Oracle® Telephony Manager

Implementation Guide

Release 11*i*

November 2000

Part No. A86114-02

ORACLE®

Oracle Telephony Manager Implementation Guide, Release 11*i*

Part No. A86114-02

Copyright © 2000, Oracle Corporation. All rights reserved.

The Programs (which include both the software and documentation) contain proprietary information of Oracle Corporation; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. Oracle Corporation does not warrant that this document is error free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Oracle Corporation.

If the Programs are delivered to the U.S. Government or anyone licensing or using the programs on behalf of the U.S. Government, the following notice is applicable:

Restricted Rights Notice Programs delivered subject to the DOD FAR Supplement are "commercial computer software" and use, duplication, and disclosure of the Programs, including documentation, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement. Otherwise, Programs delivered subject to the Federal Acquisition Regulations are "restricted computer software" and use, duplication, and disclosure of the Programs shall be subject to the restrictions in FAR 52.227-19, Commercial Computer Software - Restricted Rights (June, 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and Oracle Corporation disclaims liability for any damages caused by such use of the Programs.

Oracle is a registered trademark, and **Oracle Telephony Manager** is a trademark or registered trademark of Oracle Corporation. Other names may be trademarks of their respective owners.

Contents

Send Us Your Comments

Oracle Telephony Manager Implementation Guide, Release 11*i*

Part No. A86114-02

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

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most?

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 via the postal service.

Oracle Corporation
CRM Content Development Manager
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

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

Welcome to the Oracle Customer Relationship Management, Release 11*i*, suite of applications.

This Implementation Guide provides general descriptions of the setup and configuration tasks required to implement Oracle Telephony Manager successfully.

This preface explains how this Implementation Guide is organized and introduces other sources of information that can help you.

Intended Audience

This guide is aimed at anyone who is tasked with implementing Oracle Telephony Manager, including:

- Database Administrators
- System Administrators
- Technical Specialists

This guide assumes you have the following prerequisites:

1. Understanding of computer-telephony integration (CTI)
2. Understanding of call center technology
3. Understanding of the company business processes
4. Understanding of Oracle Applications, Release 11i
5. Understanding of Oracle Workflow

Structure

This manual contains the following sections:

- Considerations for Planning an Implementation Project
- Typical Release Dependencies
- Related Documentation and Resources
- Upgrading from Oracle Telephony Manager 3i
- Setting Up Oracle Telephony Manager
- Setting Up Rules-Based Routing for Inbound Calls and Email
- Setting Up Workflow-Based Routing for Inbound Calls and Email
- Setting Profile Options
- System Profile Options
- Configuring and Testing Integration Points
- Testing an Implementation Project

Related Documents

For more information, see the following manuals:

- *Oracle Applications Concepts*
- *Oracle Applications Product Update Notes, Release 11i*
- *Oracle Applications Release Notes, Release 11i*
- *Oracle Applications Installation Update Notes*
- *Installing Oracle Applications, Release 11i*
- *Maintaining Oracle Applications, Release 11i*
- *Upgrading Oracle Applications, Release 11i*
- *Oracle Applications System Administrator's Guide*
- *Oracle Applications User's Guide*
- *Oracle Workflow Guide*
- *Implementing CRM Applications*
- *Oracle Telephony Manager Concepts and Procedures*

- *Oracle Telephony Manager Technical Reference Manual*

Implementing Oracle Telephony Manager

This guide provides general descriptions of the setup and configuration tasks required to implement OTM successfully. It includes an overview with list of steps to follow to set up OTM, and includes detailed instructions on completing setup tasks in each OTM setup window.

This guide contains the following information:

Considerations for Planning an Implementation Project

This topic includes the following information:

Purpose for Planning an Implementation

Implementing Oracle Telephony Manager is a complex process that requires knowledge of a variety of technologies and processes. Persons implementing Oracle Telephony Manager should have a working knowledge of Oracle Forms, HTML, Java, and the installation platform (Windows NT or Unix). In addition, an understanding of the operational requirements of an interaction center and basic telephony functionality is required.

Oracle Telephony Manager implementation planning requires that you take a careful and detailed look at the following areas:

- **Verifying Operational Requirements**: This is the preliminary step in the implementation. The PBX / ACD CTI enabler configuration must be complete and the appropriate Oracle Call Center Connectors installed and configured. This integration should be tested and functional before configuring Oracle Telephony Manager.
- **Installing and Connecting Servers**: Also as part of the operational requirements, the servers and workstations to support Oracle Telephony Manager are installed and connected to the network. The consultant will need to work with the customer to determine the server architecture including the number of machines and which services will run them.
- **Installing Oracle Telephony Manager**: Oracle Telephony Manager is installed on the various machines.
- **Configuring Oracle Telephony Manager**: Oracle Telephony Manager is then configured for the interaction center environment.

  The consultant will need to work with the customer to determine if OTM will run in a passive or active routing mode. If OTM will run in an active routing mode and Advanced Inbound will be implemented, each of the various inbound media routes and call classifications will need to be defined and

configured. This may include routing for inbound telephone calls, inbound calls handled by the IVR, inbound eMail, and web callbacks.

In addition to defining the media routing, there may be special treatment required while media items are in queue that will need to be defined and configured. Queue treatments are only available when OTM is in an active routing mode and Advanced Inbound is being implemented.

If OTM is being implemented in an active routing mode, the route target groups will need to be defined. The target groups are the groups of agents that are allowed to be the recipient of a routed media item. Any agent that is not part of a target group for a particular media type will not be able to access that media type through the Universal Work Queue. For example, agents that are not part of any group servicing eMail will not see inbound eMail work.

- **Testing Oracle Telephony Manager**: Finally, with all software installed and operating, Oracle Telephony Manager is put through the operational testing step to verify that it meets the operational requirements.

Business Requirements Mapping

Oracle Telephony Manager is a prerequisite for providing:

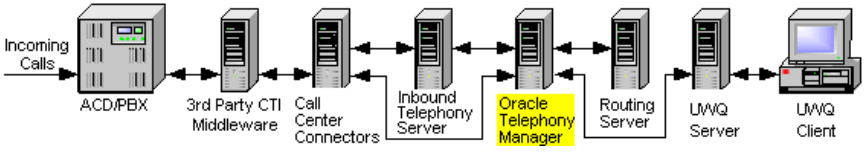
- CTI support and Softphone
- IVR Integration
- Sophisticated routing across multiple media channels
- Enhanced queuing, call treatment and overflow functionality
- Pre-integrated with Oracle E-Business Suite applications
- Essential call center functionality includes:
  - Inbound and outbound telephony
  - Out-of-the box ACD / PBX connectivity with multiple ACDs and CTI enablers
  - Agent Softphone
  - ANI & DNIS screen-pops
  - Call and data transfer
- Additional interaction center functionality provided includes:
  - Multi-media support, telephone, Email and web callBacks

- Intelligent out-of-the-box routing provides rules, skills and records-based routing
- Static and dynamic routing capabilities
- Best agent for given interaction is routed the interaction, telephone calls, email and web call backs
- Integration to IVRs provides additional data for enhanced routing and screen-pops
- Advanced queuing provides enhanced treatment, overflow and group queuing of calls
- Support for web callBacks

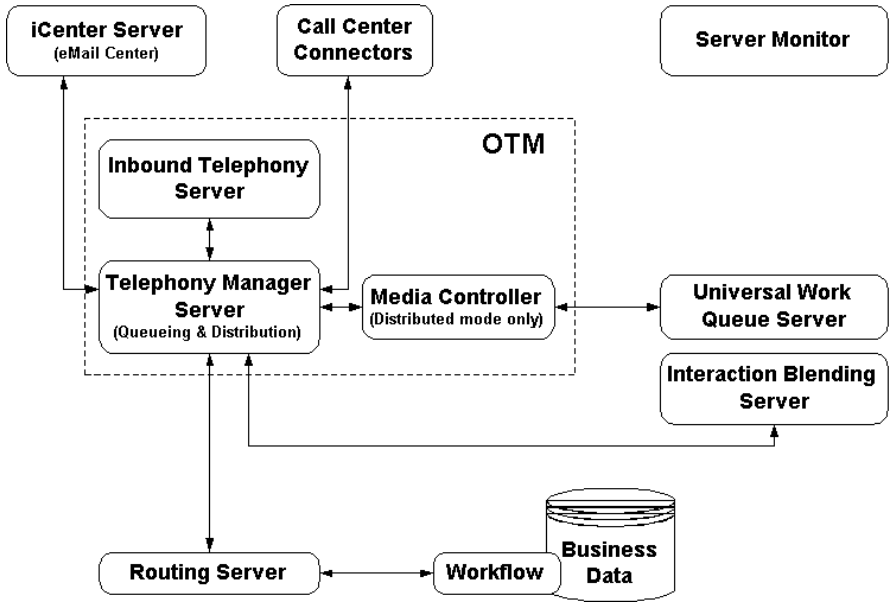
Application Architecture

Oracle Telephony Manager (OTM) is the platform for all Oracle interaction center and telephony applications. OTM translates the proprietary ACD / PBX protocol of telephony communications into computer-compatible language, and routes calls to the designated telephones and computers used by call center agents.

Required third-party CTI middleware provide the interface between the customer's proprietary PBX / ACD CTI link and our interaction center applications (Call Center Connectors and Oracle Telephony Manager). Third-party enablers, such as Dialogic's CT-Connect, allow server API integration for CTI messaging. The integration between the third-party middleware, the Call Center Connectors server, and Oracle Telephony Manager allow standardization of CTI functionality and protect the customer's Oracle application from the proprietary differences between PBX / ACD platforms.



An OTM interaction center is represented by a logical grouping of interaction center processes called a *server group*. The number of server applications in a server group will depend on the specific processes used in a particular interaction center.



The following types of server processes may be included in a server group:

Advanced Outbound Proxy Server is a server process for integrating the Oracle interaction center with advanced outbound telephony (Oracle Campaign Plus and Oracle Predictive).

Fulfillment Server is a server process for integrating the Oracle interaction center with Oracle 1-to-1 Fulfillment.

iCenter Server is a server process for integrating the Oracle interaction center with Oracle eMail Center.

