Oracle® Advanced Inbound

Implementation Guide

Release 11*i*

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Oracle Advanced Inbound Implementation Guide, Release 11*i*

Part No. B10175-02

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If you find any errors or have any other suggestions for improvement, please indicate the document title and part number, and the chapter, section, and page number (if available). You can send comments to us at the following address:

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If you would like a reply, please give your name, address, telephone number, and (optionally) electronic mail address.

If you have problems with the software, please contact your local Oracle Support Services.

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, "Introduction" introduces and explains the key features of Oracle Advanced Inbound and its role within the Oracle Interaction Center product family.
- Chapter 2, "Before You Begin" describes the dependency requirements of Oracle Advanced Inbound.

- Chapter 3, "Detailed Product Description" provides a detailed description of the architecture, components and concepts of Oracle Advanced Inbound.
- Chapter 4, "Implementation and Administration Tasks" explains detailed instructions on implementing and administering Oracle Advanced Inbound.
- Chapter 5, "Verifying the Implementation" explains how to verify that the implementation was done correctly.
- Chapter 6, "Diagnostics and Troubleshooting" explains how to diagnose and correct some issues that may be encountered in implementing Oracle Advanced Inbound.
- Appendix A, "Oracle Advanced Inbound Server Parameters" lists the parameters for all servers in Oracle Advanced Inbound.
- Appendix B, "Middleware Parameter Equivalents Across Releases" compares Oracle Advanced Inbound CTI middleware parameters across recent releases.
- Appendix C, "Data Type Operators and Media Type Values for Rules" lists the data type operators and media type values for route rules and classification rules.
- Appendix D, "Multi-Site Implementation Worksheet" is the worksheet to use as a guide when planning and implementing Oracle Advanced Inbound for multiple interaction centers.

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 Oracle*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

Interaction Center Recommended Patch List

Prior to upgrading to a specific Family Pack, refer to the Recommended Patch List in Oracle*MetaLink* Note ID: 219238.1.

Oracle Advanced Inbound Certified Switches/Middleware

Oracle Advanced Inbound Certified Switches/Middleware for Interaction Center Family Pack-Q, Oracle*MetaLink* Note ID: 225626.1.

Oracle Advanced Inbound CTI Application Notes

These Application Notes, Oracle*MetaLink* Note ID: 225623.1, provide detailed information for implementing Oracle Advanced Inbound for specific telephony platforms, and features such as multi-site and IVR integration.

Oracle Interaction Center Server Manager Implementation Guide

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

Oracle Telephony Adapter SDK Developers Reference Guide

This developers guide contains the information necessary to plan, implement and test the development of the Oracle Telephony Adapter SDK for use with third-party switches that Oracle does not certify.

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 or Oracle9 technology stack, and the Oracle8*i* Oracle9*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 Document Set

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 6*i* 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 Developer's Guide

Oracle Workflow Developer's Guide

This guide contains instructions on using Workflow Builder, and defining workflow processes, BES events, subscriptions, agents and systems.

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 Oracle*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 Oracle8*i* or Oracle9*i* 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.

1 Introduction

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 eBusiness 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 front office applications (known as Customer Relationship Management or CRM), and back office applications (Enterprise Relationship Planning or ERP), 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"
- Section 1.1.6, "Oracle 1-to-1 Fulfillment"
- Section 1.1.7, "Oracle Customer Interaction History"

1.1.1 Oracle Advanced Inbound

Oracle Advanced Inbound is designed to consistently and effectively handle customer interactions by intelligently routing, queuing and distributing media items. Oracle Advanced Inbound offers CTI support for market-leading traditional ACD/PBX and IP Telephony platforms, and provides enhanced screen pops on customer data into the Oracle e-Business suite application. Oracle Advanced Inbound is fully integrated with Oracle TeleSales, Oracle TeleService and Oracle Collections, thereby minimizing integration time and deployment costs. Oracle Advanced Inbound also provides the Oracle Telephony Adapter SDK, which can be used to integrate other PBX/ACD and CTI middleware combinations that are not supported by an Oracle telephony adapter.

Oracle Advanced Inbound is required to telephony enable business applications in the Oracle eBusiness Suite. "Telephony-enabled" means that the application can communicate with a telephone system for inbound calls, outbound calls, or both by way of the CTI middleware that handles the messaging between the customer's PBX/ACD and the business application.

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

See Also

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"

Section 1.1.6, "Oracle 1-to-1 Fulfillment"

Section 1.1.7, "Oracle Customer Interaction History"

1.1.2 Oracle Advanced Outbound

Oracle Advanced Outbound is another key part of the Oracle eBusiness Suite of applications. It is the module of Oracle Interaction Center that addresses outbound telephony. Oracle Advanced Outbound 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 to create campaigns and lists to execute. Oracle Advanced Outbound serves as the execution arm for these marketing lists to maximize both outbound list penetration and agent productivity. Oracle Advanced Outbound 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.

Oracle Advanced Outbound also integrates with Oracle Customer 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.

Oracle Advanced Outbound does not include any other telephony management modules, and thus requires the use of Oracle Advanced Inbound.

See Also

Section 1.1.1, "Oracle Advanced Inbound"

Section 1.1.3, "Oracle Email Center"

Section 1.1.4, "Oracle Scripting"

Section 1.1.5, "Oracle Interaction Center Intelligence"

Section 1.1.6, "Oracle 1-to-1 Fulfillment"

Section 1.1.7, "Oracle Customer Interaction History"

1.1.3 Oracle Email Center

Oracle Email Center 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. Oracle Email Center 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"

Section 1.1.5, "Oracle Interaction Center Intelligence"

Section 1.1.6, "Oracle 1-to-1 Fulfillment"

Section 1.1.7, "Oracle Customer Interaction History"

1.1.4 Oracle Scripting

Oracle Scripting is a set of tools to facilitate the process of gathering of information for the benefit of the enterprise. Oracle Scripting is composed of several components: the Script Author, the Scripting Engine, the Scripting Administration console, and the Survey Administration console.

The Script Author is the development tool with which customized business requirements are translated into miniature programs known as "scripts." Each implementation of Oracle Scripting employs at least one customized script built by Oracle Consulting, consulting partners, or the enterprise. There are various ways in which scripts can be employed to gather or distribute data for an enterprise. For example, a script can serve to unify an agent's desktop by integrating aspects of various applications, or as a survey questionnaire to solicit specific information from the sample or target population. The Script Author offers two ways to create a script, including graphical layout tools and a Script Wizard component.

The Scripting Engine is responsible for displaying the script to the end user, interpreting the end user's responses to questions and answers, and processing custom code developed in support of the script. The Scripting Engine includes two interfaces (one for agents, and one for executing a script using a Web browser). Any script executed in the Web interface requires survey campaign administration.

The Scripting Administration console provides the user interface with which script developers can launch the Script Author as a Java applet, and script administrators can administer Oracle Scripting files, as well as generate, view and analyze a panel footprint report.

The Survey Administration console provides the user interface with which survey administrators establish and maintain survey campaign information, define and manage survey deployments, and view responses from data received.

See Also

Section 1.1.1, "Oracle Advanced Inbound"

Section 1.1.2, "Oracle Advanced Outbound"

Section 1.1.3, "Oracle Email Center"

Section 1.1.5, "Oracle Interaction Center Intelligence"

Section 1.1.6, "Oracle 1-to-1 Fulfillment"

Section 1.1.7, "Oracle Customer Interaction History"

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 a 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 (Oracle CRM Foundation, sometimes referred to as Java Technology Framework or JTF).Users of Oracle 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 11*i*-certified 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 Oracle8*i* or Oracle9*i* database.

See Also

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 1.1.6, "Oracle 1-to-1 Fulfillment"

Section 1.1.7, "Oracle Customer Interaction History"

1.1.6 Oracle 1-to-1 Fulfillment

Oracle 1-to-1 Fulfillment is a framework for compiling and distributing fulfillment information to customers in electronic format. Fulfillment information includes generic collateral or personalized cover letters sent to customers or prospective customers. Oracle 1-to-1 Fulfillment automates this process, providing the ability to immediately satisfy a requests for information, literature, and other correspondence. Interaction center agents handle a variety of requests ranging from product and service inquiries, pricing questions, billing inquiries, and general customer care issues. Many of these requests result in some dissemination of literature, collateral, forms of application, letters, or correspondence to the customer. Oracle 1-to-1 Fulfillment provides the ability for interaction center administrators, mobile field representatives, marketing managers, customer care representatives, and other service agents to respond to different customer needs quickly and easily using e-mail. Oracle 1-to-1 Fulfillment is also used by marketing groups to send marketing information to customers. Fulfillment requests can also be generated by e-Commerce applications that send information to customers using Web clicks.

See Also

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"

Section 1.1.7, "Oracle Customer Interaction History"

1.1.7 Oracle Customer Interaction History

Oracle Customer Interaction History provides a real-time repository for recording contact interactions and relevant business events between businesses and customers. Oracle Customer Interaction History also provides user interfaces for setup administration and for viewing and querying these stored interactions and events.

See Also

Section 1.1.1, "Oracle Advanced Inbound"

Section 1.1.2, "Oracle Advanced Outbound"

2

Before You Begin

This section describes the following dependency requirements:

2.1 Installing Oracle Advanced Inbound

You have the following options for installing Oracle Advanced Inbound:

> **Note:** Prior to installation or upgrade, *always* review the readme and patch list for the Oracle Interaction Center Family Pack. The readme contains installation instructions, a summary of product changes, and a list of known issues for a family pack. The patch list contains a list of patches that are required or recommended for use with a family pack. The readme and patch list for the Oracle Interaction Center Family Pack are available on Oracle*MetaLink* (Note 219238.1) at http://metalink.oracle.com.

- Oracle Applications Rapid Install

  The Rapid Install is intended for customers who are installing Oracle Applications for the first time or upgrading to Release 11i from Release 11.0 or Release 10.7. It contains the family packs or product minipacks for all products in Oracle Applications.

The Rapid Install is provided on CD-ROMs and is available from Oracle Store at http://oraclestore.oracle.com. For information about installing Oracle Applications using Rapid Install, see *Installing Oracle Applications*. For information about upgrading Oracle Applications using Rapid Install, see *Upgrading Oracle Applications*.

- Oracle Applications Maintenance Pack

  The Maintenance Pack is intended for customers who have already installed Oracle Applications Release 11i. It contains the family packs or product minipacks for all products in Oracle Applications.

  The Maintenance Pack is provided as a patch and is available on Oracle*MetaLink* at http://metalink.oracle.com. For information about upgrading Oracle Applications Release 11i using the Maintenance Pack, see Maintenance Pack Release Instructions (Note 232834.1) on Oracle*MetaLink* at http://metalink.oracle.com.

- Oracle Interaction Center Family Pack

  The Oracle Interaction Center Family Pack is intended for customers who have already installed or upgraded to Oracle Applications Release 11i and wish to upgrade only Oracle Interaction Center. The family pack is cumulative and contains only the minipacks for products in the Oracle Interaction Center family.

  Note: Oracle Interaction Center products integrate with other products in Oracle Applications. Therefore, you may have to install family packs, product minipacks, or individual product patches for *other* products before installing the Oracle Interaction Center Family Pack.

The Oracle Interaction Center Family Pack is provided as a patch and is available on OracleMetaLink at http://metalink.oracle.com. The readme and patch list for the Oracle Interaction Center Family Pack are available on OracleMetaLink (Note 219238.1) at http://metalink.oracle.com

2.2 Upgrading Oracle Advanced Inbound Configurations

To upgrade an existing installation of Oracle Advanced Inbound to Release 11.5.8., verify the following:

- An Oracle Telephony Adapter Server is defined in your server group

- The Middleware Configuration server parameter is correct for Oracle Telephony Adapter Server
- The correct client files are installed for the following CTI middleware:
  - Intel NetMerge Call Processing Software: Check that the Java client file CTCAPI.JAR is copied into the directory admin/scripts/3rdparty of the ICSM node that hosts Oracle Telephony Adapter Server.
  - 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.
  - Intel CT Connect: Check that the CT Connect Java client file ctcapi.jar is copied into the directory admin/scripts/3rdparty of the ICSM node that hosts Oracle Telephony Adapter Server.

Topics on upgrading include:

- Section 2.2.1, "Upgrading From Release 11.5.5 or Earlier"
- Section 2.2.2, "Upgrading From Release 11.5.6 or Release 11.5.7"
- Section 2.2.3, "Upgrading From Release 11.5.8"

2.2.1 Upgrading From Release 11.5.5 or Earlier

Use the following guidelines when upgrading Oracle Advanced Inbound from Release 11.5.5 or earlier.

Retirement of Oracle Call Center Connectors

Oracle Call Center Connectors has been replaced by the Oracle Telephony Adapter Server. Discontinue the use of existing installations of Oracle Call Center Connectors. All implementations of the Oracle Advanced Inbound module of Interaction Center must use Oracle Telephony Adapter Server, which is installed as part of the standard Oracle eBusiness installation (Rapid Install, Maintenance Pack). Administer Oracle Telephony Adapter Server as a server in the Interaction Center Server Group. Configure and launch Oracle Telephony Adapter Server in the Call Center HTML Administration tab > ICSM sub tab. You may need to install third-party client API files on the Oracle Telephony Adapter Server machine.

Multi-Server Architecture

The multi-server architecture of Oracle Telephony Manager and Oracle Telephony Media Controller has changed. Oracle Telephony Media Controller, the telephony

component in the multi-server architecture, has been replaced by Oracle Telephony Manager. The Interaction Queueing and Distribution server has been introduced and replaces the queueing component of Oracle Telephony Manager. One Interaction Queueing and Distribution server and one or more Oracle Telephony Managers must be defined in a server group. Oracle Telephony Manager no longer functions as a standalone server.

Web Callback

Web callback is no longer handled by Inbound Telephony Server. Interaction Queueing and Distribution now handles Web callbacks.

Retirement of IVR Integrator

IVR Integrator has been replaced by a new built-in IVR Integration (IVRI) option in Oracle Telephony Adapter Server. Discontinue the use of IVR Integrator Server and Monitor. Entegrity (Gradient) PC-DCE is no longer required. Modify the IVR Data Packet format for data exchange between IVR systems and IVR Integration to send name/value pairs instead of a continuous data stream. You may also need to make minor changes to the IVR and the ACD/PBX configuration to support the new IVR integration call flow. See *Oracle Advanced Inbound Interaction Center Family Pack Q IVR Integration Application Note*, Oracle*MetaLink* Note ID: 227883.1, for specific requirements and sample configuration for integrating with Avaya Conversant IVR, Avaya MultiVantage G3 ECS switch and Intel CT Connect or Intel NetMerge Call Processing Software.

Migration of Middleware Configurations

Middleware configurations that use Connectors for Adapter will automatically migrate to Adapters for CT Connect. Similarly, middleware configurations that use Connectors for Geotel will automatically migrate to Adapters for Cisco ICM.

Migration of Middleware Parameters

The upgrade process automatically migrates most existing middleware parameters and agent resource telephony parameters that belong to the migrated middleware configurations. Oracle recommends that you verify successful migration of these parameters. However, the middleware parameters Route Point Set 1 through Route Point Set 5 do not migrate automatically to individual route point configurations. If you are implementing active mode and enhanced passive mode, then configure route points by using the Call Center HTML Administration Route Point page.

Configure additional middleware parameters for Adapters for CT Connect and Adapters for Cisco ICM.

Softphone Change

The current softphone interface no longer has a Call Forward button.

See Also

- Section 4.2, "Configuring Middleware"
- Appendix B, "Middleware Parameter Equivalents Across Releases"

2.2.2 Upgrading From Release 11.5.6 or Release 11.5.7

Use the following guidelines when upgrading from Release 11.5.6 or Release 11.5.7.

Retirement of Oracle Call Center Connectors

Oracle Call Center Connectors has been replaced by the Oracle Telephony Adapter Server. Discontinue the use of existing installations of Oracle Call Center Connectors. All implementations of the Oracle Advanced Inbound module of Interaction Center must use Oracle Telephony Adapter Server, which is installed as part of the standard Oracle eBusiness installation (Rapid Install, Maintenance Pack). Administer Oracle Telephony Adapter Server as a server in the Interaction Center Server Group. Configure and launch Oracle Telephony Adapter Server in the Call Center HTML Administration tab > ICSM sub tab. You may need to install third-party client API files on the Oracle Telephony Adapter Server machine.

IVR Integration Moved From Inbound Telephony Server to Oracle Telephony Adapter Server

If the IVR Integration feature is configured to run in Server mode (the IVR system connects to IVR Integration), then reconfigure the IVR system to connect to the Oracle Telephony Adapter Server machine instead of the Inbound Telephony Server machine, if Oracle Telephony Adapter Server and Inbound Telephony Server are running on different machines.

Migration of Middleware Configurations

Middleware configurations that use Connectors for Adapter automatically migrate to Adapters for CT Connect. Similarly, middleware configurations that use Connectors for Geotel automatically migrate to Adapters for Cisco ICM.

Multi-Site Call and Data Transfer and Enterprise Routing Enhancements

The necessary configuration for implementing multi-site call and data transfer and enterprise routing features has changed substantially since these features were last

supported in a post-11.5.6 patch. Multi-site configurations and multi-site paths do not migrate automatically. For instructions, see *Oracle Advanced Inbound Family Pack Q Multi-Site Enterprise Routing and Call and Data Transfer Application Note,* Oracle*MetaLink* Note ID: 225622.1.

Migration of Middleware Parameters

The upgrade process automatically migrates most existing middleware parameters and agent resource telephony parameters that belong to the migrated middleware configurations. Oracle recommends that you verify successful migration of these parameters. However, the middleware parameters Route Point Set 1 through Route Point Set 5 do not migrate automatically to individual route point configurations. If you are implementing active mode and enhanced passive mode, then configure route points by using the Call Center HTML Administration Route Point page.

Configure additional middleware parameters for Adapters for CT Connect and Adapters for Cisco ICM.

Softphone Change

The current softphone interface no longer has a Call Forward button.

See Also

- Section 4.2, "Configuring Middleware"
- Appendix B, "Middleware Parameter Equivalents Across Releases"

2.2.3 Upgrading From Release 11.5.8

Use the following guidelines when upgrading from Release 11.5.8.

Middleware Parameters

Most Middleware Parameters and Agent Resource Telephony Parameters are automatically migrated by the upgrade process. Oracle recommends that you verify successful migration of these parameters.

Intel NetMerge Call Processing Software

If you have upgraded Intel CT Connect to Intel NetMerge Call Processing Software v6, change the middleware type of the existing middleware configuration to Adapter for Intel NetMerge Call Processing Software and re-enter all the middleware parameters.

See Also

- Section 4.2, "Configuring Middleware"
- Appendix B, "Middleware Parameter Equivalents Across Releases"

2.3 Conditional Dependencies

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

Table 2–1 Functions and Conditional Dependencies

Functionality	Dependency
TeleService screen pop	Oracle TeleService (Customer Care)
TeleSales screen pop	Oracle TeleSales
Web Callback	Oracle *i*Support or Oracle *i*Store
Service request screen pop	Oracle Service
Collections screen pop	Oracle Collections

2.4 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 made 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, 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?

For a list of switch and middleware combinations, see *Oracle Advanced Inbound Certified Switches/Middleware for Interaction Center Family Pack-Q*, Oracle*MetaLink* Note ID: 225626.1. If the PBX and CTI middleware combination in use is not certified by Oracle, then you may be able to integrate the combination by using the Oracle Telephony Adapter SDK. The SDK requires building a custom adapter. See *Oracle Telephony Adapter SDK Developer's Reference Guide.*

2.5 Installing Oracle Advanced Inbound

You have the following options for installing Oracle Advanced Inbound:

Note: Prior to installation or upgrade, *always* review the readme and patch list for the Oracle Interaction Center Family Pack. The readme contains installation instructions, a summary of product changes, and a list of known issues for a family pack. The patch list contains a list of patches that are required or recommended for use with a family pack. The patch list for each Oracle Interaction Center Family Pack is available on Oracle*MetaLink* at http://metalink.oracle.com. Each patch list contains a hyperlink to the readme. (Perform an advanced search for Document ID 219238.1. Enter the document ID in the Search Field and select the Doc ID option.)

- Oracle Applications Rapid Install

  The Rapid Install is intended for customers who are installing Oracle Applications for the first time or upgrading to Release 11*i* from to Release 11.0 or Release 10.7. It contains the family packs or product minipacks for all products in Oracle Applications.

  The Rapid Install is provided on CD-ROMs and is available from Oracle Store at http://oraclestore.oracle.com. For information about installing Oracle Applications using Rapid Install, see *Installing Oracle Applications*. For information about upgrading Oracle Applications using Rapid Install, see *Upgrading Oracle Applications*.

- Oracle Applications Maintenance Pack

  The Maintenance Pack is intended for customers who have already installed Oracle Applications Release 11*i*. It contains the family packs or product minipacks for all products in Oracle Applications.

The Maintenance Pack is provided as a patch and is available on Oracle*MetaLink* at http://metalink.oracle.com. For information about upgrading Oracle Applications Release 11i using the Maintenance Pack, see Maintenance Pack Release Instructions on Oracle*MetaLink* at http://metalink.oracle.com. (Perform an advanced search for Document ID 232834.1. Enter the document ID in the Search Field and select the Doc ID option.)

When installing an Oracle Applications Maintenance Pack, you must also check the patch list for the corresponding Oracle Interaction Center Family Pack, for any new issues that have emerged since the Maintenance Pack was released. The patch list for each Oracle Interaction Center Family Pack is available on Oracle*MetaLink* at http://metalink.oracle.com. (Perform an advanced search for Document ID 219238.1. Enter the document ID in the Search Field and select the Doc ID option.)

- Oracle Interaction Center Family Pack

  The Oracle Interaction Center Family Packs are intended for customers who have already installed or upgraded to Oracle Applications Release 11*i* and wish to upgrade Oracle Interaction Center, or are upgrading another Oracle Applications product family, such as Oracle Service, which uses Oracle Interaction Center components, such as Universal Work Queue. The family pack is cumulative and contains only the minipacks for products in the Oracle Interaction Center family.

  Note: Oracle Interaction Center products integrate with other products in Oracle Applications. Therefore, you may have to install family packs, product minipacks, or individual product patches for *other* products before installing the Oracle Interaction Center Family Pack.

The Oracle Interaction Center Family Pack is provided as a patch and is available on OracleMetaLink at http://metalink.oracle.com. The patch list for each Oracle Interaction Center Family Pack is available on OracleMetaLink at http://metalink.oracle.com. (Perform an advanced search for Document ID 232834.1. Enter the document ID in the Search Field and select the Doc ID option.)

3

Detailed Product Description

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.

Topics include:

3.1 New in this Release

The following features and functions have been added to Oracle Advanced Inbound in Release 11.5.8 and Release 11.5.9.

Topics include:

3.1.1 Multi-Site Parameters

The following table lists the new parameters for multi-site implementations that have been added to the HTML Administration of Oracle Advanced Inbound. For details on the definition and configuration of new parameters, see Section 4.2, "Configuring Middleware" and *Oracle Advanced Inbound Multi-Site Enterprise Routing and Call-and-Data Transfer Application Note*, Oracle*MetaLink* Note ID: 225622.1.

Table 3–1 New Multi-Site Parameters

Parameter	Location
Site Canonical Number Prefix	Call Center tab > Middleware sub tab
Canonical Phone Number	Call Center tab > Teleset sub tab
Default Inbound Phone Number Suffix Type	Call Center tab > Middleware sub tab
Default Outbound Phone Number Suffix Type	Call Center tab > Middleware sub tab
Default Enterprise Routing Route Point	Call Center tab > Middleware sub tab
Tie Line Access Code	Call Center tab > Multisite sub tab

3.1.2 Active Mode Routing Parameter

The parameter Active Routing Target Type has been added to the Call Center HTML Administration Call Center tab > Middleware sub tab. This parameter is relevant only for active mode configurations. It identifies the type of number that Oracle Advanced Inbound should use to route calls to targets ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2, or 3. If this parameter field is left blank, then the parameter Teleset Line Index 1 is used by default. This parameter is optional in most interaction center setups.

