

Oracle[®] Advanced Inbound

Implementation Guide

Release 11*i*

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Oracle Advanced Inbound Implementation Guide, Release 11i

Part No. B10175-01

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this document. Your input is an important part of the information used for revision.

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Preface

Audience for This Guide

Welcome to Release 11*i* of the Oracle Advanced Inbound Implementation Guide.

This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Oracle Advanced Inbound

If you have never used Oracle Advanced Inbound, Oracle suggests you attend one or more of the Oracle Advanced Inbound training classes available through Oracle University.

- The Oracle Applications graphical user interface.

To learn more about the Oracle Applications graphical user interface, read the *Oracle Applications User's Guide*.

See Other Information Sources for more information about Oracle Applications product information.

How To Use This Guide

This guide contains the information you need to understand and use Oracle Advanced Inbound.

- Chapter 1 introduces and explains the key features of Oracle Advanced Inbound and its role within the Oracle Interaction Center product family.
- Chapter 2 describes the features and functions of Oracle Advanced Inbound.

- Chapter 3 describes the server architecture of Oracle Advanced Inbound and lists the minimum hardware and software requirements.
- Chapter 4 describes the applications that must be implemented prior to implementing Oracle Advanced Inbound, and optional applications that provide additional functionality.
- Chapter 5 provides an overview of the implementation process.
- Chapter 6 describes the implementation procedures.
- Appendix A lists the Oracle Telephony Adapter equivalents for CTI middleware parameters that were used in previous releases.
- Appendix B lists the data type operators and media type values for route rules and classification rules.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Accessibility of Code Examples in Documentation

JAWS, a Windows screen reader, may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, JAWS may not always read a line of text that consists solely of a bracket or brace.

Other Information Sources

You can choose from many sources of information, including online documentation, training, and support services, to increase your knowledge and understanding of Oracle Advanced Inbound.

If this guide refers you to other Oracle Applications documentation, use only the Release 11*i* versions of those guides.

Online Documentation

All Oracle Applications documentation is available online (HTML or PDF). Online help patches are available on MetaLink.

Related Documentation

Oracle Advanced Inbound shares business and setup information with other Oracle Applications products. Therefore, you may want to refer to other product documentation when you set up and use Oracle Advanced Inbound.

You can read the documents 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>.

Documents Related to All Products

Oracle Applications User's Guide

This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI) available with this release of Oracle Advanced Inbound (and any other Oracle Applications products). This guide also includes information on setting user profiles, as well as running and reviewing reports and concurrent processes.

You can access this user's guide online by choosing "Getting Started with Oracle Applications" from any Oracle Applications help file.

Documents Related to This Product

Oracle Advanced Inbound Concepts and Procedures

Use this guide for post-installation administrative procedures and for conceptual information.

Oracle Interaction Center Concepts and Procedures

This guide contains basic conceptual and administrative information about the Interaction Center server group architecture.

Oracle Applications Interaction Center Implementation Guide

This guide contains the installation and implementation information for the Interaction Center Server Manager (ICSM).

Installation and System Administration

Oracle Applications Concepts

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications Release 11*i*. It provides a useful first book to read before an installation of Oracle Applications. This guide also introduces the concepts behind Applications-wide features such as Business Intelligence (BIS), languages and character sets, and Self-Service Web Applications.

Installing Oracle Applications

This guide provides instructions for managing the installation of Oracle Applications products. In Release 11*i*, much of the installation process is handled using Oracle Rapid Install, which minimizes the time to install Oracle Applications, the Oracle8 technology stack, and the Oracle8*i* Server technology stack by automating many of the required steps. This guide contains instructions for using Oracle Rapid Install and lists the tasks you need to perform to finish your installation. You should use this guide in conjunction with individual product user's guides and implementation guides.

Oracle Applications Supplemental CRM Installation Steps

This guide contains specific steps needed to complete installation of a few of the CRM products. The steps should be done immediately following that tasks given in the Installing Oracle Applications guide.

Upgrading Oracle Applications

Refer to this guide if you are upgrading your Oracle Applications Release 10.7 or Release 11.0 products to Release 11*i*. This guide describes the upgrade process and lists database and product-specific upgrade tasks. You must be either at Release 10.7 (NCA, SmartClient, or character mode) or Release 11.0, to upgrade to Release 11*i*. You cannot upgrade to Release 11*i* directly from releases prior to 10.7.

Maintaining Oracle Applications

Use this guide to help you run the various AD utilities, such as AutoUpgrade, AutoPatch, AD Administration, AD Controller, AD Relink, License Manager, and others. It contains how-to steps, screen shots, and other information that you need

to run the AD utilities. This guide also provides information on maintaining the Oracle applications file system and database.

Oracle Applications System Administrator's Guide

This guide provides planning and reference information for the Oracle Applications System Administrator. It contains information on how to define security, customize menus and online help, and manage concurrent processing.

Oracle Alert User's Guide

This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

Oracle Applications Developer's Guide

This guide contains the coding standards followed by the Oracle Applications development staff. It describes the Oracle Application Object Library components needed to implement the Oracle Applications user interface described in the *Oracle Applications User Interface Standards for Forms-Based Products*. It also provides information to help you build your custom Oracle Forms Developer 6i forms so that they integrate with Oracle Applications.

Oracle Applications User Interface Standards for Forms-Based Products

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

Other Implementation Documentation

Multiple Reporting Currencies in Oracle Applications

If you use the Multiple Reporting Currencies feature to record transactions in more than one currency, use this manual before implementing Oracle Advanced Inbound. This manual details additional steps and setup considerations for implementing Oracle Advanced Inbound with this feature.

Multiple Organizations in Oracle Applications

This guide describes how to set up and use Oracle Advanced Inbound with Oracle Applications' Multiple Organization support feature, so you can define and support different organization structures when running a single installation of Oracle Advanced Inbound.

Oracle Workflow Guide

This guide explains how to define new workflow business processes as well as customize existing Oracle Applications-embedded workflow processes. You also use this guide to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes.

Oracle Applications Flexfields Guide

This guide provides flexfields planning, setup and reference information for the Oracle Advanced Inbound implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This manual also provides information on creating custom reports on flexfields data.

Oracle eTechnical Reference Manuals

Each eTechnical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle Applications product. This information helps you convert data from your existing applications, integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on Metalink

Oracle Manufacturing APIs and Open Interfaces Manual

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes APIs and open interfaces found in Oracle Manufacturing.

Oracle Order Management Suite APIs and Open Interfaces Manual

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes APIs and open interfaces found in Oracle Order Management Suite.

Oracle Applications Message Reference Manual

This manual describes Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 11i.

Oracle CRM Application Foundation Implementation Guide

Many CRM products use components from CRM Application Foundation. Use this guide to correctly implement CRM Application Foundation.

Training and Support

Training

Oracle offers training courses to help you and your staff master Oracle Advanced Inbound and reach full productivity quickly. You have a choice of educational environments. You can attend courses offered by Oracle University at any one 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 Advanced Inbound 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 Oracle8i server, and your hardware and software environment.

Oracle MetaLink

Oracle MetaLink is your self-service support connection with Web, telephone menu, and e-mail alternatives. Oracle supplies these technologies for your convenience, available 24 hours a day, 7 days a week. With Oracle MetaLink, you can obtain information and advice from technical libraries and forums, download patches, download the latest documentation, look at bug details, and create or update TARs. To use MetaLink, register at (<http://metalink.oracle.com>).

Alerts: You should check Oracle MetaLink alerts before you begin to install or upgrade any of your Oracle Applications. Navigate to the Alerts page as follows: Technical Libraries/ERP Applications/Applications Installation and Upgrade/Alerts.

Self-Service Toolkit: You may also find information by navigating to the Self-Service Toolkit page as follows: Technical Libraries/ERP Applications/Applications Installation and Upgrade.

Do Not Use Database Tools to Modify Oracle Applications Data

*Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle Applications 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 Applications data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle Applications tables are interrelated, any change you make using Oracle Applications can update many tables at once. But when you modify Oracle Applications data using anything other than Oracle Applications, 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 Applications.

When you use Oracle Applications to modify your data, Oracle Applications automatically checks that your changes are valid. Oracle Applications 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.

About Oracle

Oracle Corporation develops and markets an integrated line of software products for database management, applications development, decision support, and office automation, as well as Oracle Applications, an integrated suite of more than 160 software modules for financial management, supply chain management, manufacturing, project systems, human resources and customer relationship management.

Oracle products are available for mainframes, minicomputers, personal computers, network computers and personal digital assistants, allowing organizations to integrate different computers, different operating systems, different networks, and even different database management systems, into a single, unified computing and information resource.

Oracle is the world's leading supplier of software for information management, and the world's second largest software company. Oracle offers its database, tools, and applications products, along with related consulting, education, and support services, in over 145 countries around the world.

Introduction

This section provides an overview of the Oracle Interaction Center product family, which includes Oracle Advanced Inbound.

This section contains the following topics:

- [Section 1.1, "Oracle Interaction Center Overview"](#)
- [Section 1.2, "New in this Release"](#)
- [Section 1.3, "Obsolete in this Release"](#)

1.1 Oracle Interaction Center Overview

Every customer interaction — a telephone call, an e-mail message, or a Web chat conversation — presents an opportunity to win new business or improve customer satisfaction. The Oracle Interaction Center supports the management and processing of customer relationship activity across all channels of customer contact.

The Oracle Interaction Center integrates with several customer relationship business applications in the Oracle E-Business suite. The Oracle Interaction Center consists of several modules. The modules relating to inbound telephony and outbound telephony are bundled separately.

The Oracle Interaction Center allows access to centralized customer information and business application functionality. Oracle Interaction Center integrates with Oracle business applications, thereby enabling a workflow powered, end-to-end strategic e-business solution.

The Oracle Interaction Center products include:

- [Section 1.1.1, "Oracle Advanced Inbound"](#)
- [Section 1.1.2, "Oracle Advanced Outbound"](#)

- [Section 1.1.3, "Oracle eMail Center"](#)
- [Section 1.1.4, "Oracle Scripting"](#)
- [Section 1.1.5, "Oracle Interaction Center Intelligence"](#)

1.1.1 Oracle Advanced Inbound

Oracle Advanced Inbound is required to telephony enable business applications in the Oracle eBusiness Suite. Telephony-enabled means that the product has the capability of communicating with a telephone system for inbound and outbound calls via the CTI middleware that handles the messaging between a telephone switch and the user's application. Oracle Advanced Outbound provides the corresponding outbound telephony capability.

The Oracle Advanced Inbound bundle consists of the following products: Call Center Technology, Oracle Universal Work Queue, Oracle Telephony Manager, and Oracle Interaction Blending.

1.1.2 Oracle Advanced Outbound

Oracle Advanced Outbound (AO) is another key part of the Oracle E-Business Suite of applications. It is the module of Oracle Interaction Center that addresses outbound telephony. AO consists of two main components:

- A tactical list manager, which determines who to call and when to call them
- An outbound dialing engine, which dials numbers and transfers live contacts to call center agents

Oracle Advanced Outbound integrates with and relies on Oracle Marketing Online (OMO) to create campaigns and lists to execute. AO serves as the execution arm for these marketing lists to maximize both outbound list penetration and agent productivity. AO also integrates with desktop applications like Oracle TeleSales and Oracle Collections to handle the actual customer interactions. Oracle Advanced Outbound can be used any time agents need to contact parties via the telephone.

AO also integrates with Oracle Interaction History to provide feedback that marketers can use to analyze and measure the success of the marketing campaign, thereby providing a closed-loop marketing process.

Note: Oracle Advanced Outbound does not include any other telephony management modules. Oracle Advanced Inbound is required to use Oracle Advanced Outbound.

See Also

- [Section 1.1.1, "Oracle Advanced Inbound"](#)
- [Section 1.1.2, "Oracle Advanced Outbound"](#)
- [Section 1.1.4, "Oracle Scripting"](#)

1.1.3 Oracle eMail Center

Oracle eMail Center (eMC) is designed to satisfy requirements for inbound customer support, e-mail interaction management, and outbound sales and marketing e-mail message processing.

Oracle eMail Center helps your business respond to e-mail queries with clear and comprehensive replies in a much more efficient manner. eMC automatically generates suggested responses and scores them according to how closely they match the requirements.

See Also

- [Section 1.1.1, "Oracle Advanced Inbound"](#)
- [Section 1.1.2, "Oracle Advanced Outbound"](#)
- [Section 1.1.4, "Oracle Scripting"](#)

1.1.4 Oracle Scripting

Oracle Scripting is a set of tools to create and display information sequentially to end users. Oracle Scripting is composed of three components: the Script Author, the Scripting Engine, and the Survey Component.

Oracle Scripting end users include interaction center agents (for the Scripting Engine), and customers or prospects using a Web browser (using the Survey component). Other users include individuals who build the scripts (Script Author users) and administrators of scripting or survey campaigns, who must access the Survey Admin console.

Using Oracle Scripting, an enterprise gains the ability to develop and deploy scripted presentations for customer interactions with agents, as well as build, deploy, and execute information-gathering survey campaigns for data which can be mined and used to tailor sales and service campaigns or improve customer satisfaction.

See Also

- [Section 1.1.1, "Oracle Advanced Inbound"](#)
- [Section 1.1.2, "Oracle Advanced Outbound"](#)
- [Section 1.1.3, "Oracle eMail Center"](#)

1.1.5 Oracle Interaction Center Intelligence

Oracle Interaction Center Intelligence is a Web-based reporting solution that provides intelligent reports that facilitate day-to-day operational and long-term strategic decisions.

The data is presented to the user in an easy-to-use portal format. This format gives the user a unified, role-based, easily customized view of Interaction Center information, including Oracle Universal Work Queue information, key performance measures relating to agent productivity, speed to answer, and abandon rate.

The product is built on an Oracle proprietary Java-based technology stack. Users of Interaction Center Intelligence require minimal training, and no additional software is needed on the user's machine other than a Web browser.

Oracle Interaction Center Intelligence is based on a three-tier architecture:

- The front end (client) using the system via an Oracle Applications-compliant Web browser.
- The middle tier, which contains the Apache Web server and application server, included as part of the installation of Oracle Applications release 11*i*.
- The database tier, using an Oracle 8*i* or 9*i* database.

1.2 New in this Release

The following features and functions have been added to Oracle Advanced Inbound for Release 11.5.8.

Topics include:

- [Section 1.2.1, "Oracle Telephony Adapter Server"](#)
- [Section 1.2.2, "Interaction Keys Administration"](#)
- [Section 1.2.3, "Classification Values Administration"](#)
- [Section 1.2.4, "PL/SQL Function Classifications"](#)
- [Section 1.2.5, "Softphone"](#)

- [Section 1.2.6, "Media Items Closed with Concurrent Manager"](#)

1.2.1 Oracle Telephony Adapter Server

Beginning in Release 11.5.8, Oracle Telephony Adapter Server (OTAS) replaces Oracle Call Center Connectors. Oracle Telephony Adapter Server is installed as part of the standard Oracle Advanced Inbound installation, for example through the Rapid Install, Maintenance Pack. OTAS is part of the Interaction Center Server Group, and can be administered and launched in the Interaction Center HTML Administration > ICSM (Interaction Center Server Manager) page.

If a C-based adapter is in use, such as Adapter for Cisco ICM or Custom C Adapter Server, then OTAS can run only on the Microsoft Windows NT platform. If a Java-based adapter is in use, such as Adapter for CT Connect or Adapter for Aspect Contact Server, then OTAS can run on any operating system that is supported by Oracle Applications, such as Microsoft Windows NT, Sun Solaris, HP-UX 11i, IBM AIX or Linux.

See Also

Oracle Telephony Adapter SDK Developers Reference Guide

1.2.2 Interaction Keys Administration

By using the Interaction Keys page by way of the Call Center, Route or Classification tabs, you can create or update interaction keys that are used for IVR data, routing rules, classification rules and the softphone.

See Also

- [Chapter 2.2, "Interaction Keys Example Scenario"](#)
- A complete list of current interaction keys is available in Oracle Interaction Center HTML Administration, Classification tab > Interaction Keys subtab.

1.2.3 Classification Values Administration

Interactions can now be classified as a specific string value that is defined in the Classification Values page.

1.2.4 PL/SQL Function Classifications

You can now define PL/SQL functions that return any one of the classification values that are defined in the Classification Values page. The PL/SQL function can return an appropriate classification value derived dynamically from interaction data, such as IVR data.

1.2.5 Softphone

The softphone has the following new functions which are available in the Call Center tab > Softphone subtab.

- Speed dialing: Configure the agent softphone with speed dialing for the agents' most frequently dialed numbers.
- Softphone configurations: Assign or reassign softphones to server groups, and select the keys to display on the softphones and the order in which the keys are displayed.
- Modify display prompts: Change the prompts in the softphone display.

1.2.6 Media Items Closed with Concurrent Manager

In release 11.5.8, media items are closed using the concurrent manager framework. Prior to this release, media items were closed by a background thread that ran in the Interaction Queuing and Distribution (IQD) server.

See Also

[Section 6.12, "Managing Media Item Processes"](#)

1.3 Obsolete in this Release

The following features and functions have been made obsolete in Oracle Advanced Inbound for Release 11.5.8.