Inbound Telephony Server is a server process which monitors and forwards inbound telephony and web callback requests to Telephony Manager Server. The Inbound Telephony Server is required when running OTM in active mode, routing inbound telephony and/or web callback requests. If OTM will be run in passive mode or if there is only outbound telephony, you do not need the Inbound Telephony Server process. This service may or may not run on the same machine as the OTM service, depending on the size of the interaction center.

Interaction Blending Server is a server process for integrating with Oracle Interaction Blending.

Routing Server is a server process for the routing component of the Oracle interaction center. The Routing Server is only used with inbound telephony and/or inbound eMail with eMail Center and then only if you are running OTM in the active routing mode. If OTM will be run in passive mode or if there is only outbound telephony, you do not need the Routing service. This server may or may not run on the same machine as the Telephony Manager Server, depending on the size of the interaction center. In release 11.5.1, you can have up to three Routing Servers and each of them can be distributed on separate server machines as dictated by the size of the interaction center and the inbound call and mail volumes being handled.

Server Monitor is a server process for monitoring and coordinating other Oracle interaction center servers. The Server Monitor monitors and launches any of the other telephony and requester server processes. These include Telephony Manager Server, Inbound Telephony Server, Routing Server, Telephony Media Controller, and iCenter Server. The Server Monitor is optional, but it is recommended that you use it for fault tolerance purposes. You must choose on which server machine to install and run the server and there is only one per server group. The remote service startup capability uses the Server Launcher that is automatically installed on any machine with one of the telephony or requester services. There is one and only Server Launcher per machine regardless of the number of telephony/requester servers running on the machine.

Telephony Manager Server is a server process for the queuing and media control component of the Oracle interaction center. Generally, there is one Telephony Manager server for a single center. However, if there are multiple businesses with data segregation in a single center, you may have a Telephony Manager server for each business. The Telephony Manager server handles the queuing and distribution of media items.

Telephony Media Controller is a server process for the distributed component of the Oracle interaction center. You will only need to register the Telephony Media Controller if you are running OTM in distributed mode. If OTM is being run in standalone mode, you do not need to register this server process.

Universal Work Queue Server is a server process for integrating desktop applications with media providers.

Overview of a Typical Business Processes

A media-processing example is an eMail message that needs to be routed to an agent. An eMail event representing the mail message will be received from eMail Center for processing by the Oracle Telephony Manager request layer. OTM

generates an eMail media item which is then passed to the distribution layer where a routing request and decision can be made.

Once the routing decision is made the media item is queued up, the Universal Work Queue is notified (as is Interaction Blending if it is running), and it will appear as a work item to an available and qualified agent or group of agents. When an agent selects the work item, the media item is de-queued.

A telephony media item works the same way except that it is received from the ACD and when an agent selects and receives the work item, the call is sent to the agent's phone set.

Typical Release Dependencies

This topic include the following information:

Related Products and Components

OTM integrates with Universal Work Queue, Interaction Blending (if implemented), Routing (if Advanced Inbound is implemented), Call Center Connectors, eMail Center, and any web application with a "call me" form enabled to generate web callbacks. OTM receives information from IVR Integrator through the Call Center Connectors server. OTM and the SoftPhone are integrated through UWQ. OTM also integrates with Workflow via the Routing Server.

Call Center Connectors are required and must be installed and configured for telephony control functionality. eMail Center is required and must be installed and configured for eMail control functionality. Universal Work Queue is required and must be installed and configured for integration to the applications running in the agent work area. The CRM Foundation (Resource Manager) must be installed and at least one test agent configured.

Implementation Starting Point

This guide assumes that the interaction center is using a Oracle certified or supported switch, that the switch interfaces to an Oracle certified or supported CTI middleware, and that Oracle Call Center Connectors has been installed and configured.

This guide also assume that Oracle Applications 11i, the Call Center Java middle tier, and Oracle Telephony Manager have been installed.

Considerations and Constraints of Interactions with Other Types of Products

Oracle Telephony Manager has several implementation dependencies. This includes:

- Customer's PBX / ACD switch must be certified and / or supported through the interaction center's PBX Integration Program.

  - For OTM, release 11.5.1, supported PBX/ACDs include Lucent Definity G3 and Nortel Meridian.
  - For OTM, release 11.5.2, supported PBX/ACDs include Lucent Definity G3, Nortel Meridian, Siemens Hicom (US version), and Alcatel 4400.
  - Additional switches are supported quarterly and/or at point/patch releases.
  - All PBX/ACDs are not compatible and may not be supported.
  - The PBX/ACD matrix includes references to specific PBX models and software releases as well as information on PBX platforms supported via specific third-party CTI enabler software.

- The customer's PBX must be interfaced to an Oracle certified/supported third-party CTI Middleware. CTI Middleware is purchased by the customer directly from the supported third-party vendor and must be installed/implemented in accordance with the third-party CTI vendor specifications.
  - For Oracle Telephony Manager, release 11.5.1, supported CTI Middleware include Dialogic's CT Connect.
  - For Oracle Telephony Manager, release 11.5.2, supported CTI Middleware include Dialogic's CT-Connect and Cisco ICM CTI Server (formerly GeoTel).
  - For Oracle Telephony Manager release 11.5.3, support CTI Middleware includes Dialogic's CT-Connect, Cisco ICM CTI Server (formerly GeoTel), Nortel Symposium Call Center Server, and Siemens Hicom (international version).
  - Additional PBX/middleware combinations are supported quarterly and/or at point/patch releases.
  - For information about approved third-party CTI middleware see the Oracle Call Center Switch (ACD) Support at the locations referenced above.
- OTM is also dependent on the proper installation of Oracle Call Center Connectors, a CTI server product included in the Advanced Inbound product module group. Call Center Connectors integrates the customer's approved third-party CTI middleware to the Oracle Telephony Manager server. For complete details on installing the Oracle Call Center Connectors server see the documentation, Installing Oracle Call Center Connectors

Since the proper implementation of Oracle Telephony Manager is dependent on the proper versions and installation of third-party customer-provided equipment for

requisite CTI functionality the following considerations should be considered prior to beginning the implementation:

- Does the Customer have a PBX/ACD switch that has been certified by Oracle?
- Is the PBX/ACD the model, software release and does it have the proper PBX-based CTI interfaces or links?
- Has the customer purchases and installed/implemented an approved third-party CTI middleware?
- Has the PBX and CTI middleware been fully tested and operation on the customer's ethernet LAN?
- Have the PBX Application Notes been referenced and the list of supported CTI functions tested.

Related Documentation and Resources

There are several locations within the Oracle intranet where you can find information on Oracle Telephony Manager and how to implement Oracle Telephony Manager. Following is a listing of many of these resources:

Implementing CRM Applications Describes manual post-installation steps for selected Customer Relationship Management (CRM) modules.

Oracle Call Center Applications Setup Describes the installation of the Oracle Telephony Manager server processes.

Oracle Telephony Manager Technical Reference Manual Provides information about the Oracle Telephony Manager schema.

Oracle Call Center Technology Technical Reference Manual Provides information about the Oracle Call Center (not a module) schema.

Installing Oracle Call Center Connectors Provides information about installing and configuring Oracle Call Center Connectors.

Upgrading from Oracle Telephony Manager 3i

Use this procedure to upgrade Oracle Telephony Manager 3i to Oracle Telephony Manager 11i.

Prerequisites

Upgrading from an earlier version of Oracle Telephony Manager. The earlier versions are CRM 3i, CRM 3.1.1 and CRM 3.1.2 and any patches to these releases.

Steps

1. Install Oracle Applications 11i, release 11.5.1.
2. Do the following in any order:
   - Install CRM Family Pack 1.
   - Install the Upgrade patch 1336084.

Note: Patch 1336084, which can be applied either before or after installing CRM Family Pack 1, needs to be applied only once. However, it must be applied before installing Oracle Applications 11i, release 11.5.2.

Setting Up Oracle Telephony Manager

Follow the steps in the following chart to set up OTM. The chart shows you where to read in detail about the setup step. The Window Name(s) column shows you in which window(s) to perform the step, and if the window is available only if you use a specific responsibility or product. The Required column shows you if the step is required, optional, required with defaults, or conditionally required.

Step Number	Required?	OTM Setup Step Description	Window Name(s)	AIW Reference
❑ Step 1	Required	**Define the Oracle interaction center server group.** See: Defining an Oracle Interaction Center Server Group	Server Locator window, Server Group tab	NA
❑ Step 2	Required	**Define and configure the Oracle interaction center server processes.** See: Configuring Oracle Interaction Center Server Processes	Server Locator window, Server tab	NA
❑ Step 3	Required	**Define and configure the CTI middleware.** See: Configuring the CTI Middleware	Call Center Administration window, Middleware tab	NA
❑ Step 4	Optional	**Define the interaction center telesets.** See: Defining Interaction Center Telesets	Call Center Administration window, Teleset tab	NA
❑ Step 5	Optional	**Map the inbound IVR data to fields in Oracle Applications.** See: Mapping Inbound Data to Oracle Applications Fields	Call Center Administration window, IVR Mapping tab	NA
❑ Step 6	Optional	**Set up routing for inbound calls or email.** See: Setting Up Routing for Inbound Calls and Email	Routing Administration window or Workflow Builder	NA

Defining an Oracle Interaction Center Server Group

An Oracle interaction center is represented by a logical grouping of interaction center processes called a *server group*. If there are multiple interaction centers or if separate lines of business are operating in the same interaction center, then there can be multiple server groups. Once the server group is defined, you can configure the individual interaction center processes in the group. (See Configuring Oracle Interaction Center Server Processes.)

Use this procedure to define a server group.

Prerequisites

None

Steps

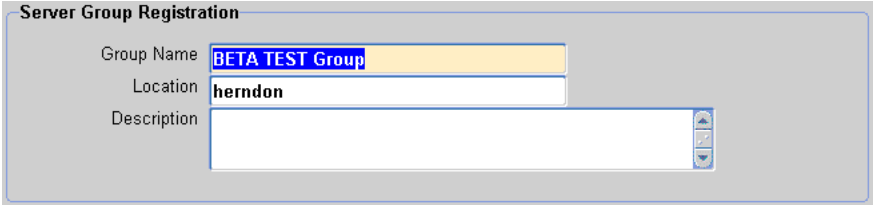
1. Navigate to the Server Locator window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.

   b. Click **Server Admin**.

      The Server Locator window appears.
2. From the **File** menu, choose **New**.
3. In the Server Group tab, enter a unique name for the server group, the location of the server group, and a description of the server group.