3.1.3 Local Call Data

Middleware parameters related to local dialing properties Outgoing Prefix, International Dialing Prefix and Domestic Dialing Prefix, have been completely revised due to the multi-site and Local Call Data enhancements. New parameters have been added. The old parameters migrate automatically to the corresponding new parameters when upgrading from a previous release (11.5.6 through 11.5.8, Family Packs L through P). Refer to *Oracle Advanced Inbound Interaction Center Family Pack Q Local Call Data Application Note* , Oracle*MetaLink* Note ID: 225621.1, for details on the definition and configuration of new parameters, and for information on how the old parameters migrate automatically to the new parameters when upgrading from a previous release.

3.1.4 Intel NetMerge Call Processing Software

A new middleware type, Adapter for Intel NetMerge Call Processing Software, has been added to the Call Center HTML Administration Call Center tab > Middleware sub tab. Use this middleware type for Intel NetMerge Call Processing Software v6 or higher. For implementations using Intel CT Connect v5 (the former product name for the Intel middleware), use the Adapter for CT Connect.

When the ACD/PBX switch is restarted, Oracle Telephony Adapter Server automatically reassigns the monitored extensions.

3.1.5 Adapter for Switch Simulator Middleware Type

A new middleware type called Adapter for Switch Simulator has been introduced in this release.

3.1.6 Interaction Keys Administration

In the new Interaction Keys page, administrators can create or update interaction keys that are used for IVR data, routing rules, classification rules and the softphone. The Interaction Keys page is accessible from the Call Center HTML Administration tabs Call Center, Route and Classification.

3.1.7 Classification Values Administration

Administrators can now classify interactions as specific string values by defining them in the Call Center HTML Administration Classification Values page.

3.1.8 PL/SQL Function Classifications

Administrators 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 that is derived dynamically from interaction data, such as IVR data.

3.1.9 Softphone Functions

The softphone has the following new functions.

Available Agents Speed Dialing The softphone now displays a list of available agents in an agent's server group. Agents can use this list to dial, transfer and conference calls to other agents within the same server group.

Softphone Configurations Administrators can now assign or reassign server groups to display configurations, and select the keys to display on the softphones and the order in which the keys are displayed.

Modify Display Prompts The ability to change the prompts in the softphone display is now available.

Display of Wait Time Softphone can now calculate and display an approximate value for the Wait Time for inbound calls.

Customer Lookup Softphone now displays the Customer(Party) Name as a part of its default display configuration prior to the application screen pop. The Routing Server can look up Customer(Party) Name and Customer(Party) ID for inbound calls. This feature is available out of the box.

3.1.10 Media Items Closed with Concurrent Manager

Beginning with Release 11.5.8, media items are closed using the concurrent manager framework.

3.1.11 Agent Resource HTML Administration

Oracle Advanced Inbound resource administration includes the capability to create, view and update an agent resource, including the following employee information:

- Personal details
- Work location
- Sales team details
- Service details

3.1.12 Classification Administration Enhancements

The Oracle Call Center HTML Administration Classification tab > Values sub tab has the following new features:

- Assign Oracle Universal Work Queue media actions to classification values
- Display classification rules by server group
- Update priorities for the classification rules in a server group
- Display all classification rules in the system

3.1.13 Assigning Universal Work Queue Media Actions to Classification Values

Beginning with Release 11.5.8, administrators can assign Oracle Universal Work Queue media actions while creating or updating classification values in the Oracle Call Center HTML Administration Classification tab > Rules sub tab > Classification Values page.

3.2 Modified in this Release

The following topics describe features and functions that have been modified in the current release.

- Section 3.2.1, "Limits to Rerouting Inbound Calls"
- Section 3.2.2, "Dialing Prefix Conversions"

3.2.1 Limits to Rerouting Inbound Calls

To avoid placing particular inbound calls in queues for all agents, administrators can now limit the number of reroutes for all inbound calls, so that the number of reroutes is fewer than the number of matching route rules for any inbound call.

3.2.2 Dialing Prefix Conversions

The Oracle Advanced Inbound upgrade script now converts the International Dialing Prefix, Outgoing Prefix and Domestic Dialing Prefix middleware parameters to the new International Access Code, Long Distance Access Code and Local Number Access Code middleware parameters, respectively.

3.2.3 Routing Server Timeout Parameter

The Oracle Interaction Queuing and Distribution server parameter Default Timeout is now a Routing Server parameter named Default Request Time Out. Interaction center administrators must specify a Default Request Time Out in seconds.

3.2.4 Routing Workflow

Beginning with the current release, use the following WorkFlow Item Type to set up the Call Routing Work Flow:

```
Item Type : ALLROUTE
Item Type User Name : Call Center Routing Starts/Ends Here!!
```

3.3 Obsolete in this Release

The following features and functions are obsolete in Oracle Advanced Inbound for Release 11.5.8 onwards.

Topics include:

3.3.1 Workflow Item Type

The Item type CALLROUTE is obsolete. Copy any custom processes in that item type to the ALLROUTE Item type.

3.3.2 Middleware Type

Connectors for CT Connect and Connectors for Cisco ICM are now obsolete. Their replacements are Adapter for CT Connect and Adapter for Cisco ICM, respectively.

3.3.3 Literal Classifications

The term "literal classifications" is obsolete. Instead, define classification values in the Call Center HTML Administration Classification tab > Rules sub tab > Classification Values page.

3.3.4 Database Procedure Classifications

The term "database procedure classifications" is obsolete. It is replaced by defined PL/SQL functions that return any one of the classification values that are defined in the Call Center HTML Administration Classification tab > Rules sub tab > Classification Values page. The PL/SQL function can return an appropriate classification value derived dynamically from interaction data, such as IVR data.

3.4 Minimum Software Requirements

See *Oracle Interaction Center Server Manager Implementation Guide*.

3.5 Switch and CTI Middleware Requirements

Oracle Advanced Inbound requires the use of an Oracle certified or supported switch that interfaces to Oracle certified or supported CTI middleware.

3.5.1 Supported Modes

Depending upon the supported switch and middleware combination in use, Oracle Advanced Inbound can run in one of three modes: active, enhanced passive or passive.

Active Mode In active mode, Oracle Advanced Inbound controls the routing and distribution of incoming calls to interaction center agents by using business data

and rules that are configured in Oracle Advanced Inbound. Active mode requires specific PBX/ACD configurations to grant Oracle Advanced Inbound full control of an inbound call when it reaches a PBX/ACD route point that Oracle Advanced Inbound monitors.

Enhanced Passive Mode In enhanced passive mode, Oracle Advanced Inbound not only uses standard PBX/ACD routing and distribution of calls to interaction center agents, but also monitors PBX/ACD route points. The monitoring checks for inbound telephony queue counts, classification of calls for targeted screen pops, and tracking and reporting by Oracle Interaction Center Intelligence of calls that are abandoned at the route point. Enhanced passive mode requires specific PBX/ACD configurations to ensure that inbound calls pass through a PBX/ACD route point monitored by Oracle Advanced Inbound.

Passive Mode In passive mode, Oracle Advanced Inbound uses standard PBX/ACD routing and distribution of calls to interaction center agents. Oracle Advanced Inbound becomes aware of the call through CTI when the call rings at the agent's teleset. In passive mode, Oracle Advanced Inbound does not monitor or control any PBX/ACD route points.

3.5.2 Supported Switches, Middleware and Modes

In the current release, Oracle certifies the following switch and CTI middleware combinations and the Oracle Advanced Inbound modes that they support.

Table 3–2 Supported Switch and Middleware Combinations and Modes

Switch/ACD	CTI Middleware	Supported Modes and Features
Alcatel 4400 r4.2 w/ CCS r4.7	Intel NetMerge Call Processing Software v6.0 or Intel CT Connect v 5.0 + Service Pack 3	Passive
Aspect Call Center v.8.3	Aspect Contact Server (CMI Server) v4.0	■ Enhanced passive ■ Passive

Table 3–2 Supported Switch and Middleware Combinations and Modes (Cont.)

Switch/ACD	CTI Middleware	Supported Modes and Features
Avaya MultiVantage v1 (with EAS)	Intel NetMerge Call Processing Software v6.0 or Intel CT Connect v 5.0 + Service Pack 3	■ Active ■ Enhanced passive ■ Passive ■ *Multi-site ■ IVR Integration
Cisco Call Manager v3.2(.2c) spG with IP-IVR v2.2(.2)	Cisco ICM v4.6(.2)	Passive
Ericsson MD110 BC11 with App. Link v4.0 + SP1	Intel NetMerge Call Processing Software v6.0 or Intel CT Connect v 5.0 + Service Pack 3	■ Active ■ Enhanced passive ■ Passive
Nortel Meridian r25 with Meridian Link Services v4.2	Intel NetMerge Call Processing Software v6.0 or Intel CT Connect v 5.0 + Service Pack 3	■ Active ■ Enhanced passive ■ Passive ■ IVR Integration in active mode or enhanced passive mode
Nortel Meridian r25 with Symposium Call Center Server v4.2	Intel NetMerge Call Processing Software v6.0 or Intel CT Connect v 5.0 + Service Pack 3	■ Enhanced Passive ■ Passive ■ IVR Integration

* Multi-site Enterprise Routing is available in active mode only. Multi-Site Call and Data Transfer is available for active, enhanced passive and passive modes if the path that a call takes is through telesets and route points monitored by Oracle Advanced Inbound.

Notes:

- Avaya MultiVantage is the current product name for what was previously known as Avaya DEFINITY. All references to Avaya MultiVantage here refer to both DEFINITY and MultiVantage.
- Intel NetMerge Call Processing Software is the current product name for what was previously known as Intel CT Connect.

3.5.3 Required CTI Middleware Client API Software

The following CTI middlewares require installing client API software. Use the installation guidelines that apply to the middleware in use.

Intel NetMerge Call Processing Software Copy the NetMerge Call Processing Software Java client file ctcapi.jar into the directory admin/scripts/3rdparty of the Interaction Center Server Manager node that hosts Oracle Telephony Adapter Server.

Intel CT Connect Copy the Intel CT Java client file ctcapi.jar into the directory admin/scripts/3rdparty of the Interaction Center Server Manager node that hosts Oracle Telephony Adapter Server.

Aspect Contact Server Copy the file ABObject.jar into the directory admin/scripts/3rdparty of the Interaction Center Server Manager node that hosts Oracle Telephony Adapter Server.

3.6 Features

Oracle Advanced Inbound has the following features:

CTI Out-of-the-box computer telephony integration to third-party telephony platforms.

IVR Integration Collect data from interactive voice response (IVR) units for call classification, routing and screen pop.

Interaction queuing and distribution Queue and route inbound calls for distribution to appropriate agents.

Screen Pops Collect and send customer data for screen pops into Oracle eBusiness Suite applications.

Warm Transfer Transfer or conference a call and its application data from one agent to another agent.

Web Callbacks Integrate Oracle Advanced Inbound with Oracle *i*Store and Oracle *i*Support to support Web callbacks.

Oracle Enterprise Routing Route and queue calls arriving at any site to agents at any site in a multi-site configuration. This feature is available only in active mode.

Enterprise Call and Data Transfer Transfer or conference a call and its application data to an agent who is at another site in a multi-site configuration. Transferred internal calls do not generate a screen pop at the target agent.

Middleware-Based Multi-Site Functionality CTI middleware such as Aspect Enterprise Contact Server and Cisco ICM may provide multi-site functionality through their software suite. In these cases, the CTI middleware vendor directly provides enterprise routing and call and data transfer functionality. Oracle Advanced Inbound is typically only available in passive or enhanced passive modes, due to middleware vendor limitations and middleware controlled routing. For Oracle Advanced Inbound integrations to these CTI middlewares (Aspect, Cisco), customers should directly contact their CTI middleware vendor for PBX/ACD-specific configurations and requirements for supporting multi-site. Oracle Advanced Inbound requires the use of an Oracle certified or supported switch that interfaces to an Oracle certified or supported CTI middleware.

3.7 Architecture

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 3.7.1, "Oracle Advanced Inbound Architecture"
- Section 3.7.2, "Single-Site Architecture"
- Section 3.7.3, "Multi-Site Architecture"
- Section 3.7.4, "IVR Integration Architecture"

3.7.1 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
- Oracle Advanced Inbound server processes:
  - Telephony Adapter Server normalizes telephony platform-specific messages and events.
  - Inbound Telephony Server monitors inbound calls arriving at ACD queues and route points.

- Oracle Telephony Manager manages agent state information.
- Interaction Queuing and Distribution queues and distributes calls.
- Oracle Routing Server classifies and routes calls to an agent group based on user-defined rules or workflow responsibilities.
- Universal Work Queue displays call queues to the agent and launches business applications when a call is delivered to an agent.
- Interaction Blending provides service-level management of calls and can blend inbound and outbound calls.
- Switch Simulator simulates a switch for verification of an Oracle Advanced Inbound implementation.

- Business and agent desktop applications
  - Oracle Universal Work Queue desktop (agent desktop work queue)
  - Oracle TeleService, Oracle TeleSales and Oracle Collections
  - 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*

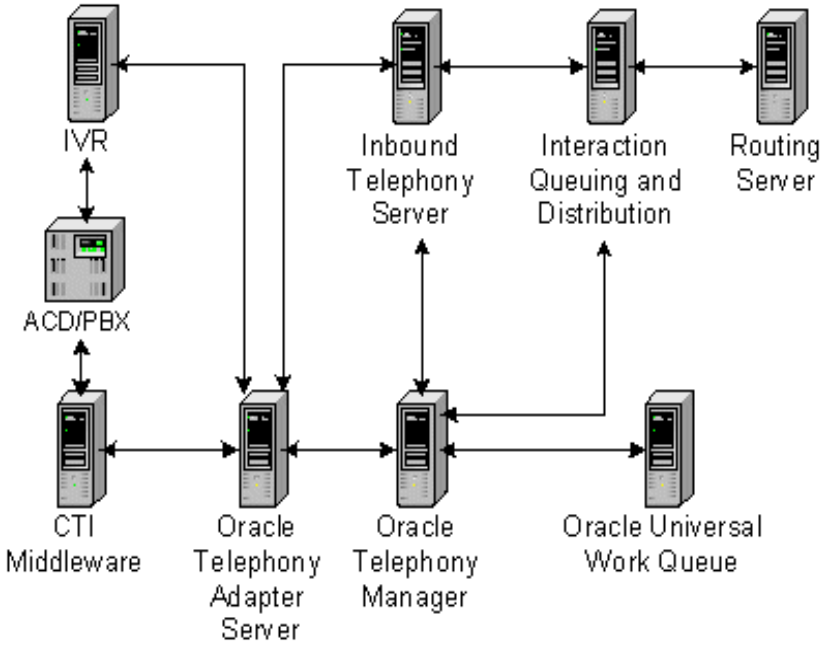
3.7.2 Single-Site Architecture

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

- One PBX and CTI middleware combination
- One Oracle Telephony Adapter Server
- One Oracle Inbound Telephony Server
- One Oracle Interaction Queuing and Distribution server
- One or more Oracle Routing Servers for scalability

- One or more Oracle Telephony Managers for scalability
- One or more Oracle Universal Work Queues for scalability

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 Advanced Inbound's functions, such as active mode, Web callbacks and scalability, are available in a single site, mutual communication occurs between the following processes:

- 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
- Oracle Interaction Queuing and Distribution and Oracle Routing Server

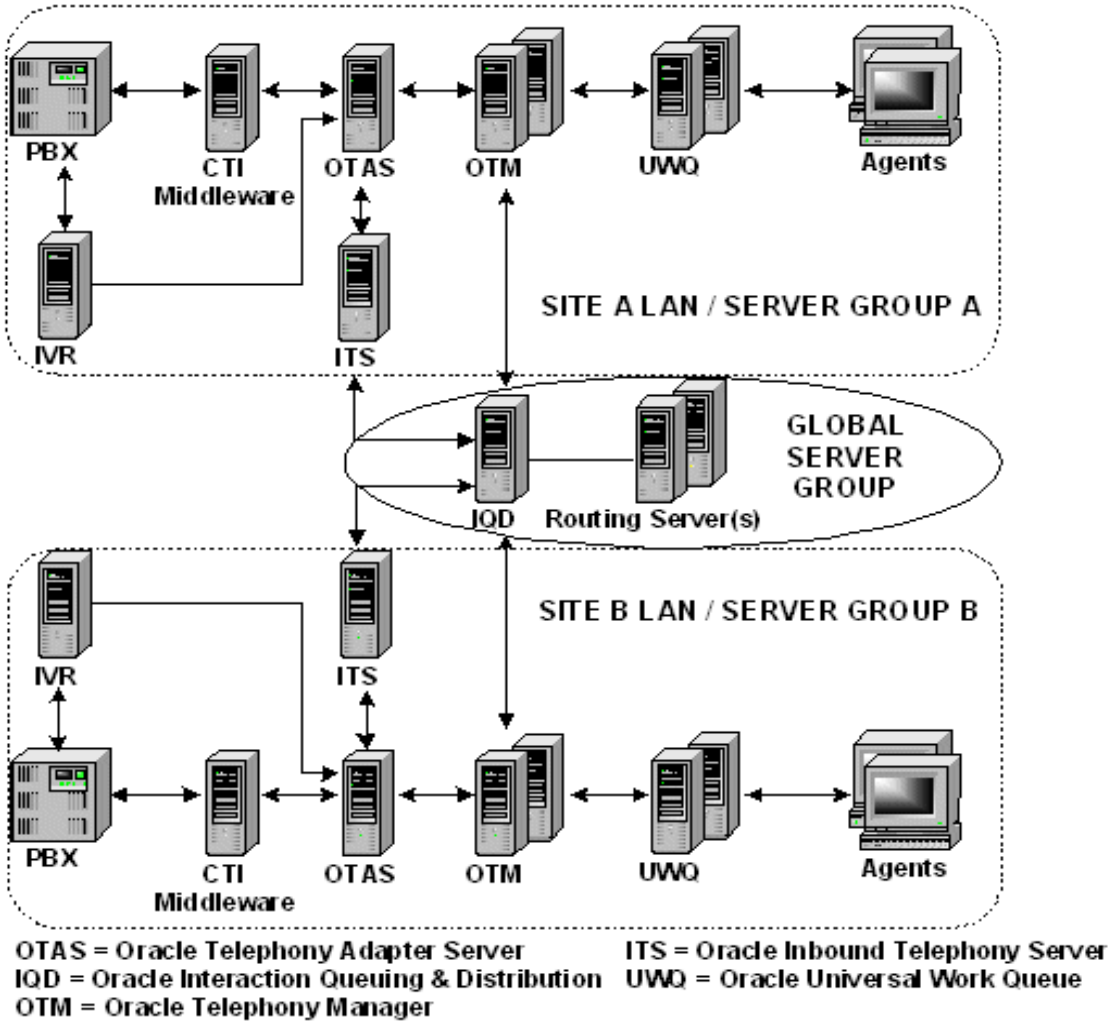
- Oracle Interaction Queuing and Distribution and Oracle Telephony Manager
- Oracle Telephony Manager to Oracle Inbound Telephony Server
- Oracle Telephony Manager and Oracle Universal Work Queue

3.7.3 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
- One Oracle Inbound Telephony Server
- One or more Oracle Telephony Managers for scalability
- One or more Oracle Universal Work Queues for scalability

The global server group includes the following servers:

- One Oracle Interaction Queuing and Distribution server
- 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 HTML Administration.

3.7.4 IVR Integration Architecture

Oracle Telephony Adapter Server has IVR integration in both active mode and enhanced passive mode, which makes IVR-collected data available as screen pops. Figure 3–1 illustrates the Oracle Advanced Inbound server architecture that includes IVR integration.

3.7.5 Oracle Telephony Adapter Server

n Release 11.5.8, Oracle Telephony Adapter Server replaces 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. Oracle Telephony Adapter Server is part of the Interaction Center Server Group, which you can administer and launch in the Interaction Center HTML Administration > ICSM 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 NetMerge CPS or Adapter for Aspect Contact Server, then Oracle Telephony Adapter Server can run on any operating system that Oracle Applications supports, such as Hewlett-Packard UX11, IBM AIX, Linux, Microsoft Windows NT and Sun Solaris.

3.8 Responsibilities

The necessary Oracle Application Responsibility for the Oracle Advanced Inbound HTML Administration is "Call Center HTML Administration."

Caution: Assign administrative responsibilities to trusted users only. The Call Center HTML Administration responsibility is required to implement and administer Oracle Interaction Center for use at an enterprise. This responsibility gives administrators the ability to modify routing and classification rules. Dynamic routes with PL/SQL code and dynamic groups with SQL code can access sensitive database tables. The resulting information, if misused, can introduce liability issues for the enterprise. For these reasons, Oracle strongly recommends that only trusted users be provided with the Call Center HTML Administration responsibility.

3.9 Concepts

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.

Major concepts regarding Oracle Advanced Inbound include the following topics:

- Section 3.9.1, "Using Interaction Keys"
- Section 3.9.2, "Customer Data Lookup"
- Section 3.9.3, "Routing Versus Classification"
- Section 3.9.4, "Classifications"
- Section 3.9.5, "Routes"
- Section 3.9.6, "Rerouting"
- Section 3.9.8, "Call Scenarios"
- Section 3.9.9, "Screen Pops"
- Section 3.9.10, "IVR Integration"

3.9.1 Using Interaction Keys

The following example demonstrates how to use Interaction Keys. In this scenario, an interaction 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 interaction center administrator can create a new Interaction Key for Account Balance by using the following procedures:

- Section 3.9.1.1, "Creating a New Interaction Key for Account Balance"
- Section 3.9.1.2, "Mapping an IVR Field to Account Balance (Oracle Field)"
- Section 3.9.1.3, "Defining Classification Rules Using Account Balance as a Rule Key"
- Section 3.9.1.4, "Defining Routing Rules Using Account Balance as a Rule Key"
- Section 3.9.1.5, "Displaying Account Balance in Softphone"

3.9.1.1 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

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

If the interaction 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, Oracle Telephony Manager passes the value of acctBalance to the Oracle Field "Account Balance."

3.9.1.3 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) are defined, administrators can set up the following rules for Classification.

- Gold Service Rule: If DNIS=8008881111 and Account Balance>=100000, then classify the interaction as Gold Service
- Silver Service Rule: If DNIS=8008881111 and Account Balance<100000 and Account Balance>=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

3.9.1.4 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, administrators can set up 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.

3.9.1.5 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 Displayed Key Without Prompt.

See Also

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

3.9.2 Customer Data Lookup

Telephony-enabled Oracle e-Business Suite applications can use collected customer data for the following purposes:

- Set up classification rules
- Set up routing rules
- Enable faster screen pops
- Display customer name and information in the agent softphone

Customer Data Lookup has the following functional options:

- Section 3.9.2.1, "Default Customer Data Lookup"
- Section 3.9.2.2, "Custom Customer Data Lookup"
- No Customer Data Lookup

3.9.2.1 Default Customer Data Lookup

The default mode for Customer Data Lookup does not require setting up in the Call Center HTML Administration page. It is implemented as a PL/SQL package (CCT_Default_Lookup_Pub) in the database.

> **Caution:** Do not attempt to customize the default Customer Data Lookup at a customer site. To implement a customized Customer Data Lookup, use the Custom Customer Data Lookup package.

Default Customer Data Lookup mode derives the following customer data:

- Customer/Party ID
- Customer Name

The following list shows the order in which various keys are used to derive Customer ID and Customer Name.

- Service Request Number
- Party Number

- Quote Number
- Order Number
- Collateral Request Number
- Account Number
- Event Registration Code
- Marketing PIN
- Service Key
- ANI (Caller Phone Number)

For example, if Service Request Number is available, then it is used to derive the Customer ID. If Party Number is available, then Customer ID is derived from Party Number, and so on.