Topics include:

- [Section 1.3.2, "Oracle Call Center Connectors"](#)
- [Section 1.3.3, "Literal Classifications"](#)
- [Section 1.3.4, "Database Procedure Classifications"](#)
- [Section 1.3.1, "IQD Server Media Item Parameter"](#)

1.3.1 IQD Server Media Item Parameter

Prior to this release, media items were closed by a background thread that ran in the Interaction Queuing and Distribution (IQD) server. In release 11.5.8, media items are closed using the concurrent manager framework. The IQD server parameter `ih_close_mi_interval` was used to define the interval to check for closed media items. This parameter is now obsolete.

1.3.2 Oracle Call Center Connectors

Oracle Call Center Connectors has been replaced by the Oracle Telephony Adapter Server (OTAS).

1.3.3 Literal Classifications

The term "literal classifications" is no longer used. The classification of interaction keys is accomplished through the use of interaction key data in the Classification Values page.

1.3.4 Database Procedure Classifications

The term "database procedure classifications" has been replaced by defined PL/SQL functions that return any one of the classification values that are defined in the Classification Values page. The PL/SQL function can return an appropriate classification value derived dynamically from interaction data, such as IVR data.

Oracle Advanced Inbound Features

Oracle Advanced Inbound is required to telephony enable business applications in the Oracle eBusiness suite for inbound calls. Telephony enabled means that the product has the capability of communicating with a telephone system through the CTI middleware that handles the messaging between a telephone switch and the user's application.

The server architecture of Oracle Advanced Inbound is scalable to run interaction centers with a single physical site or multiple sites.

Oracle Advanced Inbound features include the following topics:

- [Section 2.1, "Oracle Telephony Adapter Server"](#)
- [Section 2.2, "Interaction Keys Example Scenario"](#)
- [Section 2.3, "Classifications"](#)
- [Section 2.4, "Routes"](#)
- [Section 2.5, "Oracle Routing Server Performance"](#)
- [Section 2.6, "Call Scenarios"](#)
- [Section 2.7, "Softphone"](#)
- [Section 2.8, "Screen Pops"](#)
- [Section 2.9, "IVR Integration \(IVRI\)"](#)

2.1 Oracle Telephony Adapter Server

Oracle Telephony Adapter Server (OTAS) is introduced in Release 11.5.8 as a replacement of the Windows NT-based Oracle Call Center Connectors product. Oracle Telephony Adapter Server is installed as part of the standard Oracle

Advanced Inbound installation, for example through the Rapid Install, Maintenance Pack. OTAS is part of the Interaction Center Server Group, which you can administer and launch in the Interaction Center HTML Administration > ICSM (Interaction Center Server Manager) page.

If a C-based adapter is in use, such as Adapter for Cisco ICM or Custom C Adapter Server, then OTAS can run only on the Microsoft Windows NT platform. If a Java-based adapter is in use, such as Adapter for CT Connect or Adapter for Aspect Contact Server, then OTAS can run on any operating system that Oracle Applications supports, such as Hewlett-Packard UX11, IBM AIX, Linux, Microsoft Windows NT and Sun Solaris.

2.2 Interaction Keys Example Scenario

The following example demonstrates how to use Interaction Keys. In this scenario, a call center administrator wants to collect Account Balance from customers through an IVR system and use Account Balance for the following purposes:

- Classification of Customers as Gold, Silver or Bronze based on Account Balance
- Routing of calls to Gold Service Agent Group, Silver Service Agent Group or Bronze Service Agent Group based on Account Balance.
- Display of Account Balance in the agent softphone

Because Account Balance is not available as an out-of-the-box Interaction Key, the call center administrator can create a new Interaction Key for Account Balance by using the Interaction Keys Page.

Example scenarios include:

- [Section 2.2.1, "Creating a New Interaction Key for Account Balance"](#)
- [Section 2.2.2, "Mapping an IVR Field to Account Balance \(Oracle Field\)"](#)
- [Section 2.2.3, "Defining Classification Rules Using Account Balance as a Rule Key"](#)
- [Section 2.2.4, "Defining Routing Rules Using Account Balance as a Rule Key"](#)
- [Section 2.2.5, "Displaying Account Balance in Softphone"](#)

See Also

A complete list of current interaction keys is available in Oracle Interaction Center HTML Administration, Classification tab > Interaction Keys subtab.

2.2.1 Creating a New Interaction Key for Account Balance

Create a new Interaction Key for Account Balance using the Call Center Interaction Keys Page.

- Code = Account_Balance
- Meaning = Account Balance
- Description = Account Balance for the Customer
- Data Type = Integer
- Add to IVR Oracle Field List = Yes
- Add to Routing/Classification Rule Key List = Yes
- Add to Softphone Display Available Keys List = Yes

2.2.2 Mapping an IVR Field to Account Balance (Oracle Field)

If the call center administrator uses the IVR field "acctBalance" to collect the "Account Balance" from the Customer in IVR, map the acctBalance field to the newly-added Oracle Field "Account Balance" in the Call Center IVR page so that when a customer enters a value for Account Balance in IVR, OTM will pass the value of acctBalance to the Oracle Field "Account Balance".

2.2.3 Defining Classification Rules Using Account Balance as a Rule Key

In the Classification Rules Page, assuming that the Classification Values (Gold Service, Silver Service, Bronze Service) have been defined already, the administrator can set up the following rules for Classification.

- Gold Service Rule: If DNIS=8008881111 and Account Balance \geq 100000, then classify the interaction as Gold Service
- Silver Service Rule: If DNIS=8008881111 and Account Balance $<$ 100000 and Account Balance \geq 50000, then classify the interaction as Silver Service
- Bronze Service Rule: If DNIS=8008881111 and Account Balance $<$ 50000, then classify the interaction as Bronze Service

2.2.4 Defining Routing Rules Using Account Balance as a Rule Key

In the Routing Rules Page, assuming that the Agent Groups(Gold Service Agent Group, Silver Service Agent Group, Bronze Service Agent Group) have been defined already, the administrator can setup the following rules for Routing.

- Gold Service Route: If Classification equals Gold Service, then route the call to Gold Service Agent Group.
- Silver Service Route: If Classification equals Silver Service, then route the call to Silver Service Agent Group.
- Bronze Service Route: If Classification equals Bronze Service, then route the call to Bronze Service Agent Group.

2.2.5 Displaying Account Balance in Softphone

In the Call Center Softphone Display Configuration Detail page, from the list of Available Keys select Account Balance and add it as a Displayed Key Without Prompt.

See Also

[Chapter 6.1, "Upgrading Oracle Advanced Inbound Configurations"](#).

2.3 Classifications

Classification is the process by which incoming calls are assigned a specific string value for identification. The specific string value is called a Classification Value. Classification Values specify how incoming calls are identified and which business applications should be used to screen pop caller data. Oracle Universal Work Queue uses classification values to identify the telephony call queues. Classification values are also used in reporting and blending.

2.3.1 Classification Values

A classification value is a string value that is the endpoint of classifying a call. Interactions can be classified as one of the classification values that are defined in the Classification Values page. A classification value determines which screen to pop in an Oracle Universal Work Queue media action. It is used to display the queue count (active mode only) in Oracle Universal Work Queue and is used in Oracle Interaction Center Intelligence to report data such as the number and type of calls.

2.3.2 PL/SQL Functions

A classification value may also be derived dynamically from a PL/SQL function by using the interaction and call data during the classification process. Such PL/SQL functions are defined in the Call Center > PLSQL Functions page and must return

any one of the classification values that are defined in the Classification Values page. If the PL/SQL function returns a value that is not in the Classification Values page, then the call is identified as "unClassified." The PL/SQL function may return the classification value in one of the following ways.

- Return value for the PL/SQL function.
- OUT parameter for the PL/SQL function. The OUT parameter takes precedence over the return value, as specified by the user in the Oracle Call Center HTML Administration.

2.3.3 Classification Rules

Classification rules determine how a call gets classified and determine the Classification value to be assigned to a call. A classification rule consists of the following:

- Time out value in seconds which specifies the time after which the call will be rerouted if it has not been serviced by an agent (The Time out value overwrites the Default Route Time Out routing server parameter.)
- Set of conditions under which the classification rule is satisfied
- Condition of whether the user needs *all* conditions to be satisfied or any *one* condition to be satisfied
- Classification value to be assigned to the call if the set of conditions is satisfied
OR
- PL/SQL function from which the classification value must be derived if the set of conditions is satisfied
- Ability to add additional key-value pairs to the incoming call if the set of conditions is satisfied
- Ability to assign the classification rule to specific media types
- Ability to assign the classification rule to specific server groups

See Also

[Appendix B, "Data Type Operators and Media Type Values for Rules"](#)

2.3.4 Example Scenario

In a hypothetical scenario, a business corporation provides its call center customers with three levels of service: Gold Service, Silver Service and Bronze Service. To access the appropriate level of service, customers dial one of the following numbers:

- Gold Service customers call 123-456-7890.
- Silver Service customers call 123-456-7891.
- Bronze Service customers call 123-456-7892.
- General enquiry number (800 800 8000), which any customer may call. When customers call this number, they are prompted by the IVR to enter their account number, which is then used to determine the service level for the customer.

To provide the best possible service to customers and to utilize call center resources most efficiently, the business corporation's call center administrator uses the HTML Administration Classification page to set up the classification process described in the following paragraphs.

2.3.4.1 Classification Values

In the Classification Values page, the administrator defines the following classification values: Gold Service, Silver Service and Bronze Service.

Because unClassified is a seeded value, the administrator does not need to define it again.

2.3.4.2 PL/SQL Functions

A PL/SQL function that accepts Account Number as the parameter and returns the classification value based on average account balance is created in the database. The administrator defines the function in the PLSQL Functions page as follows:

```
FUNCTION Get_Classification_Value_From_Account_Number(AccountNumber IN VARCHAR2)
returns VARCHAR2
```

The above function returns a classification value according to the following business logic.

```
If account number is not provided then return unClassified

Else if average account balance for the account number is >=100000 then
return Gold Service

Else if average account balance for the account number is >=50000 and
```

<100000 then return Silver Service

Else if average account balance for the account number is <50000 then return
Bronze Service

2.3.4.3 Classification Rules

The administrator defines the following classification rules in the Classification Rules page.

Gold Service Rule

Timeout: 30 seconds

If DNIS=8008008001

then classify the call as Gold Service

Assigned to all media types and all available server groups.

Silver Service Rule

Timeout: 60 seconds

If DNIS=8008008002

Then classify the call as Silver Service

Assigned to all media types and all available server groups.

Bronze Service Rule

Timeout: 120 seconds

If DNIS=8008008003

Then classify the call as Bronze Service

Assigned to all media types and all available server groups.

Other Calls Service Rule

Timeout: 120 seconds

If DNIS=8008008000

Then derive the classification Value from Get_Classification_Value_From_Account_Number.

Assigned to all media types and all available server groups.

2.4 Routes

Oracle Advanced Inbound routes incoming calls according to whether the route is dynamic or static, and predefined route rules, which are explained in the following topics:

- [Section 2.4.1, "Dynamic Routes"](#)
- [Section 2.4.2, "Static Routes"](#)
- [Section 2.4.3, "Route Rules"](#)

2.4.1 Dynamic Routes

A dynamic route is a route that is based on a PL/SQL function or workflow function. Dynamic routes return a list of agents that is derived from a seeded routing workflow or custom PL/SQL function.

Note: The routing server only supports Database Function to be defined rather than Database Procedure for dynamic routes.

For dynamic routes, Database Function could return a list of AgentIDs separated by the “;” delimiter as a string value as a function return type. If AgentID interaction key is used as one of the function Out parameters, it takes precedence over AgentIDs returned by Function as a return value.

Procedure Parameters for Dynamic Routes

The Procedure Parameters fields are visible *only* if the selected Route Type is Dynamic. In the following example,

```
GET_AGENTS_FROM_CUSTOMER_PRODUCT(p_customer_id IN VARCHAR2,p_product_id IN NUMBER) returns VARCHAR2
```

GET_AGENTS _FROM_CUSTOMER_PRODUCT is the PL/SQL function which returns a list of agents as a VARCHAR2 from P_Customer_ID.

In the HTML Routing Administration, the above PL/SQL function can be defined as a target as stated below.

```
Procedure Name: GET_AGENTS_FROM_CUSTOMER_PRODUCT
Description: a function which returns agents from customer_id and product-id
Parameter: p_customer_ID
Value: can either be a string value or a value from the list of values
```

Direction: IN
Data Type: VARCHAR2
Sequence: generated by the Admin=1
Parameter: p_product_ID
Value: can either be a numerical value or a value from the list of values
Direction: IN
Data Type: INTEGER
Sequence: generated by the Admin=2

2.4.2 Static Routes

A static route is a route that is based on cached data. Static routes are based on agents derived from Resource groups that are cached by the Routing Server. A static route derives its agent list based on resource groups that are selected by the user.

2.4.3 Route Rules

Oracle Routing Server determines which agents or agent groups receive a new interaction based on route rules that define the following types of routing.

- "Customer Information-Based Routing"
- "Rule-Based Routing"
- "Skill-Based Routing"

2.4.3.1 Customer Information-Based Routing

In customer information-based routing, Oracle Telephony Manager routes calls based on data that is supplied by the database instead of by the PBX. For example, if a customer places a call for computer technical support, the ACD receives the call and the customer keys in an account number that is captured by the IVR and sent to Oracle Telephony Manager by way of IVR Integration. Oracle Telephony Manager searches the database to check the number of open service requests for this customer. If the acceptable threshold for open service requests has been exceeded, then the account can be placed in the front of the call queue and handled by the most experienced customer service representative.

2.4.3.2 Rule-Based Routing

Rule-based routing associates user-defined rules using variables such as time of day, ANI or DNIS. For example, a rule could specify to route calls from a particular telephone area code to a designated agent group.

2.4.3.3 Skill-Based Routing

Skill-based routing is a dynamic call routing intelligence that delivers inbound calls to an agent who is appropriately skilled to meet the needs of the caller. Skill-based routing can be set up by using dynamic groups or dynamic routes.

Skill-based routing leverages data derived from Oracle Human Resources Management System. Agent skill information can be used as a routing variable to send a call to the most appropriate agent. A skill can be a singular ability, such as language fluency, or multiple abilities, such as product competency, license level, or certification status. Any skill that can be tracked in the human resources database can be used as search and routing criteria to route the call.

For example, in routing based on language skill, when a caller presses the prompt indicating a preference to speak French, the routing server queries the human resources database to find all agents who speak French, compares agents who are logged in and available to take calls, and then routes the call to the appropriate agent. The administrator does not have to assign the agent to a specific telephone. Oracle Telephony Manager knows both the agent's location (because the agent has logged on to the system) and the agent's skills (by accessing the human resources database). Criteria such as time of day, telephone number dialed (DNIS), or telephone number from which the caller is dialing (ANI), are a few of the variables used to route the call to the appropriately skilled agent.

See Also

[Appendix B, "Data Type Operators and Media Type Values for Rules"](#)

2.5 Oracle Routing Server Performance

The following topics describe key concepts of Oracle Routing Server performance.

- [Section 2.5.1, "Thread Pool"](#)
- [Section 2.5.2, "JDBC Connection Pool"](#)
- [Section 2.5.3, "Automatic Refresh of Metadata for Routing Server"](#)
- [Section 2.5.4, "Callback Support"](#)
- [Section 2.5.5, "Support for Interaction Center Service Manager"](#)

2.5.1 Thread Pool

Thread pool processes incoming routing and classification requests. You can configure thread pool parameters by using the routing server parameters `NO_OF`

Concurrent Route Request (Min) and No of Concurrent Route Request (Max).

The parameter No of Concurrent Route Request (Min) specifies the number of concurrent route requests (threads) that the routing server can process at startup. The default value is 2. The number that the routing server can process could range from 1 to the max_thread value that you specify, and can change depending upon the rate of route requests.

The parameter No of Concurrent Route Request (Max) specifies the maximum number of concurrent route requests that the routing server can process. The default value is 5.

2.5.2 JDBC Connection Pool

JDBC Connection Pool increases the speed of serving incoming dynamic routing requests. You can configure the number of JDBC Connections by using the server parameter No of JDBC Connections. This parameter specifies the number of JDBC connections maintained by Oracle Routing Server for dynamic or workflow routes and dynamic classification. The default value is 2. The routing server can process more concurrent dynamic routes if the value of the parameter No of JDBC Connections is increased.

2.5.3 Automatic Refresh of Metadata for Routing Server

Oracle Routing Server periodically scans the database for changes to metadata, consisting of routes and classification definitions. The default value of the scanning frequency is thirty minutes. You can change the scanning frequency in the Server Parameters page or by setting the Server Parameter refresh_rate. For example, the parameter -refresh_rate 20 sets the refresh rate to twenty minutes.

Oracle Routing Server does not need to be restarted to register changes to metadata, such as when a route is deleted or when a rule is changed.

Note: Oracle Routing Server registers the deletion of the CCT Server Group only when any pre-existing server group definition is updated or a new server group is added. Similarly, Oracle Routing Server registers a resource that is removed from a server group only when an existing resource is updated or if a resource is added to a server group.