Server Location Window: Server Group Tab: Server Group Registration Area



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

Configuring Oracle Interaction Center Server Processes

Oracle interaction center processes, such as routing, are governed by individual server applications. A logical grouping of server processes is called a server group. (See Defining an Oracle Interaction Center Server Group.)

The number of server applications in a server group will depend on the specific processes used in a particular interaction center. The following types of server processes may be included in a server group:

- Advanced Outbound Proxy Server
- Fulfillment Server
- iCenter Server
- Inbound Telephony Server
- Interaction Blending Server
- Routing Server
- Server Monitor
- Telephony Manager Server
- Telephony Media Controller
- Universal Work Queue Server

For a detailed description of each server process, see Application Architecture.

The server applications may run on one or more server machines. Each server process is configured individually. The configuration information is recorded in the Call Center schema.

Use this procedure to configure an Oracle interaction center server process.

Prerequisites

❑ Define the Oracle interaction center server group. For more information, see Defining an Oracle Interaction Center Server Group.

Steps

1. Navigate to the Server Locator window.

   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

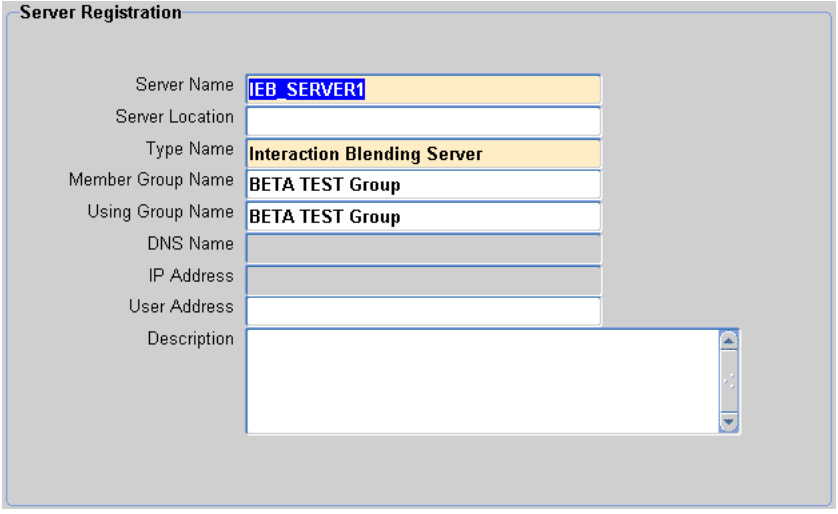
      The Call Center Administration window appears.

b. Click **Server Admin**.

The Server Locator window appears.

2. In the Server Group tab, find your server group.
   a. Choose **View** > **Query by Example** > **Enter** to invoke the query entry mode.
   b. Enter your query.
   c. Choose **View** > **Query by Example** > **Run** to find the matching server groups.
3. Select the Server tab.
4. If necessary, choose **File** > **New**.
5. In the Server Registration area, identify the server process.

Server Locator Window: Server Tab: Server Registration Area



   a. Enter a unique name for the server process.
   b. Enter the location of the server process.
   c. From the Type Name list, select the server process type.

   For a detailed description of each server process, see Application Architecture.

d. From the Member Group Name list, select the server group for this server process.

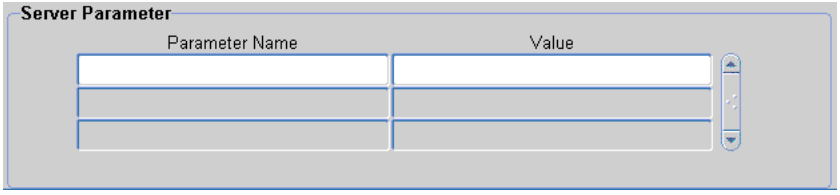
e. From the Using Group Name list, select any other server group that can use this server process.

6. In the Server Parameter area, configure the parameters for the selected server process type.

   Each row in the table corresponds to an Oracle interaction center server parameter.

   Note: There are no parameters that must be defined for Advanced Outbound Proxy Server, Fulfillment Server, iCenter Server, Routing Server, and Server Monitor.

Server Locator Window: Server Tab: Server Parameter Area



a. From the Parameter Name list, select a parameter.

   The parameters listed in the Parameter Name list depend on the type of server process selected from the Server Type list. For information about server type parameters, see Guidelines below.

b. Enter a value for the parameter.

   Note: Be sure to provide a value for all required parameters for the selected server process.

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

8. To configure another interaction center server process, repeat steps 5 through 7.

Guidelines

Use the following guidelines to determine:

- Inbound Telephony Server Parameters
- Telephony Manager Server Parameters
- Telephony Media Controller Parameters

Inbound Telephony Server Parameters Refer to the following table for a description of Inbound Telephony Server parameters.

Name	Required?	Description	Sample Value
OTM_SERVER_NAME	Required	Server name of the Telephony Manager Server to which this server is associated.	SampleOTMServer
TELE_MIDDLEWARE_CONFIG	Required	Configuration name of the middleware used by this server.	SampleMWConfig
WEB_CALL_PORT	Required if using web callback	Port used to listen for web call-back requests. If left blank, the default port 888 is used. This number must match the OTM Server Port field in the iSupport Admin UI -> Support tab -> Call Me sub-tab.	888

Telephony Manager Server Parameters Refer to the following table for a description of Telephony Manager Server parameters.

Name	Required?	Description	Example
TELE_MIDDLEWARE_CONFIG	Required	Configuration name of the middleware used by this server.	MWConfig
DEFAULT_TIMEOUT	Optional	Default timeout for re-route in minutes. For example, when this parameter is set to 5, a media item will be re-routed if it has been waiting in queue for more than 5 minutes.	5
IB_SERVER_NAME	Optional	Server name of the Interaction Blending Server	IBServer
MQA_MODE	Optional	TRUE/FALSE parameter. TRUE if multiple queue mode is on. Applicable to Nortel switch only.	TRUE
PASSIVE_MODE	Optional	TRUE/FALSE parameter. TRUE if passive mode is on.	FALSE
ROUTE_SERVER_1	Required for active mode only	Server name of Routing Server	RouteServer1

Name	Required?	Description	Example
ROUTE_SERVER_2	Optional	Alternate Routing Server for load balancing	RouteServer2
ROUTE_SERVER_3	Optional	Alternate Routing Server for load balancing	RouteServer3
STANDALONE	Optional	TRUE/FALSE parameter. TRUE if Telephony Manager is running in STANDALONE mode. FALSE if running in DISTRIBUTED mode.	TRUE

Telephony Media Controller Parameters Refer to the following table for a description of Telephony Media Controller Server parameters.

Telephony Media Controller Parameters

Field Name	Required	Description	Example
TELE_MIDDLEWARE_CONFIG	Required	Configuration name of the middleware used by this server.	MWConfig
OTM_SERVER_NAME	Required	Server name of the Telephony Manager Server.	SampleOTM
MQA_MODE	Optional	TRUE/FALSE parameter. TRUE if multiple queue mode is on. Applicable to Nortel switch only.	TRUE
PASSIVE_MODE	Optional	TRUE/FALSE parameter. TRUE if passive mode is on.	FALSE

Configuring the CTI Middleware

CTI (computer telephony integration) middleware enables Oracle Telephony Manager and the Inbound Telephony Server to control telephony devices (for example, agent phones and telesets) and shared telephony resources (for example, phone switches and PBX / ACD).

Use this procedure to configure the CTI enabler for the interaction center.

Prerequisites

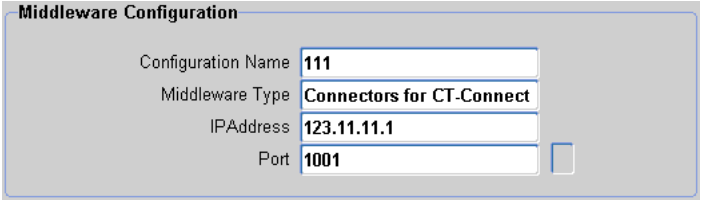
❑ Define the Oracle interaction center server group. See Defining an Oracle Interaction Center Server Group.

Steps

1. Navigate to the Call Center Administration window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.
2. If necessary, find your server group.
   a. Choose **View** > **Query by Example** > **Enter** to invoke the query entry mode.
   b. Enter your query.
   c. Choose **View** > **Query by Example** > **Run** to find the matching server groups.
3. Select the Middleware tab.
4. In the Middleware Configuration area, specify your middleware.

Call Center Administration Window: Middleware Tab: Middleware Configuration Area



   a. Enter a unique name for the middleware configuration.

b. From the Middleware Type list, select the middleware type.

For information about valid middleware types, see Middleware Types.

c. Enter the IP address of the machine hosting Call Center Connectors, for example, Oracle Call Center Connectors or Prospect CTI Server.

d. Enter the port number of the middleware server, for example, Oracle Call Center Connectors or Prospect CTI Server.

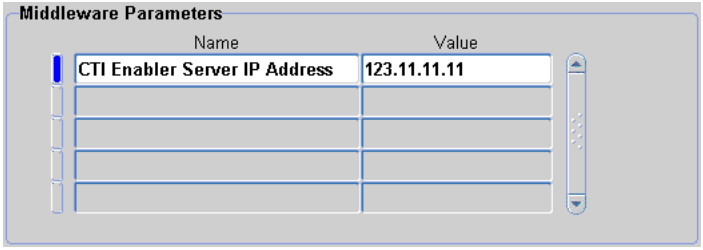
Note: Check the port number against the configuration of the middleware server. For Oracle Call Center Connectors, default port number is 3201. For Prospect CTI Server, the default port number is 9001.

---

5. In the Middleware Parameter area, configure the parameters for the selected middleware type.

Each row in the table corresponds to an Oracle interaction center server parameter.

Call Center Administration Window: Middleware Tab: Middleware Parameters Area



a. From the Name list, select a parameter.

The parameters listed in the Name list depend on the type of middleware selected from the Middleware Type list. For information about server type parameters, see Guidelines below.

b. Enter a value for the parameter.

Note: Be sure to provide a value for all required parameters for the selected middleware type.