3.9.2.2 Custom Customer Data Lookup

Users can use the Custom Customer Data Lookup mode to customize the data that the Customer Data Lookup process gathers.

Programmers who use this mode must meet the following requirements:

- Working knowledge of PL/SQL programming
- Knowledge of Oracle Applications Schema and APIs
- Access to a SQLPLUS session of Oracle Applications Database with PL/SQL compiling permissions

To use this mode, select Custom Customer Data Lookup as the type of Customer Data Lookup in the Customer Lookup page.

Function CCT_CUSTOM_LOOKUP_PUB.GetData(x_key_value_varr IN OUT NOCOPY cct_keyvalue_varr) must be implemented to return the desired Customer Data.

If Custom Customer Data Lookup is the selected type in the Call Center HTML Administration, then when an inbound interaction, such as a phone call or Web collaboration request, route request is received, the routing server calls CCT_Custom_Lookup_Pub.GetData() with all the available call and interaction data, including IVR and other customer interaction-specific data. The Routing Server executes the above function and then sends the collected customer data to the agent desktop for screen pop or softphone display.

The collected customer data may also be used for classification and routing, as demonstrated in the following sequence:

- Custom Customer Data Lookup is selected as the type of Customer Lookup in the HTML Administration page
- Routing Server starts
- Routing Server receives a route request for an inbound phone call (for example)
- Routing Server executes CCT_Custom_Lookup_Pub.GetData() with the inbound phone call data (including IVR data)
- Routing Server collects the data from the above function and may use it for classification and routing
- When an agent is identified for the inbound call, the collected customer data is sent to Agent Desktop for faster screen pop and display in softphone (if configured in the Softphone Configuration Administrator)

3.9.3 Routing Versus Classification

The routing engine performs classifications and routing. Classifications allow different media actions for an inbound call, and occur before routing. Routing determines which agent receives an inbound call. You can use the determined classification name in a route rule.

See Also

Section 3.9.4, "Classifications"

Section 3.9.5, "Routes"

3.9.4 Classifications

Classifications assign a specific string value to incoming calls 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.

Choose from among the following topics:

Section 3.9.4.1, "Classification Values"

Section 3.9.4.2, "PL/SQL Functions"

Section 3.9.4.3, "Classification Rules"

Section 3.9.4.4, "Example Scenario"

3.9.4.1 Classification Values

A classification value is a string value that is the end point of classifying a call. Interactions can be classified as one of the classification values 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.

3.9.4.2 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.

3.9.4.3 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:

- ReRoute 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 ReRoute 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

3.9.4.4 Example Scenario

In a hypothetical scenario, a business corporation provides its interaction 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 customers call 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 interaction center resources most efficiently, the business corporation's interaction center administrator uses the Call Center HTML Administration Classification page to set up the classification process described in the following paragraphs.

Classification Values

In the Classification Values page, define 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.

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
```

Classification Rules

Define the following classification rules in the Classification Rules page. They are assigned to all media types and all available server groups.

Gold Service Rule

Time Out: 30 seconds

If DNIS=8008008001

Classify the call as Gold Service.

Silver Service Rule

Time Out: 60 seconds

If DNIS=8008008002

Classify the call as Silver Service.

Bronze Service Rule

Time Out: 120 seconds

If DNIS=8008008003

Classify the call as Bronze Service.

Other Calls Service Rule

Time Out: 120 seconds

If DNIS=8008008000

Derive the classification Value from Get_Classification_Value_From_Account_Number.

3.9.5 Routes

Administrators can control routing by using simple, optimized rules or by a comprehensive workflow that combines data from the eBusiness Application suite. Routing is business-driven, thereby enabling interactions of high quality and saving money by handling customers correctly. You can also use Oracle Workflow to create sophisticated routing flows.

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

- Section 3.9.5.1, "Static Routes"
- Section 3.9.5.2, "Dynamic Routes"
- Section 3.9.5.3, "Route Rules"
- Section 3.9.6, "Rerouting"
- Section 3.9.7, "Routing for Web Callbacks"

3.9.5.1 Static Routes

A static route is based on agents derived from Resource groups configured in the Call Center HTML Administration Resource tab and cached by the Routing Server.

3.9.5.2 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 or procedure.

For dynamic routes, Database Function could return a list of AgentIDs separated by the ";:;" delimiter as the function return value. If you use the AgentID interaction key as one of the function Out parameters, the AgentID interaction key takes precedence over AgentIDs that are returned by Function as a return value. For procedures, the AgentID interaction key is used as one of the procedure Out parameters to return the list of agents.

Parameters for Dynamic Routes

The Procedure and Function 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
```

the PL/SQL function GET_AGENTS _FROM_CUSTOMER_PRODUCT 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.

```
Function 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
```

3.9.5.3 Route Rules

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

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

Customer Information-Based Routing

In customer information-based routing, Oracle Routing Server 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 enters an account number that is captured by the IVR and sent to Oracle Routing Server. A dynamic route in Oracle Routing Server could search the eBusiness 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.

Rule-Based Routing

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

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 the seeded routing workflow, 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 an available French-speaking agent. The administrator does not need to assign the agent to a specific telephone. Oracle Advanced Inbound 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).

3.9.6 Rerouting

Rerouting is based on the priority and reroute time out value of routes. When an incoming media item reaches the reroute time out value, the call is rerouted and the Interaction Queuing and Distribution server sends another route request to the Routing Server. When the Routing Server receives the media item for a second routing, the routing server tries to find two matching route rules and then selects a route that is of lower priority, because the route with the higher priority was already selected during the first route request.

For example, suppose the route "Get Agent from Customer ID" has a priority of 3, and "Get Route Point from Customer ID" has a priority of 4, and both routes have the same rule "ANI = 6506070195." During the first route request from a caller whose ANI = 6506070195, "Get Agent from Customer ID" will be selected and the call will be queued to the agents who are returned by that route. If agents do not

answer this call within the reroute time out period, then a reroute request for the same call is sent. The routing server will select the route with the next highest priority, which in this case is "Get Route Point from Customer ID."

Reroute Time Out works according to the following hierarchy:

1. Set a value for the Default ReRoute Time Out in the Routing Server Parameter page. If a value is not set, then 300 seconds is used as the default value. If classification or route time outs are not set, then the Default ReRoute Time Out is effective.
2. The Classification ReRoute Time Out value overrides the Default ReRoute Time Out. If necessary, administrators can set this parameter for each classification rule by selecting Classification Rule Details and entering the time out value in the Time Out field. If an incoming media item is classified with a given classification rule that has a positive time out value, the media item is assigned the classification rule time out value.
3. The Route Details page ReRoute Time Out value overrides the Create Classification Rule page ReRoute Time Out value. If necessary, you can set the route time out for each route rule by selecting the Routes tab > Route Rule Details sub tab and entering a time out value in the ReRoute Time Out field. For an incoming media item that is sent as a route request to the routing server, route rules are evaluated in accordance to their priority to find a matching route rule. The time out of the selected route rule is the effective route time out for a given media item.

Note: Beginning in Release 11.5.8, to prevent a media item from being rerouted, enter a negative value in the ReRoute Time Out field. After receiving the agent list for this route, the Oracle Interaction Queuing and Distribution server will not send a reroute request for the call.

See Also

Appendix C, "Data Type Operators and Media Type Values for Rules"

3.9.7 Routing for Web Callbacks

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

3.9.8 Call Scenarios

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

- Section 3.9.8.1, "Call and Data Transfer Scenarios"
- Section 3.9.8.2, "Enterprise Routing Scenarios"

3.9.8.1 Call and Data Transfer Scenarios

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

Table 3–3 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.
Warm Transfer	Agent A is logged into PBX 1 and transfers or conferences a call and its application data, usually customer data, to Agent B, who is logged in to PBX 1 or PBX 2, or another PBX.

3.9.8.2 Enterprise Routing Scenarios

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

Table 3–4 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.

Table 3–4 Enterprise Routing Scenarios (Cont.)

Scenario	Definition
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. 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 interaction center, and the call is routed to the label as if it were an agent extension.

3.9.9 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 3.9.9.1, "IVR Mapping HTML Administration"
- Section 3.9.9.2, "Out-of-the-Box Screen Pops"
- Section 3.9.9.3, "Customized Screen Pops"

3.9.9.1 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 an interaction 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.

3.9.9.2 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 Oracle Customer IVR fields and their mappings.

Table 3–5 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	If none of the above parameters are available, then the ANI 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.

Table 3–6 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	Customer phone number	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 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*

3.9.9.3 Customized Screen Pops

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

You can map IVR Keys 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 to send 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=8008822222,CustomerID=3888,ContractNum=1001,AccountCode
=2999}.
```

3.9.10 IVR Integration

Oracle Advanced Inbound provides the IVR Integration functionality to integrate IVR data for routing and screen pops when Oracle Advanced Inbound is configured in either active or enhanced passive modes. IVR Integration is available for specific PBX and ACD CTI middleware combinations.

IVR Integration enables Oracle Advanced Inbound to use 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. IVR Integration also reports customers' interactions with the IVR to the database as part of Oracle Customer Interaction History. IVR Integration records the calls' start time, end time, the duration in the IVR and calls abandoned while in the IVR.

IVR Integration was introduced in Release 11.5.6 as a replacement for the Windows NT-based IVR Integrator product. IVR Integration is a built-in feature of Oracle Advanced Inbound, which administrators can enable or disable by configuring the appropriate middleware parameters in the Call Center HTML Administration Call Center tab > Middleware sub tab. In Release 11.5.6 and Release 11.5.7, IVR Integration is a component of the Inbound Telephony Server. In Release 11.5.8 and higher, IVR Integration is in Oracle Telephony Adapter Server.

Note: Oracle no longer supports Microsoft Windows NT-based Oracle IVR Integrator. When upgrading existing installations to Release 11.5.6 or higher, and for specific requirements and sample configuration for integrating with Avaya Conversant IVR, Avaya MultiVantage G3 ECS switch and Intel CT Connect/NetMerge Call Processing Software, see *Oracle Advanced Inbound Interaction Center Family Pack Q IVR Integration Application Note*, Oracle*MetaLink* Note ID: 225627.1 .

The following topics provide detailed information on IVR Integration.

- Section 3.9.10.1, "IVR Integration Call Flows"
- Section 3.9.10.2, "IVR Data Packets"

3.9.10.1 IVR Integration 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 Telephony Adapter 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 Telephony Adapter 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.

3.9.10.2 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 IVR Integration as key/value pairs in the format described in the following table.

Table 3–7 Data Packet Format

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

4

Implementation and Administration Tasks

This chapter describes task-based procedures for implementing and administering Oracle Advanced Inbound. Topics include:

- Section 4.19, "Setting Up Workflow Item Type"

4.1 Implementation Task Sequence

This section provides a general description of the implementation process. The following table is an overview of implementing Oracle Advanced Inbound. The HTML Location column shows you in which Call Center HTML Administration tabs to perform the procedure.

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.

Table 4–1 Implementation Task Sequence

Step Number	Required or Optional	Description	HTML Tab
❑ 1	Required	Install Interaction Center Server Manager (ICSM) on each target machine. See *Oracle Interaction Center Server Manager Implementation Guide*	ICSM > Setup
❑ 2	Required	Define the Oracle interaction center server group. See *Oracle Interaction Center Server Manager Implementation Guide*	ICSM > Server Group
❑ 3	Required	Define and configure the Oracle interaction center server processes. See *Oracle Interaction Center Server Manager Implementation Guide*	ICSM > Server Group
❑ 4	Optional	Configuration for verification of steps 1 through 3, using switch simulator: ■ Define and configure the CTI middleware. See Section 4.2, "Configuring Middleware". ■ Define the interaction center route points. See Section 4.3, "Configuring Route Points". ■ Define the interaction center telesets. See Section 4.4, "Configuring Teleset Lines".	Call Center
❑ 5	Optional	Run verification using switch simulator. See *Oracle Interaction Center Server Manager Implementation Guide*	Call Center
❑ 6	Required	Define and configure the CTI middleware. Section 4.2, "Configuring Middleware".	Call Center > Middleware

Table 4–1 Implementation Task Sequence (Cont.)

Step Number	Required or Optional	Description	HTML Tab
❑ 7	Required for active and enhanced passive modes only	Define the interaction center route points. See Section 4.3, "Configuring Route Points".	Call Center > Route Point
❑ 8	Required	Define the interaction center telesets. See Section 4.4, "Configuring Teleset Lines".	Call Center > Teleset
❑ 9	Optional	Map the inbound call / IVR data to fields in Oracle Applications. See Section 4.5, "Mapping IVR Fields to Application Fields".	Call Center > IVR
❑ 10	Required for multi-site call centers connected via tie lines	Define and configure multi-site configuration. Both interaction centers that are connected by the tie line must already have defined middleware configurations in the Call Center tab > Middleware) sub tab. See Section 4.6, "Configuring Multi-Sites".	Call Center > Multisite
❑ 11	Optional	Configure softphone display. See Section 4.8, "Configuring Softphone".	Call Center > Softphone > Display Configuration
❑ 12	Optional	Configure softphone speed dial. Section 4.8, "Configuring Softphone".	Center > Softphone > Speed Dial
❑ 13	Optional	▪ Configure additional Interaction Keys for use in IVR Mapping. See Section 4.5, "Mapping IVR Fields to Application Fields". ▪ Set up of Classification Rules and Routing Rules. See Section 4.10, "Configuring Classifications" and Section 4.11, "Configuring Routes". ▪ Set up softphone display available keys. See Section 4.8.1, "Configuring Softphone Displays".	▪ Call Center > Interaction Keys ▪ Route > Interaction Keys ▪ Classification > Interaction Keys
❑ 14	Required for active mode	Set up routing for inbound calls. See Section 4.11, "Configuring Routes".	Route tab required, Oracle Workflow Builder optional. See *Oracle Workflow Guide*.

Table 4–1 Implementation Task Sequence (Cont.)

Step Number	Required or Optional	Description	HTML Tab
❑ 15	Required	Set up classifications. See Section 4.10, "Configuring Classifications".	Classification
❑ 16	Optional	Select a Media Action with each associated Media Type and Classification. See *Oracle Universal Work Queue Implementation Guide.*	UWQ Media Action
❑ 17	Required	Configure Interaction Center parameter value. See Section 4.14, "Configuring Agent Telephony Parameters".	Resource

4.2 Configuring Middleware

The CTI middleware definition contains the information required for Oracle Advanced Inbound to communicate with a switch (such as Nortel Meridian or Avaya MultiVantage) by way of CTI middleware (such as Intel CT Connect / Intel NetMerge Call Processing Software 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). To use a specific middleware definition in operating the interaction center, you need to specify the name of the middleware definition in the Middleware Configuration Name parameter for the Oracle Telephony Adapter Server and Inbound Telephony Server in the server group.

Notes:

- Connectors for Cisco ICM and Connectors for CT Connect were deprecated in Release 11.5.8 and are obsolete in the current release. Migrate existing Cisco ICM configurations to Adapter for Cisco ICM, and migrate existing CT Connect configurations to Adapter for NetMerge CPS.
- Adapter for Intel NetMerge Call Processing Software is introduced in 11.5.8 Family Pack Q to support Intel NetMerge Call Processing Software (CPS) v6 (previously Intel CT Connect).
- Oracle does not support Adapter for Genesys AIL and Adapter for Genesys TLib as of this writing. See the Readme of Oracle Interaction Center for the most recent information on CTI middleware support.

Tasks

In the Middleware page you can perform the following tasks:

- Section 4.2.1, "Configuring Middleware for Adapter for Aspect Contact Server"
- Section 4.2.2, "Configuring Middleware for Adapter for Cisco ICM"
- Section 4.2.3, "Configuring Middleware for Adapter for CT Connect"
- Section 4.2.4, "Configuring Middleware for Adapter for Intel NetMerge Call Processing Software"
- Section 4.2.5, "Configuring Middleware for Adapter for Switch Simulator"
- Section 4.2.6, "Configuring Middleware for Custom C Adapter Server"
- Section 4.2.7, "Configuring Middleware for Custom Java Adapter Server"

4.2.1 Configuring Middleware for Adapter for Aspect Contact Server

Use the following procedure to configure middleware parameters for Adapter for Aspect Contact Server.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Configure at least one server group.
- Install Aspect CMI Server client file on the machine that runs Oracle Telephony Adapter Server by copying the file ABObject.jar from the CMI Server Installation software CD-ROM to the directory icsm/admin/scripts/3rdparty of the Oracle Telephony Adapter machine.

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 **Adapter for Aspect Contact Server**.
6. Click **Update** to save.

   The Middleware Details page refreshes. The Middleware Parameters fields and the Teleset Details and Route Point Details links appear.
7. In the Value fields, use the following table to enter the Middleware Parameter values. For most fields, if you enter invalid values, an error message advises you on entering a correct value. For example, check that you enter the correct IP address format and port number.

Table 4–2 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. Use only passive mode for this middleware type.	True

Table 4–2 Middleware Parameters for Adapter for Aspect Contact Server (Cont.)

Parameter	Required	Description	Sample Value
Long Distance Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a long distance call from within the country or region of the ACD/PBX; consists of the long distance trunk access code plus the National Direct Dialing (NDD) prefix.	91
International Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making an international call to another country or region from the ACD/PBX; consists of the international trunk access code plus the International Direct Dialing (IDD) prefix.	9011
Local Number Access Code	Required	Digits for agents to add at the beginning of a telephone number when making a local call from the ACD/PBX; consists of the local outbound trunk access code.	9
Dialing Suffix	Optional	For outbound dialing. Digits the system adds at the end of a telephone number when placing any outside call from the ACD/PBX.	#
Local Area Codes	Optional	Semi-colon-separated list of other area codes that are local numbers for the location of the ACD/PBX. If not applicable, then leave blank.	301; 202; 888
Non-Local Exchanges	Optional	Semi-colon-separated list of exchanges within the Site Area Code that are long distance numbers for the location of the ACD/PBX. If not applicable, then leave blank.	123;234
Site Area Code	Required	Area code of the location of the ACD/PBX.	650
Site Country Code	Required	Country code of the location of the ACD/PBX.	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same interaction center. This is used to distinguish between internal and external calls.	5

Table 4–2 Middleware Parameters for Adapter for Aspect Contact Server (Cont.)

Parameter	Required	Description	Sample Value
Site Overlay	Optional	For North American Numbering Plan only. Select YES if ten-digit dialing is required for placing outside local calls from the ACD/PBX. Otherwise, select NO or leave blank.	Yes
Site Local Number Maximum Length	Required	Maximum number of digits dialed when making an outside local call from the ACD/PBX.	7
Active Routing Target Type	Optional. For active mode only.	Identifies the type of number Advanced Inbound uses to route calls to targets (ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2 or 3). If this field is blank, then the default is Teleset Line Index 1.	Teleset Line Index 1
Site Canonical Number Prefix	Optional, but recommended for implementing multi-site features for most interaction centers.	A standardized number of the format: +<country code> (<area code>) <local exchange>-<subscriber number> The area code is optional. Local Exchange and Subscriber Number can be combined into one number by omitting the dash (-). If there is no area code, then there must be a space after country code, such as +44 3456-1234 or +6 (8323) 12345, otherwise spaces are ignored. Site Canonical Number Prefix is prefixed to the value of Default Inbound/Outbound Phone Number Suffix Type to generate Canonical Phone Numbers for agent/teleset combinations that do not have a specifically defined Canonical Phone Number.	+1 (123) 456-
Default Inbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number that inbound callers need to dial to reach a specific agent or teleset, that is the Direct Inward Dial [DID] number. If this field is blank, then no DID numbers will be derived, however, if specific Canonical Phone Numbers are specified for an agent or teleset, then they will be used for both DID and ANI.	Teleset Line Extensions

Table 4–2 Middleware Parameters for Adapter for Aspect Contact Server (Cont.)

Parameter	Required	Description	Sample Value
Default Outbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number the PBX/ACD on the caller side sends as the Automatic Number Identification [ANI] of the call when transferring a call outside of the switch or when placing an outbound call. If this field is blank, then this parameter defaults to Teleset Line Extensions.	Teleset Line Extensions
Default Enterprise Routing Route Point	Optional, but recommended for implementing multi-site Enterprise Routing for interaction centers with a limited number of Direct Inward Dial (DID) numbers.	If specified, enterprise routing first routes a call to the Default Enterprise Routing Route Point of the target interaction center (which must be a monitored route point in active mode) and then immediately routes the call to the destination agent or teleset. **Note:** A tie line access code takes precedence over this value, therefore enterprise-routed calls use a tie line if one is available between the source and destination PBX/ACDs.	7400
Disable Warm Transfer/Conference for all Applications	Optional	If warm transfer and conference functionality should be disabled, then set the value to Yes.	No
Warm Transfer/Conference Initiation Wait Time (seconds)	Optional	Parameter can be used to delay the initiation of (warm) transfer and conference calls so that business applications receive sufficient time to update the call data with customer information.	5

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

See Also

- *Oracle Interaction Center Server Manager Implementation Guide*
- *Oracle Advanced Inbound CTI Integration Applications Notes*
- *Oracle Advanced Inbound Local Call Data Application Note*
- *Oracle Advanced Inbound Multi-Site Application Note*

4.2.2 Configuring Middleware for Adapter for Cisco ICM

Use the following procedure to configure middleware parameters for Adapter for Cisco ICM.

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 **Adapter for Cisco ICM**.

6. Click **Update** to save.

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

7. In the Value fields, use the following table to enter the Middleware Parameter values. For most fields, if you enter invalid values, an error message advises you on entering a correct value. For example, check that you enter the correct IP address format and port number.

Table 4–3 Middleware Parameters for Adapter for Cisco ICM

Parameter	Required	Description	Sample Value
Passive Mode	Required	Select True. Use only passive mode for this middleware type.	True
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	Optional. For duplex configuration of ICM only.	IP Address of Cisco ICM Peripheral Gateway (Side B).	123.45.67.90
Site B Host IP Port	Optional. For duplex configuration of ICM only.	TCP/IP port of Cisco ICM Peripheral Gateway (Side B).	43027
Peripheral Identifier	Required	ICM Peripheral ID for the interaction 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
Long Distance Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a long distance from within the country or region of the ACD/PBX; consists of the long distance trunk access code plus the National Direct Dialing (NDD) prefix.	91
International Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making an international call to another country/region from the ACD/PBX; consists of the international trunk access code plus the International Direct Dialing (IDD) prefix.	9011
Local Number Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a local call from the ACD/PBX; consists of the local outbound trunk access code.	9

Table 4–3 Middleware Parameters for Adapter for Cisco ICM (Cont.)

Parameter	Required	Description	Sample Value
Dialing Suffix	Optional	For outbound dialing. Digits the system adds at the end of a telephone number when placing any outside call from the ACD/PBX.	#
Local Area Codes	Optional	Semi-colon-separated list of other area codes that are local numbers for the location of the ACD/PBX. If not applicable, then leave blank.	301; 202; 888
Non-Local Exchanges	Optional	Semi-colon-separated list of exchanges within the Site Area Code that are long distance numbers for the location of the ACD/PBX. If not applicable, then leave blank.	123;234
Site Area Code	Required	Area code of the location of the ACD/PBX.	650
Site Country Code	Required	Country code of the location of the ACD/PBX.	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same interaction center. This is used to distinguish between internal and external calls.	5
Site Overlay	Optional	For North American Numbering Plan only. Select YES if ten-digit dialing is required for placing outside calls from the interaction center. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Required	Maximum number of digits dialed when making an outside local call from the ACD/PBX.	7
Active Routing Target Type	Optional. For active mode only.	Identifies the type of number Advanced Inbound uses to route calls to targets (ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2, or 3). If this field is blank, then the default is Teleset Line Index 1.	Teleset Line Index 1

Table 4–3 Middleware Parameters for Adapter for Cisco ICM (Cont.)

Parameter	Required	Description	Sample Value
Site Canonical Number Prefix	Optional, but recommended for implementing multi-site features for most interaction centers.	A standardized number of the format: +<country code> (<area code>) <local exchange>-<subscriber number> The area code is optional. Local Exchange and Subscriber Number can be combined into one number by omitting the dash (-). If there is no area code, then there must be a space after country code, such as +44 3456-1234 or +6 (8323) 12345, otherwise spaces are ignored. Site Canonical Number Prefix is prefixed to the value of Default Inbound/Outbound Phone Number Suffix Type to generate Canonical Phone Numbers for agent/teleset combinations that do not have a specifically defined Canonical Phone Number.	+1 (123) 456-
Default Inbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number that inbound callers need to dial to reach a specific agent or teleset, that is the Direct Inward Dial [DID] number. If this field is blank, then no DID numbers will be derived, however, if specific Canonical Phone Numbers are specified for an agent or teleset, then they will be used for both DID and ANI.	Teleset Line Extensions
Default Outbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number the PBX/ACD on the caller side sends as the Automatic Number Identification [ANI] of the call when transferring a call outside of the switch or when placing an outbound call. If this field is blank, then this parameter defaults to Teleset Line Extensions.	Teleset Line Extensions

Table 4–3 Middleware Parameters for Adapter for Cisco ICM (Cont.)

Parameter	Required	Description	Sample Value
Default Enterprise Routing Route Point	Optional, but recommended for implementing multi-site Enterprise Routing for interaction centers with a limited number of Direct Inward Dial (DID) numbers.	If specified, enterprise routing first routes a call to the Default Enterprise Routing Route Point of the target interaction center (which must be a monitored route point in active mode) and then immediately routes the call to the destination agent or teleset. **Note:** A tie line access code takes precedence over this value, therefore enterprise-routed calls use a tie line if one is available between the source and destination PBX/ACDs.	7400
Disable Warm Transfer/Conference for all Applications	Optional	If warm transfer and conference functionality should be disabled, then set the value to Yes.	No
Warm Transfer/Conference Initiation Wait Time (seconds)	Optional	Parameter can be used to delay the initiation of (warm) transfer or conference calls so that business applications receive sufficient time to update the call data with customer information.	5

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

See Also

- *Oracle Interaction Center Server Manager Implementation Guide*
- *Oracle Advanced Inbound CTI Integration Applications Notes*
- *Oracle Advanced Inbound Local Call Data Application Note*
- *Oracle Advanced Inbound Multi-Site Application Note*

4.2.3 Configuring Middleware for Adapter for CT Connect

Use the following procedure to configure middleware parameters for Adapter for CT Connect.

> **Note:** In the current release, Oracle supports both Adapter for CT Connect and Adapter for NetMerge Call Processing Software.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Configure at least one server group.
- Install the CT Connect client file on the machine that runs Oracle Telephony Adapter Server by copying the file ctcapi.jar from the CMI Server Installation software CD to the directory icsm/admin/scripts/3rdparty of the Oracle Telephony Adapter machine.

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 **Adapter for CT Connect**.
6. Click **Update** to save.

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

7. In the Value fields, use the following table to enter the Middleware Parameter values. For most fields, if you enter invalid values, an error message advises you on entering a correct value. For example, check that you enter the correct IP address format and port number.

Table 4–4 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 interaction 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 or enhanced passive mode).	False
Long Distance Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a long distance from within the country or region of the ACD/PBX; consists of the long distance trunk access code plus the National Direct Dialing (NDD) prefix.	91
International Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making an international call to another country or region from the ACD/PBX; consists of the international trunk access code plus the International Direct Dialing (IDD) prefix.	9011
Local Number Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a local call from the ACD/PBX; consists of the local outbound trunk access code.	9

Table 4–4 Middleware Parameters for Adapter for CT Connect (Cont.)

Parameter	Required	Description	Sample Value
Dialing Suffix	Optional	For outbound dialing. Digits the system adds at the end of a telephone number when placing any outside call from the ACD/PBX.	#
Local Area Codes	Optional	Semi-colon-separated list of other area codes that are local numbers for the location of the ACD/PBX. If not applicable, then leave blank.	301; 202; 888
Non-Local Exchanges	Optional	Semi-colon-separated list of exchanges within the Site Area Code that are long distance numbers for the location of the ACD/PBX. If not applicable, then leave blank.	123;234
Site Area Code	Required	Area code of the location of the ACD/PBX.	650
Site Country Code	Required	Country code of the location of the ACD/PBX.	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same interaction center. This is used to distinguish between internal and external calls.	5
Site Overlay	Optional	For North American Numbering Plan only. Select YES if ten-digit dialing is required for placing outside calls from the interaction center. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Required	Maximum number of digits dialed when making an outside local call from the ACD/PBX.	7
Active Routing Target Type	Optional. For active mode only.	Identifies the type of number Advanced Inbound uses to route calls to targets (ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2, or 3). If this field is blank, then the default is Teleset Line Index 1.	Teleset Line Index 1

Table 4–4 Middleware Parameters for Adapter for CT Connect (Cont.)

Parameter	Required	Description	Sample Value
Site Canonical Number Prefix	Optional, but recommended for implementing multi-site features for most interaction centers.	A standardized number of the format: +<country code> (<area code>) <local exchange>-<subscriber number> The area code is optional. Local Exchange and Subscriber Number can be combined into one number by omitting the dash (-). If there is no area code, then there must be a space after country code, such as +44 3456-1234 or +6 (8323) 12345, otherwise spaces are ignored. Site Canonical Number Prefix is prefixed to the value of Default Inbound/Outbound Phone Number Suffix Type to generate Canonical Phone Numbers for agent/teleset combinations that do not have a specifically defined Canonical Phone Number.	+1 (123) 456-
Default Inbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number that inbound callers need to dial to reach a specific agent or teleset, that is the Direct Inward Dial [DID] number. If this field is blank, then no DID numbers will be derived, however, if specific Canonical Phone Numbers are specified for an agent or teleset, then they will be used for both DID and ANI.	Teleset Line Extensions
Default Outbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number the PBX/ACD on the caller side sends as the Automatic Number Identification [ANI] of the call when transferring a call outside of the switch or when placing an outbound call. If this field is blank, then this parameter defaults to Teleset Line Extensions.	Teleset Line Extensions

Table 4–4 Middleware Parameters for Adapter for CT Connect (Cont.)

Parameter	Required	Description	Sample Value
Default Enterprise Routing Route Point	Optional, but recommended for implementing multi-site Enterprise Routing for interaction centers with a limited number of Direct Inward Dial (DID) numbers.	If specified, enterprise routing first routes a call to the Default Enterprise Routing Route Point of the target interaction center (which must be a monitored route point in active mode) and then immediately routes the call to the destination agent or teleset. **Note:** A tie line access code takes precedence over this value, therefore enterprise-routed calls use a tie line if one is available between the source and destination PBX/ACDs.	7400
IVR Host	Required only for the IVR Integration feature.	IP address of the IVR. The IVRI feature will not work if this field is blank. If IVRI mode = server, you may enter any value in the IVR Host field to turn on the IVR Integration feature.	123.45.67.80
IVR Port	Required only for the IVR Integration feature.	Do one of the following: ■ If IVRI Mode = client, then enter the TCP/IP port on the IVR machine that listens for a connection from the IVRI module of OTAS. ■ If IVRI Mode = server, then enter the TCP/IP port on the OTAS machine that listens for a connection from the IVR.	4000

Table 4–4 Middleware Parameters for Adapter for CT Connect (Cont.)

Parameter	Required	Description	Sample Value
IVRI Mode	Required only for the IVR Integration feature.	Options are *client* or *server*. IVRI mode determines whether Oracle Telephony Adapter Server (OTAS) initiates a socket connection to the IVR, or the IVR initiates a socket connection to OTAS. Do one of the following: ■ If the IVRI module of OTAS connects to the IVR machine, choose **client** and in the IVR Host field enter the IP address of the machine that sends the packets to OTAS. ■ If the IVR connects to the IVRI module of the OTAS machine, choose **server**. If this field is blank, then the default is client.	client
IVRI Abandon Threshold	Required only for the IVR Integration feature.	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
Disable Warm Transfer/Conference for all Applications	Optional	If warm transfer and conference functionality should be disabled, then set the value to Yes.	No
Warm Transfer/Conference Initiation Wait Time (seconds)	Optional	Parameter can be used to delay the initiation of (warm) transfer or conference calls so that business applications receive sufficient time to update the call data with customer information.	5

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

See Also

- *Oracle Interaction Center Server Manager Implementation Guide*

- *Oracle Advanced Inbound CTI Integration Applications Notes*
- *Oracle Advanced Inbound Local Call Data Application Note*
- *Oracle Advanced Inbound Multi-Site Application Note*

4.2.4 Configuring Middleware for Adapter for Intel NetMerge Call Processing Software

Use the following procedure to configure middleware parameters for Adapter for Intel NetMerge Call Processing Software.

> **Note:** In the current release, Oracle supports both Adapter for CT Connect and Adapter for NetMerge Call Processing Software.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Configure at least one server group.
- Install the CPS client file API on the machine that runs Oracle Telephony Adapter Server by copying the file ctcapi.jar from the CPS server machine to the directory icsm/admin/scripts/3rdparty on the Oracle Telephony Adapter Server machine. Oracle Telephony Adapter Server must run in Java Runtime Environment (JRE) v1.4 or higher. Edit the file java.policy in the directory jre\lib\security of the JRE to include the following two lines:

  ```
  permission java.util.PropertyPermission "user.name", "read";
  permission java.net.SocketPermission "*:1024-", "connect, listen, accept,
  resolve";
  ```

  See the Intel CPS v6 product release notes for more details.

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 **Adapter for Intel NetMerge Call Processing Software**.
6. Click **Update** to save.

   The Middleware Details page refreshes. The Middleware Parameters fields and the Teleset Details and Route Point Details links appear.
7. In the Value fields, use the following table to enter the Middleware Parameter values. For most fields, if you enter invalid values, an error message advises you on entering a correct value. For example, check that you enter the correct IP address format and port number.

Table 4–5 Middleware Parameters for Adapter for Intel NetMerge Call Processing Software

Parameter	Required	Description	Sample Value
CPS Server IP Address 1	Required	IP address of the Intel NetMerge CPS server.	123.45.67.89
CPS Link Logical Identifier 1	Required	The logical identifier of the link that is defined in the Intel NetMerge CPS configuration.	nortel
CPS Server IP Address 2	Not applicable	Not supported in the current release. For dual CPS server configuration.	Not applicable
CPS Link Logical Identifier 2	Not applicable	Not supported in the current release. For dual CPS server configuration.	Not applicable
PBX Type	Required	Type of switch used at the interaction 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 or enhanced passive mode).	False

Table 4–5 Middleware Parameters for Adapter for Intel NetMerge Call Processing Software (Cont.)

Parameter	Required	Description	Sample Value
Long Distance Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a long distance from within the country or region of the ACD/PBX; consists of the long distance trunk access code plus the National Direct Dialing (NDD) prefix.	91
International Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making an international call to another country or region from the ACD/PBX; consists of the international trunk access code plus the International Direct Dialing (IDD) prefix.	9011
Local Number Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a local call from the ACD/PBX; consists of the local outbound trunk access code.	9
Dialing Suffix	Optional	For outbound dialing. Digits the system adds at the end of a telephone number when placing any outside call from the ACD/PBX.	#
Local Area Codes	Optional	Semi-colon-separated list of other area codes that are local numbers for the location of the ACD/PBX. If not applicable, then leave blank.	301; 202; 888
Non-Local Exchanges	Optional	Semi-colon-separated list of exchanges within the Site Area Code that are long distance numbers for the location of the ACD/PBX. If not applicable, then leave blank.	123;234
Site Area Code	Required	Area code of the location of the ACD/PBX.	650
Site Country Code	Required	Country code of the location of the ACD/PBX.	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same interaction center. This is used to distinguish between internal and external calls.	5
Site Overlay	Optional	For North American Numbering Plan only. Select YES if ten-digit dialing is required for placing outside calls from the interaction center. Otherwise, select NO or leave blank.	No

Table 4–5 Middleware Parameters for Adapter for Intel NetMerge Call Processing Software (Cont.)

Parameter	Required	Description	Sample Value
Site Local Number Maximum Length	Required	Maximum number of digits dialed when making an outside local call from the ACD/PBX.	7
Active Routing Target Type	Optional. For active mode only.	Identifies the type of number Advanced Inbound uses to route calls to targets (ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2, or 3). If this field is blank, then the default is Teleset Line Index 1.	Teleset Line Index 1
Site Canonical Number Prefix	Optional, but recommended for implementing multi-site features for most interaction centers.	A standardized number of the format: +<country code> (<area code>) <local exchange>-<subscriber number> The area code is optional. Local Exchange and Subscriber Number can be combined into one number by omitting the dash (-). If there is no area code, then there must be a space after country code, such as +44 3456-1234 or +6 (8323) 12345, otherwise spaces are ignored. Site Canonical Number Prefix is prefixed to the value of Default Inbound/Outbound Phone Number Suffix Type to generate Canonical Phone Numbers for agent/teleset combinations that do not have a specifically defined Canonical Phone Number.	+1 (123) 456-
Default Inbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number that inbound callers need to dial to reach a specific agent or teleset, that is the Direct Inward Dial [DID] number. If this field is blank, then no DID numbers will be derived, however, if specific Canonical Phone Numbers are specified for an agent or teleset, then they will be used for both DID and ANI.	Teleset Line Extensions
Default Outbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number the PBX/ACD on the caller side sends as the Automatic Number Identification [ANI] of the call when transferring a call outside of the switch or when placing an outbound call. If this field is blank, then this parameter defaults to Teleset Line Extensions.	Teleset Line Extensions

Table 4–5 Middleware Parameters for Adapter for Intel NetMerge Call Processing Software (Cont.)

Parameter	Required	Description	Sample Value
Default Enterprise Routing Route Point	Optional, but recommended for implementing multi-site Enterprise Routing for interaction centers with a limited number of Direct Inward Dial (DID) numbers.	If specified, enterprise routing first routes a call to the Default Enterprise Routing Route Point of the target interaction center (which must be a monitored route point in active mode) and then immediately routes the call to the destination agent or teleset. **Note:** A tie line access code takes precedence over this value, therefore enterprise-routed calls use a tie line if one is available between the source and destination PBX/ACDs.	7400
IVR Host	Required only for the IVR Integration feature.	IP address of the IVR. The IVRI feature will not work if this field is blank. If IVRI mode = server, you may enter any value in the IVR Host field to turn on the IVR Integration feature.	123.45.67.80
IVR Port	Required only for the IVR Integration feature.	Do one of the following: ■ If IVRI Mode = client, then enter the TCP/IP port on the IVR machine that listens for a connection from the IVRI module of OTAS. ■ If IVRI Mode = server, then enter the TCP/IP port on the OTAS machine that listens for a connection from the IVR.	4000

Table 4–5 Middleware Parameters for Adapter for Intel NetMerge Call Processing Software (Cont.)

Parameter	Required	Description	Sample Value
IVRI Mode	Required only for the IVR Integration feature.	Options are *client* or *server*. IVRI mode determines whether Oracle Telephony Adapter Server (OTAS) initiates a socket connection to the IVR, or the IVR initiates a socket connection to OTAS. Do one of the following: ■ If the IVRI module of OTAS connects to the IVR machine, choose **client** and in the IVR Host field enter the IP address of the machine that sends the packets to OTAS. ■ If the IVR connects to the IVRI module of the OTAS machine, choose **server**. If this field is blank, then the default is client.	client
IVRI Abandon Threshold	Required only for the IVR Integration feature.	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
Disable Warm Transfer/Conference for all Applications	Optional	If warm transfer and conference functionality should be disabled, then set the value to Yes.	No

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

See Also

- *Oracle Interaction Center Server Manager Implementation Guide*
- *Oracle Advanced Inbound CTI Integration Applications Notes*
- *Oracle Advanced Inbound Local Call Data Application Note*
- *Oracle Advanced Inbound Multi-Site Application Note*

4.2.5 Configuring Middleware for Adapter for Switch Simulator

Use the following procedure to configure middleware parameters for Adapter for 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, 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, for example, servergroup_mw.

5. From the Middleware Type list, select **Adapter for Switch Simulator**.

6. Click **Update** to save.

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

7. In the Value fields, use the following table to enter the Middleware Parameter values. For most fields, if you enter invalid values, an error message advises you on entering a correct value. For example, check that you enter the correct IP address format and port number.

Table 4–6 Middleware Parameters for Adapter for Switch Simulator

Parameter	Required	Description	Sample Value
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 or enhanced passive mode).	False
Long Distance Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a long distance from within the country or region of the ACD/PBX; consists of the long distance trunk access code plus the National Direct Dialing (NDD) prefix.	1
International Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making an international call to another country or region from the ACD/PBX; consists of the international trunk access code plus the International Direct Dialing (IDD) prefix.	011
Local Number Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a local call from the ACD/PBX; consists of the local outbound trunk access code.	9
Dialing Suffix	Not applicable	For outbound dialing. Digits the system adds at the end of a telephone number when placing any outside call from the ACD/PBX.	
Local Area Codes	Not applicable	Semi-colon-separated list of other area codes that are local numbers for the location of the ACD/PBX. If not applicable, then leave blank.	
Non-Local Exchanges	Not applicable	Semi-colon-separated list of exchanges within the Site Area Code that are long distance numbers for the location of the ACD/PBX. If not applicable, then leave blank.	
Site Area Code	Required	Area code of the location of the ACD/PBX.	650

Table 4–6 Middleware Parameters for Adapter for Switch Simulator (Cont.)

Parameter	Required	Description	Sample Value
Site Country Code	Required	Country code of the location of the ACD/PBX.	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same interaction center. Used to distinguish between internal and external calls. Must be equal to the number of digits configured for extension range 1 and 2 of the Switch Simulator parameters. Note: To generate the correct screen pops using the Web phone, this value must be less than the number of digits configured for extension range 3 of the Switch Simulator parameters. See Table 5–2, "Switch Simulator Parameters".	4
Site Canonical Number Prefix	Not applicable	A standardized number of the format: +<country code> (<area code>) <local exchange>-<subscriber number> The area code is optional. Local Exchange and Subscriber Number can be combined into one number by omitting the dash (-). If there is no area code, then there must be a space after country code, such as +44 3456-1234 or +6 (8323) 12345, otherwise spaces are ignored. Site Canonical Number Prefix is prefixed to the value of Default Inbound/Outbound Phone Number Suffix Type to generate Canonical Phone Numbers for agent/teleset combinations that do not have a specifically defined Canonical Phone Number.	
Default Inbound Phone Number Suffix Type	Not applicable	Identifies the type of number that inbound callers need to dial to reach a specific agent or teleset, that is the Direct Inward Dial [DID] number. If this field is blank, then no DID numbers will be derived, however, if specific Canonical Phone Numbers are specified for an agent or teleset, then they will be used for both DID and ANI.	

Table 4–6 Middleware Parameters for Adapter for Switch Simulator (Cont.)

Parameter	Required	Description	Sample Value
Default Outbound Phone Number Suffix Type	Not applicable	Identifies the type of number the PBX/ACD on the caller side sends as the Automatic Number Identification [ANI] of the call when transferring a call outside of the switch or when placing an outbound call. If this field is blank, then this parameter defaults to Teleset Line Extensions.	
Default Enterprise Routing Route Point	Not applicable	If specified, enterprise routing first routes a call to the Default Enterprise Routing Route Point of the target interaction center (which must be a monitored route point in active mode) and then immediately routes the call to the destination agent or teleset. **Note:** A tie line access code takes precedence over this value, therefore enterprise-routed calls use a tie line if one is available between the source and destination PBX/ACDs.	
Site Overlay	Not applicable	For North American Numbering Plan only. Select YES if ten-digit dialing is required for placing outside local calls from the ACD/PBX. Otherwise, select NO or leave blank.	
Site Local Number Maximum Length	Required	Maximum number of digits dialed when making an outside local call from the ACD/PBX.	7
Active Routing Target Type	Not applicable	Identifies the type of number Advanced Inbound uses to route calls to targets (ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2, or 3). If this field is blank, then the default is Teleset Line Index 1.	
Disable Warm Transfer/Conference for all Applications	Not applicable	If warm transfer and conference functionality should be disabled, then set the value to Yes.	
Warm Transfer/Conference Initiation Wait Time (seconds)	Not applicable	Parameter can be used to delay the initiation of (warm) transfer or conference calls so that business applications receive sufficient time to update the call data with customer information.	

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

See Also

- *Oracle Interaction Center Server Manager Implementation Guide*
- *Oracle Advanced Inbound CTI Integration Applications Notes*
- *Oracle Advanced Inbound Local Call Data Application Note*
- *Oracle Advanced Inbound Multi-Site Application Note*

4.2.6 Configuring Middleware for Custom C Adapter Server

Use the following procedure to configure middleware parameters for Custom C Adapter Server.

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 **Custom C Adapter Server**.
6. Click **Update** to save.

   The Middleware Details page refreshes. The Middleware Parameters fields and the Teleset Details and Route Point Details links appear.
7. In the Value fields, use the following table to enter the Middleware Parameter values. For most fields, if you enter invalid values, an error message advises you on entering a correct value. For example, check that you enter the correct IP address format and port number.

Table 4–7 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
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

Table 4–7 Middleware Parameters for Custom C Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
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 or enhanced passive mode).	False
Long Distance Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a long distance from within the country or region of the ACD/PBX; consists of the long distance trunk access code plus the National Direct Dialing (NDD) prefix.	91
International Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making an international call to another country/region from the ACD/PBX; consists of the international trunk access code plus the International Direct Dialing (IDD) prefix.	9011
Local Number Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a local call from the ACD/PBX; consists of the local outbound trunk access code.	9
Dialing Suffix	Optional	For outbound dialing. Digits the system adds at the end of a telephone number when placing any outside call from the ACD/PBX.	#
Local Area Codes	Optional	Semi-colon-separated list of other area codes that are local numbers for the location of the ACD/PBX. If not applicable, then leave blank.	301; 202; 888
Non-Local Exchanges	Optional	Semi-colon-separated list of exchanges within the Site Area Code that are long distance numbers for the location of the ACD/PBX. If not applicable, then leave blank.	123;234
Site Area Code	Required	Area code of the location of the ACD/PBX.	650
Site Country Code	Required	Country code of the location of the ACD/PBX.	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same interaction center. This is used to distinguish between internal and external calls.	5

Table 4–7 Middleware Parameters for Custom C Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Site Overlay	Optional	For North American Numbering Plan only. Select YES if ten-digit dialing is required for placing outside local calls from the ACD/PBX. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Required	Maximum number of digits dialed when making an outside local call from the ACD/PBX.	7
Site Canonical Number Prefix	Optional, but recommended for implementing multi-site features for most interaction centers.	A standardized number of the format: +<country code> (<area code>) <local exchange>-<subscriber number> The area code is optional. Local Exchange and Subscriber Number can be combined into one number by omitting the dash (-). If there is no area code, then there must be a space after country code, such as +44 3456-1234 or +6 (8323) 12345, otherwise spaces are ignored. Site Canonical Number Prefix is prefixed to the value of Default Inbound/Outbound Phone Number Suffix Type to generate Canonical Phone Numbers for agent/teleset combinations that do not have a specifically defined Canonical Phone Number.	+1 (123) 456-
Default Inbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number that inbound callers need to dial to reach a specific agent or teleset, that is the Direct Inward Dial [DID] number. If this field is blank, then no DID numbers will be derived, however, if specific Canonical Phone Numbers are specified for an agent or teleset, then they will be used for both DID and ANI.	Teleset Line Extensions
Default Outbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number the PBX/ACD on the caller side sends as the Automatic Number Identification [ANI] of the call when transferring a call outside of the switch or when placing an outbound call. If this field is blank, then this parameter defaults to Teleset Line Extensions.	Teleset Line Extensions

Table 4–7 Middleware Parameters for Custom C Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Default Enterprise Routing Route Point	Optional, but recommended for implementing multi-site features for most interaction centers with a limited number of Direct Inward Dial (DID) numbers.	If specified, enterprise routing first routes a call to the Default Enterprise Routing Route Point of the target interaction center (which must be a monitored route point in active mode) and then immediately routes the call to the destination agent or teleset. **Note:** A tie line access code takes precedence over this value, therefore enterprise-routed calls use a tie line if one is available between the source and destination PBX/ACDs.	7400
Active Routing Target Type	Optional. For active mode only.	Identifies the type of number Advanced Inbound uses to route calls to targets (ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2, or 3). If this field is blank, then the default is Teleset Line Index 1.	Teleset Line Index 1
Disable Warm Transfer/Conference for all Applications	Optional	If warm transfer and conference functionality should be disabled, then set the value to Yes.	No
Warm Transfer/Conference Initiation Wait Time (seconds)	Optional	Parameter can be used to delay the initiation of (warm) transfer or conference calls so that business applications receive sufficient time to update the call data with customer information.	5

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

See Also

- *Oracle Interaction Center Server Manager Implementation Guide*
- *Oracle Advanced Inbound CTI Integration Applications Notes*
- *Oracle Advanced Inbound Local Call Data Application Note*
- *Oracle Advanced Inbound Multi-Site Application Note*

4.2.7 Configuring Middleware for Custom Java Adapter Server

Use the following procedure to configure middleware parameters for Custom Java Adapter Server.

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 **Custom Java Adapter Server**.

6. Click **Update** to save.

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

7. In the Value fields, use the following table to enter the Middleware Parameter values. For most fields, if you enter invalid values, an error message advises you on entering a correct value. For example, check that you enter the correct IP address format and port number.

Table 4–8 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
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 or enhanced passive mode).	False
Long Distance Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a long distance from within the country or region of the ACD/PBX; consists of the long distance trunk access code plus the National Direct Dialing (NDD) prefix.	91

Table 4–8 Middleware Parameters for Custom Java Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
International Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making an international call to another country/region from the ACD/PBX; consists of the international trunk access code plus the International Direct Dialing (IDD) prefix.	9011
Local Number Access Code	Required	For outbound dialing. Digits the system adds at the beginning of a telephone number when making a local call from the ACD/PBX; consists of the local outbound trunk access code.	9
Dialing Suffix	Optional	For outbound dialing. Digits the system adds at the end of a telephone number when placing any outside call from the ACD/PBX.	#
Local Area Codes	Optional	Semi-colon-separated list of other area codes that are local numbers for the location of the ACD/PBX. If not applicable, then leave blank.	301; 202; 888
Non-Local Exchanges	Optional	Semi-colon-separated list of exchanges within the Site Area Code that are long distance numbers for the location of the ACD/PBX. If not applicable, then leave blank.	123;234
Site Area Code	Required	Area code of the location of the ACD/PBX.	650
Site Country Code	Required	Country code of the location of the ACD/PBX.	1
Site Internal Number Length	Required	Maximum number of digits an agent dials to reach another agent in the same interaction center. This is used to distinguish between internal and external calls.	5
Site Overlay	Optional	For North American Numbering Plan only. Select YES if ten-digit dialing is required for placing outside local calls from the ACD/PBX. Otherwise, select NO or leave blank.	No
Site Local Number Maximum Length	Required	Maximum number of digits dialed when making an outside local call from the ACD/PBX.	7

Table 4–8 Middleware Parameters for Custom Java Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Site Canonical Number Prefix	Optional, but recommended for implementing multi-site features for most interaction centers.	A standardized number of the format: +<country code> (<area code>) <local exchange>-<subscriber number> The area code is optional. Local Exchange and Subscriber Number can be combined into one number by omitting the dash (-). If there is no area code, then there must be a space after country code, such as +44 3456-1234 or +6 (8323) 12345, otherwise spaces are ignored. Site Canonical Number Prefix is prefixed to the value of Default Inbound/Outbound Phone Number Suffix Type to generate Canonical Phone Numbers for agent/teleset combinations that do not have a specifically defined Canonical Phone Number.	+1 (123) 456-
Default Inbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number that inbound callers need to dial to reach a specific agent or teleset, that is the Direct Inward Dial [DID] number. If this field is blank, then no DID numbers will be derived, however, if specific Canonical Phone Numbers are specified for an agent or teleset, then they will be used for both DID and ANI.	Teleset Line Extensions
Default Outbound Phone Number Suffix Type	Optional, but recommended for implementing multi-site features for most interaction centers.	Identifies the type of number the PBX/ACD on the caller side sends as the Automatic Number Identification [ANI] of the call when transferring a call outside of the switch or when placing an outbound call. If this field is blank, then this parameter defaults to Teleset Line Extensions.	Teleset Line Extensions

Table 4–8 Middleware Parameters for Custom Java Adapter Server (Cont.)

Parameter	Required	Description	Sample Value
Default Enterprise Routing Route Point	Optional, but recommended for implementing multi-site Enterprise Routing for interaction centers with a limited number of Direct Inward Dial (DID) numbers.	If specified, enterprise routing first routes a call to the Default Enterprise Routing Route Point of the target interaction center (which must be a monitored route point in active mode) and then immediately routes the call to the destination agent or teleset. **Note:** A tie line access code takes precedence over this value, therefore enterprise-routed calls use a tie line if one is available between the source and destination PBX/ACDs.	7400
Active Routing Target Type	Optional. For active mode only.	Identifies the type of number Advanced Inbound uses to route calls to targets (ACD Agent ID, Teleset Hardware Number, or Teleset Line Index 1, 2, or 3). If this field is blank, then the default is Teleset Line Index 1.	Teleset Line Index 1
Disable Warm Transfer/Conference for all Applications	Optional	If warm transfer and conference functionality should be disabled, then set the value to Yes.	No
Warm Transfer/Conference Initiation Wait Time (seconds)	Optional	Parameter can be used to delay the initiation of (warm) transfer or conference calls so that business applications receive sufficient time to update the call data with customer information.	5

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

See Also

- *Oracle Interaction Center Server Manager Implementation Guide*
- *Oracle Advanced Inbound CTI Integration Applications Notes*
- *Oracle Advanced Inbound Local Call Data Application Note*
- *Oracle Advanced Inbound Multi-Site Application Note*

4.3 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.

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 sub tab.

   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 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 **Not Monitored**.
10. Click **Update** to save.

    The Route Point Details page refreshes. The Parameter Details fields appear.
11. Optionally, for multi-site configurations, enter a Canonical Phone Number for the Route Point's Direct Inward Dial (DID) number. Configure this field only if the canonical phone number of this route point is not the same as the Site Canonical Number Prefix (specified in the middleware configuration) that is concatenated with the Route Point Number.
12. For Nortel Meridian with CT Connect/Net Merge Call Processing Software 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.
13. For Nortel Meridian with CT Connect/NetMerge Call Processing Software 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 hexidecimal. For example, if the music route number is 10, then enter `#0A` in the Music Route Number field.
14. For Avaya MultiVantage with CT Connect/NetMerge Call Processing Software and Passive Mode Caller Entered Digits (CED), enter **`CED`** in the Immediate Treatment field. The Middleware Passive Mode field is set to True and the Avaya VDN takes Caller Entered Digits.
15. Click **Update** to save.

4.4 Configuring Teleset Lines

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.

Note: Oracle does *not* support agents' use of the PBX/ACD physical teleset for access to features. Due to limitations of the PBX/ACD platform, features activated at the teleset are not passed through the PBX/ACD CTI interface, which desynchronizes the physical teleset and the Oracle CTI interfaces. If an agent uses the physical teleset rather than the softphone, and an unsynchronized condition occurs, then the agent may need to reset the application through the Oracle Universal Work Queue reset feature.

Tasks

In the Teleset page you can perform the following tasks:

- Section 4.4.1, "Configuring Telesets"
- Section 4.4.2, "Performing Mass Updates of Telesets"

4.4.1 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 sub tab.

   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 refreshes. 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 **Update**.

    The Teleset Details page refreshes. 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.

Table 4–9 Teleset Line Configurations

Teleset	Required Line Configuration
Alcatel	Two lines for each teleset. Enter the same teleset extension number (*not* 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, *not* 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. ■ 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	■ 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. Optionally, for multi-site configuration, in the Canonical Phone Number fields, enter the Direct Inward Dial (DID) number for each teleset line. For telesets for which a line index does not correspond with an actual physical teleset line, such as Nortel line index 3, enter `9999999`. For switches in which DID numbers are attached to agents rather than to telesets, leave these fields blank and configure specific canonical phone numbers in CRM Resource (see *Oracle Interaction Center Implementation Guide*). Configure this field only if the canonical phone numbers for this teleset are not the same as the Site Canonical Phone Number Prefix (specified in the middleware configuration) concatenated with the Extension.
13. Click **Update** to save.

4.4.2 Performing 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 perform mass updates of 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 sub tab.

   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 refreshes. A list of telesets appears.

4. In the Destination Server Group field, select the destination server group.

   The Teleset Details page refreshes. 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**. If

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

4.5 Mapping IVR Fields to Application Fields

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 MultiVantage with CT Connect/NetMerge Call Processing Software, an inbound media item may contain 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 4.5.1, "Mapping IVR Fields to Oracle Applications Fields"
- Section 4.5.2, "Performing Mass Updates of IVR Mappings"

4.5.1 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 sub tab.

   The IVR Mappings page appears.

2. From the lists, select the appropriate Server Group, Middleware and Route Point.

   The IVR Mappings page refreshes. 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.

4.5.2 Performing 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 perform a mass update of 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 sub tab.

   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 refreshes. 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 refreshes. A list of CTI middlewares appears.

4. From the Destination Middleware list, select the destination CTI middleware.

   The IVR page refreshes. 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**.

4.6 Configuring Multi-Sites

Use the Multi-Site page to set up a tie line multi-site configuration between two CTI middlewares. A multi-site configuration contains all the information necessary to route or transfer a call from one site to another site by way of a tie line. Do not use this if the two sites route and transfer calls by way of the Public Switched Telephone Network (PSTN).

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 sub tab.

   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 refreshes. 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. Tie Line Access Code - This prefix describes to the source PBX/ACD that the call is going through the tie line. The prefix can be in the formats listed in the following table of two special qualifiers: minus (-) and plus (+)):

Table 4–10 Tie Line Access Codes

Tie Line Access Code	Sample Value	What an Agent Dials	What the Destination Agent Sees
-TLAC	-8	Target Number (for example 8501)	Source Agent Extension/Acd Agent ID (for example 24181)
TLAC	8	TLAC + Target Number (for example 88501)	TLAC (for the other direction) + Source Agent Ext/Agent ID (for example 224181)
+TLAC	+8	TLAC + Target Number (for example 88501)	Source Agent External ANI (for example 6501824181)

Note: For TLAC, the destination party sees the number that is needed to dial to contact the caller by way of the tie line. A different Tie Line Access Code may go in the other direction.

- -TLAC: Two interaction centers are integrated seamlessly. Agents can dial extensions and never know that the call is going across a tie line to another interaction center. Multiple TLACs are supported in each direction. Create a new multi-site record for each distinct TLAC.
- TLAC: Standard Tie Line Integration. Agents must dial a special prefix, usually the access code to the tie line route, plus the destination (extension) when calling the other interaction center.
- +TLAC: Standard Tie Line Integration with External ANI. Same as above, but the destination sees the caller's External ANI, as though the Tie Line were not present and the caller is dialing by way of the Public Switched

Telephone Network (PSTN). Multiple TLACs are supported in each direction, but only for Call and Data Transfer, not for Enterprise Routing. Create a new multi-site record for each distinct TLAC. Only one TLAC is supported in each direction.

6. Click **Update** to save.

   The Multi-Site Details page refreshes.

4.7 Creating and Updating Interaction Keys

In 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 you can map IVR Fields
- 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

Tasks

In the Interaction Keys page, you can perform the following tasks:

- Create Interaction Keys
- Update Interaction Keys

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Do one of the following:

- Select the Call Center tab > Interaction Keys sub tab.
- Select the Route tab > Interaction Keys sub tab.
- Select the Classification tab > Interaction Keys sub tab.

  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.

4.8 Configuring Softphone

Use the softphone tab to perform the following tasks:

- Section 4.8.1, "Configuring Softphone Displays"
- Section 4.8.2, "Configuring Softphone Speed Dialing"
- Section 4.8.3, "Configuring Softphone Logging"

Note: Oracle does not have public or published APIs for making customized changes to softphone buttons or features. Any modifications to the softphone configuration other than those described in this section are customizations that Oracle Advanced Inbound base product does not support.

4.8.1 Configuring Softphone Displays

The softphone is a functional GUI representation of a telephone that is displayed on interaction agents' monitors. A sample display configuration, "Default Configuration," is seeded and is available for reference. The Default Configuration is defined as follows:

Table 4–11 Softphone Display Default Configuration

Display Order	Interaction Key	Description	Prompt Displayed
1	AO Customer Name	Name of customer in Advanced Outbound call	No
2	AO Customer Phone Number	Telephony number of customer in Advanced Outbound call	No
3	Classification Value	Determines which screens to pop	No
4	Caller Ph	Caller's telephone number (ANI)	Yes
5	Dialed Number	DNIS	Yes
6	Wait Time	Difference between the Call Birth Time and the time the call comes to the agent's softphone	Yes

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.

Administrators can assign a display configuration to multiple server groups so that all the assigned server groups have similar softphone displays.

Use the Display Configuration page to perform the following tasks:

- Select which 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.
- Assign display configurations to server groups.

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 Call Center >Interaction Keys sub tab and must have been added to the Softphone Available Keys list.

Steps

1. Select the Call Center tab > Softphone sub tab > Display Configuration.

   The Display Configuration Summary page opens.

2. From the Choose Server Group list, select the server group to which the softphone is assigned.
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**. The Display Configuration Details page appears. Proceed to step 5.
   - To reconfigure an existing softphone display, select the Configuration Name. The Display Configuration Details page appears. Proceed to step 8.
   - To assign a softphone display configuration to a server group, for the softphone display Configuration Name click **Assign Server Groups**. The Server Group Assignment Details page appears. Proceed to step 14.
5. In the Configuration Name field, enter a unique name for the display configuration.
6. Optionally, enter a description in the Description field.
7. Click **Create**.

   The page refreshes and the Softphone Display lists appear.
8. In the Softphone Display group, from the Available Keys list select the keys to display on the softphone and move them to the Displayed Keys list by using the arrow button. To select and move all keys, use the double arrow button. You can change the order of the keys on the softphones by using the arrow buttons in the Displayed Keys list.
9. Click **Update** to save.
10. 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, then 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, the softphone display would show "Vision Customer."

---

11. From the Prompt and Value list, select any keys whose *values* you want to display only without prompts and move them to the Value Only list.
12. Click **Update** to save.
13. Click **Display Configuration** to return to the Display Configuration Page.
14. Optionally, to assign server groups to an existing softphone, click **Assign server groups** for the Configuration Name.

    The Server Group Assignment Detail page opens.

    a. 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, first remove the server group from the "Assigned to this Configuration" list of the old display configuration and then add it to the "Assigned to this configuration" list of the new display configuration.

    b. Click **Update** to save.

4.8.2 Configuring Softphone Speed Dialing

Administrators can configure frequently-dialed numbers in the softphone, enabling agents to click configured speed dial buttons to dial frequently-called parties automatically. When an agent logs into the softphone, a speed dial list of internal and external numbers for the agent's server group appears in the agent's softphone.

Use the Speed Dial page to define the following speed dial numbers:

- Internal numbers within a server group or interaction center site
- External numbers shared across many server groups or interaction center sites

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 sub tab > Speed Dial.

   The Speed Dial Numbers page opens.

2. From the Choose Server Group list, select the server group whose speed dial list you want to create or modify.

3. Click **Go**.

4. Optionally, to find the number of a specific agent, enter the name of the agent in the Find Number Like field and click Go.

   The page refreshes and displays lists of configured internal and external speed dial numbers. The displayed numbers are available in the softphones of all agents in the selected server group.

5. Do one of the following:

   - To configure a new Internal Number for the speed dial, in the Internal Numbers area click **Create**.

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

   - To configure a new external number for speed dialing, in the External Numbers area click **Create**.

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

   - To reconfigure an existing internal or external number for speed dialing, click the First Name, Last Name.

     The External Number Details page opens. For internal numbers, proceed to step 6. For external numbers, proceed to step 10.

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** or **Update**. Proceed to step 14.

10. For external numbers, enter the Last Name and Local Number. Do not include dashes or spaces in the Local Number field.

11. Optionally, enter the First Name, Description, Country Code and Area Code.
12. Click **Add** or **Update**.

    The page refreshes.
13. In the Server Group Assignments area, from the Available Server Groups list select the server groups to which this external number should be associated. Move the selected groups to the Selected Server Groups list.
14. Click **Update** to save.

4.8.3 Configuring Softphone Logging

In Release 11.5.8, the softphone supports logging softphone events, commands, other information at various levels and output formats.

Softphone has the following logging options.

Agent Desktop Logging

The softphone can be configured to log events, commands or information to a file on the agent desktop. To enable agent desktop logging, set the Java Run Time Parameter in the Jinitiator Console to "true," for example:

```
-Dsoftphone.debug.file=true
```

By default, a log file starting with SOFTPHONE<timedate>.log is generated in the directory c:/temp. To specify another directory, use the following Java Run Time Parameter in Jinitiator Console:

```
-Dsoftphone.debug.directory=<fully qualified directory path>
```

For example: `-Dsoftphone.debug.directory=e:/softphonelog`

Java Console Logging

By default the softphone logs all error events (only) to the java console in the agent desktop. To disable Java Console logging, set the Java Run Time Parameter in the Jinitiator Console to "true," for example:

```
-Dsoftphone.debug.noconsole=true
```

> **Note:** If the Java Run Time parameter is *not* set, and the file parameter *is* set, then both console and file logging are enabled simultaneously.

Logging Levels

The softphone supports the following logging levels:

- fatal: Only fatal errors
- error (default): All errors
- warning : All inbound events and outbound commands
- info : All important information about the softphone, such as calls by Oracle Universal Work Queue and application plug-ins
- verbose: Almost all log messages

To set the logging level, use the Java Run Time Parameter `-Dsoftphone.debug.level=soft=<level>` where level can be {fatal,error,warning,info,verbose}.

Use the following procedure to log all softphone errors, inbound events and commands.

Log in

Not Applicable

Responsibility

Not Applicable

Prerequisites

None

Steps

1. Log out of Oracle Universal Work Queue, IcWork Controller and Oracle Applications.
2. Launch Jinitiator. If multiple versions exist on the system, verify that you are launching the correct version.
3. In the Basic tab, set the Network Access to Unrestricted, which is required to generate a file from logging.
4. In the Basic tab, to the Java Run Time Parameters add the following command:

```
-Dsoftphone.debug.file=true -Dsoftphone.debug.directory=c:/softphone
-Dsoftphone.debug.level=soft=info
```

5. Press **Apply** in Jinitiator.
6. Close Jinitiator.
7. Restart Oracle Applications.
8. Log into Oracle Universal Work Queue and the softphone.
9. Check the directory c:/softphone for the new log file. If the log file has not generated, then check that the directory has the correct permissions. Otherwise, close all open browser sessions, open a new browser and log in to Oracle Universal Work Queue and the softphone.

4.9 Setting Options for Customer Data Lookup

Customer Data Lookup is a process that uses Oracle Routing Server to gather customer information, such as customer ID, from the Oracle e-Business Suite Database based on inbound call information such as ANI or IVR data.

Tasks

In the Customer Lookup page you can select one of the following options:

- Default Customer Data Lookup
- Custom Customer Data Lookup
- Disable Customer Data Lookup

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Classification tab > Customer Lookup sub tab.

   The Customer Data Lookup page appears.

2. From the Choose Server Group list, select the server group to which you want to apply the customer lookup.
3. From the Select Customer Data Lookup Type options, select one option:
   - Default Customer Data Lookup: The default out-of-the-box function, this option does not require setting up.
   - Custom Customer Data Lookup: Requires that consultants implement Customer Data Lookup at the customer site.
   - No Customer Data Lookup: Disable the Customer Data Lookup process.
4. Click **Update** to save.

4.10 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 criteria:

- 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, perform the following tasks in the following sequence.

1. Section 4.10.1, "Configuring Classification Values"
2. Section 4.10.2, "Modifying Media Actions Assigned to Classification Values"
3. Section 4.10.3, "Defining PL/SQL Functions"
4. Section 4.10.4, "Defining Classification Rules"
5. Section 4.10.5, "Viewing Classification Rules"

6. Section 4.10.6, "Setting Classification Rule Priorities"

4.10.1 Configuring Classification Values

Use the following procedure to configure classification values.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Classification tab > Rules sub tab > Classification Value.

   The Classification Values page opens.

   Note: Only those classification values that are defined in the Classification Values page will be valid in the interaction center. If a PL/SQL function used in a classification rule returns a classification value that is not defined in this page, then the call will be marked "unClassified."

2. Do one of the following:
   - To create a new classification value, click **Create**.

     The Create Classification Value Details page appears.
   - To update an existing value, click the name of the Classification Value.

     The Update Classification Value Details page appears.
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. If you are creating a new classification value, click **Create**.

The Classification Value Action Association fields appear.

6. In the Classification Value Action Association fields, from the Screen Pop Action lists, select screen pops for Oracle Universal Work Queue to associate with the corresponding media types.
7. Click **Create** or **Update** to save.

   The page refreshes.

See Also

Section 4.10.2, "Modifying Media Actions Assigned to Classification Values"

4.10.2 Modifying Media Actions Assigned to Classification Values

Use the following procedure to modify Oracle Universal Work Queue media actions assigned to existing classification values.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Define classification values. See Section 4.10.1, "Configuring Classification Values".

Steps

1. Select the Classification tab > Rules sub tab > Classification Value.

   The Classification Values page appears.
2. Click the Classification Value that you want to modify.

   The Update Classification Value Details page appears.
3. From the Screen Pop Action list, choose a screen pop action for the corresponding media types.
4. Click **Update** to save.

4.10.3 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 PL/SQL 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 Section 4.10.1, "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 procedure.

> **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 4.10.1, "Configuring Classification Values".

Steps

1. Select the Classification tab > Rules sub tab > PL/SQL Function.

   The PL/SQL Function page opens.

2. Do one of the following:

- To create a new PL/SQL function, click **Create**.

  The Create PL/SQL Function page opens.

- To update an existing PL/SQL function, click the User Function Name.

  The Update PL/SQL 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 search icon for the Value field, select a key from the Interaction Key list and then click **Select**.
10. In the Data Type field, select a data type from the list.
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 refreshes and the Sequence field is populated for each parameter.
14. Verify that the generated sequence matches the order of the parameters of the PL/SQL function in the database.

4.10.4 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

- Define at least one classification value.
- Optionally, if a classification value is derived from a PL/SQL function, then the PL/SQL function should be defined in the PL/SQL Function page.

Steps

1. Select the Classification tab > Rules sub tab > All Rules.

   The Classification Rules page opens.
2. Optionally, from the Choose Mediatype list, select a media type.
3. Click **Go**.

   The page refreshes and any rules that are assigned to the selected media type appear.
4. Do one of the following:
   - To create a new classification rule, click **Create** and proceed to step 7.

The Create Classification Rule page appears.

- To update an existing classification rule, click the Rule Name.

  The Update Classification Rule Details page appears.

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

   The page refreshes and displays the list of rules based on the search conditions.
6. Optionally, you can do the following:
   a. To view rule details, click **Show**.
   b. To hide rule details, click **Hide**.
   c. To delete a rule, check the Select box for the rule and click **Delete**.

      The page refreshes and the rule is not evaluated by the classification engine.
7. In the Rule Name field, enter an arbitrary, unique name for the rule.
8. Optionally, enter a ReRoute Time Out in seconds.
9. Click **Add**.

   The page refreshes and the conditions fields appear.
10. 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**.
11. Enter the conditions for the rule. From the lists select the Rule Key and Operator and enter a Value. Examples of sets of conditions include:
    - DNIS =8008008000 and Account Number > 10000
    - DNIS =8008008001 or Account Number <= 10000

    Add as many conditions as necessary.
12. 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.

13. Optionally, in the "Add Additional Key Value pairs to Interaction" options, to attach additional key value pairs to the interaction or call, do the following:
    - In the Key field, enter a key or click the search icon to find a key.
    - In the Value field, enter a value to be associated with this key.
14. 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.
15. Click **Update** to save.

4.10.5 Viewing Classification Rules

Use the following procedure to view classification rules by server group, media type and all classification rules.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Create at least one classification rule.

Steps

1. Select the Classification tab > Rules sub tab > All Rules.

   The Classification Rules page opens.
2. To view only the classification rules that are used for the selected media type, select a type of media from the Choose Mediatype list.
3. Click **Go**.

The page refreshes with the prioritized list of classification rules that belong to the selected media type.

4. To view a brief summary of the displayed classification rules, click **Show** beside a Rule Name.

   The page refreshes and lists a summary of the classification rules.

5. To view all the defined classification rules in the system, click **View Summary**.

   The page refreshes and lists all classification rules.

4.10.6 Setting Classification Rule Priorities

A classification rule with higher priority is evaluated before another classification rule with a lower priority.

Use the following procedure to set classification rule priorities.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Create at least one classification rule.

Steps

1. Click the Classification tab > Rules sub tab > Rules by Server Group > Priority.

   The Classification Rule Priorities page appears.

2. From the Choose Server Group list, select the server group to which the Classification Rule applies.

3. Click **Go**.

   The page refreshes and the Rule Names appear for the selected server group. The priorities are listed in descending order, so that rules with the highest priority are displayed at the top of the list.

4. 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.

5. Click **Update** to save.

4.11 Configuring Routes

Use the Route page to configure Oracle Telephony Manager for 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.

You can configure a route to be one of three types:

- Static routes are based on agents derived from Resource groups that are cached by the Routing Server.
- Dynamic routes are based on agents who are derived from a seeded routing workflow or custom PL/SQL function.
- Route point routes route calls to a pre-defined route point.

Tasks

In the Route page you can perform the following tasks:

- Section 4.11.1, "Configuring Static Routes"
- Section 4.11.2, "Configuring Dynamic Routes"
- Section 4.11.3, "Configuring Route Point Routes"
- Section 4.11.4, "Setting Route Priorities"
- Section 4.11.5, "Configuring Reroutes"
- Section 4.11.6, "Limiting the Number of Reroutes for an Unanswered Inbound Call"
- Section 4.11.7, "Setting Up Workflow-Based Routing"

4.11.1 Configuring Static Routes

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.

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 Route Name.

   The Route Details page appears.

3. If the Route Name field is blank, enter the Route Name. The Route Name is an arbitrary, descriptive name of the route.

4. In the Route Type list, select **Static**.

5. Optionally, in the ReRoute Time Out field, enter a Value in seconds for the route. This value overrides any classification time out for a route request.

6. 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.

7. Optionally, enter a Description.

8. Click **Update**.

   The Routes page refreshes. The Static Destination, Route Rules and Route Filter Details fields appear.

9. Select one or more destinations from the Static Destination list.

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 Operations.

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.

4.11.2 Configuring Dynamic Routes

Use the following procedure to configure dynamic 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 Route Name.

   The Route Details page appears.

3. If the Route Name field is blank, enter the Route Name. The Route Name is an arbitrary, descriptive name of the route.

4. In the Route Type list, select **Dynamic**.

5. Optionally, in the ReRoute Time Out field, enter a Value for the route. This value overrides any classification time out for a route request.

6. 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.

7. Optionally, enter a Description.

8. Click **Update**.

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

9. Do one of the following:
   - In the Procedure Detail box, enter a name for this function 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 13.
10. If you did not select the Default Workflow Procedure, in the Parameters field enter the Parameter and select a Value from the list. You can enter a fixed, hard-coded value in the left Value field or select an Oracle value from the list in the right Value field, for example, CustomerID. Sequence is the sequence of the parameter for a PL/SQL function. See Section 3.9.5.2, "Dynamic Routes".
11. If you did not select the Default Workflow Procedure, select a Data Type: Call Data, Date, Integer, Route Result, and Varchar.
12. If you did not select the Default Workflow Procedure, select a Direction: IN, INOUT, and OUT.
13. 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.
14. 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.
15. Click **Update** to save.

4.11.3 Configuring Route Point Routes

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 sub tab.

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 Route Name.

   The Route Details page appears.

3. If the Route Name field is blank, enter the Route Name. The Route Name is an arbitrary, descriptive name of the route.

4. From the Route Type list, select **Route Point**.

5. Optionally, in the ReRoute Time Out field, enter a Value for the route. This value overrides any classification time-out for a route request.

6. 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.

7. Optionally, enter a Description.

8. Click **Update**.

   The Routes page refreshes. The Route Point Details and Route Rules fields appear.

9. In the Route Point Details box, from the Route Point list select a route point.

10. 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.

11. Click **Update** to save.

See Also

Section 3.9.5, "Routes"

4.11.4 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 two routes.

Steps

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.

4.11.5 Configuring Reroutes

A reroute has the same route rules as the original route, but a different set of agents as the destination than the original route.

Use the following procedure to set up a reroute for a specific route.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Configure at least one route.

Steps

1. Select the Route tab > Route sub tab.

   The Routes page appears.

2. Click **Create**.

   The Route Details page appears.

3. Enter a unique Route Name for the reroute. The name cannot be the same name as the original route.

4. In the Route Type field, select a route type. The route type can be different from the route type of the original route.

5. In the Default Destination field, select a default destination. If the agent group destination defined in step 7 is not used, then the default destination is used.

6. Optionally, enter a Description.

7. Define a new agent group destination for the reroute. The destination must be different from the destination that was defined for the original route. Do one of the following:

   - For a dynamic route, configure a destination in the Procedure Details group of fields.

- For a route point route, select a destination from the Route Point Details list.
- For a static route, select a destination from the Static Destination list.

8. In the Route Rules fields, enter the same values for Key, Operator and Values as the original route.
9. Click **Update** to save.

   The page refreshes. The new reroute is listed as a Route Name in the Route page. By default, the newest route is given the lowest priority, so that the reroute automatically has a lower priority than the original route. To change route priorities, see Section 4.11.4, "Setting Route Priorities".

Note: By default, a call is routed to all agents who are logged in when a route timeout occurs with either of the following conditions:

- No reroute rule has been specified.
- All the set up reroutes have timed out, and none of the agents who have already received the media item have handled the call.

4.11.6 Limiting the Number of Reroutes for an Unanswered Inbound Call

Beginning with Release 11.5.8, administrators can control the rerouting of inbound calls in one of two ways:

- Set the time out value for a route rule to be -1 in Routing Rules Administration.
- Set a value for the Routing Server Parameter: Maximum number of Reroutes.

An interaction center administrator can control the reroute feature at a global level by setting the value of the above parameters to a non-negative value (>=0). For example regardless of the type of inbound call, if an interaction center administrator wants to limit the number of reroutes per call to 2, then the value for Maximum number of Reroute should be set to 2. In that case, all the calls serviced by that routing server will be rerouted only twice and will be in the routed agents' queues until one of the routed agents answers the call or if the customer hangs up.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Configure at least one route rule.

Steps

1. Select the Route tab > Route sub tab.

   The Routes page appears.

2. Click the relevant Route Name.

   The Route Details page appears.

3. In the Route Time Out field, enter the value `-1`.

4. Click **Update** to save.

See Also

Oracle Interaction Center Server Manager Implementation Guide

4.11.7 Setting Up Workflow-Based Routing

Perform the following procedure to use Workflow for routing.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Route tab.

   The Routes page appears.

2. Click **Create**.

   The Route Details page appears.

3. Configure a dynamic Routing Rule for incoming calls. For example, Classification equals GoldService. The PL/SQL Function/Procedure for the Routing Rule should be Default Workflow Procedure. A routing rule could have the following characteristics:

   Route Name: WorkflowRouteRule1

   Type: Dynamic

   ReRoute Time Out: 60 Seconds

   Priority: 1

   Rule: Classification equals GoldService

   PLSQL Procedure: CCT_ROUTINGWORKFLOW_PUB.LAUNCH_WORKFLOW_VERSION5

   In the above example, all calls with Classification=GoldService are sent to Workflow Routing to determine a list of agents.

4. In the Oracle Workflow Builder application, open the "Call Center Routing Starts/Ends Here!!(ALLROUTE)" Item type and do one of the following:

   a. Check if an existing process suits your interaction center requirement. Each of the following processes satisfies a particular type of inbound call and is a very powerful and efficient mode of routing. The process E-Business Routing Flow is provided as a sample flow that would satisfy the requirement of an interaction center that provides both support and sales routing functions.

      - Complete Business Flow - Campaign to Lead
      - Complete Business Flow - Customer Enquiry to Entitlement
      - Complete Business Flow - Order to Cash
      - Complete Business Flow - Quote to Contract
      - E-Business Routing Flow
      - Fast Forward Flow - Call to Order
      - Fast Forward Flow - Call to Resolution
      - Telesales Routing Flow
      - Teleservice/Customer Support Flow

      Double click a process name to view the respective process flow. If one of the above processes satisfies your interaction center routing requirement,

right click the process Name and select Properties to view the Internal Name. Write down the Internal Name of the process. Proceed to step 5.

b. If none of the above processes satisfies your requirement, then a workflow expert can define a routing workflow. A sample Routing Flow Template is provided in Processes as a starting point to build a workflow. The GetAgent node should always be used as the end point for the process flow, and the process should be set as Runnable in its Properties window.

5. Double click **Attributes** in the "Call Center Routing Starts/Ends Here!!" Item type.

The Navigator displays the list of Attributes.

6. Right click the Selected Process attribute.

7. Select **Properties**.

The Navigator Control Properties window opens.

8. In the Attribute Tab, go to the Default section. In the Value field, the default value EBUSINESSROUTING corresponds to the process E-Business Routing Flow. By default, this is the process that the Routing Server uses for routing when a dynamic workflow routing is used. To use another process instead of E-Business Routing Flow, enter the Internal Name of the process in the Value field.

9. Click **OK**.

10. Save the changes in the Navigator Window.

Using the example in step 1, if E-Business Routing Flow is set as the Selected Process, then all calls with Classification=GoldService will be routed using the process definition in E-Business Routing Flow.

New Routing Functions/Routing Nodes have been provided and are broadly classified into the following Item Types. They are available as Functions in the following Item Types.

- Call Center OTM Filters (CCTFILT)
- Derive Agents from other Attributes like Service Request Number (ATTRFILT)
- HR Competency Based Routing Filters (HRFILT)
- JTF Resource Routing Filters (JTFFILT)
- Party/Customer Initiation (PARTYINI)
- Product Initialization Phase (PRODINI)

- Other Attributes Initiation (OTHERINI)
- Sales Agent Filters (SALEFILT)
- Time/Day/Date Routing Nodes (CCTENVIR)

New sample Flows are available as Processes in the following Item Types. Administrators can use these processes and the above Functions to build a custom Workflow that suits their interaction center routing requirements.

- HR Competency Routing Node (HRROUTE)
- Telesales Routing Node (TSLROUTE)
- Territory Routing Filters (TERRFILT)
- Teleservice/Customer Care Routing Node (CSCROUTE).

See Also

Oracle Workflow Guide

4.12 Creating and Maintaining Employee Resource Information

A Resource Administration tab has been introduced in Release 11.5.9. Oracle Advanced Inbound administrators can use this tab to directly create and maintain Agent Resources and Groups.

Tasks

- Section 4.12.1, "Creating a New Employee Record"
- Section 4.12.2, "Initiating an Advanced Search for a Resource"
- Section 4.12.3, "Modifying Employee Records"

Note: This release is the first phase in the process of enabling administrators to fully configure and view the agent configuration. In future releases, administrators will be able to fully configure agents as interaction center agents. Enhancements necessary for full configuration include configuring UWQ Site or User Profiles, and support for importing resources already created as an Employee in the HR Management System. Until full configuration is available, if an Employee has already been created in HRMS Manager, Oracle recommends creating the Resource by using the existing Resource Manager facilities. See *Managing People Using Oracle HRMS*.

4.12.1 Creating a New Employee Record

Perform the following procedure to create a new employee record.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Resource tab > Employee sub tab > Summary.

   The Summary page appears.

2. Click **Create**.

   The Create An Employee Resource page appears.

3. Enter the employee information in the fields.

4. In the Job Title field, enter a part of the job title and click **Go**.

   The Select A Job Title page appears.

5. Click the correct job title.

   The Create an Employee Resource page appears.

6. In the Manager field, enter the last name of the employee's manager and click **Go**.

   The Select a Manager page appears.

7. Click the correct manager's name.

8. The Create an Employee Resource page appears

9. Enter information in any remaining fields.

10. Click **Create**

    The page refreshes and the Resource Roles and Group Membership fields appear.

11. Enter Resource Role Information.

    a. Select a Role Type from the list.

    b. Enter a role in the Role field and click **Go**.

       The Select a Role page appears.

    c. Click the appropriate role.

       The Details page appears with the Role field populated.

    d. Enter the start date in the format 24-Jul-2001 or click the calendar icon to select a date.

    e. Enter the end date in the format 24-Jul-2001 or click the calendar icon to select a date.

12. Enter Group Membership information.

    a. In the Group field, enter search criteria for the group name (at least three characters) and click **Go**.

       The Select a Group window opens.

    b. Click the appropriate group.

       The Details page appears with the Group field populated.

    c. Enter a role in the Role field and click **Go**.

       The Select a Role page appears.

    d. Click the appropriate role.

       The Details page appears with the Role field populated.

e. Enter the start date in the format 24-Jul-2001 or click the calendar icon to select a date.

f. Enter the end date in the format 24-Jul-2001 or click the calendar icon to select a date.

g. Optionally, click **Show History** to view the group membership history.

13. Click **Update** to save.

4.12.2 Initiating an Advanced Search for a Resource

Perform the following procedure to search for an employee resource.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Resource tab > Employee sub tab > Summary.

   The Resource page appears.

2. In Quick Find area, click **Advanced Search**.

   The Resource Advanced Search window opens.

3. Enter as much information in the fields as possible for your search criteria.

4. Click **Search**.

   The Employees page opens with a list of resources that match your search criteria.

5. Click the Preferred Name to view the resource's details.

6. Click the Job title to view the organizational structure.

7. Click the resource's email address to send an email.

4.12.3 Modifying Employee Records

Perform the following procedure to modify the record of an existing employee.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Resource tab > Employee sub tab > Details.

   The Details page opens. The information that appears is based on the user login. To select a different employee record, first perform a search in the Resource Advanced Search page. See Section 4.12.2, "Initiating an Advanced Search for a Resource".

2. Modify personal information:

   a. Enter search criteria for the Job Title (at least three characters) and click **Go** to search for matching titles.

      The Select a Job Title window opens.

   b. Click the appropriate job title.

      The Details page appears with the Job Title field populated.

   c. Enter the work phone number in any format, for example 555.5555 or 555-5555.

   d. Enter the email address.

      No verification is made to determine if the email address is correct.

      By default, the user name appears in the User Name field.

      The salesperson number appears in the text field.

   e. Use the drop-down list to select a sales credit type.

The category (Employee), employee number, and resource number are automatically displayed.

3. Modify the location information.
4. Modify Resource Role Information.
   a. Select a Role Type from the list.
   b. Enter a role in the Role field and click **Go**.

      The Select a Role page appears.
   c. Click the appropriate role.

      The Details page appears with the Role field populated.
   d. Enter the start date in the format 24-Jul-2001 or click the calendar icon to select a date.
   e. Enter the end date in the format 24-Jul-2001 or click the calendar icon to select a date.
5. Modify group membership information.
   a. In the Group field, enter search criteria for the group name (at least three characters) and click **Go**.

      The Select a Group window opens.
   b. Click the appropriate group.

      The Details page appears with the Group field populated.
   c. Enter a role in the Role field and click **Go**.

      The Select a Role page appears.
   d. Click the appropriate role.

      The Details page appears with the Role field populated.
   e. Enter the start date in the format 24-Jul-2001 or click the calendar icon to select a date.
   f. Enter the end date in the format 24-Jul-2001 or click the calendar icon to select a date.
   g. Optionally, click **Show History** to view the group membership history.
6. Click **Update** to save.

4.13 Assigning or Removing Employee Responsibilities

Responsibilities provide the ability to configure each agent resource with the required parameters that were previously administered in the HR Administration.

Use the following procedure to assign or remove responsibilities to an employee.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one employee resource.
- If the Employee has already been created in Human Resources Management System Manager, check that the employee resource has a configured USER NAME.

Steps

1. Select the Resource tab > Employee sub tab > Responsibility.

   The Responsibility Details page appears.

2. In the Search by Resource Full Name field, enter the employee name or use the search function to find an employee name.

3. Click **Go**.

   The page refreshes and the Responsibility Details fields appear.

Caution: Assign administrative responsibilities to trusted users only. The Call Center HTML Administration responsibility is required to implement and administer Oracle Interaction Center for use at an enterprise. This responsibility gives administrators the ability to modify routing and classification rules. Dynamic routes with PL/SQL code and dynamic groups with SQL code can access sensitive database tables. The resulting information, if misused, can introduce liability issues for the enterprise. For these reasons, Oracle strongly recommends that only trusted users be provided with the Call Center HTML Administration responsibility.

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4. In the Responsibility Key field, enter a responsibility key or use the search function to find the appropriate responsibility. Use a separate Responsibility Key field for each responsibility that you want to add.
5. Optionally, to remove a responsibility, select the responsibility and click **Delete**.
6. Click **Update** to save.

4.14 Configuring Agent Telephony Parameters

Telephony parameters provide the ability to configure each agent resource to a specific telephony middleware and the associated middleware parameters that define agent login and password details.

Use the following procedure to configure telephony parameters for an interaction center agent.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one employee resource.
- If the Employee has already been created in Human Resources Management System Manager, check that the employee resource has a configured USER NAME.

