_ID	INSTALL_BASE_INF O	CSI_ITEM_INSTANC ES. INSTALL_LOCATIO N_ID	Install Location Identifier

LAST_OE_ORDER_LINE_ID	INSTALL_BASE_INFO	CSI_ITEM_INSTANCES. LAST_OE_ORDER_LINE_ID	Last Order Line Identifier that touched the Instance
ADDRESS	INSTALL_BASE_INFO	CSI_ITEM_INSTANCES. INSTALL_AT_ADDRESS	Install At Address
ATTRIBUTE_VALUES	INSTALL_BASE_INFO	Attribute Value Pairs of Install Base	-
ATTRIBUTE_INFO	ATTRIBUTE_VALUES	Attribute Information	-
ATTRIBUTE_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_ID	Attribute Identifier
ATTRIBUTE_LEVEL	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_LEVEL	Attribute Level
MASTER_ORGANIZATION_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.MASTER_ORGANIZATION_ID	Master Organization Identifier
INVENTORY_ITEM_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.INVENTORY_ITEM_ID	Inventory Item Identifier
ITEM_CATEGORY_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ITEM_CATEGORY_ID	Item Category Identifier
ATTRIBUTE_CODE	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_CODE	Attribute Code

ATTRIBUTE_NAME	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_NAME	Attribute Name
ATTRIBUTE_CATEGORY	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ATTRIBUTE_CATEGORY	Attribute Category
DESCRIPTION	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.DESCRPTION	Description
ACTIVE_START_DATE	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ACTIVE_START_DATE	Activation Start Date
ACTIVE_END_DATE	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.ACTIVE_END_DATE	Activation End Date
SECURITY_GROUP_ID	ATTRIBUTE_INFO	CSI_I_EXTENDED_ATTRIBUTES.SECURITY_GROUP_ID	Security Group Identifier
VALUE_INFO	ATTRIBUTE_VALUES	Value Information	-
ATTRIBUTE_VALUE_ID	VALUE_INFO	CSI_IEA_VALUES.ATTRIBUTE_VALUE_ID	Instance Extended Attribute Value Identifier.
ATTRIBUTE_VALUE	VALUE_INFO	CSI_IEA_VALUES.ATTRIBUTE_VALUE	Instance Extended Attribute Value.
ACTIVE_START_DATE	VALUE_INFO	CSI_IEA_VALUES.ACTIVE_START_DATE	Activation Start Date
ACTIVE_END_DATE	VALUE_INFO	CSI_IEA_VALUES.ACTIVE_END_DATE	Activation End Date
BILL_TO_PARTY_INFO	ORDER_LINE	BILL_TO_PARTY_INFO	-

BILL_TO_OWNER_FLAG	BILL_TO_PARTY_IN FO	HZ_PARTIES.BILL_T O_OWNER_FLAG	Bill To Owner Flag
PRIMARY_BILL_TO_FLAG	BILL_TO_PARTY_IN FO	HZ_PARTIES.PRIMA RY_BILL_TO_FLAG	Primary Bill To Flag
BILL_TO_PARTY_N UMBER	BILL_TO_PARTY_IN FO	HZ_PARTIES.PARTY _NUMBER	Unique Identifier of the Customer
BILL_TO_PARTY_N AME	BILL_TO_PARTY_IN FO	HZ_PARTIES.PARTY _NAME	Customer Name
BILL_TO_ACCOUNT _NUMBER	BILL_TO_PARTY_IN FO	HZ_CUST_ACCOUN TS. ACCOUNT_NUMBE R	Unique Identifier of the Account
BILL_TO_ACCOUNT _NAME	BILL_TO_PARTY_IN FO	HZ_CUST_ACCOUN TS. ACCOUNT_NAME	Account Name
ADDRESS	BILL_TO_PARTY_IN FO	Bill To Address	-
ADDRLINE	ADDRESS	CONCAT(HZ_LOCATIONS.AD DRESS1;HZ_LOCATI ONS.ADDRESS2;HZ_ LOCATIONS.ADDRE SS3;HZ_LOCATIONS . ADDRESS4)	Bill To Address Line of the Account
CITY	ADDRESS	HZ_LOCATIONS.CI TY	City
COUNTRY	ADDRESS	HZ_LOCATIONS.CO UNTRY	Country
COUNTY	ADDRESS	HZ_LOCATIONS.CO UNTY	County