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

Guidelines

Use the following guidelines to determine:

- Middleware Types
- Middleware Parameters for Connectors for CT-Connect or Connectors for CT-Connect (CompuCALL Variant)
- Middleware Parameters for Connectors for Cisco ICM (GeoTe)l
- Middleware Parameters for Prospect Aspect

Middleware Types Refer to the following table for a description of middleware types.

Middleware Type	Middleware Server	CTI Enabler Server (Middleware)	Switch (PBX/ACD)
Connectors for CT-Connect	Oracle Call Center Connectors	Dialogic CT-Connect	■ Alcatel 4400 ■ Lucent Definity G3 ■ Nortel Meridian ■ Nortel Symposium Call Center Server ■ Siemens HICOM (US and international)
Connectors for CT-Connect (CompuCALL Variant)	Oracle Call Center Connectors	Dialogic CT-Connect for CompuCall	■ Nortel DMS100 ■ Nortel SL100
Connectors for GeoTel	Oracle Call Center Connectors	Cisco ICM CTI Server (formerly GeoTel)	■ Aspect ■ Lucent Definity G3 ■ Nortel Meridian
Prospect Aspect	Prospect CTI Server	N / A	■ Aspect

Middleware Parameters for Connectors for CT-Connect or Connectors for CT-Connect (CompuCALL Variant) Refer to the following table for a description of middleware parameters for Connectors for CT-Connect or Connectors for CT-Connect (CompuCALL Variant).

Field Name	Required	Description	Sample Value
CTI Enabler IP Address	Required	IP address of the CT-Connect server.	123.45.67.890
PBX Name	Required	Link logical identifier defined in CT-Connect configuration to represent the CTI link between CT-Connect and the switch.	ctc_nortel ctc_lucent
PBX Type	Required	PBX type. Enter: ■ A - Lucent Definity ■ M - Nortel Meridian or Symposium Call Center Server ■ S - Siemens HICOM ■ C - Alcatel 4400 ■ X - Nortel DMS100/SL100.	A
Middleware Server Info 1	Required	Enter the value `ncacn_ip_tcp` as the identifier for the network protocol used between Oracle Call Center Connectors and CT-Connect.	Enter `ncacn_ip_tcp` for TCP/IP (actual value)

Route Points Set 1
Route Points Set 2
Route Points Set 3
Route Points Set 4
Route Points Set 5
	Required if using active mode	Devices within the PBX/ACD where inbound calls are initially received and route requests are issued.
		■ Lucent Definity
		Enter one or more vector directory numbers (VDN), separated by commas. The format is:
		`vdn[,vdn...]`
		■ Nortel Meridian:
		Enter one or more CDN-immediate treatment pair(s), separated by commas. (CDN stands for Control Directory Number; the immediate treatment of an inbound call arriving at a CDN can be ringback or music). The format is:
		`cdn:treatment[,cdn:treatment...]`
		The format for `treatment` is:
		`##{R|M#musicRouteNumber}`
		■ Siemens HiCom and Alcatel 4400:
		Enter one or more pilot number(s), separated by commas. The format is:
		`pilotNumber[,pilotNumber...]`
		There is a 256 maximum character limit. You can configure as many route points in each Route Points Set X field as the 256-character limit permits.
			7400
			7400,7500
			7520:##R
			7530:##M#02
			7400

Field Name	Required	Description	Sample Value
Outgoing Prefix	Required if using web callback	Numeric prefix dialed to place outside calls. Check against the configuration of the PBX.	9
International Dialing Prefix	Required if using web callback	Numeric prefix dialed for placing international calls.	011 (from within the USA)
Site Country Code	Required if using web callback	The country code for the site where the PBX is located.	1
Site Area Code	Required if using web callback	The area code for the site where the PBX is located.	650
IVR Server Name	Required if using IVR Integrator	The PCDCE name of the IVR Integrator server. Check against PCDCE configuration.	SampleIVR

Middleware Parameters for Connectors for Cisco ICM (GeoTe)l Refer to the following table for a description of middleware parameters for Connectors for Cisco ICM (GeoTel).

Field Name	Required	Description	Sample Value
CTI Enabler IP Address	Required	IP address of the Cisco ICM CTI server (Server A).	123.45.67.890
Middleware Server Info 1	Required	Port number of the Cisco ICM CTI server (Port A).	42027
Middleware Server Info 2	Required	IP address of the Cisco ICM CTI server (Server B).	123.45.67.890
Middleware Server Info 3	Required	Port number of the Cisco ICM CTI server (Port B).	42027
PBX Name	Required	Peripheral ID defined in Cisco ICM CTI server for the PBX of interest.	5008
PBX Type	Required	PBX type. ■ A - Lucent Definity ■ M - Nortel Meridian ■ P - Aspect	A
Outgoing Prefix	Required if using web callback	Numeric prefix dialed to place an outside call. Check against the configuration of the PBX.	9

Field Name	Required	Description	Sample Value
International Dialing Prefix	Required if using web callback	Numeric prefix dialed for placing international calls.	011
Site Country Code	Required if using web callback	The country code for the site where the PBX is located.	1
Site Area Code	Required if using web callback	The area code for the site where the PBX is located.	650

Middleware Parameters for Prospect Aspect Refer to the following table for a description of middleware parameters for Prospect Aspect.

Field Name	Required	Description	Sample Value
Inbound CCT	Required	Number of the CCT (Call Control Table) that handles inbound customer calls.	1
Internal App ID	Required	Application ID that is associated with internal calls.	2
Internal CCT	Required	Number that sets the CCT (Call Control Table) for agent-to-agent calls.	2
Outbound App ID	Required	Application ID that is associated with outbound calls.	3
Outbound CCT	Required	Number that sets the CCT (Call Control Table) for outbound calls.	3
Outgoing Prefix	Required if using web callback	Numeric prefix dialed to place an outside call. Check against the configuration of the PBX.	9
Predictive App ID	Optional	Application ID that is associated with predictive calls.	4
Route CCT	Required	Number of the CCT (Call Control Table) specifying how routed calls are distributed.	50

Defining Interaction Center Telesets

Use this procedure to configure Oracle Telephony Manager for use with a teleset. You can integrate Oracle Telephony Manager with the following teleset types:

- Lucent
- Nortel
- Siemens
- Alcatel
- Aspect

Prerequisites

❑ Define the Oracle interaction center server group. See Defining an Oracle Interaction Center Server Group.

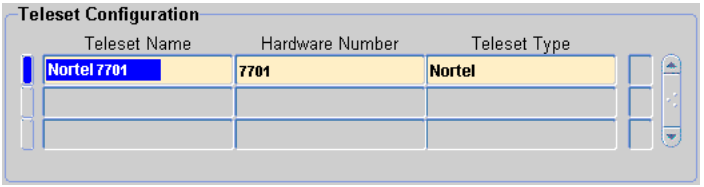
Steps

1. Navigate to the Call Center Administration window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.
2. If necessary, find your server group.
   a. Choose **View** > **Query by Example** > **Enter** to invoke the query entry mode.
   b. Enter your query.
   c. Choose **View** > **Query by Example** > **Run** to find the matching server groups.
3. Select the Teleset tab.
4. In the Teleset Configuration area, create a teleset definition for each teleset in the interaction center.

   Each row in the table corresponds to one teleset in the interaction center.

Call Center Administration Window: Teleset Tab: Teleset Configuration Area



a. In the Teleset Name field, enter a unique name for the teleset (for example, Nortel7701).

b. In the Hardware Number field, enter a unique identifier for this teleset (for example, 7701).

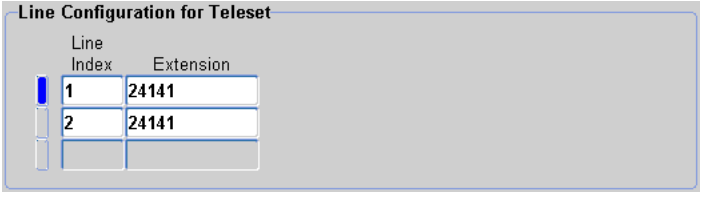
Oracle recommends that you follow the convention of using the primary extension number of the teleset.

c. From the Teleset Type list, select the vendor name for the teleset (for example, Nortel).

5. In the Line Configuration for Teleset area, configure the line configuration for each teleset definition.

You can configure a maximum of three lines per teleset, one line each for Line Index 1, 2, or 3. The line configuration will depend on the type of teleset. For information about teleset line configurations, see Guidelines below

Call Center Administration Window: Teleset Tab: Line Configuration for Teleset Area



a. In the Teleset Configuration area, select the row for the teleset that you want to configure.

b. In the Line Configuration for Teleset area, select a line index from the Line Index list.

c. Enter the extension for the line index.

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

Guidelines

Refer to the following table to determine the teleset line configuration for a particular teleset type.

Teleset	Line Configuration
Lucent	You can configure 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 in the Extension field for all line indexes.
Nortel	You must configure exactly two lines: ■ For Line Index 1, enter the DN (Directory Number) in the Extension field. This corresponds to the Single Call Ringing key on the actual teleset. ■ For Line Index 2, enter the ACD DN in the Extension field. This corresponds to the Automatic Call Distribution key on the actual teleset.
Aspect	For Prospect CTI Server, you must configure exactly one line for each teleset. Enter the teleset phone number in the Extension field for Line Index 1. For CIsco ICM CTI Server (formerly Geotel), configure three lines for each teleset. Enter the same teleset extension number for all line indexes.
Siemens	For Prospect CTI Server, configure exactly one line for each teleset. Enter the primary extension number in the Extension field for Line Index 1.
Alcatel	You must configure exactly one line for each teleset. Enter the teleset phone number in the Extension field for Line Index 1.

Mapping Inbound Data to Oracle Applications Fields

For interaction centers equipped with an IVR (Interactive Voice Response) unit, data collected by the IVR can be passed via IVR Integrator to Oracle Applications in the form of name-value pairs. Oracle Applications can make use of this data to generate a more complete and meaningful screen pop on the agent desktop.

Use this procedure to map the name associated with a value in an IVR data packet to a field in Oracle Applications.

Prerequisites

❑ Define the Oracle interaction center server group. See Defining an Oracle Interaction Center Server Group.