Steps

1. Select the Resource tab > Employee sub tab > Telephony Parameters.

   The Resource Details page opens.
2. In the Search by Resource Full Name field, enter the employee's full name or use the search function to find an employee name.
3. Click **Go**.

   The page refreshes and the Resource Details fields appear.
4. Select a server group from the Server Group Name list.

5. Click **Update**.

   The page refreshes and the middleware parameter fields appear.

6. Select a Middleware Name from the list.

7. Select a Parameter from the list. For a description of parameters, see the list of tables following this procedure.

8. In the Value field, enter a value to correspond to the parameter that you selected in step 7.

9. If necessary, repeat steps 6 through 8 for additional middlewares.

10. Click **Update** to save.

The following tables list agent telephony parameters according to switch and CTI middleware combinations.

Alcatel 4400 with Intel CT Connect/NetMerge Call Processing Software

For an Alcatel 4400 switch with Intel CT Connect/NetMerge Call Processing Software middleware, use the parameters in the following table to set the telephony parameters for the agent.

Table 4–12 Alcatel 4400 with Intel CT Connect/NetMerge Call Processing Software

Parameter	Description	Example
ACD Agent ID	Agent number used to log in to a telephone, as defined in the Alcatel switch administration	3551
ACD Agent Password	Agent password or personal code, as defined in the Alcatel switch administration	0000
ACD Queue	Group (PG) Number (*not* the Pilot number or the Queue number), as defined in the Alcatel switch administration	3700

Table 4–12 Alcatel 4400 with Intel CT Connect/NetMerge Call Processing Software

Parameter	Description	Example
Canonical Phone Number	A canonical phone number that is associated with the ACD Agent ID. This is typically a Direct Inward Dial (DID) number that an outside caller dials to reach this agent directly. You need to configure this field only if the canonical phone number of this agent is not the same as the Site Canonical Number Prefix (specified in the middleware configuration) concatenated with the ACD Agent ID. If a canonical phone number is associated with the teleset line extension instead of the ACD Agent ID, then configure the canonical phone number in Teleset Line Configuration instead and leave this field blank. Optional, but recommended for implementing multi-site features.	+1 (123) 456-7890

Aspect CallCenter with Aspect Contact Server

If you are using an Aspect CallCenter switch with Aspect Contact Server middleware, then use the following table to set the telephony parameters for the agent.

Table 4–13 Aspect CallCenter with Aspect Contact Server

Parameter	Description	Example
ACD Agent ID	Agent extension number, as defined in the Aspect Agent Administrator	20011
ACD Agent Password	Agent password assigned to the agent extension number	20011
Canonical Phone Number	A canonical phone number that is associated with the ACD Agent ID. This is typically a Direct Inward Dial (DID) number that an outside caller dials to reach this agent directly. You need to configure this field only if the canonical phone number of this agent is not the same as the Site Canonical Number Prefix (specified in the middleware configuration) concatenated with the ACD Agent ID. If a canonical phone number is associated with the teleset line extension instead of the ACD Agent ID, then configure the canonical phone number in Teleset Line Configuration instead and leave this field blank. Optional, but recommended for implementing multi-site features.	+1 (123) 456-7890

Avaya MultiVantage with Intel CT Connect/NetMerge Call Processing Software

If you are using an Avaya MultiVantage switch with Intel CT Connect/NetMerge Call Processing Software middleware, then use the following table to set the telephony parameters for the agent.

Table 4–14 Avaya MultiVantage with Intel CT Connect/NetMerge Call Processing Software

Parameter	Description	Example
ACD Agent ID	Agent login ID, as defined in the MultiVantage switch administration	34141
ACD Agent Password	Agent password (if a password is configured for the agent login ID), as defined in the MultiVantage switch administration	34141
Canonical Phone Number	A canonical phone number that is associated with the ACD Agent ID. This is typically a Direct Inward Dial (DID) number that an outside caller dials to reach this agent directly. You need to configure this field only if the canonical phone number of this agent is not the same as the Site Canonical Number Prefix (specified in the middleware configuration) concatenated with the ACD Agent ID. If a canonical phone number is associated with the teleset line extension instead of the ACD Agent ID, then configure the canonical phone number in Teleset Line Configuration instead and leave this field blank. Optional, but recommended for implementing multi-site features.	+1 (123) 456-7890

Cisco CallManager with Cisco ICM

If you are using a Cisco CallManager switch with Cisco ICM middleware, then use the following table to set the telephony parameters for the agent

Table 4–15 Cisco CallManager with Cisco ICM

Parameter	Description	Example
ACD Agent ID	Agent Peripheral Number, as defined in the Cisco ICM Agent Explorer	7011
ACD Agent Password	Agent Password, as defined in the Cisco ICM Agent Explorer	7011

Table 4–15 Cisco CallManager with Cisco ICM (Cont.)

Parameter	Description	Example
ACD Queue	Skill Group Peripheral Number, as defined in the Cisco ICM Skill Group Explorer	701
Canonical Phone Number	A canonical phone number that is associated with the ACD Agent ID. This is typically a Direct Inward Dial (DID) number that an outside caller dials to reach this agent directly. Configure this field only if the canonical phone number of this agent is not the same as the Site Canonical Number Prefix (specified in the middleware configuration) concatenated with the ACD Agent ID. If a canonical phone number is associated with the teleset line extension instead of the ACD Agent ID, then configure the canonical phone number in Teleset Line Configuration instead and leave this field blank. This parameter is optional, but is recommended for implementing multi-site features.	+1 (123) 456-7890

Ericsson MD110 with Intel CT Connect/NetMerge Call Processing Software

If you are using an Ericsson MD110 switch with Intel CT Connect/NetMerge Call Processing Software middleware, then use the following table to set the telephony parameters for the agent.

Table 4–16 Ericsson MD110 with Intel CT Connect/NetMerge Call Processing Software

Parameter	Description	Example
ACD Agent ID	Agent login ID, as defined in the Ericsson switch administration	2706
ACD Agent Password	Agent password, as defined in the Ericsson switch administration	2706

Table 4–16 Ericsson MD110 with Intel CT Connect/NetMerge Call Processing Software

Parameter	Description	Example
Canonical Phone Number	A canonical phone number that is associated with the ACD Agent ID. This is typically a Direct Inward Dial (DID) number that an outside caller dials to reach this agent directly. You need to configure this field only if the canonical phone number of this agent is not the same as the Site Canonical Number Prefix (specified in the middleware configuration) concatenated with the ACD Agent ID. If a canonical phone number is associated with the teleset line extension instead of the ACD Agent ID, then configure the canonical phone number in Teleset Line Configuration instead and leave this field blank. Optional, but recommended for implementing multi-site features.	+1 (123) 456-7890

Nortel Meridian with Intel CT Connect/NetMerge Call Processing Software

If you are using a Nortel Meridian switch with Intel CT Connect/NetMerge Call Processing Software middleware, then use the following table to set the telephony parameters for the agent.

Table 4–17 Nortel Meridian with Intel CT Connect/NetMerge Call Processing Software

Parameter	Description	Example
ACD Agent ID	Agent ID, typically a unique number between 1000 and 9999	7501
Canonical Phone Number	A canonical phone number that is associated with the ACD Agent ID. This is typically a Direct Inward Dial (DID) number that an outside caller dials to reach this agent directly. You need to configure this field only if the canonical phone number of this agent is not the same as the Site Canonical Number Prefix (specified in the middleware configuration) concatenated with the ACD Agent ID. If a canonical phone number is associated with the teleset line extension instead of the ACD Agent ID, then configure the canonical phone number in Teleset Line Configuration instead and leave this field blank. Optional, but recommended for implementing multi-site features.	+1 (123) 456-7890

4.15 Configuring Resource Static Groups

Static groups contain a fixed set of target agents. Use the Groups sub tab to define and modify agent static groups.

Tasks

- Section 4.15.1, "Initiating an Advanced Search for a Static Group"
- Section 4.15.2, "Creating a Static Group"
- Section 4.15.3, "Defining Static Group Hierarchy"

4.15.1 Initiating an Advanced Search for a Static Group

Perform the following steps to search for a static group resource.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Create at least one employee resource.

Steps

1. Select the Resource tab > Groups sub tab > Static Group Summary.

   The Groups window opens.

2. Click **Advanced Search**.

   The Advanced Search window opens.

3. Enter as much information in the fields as possible to define your search criteria.

4. Select a group usage from the list.

5. Enter the Active From Date or click the calendar icon to select a date. The date should be in the format 01-Jan-2003.

6. Enter the To date or click the calendar icon to select a date. The date should be in the format 01-Jan-2003. The Effective Dates range returns all groups that are

active during the dates that the user inputs. If you input an Active From Date and leave the To Date field empty, the result would return all groups active from the specified Active From Date that do not have a To Date.

7. Click **Search**.

   The Group page appears with a list of groups that match the search criteria.

4.15.2 Creating a Static Group

A static group is based on the similar functionality or roles of its members. It can consist of individual resources and resource groups.

Example

Vision Motor Corporation has several sales groups for different models. Linda, as a sales manager, leads the Vision Model A Sales Group. She has three sales representatives, John, Mark, and Carol, working directly for her. This Vision Model A Sales Group can also consist of another resource group, Key Accounts West Group, to handle sales in the west region for model A. A resource can belong to multiple groups. For example, as a sales manager for model A, Linda may belong to another sales group to provide model A information.

You can then create a new resource group, identify parent group name and group usage, as well as assign group member information.

Perform the following steps in HTML to create a group resource.

Notes: ■

- If the row contains a Remove check box, you can select the check box and update the window to delete the record. If the row contains a Remove icon, you can click it to clear the row.
- You should not modify an HTML Calendar in the Resource Manager or add either Calendar Group usages (PUBLIC CALENDAR or HTML GROUP CALENDAR) to a new or existing Resource Manager Group.
- Only one parent record can be specified for a specific period of time. However, several child records can be active at once.
- Group role functionality is defined in the Forms version only. The group role is particularly useful when a group is assigned to a team.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Set the JTFRS: Group Update Access profile to "None."

Steps

1. Select the Resource tab > Groups sub tab.

   The Groups window opens.

2. Click **Create**.

   The Create Groups window opens.

3. Enter the Group name.

4. Enter a description for the group.

5. Enter an email address for the group.

   No validation is made to determine if the email address is correct or even exists.

6. Enter the start (which defaults to the current date) and the end dates in the specified field or click the Date Picker icon to select a date. The date format must be in the following format: 28-Jul-2001.

7. Use the drop-down list to select the group usage.

8. Define the group membership information.

   a. Use the drop-down list to select a resource category. Options include: Employee, Other, Partner, Party, Supplier Contact, and To Be Hired.

   b. Enter at least three characters or enter "%%%" to search all resources.

   c. The Select a Resource window opens.

   d. Click the resource to populate the field.

   e. Use the drop-down list to select a Role Type.

   f. Enter at least three characters or enter "%%%" to search all roles.

   g. The Select a Role window opens. The roles that appear in the window correspond with the role type you selected. Check marks in the table cells define role responsibility. If you select a role with the role type of Admin or

manager, the resource can edit their group hierarchy as well as the group structure of the child groups of the parent group that they are a member.

h. Click the role to populate the field.

i. Enter the start date (which defaults to the current date) and the end date in the specified field or click the calendar icon to select a date. The date must be in the format 28-Jul-2001.

9. Click **Create**.

The Group Detail window opens with the new group information.

4.15.3 Defining Static Group Hierarchy

To maintain group hierarchy information by selecting Hierarchy from the side navigation menu, a user with appropriate access (with either the Admin or Manager group member role) can add additional child or parent groups, as well as set an end date to an existing child or parent group.

Only a group member with a role of Admin or Manager role assigned to it can perform these activities. In addition, the JTFRS: Group Update Access profile option must be set to None. The Admin or Manager role attribute can be identified when you click the Go button to open the Select a Role page. These attributes are defined in the setup window.

Perform the following steps to define group hierarchy.

Notes:

- If the row contains a Remove check box, you can select the check box and update the window to delete the record. If the row contains a Remove icon, you can click it to clear the row.
- A person in a group with the role of Manager or Admin can change his or her role and group hierarchy information but not phone or address information.

Log In

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Select a static group by way of the Resource tab > Groups sub tab > Static Group Summary.

Steps

1. Select the Resource tab > Groups sub tab > Static Group Hierarchy.

   The Group Detail - Child and Parent Groups page appears.

2. In the Parent Groups area, enter at least three character in the Group Name field or enter "%%%" to search all roles.

3. Click **Go**.

   The Select a Group page appears.

4. Click the group to populate the group name and description.

5. Enter the start date (which defaults to the current date) and the end date in the specified field or click the calendar icon to select a date. The date must be in the format 28-Jul-2001.

6. In the Child Groups area, enter at least three characters in the Group Name field or enter "%%%" to search all roles.

7. Click **Go**.

   The Select a Group window opens.

8. Click the group to populate the Group Name and Description fields.

9. Enter the start date (which defaults to the current date) and the end date in the specified field or click the calendar icon to select a date. The date must be in the format 28-Jul-2001.

4.16 Configuring Resource Dynamic Groups

Dynamic groups contain a set of target agents as part of a group that is derived by executing PL/SQL procedures.

Topics include:

- Section 4.16.1, "Creating New Dynamic Groups"
- Section 4.16.2, "Modifying or Deleting Existing Dynamic Groups"

4.16.1 Creating New Dynamic Groups

Use the following procedure to create dynamic groups.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the Resource tab > Groups sub tab > Dynamic Group Summary.

   The Dynamic Group page appears.

2. Click **Create**.

   The Dynamic Group Details page appears.

3. Enter the Group Name.
4. Optionally, enter a Description.
5. In the Query String field, enter a SQL string. Do not use the operator ";".
6. Click **Update** to save.

4.16.2 Modifying or Deleting Existing Dynamic Groups

Use the following procedure to modify or delete existing dynamic groups.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Create at least one dynamic group.

Steps

1. Select the Resource tab > Groups sub tab > Dynamic Group Summary.

   The Dynamic Groups page appears.

2. To search for a dynamic group, enter the group name in the Find Dynamic Group by Name field and click **Go**.

   The page refreshes and the server group is listed.

3. To delete a dynamic group, click Select in the row for that dynamic group and then click **Delete**.

4. To modify a dynamic group, click the Group Name.

   The Dynamic Group Details page appears.

5. Modify the information as necessary.

6. Click **Update** to save.

4.17 Creating and Maintaining Server Group Resources

Use the Server Group sub tab to view the agent resources available to server groups, and to assign or reassign agents to particular server groups.

Tasks

- Section 4.17.1, "Viewing Server Group Resources"
- Section 4.17.2, "Assigning Agents to Server Groups"

4.17.1 Viewing Server Group Resources

Use the following procedure to view a summary of resources assigned to server groups.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one employee resource.
- Create at least one server group.

Steps

1. Select the Resource tab > Server Group sub tab > Summary.

   The Resource Server Group page appears.

2. Select a server group from the Choose Server Group list.

3. Click **Go**.

   The page refreshes and the Server Group Name is listed with the Description and Number of Agents assigned to the selected server group.

4.17.2 Assigning Agents to Server Groups

Use the following procedure to assign agents to server groups.

Log in

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

- Create at least one employee resource.
- Create at least one server group.

Steps

1. Select the Resource tab > Server Group sub tab > Details.

   The Server Group Assignment Details page appears.

2. Select a server group from the Choose Server Group list.

3. Click **Go**.

4. Assign agents to a server group by moving the agents' names from the "Agents not assigned to this server group" box to the "Agents assigned to this server group" box.

5. Click **Update** to save.

4.18 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.

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

Notes:

- For these processes to run correctly, the concurrent manager framework must be available at all times.
- Run these processes even if the customer has not implemented Oracle Interaction Center Intelligence.

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**.

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."

5. Click **OK**.

   The Submit Request window opens.

6. In the Name field, click to open the drop-down menu.

   The Reports window opens.

7. 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.

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

9. Click **OK**.

   The Submit Request window appears.

10. Click **Submit**.

    The Find Requests window appears.

11. Select **All My Requests**.

12. Click **Find**.

The Requests window opens.

13. Verify that the submitted request appears in the schedule.
14. Optionally, click 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.
15. Select **File** > **Save**.

4.19 Setting Up Workflow Item Type

Use the following procedure to access the Workflow Item Type.

1. Launch Workflow Builder 2.6.
2. From the menu, Select File > Open.
3. Choose Database and enter the user name, password and Connect Strings.
4. Click **OK**.
5. The Show Item Types window opens.

   Select "Call Center Routing Starts/Ends Here!!" from the Hidden List and move it to Visible List.
6. Click **OK**.

   The Navigator opens with the Selected Item Type.

See Also

Oracle Workflow Guide

5

Verifying the Implementation

Topics include:

5.1 Oracle Advanced Inbound Implementation Verification Tasks

Perform the steps in the following table to verify the implementation of Oracle Advanced Inbound. The Number column indicates the step order. The Required column indicates whether a step is required. The Description column describes a high-level step and, where applicable, provides a reference to a more detailed topic in this document. The Responsibility column indicates the Oracle Applications user account responsibility required to complete the step.

If you have defined an administrator for Oracle Advanced Inbound media work, then that user will have all of the responsibilities necessary to implement Oracle Advanced Inbound.

Table 5–1 Implementation Verification Procedures

Number	Required?	Description	Responsibility
❑ Step 1	Required	Create a server group. See *Oracle Interaction Center Server Manager Implementation Guide*	Call Center HTML Administration
❑ Step 2	Required	Create a middleware configuration for the switch simulator. See Section 4.2.5, "Configuring Middleware for Adapter for Switch Simulator"	Call Center HTML Administration
❑ Step 3	Required	Configure the parameters for the interaction center servers. See Section 5.1.1, "Configuring Server Process Parameters for Use with the Switch Simulator"	Call Center HTML Administration
❑ Step 4	Required	Create teleset and route point configurations for the switch simulator. See Section 4.4, "Configuring Teleset Lines"	Call Center HTML Administration
❑ Step 5	Required	Configure Oracle Universal Work Queue to produce an application screen pop for media work. See Section 5.1.3, "Configuring a Media Screen Pop for Oracle Advanced Inbound"	Call Center HTML Administration
❑ Step 6	Required	Create a Web phone user for simulating a customer call to the switch simulator. See Section 5.2.1, "Creating a Web Phone User Account"	CCT_WEBPHONE_DEMO_RESP
❑ Step 7	Required	Configure the system profile options for the Web phone user. See Section 5.2.2, "Configuring Web Phone Profile Options for the Web Phone User"	System Administrator
❑ Step 8	Required	Configure the system profile options for media work in Oracle Advanced Inbound. See Section 5.1.4, "Configuring Profile Options for Media Work".	System Administrator
❑ Step 9	Required	Start the servers in the interaction center server group. See *Oracle Interaction Center Server Manager Implementation Guide*	Call Center HTML Administration

See Also

- Section 5.2, "Implementing Web Phone for Inbound Calls to the Switch Simulator"
- Section 5.3, "Testing Advanced Inbound Using the Switch Simulator"

5.1.1 Configuring Server Process Parameters for Use with the Switch Simulator

Use this procedure to configure the parameters for a server in an Oracle interaction center server group.

Login

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

Create a server group.

Steps

1. Select the ICSM tab.
2. Click **Server Groups**.

   The Server Group List page appears.
3. Click the server group name.

   The Server Group Details page displays.
4. In the Servers area, click the Inbound Telephony Server name.

   The Server Details - General page appears for the specified server.
5. Click **Parameters**.

   The Server Details - Parameters page appears.
6. In the Parameter Value field for Middleware Configuration Name, enter the name of your middleware configuration, for example `servergroup_mw`.
7. Click **Update**.
8. Click **Server Groups**.

The Server Group List page appears.

9. Click the server group name.
10. In the Servers area, click the Telephony Adapter Server name.

    The Server Details - General page appears for the specified server.
11. Click **Parameters**.

    The Server Details - Parameters page appears.
12. In the Parameter Value field for Middleware Configuration Name, enter the name of your middleware configuration.
13. Click **Update**.
14. Click **Server Groups**.

    The Server Group List page appears.
15. Click the server group name.
16. In the Servers area, click the Switch Simulator server name.

    The Server Details - General page appears.
17. Click **Parameters**.

    The Server Details - Parameters page appears.
18. Enter the parameters for the switch simulator.

Table 5–2 Switch Simulator Parameters

Parameter	Value	Sample Value
Extension Range 1 Begin	Enter the start range for the line 1 agent extensions.	7000
Extension Range 1 End	Enter the end range for the line 1 agent extensions.	7099
Extension Range 2 Begin	Enter the start range for the line 2 agent extensions.	8000
Extension Range 2 End	Enter the end range for the line 2 agent extensions.	8099
Extension Range 3 Begin	Enter the start range for extensions for the Web phone.	90000
Extension Range 3 End	Enter the end range for extensions for the Web phone.	90099

Table 5–2 Switch Simulator Parameters (Cont.)

Parameter	Value	Sample Value
Middleware Configuration Name	The name of the middleware configuration.	servergroup_mw
Route Point 1	Enter a route point.	40000
Route Point 2	Enter a route point.	40001
Route Point 3	Enter a route point	40002
Trace Level	Enter None/Error/Info/Verbose	Error

19. Click **Update**.

See Also

- Section 5.1.3, "Configuring a Media Screen Pop for Oracle Advanced Inbound"
- Section 5.1.4, "Configuring Profile Options for Media Work"

5.1.2 Creating Telesets and Route Points for the Switch Simulator

Create telesets for the switch simulator by using the line extensions that are defined in the switch simulator parameters. For example, using the Sample Values in Table 5–2, "Switch Simulator Parameters", a teleset should have Line Index 1 extension set to "8000" and Line Index 2 extension set to "7000." Line Index 3 extension should be blank. The Hardware Number should be "7000." The Teleset Type should be "Nortel".

Create route points for the switch simulator by using the route points that are defined in the switch simulator parameters. For example, using the Sample Values in Table 5–2, "Switch Simulator Parameters", a route point should have a Route Point Number of "40000".

See Also

- Chapter 5.1.1, "Configuring Server Process Parameters for Use with the Switch Simulator"
- Section 4.4, "Configuring Teleset Lines"
- Section 4.3, "Configuring Route Points"

5.1.3 Configuring a Media Screen Pop for Oracle Advanced Inbound

Classifications (for example, "Gold Support") can be assigned to calls based on the information in the call (for example, the number dialed by the caller). Then, for a specific type of media, the classification is mapped to a business application page. When an agent requests the delivery of that media type, the mapped business application is launched.

Use this procedure to associate media work with a CRM business application. When a media item is delivered to the Oracle Advanced Inbound desktop, a CRM business application is launched based on the media type and the media item classification.

Login

HTML Login URL

Responsibility

Call Center HTML Administration

Prerequisites

None

Steps

1. Select the UWA Media Action tab.

   The Media Classification Action Association page appears.

2. In the Media Type field, select Inbound Telephony.

3. Leave the Classification field blank.

   Note: The call classification triggers the media action (screen pop). A blank field in the Classification column indicates that the default media action for any unassociated classification belongs to the same Media Type.

4. In the Media Action field, select **Customer Care media function** or **TeleSales Inbound Telephony function**.

   This determines the application that will be launched when a media item of the specified type with the specified classification is selected from a work node.

5. To clear a row, select the Remove check box to the left of the media classification action association. Selected rows will be removed when you click **Update**.
6. To save your work, click **Update**.

   The Media Classification Action Association page appears.
7. To delete a media classification action association, select the Remove checkbooks to the left of the media type and click **Update**.

See Also

- Section 5.1.1, "Configuring Server Process Parameters for Use with the Switch Simulator"
- Section 5.1.4, "Configuring Profile Options for Media Work"

5.1.4 Configuring Profile Options for Media Work

Use this procedure to set system profile options.

Login

Self Service Login URL

Responsibility

System Administrator

Prerequisites

Review *Oracle Applications Systems Administrator's Guide*.

Steps

1. In the Navigator window, on the Functions tab, choose **Profile** > **System**.

   The Find System Profile Values window appears. The Site and Profiles with No Values check boxes are selected by default.
2. Specify the level or levels at which you wish to view or set profile option values.
   - If you want to view or set profile options for all users at the installation site, select the Site box.

- If you want to view or set profile options for users working under responsibilities owned by a specific application, select the Application box and then select an application from the Application list.
- If you want to view or set profile options for users working under a specific responsibility, select the Responsibility box and then select a responsibility from the Responsibility list.
- If you want to view or set profile options for a specific user, select the User box and then select a user name from the User list.

3. If you want to display profile options both with and without values, select the Profiles with No Values check box.
4. If you want to display profile options that include a specific character string, enter the string in the Profile field.

   You may search for profile options using character strings and the wildcard symbol (%). For example, to find profile options prefixed by "IEU", the product code for Oracle Universal Work Queue, enter **IEU%**.
5. Click **Find**.

   The System Profile Values window appears.