If the database goes down, then Oracle Routing Server periodically tries to reconnect to it. The default value is two minutes. To reset the frequency of connection attempts, use the parameter `db_down_refresh_rate`. For example, the parameter `db_down_refresh_rate 10` checks the database every ten minutes.

2.5.4 Callback Support

Oracle Routing Server supports Web callbacks, customer requests that originate from Oracle eCommerce products, such as Oracle iStore or Oracle iSupport, which provide a method for the customer to request a telephone call from an interaction center agent.

2.5.5 Support for Interaction Center Service Manager

Oracle Routing Server supports all parameters listed in the ICSM tab > Oracle Routing Server > Parameters > Server Details page.

The routing server *must* be launched in the Call Center HTML Administration Interaction Center Server Manager (ICSM) page. As of Release 11.5.6, the routing server no longer recognizes the `ors.ini` file.

As of Release 11.5.7, Minipack O, the routing server supports logging levels of error severity, which administrators can set in the ICSM page.

See Also

"Oracle Interaction Center Server Parameters" in *Oracle Applications Interaction Center Implementation Guide*

2.6 Call Scenarios

The following use cases describe typical call scenarios in interaction center environments.

- [Section 2.6.1, "Call and Data Transfer Scenarios"](#)
- [Section 2.6.2, "Enterprise Routing Scenarios"](#)

Note: Multi-site call and data transfer and enterprise routing are not supported in Release 11.5.8. Oracle will support these features in later releases.

2.6.1 Call and Data Transfer Scenarios

The following table lists and describes call and data transfer scenarios.

Call and Data Transfer Scenarios

Scenario	Definition
Single-Site Transfer to Agent	Agent A transfers a call to Agent B. Agent A and Agent B are both logged into the same PBX.
Multi-Site Transfer to Agent	Agent A is logged into PBX 1 and transfers a call to Agent B who is logged into PBX 2. The call from A to B can be through a tie-line or the PSTN.
Single-Site Transfer to Route Point	Agent A is logged into PBX 1 and transfers a call to a route point that is also on PBX 1. The call is then routed to an available agent on PBX 1.
Multi-Site Transfer to Route Point	Agent A is logged into PBX 1 and transfers a call to a route point on PBX 2. The call is then routed to an available agent on PBX 2.

2.6.2 Enterprise Routing Scenarios

The following table lists and defines interaction center enterprise routing scenarios.

Enterprise Routing Scenarios

Scenario	Definition
Single-Site Routing	A call is at a route point on PBX 1. Oracle Routing Server returns a list of agents on PBX 1. The call is routed to first available agent in the list.
Multi-Site Routing with Direct Inward Dialing (DID) Numbers	A call is at a route point on PBX 1. Oracle Routing Server returns a list of agents on PBX 2 and any other PBXs. The call is routed directly to the first available agent on the list by way of the configured multi-site path.
Multi-Site Routing without Direct Inward Dialing (DID) Numbers	A call is at a route point on PBX 1. Oracle Routing Server returns a list of agents on PBX 2 and any other PBXs. The first available agent (on PBX 2) does not have a DID number. The call is routed to a route point on PBX 2, as specified in the configured multi-site path. The route point on PBX 2 immediately routes the call to the destination agent.
Multi-Site Routing to a Label	In the first three scenarios, Oracle Routing Server can return a label in the same or a different call center, and the call is routed to the label as if it were an agent extension.

2.7 Softphone

The softphone is a functional GUI representation of a telephone that is displayed on interaction agents' monitors. The softphone display Default Configuration is defined as follows:

Table 2–1 Softphone Display Default Configuration

Display Order	Interaction Key	Prompt Displayed
1	Advanced Outbound Customer Name	No
2	Advanced Outbound Customer Phone Number	No
3	Classification	Yes
4	ANI	No
5	DNIS	Yes
6	Other Party	Yes
7	Caller Wait Time	No

Note: The Default Configuration does not need to be assigned to a server group. For example, if a server group "Vision-Group One" is not assigned a softphone display configuration, the softphone uses the Default Configuration to display Customer Call Data for all agents in "Vision-Group One."

A server group can be associated with only one display configuration.

2.8 Screen Pops

Telephony-enabled business applications, such as Oracle Customer Care and Oracle TeleSales, can visually display customer, service and sales records, called "screen pops," when a phone call is delivered to an agent's desktop. Oracle Telephony Manager delivers to the business applications the data that is associated with a call that queries the applications database for the screen pop. The call data can be collected from the IVR or from a Web site in Web callbacks.

Topics include:

- [Section 2.8.1, "IVR Mapping HTML Administration"](#)

- [Section 2.8.2, "Out-of-the-Box Screen Pops"](#)
- [Section 2.8.3, "Customized Screen Pops"](#)

2.8.1 IVR Mapping HTML Administration

The IVR Mapping page of the Call Center HTML Administration is used to map the IVR keys to Oracle Fields which the business applications use to generate screen pops. For example, if a call center administrator uses the value "custno" to collect Customer Number in the IVR, then that value must be mapped to the Oracle Field "Customer Number" in the IVR Mapping page. After the value is mapped to the corresponding Oracle Field, then the business application can generate a screen pop that is based on Customer Number.

2.8.2 Out-of-the-Box Screen Pops

The following keys in the order of precedence are used for out-of-the-box screen pops by Oracle Customer Care and Oracle TeleSales.

Oracle Customer Care Screen Pop Precedence

The following table lists and describes Oracle Customer IVR fields and their column mappings.

Oracle Customer Care Screen Pop Precedence

IVR Oracle Field	Description	Column (Table) Mapping
Customer ID	Party ID of the Customer Party	PARTY_ID (HZ_PARTIES)
Customer Number	Party Number of the Customer Party	CUSTOMER_NUMBER (HZ_PARTIES.PARTY_NUMBER)
Account Code	Account Number of the Customer Party	ACCOUNT_NUMBER (HZ_CUST_ACCOUNTS)
Contact Number	Party Number of the Contact Party	'PARTY_NUMBER' in HZ_PARTIES, Contacts) (HZ_PARTIES.PARTY_NUMBER)
ANI/Email Address	If none of the above parameters are available, then the ANI or e-mail address of the Contact Party is used.	ANI (Telephone number) (HZ_CONTACT_POINTS)

Oracle TeleSales Screen Pop Precedence

The following table lists and describes Oracle TeleSales IVR fields and their database mappings.

Oracle TeleSales Screen Pop Precedence

IVR Oracle Field	Description	Mapping to Database
Party ID	Party ID of the Contact Party	PARTY_ID (HZ_PARTIES)
ANI/Email Address	If none of the above parameters are available, then ANI or Email address of the Contact party is used.	ANI (Telephone number) (HZ_CONTACT_POINTS)
Account Code	Account Number of the Customer Party	ACCOUNT_NUMBER (HZ_CUST_ACCOUNTS)
Event Code	Event Registration Confirmation Code	CONFIRMATION_CODE (AMS_EVENT_REGISTRATIONS_V)
Collateral Request Number	Collateral Request Number / Quote Number	QUOTE_NUMBER(ASO_QUOTE_HEADERS_ALL)
Customer Number Party	Number of the Customer Party	CUSTOMER_NUMBER (HZ_PARTIES.PARTY_NUMBER)
Contact Number Party	Number of the Contact Party	'PARTY_NUMBER' in HZ_PARTIES, Contacts) (HZ_PARTIES.PARTY_NUMBER)

See Also

- *Oracle Customer Care User Guide*
- *Oracle TeleSales User Guide*

2.8.3 Customized Screen Pops

Customers can customize the business application form to generate screen pops that are based on keys other than those presented in the preceding tables.

Caution: Customers who customize business application forms do so at their own risk. To do so, consultants should have a thorough understanding of the Oracle Application schema.

IVR Keys can be mapped to any of the Oracle fields that can be used for customizing screen pops. The interaction keys, which are supported by Interaction

Center IVR Mapping, are used for sending the call data. Depending on IVR Mapping, a media item delivery to the business application might consist of the following key-value pairs:

```
{occtANI=373333,occtDNIS=800882222, CustomerID=3888, ContractNum=1001, AccountCode=2999}.
```

2.9 IVR Integration (IVRI)

IVR Integration (IVRI) integrates Oracle Advanced Inbound and most industry standard Interactive Voice Response (IVRs) or Voice Response Units (VRUs). IVRI enables the use of IVR-collected data, such as account number and order number, for sophisticated call routing, call classification, and customer or transaction-specific screen pops in Oracle TeleSales or Oracle TeleService business applications. IVRI also reports customers' interactions with the IVR to the database as part of Oracle Interaction History (IH). IVRI records the calls' start time, end time, the duration in the IVR and calls abandoned while in the IVR.

IVRI was introduced in Release 11.5.6 as a replacement of the Windows NT-based IVR Integrator product. IVRI is a built-in feature of Oracle Advanced Inbound, and can be enabled or disabled by configuring the appropriate Middleware Parameters in the Interaction Center HTML Administration Call Center > Middleware page. IVRI is a component within the Inbound Telephony Server (ITS) in Release 11.5.6 and 11.5.7. In Release 11.5.8 and higher, IVRI resides within the Oracle Telephony Adapter Server (OTAS).

Notes:

- Beginning in Release 11.5.6, the Microsoft Windows NT-based Oracle IVR Integrator is no longer supported. Existing installations that are planned to upgrade to Release 11.5.6 or higher need to follow the guidelines in the Appendix of the IVR Integration Application Note.
 - Refer to the IVR Integration Application Note for specific requirements and sample configuration for integrating with Avaya Conversant IVR, Avaya Definity G3 ECS switch and Intel CT Connect.
-
-

The following topics provide detailed information on IVR Integration (IVRI).

- [Section 2.9.1, "IVRI Call Flows"](#)
- [Section 2.9.2, "IVR Data Packets"](#)

2.9.1 IVRI Call Flows

The following scenario describes the progress of a call from the time it arrives at the PBX until it reaches an interaction center agent.

1. The PBX receives an incoming call and sends the call to the IVR system.
2. When the call reaches an IVR port or extension, the IVR immediately sends a START packet to Oracle Inbound Telephony Server. The START packet contains the IVR extension, time, date, ANI and DNIS.
3. The IVR plays recorded messages and prompts the caller to enter additional digits, such as an account number, as defined by an IVR script that is programmed in the IVR.
4. The caller enters digits as prompted by the IVR recording. The IVR needs to send an END packet to Oracle Inbound Telephony Server before sending the call back to the PBX. If the caller hangs up before the IVR sends the call back to the PBX, the IVR should still send an END packet if possible. The END packet contains the IVR extension, time, date, ANI and DNIS, plus any additional data that is collected by the IVR.
5. The IVR sends the call to a route point of the PBX.
6. The call is routed from the route point to an agent's extension.
7. A screen pop appears on the agent's desktop.

2.9.2 IVR Data Packets

Data packets are ASCII text streams and can be written in any software language. The IVR data packets are in the following key/value pair format,

```
KEY1 : VALUE1 ; KEY2 : VALUE2 ; KEY3 : VALUE3 ; \n
```

where the key/value separator is ":", the field delimiter is ";" and the packet delimiter is "\n."

IVR sends data packets to the IVRI as key/value pairs in the format described in the following table.

IVR Data Packet Key Value Formats

PBXEXTN	TYPE	TIME	DATE	ANI	DNIS	IVR Data
The PBX extension for the IVR port	S=Start E=End	In seconds since January 1, 1970	Format: yyyymmdd			IVRINFO1 through IVRINFO4 for user-defined values, for example: Cust ID, Name, Account (The number of fields is variable.)

The following examples demonstrate the IVR start and end data packets.

IVR Start Data Packet

```
PBXEXTN:7203;TYPE:S;TIME:988239405;DATE:20020425;ANI:1234567890;DNIS:Unknown;
```

IVR End Data Packet

```
PBXEXTN:7203;TYPE:E;TIME:988239411;DATE:20020725;IVRINFO1:1111;IVRINFO2:1234567;IVRINFO3:Unknown;IVRINFO4:Unknown;
```

Required Data Packet Fields

The following four fields are required in data packets.

- PBXEXTN
- TYPE
- TIME
- DATE

Optional Data Packet Fields

The following six fields are optional in data packets.

- ANI
- DNIS
- IVRINFO1
- IVRINFO2
- IVRINFO3
- IVRINFO4

Technology, Requirements and Performance

This chapter describes the Oracle Advanced Inbound technology stack and components that are required on clients, middle tier and database tiers, and the minimum hardware and software requirements.

- [Section 3.1, "Architectural Overview"](#)
- [Section 3.2, "Minimum Software Requirements"](#)
- [Section 3.3, "Switch and CTI Middleware Requirements"](#)

3.1 Architectural Overview

The server architecture of Oracle Advanced Inbound is scalable to run interaction centers with a single physical site or multiple sites. It can also be configured to integrate IVR data.

- [Section 3.1.1, "Oracle Advanced Inbound Architecture"](#)
- [Section 3.1.2, "Oracle Telephony Manager Architecture"](#)
- [Section 3.1.3, "Single-Site Architecture"](#)
- [Section 3.1.4, "Multi-Site Architecture"](#)
- [Section 3.1.5, "IVR Integration Architecture"](#)

3.1.1 Oracle Advanced Inbound Architecture

The Oracle Advanced Inbound solution consists of a three-layer server architecture outlined below.

- Telephony platform layer consisting of ACD/PBX switches and CTI middlewares provided by third-party vendors and Oracle Interaction Center Development
- Oracle Advanced Inbound server
 - Oracle Interaction Center Server Manager
 - Oracle Interaction Queuing and Distribution
 - Oracle Telephony Manager
 - Oracle Routing Server
 - Oracle Inbound Telephony Server
 - Oracle Universal Work Queue
 - Oracle Telephony Adapter Server (OTAS)
 - Oracle Interaction Blending
- Business applications / agent desktop
 - Oracle Universal Work Queue desktop (agent desktop work queue)
 - Oracle TeleService and Oracle TeleSales
 - Media Desktop (softphone)

See Also

- [Section 1.1.2, "Oracle Advanced Outbound"](#)
- [Section 1.1.3, "Oracle eMail Center"](#)
- [Section 1.1.4, "Oracle Scripting"](#)
- *Oracle Interaction Blending Implementation Guide*
- *Oracle Universal Work Queue Implementation Guide*

3.1.2 Oracle Telephony Manager Architecture

Oracle Telephony Manager is a key component of the Oracle Interaction Center Advanced Inbound product suite and is a prerequisite for providing the following functions and features:

- CTI support
- Softphone support
- IVR integration
- Sophisticated routing across multiple media channels
- Advanced queuing, call treatment and overflow functionality
- Pre-integration with Oracle e-Business Suite applications

Oracle Telephony Manager provides the following essential interaction center functions:

- Inbound and outbound telephony
- Out-of-the box ACD/PBX connectivity with multiple ACDs and CTI middlewares
- Agent softphone
- ANI and DNIS screen pops
- Call and data transfer

Oracle Telephony Manager provides the following additional interaction center functions:

- Web callback support
- Intelligent out-of-the-box routing provides rule, skill and record-based routing
- Static and dynamic routing capabilities
- Additional data for enhanced routing and screen pops via integration to IVRs
- Advanced queuing provides enhanced treatment, overflow and group queuing of calls

The Oracle Telephony Manager product consists of the following middle-tier server processes: Oracle Telephony Adapter Server, Oracle Inbound Telephony Server, Oracle Telephony Manager, Oracle Routing Server and Oracle Interaction Queuing and Distribution Server.