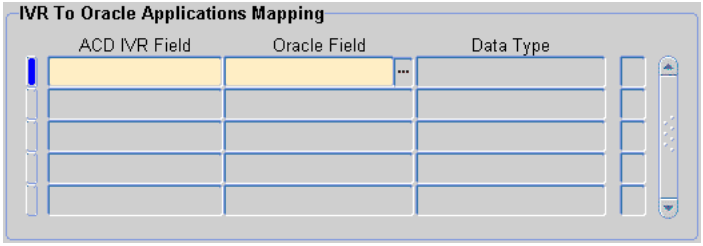
Steps

1. Navigate to the Call Center Administration window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.
2. If necessary, find your server group.
   a. Choose **View** > **Query by Example** > **Enter** to invoke the query entry mode.
   b. Enter your query.
   c. Choose **View** > **Query by Example** > **Run** to find the matching server groups.
3. Select the IVR Mapping tab.

   Each row in the table corresponds to the mapping of one data item in the IVR data packet to one field in Oracle Applications.

Call Center Administration Window: IVR Mapping Tab



4. For each piece of IVR data that you want to map to a field in Oracle Applications, do the following:
   a. In the ACD IVR cell, enter or select the name of the IVR field.
   b. In the Oracle Field cell, enter or select an Oracle Applications field name.
5. From the **File** menu, choose **Save**.

Setting Up Telephony Parameters

For each call center agent resource, you need to set up one or more telephony parameters. This can be done in the CRM Resource Manager responsibility, Resource form, Interaction Center tab, Telephony Parameters section. Which telephony parameters are required and what values to specify depend on the types of switch and CTI middleware in use in the call center.

The following tables provide specific instructions for each supported switch-middleware combination.

Telephony Parameters for Lucent Definity with CT-Connect

Field Name	Description	Sample Value
ACD Data 1	Agent's ACD password, if any, as defined in the PBX admin.	34181
ACD Data 2	Agent's ACD login ID, as defined in the PBX admin.	34181

Telephony Parameters for Lucent Definity with Cisco ICM CTI Server (formerly GeoTel)

Field Name	Description	Sample Value
ACD Data 1	Agent's ACD password, as defined in the PBX admin.	34181
ACD Data 2	Agent's ACD login ID, as defined in the PBX admin.	34181
ACD Queue	Agent's skill group number, as defined in the PBX admin.	46

Telephony Parameters for Nortel Meridian or Sympostium Call Center Server with CT-Connect

Field Name	Description	Sample Value
ACD Data 1	(Require only when the switch is in login ID mode) Agent's ACD login ID, as defined in the PBX admin	1001

Telephony Parameters for Nortel Meridian with Cisco ICM CTI Server (formerly GeoTel)

Field Name	Description	Sample Value
ACD Data 1	Agent's ACD password, as defined in the PBX admin.	1001
ACD Data 2	Agent's ACD login ID, as defined in the PBX admin.	1001
ACD Queue	Agent's skill group number, as defined in the PBX admin.	46

Telephony Parameters for Aspect with Cisco ICM CTI Server

Field Name	Description	Sample Value
ACD Data 1	Agent's ACD password, as defined in the PBX admin.	1001
ACD Data 2	Agent's ACD login ID, as defined in the PBX admin.	1001
ACD Queue	Agent's skill group number, as defined in the PBX admin.	46

Telephony Parameters for Siemens Hicom with CT-Connect

Field Name	Description	Sample Value
ACD Data 2	Agent's ACD login ID, as defined in the PBX admin.	40027

Telephony Parameters for Alcatel 4400 with CT-Connect

Field Name	Description	Sample Value
ACD Data 1	Agent's ACD password, as defined in the PBX admin.	0000
ACD Data 2	Agent phone number, as defined in the PBX admin.	3551
ACD Queue	Agent's processing group number, as defined in the PBX admin.	3700

Setting Up Routing for Inbound Calls and Email

The Routing Server is the server process for the routing component of the Oracle interaction center. The Routing Server is used in the following scenarios:

- With Inbound Telephony only if you are running Oracle Telephony Manager in the active routing mode
- With Inbound eMail in Oracle eMail Center

The Oracle routing module has two basic types of routing which are used for different situations based on the requirements of the configuration: rules based routing and workflow based routing.

Rules Based Routing

Rules based routing is the simplest and fastest routing to use, but it is also the least flexible. This would probably handle the lions share of the routing logic in a normal company.

The principal is that each media interaction has a lot of information attached to it, such as the media type, time of day (TOD), ANI, DNIS and possibly some information coming from an IVR or Webpage. All of this information is available to be made into rules within rules based routing.

To use this interaction data you create a rule. You select a key A, such as MediaType, TOD or DNIS from the 'key' pulldown list. Then you enter the value which you want to compare the key B against, such as 5:00pm. You then pick the group of agents G1 you want to send the media item to if the rule evaluates to true.

You have now created a rule that logically says: If the ‘key A’ equals the ‘value X’, then send it to the group of agents G1.

You can then add a second rule, or add another condition to the first rule.

If the ‘key A’ equals the ‘value X’, send to group G1

If the ‘key B’ equals the ‘value X’ AND ‘key D’ equals ‘value Y’ send to group G2

An example: A company has a special phone number for it’s biggest accounts, that phone number is "1-800-444-4357". They wish to make a rule that anytime anyone has called 1-800-444-4357 they go the special group of agents (say group 5). This is the simple type of routing request that can easily be handled by rules based routing. DNIS is the telephony name for the number a customer dialed to reach you, so you use the pulldown to select the key DNIS. Use the modifier pulldown and select ‘=’. Enter the value "1-800-444-4357" into the field. Enter group 5 for the route destination.

Advantages:

- Routing rules return quickly
- Very easy to configure and intuitive
- No technical skill necessary to configure rules

Disadvantages:

- Cannot setup complex series of ANDs and Ors
- Not as easily customized as workflow routing

See Setting Up Rules-Based Routing for Inbound Calls and Email.

Workflow Based Routing

Workflow based routing is the most flexible, and relies upon the power of the Oracle workflow engine. This is the full function routing, which relies upon the database and uses pre-defined nodes which access the business data from the CRM business apps.

The input to workflow based routing is the same as it was for rules based routing, all information about the interaction is available in key-value pairs. Media data is available such as "ANI : 655-3458" or "MediaType : Email" and any IVR data is available as well "BugID : 6091549". These values are available to nodes, which then perform logic in a workflow which decides who are the possible recipients of a call. These are the routing recipients.

Example 1: If you want to route a call to the agent who to this Sales account, you could perform that type of functionality with the workflow. A workflow node is pre-built and shipped with the product which takes the account number as input and returns the list of agents associated with that account within the CRM sales application. Since that node already exists, it would be dragged into the workflow and dropped in to create the logic desired. Dozens of nodes are shipped pre-built and pre-integrated across CRM products.

Example 2: You can also create a custom node which performs most any action you can write into a PL/SQL function. Lets say they wanted to retrieve all agents who had been with the company more than 1 year. This is not something we ship out of the box, but a consultant could write a PL/SQL procedure which took today's date, went into the HR views and returned a list of all agents who had been here over 1 year. This could then be wrapped into a workflow node, saved and dropped into any future workflows that customer might have.

Advantages:

- Pre-built nodes with pre-built integration to CRM
- Drag and drop functionality
- Uses a workflow engine, so there is a visible representation of the logic
- Can be used to perform any type of complex logic
- Able to be customized, so a customer can write their own nodes
- Little technical ability necessary to configure nodes.

Disadvantages:

- Request must travel to the database and back
- Normally has an overhead of at least 50ms
- Technical skill needed to write custom nodes

See Setting Up Workflow-Based Routing for Inbound Calls and Email.

Setting Up Rules-Based Routing for Inbound Calls and Email

Follow the steps in the following chart to set up OTM rules-based routing. The chart shows you where to read in detail about the setup step. The Window Names(s) column shows you in which window(s) you perform the step, and if the window is available only if you use a specific responsibility or product. The Required column shows you if the step is required, optional, required with defaults, or conditionally required.

Step Number	Required?	OTM Setup Step Description	Window Name(s)	AIW Reference
❑ Step 1	Required for rules-based routing	**Define a group.** See: Defining Groups	Define Groups window; Dynamic Groups window	NA
❑ Step 2	Required for rules-based routing	**Define a route.** See: Defining Routes	Routing Administration window	NA
❑ Step 3	Required for rules-based routing	**Define the route priorities.** See: Defining Route Priorities	Routing Priority window	NA
❑ Step 4	Required for rules-based routing	**Define the classifications.** See: Defining Classifications	Classification Administration window	NA

Defining Groups

There are two types or groups for rules-based routing: static and dynamic. A static group requires that you manually edit information about individual group members. In a dynamic group, the database automatically updates information about individual group members.

For procedures, see:

- Defining a Static Group
- Defining a Dynamic Group

Defining a Static Group

Use this procedure to configure a static group for routing.

Prerequisites

None

Steps

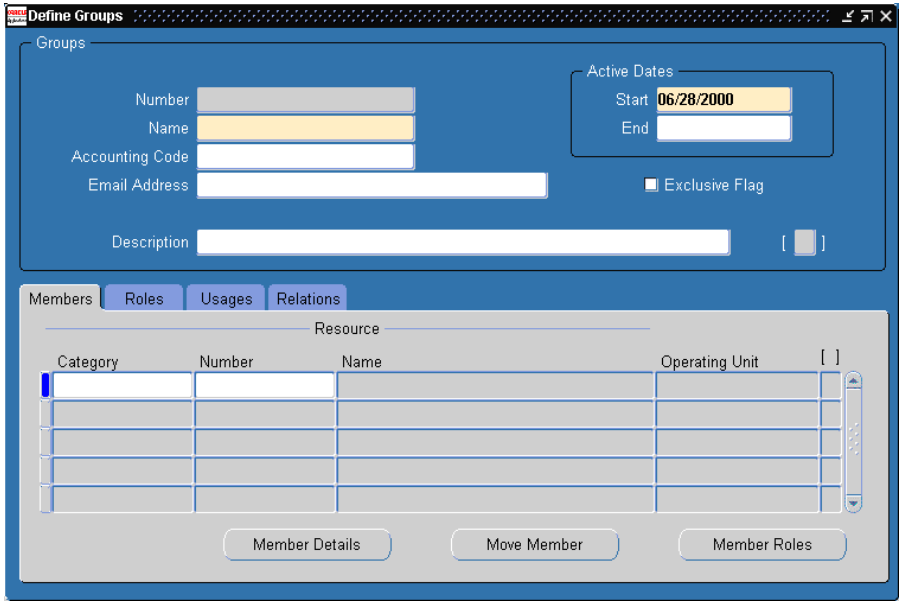
1. Navigate to the Define Groups window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Server Administration**.