6. Set the values for the profile options at one or more levels.

   When a profile option may be set at more than one level, the value entered at the Site level has the lowest priority. The value entered at the Site level is superseded by any value entered at the Application level value and the value entered at the Application level is superseded by any value entered at the Responsibility level. The value entered at the User level has the highest priority and overrides values entered at any other level.

   The following table lists the Oracle Advanced Inbound profile option values to be used for testing Oracle Advanced Inbound with media work.

Table 5–3 Profile Option Values

Profile Option	Value
IEU: Blending Style	Not Blended
IEU: Desktop: Network: Proxy Port	Null
IEU: Desktop: Network: Proxy Server	Null
IEU: Desktop: Network: Use Proxy	No
IEU: Desktop: Trace Level	None

Table 5–3 Profile Option Values (Cont.)

Profile Option	Value
IEU: Desktop: UI: Refresh Style	Automatic
IEU: Desktop: UI: Show All Nodes	Yes
IEU: Desktop: UI: Refresh Rate	Null
IEU: Message: UI: UWQ Notice	No
IEU: Optional: Phone Extension	Null
IEU: Queue Order: Advanced Outbound Telephony	Null
IEU: Queue Order: Blended	Null
IEU: Queue Order: Enterprise Tasks	Null
IEU: Queue Order: Escalations	Null
IEU: Queue Order: Forecasts	Null
IEU: Queue Order: Inbound Email	Null
IEU: Queue Order: Inbound Telephony	Null
IEU: Queue Order: Leads	Null
IEU: Queue Order: Media Nodes	Null
IEU: Queue Order: Opportunities	Null
IEU: Queue Order: Outbound Telephony	Null
IEU: Queue Order: Service Requests	Null
IEU: Queue Order: Work List	Null
IEU: Queue: Advanced Outbound Telephony	Null
IEU: Queue Enterprise Tasks	Yes
IEU: Queue: Escalations	Yes
IEU: Queue: Forecasts	Yes
IEU: Queue: Inbound Email	No
IEU: Queue: Inbound Telephony	Yes
IEU: Queue: Leads	Yes
IEU: Queue: Opportunities	Yes
IEU: Queue: Outbound Telephony	No

Table 5–3 Profile Option Values (Cont.)

Profile Option	Value
IEU: Queue: Service Requests	Yes
IEU: Queue: Work List	Yes
IEU: Session History Logging	No

7. From the **File** menu, choose **Save**.

   Your changes take effect as soon as users sign on or change responsibility.

See Also

- Section 5.1.1, "Configuring Server Process Parameters for Use with the Switch Simulator"
- Section 5.1.3, "Configuring a Media Screen Pop for Oracle Advanced Inbound"

5.2 Implementing Web Phone for Inbound Calls to the Switch Simulator

Use the following procedures to test the Oracle Advanced Inbound implementation without setting up a physical switch and CTI middleware. Administrators can use Web Phone and Switch Simulator for demonstration, evaluation or verification.

Topics include:

- Section 5.2.1, "Creating a Web Phone User Account"
- Section 5.2.2, "Configuring Web Phone Profile Options for the Web Phone User"

5.2.1 Creating a Web Phone User Account

Use this procedure to create an Oracle Applications user account for operating the Web phone.

Login

Self Service Login URL

Responsibility

System Administrator

Prerequisites

Review *Oracle Applications Systems Administrator's Guide*.

Steps

1. In the Navigator window, on the Functions tab, choose **Security** > **User** > **Define**.

   The Users window appears.

2. In the User Name field, enter the name of the user account. Use the following guidelines to define Oracle Applications user names:

   - Use only alphanumeric characters ('A' through 'Z', and '0' through '9') and underscore.
   - Use only the set of characters that your operating system supports for filenames.

3. Optionally, in the Description field enter explanatory text about the user.

4. In the Password field, enter the password for the user account. The password is temporary. When the user signs in to Oracle Applications for the first time, the message "Your password has expired" appears and the user is prompted to set a new password. Use the following guidelines to define Oracle Applications passwords:

   - Use at least five characters and no more than 100 characters.
   - Use only alphanumeric characters ('A' through 'Z', and '0' through '9') and underscore.

5. Press the Tab key.

   The cursor remains in the Password field. In the status bar, the message "Re-enter your password to verify" appears.

6. Re-enter the password to verify it.

7. Press the Tab key.

   The cursor jumps to the default Password Expiration option "None."

8. Either accept the default Password Expiration or enter a number of days or accesses to limit the validity of the password.

9. In the Person field, select an employee to associate with this user account.

10. In the Responsibilities tab, add the following responsibility:

Table 5–4 Web Phone User Account Responsibility

Responsibility	Function	Type
CCT_WEBPHONE_DEMO_RESP	Operate the Web phone to simulate a customer call to the Switch Simulator	HTML

Once the user record has been saved, you cannot delete an assigned responsibility. Oracle Applications maintains audit data for assigned responsibilities.

To deactivate an assigned responsibility, set the effective end date (in the Effective Dates - To field) of the assigned responsibility to the current date. To activate an assigned responsibility, clear or reset the effective end date.

Note: If the same user has been assigned previously as a Web phone user, then check that the previous responsibility "Call Center Demo" has been deactivated.

11. From the **File** menu, choose **Save**.

See Also

Section 5.2.2, "Configuring Web Phone Profile Options for the Web Phone User"

5.2.2 Configuring Web Phone Profile Options for the Web Phone User

Use this procedure to set system profile options for the Web phone user.

Login

Self Service Login URL

Responsibility

System Administrator

Prerequisites

Review *Oracle Applications Systems Administrator's Guide*.

Steps

1. In the Navigator window, on the Functions tab, choose **Profile** > **System**.

The Find System Profile Values window appears. The Site and Profiles with No Values check boxes are selected by default.

2. Select the User box and then enter the name of the Web phone user.
3. If you want to display profile options both with and without values, select the Profiles with No Values check box.
4. If you want to display profile options that include a specific character string, enter the string in the Profile field.

   You may search for profile options using character strings and the wildcard symbol (%). For example, to find Web phone profile options, enter **CCT:TOOL%**.
5. Click **Find**.

   The System Profile Values window appears.
6. Set the values for the profile options at one or more levels.

   When a profile option may be set at more than one level, the value entered at the Site level has the lowest priority. The value entered at the Site level is superseded by any value entered at the Application level value and the value entered at the Application level is superseded by any value entered at the Responsibility level. The value entered at the User level has the highest priority and overrides values entered at any other level.

   The following table lists the Oracle Advanced Inbound profile option values to be used for testing Oracle Advanced Inbound with media work.

Table 5–5 Profile Option Values

Profile Option	Value	Example
CCT:TOOL:SERVER_GROUP	<servergroupname>	servergroup
CCT:TOOL:MW_CONFIG	<middlewareconfigurationname>	servergroup_mw
CCT:TOOL:EXT_START	Enter "Extension Range 3 Begin" from the Switch Simulator configuration.	90000
CCT:TOOL:EXT_END	Enter "Extension Range 3 End" from the Switch Simulator configuration.	90099
CCT:TOOL:DEFAULT_ROUTE_POINT	Enter the route point value from the Switch Simulator configuration.	40000

Table 5–5 Profile Option Values (Cont.)

Profile Option	Value	Example
CCT:TOOL:REFRESH_RATE	This is the refresh rate of the Web phone interface in seconds. The default is 5.	5
CCT:TOOL:HIDDEN_DATA	Do not use. The default is No. This profile option is for hidden data passed in the inbound call. It has the format key1=value1,key2=value2.	Not applicable
CCT:TOOL:VISIBLE_ROUTE_POINT	Do not use.	Not applicable
CCT:TOOL:IVR_DATA	This profile option is for IVR data passed in the inbound call. It has the format k1=v11;v12;v13,k2=v21;v22, in which v11, v12 and v13 show the drop-down list for k1 in the Web phone interface. Check that k1 and k2 are exactly the same (case sensitive) as the "interaction_key" field in the "CCT_INTERACTION_KEYS" table.	

7. From the **File** menu, choose **Save**.

   Your changes take effect as soon as users sign on or change responsibility.

See Also

Section 5.2.1, "Creating a Web Phone User Account"

5.3 Testing Advanced Inbound Using the Switch Simulator

Use this procedure to simulate an inbound call to Oracle Advanced Inbound.

> **Note:** The rate at which the Web Phone page refreshes is based on the value in the CCT:TOOL:REFRESH_RATE profile option.

Login

HTML Login URL

Responsibility

CCT_WEBPHONE_DEMO_RESP

Prerequisites

- Use Internet Explorer.
- Configure the following internet options for Web phone use.
  a. Choose **Start** > **Settings** > **Control Panel**.
  b. Double-click **Internet Options**.

     The Internet Properties window appears.
  c. In the Temporary Internet Files area, click **Delete Files**.
  d. In the Delete Files window, select **Delete all offline content** and then click **OK**.
  e. In the Temporary Internet Files area, click **Settings**.
  f. In the Settings window, under Check for newer versions of stored pages, select **Every visit to the page** and then click **OK**.
  g. In the Interaction Properties window, click **OK**.
- If necessary, close *all* Internet Explorer sessions and restart Internet Explorer.
- Start the servers in the interaction center server group. (See *Oracle Interaction Center Implementation Guide*.)

Steps

1. On the Web Phone tab, click **Request Extension**.

   An extension appears starting with the extension defined in Extension Range 3 End parameter for the Switch Simulator.
2. Click an extension number.

   A Web phone appears.
3. In the Web phone, do one of the following:
   - Click Speed Dial to dial the route point defined in the CCT:TOOL:DEFAULT_ROUTE_POINT profile option for the user.
   - Enter a route point and then click **Dial**. The route point must be defined in the Switch Simulator parameters.
4. To make a call from another Web phone extension, click **Request Extension** on the Web Phone tab and then click the new extension.

When a connection with the Switch Simulator is established, the Web phone state is Connected and the Line button is green.

5. To hang up, click **Release**.

See Also

- Section 5.1, "Oracle Advanced Inbound Implementation Verification Tasks"
- Section 5.2, "Implementing Web Phone for Inbound Calls to the Switch Simulator"

6

Diagnostics and Troubleshooting

Use the following information to diagnose and fix issues encountered in implementing and using Oracle Advanced Inbound.

6.1 Telephony Adapter Server java.lang.NoClassDefFoundError

The error "java.lang.NoClassDefFoundError" in the Oracle Telephony Adapter Server log, for what appears to be a third-party class (for example, com/dialogic/ctcapi/ctcException), is caused by a missing third-party client library on the Interaction Center Server Manager node where Oracle Telephony Adapter Server is running.

To fix this issue, copy the third-party, middleware-specific client library file into the Oracle Telephony Adapter Server machine's directory icsm/admin/scripts/3rdparty. The middleware-specific files are:

- For Intel NetMerge Call Processing Software or Intel CT Connect, copy the file ctcapi.jar.
- For Aspect CMI Server, copy the file ABObject.jar. No client library is required for Cisco ICM.

After you have copied the appropriate file into the correct directory, restart Oracle Telephony Adapter Server.

A

Oracle Advanced Inbound Server Parameters

This section describes the parameters for most Interaction Center servers. Administrators can set server parameters by using the Call Center HTML Administration interface. The parameters are stored in the Oracle Applications database.

Topics include:

A.1 Server Parameters Worksheet

Topics include:

- Section A.1.5, "Telephony Adapter Server Parameters"
- Section A.1.6, "Telephony Manager Parameters"

A.1.1 Inbound Telephony Server Parameters

Server Name:

Node Assignment:

Server Group:

Table A–1 Inbound Telephony Server Parameters

Parameter	Value
Database Logging	❑ true ❑ false
Middleware Configuration Name	
Trace Level	❑ fatal ❑ error ❑ warning ❑ info ❑ verbose

A.1.2 Interaction Queueing and Distribution Parameters

Server Name:

Node Assignment:

Server Group:

Table A–2 Interaction Queuing and Distribution Parameters

Parameter	Value
Database Logging	❑ true ❑ false
IH JDBC Connections	
JDBC Connections	

Table A–2 Interaction Queuing and Distribution Parameters (Cont.)

Parameter	Value
Trace Level	❑ fatal ❑ error ❑ warning ❑ info ❑ verbose
Web Callback	❑ False ❑ True

A.1.3 Routing Server Parameters

Server Name:

Node Assignment:

Server Group:

Table A–3 Routing Server Parameters

Parameter	Value
Database Logging	❑ true ❑ false
Default ReRoute Time Out	
Maximum Number of Reroutes	
MetaData Refresh Rate	
No of JDBC Connections	
No of Concurrent Route Request (Max)	
No of Concurrent Route Request (Min)	
Polling Interval while DB Down	
Trace Level	❑ fatal ❑ error ❑ warning ❑ info ❑ verbose

A.1.4 Switch Simulator Parameters

Server Name:

Node Assignment:

Server Group:

Table A–4 Switch Simulator Parameters

Parameter	Value
Extension Range 1 Begin	
Extension Range 1 End	
Extension Range 2 Begin	
Extension Range 2 End	
Extension Range 3 Begin	
Extension Range 3 End	
Middleware Configuration Name	
Route Point 1	
Route Point 2	
Route Point 3	
Trace Level	❑ fatal ❑ error ❑ warning ❑ info ❑ verbose

A.1.5 Telephony Adapter Server Parameters

Server Name:

Node Assignment:

Server Group:

Table A–5 Telephony Adapter Server Parameters

Parameter	Value
Database Logging	❑ true ❑ false
Middleware Configuration Name	
Trace Level	❑ fatal ❑ error ❑ warning ❑ info ❑ verbose

A.1.6 Telephony Manager Parameters

Server Name:

Node Assignment:

Table A–6 Telephony Manager Parameters

Parameter	Value
Database Logging	❑ true ❑ false
IH JDBC Connections	
JDBC Connections	
Trace Level	❑ fatal ❑ error ❑ warning ❑ info ❑ verbose

A.2 Inbound Telephony Server

Database Logging
Possible values are {true, false}.

Default is false.

When database logging is turned on {true}, exceptions and error level messages are logged to the database and can be viewed in the Log Viewer page. Use database logging as a diagnostic tool only as logging will affect the performance of the system.

Middleware Configuration Name
The name of the middleware configuration.

Trace Level
Specify the type of messages logged to the trace file.

Possible values are {fatal, error, warning, info, verbose}.

Default trace level is error level messages only.

A.3 Routing Server

Database Logging
Possible values are {true, false}.

Default is false.

When database logging is turned on {true}, exceptions and error level messages are logged to the database and can be viewed in the Log Viewer page. Use database logging as a diagnostic tool only as logging will affect the performance of the system.

Maximum Number of Reroutes
Specifies the system-wide limit on the maximum number of times a particular media item can be rerouted to the Routing Server. To override this parameter, enter a negative value in the Time Out field in the Route sub tab >Route Detail page.

Type: Integer

Default Value: There is no limit to the number of reroutes.

MetaData Refresh Rate
Specifies the time interval at which Oracle Routing Server scans the database for changes to metadata, consisting of routes and classification definitions.

Type: Integer

Unit: Minutes

Default Value: refresh_rate = 30

No of JDBC Connections

Increases the speed of serving incoming dynamic routing requests, and specifies the number of JDBC connections maintained by Oracle Routing Server for dynamic or workflow routes and dynamic classifications.

Default value: 3. Recommended range for this parameter is from 3-15. Higher values improve the real-time performance of the server process but uses more CPU.

Default ReRoute Time Out

Specifies the time that the Routing Server waits for agents to be ready for the next call or next media item. If no agent becomes ready, the same media item is rerouted by the Routing Server.

Type: Integer

Unit: Seconds

Default Value: 300

No of Concurrent Route Requests (Max)

Specifies the maximum number of concurrent route requests that the routing server can process.

Type: Integer

Default Value: 5

No of Concurrent Route Requests (Min)

Specifies the number of concurrent route request threads that the routing server runs continuously.

Type: Integer

Default Value: 2

Polling Interval while DB Down

Specifies the time interval at which Oracle Routing Server tries to reconnect to the database if the database goes down.

Type: Integer

Unit: Minutes

Default Value: 1 minute

Trace Level
Specify the type of messages logged to the trace file.

Possible values are {fatal, error, warning, info, verbose}.

Default trace level is error level messages only.

A.4 Switch Simulator

The switch simulator simulates a Nortel Meridian switch.

Extension Range 1 Begin
Specify beginning of your virtual extension range for line 1 of each teleset.

Extension Range 1 End
Specify end of your virtual extension range for line 1 of each teleset.

Extension Range 2 Begin
Specify beginning of your virtual extension range for line 2 of each teleset.

Extension Range 2 End
Specify end of your virtual extension range for line 2 of each teleset.

Extension Range 3 Begin
Specify beginning of your virtual extension range for the Web phone.

Extension Range 3 End
Specify end of your virtual extension range for the Web phone.

Middleware Configuration Name
Specify the name of the middleware configuration

Route Point 1
Specify a route point number.

Route Point 2
Specify a route point number.

Route Point 3
Specify a route point number.

Trace Level
Specify the type of messages logged to the trace file.

Possible values are {fatal, error, warning, info, verbose}.

Default trace level is error level messages only.

A.5 Telephony Adapter Server

Database Logging
Possible values are {true, false}.

Default is false.

When database logging is turned on {true}, exceptions and error level messages are logged to the database and can be viewed in the Log Viewer page. Use database logging as a diagnostic tool only as logging will affect the performance of the system.

Middleware Configuration Name
The name of the middleware configuration.

Trace Level
Specify the type of messages logged to the trace file.

Possible values are {fatal, error, warning, info, verbose}.

Default trace level is error level messages only.

A.6 Telephony Manager

Database Logging
Possible values are {true, false}.

Default is false.

When database logging is turned on {true}, exceptions and error level messages are logged to the database and can be viewed in the Log Viewer page. Use database logging as a diagnostic tool only as logging will affect the performance of the system.

IH JDBC Connections
Specify number of JDBC connections used by the server for saving interaction history records to the database.

Default value = 1. Recommended range for this parameter is from 1-5. Higher value causes faster updates of interaction history data but uses more CPU.

JDBC Connections

Specify number of JDBC connections used by the server.

Default value = 3. Recommended range for this parameter is from 3-15. Higher value improves the real time performance of the server process but uses more CPU.

Trace Level

Specify the type of messages logged to the trace file.

Possible values are {fatal, error, warning, info, verbose}.

Default trace level is error level messages only.

A.7 Interaction Queuing and Distribution

Database Logging

Possible values are {true, false}.

Default is false.

When database logging is turned on {true}, exceptions and error level messages are logged to the database and can be viewed in the Log Viewer page. Use database logging as a diagnostic tool only as logging will affect the performance of the system.

IH JDBC Connections

Specify number of JDBC connections used by the server for saving interaction history records to the database.

Default value = 1. Recommended range for this parameter is from 1 to 5. Higher values cause faster updates of interaction history data but use more of the CPU.

JDBC Connections

Specify number of JDBC connections used by the server.

Default value = 3. Recommended range for this parameter is from 3-15. Higher value improves the real time performance of the server process but uses more CPU.

Trace Level

Specify the type of messages logged to the trace file.

Possible values are {fatal, error, warning, info, verbose}.

Default trace level is error level messages only.

Web Callback

Specify whether to receive Web callbacks.

Possible values are {true, false}.

Default is {false}.

Set to {true} to turn on Web callbacks.

B

Middleware Parameter Equivalents Across Releases

The following tables compare Oracle Advanced Inbound CTI middleware parameters across recent releases.

- Table B–1, "Intel CT Connect / Intel NetMerge Call Processing Software Parameter Equivalents"
- Table B–2, "Cisco Intelligent Contact Management Parameter Equivalents"

Table B–1 Intel CT Connect / Intel NetMerge Call Processing Software Parameter Equivalents

11.5.5, FP-K	11.5.6/11.5.7, FP-M	11.5.8, FP-O and FP-P	11.5.9, FP-Q
Connectors for Intel CT Connect	Connectors for Intel CT Connect	Adapter for Intel CT Connect	Adapter for Intel CT Connect and Adapter for Intel NetMerge Call Processing Software
IP Address	IP Address	Obsolete	Obsolete
Port Number	Port Number	Obsolete	Obsolete
CTI Enabler IP Address	CTI Enabler IP Address	Intel CT Connect IP Address	Intel CT Connect IP Address/CPS Server IP Address 1
PBX Name	PBX Name	Intel CT Connect Link Logical Identifier	Intel CT Connect Link Logical Identifier/CPS Link Logical Identifier 1
			(Intel NetMerge Call Processing Software only) CPS Server IP Address 2

Table B–1 Intel CT Connect / Intel NetMerge Call Processing Software Parameter Equivalents (Cont.)

11.5.5, FP-K	11.5.6/11.5.7, FP-M	11.5.8, FP-O and FP-P	11.5.9, FP-Q
			(Intel NetMerge Call Processing Software only) CPS Link Logical Identifier 2
PBX Type	PBX Type	PBX Type	PBX Type
Middleware Server Info 1	Obsolete	Obsolete	Obsolete
Route Point Set 1 through 5	Moved to Route Point page	Moved to Route Point page	Moved to Route Point page
	Passive Mode	Passive Mode	Passive Mode
Outgoing Prefix	Outgoing Prefix	Outgoing Prefix	Local Number Access Code
	Domestic Dialing Prefix	Domestic Dialing Prefix	Long Distance Access Code
International Dialing Prefix	International Dialing Prefix	International Dialing Prefix	International Access Code
			Local Area Codes
			Non-Local Exchanges
Site Area Code	Site Area Code	Site Area Code	Site Area Code
Site Country Code	Site Country Code	Site Country Code	Site Country Code
	Site Internal Number Length	Site Internal Number Length	Site Internal Number Length
	Site Local Number Maximum Length	Site Local Number Maximum Length	Site Local Number Maximum Length
	Site Overlay	Site Overlay	Site Overlay
			Active Routing Target Type
			Site Canonical Number Prefix
			Default Inbound Phone Number Suffix Type
			Default Outbound Phone Number Suffix Type
			Default Enterprise Routing Route Point
IVR Server Name	IVR Host	IVR Host	IVR Host

Table B–1 Intel CT Connect / Intel NetMerge Call Processing Software Parameter Equivalents (Cont.)

11.5.5, FP-K	11.5.6/11.5.7, FP-M	11.5.8, FP-O and FP-P	11.5.9, FP-Q
	IVR Port	IVR Port	IVR Port
	IVR Info [1-3]	Obsolete	Obsolete
	IVRI Mode	IVRI Mode	IVRI Mode
	IVRI Abandon Threshold	IVRI Abandon Threshold	IVRI Abandon Threshold
	Use Advanced Outbound		
	Predictive Transfer Flag		
	Predictive Transfer Wait Time		
	Predictive Answer Flag		
	Predictive Answer Wait Time		
	Disable Warm Transfer/Conference for all Applications	Disable Warm Transfer/Conference for all Applications	Disable Warm Transfer/Conference for all Applications
	Warm Transfer/Conference Initiation Wait Time (seconds)	Warm Transfer/Conference Initiation Wait Time (seconds)	Warm Transfer/Conference Initiation Wait Time (seconds)
			Enable Softphone Reset Popup Menu

Table B–2 Cisco Intelligent Contact Management Parameter Equivalents

11.5.5, FP-K	11.5.6 and 11.5.7, FP-M	11.5.8, FP-O and FP-P	11.5.9, FP-Q
Connectors for Cisco ICM	Connectors for Cisco ICM	Adapter for Cisco ICM	Adapter for Cisco ICM
IP Address	IP Address	Obsolete	Obsolete
Port Number	Port Number	Obsolete	Obsolete
CTI Enabler IP Address	CTI Enabler IP Address	Site A Host IP Address	Site A Host IP Address
PBX Name	PBX Name	Peripheral Identifier	Peripheral Identifier
PBX Type	PBX Type	PBX Type	PBX Type
Middleware Server Info 1	Middleware Server Info 1	Site A Host IP Port	Site A Host IP Port

Table B–2 Cisco Intelligent Contact Management Parameter Equivalents (Cont.)

11.5.5, FP-K	11.5.6 and 11.5.7, FP-M	11.5.8, FP-O and FP-P	11.5.9, FP-Q
Middleware Server Info 2	Middleware Server Info 2	Site B Host IP Address	Site B Host IP Address
Middleware Server Info 3	Middleware Server Info 3	Site B Host IP Port	Site B Host IP Port
	Middleware Server Info 4	Obsolete	Obsolete
	Middleware Server Info 5	Media Item Call Variable	Media Item Call Variable
Route Point Set [1-5]	Moved to Route Point page	Moved to Route Point page	Moved to Route Point page
	Passive Mode	Passive Mode	Passive Mode
Outgoing Prefix	Outgoing Prefix	Outgoing Prefix	Local Number Access Code
	Domestic Dialing Prefix	Domestic Dialing Prefix	Long Distance Access Code
International Dialing Prefix	International Dialing Prefix	International Dialing Prefix	International Access Code
			Local Area Codes
			Non-Local Exchanges
Site Area Code	Site Area Code	Site Area Code	Site Area Code
Site Country Code	Site Country Code	Site Country Code	Site Country Code
	Site Internal Number Length	Site Internal Number Length	Site Internal Number Length
	Site Local Number Maximum Length	Site Local Number Maximum Length	Site Local Number Maximum Length
	Site Overlay	Site Overlay	Site Overlay
			Active Routing Target Type
			Site Canonical Number Prefix
			Default Inbound Phone Number Suffix Type
			Default Outbound Phone Number Suffix Type
			Default Enterprise Routing Route Point

Table B–2 Cisco Intelligent Contact Management Parameter Equivalents (Cont.)

11.5.5, FP-K	11.5.6 and 11.5.7, FP-M	11.5.8, FP-O and FP-P	11.5.9, FP-Q
	Disable Warm Transfer or Conference for all Applications	Disable Warm Transfer or Conference for all Applications	Disable Warm Transfer or Conference for all Applications
	Warm Transfer or Conference Initiation Wait Time in seconds	Warm Transfer or Conference Initiation Wait Time in seconds	Warm Transfer or Conference Initiation Wait Time in seconds
			Enable Softphone Reset Popup Menu

C

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.

C.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.

Table C–1 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

Table C–1 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)

C.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.

Table C–2 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)

C.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.

Table C–3 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.

C.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.

Table C–4 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		

D

Multi-Site Implementation Worksheet

Before you implement a muti-site, record the following information for each interaction center.

This section's topics include:

D.1 Telesets

If phone numbers are assigned to telesets, gather the following teleset information. Not all switches assign phone numbers to telesets, and some switches can be configured so that a phone number is assigned to either an agent or a teleset.

Table D–1 Teleset Phone Numbers

Teleset/Line	Extension	Inbound Phone Number	Outbound Phone Number

The inbound phone number is the Direct Inward Dial (DID) number, the number that an outside caller dials to reach the teleset line directly. The outbound phone number is the number displayed at the destination of a call that is placed to the outside. For most call centers, the inbound and outbound phone numbers are the same. For most call centers, the last few digits of the phone number match the extension number.

D.2 Agents

If phone numbers are assigned to agents, record the following information.

Table D–2 Agent Phone Numbers

Agent	ACD Agent ID	Inbound Phone Number	Outbound Phone Number

Inbound and outbound phone numbers are analogous to the teleset. For most call centers, the inbound and outbound phone numbers are the same, and the last few digits of the phone number match the ACD Agent ID.

D.3 Route Points

The following information about route points is required for every implementation.

Table D–3 Route Point Phone Numbers

Route Point Number	Inbound Phone Number

Route points do not have an outbound phone number because they cannot place calls.

D.4 Middleware Config Active Routing Target Type

Before proceeding with the implementation, prepare an answer to the following question: When a call is routed to an agent or teleset, is the actual target of the call a specific teleset line, the agent, or the teleset as a whole? The answer is the Middleware Config Active Routing Target Type, even if you are not using Oracle Advanced Inbound active mode.

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).

canonical phone number

A standardized telephone number of the format:

+<country code> (<area code>) <local exchange>-<subscriber number>

For example: "+1 (555) 123-4567" is a United States (+1) telephone number within the 555 area code.

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 points
- ITS detects calls that are abandoned at route points

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/NetMerge Call Processing Software 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.

Wait Time

The time between the Call Birth Time (database system time) and the time the call comes to the agent's softphone (database system time). The two values must be both database system time, otherwise the wrong Wait Time will be generated.

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