3.1.3 Single-Site Architecture

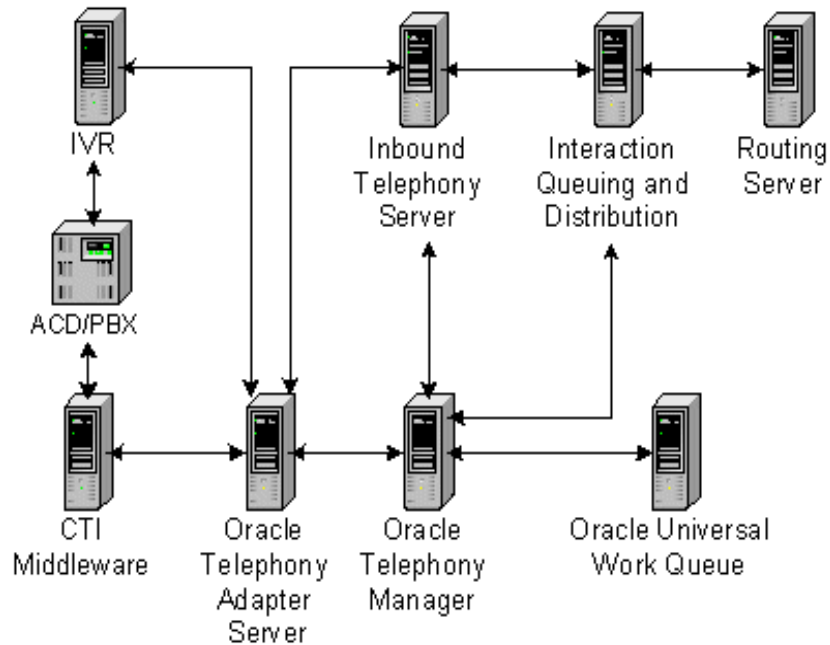
A typical Oracle Advanced Inbound server architecture for a single interaction center site consists of the following components:

- One certified PBX and CTI middleware combination
- One Oracle Telephony Adapter Server (OTAS)
- One Oracle Inbound Telephony Server (ITS)
- One Oracle Interaction Queuing and Distribution server (IQD)
- One or more Oracle Routing Servers for scalability
- One or more Oracle Telephony Managers (OTM) for scalability
- One or more Oracle Universal Work Queues (UWQ) for scalability

Notes:

- Active mode and passive mode use identical server architecture.
 - IVR integration is now a feature of the Oracle Telephony Adapter Server.
-
-

Figure 3–1 Server Architecture for a Single Interaction Center Site with All Functionality Available for Oracle Telephony Manager



As the previous figure illustrates, when all of Oracle Telephony Manager's functions (such as active mode, Web callbacks, scalability) are available in a single site, the architecture consists of mutual communication between the following:

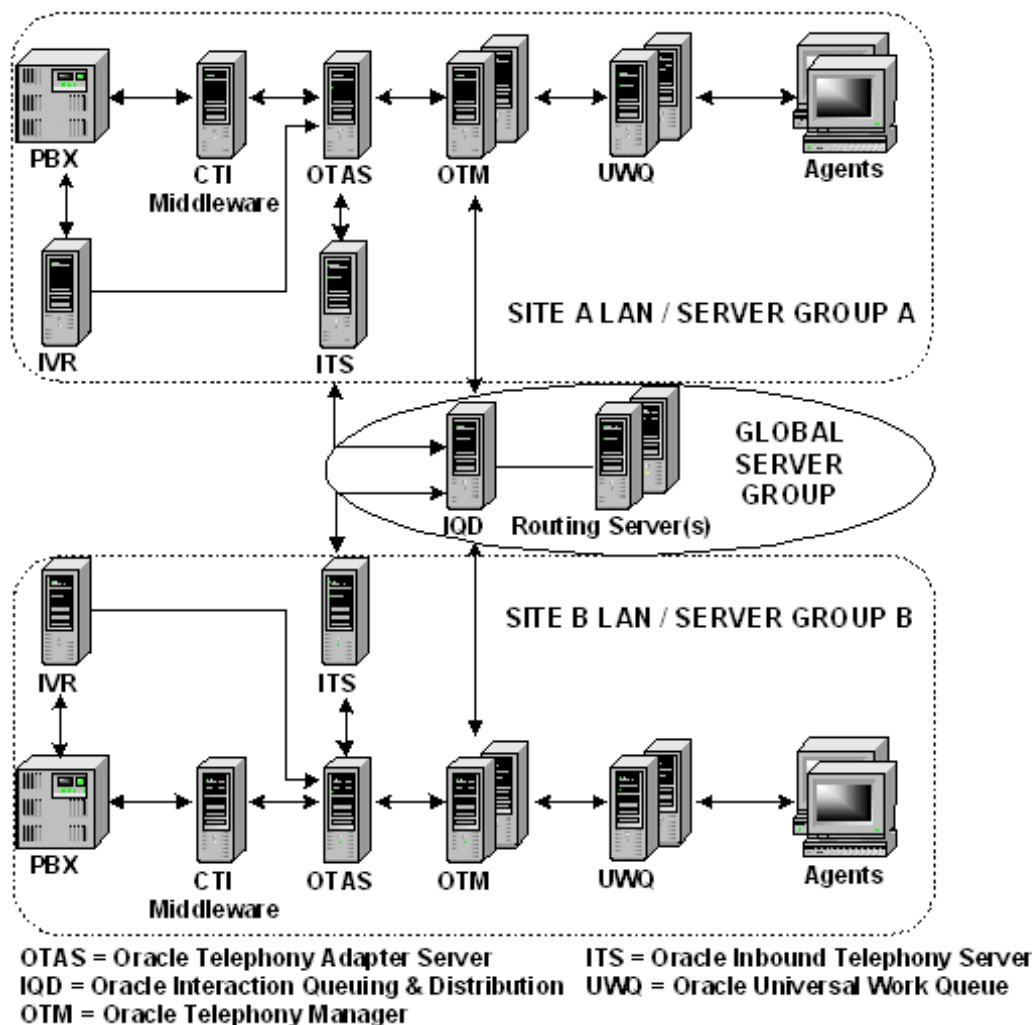
- Third-party IVR to Oracle Telephony Adapter Server with IVR integration
- Third-party CTI middleware and Oracle Telephony Adapter Server
- Oracle Telephony Adapter Server and Oracle Inbound Telephony Server
- Oracle Telephony Adapter Server and Oracle Telephony Manager Server
- Oracle Inbound Telephony Server to Interaction Queuing and Distribution
- Interaction Queuing and Distribution and Oracle Routing Server
- Interaction Queuing and Distribution and Oracle Telephony Manager
- Oracle Telephony Manager to Oracle Inbound Telephony Server
- Oracle Telephony Manager and Oracle Universal Work Queue

3.1.4 Multi-Site Architecture

The Oracle Advanced Inbound multi-site server architecture is required to support multiple ACD/PBXs that could be geographically dispersed.

The following figure illustrates the multiple PBX, multi-site architecture.

Figure 3-2 Oracle Advanced Inbound Multi-Site Server Architecture



As the previous figure illustrates, in the multi-site Oracle Advanced Inbound server architecture each site is configured as a server group that includes the following components:

- One certified PBX and CTI middleware combination
- One Oracle Telephony Adapter Server (OTAS)
- One Oracle Inbound Telephony Server (ITS)
- One or more Oracle Telephony Managers (OTM) for scalability
- One or more Oracle Universal Work Queues (UWQ) for scalability

The global server group includes the following servers:

- One Oracle Interaction Queuing and Distribution server (IQD)
- One or more Oracle Routing Servers for scalability

Each site-specific server group associates with a global server group using the super group relationship that is defined in the Interaction Center Server Manager (ICSM) HTML Administration.

Note: In Release 11.5.8 Oracle does not support multi-site call and data transfer and enterprise routing. Oracle will support these features in a future release.

One multi-site configuration (with its associated multi-site path) works for one direction only. Therefore, it is usually necessary to set up two multi-site configurations to route or transfer calls bidirectionally between two sites.

3.1.5 IVR Integration Architecture

Oracle Inbound Telephony Server has IVR Integration that makes IVR-collected data available as screen pops. [Figure 3-1](#) illustrates the Oracle Advanced Inbound server architecture that includes IVR Integration.

3.2 Minimum Software Requirements

Oracle Applications 11*i*, the Call Center Java middle tier, and Oracle Telephony Manager must have been installed. Oracle Telephony Adapter Server (OTAS) must be installed and configured. Oracle Inbound Telephony Server and Oracle Telephony Manager server processes connect to Oracle Telephony Adapter Server

(OTAS), which in turn connects to third-party CTI middleware (for example, Intel CT Connect and Cisco ICM), which in turn connects to a PBX/ACD (for example, Avaya Definity).

For CT Connect, the CT Connect Java client file `ctcapi.jar` must be copied into the directory `admin/scripts/3rdParty` of the ICSM node that hosts Oracle Telephony Adapter Server (OTAS).

For Aspect Contact Server, the file `AObject.jar` must be copied into the directory `admin/scripts/3rdParty` of the ICSM node that hosts Oracle Telephony Adapter Server (OTAS).

Oracle Telephony Adapter Server (OTAS) with a Java telephony adapter is certified for UNIX and Microsoft Windows NT 4.0 or higher, and with a C telephony adapter is certified only for Microsoft Windows NT 4.0 or higher.

3.3 Switch and CTI Middleware Requirements

Oracle Advanced Inbound requires the use of an Oracle certified or supported switch that interfaces to an Oracle certified or supported CTI middleware. The following table lists the supported switches and CTI middleware combinations in Release 11.5.8.

Table 3–1 Supported Switches and CTI Middleware Combinations in Release 11.5.8

Switch/ACD	CTI Middleware	Conditions
Alcatel 4400	Intel CT Connect	Passive mode only
Aspect Call Center	Aspect Contact Server	<ul style="list-style-type: none">Enhanced passive modePassive mode
Avaya DEFINITY ECS	Intel CT Connect	<ul style="list-style-type: none">Active modeEnhanced passive modePassive mode
Cisco CallManager	Cisco ICM Enterprise CTI	Passive mode only
Ericsson MD110	Intel CT Connect	<ul style="list-style-type: none">Active modeEnhanced passive modePassive mode
Nortel Meridian 1	Intel CT Connect	<ul style="list-style-type: none">Active modeEnhanced passive modePassive mode

Note: PBX/ACD switch and CTI middleware support depends upon an active certification program. Additional switch/CTI middleware combinations may be supported. Verify platform support, switch and middleware release dependencies with your Oracle Sales, Consulting or Support representative.

Dependency Requirements and Verification

This section describes the following dependency requirements:

- [Section 4.1, "Conditional Dependencies"](#)
- [Section 4.2, "Installation and Dependency Verification"](#)

4.1 Conditional Dependencies

The following functions are dependent upon the installation of the respective product applications.

Table 4–1 Functions and Conditional Dependencies

Functionality	Dependency
TeleService screen pop	Oracle TeleService (Customer Care)
TeleSales screen pop	Oracle TeleSales
Web Callback	Oracle iSupport or Oracle iStore

4.2 Installation and Dependency Verification

Installation and Dependency Verification is a functional checklist that indicates tasks to perform to ensure that mandatory dependencies are installed, implemented and set up correctly.

Since the proper implementation of Oracle Telephony Manager is dependent on the proper versions and installation of third-party customer-provided equipment for requisite CTI functionality the following considerations should be considered prior to beginning the implementation:

- ❑ Does the Customer have a PBX/ACD switch that has been certified by Oracle?

- ❑ Is the PBX/ACD a model and software release that has been certified and does it have the proper PBX-based CTI interfaces or links?
- ❑ Has the customer purchased and installed and implemented an approved third-party CTI middleware?
- ❑ Has the PBX and CTI middleware been fully tested and is it operational on the customer's ethernet LAN?

Implementation Overview

This section provides an general description of the implementation process.

5.1 Process Description

Prerequisites for implementing Oracle Advanced Inbound include installing and implementing the Oracle Interaction Center servers and server groups. Implementation of Oracle Advanced Inbound involves creating agent resources and configuring CTI middleware, telesets, route points, routing and classifications.

5.2 Implementation Task Sequence

The following table provides an overview of setting up Oracle Advanced Inbound. The Tab Name(s) column shows you in which tab(s) to perform the procedure, and whether the window is available only if you use a specific responsibility or product.

Table 5–1 Implementation Task Sequence

Step Number	Required or Optional	Description	Tab Name(s)
<input type="checkbox"/> 1	Required	Install Interaction Center Server Manager (ICSM) on each target machine. <i>See Oracle Applications Interaction Center Implementation Guide</i>	ICSM > Setup
<input type="checkbox"/> 2	Required	Define the Oracle interaction center server group. <i>See Oracle Applications Interaction Center Implementation Guide</i>	ICSM > Server Group
<input type="checkbox"/> 3	Required	Define and configure the Oracle interaction center server processes. <i>See Oracle Applications Interaction Center Implementation Guide</i>	ICSM > Server Group
<input type="checkbox"/> 4	Required	Configure Oracle Universal Work Queue for inbound telephony. <i>See Oracle Universal Work Queue Implementation Guide.</i>	
<input type="checkbox"/> 5	Optional	Configuration for verification of steps 1 through 3, using switch simulator: <ul style="list-style-type: none"> ■ Define and configure the CTI middleware. ■ Define the interaction center route points. ■ Define the interaction center telesets 	Call Center
<input type="checkbox"/> 6	Optional	Run verification using switch simulator <i>See Oracle Interaction Center Server Manager Implementation Guide</i>	Call Center
<input type="checkbox"/> 7	Required	Define and configure the CTI middleware.	Call Center > Middleware
<input type="checkbox"/> 8	Required for active and enhanced passive modes only	Define the interaction center route points.	Call Center > Route Point
<input type="checkbox"/> 9	Required	Define the interaction center telesets	Call Center > Teleset
<input type="checkbox"/> 10	Optional	Map the inbound call / IVR data to fields in Oracle Applications.	Call Center > IVR

Table 5–1 Implementation Task Sequence (Cont.)

Step Number	Required or Optional	Description	Tab Name(s)
<input type="checkbox"/> 12	Required for active mode	Set up routing for inbound calls.	Route tab required, Oracle Workflow Builder optional
<input type="checkbox"/> 13	Required	Set up Classifications.	Classification
<input type="checkbox"/> 14	Optional	Set up media action for each media and classification.	UWQ Media Action
<input type="checkbox"/> 15	Required	Configure Interaction Center parameter value. See “Configuring Interaction Center Parameters for a CRM Resource” in <i>Oracle Interaction Center Server Manager Implementation Guide</i> .	CRM Resource Manager

Implementation Tasks

Perform the following tasks to implement Oracle Advanced Inbound.

- [Section 6.1, "Upgrading Oracle Advanced Inbound Configurations"](#)
- [Section 6.2, "Configuring Middleware"](#)
- [Section 6.3, "Configuring Route Points"](#)
- [Section 6.4, "Configuring Telesets"](#)
- [Section 6.5, "Configuring IVR Mappings"](#)
- [Section 6.6, "Configuring Multi-Sites"](#)
- [Section 6.7, "Configuring Multi-Site Paths"](#)
- [Section 6.8, "Configuring Routes"](#)
- [Section 6.9, "Configuring Classifications"](#)
- [Section 6.10, "Configuring Softphone"](#)
- [Section 6.11, "Creating and Updating Interaction Keys"](#)
- [Section 6.12, "Managing Media Item Processes"](#)

6.1 Upgrading Oracle Advanced Inbound Configurations

Follow these instructions to upgrade an existing installation of Oracle Advanced Inbound to Release 11.5.8.

Caution: You must run a separate patch (2435611) to migrate the existing configuration of CTI middlewares, telesets, and resource parameters (such as ACD Data 1, ACD Queue). Follow the instructions in the upgrade patch Readme file.

You must verify that an Oracle Telephony Adapter Server is defined in your server group and the Middleware Configuration server parameter is correct for Oracle Telephony Adapter Server.

For CT Connect, check that the CT Connect Java client file `ctapi.jar` is copied into the directory `admin/scripts/3rdParty` of the ICSM node that hosts Oracle Telephony Adapter Server (OTAS).

For Aspect Contact Server/CMI Server, check that the Aspect CMI Server client file `ABObject.jar` is copied into the directory `admin/scripts/3rdParty` of the ICSM node that hosts Oracle Telephony Adapter Server (OTAS).

See Also

[Appendix A, "Middleware Parameter Equivalents"](#)

[Section 6.2.1, "Configuring CTI Middlewares"](#)

6.2 Configuring Middleware

The CTI middleware definition contains the information that is required for Oracle Advanced Inbound to communicate with a switch (such as Nortel Meridian or Avaya Definity) by way of CTI middleware (such as Intel CT Connect or Cisco ICM). A CTI middleware definition is associated with a server group.

You can define multiple middleware definitions (for example, a middleware definition for use with a switch and a middleware definition for use with the switch simulator server). However, to use a specific middleware definition in the operation of the interaction center, you must specify the name of the middleware definition in the Middleware Configuration Name parameter for the Oracle Telephony Adapter Server (OTAS) and Inbound Telephony Server in the server group.

Tasks

In the Middleware page you can perform the following tasks:

- [Section 6.2.1, "Configuring CTI Middlewares"](#)
- [Section 6.2.2, "Configuring CTI Middlewares for Use with the Switch Simulator"](#)

6.2.1 Configuring CTI Middlewares

Use the following procedure to configure CTI middlewares.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Configure at least one server group.

Steps

1. Click the Call Center tab.
The CTI Middlewares page appears.
2. From the Choose Server Group list, select the appropriate server group.
3. Do one of the following:
 - To configure a new CTI middleware, click **Create**.
 - To reconfigure an existing CTI middleware, click the appropriate Configuration Name and proceed to step 7.
The Middleware Details page appears.
4. In the Middleware Name field, enter a unique name for this middleware definition.
5. From the Middleware Type list, select the adapter that corresponds to the CTI middleware used in your call center. See [Section 6.1, "Upgrading Oracle Advanced Inbound Configurations"](#).

Note: Connectors for Cisco ICM and Connectors for CT Connect are deprecated in Release 11.5.8 and will be obsolete in the next release. Existing Cisco ICM configurations must be migrated to Adapter for Cisco ICM. Existing CT Connect configurations must be migrated to Adapter for CT Connect.

6. Click **Update** to save.

The Middleware Details page is refreshed. The Middleware Parameters fields and the Teleset Details and Route Point Details links appear.

7. In the Value fields, use the following tables to enter the correct Middleware Parameters values for the selected Middleware Type. For most fields, if you enter invalid values, an error message advises you on entering a correct value. Check that you enter the correct IP address format and port number.

Proceed to the table of middleware parameters that corresponds to the Middleware Type that you selected in step 5.