STATEPROVN	ADDRESS	HZ_LOCATIONS.STATE	State
POSTALCODE	ADDRESS	HZ_LOCATIONS.POSTAL_CODE	Postalcode
PARTY_EXT_ATTRIBUTES	BILL_TO_PARTY_INFO	Party Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	PARTY_EXT_ATTRIBUTES	HZ_PARTIES.ATTRIBUTE1 to HZ_PARTIES.ATTRIBUTE15	Descriptive Flexfield segment for Customer
ACCOUNT_EXT_ATTRIBUTES	BILL_TO_PARTY_INFO	Account Extended Attributes	-
ATTRIBUTE1 to ATTRIBUTE15	ACCOUNT_EXT_ATTRIBUTES	HZ_CUST_ACCOUNTS.ATTRIBUTE1 to ATTRIBUTE15	Descriptive Flexfield segment for Account
SHIP_TO_CONTACT_INFO	ORDER_LINE	Ship to Contact Information	-
CONTACT_NAME	SHIP_TO_CONTACT_INFO	Ship to Contact Name	-
PERSON_IDENTIFIER	CONTACT_NAME	HZ_PARTIES.PERSON_IDENTIFIER	Person Identifier
PERSON_TITLE	CONTACT_NAME	HZ_PARTIES.PERSON_TITLE	Title
PERSON_PRE_NAME_ADJUNCT	CONTACT_NAME	HZ_PARTIES.PERSON_PRE_NAME_ADJUNCT	Pre Name Adjunct
PERSON_MIDDLE_NAME	CONTACT_NAME	HZ_PARTIES.PERSON_MIDDLE_NAME	Middle Name
PERSON_LAST_NAME	CONTACT_NAME	HZ_PARTIES.PERSON_LAST_NAME	Last Name

PERSON_NAME_SUFFIX	CONTACT_NAME	HZ_PARTIES.PERSON_NAME_SUFFIX	Suffix
SALUTATION	SHIP_TO_CONTACT_INFO	HZ_PARTIES.SALUTATION	Salutation
CONTACT_INFO	SHIP_TO_CONTACT_INFO	Ship to Contact Information	-
CONTACT_POINT_TYPE	CONTACT_INFO	HZ_CONTACT_POINTS.CONTACT_POINT_TYPE	Contact Point Type
EMAIL_ADDRESS	CONTACT_INFO	HZ_CONTACT_POINTS.EMAIL_ADDRESS	Email Address
PHONE_LINE_TYPE	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_LINE_TYPE	Phone Purpose
PHONE_COUNTRY_CODE	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_COUNTRY_CODE	Country Code
PHONE_AREA_CODE	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_AREA_CODE	Area Code
PHONE_NUMBER	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_NUMBER	Phone Number
PHONE_EXTENSION	CONTACT_INFO	HZ_CONTACT_POINTS.PHONE_EXTENSION	Extension
URL	CONTACT_INFO	HZ_CONTACT_POINTS.URL	Url

Glossary

Advanced Queuing Adapter

Used to integrate OAI hub with an Advanced Queue in the spoke application.

Agent Listener

Type of service component that processes event messages on agents.

Hub

An integration point within your network.

Hub Schema

Schema in the database where OAI hub repository resides.

Hub User

Represents an application that takes part in the message exchange.

JMS

Java Message Service (JMS) API is a messaging standard that allows application components based on the Java 2 Platform, Enterprise Edition (J2EE) to create, send, receive, and read messages.

OAI Hub

Contains all the mapping and transformation data required for integration in its repository.

OAI Maps

Specification for transforming XML message from application view to common view and vice versa.

Trading Partner

Entity that exchanges messages with the XML Gateway.

Transaction

Transmission of information between Oracle EBS and Billing application.

Workflow Function

Activity in a workflow process which invokes Pl/Sql procedure or function.

XML Gateway

Generates the appropriate xml message based on the specifications, provided in the XML gateway map file. The message is validated using a DTD. XML Gateway places the generated message on the Advanced Queue (AQ) for further processing.

XML Payload

Data present within the XML message.

Index

A

Agent Listeners, list of, 3-13

B

Billing Preference, obsoleted, 1-7
Billing Preference event, obsoleted, 1-7
Bill Summary UI
 Accessing, 3-16

C

Collaboration History, 3-10
 profile values, 3-11

F

Final Collaboration Event, 3-12

G

Grouped Sales Order Message, 1-6
 Example, 1-6

H

Hub user, defining, 3-4

O

OAI hub, A-1
Overview, 1-1
 XML Message, D-1
Overview, OAI, A-1

P

Profile Option
 Bill Summary UI, 3-13
Publishing
 Account Update Details, 1-3
 Bill To accounts for a Sales Order, 1-6
 Item/Product Details, 1-4
 New Account Details, 1-3
 Sales Order Details, 1-4

S

Starting Adapter, A-4
Stopping Adapter, A-4

T

Transactions, internal, 3-5