      The Routing Administration window appears.

   b. Click **Static Groups**.

      The Define Groups window appears.

Routing Administration Window: Static Groups Button: Define Groups Window



Guidelines

When configuring static groups, use the following guidelines:

- The Group Number and Group Name must be unique.
- If you want to prevent an agent from being shared with other groups, check the Exclusive Flag box to indicate that the agent belongs exclusively to this group.
- You cannot create member records without choosing a Parent Group.
- When defining a static/dynamic group for Routing, the usage of the group should be set to 'Call Center' so that the group will be available in the Routing Admin LOV for static/dynamic groups.

Defining a Dynamic Group

Use this procedure to configure a dynamic group for routing.

Prerequisites

None

Steps

1. Navigate to the Dynamic Groups window.

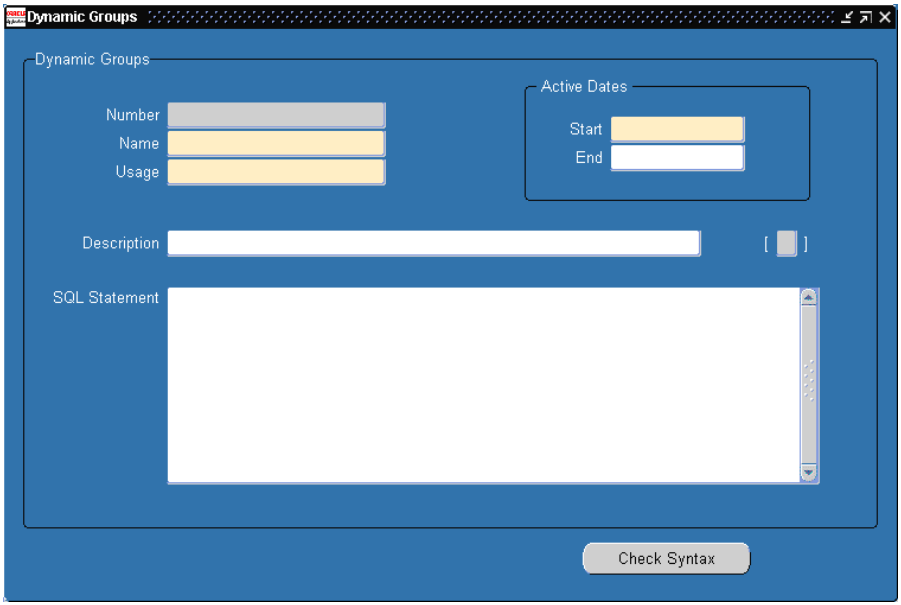
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Server Administration**.

      The Routing Administration window appears.

   b. Click **Dynamic Groups**.

      The Dynamic Groups window appears.

Routing Administration Window: Dynamic Groups Button: Dynamic Groups Window



2. If necessary, choose **File** > **New**.
3. Enter a unique name for the group.
4. From the Usage list, select the usage of the list.
5. Optionally, enter a description of the list.
6. Optionally, in the Active Dates area, select or enter the start and end date for the use of the group in routing.

7. Enter the SQL statement that selects the members of the group.
8. Click **Check Syntax**.

   If the SQL statement is invalid, then an error message appears. If the SQL statement is valid, then no message appears.
9. From the **File** menu, choose **Save**.

Guidelines

- When defining a static/dynamic group for Routing, the usage of the group should be set to 'Call Center' so that the group will be available in the Routing Admin LOV for static/dynamic groups.

Defining Routes

A route definition identifies the potential groups or members to which a call may be routed and the call parameters (such as ANI) to be used in determining the destination of a call.

There are two types of routes for rules-based routing: static and dynamic. Static routing is based on data stored in cache. Dynamic routing is based on PL/SQL queries. Static routing is faster, but dynamic routing is more flexible.

Note: If the route server cannot determine agents from the defined destinations, then the server routes the call to the default destination defined for the route.

For procedures, see:

- Defining a Static Route
- Defining a Dynamic Route

Defining a Static Route

Use this procedure to define a static route.

Prerequisites

❑ Define a group. For more information, see Defining Groups.

Steps

1. Navigate to the Routing Administration window.

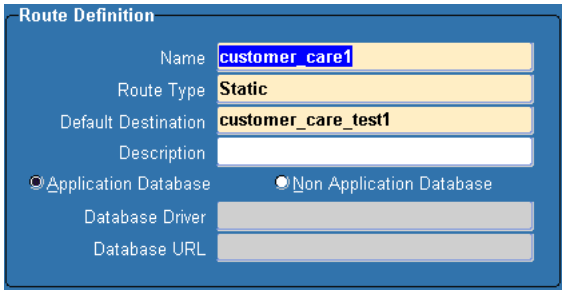
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Server Administration**.

      The Routing Administration window appears.

2. If necessary, choose **File** > **New**.

3. In the Route Definition area, identify the route.

Routing Administration Window: Route Definition Area



   a. Enter a unique name to describe the route.

   b. From the Route Type list, select **Static**.

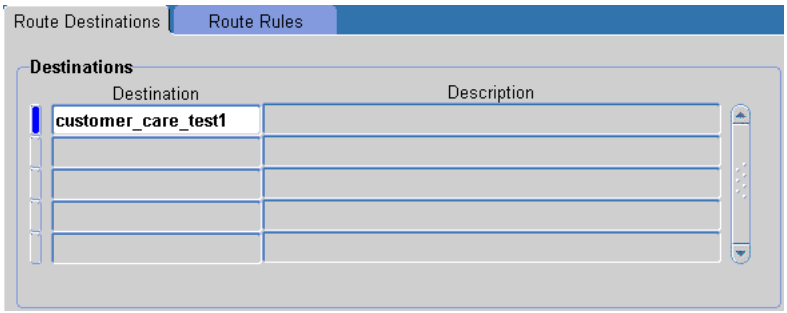
   c. Optionally, enter the description of the static route.

   d. If this route uses the Oracle Applications database, select **Application Database**.

   e. If this route does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.

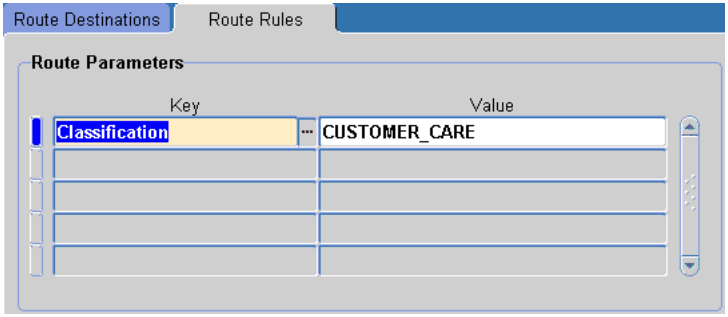
4. On the Route Destinations tab, select the groups to which calls may be routed.

Routing Administration Window: Route Destinations Tab (Static)



5. On the Route Rules tab, define the parameters expected in an incoming call.

Routing Administration Window: Route Rules Tab



   a. From the Key list, select a key (for example, ANI).
   b. Enter the value for the selected key (for example, 888-555-1234).

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

Defining a Dynamic Route

Use this procedure to define a dynamic route.

Prerequisites

None

Steps

1. Navigate to the Routing Administration window.

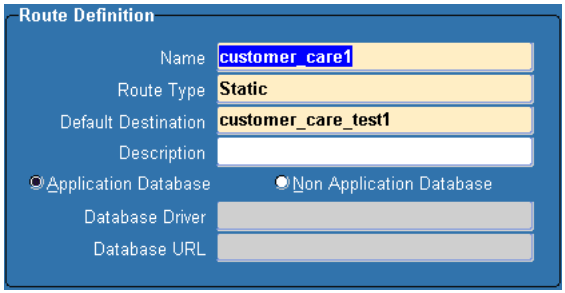
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Server Administration**.

      The Routing Administration window appears.

2. If necessary, choose **File** > **New**.

3. In the Route Definition area, identify the route.

Routing Administration Window: Route Definition Area



   a. Enter a unique name to describe the route.

   b. From the Route Type list, select **Dynamic**.

   c. From the Default Destination list, select the default destination to be use when the Routing Server cannot determine a destination based on the procedure parameters.

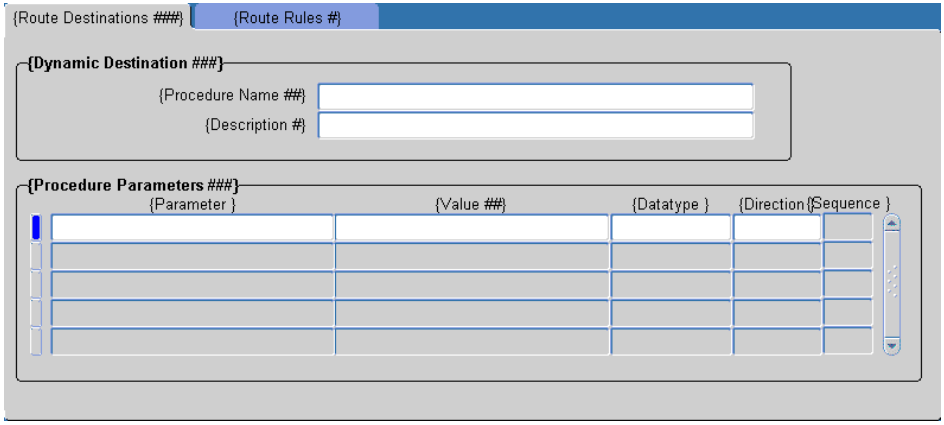
   d. Enter the description of the dynamic route.

   e. If this route uses the Oracle Applications database, select **Application Database**.

   f. If this route does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.