- ["Adapter for Aspect Contact Server"](#)
- ["Adapter for Cisco ICM"](#)
- ["Custom C Adapter Server"](#)
- ["Custom Java Adapter Server"](#)
- ["Adapter for CT Connect"](#)

Adapter for Aspect Contact Server

Use the following middleware parameters if the selected Middleware Type is Adapter for Aspect Contact Server. The following table lists the middleware parameters, whether or not the parameter is required, a description of the parameter, and a sample value.

Middleware Parameters for Adapter for Aspect Contact Server

Parameter	Required	Description	Sample Value
Blind Transfer Prefix	Required	Choose a one-digit prefix that will be used to place a blind transfer to a Call Control Table (CCT). All calls beginning with this number will be seen as a blind transfer by the Oracle Telephony Adapter Server. This number is not passed to the Aspect switch.	7
Aspect Contact Server IP Address	Required	IP address of the Aspect CMI Server	123.45.67.89
Aspect Contact Server Port	Required	TCP/IP port of the Aspect CMI Server that listens for a connection from Oracle Telephony Adapter Server	9001
Outgoing CCT	Required	The CCT used for making outside calls. It is passed automatically to the Aspect switch when an agent makes an outbound call.	2
Passive Mode	Required	Select True. Passive mode only for this middleware type.	True
Domestic Dialing Prefix	Optional	Access code used to make a long distance call within the country. Also known as the National Direct Dialing (NDD) Prefix.	1 (for USA)
International Dialing Prefix	Optional	The international prefix needed to make a call to a foreign country. Also known as the International Direct Dialing (IDD) Prefix.	011 (for USA)
Outgoing Prefix	Required	Access code used to place an outside call. It is specific to the call center's PBX settings.	9
Site Area Code	Optional	Area code of the call center	650
Site Country Code	Optional	Country code of the call center	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same call center. This is used to distinguish between internal and external calls.	5
Site Overlay	Optional	(US only) Select YES if ten-digit dialing is required for placing outside calls from the call center. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Optional	Maximum number of digits dialed when calling from the call center to an outside local number	7

Proceed to step 8.

Adapter for Cisco ICM

Use the following middleware parameters if the selected Middleware Type is Adapter for Cisco ICM. The following table lists the middleware parameters, whether or not the parameter is required, a description of the parameter, and a sample value.

Middleware Parameters for Adapter for Cisco ICM

Parameter	Required	Description	Sample Value
Site A Host IP Address	Required	IP Address of Cisco ICM Peripheral Gateway (Side A)	123.45.67.89
Site A Host IP Port	Required	TCP/IP port of Cisco ICM Peripheral Gateway (Side A)	42027
Site B Host IP Address	Required only for duplex configuration of ICM	IP Address of Cisco ICM Peripheral Gateway (Side B)	123.45.67.90
Site B Host IP Port	Required only for duplex configuration of ICM	TCP/IP port of Cisco ICM Peripheral Gateway (Side B)	43027
Peripheral Identifier	Required	ICM Peripheral ID for the call center switch	5001
Media Item Call Variable	Required	ICM Call Variable that Oracle Interaction Center uses to track calls. Enter a number between 1 and 9. (CallVariable10 is reserved for Oracle).	5
PBX Type	Required	Type of switch used in the interaction center.	Nortel Meridian
Domestic Dialing Prefix	Optional	Access code used to make a long distance call within the country. Also known as the National Direct Dialing (NDD) Prefix.	1 (for USA)
International Dialing Prefix	Optional	The international prefix needed to make a call to a foreign country. Also known as the International Direct Dialing (IDD) Prefix.	011 (for USA)
Outgoing Prefix	Required	Access code used to place an outside call. It is specific to the call center's PBX settings.	9
Site Area Code	Optional	Area code of the call center	650
Site Country Code	Optional	Country code of the call center	1

Middleware Parameters for Adapter for Cisco ICM (Cont.)

Parameter	Required	Description	Sample Value
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same call center. This is used to distinguish between internal and external calls.	5
Site Overlay	Optional	(US only) Select YES if ten-digit dialing is required for placing outside calls from the call center. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Optional	Maximum number of digits dialed when calling from the call center to an outside local number	7

Proceed to step 8.

Custom C Adapter Server

Use the following middleware parameters if the selected Middleware Type is Custom C Adapter Server. The following table lists the middleware parameters, whether or not the parameter is required, a description of the parameter, and a sample value.

Middleware Parameters for Custom C Adapter Server

Parameter	Required	Description	Sample Value
Library Name	Required	Dynamic Link Library name for the custom C adapter	ctcnortel.dll
CTI Server IP Address 1	Optional	Switch or CTI middleware TCP/IP address	123.45.67.89
CTI Server Port 1	Optional	Switch or CTI middleware TCP/IP port	3000
CTI Server IP Address 2	Optional	Second switch or CTI middleware TCP/IP address	123.45.67.90
CTI Server Port 2	Optional	Second switch or CTI middleware TCP/IP port	3000
Adapter Server Info 1	Optional	Custom fields used to configure the Adapter	As required by the adapter implementation
Adapter Server Info 2	Optional	Custom fields used to configure the Adapter	As required by the adapter implementation

Middleware Parameters for Custom C Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Adapter Server Info 3	Optional	Custom fields used to configure the Adapter	As required by the adapter implementation
Adapter Server Info 4	Optional	Custom fields used to configure the Adapter	As required by the adapter implementation
Adapter Server Info 5	Optional	Custom fields used to configure the Adapter	As required by the adapter implementation
Adapter Server Info 6	Optional	Custom fields used to configure the Adapter	As required by the adapter implementation
Passive Mode	Required	Select False for Oracle Advanced Inbound to route calls in active mode. Select True if the third-party switch or middleware routes calls (passive mode).	False
Domestic Dialing Prefix	Optional	Access code used to make a long distance call within the country. Also known as the National Direct Dialing (NDD) Prefix.	1 (for USA)
International Dialing Prefix	Optional	The international prefix needed to make a call to a foreign country. Also known as the International Direct Dialing (IDD) Prefix.	011 (for USA)
Outgoing Prefix	Required	Access code used to place an outside call. It is specific to the call center's PBX settings.	9
Site Area Code	Optional	Area code of the call center	650
Site Country Code	Optional	Country code of the call center	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same call center. This is used to distinguish between internal and external calls.	5

Middleware Parameters for Custom C Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Site Overlay	Optional	(US only) Select YES if ten-digit dialing is required for placing outside calls from the call center. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Optional	Maximum number of digits dialed when calling from the call center to an outside local number	7
Active Routing Target Type	Required	Select the configuration field that has the number to route a call to an agent. Only used if passive mode is false	Agent Id

Proceed to step 8.

Custom Java Adapter Server

Use the following middleware parameters if the selected Middleware Type is Custom Java Adapter Server. The following table lists the middleware parameters, whether or not the parameter is required, a description of the parameter, and a sample value.

Middleware Parameters for Custom Java Adapter Server

Parameter	Required	Description	Sample Value
TeleDevice Factory ClassName	Required	Java fully-qualified class name of the Custom Java Adapter TeleDeviceFactory object	com.third-party.TeleDeviceFactory
CTI Server IP Address 1	Optional	Switch or CTI middleware TCP/IP address	123.45.67.89
CTI Server Port 1	Optional	Switch or CTI middleware TCP/IP port	3000
CTI Server IP Address 2	Optional	Second switch or CTI middleware TCP/IP address	123.45.67.90
CTI Server Port 2	Optional	Second switch or CTI middleware TCP/IP port	3000
Adapter Server Info 1	Optional	Custom fields used to configure the adapter	As required by the adapter implementation
Adapter Server Info 2	Optional	Custom fields used to configure the adapter	As required by the adapter implementation

Middleware Parameters for Custom Java Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Adapter Server Info 3	Optional	Custom fields used to configure the adapter	As required by the adapter implementation
Adapter Server Info 4	Optional	Custom fields used to configure the adapter	As required by the adapter implementation
Adapter Server Info 5	Optional	Custom fields used to configure the adapter	As required by the adapter implementation
Adapter Server Info 6	Optional	Custom fields used to configure the adapter	As required by the adapter implementation
Passive Mode	Required	Select False for Oracle Advanced Inbound to route calls in active mode. Select True if the third-party switch or middleware routes calls (passive mode).	False
Domestic Dialing Prefix	Optional	Access code used to make a long distance call within the country. Also known as the National Direct Dialing (NDD) Prefix.	1 (for USA)
International Dialing Prefix	Optional	The international prefix needed to make a call to a foreign country. Also known as the International Direct Dialing (IDD) Prefix.	011 (for USA)
Outgoing Prefix	Required	Access code used to place an outside call. It is specific to the call center's PBX settings.	9
Site Area Code	Optional	Area code of the call center	650
Site Country Code	Optional	Country code of the call center	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same call center. This is used to distinguish between internal and external calls.	5

Middleware Parameters for Custom Java Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Site Overlay	Optional	(US only) Select YES if ten-digit dialing is required for placing outside calls from the call center. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Optional	Maximum number of digits dialed when calling from the call center to an outside local number	7
Active Routing Target Type	Required	Select the configuration field that has the number to route a call to an agent. Only used if Passive Mode is false.	Agent Id

Proceed to step 8.

Adapter for CT Connect

Use the following middleware parameters if the selected Middleware Type is Adapter for CT Connect. The following table lists the middleware parameters, whether or not the parameter is required, a description of the parameter, and a sample value.

Middleware Parameters for Adapter for CT Connect

Parameter	Required	Description	Sample Value
CT Connect IP Address	Required	IP Address of the CT Connect server	123.45.67.89
CT Connect Link Logical Identifier	Required	The Logical Identifier of the link defined in the CT Connect Configuration	nortel
PBX Type	Required	Type of switch used at the call center	Nortel Meridian
Passive Mode	Required	Select False for Oracle Advanced Inbound to route calls in active mode. Select True if the third-party switch or middleware routes calls (passive mode).	False
Domestic Dialing Prefix	Optional	Access code used to make a long distance call within the country. Also known as the National Direct Dialing (NDD) Prefix.	1 (for USA)
International Dialing Prefix	Optional	The international prefix needed to make a call to a foreign country. Also known as the International Direct Dialing (IDD) Prefix.	011 (for USA)

Middleware Parameters for Adapter for CT Connect (Cont.)

Parameter	Required	Description	Sample Value
Outgoing Prefix	Required	Access code used to place an outside call. It is specific to the call center's PBX settings.	9
Site Area Code	Optional	Area code of the call center	650
Site Country Code	Optional	Country code of the call center	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same call center. This is used to distinguish between internal and external calls.	5
Site Overlay	Optional	(US only) Select YES if ten-digit dialing is required for placing outside calls from the call center. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Optional	Maximum number of digits dialed when calling from the call center to an outside local number	7
IVR Host	Required for IVR Integration feature	IP address of the IVR. If blank, the IVRI feature will be disabled.	123.45.67.80
IVR Port	Required for IVR Integration feature	If IVRI Mode = client, then enter the TCP/IP port on the IVR machine that listens for a connection from the IVRI module of Oracle Telephony Adapter Server (OTAS). If IVRI Mode = server, then enter the TCP/IP port on the OTAS machine that listens for a connection from the IVR.	4000
IVRI Mode	Optional	client or server. Choose client if IVRI module of Oracle Telephony Adapter Server (OTAS) connects to the IVR machine. Choose server if the IVR connects to IVRI module of OTAS machine. Default is client if this field is left blank.	client
IVRI Abandon Threshold	Optional	Number of seconds to wait before marking an IVR data packet received by the IVRI as stale. Default is 7 seconds if this field is left blank.	5

8. Click **Update** to save.
9. Optionally, to associate and configure telesets or route points, click the **Associate and Configure Telesets** hyperlink or **Associate and Configure Route Points** hyperlink.

See Also

- *Oracle Applications Interaction Center Concepts and Procedures*
- *Oracle Applications Interaction Center Implementation Guide*

6.2.2 Configuring CTI Middlewares for Use with the Switch Simulator

The switch simulator is a process that uses Intel CT Connect CTI middleware to simulate a Nortel switch and the connection and message behavior of the Oracle Telephony Adapter Server (OTAS). The switch simulator enables setting up an interaction center without connecting to a real switch.

Use the following procedure to configure CTI middlewares for use with the switch simulator.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Configure at least one server group.

Steps

1. Click the Call Center tab.
The CTI Middlewares page appears.
2. From the Choose Server Group list, select the appropriate server group.
3. Do one of the following:
 - To configure a new CTI middleware for use with the switch simulator, click **Create**.
 - To reconfigure an existing CTI middleware for use with the switch simulator, click the appropriate Configuration Name.
The Middleware Details page appears.
4. If the Middleware Name field is blank, enter a unique CTI middleware name. The Middleware Name cannot contain spaces. Enter a string that contains no spaces.

5. In the IP Address field, enter the IP address of the switch simulator for the server group that you selected in step 2. The IP Address must be in the format xxx.xxx.xxx.xxx, for example, 255.255.255.255.
6. In the Port field, enter an arbitrary port number, such as "3201."
7. From the Middleware Type list, select **Connectors for CT Connect**.
8. Click **Create** to save.

The Middleware Details page is refreshed. The Teleset Details and Route Point Details links appear, and fields appear for the Middleware Parameters.

9. Enter or select only the Middleware Parameter Values that are listed in the following table. The switch simulator does not use any other Middleware Parameter fields.

Middleware Parameters for the Switch Simulator

Field Name	Required	Value
PBX Name	Yes	nortel
PBX Type	Yes	Nortel Meridian
MiddlewareServerInfo1	Yes	ncacn_ip_tcp

10. Click **Update** to save.
11. Optionally, to associate and configure telesets or route points, click the **Associate and Configure Telesets** hyperlink or **Associate and Configure Route Points** hyperlink.

See Also

- [Section 6.3.2, "Configuring Route Points for Use with the Switch Simulator"](#)
- [Section 6.4.3, "Configuring Telesets for Use with the Switch Simulator"](#)
- [Section 6.1, "Upgrading Oracle Advanced Inbound Configurations"](#)
- *Oracle Applications Interaction Center Implementation Guide*

6.3 Configuring Route Points

Use the Route Point page to define route points. A route point is the first point from which calls are queued and routed. "Route point" refers to Avaya VDN, Nortel CDN/ACDN, Aspect DID DNIS, and so on.

Tasks

In the Route Point page you can perform the following tasks:

- [Section 6.3.1, "Configuring Route Points"](#)
- [Section 6.3.2, "Configuring Route Points for Use with the Switch Simulator"](#)

6.3.1 Configuring Route Points

Use the following procedure to configure route points.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one server group.
- Create at least one CTI middleware.

Steps

1. Click the Call Center tab > Route Point subtab.
The Route Point Summary page appears.
2. From the Choose Server Group list, select the appropriate server group or verify that the correct server group is selected.
3. From the Choose Middleware list, select the appropriate CTI middleware or verify that the correct CTI middleware is selected.
4. Do one of the following:
 - To configure a new route point, click **Create**.

- To reconfigure an existing route point, click the appropriate Route Point Number.

The Route Point Details page appears.

5. In the Route Point Number field, enter the route point extension number.
6. Optionally, enter a Description.
7. In the Server Group Name field select the correct server group or verify that the correct server group is selected.
8. In the Middleware Name field select the correct middleware or verify that the correct middleware is selected.
9. Optionally, if you do not want this route point to be monitored by the Inbound Telephony Server, click **Unmonitored**.
10. Click **Update** to save.

The Route Point Details page is refreshed. The Parameter Details fields appear.

11. For Nortel Meridian with CT Connect only, in the Immediate Treatment field, specify the immediate treatment of inbound calls arriving at this route point CDN (Control Directory Number). Enter ##R for ringback, ##M for music, or ##S for silence.
12. For Nortel Meridian with CT Connect only, if music treatment (##M) is specified in step 11, in the Music Route Number field specify the route number of a music source that is configured in the Meridian PBX. Enter # followed by a two-digit route number specified in hexadecimal. For example, if the music route number is 10, then enter #0A in the Music Route Number field.
13. Click **Update** to save.

6.3.2 Configuring Route Points for Use with the Switch Simulator

Use the following procedure to configure route points for use with the switch simulator.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one server group.
- Create at least one CTI middleware.

Steps

1. Click the Call Center tab > Middleware subtab.
The CTI Middlewares page appears.
2. Click the Configuration Name that you want to configure.
The Middleware Details page appears.
3. Click **Associate and configure route points**.
The Route Point Summary page appears.
4. Verify that the correct Server Group and Middleware Name are selected.
5. Click **Create**.
The Route Point Summary page appears.
6. Click **Create**.
The Route Point Details page appears.
7. In the Route Point Number field, enter the extension number of the route point.
8. Optionally, enter a Description.
9. Verify that the correct Server Group Name and Middleware Name are selected.
10. Optionally, if you do not want this route point to be monitored by the Inbound Telephony Server (ITS), click **Unmonitored**.
11. Click **Create** to save.
The Route Point Details page is refreshed. The Parameter Details fields appear.

Note: Do not enter values into the Parameter Details fields.

12. Click **Update** to save.

See Also

- [Section 6.2.2, "Configuring CTI Middlewares for Use with the Switch Simulator"](#)

- [Section 6.4.3, "Configuring Telesets for Use with the Switch Simulator"](#)

6.4 Configuring Telesets

The teleset definition contains information about a physical telephone in the interaction center. There should be one teleset definition for each physical telephone. A teleset definition is associated with a server group and CTI middleware.

Tasks

In the Teleset page you can perform the following tasks:

- [Section 6.4.1, "Configuring Telesets"](#)
- [Section 6.4.2, "Mass Updates of Telesets"](#)
- [Section 6.4.3, "Configuring Telesets for Use with the Switch Simulator"](#)

6.4.1 Configuring Telesets

Use the following procedure to configure telesets.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one server group.
- Create at least one CTI middleware.

Steps

1. Click the Call Center tab > Teleset subtab.
The Telesets page appears.
2. From the Choose Server Group list, select the appropriate server group or verify that the correct server group is selected.

3. From the Choose Middleware list, select the appropriate CTI middleware or verify that the correct CTI middleware is selected.

The Telesets page is refreshed. A list of the telesets assigned to the selected server group and CTI middleware appears.

4. Do one of the following:
 - To configure a new teleset, click **Create**.
 - To reconfigure an existing teleset, click the appropriate Hardware Number.

The Teleset Details page appears.

5. If the Teleset Name field is blank, enter a descriptive teleset name.
6. Enter or edit a unique Hardware Number. The Hardware Number is typically the number of the physical teleset and is the same number used when logging into Oracle Universal Work Queue and the softphone.
7. From the Teleset Type list, select the teleset type.
8. Do one of the following:
 - In the Server Group Name field, verify that the correct server group is selected.
 - From the Server Group Name list, select a server group.
9. Do one of the following:
 - In the Middleware Name field, verify that the correct CTI middleware is selected.
 - From the Middleware Name list, select a CTI middleware.
10. Click **Create** or **Update**.

The Teleset Details page is refreshed. The Line Details fields appear. The selected Teleset Type determines the number of available teleset line fields.

11. In the Extension fields, enter the teleset line extension numbers. Use the following table to determine the number of teleset lines required for each teleset type.

Note: Configure the exact number of specified lines.

The following table lists telesets by manufacturer and their required line configurations.

Teleset	Required Line Configuration
Alcatel	Two lines for each teleset. Enter the same teleset extension number (<i>not</i> the agent login number) in the Extension field for Line Index 1 and Line Index 2.
Aspect	Three lines for each teleset. Enter the same instrument number in the Extension for all line indexes.
Avaya (Lucent)	Two OR three lines for each teleset — as many lines as there are call appearances on the actual teleset. Enter the same teleset extension number (station number, <i>not</i> the agent login ID) in the Extension field for all line indexes.
Cisco Call Manager	Three lines for each teleset. Enter the same teleset extension number for all line indexes.
Ericsson	Three lines for each teleset. <ul style="list-style-type: none"> ■ For Line Indexes 1 and 2, enter the same ODN (Own Directory Number) in the Extension field. ■ For Line Index 3, enter the ADN (Additional Directory Number) in the Extension field.
Nortel	<ul style="list-style-type: none"> ■ For Line Index 1, enter the DN (Directory Number) in the Extension field. This value corresponds to the Single Call Ringing key on the actual teleset. ■ For Line Index 2, enter the ACD DN in the Extension field. This value corresponds to the Automatic Call Distribution key on the actual teleset. ■ For Line Index 3, enter 9999 (or any number). This line is used to display a consultation call placed by the agent.

12. Click **Update** to save.

6.4.2 Mass Updates of Telesets

Mass updates for telesets involve moving from one CTI middleware configuration to another CTI middleware configuration.

Use the following procedure to mass update telesets.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Configure at least one server group.
- Configure at least two CTI middlewares for telesets.

Steps

1. Click the Call Center tab > Teleset subtab.
The Telesets page appears.
2. From the Choose Server Group list, select the appropriate server group or verify that the correct server group is selected.
3. From the Choose Middleware list, select the appropriate CTI middleware or verify that the correct CTI middleware is selected.
The Telesets page is refreshed. A list of telesets appears.
4. In the Destination Server Group field, select the destination server group.
The Teleset Details page is refreshed. A list of CTI middlewares appears.
5. In the Destination Middleware field, select the destination CTI middleware.
6. Do one of the following:
 - To select individual telesets for mass updating, in the Select column click the Teleset Names.
 - To select all telesets, click **Select**.
 - Optionally, to move all the telesets, even those that are not displayed, click **Mass Update All**. To move only the selected telesets, click **Mass Update**.

Note: If you click Mass Update, the telesets that are not displayed will not be moved to the destination CTI middleware.

6.4.3 Configuring Telesets for Use with the Switch Simulator

Use the following procedure to configure telesets for use with the switch simulator.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one server group.
- Create at least one CTI middleware.

Steps

1. Click the Call Center tab > Teleset subtab.

The Telesets page appears.

2. Click the appropriate Server Group and Middleware.

The Telesets page is refreshed. A list of the telesets assigned to the selected server group and CTI middleware appears.

3. Do one of the following:

- To configure a new teleset for use with the switch simulator, click **Create**.
- To reconfigure an existing teleset for use with the switch simulator, click the appropriate Hardware Number.

The Teleset Details page appears.

4. If the Teleset Name field is blank, enter a descriptive teleset name.
5. Enter a unique Hardware Number, for example, 7701. The Hardware Number is typically the number of the physical teleset and is the same number used when logging into Oracle Universal Work Queue and the softphone.
6. From the Teleset Type list, select a teleset type.
7. Do one of the following:
 - In the Server Group Name field, verify that the correct server group is selected.

- From the Server Group Name list, select a server group.
8. Do one of the following:
 - In the Middleware Name field, verify that the correct CTI middleware is selected.
 - From the Middleware Name list, select a CTI middleware.
 9. Click **Create**.

The Teleset Details page is refreshed. The Line Details fields appear. The selected Teleset Type determines the number of available teleset line fields.
 10. In Line Index 1, enter a number that is different from the Hardware Number, for example 8701.
 11. In Line Index 2, enter the Hardware Number, for example 7701.
 12. Click **Update** to save.

See Also

- [Section 6.2.2, "Configuring CTI Middlewares for Use with the Switch Simulator"](#)
- [Section 6.3.2, "Configuring Route Points for Use with the Switch Simulator"](#)

6.5 Configuring IVR Mappings

IVR mappings associate generic call data keys (IVR fields) to specific Oracle Fields so that the values captured in the generic call data keys are interpreted appropriately for screen pops, classifications, and call routing (in active mode only).

For example, if the IVRINFO1 key stores an account code, you need to map the IVR field IVRINFO1 to the Oracle Field `Account Code`.

IVR fields can be arbitrary names, with the exception of the following reserved keys:

- IVRINFO1, IVRINFO2, IVRINFO3, IVRINFO4: When the IVR Integration (IVRI) feature is enabled, an inbound media item contains up to four additional call data keys in the data packet sent from the IVR to IVRI.
- CED: For Avaya Definity with CT Connect and active mode configuration, an inbound media item contains an additional call data key named "CED" which captures the caller-entered digits that are collected by a Collect step in a vector.

- dataA, dataB, dataC, dataD, dataE: For Aspect CallCenter, an inbound media item contains five additional call data keys which correspond to the Aspect variables A through E.
- CallVar1, CallVar2, ... CallVar10: For Cisco ICM middleware, an inbound media item may contain up to ten additional call data keys which correspond to the Cisco ICM Peripheral/Call Variables. Any Cisco ICM Extended Call Context (ECC) variables are also passed to the media item with the same names as they are defined in the Cisco ICM administration.

Tasks

In the IVR page you can perform the following tasks:

- [Section 6.5.1, "Mapping IVR Fields to Oracle Applications Fields"](#)
- [Section 6.5.2, "Mass Updates of IVR Mappings"](#)

6.5.1 Mapping IVR Fields to Oracle Applications Fields

Use the following procedure to map IVR fields to Oracle Applications fields.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Define at least one of each of the following:

- Server group
- CTI middleware
- Route point

Steps

1. Click the Call Center tab > IVR subtab.
The IVR Mappings page appears.
2. From the lists, select the appropriate Server Group, Middleware and Route Point.

The IVR Mappings page is refreshed. A list of the IVR fields for the selected server group appears.

3. In IVR Field, type the *case sensitive* name of an IVR data key name of your IVR system, for example, `customer_number`.

Note: The IVR Field is case sensitive.

4. In the corresponding Oracle Field, select the value that corresponds to the IVR Field that you entered in step 3, for example, Customer Number.
5. Repeat steps 3 and 4 for each IVR field.
6. Click **Update** to save.

6.5.2 Mass Updates of IVR Mappings

Mass updates for IVR mappings involve moving from one route point configuration to another route point configuration.

Use the following procedure to mass update IVR mappings.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Configure at least one server group.
- Configure at least two route points for IVR mappings.

Steps

1. Click the Call Center tab > IVR subtab.

The IVR page appears.

2. From the lists for Choose Server Group, Choose Middleware and Choose Route Point, select the appropriate server group, middleware and route point.

The IVR page is refreshed. A list of IVR mappings appears.

3. From the Destination Server Group list in the Mass Update area, select the destination server group.
The IVR page is refreshed. A list of CTI middlewares appears.
4. From the Destination Middleware list, select the destination CTI middleware.
The IVR page is refreshed. A list of route points appears.
5. From the Destination Route Point list, select the destination route point.
6. Do one of the following:
 - In the Select column, click individual IVR mappings for mass updating.
 - If you want to select all IVR mappings, click **Select**.
7. Do one of the following:
 - To move all the IVR mappings, even those that are not displayed, click **Mass Update All**.
 - To move only the selected IVR mappings, click **Mass Update**.

See Also

- [Section 2.8, "Screen Pops"](#)
- [Section 2.9, "IVR Integration \(IVRI\)"](#)

6.6 Configuring Multi-Sites

Use the Multi-Site page to set up a multi-site configuration between two CTI middlewares. A multi-site configuration contains all information necessary to route or transfer a call from one site to another site.

Note: This feature is not supported in Release 11.5.8. Oracle will support this feature in a future release.

Use the following procedure to configure interaction center multi-sites.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Create at least two CTI middlewares.

Steps

1. Click the Call Center tab > Multi-Site subtab.

The Multi-Site Configuration Summary page appears.

2. From the Choose Server Group and Choose Middleware lists, select the appropriate server group and CTI middleware.

The Multi-Site Configuration Summary page is refreshed. A list of the multi-sites assigned to the selected server group and CTI middleware appears.

3. Do one of the following:

- To configure a new multi-site, click **Create**.
- To reconfigure an existing multi-site, click the appropriate Multi-Site Configuration.

The Multi-Site Details page appears.

4. To create a multi-site configuration from one CTI middleware to another CTI middleware, use the following guidelines:

- All fields are required.
- The From middleware and To middleware must be different.
- The Multi-Site Configuration Name must be unique and is limited to 128 characters.

5. Click **Update** to save.

The Multi-Site Details page is refreshed. The Associate and Configure Multi-Site Path link appears.

6. Optionally, configure multi-site paths by clicking **Associate and Configure Multi-Site Path**.

See Also

[Section 2.6, "Call Scenarios"](#)

6.7 Configuring Multi-Site Paths

To enable multi-site features, you must set up both a multi-site configuration and a multi-site path. A multi-site path represents a way to transfer a call from an outbound trunk of one site to an inbound trunk of another site, and contains the information, such as trunk prefix, for one particular way to route or transfer a call. If the interaction center has more than one way to route or transfer a call from one site to another site, such as by way of tie line versus by way of PSTN, you need to set up one multi-site path for each carrier option.

Note: This feature is not supported in Release 11.5.8. Oracle will support this feature in a future release.

Use the following procedure to configure multi-site paths.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one multi-site.
- Create at least one multi-site configuration.
- Configure at least one route point for the destination server group in the multi-site configuration.

Steps

1. Click the Call Center tab > Multi-Site Path subtab.

The Multi-Site Path Summary page appears.

2. From the Choose Multi-Site Configuration list, select a multi-site.

The Multi-Site Path Summary page is refreshed. A list of the available Route Point Numbers appears.

3. Do one of the following:
 - To configure a new multi-site path, click **Create**.

- To reconfigure an existing multi-site path, click the appropriate Route Point Number.

The Multi-Site Path Details page appears.

4. From the Multi-Site Configuration list, select a multi-site configuration.
5. Do one of the following:
 - Select a Route Point Number from the list.
 - Leave this field blank.
6. Optionally, enter a Description.
7. Click **Update**.

The Multi-Site Path Details page is refreshed. The Parameter Detail fields appear.

8. In the Prefix Value field, enter the trunk access code for placing a call from the From site to the To site by way of a tie line or the outbound trunk line.
9. In the Suffix Value field, enter any additional digits that need to be appended to the number when dialing from the originating call center to the destination call center.

The Translation Route Dialed Number field is not used in the current release.

10. Click **Update** to save.

6.8 Configuring Routes

Use the Route page to configure Oracle Telephony Manager for dynamic or static routes, to set route priorities and to route calls to route points that are not monitored. Configuring routes requires understanding rule-based routing concepts and business requirements.

Tasks

In the Route page you can perform the following tasks:

- [Configuring Route Type](#)
- [Setting Route Priorities](#)
- [Routing Calls to Route Points that Are Not Monitored](#)
- [Creating or Updating Interaction Keys](#)

6.8.1 Configuring Route Type

A route can be a dynamic route, static route or a route point route.

Use the following procedures to configure routes.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Click the Route tab.
The Routes page appears.
2. Do one of the following:
 - To configure a new route, click **Create**.
 - To reconfigure an existing route, click the appropriate Route Name.
The Route Details page appears.
3. Proceed to one of the following topics:
 - [Configuring Static Routes](#)
 - [Configuring Dynamic Routes](#)
 - [Configuring Route Point Routes](#)

Configuring Static Routes

Static routes are based on agents derived from Resource groups that are cached by the Routing Server.

Use the following procedure to configure static routes.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one Resource Group with a usage of Call Center.
- Navigate to the Route Detail page. See [Section 6.8, "Configuring Routes"](#).

Steps

1. If the Route Name field is blank, enter the Route Name. The Route Name is an arbitrary, descriptive name of the route.
2. In the Route Type list, select **Static**.
3. Optionally, in the Time Out field, enter a Value in seconds for the route. This value overrides any classification time out for a route request.
4. In the Default Destination list, select a default route destination. If the routing server cannot determine agents from the defined destinations, then the server defaults to the selected Default Destination.
5. Optionally, enter a Description.
6. Click **Update**.
The Routes page is refreshed. The Static Destination, Route Rules and Route Filter Details fields appear.
7. Select one or more destinations from the Static Destination list.
8. In the Route Rules fields, create a route rule by choosing a Key and Operation from the Route Rules lists and enter a Value, for example, "Language Competency Equals French" or "Customer Number Begins With 0." The selected Key determines the available Operations. See also [Appendix B, "Data Type Operators and Media Type Values for Rules"](#).
9. In the Route Filter Details, move one or more Available Filters (server groups) to the Filtered By column. Adding filters restricts the route results to the agents who are listed in the selected server groups.
10. Click **Update** to save.

Configuring Dynamic Routes

Dynamic routes are based on the agents derived from a seeded routing workflow or custom PL/SQL function.

Use the following procedure to configure dynamic routes.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Navigate to the Route Detail page. See [Section 6.8, "Configuring Routes"](#).

Steps

1. If the Route Name field is blank, enter the Route Name. The Route Name is an arbitrary, descriptive name of the route.
2. In the Route Type list, click **Dynamic**.
3. Optionally, in the Time Out field, enter a Value for the route. This value overrides any classification time out for a route request.
4. In the Default Destination list, select a default route destination. If the routing server cannot determine agents from the defined destinations, then the server defaults to the selected Default Destination.
5. Optionally, enter a Description.
6. Click **Update**.

The Routes page is refreshed. The Procedure Detail, Route Rules and Route Filter Details boxes appear.

7. Do one of the following:
 - In the Procedure Detail box, enter a name for this procedure in the Procedure Name field. Optionally, enter a description in the Description field.
 - Optionally, click Use Default Workflow Procedure. The Default Workflow Procedure is the seeded routing workflow. If you use the Default Workflow Procedure, you do not need to enter any parameters, however, the Default Workflow Procedure is slower than static routes.

Caution: Choosing the Default Workflow Procedure will clear the Parameters Detail fields of any data that you enter.

If you chose Use Default Workflow Procedure, proceed to step 10.

8. If you did not select the Default Workflow Procedure, in the Parameters field enter the Parameter and select a Value from the list. In the left Value field you can enter a fixed, hard-coded value or select an Oracle value from the list in the right Value field, for example, CUSTOMER_ID. Sequence is the sequence of the parameter for a PL/SQL function. See also [Section 2.4.1, "Dynamic Routes"](#).
9. If you did not select the Default Workflow Procedure, select a Data Type and Direction from the lists.
10. In the Route Rules fields, create a route rule by choosing a Key and Operation from the Route Rules lists and enter a Value, for example, "Language Competency Equals French" or "Customer Number Begins With 0." The selected Key determines the available Operators. See also [Appendix B, "Data Type Operators and Media Type Values for Rules"](#).
11. In the Route Filter Details, move one or more Available Filters (server groups) to the Filtered By column. Adding filters restricts the route results to the agents who are listed in the selected server groups.
12. Click **Update** to save.