4. On the Route Destinations tab, define the procedure that is to be used to derive the destination for call.

Routing Administration Window: Route Destinations Tab (Dynamic)



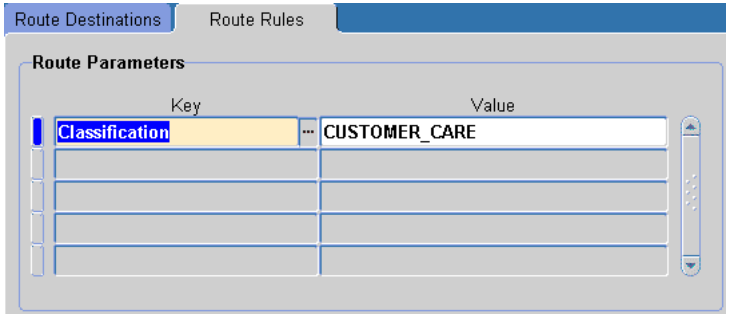
a. In the Dynamic Destination area, enter the name of the procedure (Package.Procedure) that is to be used to derive the destination for call.

b. In the Procedure Parameters area, identify the parameters for the procedure.

Sequence is a generated number that indicates the sequence of the parameter.

5. On the Route Rules tab, define the rules for the route.

Routing Administration Window: Route Rules Tab



a. From the Key list, select a key (for example, ANI).

b. Enter the value for the selected key (for example, 888-555-1234).

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

Defining Route Priorities

You can define and change the priority of route definitions. 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 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 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 this procedure to set the priority for a route.

Prerequisites

None

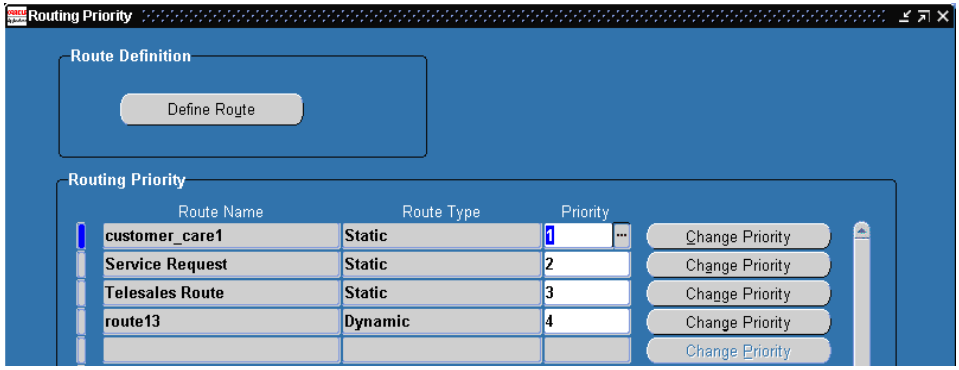
Steps

1. Navigate to the Routing Priority window.

   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Priority Administration**.

      The Routing Priority window appears.

Routing Administration Window: Route Priority Button: Routing Priority Window



2. From the Priority list, select a priority.
3. Click **Change Priority**.
4. From the **File** menu, choose **Save**.

Defining Classifications

Classifications specify how to identify and route particular types of calls that are associated with the selected Route ID. Classifications are of two types: literal and database procedure. A literal classification is a string. A database procedure classification is a stored procedure.

Classification rules can determine the route that a call must take, or a classification rule can designate a call as a classification for reports or for screen pops. Every classification must have rules that define the conditions under which the classification occurs. When a call meets all these conditions, the classification is the result and the call is routed accordingly.

In an example scenario, if a request to route ANI of 800 is a classification for Gold Card customer, then the resulting route destination could be the priority group.

A classification can have multiple rules associated with it. An individual route can have multiple destinations, which can be either static or dynamic. Every route has a sequence of a Key and a Value whose relationship is determined by one of the available Operations (=, !=, >, >=, <, <=).

If an incoming routing request results in a new classification, the new classification is added to the route request as one of the parameters. The server tries to find a new route based on this route request.

> **Note:** If you configure a classification rule that results in a new rule, then you will need a route that is defined for that new rule.

For example, if the classification rules in the preceding table result in adding the new classification rule CLASSIFICATION=GOLD to the classification request, then a new route is determined based on the new rule.

For procedures, see:

- Defining a Literal Classification
- Defining a Database Procedure Classification

Defining a Literal Classification

Use this procedure to define a literal classification.

Prerequisites

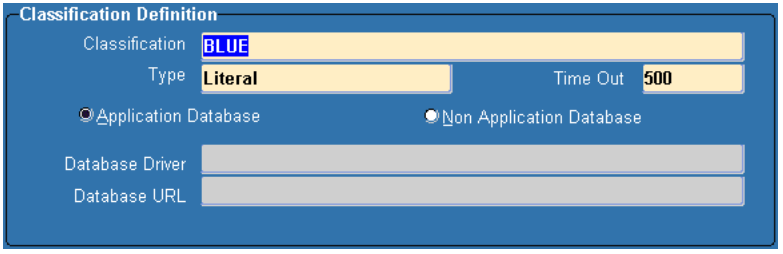
None

Steps

1. Navigate to the Classification Administration window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Classification Administration**.

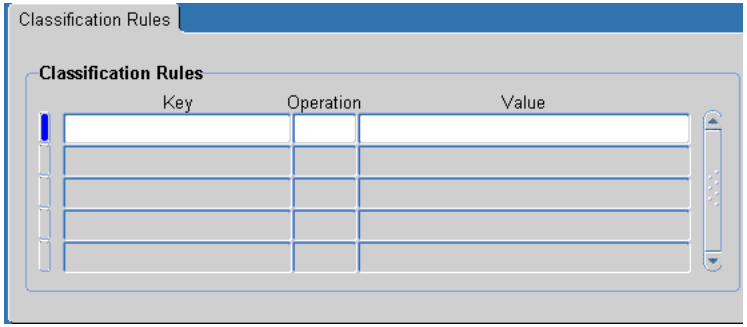
      The Classification Administration window appears.
2. If necessary, choose **File** > **New**.
3. In the Classification Definition area, define the classification.

Classification Administration Window: Classification Definition Area



   a. Enter a unique name to describe the classification.
   b. From the Type list, select **Literal**.
   c. Enter the maximum amount of time, in seconds, that the Routing Server should spend trying to determine the destination.
   d. If this classification uses the Oracle Applications database, select **Application Database**.
   e. If this classification does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.
4. On the Classification Rules tab, define the rules for routing based on the keys identified in the route definition.

Classification Administration Window: Classification Rules Tab



a. From the Key list, select a key.

> **Note:** A key used in a classification rule must be the same as that identified in the route rules definition.

b. From the Operation list, select an operator.

c. Enter the value for the selected key.

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

Defining a Database Procedure Classification

Classifications specify how to identify and route particular types of calls that are associated with the selected Route ID. A database procedure classification is a stored procedure. The following conditions apply.

Prerequisites

None

Steps

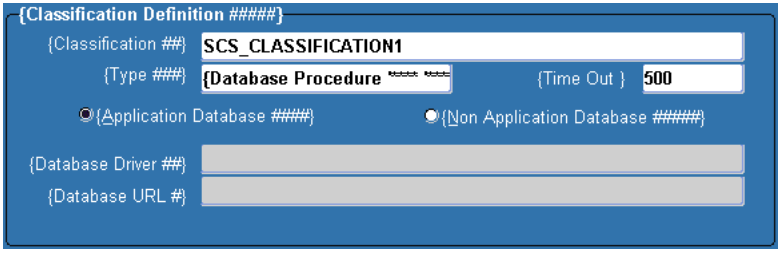
1. Navigate to the Classification Administration window.

   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Classification Administration**.

      The Classification Administration window appears.

2. In the Classification Definition area, define the classification.

Classification Administration Window: Classification Definition Area



   a. Enter the name of the database procedure.

   Note: The name of the classification is not verified against the stored procedures. Be sure to enter the correct procedure name.

   b. From the Type list, select **Database Procedure**.

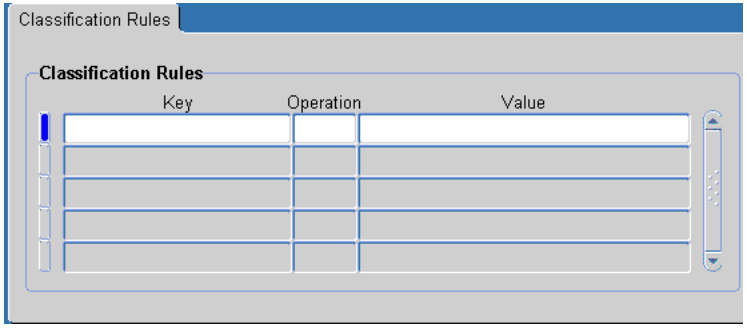
   c. Enter the maximum amount of time, in seconds, that the Routing Server should spend trying to determine the destination.

   d. If this classification uses the Oracle Applications database, select **Application Database**.

   e. If this classification does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.

3. On the Classification Rules tab, define the rules for routing based on the keys identified in the route definition.

Classification Administration Window: Classification Rules Tab



a. From the Key list, select a key.

Note: A key used in a classification rule must be the same as that identified in the route rules definition.

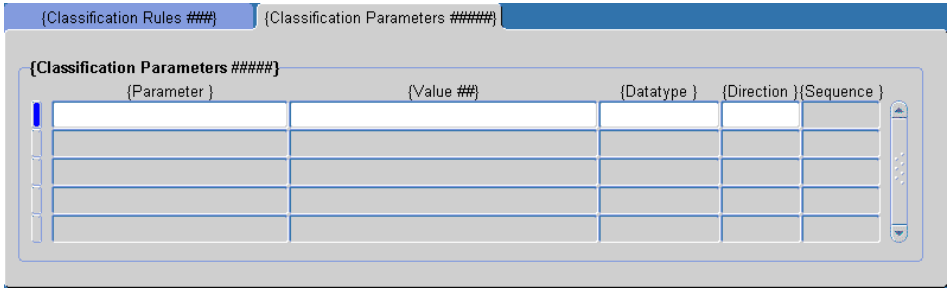
---

b. From the Operation list, select an operator.

c. Enter the value for the selected key.

4. On the Classification Parameters tab, identify the parameters for the database procedure.

Classification Administration Window: Classification Parameters Tab (Dynamic)



a. From the Parameter list, select a parameter.

b. From the Datatype list, select the data type of the parameter (for example, VARCHAR).

c. From the Direction list, select the direction of the parameter (for example, IN).

Sequence is a generated number that indicates the sequence of the parameter.

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

Setting Up Workflow-Based Routing for Inbound Calls and Email

With Oracle Workflow Builder 2.5, you can use drag-and-drop routing functions to implement and administer the Call Routing screen.