Configuring Route Point Routes

Route Point routes reroute calls to a pre-defined route point.

Use the following procedure to configure route point routes.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Define at least one route point in the Call Center tab > Route Point subtab.
- Navigate to the Route tab > Route Name OR Create > Route Detail page.

Steps

1. If the Route Name field is blank, enter the Route Name. The Route Name is an arbitrary, descriptive name of the route.
2. From the Route Type list, select **Route Point**.
3. Optionally, in the Time Out field, enter a Value for the route. This value overrides any classification time-out for a route request.
4. From the Default Destination list, select a default route destination. If the routing point destination is not valid, the server defaults to the selected default destination.
5. Optionally, enter a Description.
6. Click **Update**.

The Routes page is refreshed. The Route Point Details and Route Rules fields appear.
7. In the Route Point Details box, from the Route Point list select a route point.
8. In the Route Rules box, create route rules by choosing a Key and Operation from the Route Rules lists and enter a Value, for example, "Language Competency Equals French" or "Customer Number Begins With 0." The selected Key determines the available Operations. See also [Appendix B, "Data Type Operators and Media Type Values for Rules"](#).
9. Click **Update** to save.

See Also

- [Section 2.4, "Routes"](#)
- [Appendix B, "Data Type Operators and Media Type Values for Rules"](#)
- [Section 2.5, "Oracle Routing Server Performance"](#)
- [Section 2.4.1, "Dynamic Routes"](#)

6.8.2 Setting Route Priorities

The Route Identification Algorithm functions according to the priority of individual routes. If more than one route satisfies all the applicable rules, the route with the highest priority is chosen.

Changing the value of a route priority affects the values of other route priorities. If you increase the value of a priority, then the priorities of all the routes with a value

equal to or greater than the original value but less than the new value will decrease by one. If you decrease the value of a priority, then the value of all the routes with a value equal to or less than the original value but greater than the new value will increase by one. For example, if you decrease 6 to 3, then 3 increases to 4, 4 increases to 5, and so on. If you increase 3 to 6, then 4 decreases to 3, 3 decreases to 2, and so on.

Use the following procedure to set route priorities.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Configure at least one route.

Steps

Use the following procedure to set the priority of a route.

1. Click the Route tab.

The Routes page appears.

2. In the same row as the appropriate Route Name, from the Priority list select a priority .

A message appears: "Do you want to change the Priority of this route and refresh the page? Click OK if you want to update the priority, click CANCEL to abort."

3. Click **OK**.
4. Click **Update** to save.

6.8.3 Routing Calls to Route Points that Are Not Monitored

The Oracle Inbound Telephony Server (ITS) monitors route points to determine which routing servers can route inbound calls. You can also route calls either to route points that are not monitored by ITS or to a non-route point device such as voice mail or an IVR extension.

Use the following procedure to route calls to route points that are not monitored.

1. Click the Call Center tab > Route Points subtab.
The Route Point Summary page appears.
2. From the Choose Server Group and Choose Middleware lists, select the appropriate server group and CTI middleware.
3. Click the appropriate Route Point Number.
The Route Point Details page appears.
4. Click **Unmonitored**.
5. Click **Update** to save.

6.9 Configuring Classifications

Classifications specify how calls are identified and which business applications should be used to screen pop caller data. Classifications are determined by the following:

- Classification values, that determine which screens to pop in an Oracle Universal Work Queue media action, and are used in Interaction Center Intelligence reporting, such as the number and type of calls. Classification values set a classification to a specific string value that is defined in the Classification Values page.
- PL/SQL functions, that are optional and needed only for dynamic classifications. The functions are registered to derive a classification value from a PL/SQL function that is defined in the PL/SQL Functions page.
- Classification rules, that determine the classification value for a particular interaction. An example of a classification rule is, "If ANI= 8000 and DNIS=800-ORACLE, then Classification=GoldService."

Tasks

In the Classification page you can perform the following tasks:

- [Section 6.9.1, "Configuring Classification Values"](#)
- [Section 6.9.2, "Defining PL/SQL Functions"](#)
- [Section 6.9.3, "Defining Classification Rules"](#)

6.9.1 Configuring Classification Values

Use the following procedure to configure classification rules.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Classification > Values tabs.

The Classification Values page opens.

Note: Only those Classification values that are defined in this page will be valid in the interaction center. If a PLSQL Function used in a classification rule returns a classification value that is not defined in this page, the call will be marked as "unclassified."

2. Do one of the following:
 - To create a new classification value, click Create.
 - To update an existing value, click the name of the Classification Value.
For a new classification value, the Create Classification Value Details page opens. For an existing classification value, the Update Classification Value Details page opens.
3. Enter a value in the Classification Value field, for example, "Gold Service".
4. Optionally, in the Description field, enter a description of the value, for example, "For Account Balance >= 100000"
5. Click **Add** or **Update** to save.
The page is refreshed.

See Also

- [Section 2.3, "Classifications"](#)
- [Appendix B, "Data Type Operators and Media Type Values for Rules"](#)

6.9.2 Defining PL/SQL Functions

PL/SQL functions are optional and needed only for dynamic classifications. A classification value can be derived from a PL/SQL function that is defined in the PLSQL Functions page.

Note: You must register a PL/SQL function rather than a PL/SQL procedure.

The Classification value can either be returned as a return value for the PL/SQL function or as one of the "out" or "in out" parameters for the PL/SQL function. The classification value derived from the PL/SQL function must be a valid value in the Classification Values page. (See step 1 in "Configuring Classification Values.") If the PL/SQL function returns a value that does not exist on the Classification Values page, then a classification value of "unClassified" is assigned to the interaction.

To derive a classification value from a PL/SQL function, register a PL/SQL function by using the following steps.

Note: Classification values returned as Out or InOut parameters will override the return of classification values of a PL/SQL function.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Define classification values. See [Section 6.9.1, "Configuring Classification Values"](#).

Steps

1. Select the Classification tab > PLSQL Functions subtab.
The PLSQL Function page opens.
2. Do one of the following:
 - To create a new PL/SQL function, click **Create**.
 - To update an existing PL/SQL function, click the User Function Name.
For a new PL/SQL function, the Create PLSQL Function page opens. For an existing PL/SQL function, the Update PLSQL Function page opens.
3. In the User Function Name field, enter an arbitrary, unique user name for the function, for example, "Get Classification Value from Account Number."
4. In the Oracle Database Application options, do one of the following:
 - If the function exists in the Oracle eBusiness Suite Application database, select **Yes** and proceed to step 5.
 - If the function does not exist in the Oracle eBusiness Suite Application database, do the following steps:
 - a. Select **No**.
 - b. In the Database URL field, enter the JDBC URL for the database.
 - c. In the Database Driver field, enter the JDBC driver.
5. If the function is part of the PL/SQL package (groups of procedures, functions, variables and SQL statements grouped together into a single unit), in the Package field enter the package name, for example, "MyCustomPkg." If the function is not part of the PL/SQL package, leave the Package field blank.
6. In the Function field, enter the name of the PL/SQL function.
7. Click **Create** or **Update**.
The Parameter Details fields appear.
8. Define the parameters for the PL/SQL function by entering the parameter name in the Parameter field.
9. Do one of the following:
 - In the Value field, enter the value to be passed to the parameter.

- If you want to pass the value from one of the interaction keys, click the flashlight icon for the Value field, select a key from the Interaction Key list and click Select.
10. In the Data Type field, from the list select a data type (Integer, Varchar, Date).
 11. In the Direction field, from the list select a direction (IN, OUT, INOUT).
 12. Repeat steps 9 through 11 for each parameter PL/SQL function. To add more Parameter fields, click Add More Parameters.
 13. Click **Update** to save.
- The page is refreshed and the Sequence field is populated for each parameter. Verify that the generated sequence matches the order of the parameters of the PLSQL function in the database.

6.9.3 Defining Classification Rules

Classification Rules define the conditions for assigning a particular classification value to an interaction. Rules can be assigned to specific server groups and media types. Classification rules are evaluated only for those interactions that belong to the assigned media types and server groups.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Classification tab > Rules subtab.
The Classification Rules page opens.
2. From the Choose Server Group list, select a server group.
3. From the And Media Type list, select a media type.
4. Click **Go**.

The page is refreshed and all rules assigned to the selected server group and media type appear.

5. Do one of the following:
 - To create a new classification rule, click **Create** and proceed to step 8.
 - To update an existing classification rule, click the Rule Name.

For a new classification rule, the Create Classification Rule page opens. For an existing classification rule, the Update Classification Rule Detail page opens.

6. Optionally, to find a specific rule, do the following:
 - a. From the Find Rule list select Name or Rule Key from the list.
 - b. In the Like field enter the value for which to search.
 - c. Click **Go**.

The page is refreshed and displays the list of rules based on the search conditions.

7. Optionally, you can do the following:
 - a. To view rule details, click **Show**.
 - b. To hide rule details, click **Hide**.
 - c. To disable a rule, select **No** from the Enabled list for the rule.

The page is refreshed and the rule is not evaluated by the classification engine.

- d. To change a rule priority, click the Increase Priority or Decrease Priority arrows. Clicking an arrow with a dash on the top or bottom moves the rule to the top or bottom of the list, respectively. A Rule with higher priority is evaluated before another with a lower priority.
 - e. To disable a rule, from the Enabled list select **No**.
8. In the Rule Name field, enter or edit an arbitrary, unique name for the rule.
9. Optionally, enter a Time Out in seconds.
10. Optionally, to disable this rule, select Disabled.
11. Click **Add** to save.

The page is refreshed and the conditions fields appear.

12. Select Any or All from the For Interactions Matching.... list. Do one of the following:
 - If you want the rule to be evaluated as true when at least one condition is met, select **Any**.
 - If you want the rule to be evaluated as true when all conditions are met, select **All**.
13. Enter the conditions for the rule. From the lists select the Rule Key and Operator from the lists and enter a value in the Value field. Examples of sets of conditions include:
 - DNIS =8008008000 and Account Number > 10000
 - DNIS =8008008001 or Account Number <= 10000Add as many conditions as necessary. See also [Appendix B, "Data Type Operators and Media Type Values for Rules"](#).
14. In the "Set the Classification to" options, select the Classification Type:
 - To set a classification to a specific string value that is defined in the Classification Values page, select Classification Value, and then select the value from the list.
 - If the classification value should be derived from a PL/SQL function that is defined in the PL/SQL Functions page, select Derive from PL/SQL Function and then select the Function from the list.
15. Optionally, in the " Add Additional Key Value pairs to Interaction" options, to attach additional key value pairs to the interaction/call, do the following:
 - In the Key field, enter a key or select a key from the List of Values.
 - In the Value field, enter a value to be associated with this key.
16. In the "Rule is assigned to" options, from the Available Media Types and Available Server Groups lists select the media types and server groups to which the rule should apply.
17. Click **Update** to save.

6.10 Configuring Softphone

You can configure the softphone to display Customer Call Data effectively and to load a list of speed dial numbers that are specific to an agent's server group.

Use the Display Configuration page to perform the following tasks:

- Select the interaction keys to display on the softphone. The Interaction Key value is displayed if the value is available in the interaction. For example, if Account Balance is selected for display, it will be displayed only if there is a valid value for Account Balance in the interaction.
- Arrange the order in which the selected Interaction Keys are displayed in the softphone display
- Disable the display of prompts for the Selected Interaction Keys

You can assign a Display Configuration to multiple server groups so that all the assigned server groups have similar softphone displays.

A sample display configuration, "Default Configuration," is seeded and is available for reference.

Use the Speed Dial page to perform the following tasks:

- Define a speed dial list of internal numbers within a Server Group/Call Center Site.
- Define a speed dial list of external numbers shared across many Server Groups/Call Center Sites.

When an agent who belongs to server group "Vision- Group One" logs into the softphone, a speed dial list of Internal and External Numbers for "Vision-Group One" is displayed in the softphone.

Tasks

In the Softphone page you can perform the following tasks:

- [Section 6.10.1, "Configuring Softphone Displays"](#)
- [Section 6.10.2, "Configuring Speed Dialing"](#)

See Also

[Chapter 2.7, "Softphone"](#)

6.10.1 Configuring Softphone Displays

Use the following procedure to configure softphone displays.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one server group.
- Interaction Keys to be displayed must exist in the Classification tab > Interaction Keys subtab and must have been added to the Softphone Available Keys list.

Steps

1. Select the Call Center tab > Softphone subtab.

The Display Configuration Summary page opens.

2. From the Choose Server Group list, select the server group with which the softphone is associated.

3. Click **Go**.

The page refreshes and displays the softphone Configuration Names that are associated with the selected server group.

4. Do one of the following:

- To configure a new softphone display, click **Create** and proceed to step 5.
- To reconfigure an existing softphone display, select the Configuration Name and proceed to step 8.
- To assign a softphone display configuration to a server group, click **Assign Server Groups** and proceed to step 15.

5. In the Configuration Name field, enter a unique name for the display configuration.
6. Optionally, enter a description.
7. Click **Create** to save.

The page is refreshed and the Softphone Display keys appear.

8. From the Available Keys list, select the keys to be displayed on the agent softphone and move it to the Displayed Keys List by using the arrow button.
9. Select the order in which to display the keys on the softphones by using the arrow buttons.
10. Click **Update** to save. The Displayed Keys list will not be saved if you do not click Update.

The page is refreshed.

11. To modify the display of prompts, Click Modify Display Prompts.

The page refreshes with all the Displayed Keys in the Prompt and Value List.

Note: The Keys in the Prompt and Value List are displayed with both the Key Name and value in the softphone display. For example, if "Account Balance" is in the Prompt and Value list and if 99999 is the value for Account Balance, the Softphone Display would show "Account Balance:99999." Keys in the Value List are displayed with values only in the softphone display. For example, if "Customer Name" is in the Value Only list and Vision Customer is the value for Customer Name, Softphone Display would show "Vision Customer."

12. From the Prompt and Value list select the keys whose values should only be displayed in the softphone and move them to the Value Only list.
13. Click **Update** to save.
14. Click Display Configuration to return to the Display Configuration Page.
15. To assign server groups to an existing softphone, select Assign Server Groups.
The Server Group Assignment Detail page opens.
16. Select server groups from the Available list and move them to the "Assigned to this Configuration" list. To remove server groups from the configuration, select servers from the "Assigned to this Configuration" list and move them to the "Available Servers" list.

The Available list shows only those server groups that currently do not have a display configuration assigned to them. To change the display configuration for a server group, the server group must first be removed from the "Assigned to

this Configuration" list of the old display configuration and then added to the "Assigned to this configuration" list of the new display configuration.

17. Click **Update** to save.
18. Click Display Configuration to return to the Display Configuration Summary page.

6.10.2 Configuring Speed Dialing

Use the following procedure to configure softphone speed dialing.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Configure at least one softphone.
- Create at least one server group.

Steps

1. Select the Call Center tab > Softphone subtab.
The Softphone Configuration Detail page opens.
2. Select **Speed Dial**.
The Speed Dial Numbers page opens.
3. From the Choose Server Group list, select the server group to which a speed dial list is to be created.
4. Click **Go**.
The page refreshes and displays lists of configured internal and external numbers. The displayed numbers will be available in the Dial field of the softphone for all the agents in the selected server group.
5. Do one of the following:
 - To configure a new Internal Number for the speed dial, click Create below the Internal Numbers.

The Internal Number Detail page opens. Proceed to step 6.

- To configure a new External Number for the speed dial, click Create below the External Numbers.

The External Number Detail page opens. Proceed to step 10.

- To reconfigure an existing speed dial number for either an Internal Number or External Number, click the First Name, Last Name. For internal numbers, proceed to step 6. For external numbers, proceed to step 9.

6. For internal numbers, enter the Last Name and Internal Number.
7. Optionally, enter the First Name and Description.
8. Select a server group from the Server Group Name list.
9. Click **Add** to save. Proceed to step 14.
10. For external numbers, enter the Last Name and Local Number.
11. Optionally, enter the First Name, Description, Country Code and Area Code.
12. Click **Add** to save.

The External Number Detail page opens.

13. In the Server Group Assignments, from the Available Server Groups list select the server groups to which this external number should be associated.
14. Click **Update** to save.
15. Use the browser Back button to return to the Speed Dial list.

6.11 Creating and Updating Interaction Keys

By using the Interaction Keys page, you can create new Interaction Keys to use in the Call Center, Route and Classification components of the Interaction Center Suite. Interaction Keys are displayed in the following pages:

- Oracle Fields to which IVR Fields can be mapped
- Keys used to set up Routing and Classification Rules
- Keys used to add additional key value pairs to Interaction in Classification Rules Detail page
- Keys available for display in Softphone Display Configuration

Use the following procedure to create or update Interaction Keys.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- IVR Mapping: In the Update Interaction Key page, select Add to IVR.
- Routing and Classification: In the Update Interaction Key page, select Add to Routing & Classification.
- Softphone: In the Update Interaction Key page, select Add to Softphone.

Steps

1. Do one of the following:
 - Select the Call Center > Interaction Keys tabs.
 - Select the Route > Interaction Keys tabs.
 - Select the Classification > Interaction Keys tabs.The Interaction Keys page opens.
2. Do one of the following:
 - To create a new interaction key, click **Create**.The Create Interaction Keys page opens.
 - To update an existing interaction key, from the Interaction Key list select the name of the Interaction Key.The Update Interaction Keys page opens.
3. In the Code field, enter the identifier for an Interaction Key. An example of a Code for Contract Number is `ContractNum`. If a value is passed along with this identifier as a key-value pair, for example `ContractNum=10000`, then the value is recognized by Oracle Interaction Center Applications as a value for the defined Interaction Key.
4. In the Key Meaning field, for the Interaction Key enter display text that is easily recognized by users. An example of a Key Meaning is `Contract Number`.
5. Optionally, enter a description for the Interaction Key. An example of a key Description is `Customer Contract Number`.

6. From the Data Type list, select whether the interaction key data type is a String, Date or Integer.
7. Select one or all of the following options:
 - To add the Interaction Key to the list of Oracle Fields in the Call Center > IVR page, select Add to IVR.
 - To add the Interaction Key to the list of Route Rule Keys that are available in the Routing and Classification Rule Details page, and to add the Interaction Keys to the list of Classification Rule Keys that are available in the Update Classification Rule Details page, select Add to Routing/Classification.
 - To add the Interaction Key to the list of Available keys in the Softphone Display Configuration Details page, select Add to Softphone.
8. Click **Add** or **Update** to save.

See Also

[Chapter 2.2, "Interaction Keys Example Scenario"](#)

6.12 Managing Media Item Processes

Concurrent manager uses two defined processes:

- Close media items process, which takes as input the interval to check for closed media items. The default value is 15 minutes.
- Timeout media items process, which takes the interval to timeout any stale or unclosed media items, that is, if a media item has stayed open for an interval equivalent to timeout, then the media item will be forced closed. Typically, closure due to timeout applies to media items for which Oracle Telephony Manager has no way of determining whether or not the media item can be closed correctly, for example, Dial failures.

Note: You must run these processes even if the customer has not implemented Oracle Interaction Center Intelligence.

Both of these concurrent manager processes are self scheduling. After you schedule them, they will run automatically at the defined run intervals.

Note: For these processes to run correctly, the concurrent manager framework must be available at all times.

To run the media item processes, use the following procedure:

Log in

Oracle Applications Forms Administration

Responsibility

Interaction Center Intelligence Admin Apps

Prerequisites

Create a user with the Interaction Center Intelligence Admin Apps responsibility.

Steps

1. In the Navigator window Functions tab, select **Requests > Concurrent Requests**.
2. Click **Open**.
The Find Requests window opens.
3. Click **Submit a New Request**.
The Submit a New Request window opens.
4. Accept the default option "Single Request" and click **OK**.
The Submit Request window opens.
5. In the Name field, click to open the drop-down menu.
The Reports window opens.
6. Do one of the following:
 - Select Close Media Items.
 - Select Timeout Media Items.

Note: In Minipack O, the timeout interval is the same as the interval to check for timeout. From Minipack P onwards, timeout media items have two input parameters. The first parameter defines the timeout interval. The second parameter defines the interval to check for timed out media items. The default value for timeout interval is 24 hours. The default value for check timeout is 6 hours.

The Parameters window opens.

7. You can accept the default value or enter a different value. (The lower the value, the closer the interval is to real time.)

8. Click **OK**.

The Submit Request window appears.

9. Click **Submit**.

The Find Requests window appears.

10. Select **All My Requests**.

11. Click **Find**.

The Requests window opens.

12. Verify that the submitted request appears in the schedule.

13. Optionally, click in a row to select a request, and then select any of the available options: Hold Request, Cancel Request, View Details, Diagnostics, View Output, View Log.

14. Select **File > Save**.

Middleware Parameter Equivalents

The following table lists the Oracle Telephony Adapter equivalents for CTI middleware parameters that were used in previous releases.

Table A-1 Middleware Parameter Equivalents Across Releases

Release 11.5.6 and 11.5.7 Fields for Connectors for CT Connect and Connectors for Cisco ICM	Release 11.5.8 Fields for Adapter for CT Connect	Release 11.5.8 Fields for Adapter for Cisco ICM
Passive Mode	Passive Mode	Passive Mode (always TRUE)
PBX Name	CT Connect Link Logical Identifier	Peripheral Identifier
PBX Type	PBX Type	PBX Type
CTI Enabler Server IP Address	CT Connect IP Address	Site A Host IP Address
Middleware Server Info 1		Site A Host IP Port
Middleware Server Info 2		Site B Host IP Address
Middleware Server Info 3		Site B Host IP Port
Middleware Server Info 4		
Middleware Server Info 5		Media Item Call Variable
Middleware Server Info 6		
Domestic Dialing Prefix	Domestic Dialing Prefix	Domestic Dialing Prefix
International Dialing Prefix	International Dialing Prefix	International Dialing Prefix
Outgoing Prefix	Outgoing Prefix	Outgoing Prefix
Site Area Code	Site Area Code	Site Area Code
Site Country Code	Site Country Code	Site Country Code

Table A-1 Middleware Parameter Equivalents Across Releases (Cont.)

Release 11.5.6 and 11.5.7 Fields for Connectors for CT Connect and Connectors for Cisco ICM	Release 11.5.8 Fields for Adapter for CT Connect	Release 11.5.8 Fields for Adapter for Cisco ICM
Site Internal Number Length	Site Internal Number Length	Site Internal Number Length
Site Overlay	Site Overlay	Site Overlay
IVR Host	IVR Host	
IVR Port	IVR Port	
IVR Info 1		
IVR Info 2		
IVR Info 3		
IVRI Mode	IVRI Mode	
IVRI Abandon Threshold	IVRI Abandon Threshold	
Use Advanced Outbound		
Predictive Answer Flag		
Predictive Answer Wait Time		
Predictive Transfer Flag		
Predictive Transfer Wait Time		
Disable Warm Transfer/Conference for all Applications		
Warm Transfer/Conference Initiation Wait Time (seconds)		
Site Local Number Maximum Length	Site Local Number Maximum Length	Site Local Number Maximum Length

B

Data Type Operators and Media Type Values for Rules

The following topics list and describe specific data type operators and media type values for route rules and classification rules that are defined in the Route tab > Route Detail page and Classification tab > Classification Detail page, respectively.

Note: The selected Key determines the availability of operators.

- [Section B.1, "Operators for Data Type: String"](#)
- [Section B.2, "Operators for Data Type: Number"](#)
- [Section B.3, "Operators for Data Type: Date"](#)
- [Section B.4, "Supported Media Type Values for Rules"](#)

B.1 Operators for Data Type: String

The following table lists and describes the operators for data type: string and the condition under which the rule is evaluated to be true.

Operators for Data Type: String

Operator	The rule is evaluated to be true if the media item value for a given key ...
begins with	Begins with the given string
contains	Contains the given string
does not contain	Does not contain the given string

Operators for Data Type: String (Cont.)

Operator	The rule is evaluated to be true if the media item value for a given key ...
does not equal	Does not match the given string
does not exist in	Does not exist in the given string
ends with	Ends with the given string
equals	Matches the given string without any case restrictions
equals (Match Case)	Matches the given string with case restriction
exists in	Is a subset of any of the given strings (a simplified OR operator)

B.2 Operators for Data Type: Number

The following table lists and describes the operators for data type: number and the condition under which the rule is evaluated to be true.

Operators for Data Type: Number

Operator	The rule is evaluated to be true if the media item value for a given key ...
!=	Is not equal to the given value
<	Is lesser than the given value
<=	Is lesser than or equal to the given value
=	Is equal to the given value
>	Is greater than the given value
>=	Is greater than or equal to the given value
between	Is between the two given values
does not exist in	Does not match any of the given values
exists in	Matches any of the given values (a simplified OR operator)

B.3 Operators for Data Type: Date

The following table lists and describes the operators for data type: date and the condition under which the rule is evaluated to be true.

Operators for Data Type: Date

Operator	The rule is evaluated to be true if the media item value for a date/time key is ...
after(hh:mm:ss)	After the given time
before(hh:mm:ss)	Before the given time
between(hh:mm:ss-hh:mm:ss)	Between the given times
day of the week in (1,2,3,4,5,6,7)	Specific day/s, where 1=Sunday, 2=Monday, and so on.

B.4 Supported Media Type Values for Rules

The following values are supported by Oracle Routing Server for the Key "Media Type" in the Values fields of the Route Rules and Classification Rules pages.

The Value for Key "Media Type" can be any of the case-independent values (inbound, outbound, email and Web callbacks) that are listed in the following table.

Supported Media Type Values for Rules

Inbound Telephony	Outbound Telephony	Email	Web CallBack
call	outboundphone	email	webcall
inboundcall	outboundtelephone		
inboundphone			
inboundtele			
inboundtelephony			
inboundtelephone			
phonecall	outboundcall	inboundemail	webcallback
phone	outboundtele		
telephony	outboundtelephony		

Glossary

active mode

A routing mode in which Oracle Advanced Inbound controls the routing and distribution of incoming calls to call center agents using business data and rules that are configured in Oracle Advanced Inbound. Specific PBX/ACD configurations are required to grant Oracle Advanced Inbound full control of an inbound call when it reaches a PBX/ACD route point monitored by Oracle Advanced Inbound.

adapter

A telephony driver of the Oracle Telephony Adapter Server developed specifically to integrate Oracle Interaction Center to a specific switch and CTI middleware platform. Oracle develops adapters for certified switch and middleware combinations. Third-parties can use the Oracle Telephony Adapter SDK to develop adapters for switch and middleware combinations that are not certified by Oracle. Typically, each adapter is developed to integrate only with the telephony system of a specific manufacturer.

ACD

Automatic Call Distribution, systems designed to automatically answer, queue and route incoming calls to interaction center agents. An ACD differs from a PBX in that while a PBX allows users to share a limited number of telephone lines, an ACD has at least one telephone line for each agent.

ANI

Automatic Number Identification, a service, similar to caller ID, that long distance carriers provide to identify the calling party's telephone number.

API

Application Programming Interface, the calling conventions by which a software application accesses the operating system and other services.

blind transfer

A call transferred from one person to another and completed without the receiving party first answering the call (that is, no consultation call is established).

CTI

Computer Telephony Integration, a system in which a computer is connected to a telephone switch, either PBX or ACD, so that the computer sends instructions to the switch about how to direct telephone calls.

DNIS

Dialed Number Identification Service, a feature of 800 and 900 lines that identifies the called number to a telephony system, which routes the call to the correct extension.

dynamic route

A route that is based on a PL/SQL query.

enhanced passive mode

A routing mode in which standard PBX/ACD routing and distribution of calls to call center agents occurs with Oracle Advanced Inbound monitoring PBX/ACD route points to allow classification of calls for targeted screen pops, inbound call queue counts and tracking of calls that are abandoned at the route point for reporting by Oracle Interaction Center Intelligence. Specific PBX/ACD configurations are required to ensure that inbound calls pass through a PBX/ACD route point that is monitored by Oracle Advanced Inbound.

IDE

Interactive Development Environment, a system for supporting the process of writing software. An IDE may include a syntax-directed editor, graphical tools for program entry, and integrated support for compiling and running the program and relating compilation errors back to the source. Examples of IDEs are Visual C++ and Visual Basic.

Interaction Center Server Manager (ICSM)

The only server process that is required to be explicitly started on each target machine, ICSM is responsible for starting, stopping and monitoring all the other

Oracle Advanced Inbound server processes. The ICSM server processes are controlled by the Interaction Center Server HTML Administration.

Inbound Telephony Server (ITS)

The Oracle Interaction Center server that handles inbound telephony interactions. ITS supports the following features:

- (Active mode only) ITS enables enterprise data-based routing by listening for route queries offered by the CTI middleware and responding to them to instruct the switch where to route the call.
- ITS monitors calls arriving at route point(s)
- ITS detects calls that are abandoned at route point(s)

interaction center server

Any interaction center server, such as Oracle Interaction Queuing and Distribution, Oracle Universal Work Queue, Oracle Routing server and Oracle Inbound Telephony Server. Same as mid-tier server process and server process.

IVR

Interactive Voice Response, an automated system that, in response to incoming telephone calls, plays a recorded message that gives callers the option of pressing telephone buttons to route the call to one or more extensions.

Javadoc

A facility provided within the Java Development Kit that produces HTML documentation from a program. Javadoc reads the source code and parses specially formatted and positioned comments into documentation.

Java Native Interface (JNI)

A native programming interface for Java that allows Java code that is running inside a Java Virtual Machine to operate with applications and libraries written in other programming languages such as C and C++.

Java Development Kit (JDK)

A Sun Microsystems product that provides the required environment for Java programming.

JDBC

Java Database Connectivity, part of the Java Development Kit that defines an application programming interface for Java for standard SQL access from Java programs to databases.

media controller

Software that bridges other systems or software with the underlying media hardware, such as a PBX.

media queue

The interaction center component for queuing and distributing inbound media items. It stores inbound items such as telephone calls or e-mails in a queue and integrates with the routing module so that the items can be sent to a set of agents. The media queue provides an API to other modules, such as Oracle Universal Work Queue, for querying and manipulating items in the queue.

media item

A representation of a telephone call, e-mail, Web callback or other type of media.

mid-tier server process

Any interaction center server, such as Oracle Interaction Queuing and Distribution, Oracle Universal Work Queue, Oracle Routing Server, Oracle Inbound Telephony Server, and Oracle Telephony Media Controller. Same as server process and interaction center server.

monitoring

The ability to view server status.

multi-site

Interaction centers that work together across multiple physical locations.

multi-site routing

The ability to route a call to agents who are located across multiple sites.

multi-site queuing and distribution

A single system storing and maintaining agent queues across multiple sites.

Oracle Advanced Inbound

The Oracle eBusiness application that is required to telephony enable business applications in the Oracle eBusiness suite. The server architecture of Oracle Advanced Inbound is scalable to run interaction centers with a single physical site or multiple sites. The Oracle Advanced Inbound bundle consists of the following products: Call Center Technology, Oracle Universal Work Queue, Oracle Telephony Manager and Oracle Interaction Blending.

Oracle Advanced Outbound

The Oracle eBusiness application that provides the outbound telephony capability corresponding to Oracle Advanced Inbound.

Oracle Interaction Center (OIC)

A group of server processes that serves as the telephony-enabling foundation of Oracle's eBusiness Suite applications.

Oracle Telephony Adapter Server (OTAS)

The CTI adapter server that substitutes for Oracle Call Center Connectors. Oracle Telephony Adapter Server encompasses one telephony adapter per switch.'

Oracle Telephony Manager (OTM)

The Oracle Interaction Center application that performs queuing, routing and distribution of media items.

package

Groups of procedures, functions, variables and SQL statements grouped together into a single unit.

passive mode

A routing mode in which standard PBX/ACD routing and distribution of calls to call center agents occurs. Oracle Advanced Inbound becomes aware of the call through CTI when the call rings at the agent's teleset. Oracle Advanced Inbound does not monitor or control any PBX/ACD route points in this mode.

PBX

Private Branch eXchange, a telephone system within a company or other organization that switches calls between the company's users and allows them to share a number of outside telephone lines. In passive mode calls are routed by the PBX.

route point

A point from which inbound calls are queued and routed. Route point refers to Avaya VDN, Nortel CDN/ACDN, Aspect DID DNIS, and so on.

scalability

A measure of how well a software or hardware product is able to adapt to future business needs.

screen pop

A user interface presentation of customer data and product and service information that appears on an interaction center agent's monitor simultaneously with the customer's incoming telephone call.

server process

Any interaction center server, such as Oracle Interaction Queuing and Distribution, Oracle Universal Work Queue, Routing server and Oracle Inbound Telephony Server. Same as mid-tier server process and interaction center server.

server status

Information on whether the server process is running or not, how long the server has been running, and so on.

site

A single geographic location where an interaction center is located. A site typically has a PBX and CTI middleware installed.

skill-based routing

A dynamic call routing intelligence that delivers inbound calls to an agent who is appropriately skilled to meet the needs of the caller.

softphone

A functional GUI representation of a telephone that is displayed on interaction agents' monitors.

Software Development Kit

(SDK) Software that is provided by software vendors to allow their products to be used with the products of other software vendors.

static route

A route that is based on cached data.

super group

The topmost, parent server group in a hierarchy of server groups.

switch simulator

A process that uses Intel CT Connect middleware to simulate a Nortel switch and the connection and message behavior of the Oracle Telephony Adapter Server. The switch simulator makes it possible to set up an interaction center without connecting to a real switch. The server architecture is configured as Switch Simulator <==> OTAS <==> ITS /IQD/OTM <==> UWQ.

target machine

The machine where mid-tier server processes are run. Same as node.

telephony-enabled

The ability of an application to communicate with a telephone system for inbound and outbound calls, or inbound or outbound calls, through the CTI middleware that handles the messaging between a telephone switch and the user's application.

telephony model

A scenario that describes the expected behavior of a call for any given telephony function. For example, in one telephony model, a transferred call has the same call ID as the original call. In another telephony model, a transferred call has the same call ID as the consultation call. In a third telephony model, a transferred call has a completely new call ID that differs from the original call and the consultation call.

telephony system

Any hardware and software components that provide telephony and CTI messaging, such as PBX, ACD, IVR, predictive dialer and CTI middleware.

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