To create and configure a route path using the Oracle Workflow Builder-based Call Routing screen, you need to have a thorough understanding of Oracle Workflow Builder.

All Oracle Workflow Builder processes are associated with an item type. An item type can include one or more processes. When you save your work in Oracle Workflow Builder, you actually save everything associated with the item type that is currently selected. You can save an item type to a database or a flat file, and similarly load an item type into Oracle Workflow Builder from a database or a flat file. Opening an item type automatically retrieves all the attributes, messages, lookups, notifications, functions, and processes associated with that item type.

See:

- Accessing the Call Route Item Type
- Applying a Pre-Defined Route
- Running a Pre-Defined Routing Process
- Modifying a Process
- Designating Start and End Activities
- Adding a New Node to a Process
- Creating a New Process Route
- Administering Call Routing Filters
- Administering Call Center Environmental Conditions
- Setting Time and Date Rules
- Deriving Rules for the Customer Initialization Phase
- Deriving Rules for the Customer Product Initialization Phase
- Deriving Rules for the Product Initialization Phase
- Deriving Rules for Telesales Routing
- Deriving Rules for Banking Routing

Accessing the Call Route Item Type

To open the Oracle Workflow Builder Call Route item type, use the following procedure.

Prerequisites

None

Steps

1. Launch Oracle Workflow Builder.
2. Open the database connection.
3. From the Show Item Types window, choose **Call Route** > **Show**.

Applying a Pre-Defined Route

Oracle Workflow Builder includes routing process examples that you can apply as your call center routing process or you can use as templates to build your own routing processes.

Use this procedure to access a pre-defined routing processes.

Prerequisite

None

Steps

1. From the navigator tree, click **Call Route Item type**.
2. Expand the Processes folder to see a list of available pre-defined processes. Oracle Telephony Manager includes pre-defined example routes.
3. Double-click on the process name to view.

Running a Pre-Defined Routing Process

To run a pre-defined routing process with Oracle Workflow Builder, use the following procedure.

Prerequisites

None

Steps

1. From the Attributes folder, choose The Selected Process.

   The Oracle Workflow Navigator Control Properties window appears.

2. In the Default Value field, enter the name of the process that you want to run.

3. Choose **OK**.

Modifying a Process

The Process window in Oracle Workflow Builder graphically represents the activities (icons) and transitions (arrows) for a particular process. Notification, function, and process activities make up the nodes of a process.

If a process contains a process activity in its diagram, then that process activity is known as a *subprocess*. To display information on the subprocess in a separate Process window, double-click on the subprocess activity node in the parent Process window.

Each activity is a node, a logical step that contributes toward the completion of a process. Nodes contain stored procedures that operate on parameters. The GetAgents node routes information to a database table, invokes a stored procedure and returns the results. The database may return up to ten parameters, each parameter being an agent.

You can drag and drop activities from the navigator tree into the Process window. Define transitions between activities by drawing arrows from one activity to the next using the secondary mouse button.

Designating Start and End Activities

Each Oracle Workflow Builder process must have a Start activity that identifies the beginning point of the process. You may designate any node from which it is logical to begin the process as a Start activity. An End activity should return a result that represents the result of the completion of the process.

Prerequisite

None

Steps

1. Right click the icon that you wish to change.

2. Choose Properties.

3. Using the Start/End pull-down list, change the step in the process.
4. Indicate if the current node is a start or end activity in your process by choosing START or END, respectively. The default is NORMAL, which means neither. You may have multiple START and END nodes in your process.

   A Start activity is marked (Start) and has a small green arrow in its activity icon. An End activity is marked (End) and has a red arrow in its activity icon.
5. For an END node, if the overall process activity has a result type associated with it, you must also select a value for the final process result. The list of values for the final process result derive from the lookup type defined as the process activity's result type.

Adding a New Node to a Process

From the Oracle Workflow Builder Process window, create a new node by dragging and dropping a function or process activity from the navigator tree into the Process window. Use functions to fine-tune the route. The activity you drag must belong to the same data store as the process to which you drag it.

If you use the right mouse button menu New Activity in the Process window to create a new node, the property pages for the node appear. Select the name of the item type and activity in the Activities property page. If you create a node by dragging and dropping an activity from the navigator tree into the process window, then double-click on the node to display the property pages so you can further specify the details of the node.

If the node is a function activity and the function activity has activity attributes, you can assign values to those activity attributes by choosing the Attribute Values tab to display the Attribute Values property page.

If the node is a process activity, then a small subprocess overlay icon appears over the upper right corner of process activity icon. The subprocess overlay icon identifies the node as a subprocess within the process diagram.

Creating a New Process Route

Use this procedure to create a new process route with Oracle Workflow Builder.

Prerequisite

None

Steps

1. Select the Processes folder and right mouse click to create a new process.
2. When the Oracle Workflow Navigator Control Properties dialog box appears, select the Activities tab and:
   a. Enter a unique Internal Name.
   b. Enter the Display Name.
   c. Enter a Description of your new route.
   d. Leave the Result Type as None.
3. From Standard Functions, drag the Start activity to the new Process window.
4. From Call Route Functions, drag the Get Agents activity to the window.
5. From Call Routing Filters, CCT Environmental Conditions, Customer Initialization Phase, Customer Product Initialization, Product Initialization Phase, and Standard Item Types, drag and drop the activities you want to use in routing the calls to the appropriate agent.

Administering Call Routing Filters

Use Oracle Workflow Builder Call Routing Filters to route calls only to those agents who meet the filter criteria. Refer to the following table for a description of call routing filters.

Call Routing Filter	Description
Competency - Language Filter	Ensures that only those agents who are competent in the language selected by the customer answer the call. Requires that a language selection be made at the IVRU.
Competency - Knowledge Filter	Ensures that only those agents who are competent in the area of expertise selected by the customer answer the call. Requires that an area of expertise selection be made at the IVRU.
Competency - Product Filter	Used to ensure that only those agents who are competent in the product selected by the customer answer the call. Requires that a product selection be made at the IVRU.
Customer Product Filter	This filter is used to ensure that only those agents who are assigned to handle the particular 'Customer Product' combination answer the call. Requires that the 'Derive Customer Product ID' sub-process be completed before this activity in the routing workflow process.

Call Routing Filter	Description
Customer ID Filter	This filter is used to ensure that only those agents who are assigned to handle this particular customer answer the call. Requires that the 'Derive Customer ID' sub-process be completed before this activity in the routing workflow process.
Problem Code Filter	This filter is used to ensure that only those agents who are assigned to handle the particular 'Problem Code' answer the call. Requires that a problem code selection be made at the IVRU.
Product ID Filter	This filter is used to ensure that only those agents who are assigned to handle the particular product answer the call. Requires that the 'Derive Product ID' sub-process be completed before this activity in the routing workflow process.
Request Owner Filter	This filter is used to ensure that the call is routed to the agent who owns the 'Service Request', when the customer is calling about the particular 'Service Request'. Requires that a service request number selection be made at the IVRU.
System Type Filter	This filter is used to ensure that only those agents who are assigned to handle the particular 'System Type' answer the call. Requires that a serial number be input from the IVRU.
Telesales Agent Account Filter	This filter is used to retrieve the agents for a customer based on the account ID.
Telesales Agent Opportunity Filter	This filter is used to retrieve the agents for a given sales opportunity.
Telesales Agent Territory Filter	This filter is used to retrieve the agents for a customer based on their territory.
Agents from Dynamic Group Name	This filter is used to retrieve the agents returned based on the dynamic group_name
Agents from Dynamic Group Number	This filter is used to retrieve the agents based on the dynamic group number
Agents from static group name	This filter returns agents based on a static group name
Agents from static group number	This filter returns agents based on static group number.
Agents not in dynamic group name	This filter returns agents not in dynamic group name
Agents not in dynamic group number	This filter returns agents not in dynamic group number

Call Routing Filter	Description
Agents not in static group name	This filter returns agents not in static group name
Agents not in static group number	This filter returns agents not in static group number.
All logged in agents	This filter returns a list of all logged in agents

Administering Call Center Environmental Conditions

Call Center Environmental Conditions refers to the routing rules based on the date and time of the call.

Setting Time and Date Rules

In Oracle Workflow Builder, for each of these attributes, the relevant value is specified after you drag the node onto the process diagram.

Use the following procedure to set time and date rules.

Prerequisites

None

Steps

1. In the process diagram, double click on the node icon to open the node properties sheet.

   The property page for the node appears.

2. Choose the Attribute Values tab.

   The Attribute Values property page for the node appears.

3. Choose the applicable attribute or attributes and enter them in the Value field.

4. Choose **Apply** to save your changes or choose **OK** to save your changes and close the Property page.

Guidelines

Refer to the following table for a description of time and date rules.

Rule	Description
Between Two Dates?	If the current date falls between the start and end dates specified, this rule returns a Yes, otherwise it returns a No.
During Business Hours?	If the call is received during business hours, this rule returns a Yes, otherwise it returns a No.
Get Day of the Month?	This rule returns the current day of the month as a number. You can use this rule to handle special, but not contiguous, days of the month differently.
Get Day of the Week?	This rule returns the current day of the week. You can use this rule to handle weekends or certain days of the week differently.
Is It After Specified Date?	If the current date is after the specified date, this rule returns a Yes, otherwise it returns a No.
Is It Before Specified Date?	If the current date is before the specified date, this rule returns a Yes, otherwise it returns a No.
Is It After Specified Time?	If the current time of day is after the specified time of day, this rule returns a Yes, otherwise it returns a No.
Is It Before Specified Time?	If the current time of day is before the specified time of day, this rule returns a Yes, otherwise it returns a No.

Deriving Rules for the Customer Initialization Phase

The Oracle Workflow Builder Customer initialization phase derives Customer ID information from the caller's responses to the IVR. The phase is represented by the Derive Customer ID sub-process, which you drag onto the process diagram.

You can drag the following rules for derivation of Customer ID onto the Derive Customer ID sub-process. You can also use these rules directly in the Routing process diagram.

Refer to the following table for a description of customer initialization phase rules.

Rule	Description
Customer ID Exists?	If the customer ID is already known, this rule returns a Yes, otherwise it returns a No. Using this as the first rule in the 'Derive Customer ID' sub-process, will allow for a quick exit from the sub-process without applying any derivation rules if the Customer ID is already known.

Rule	Description
Can Get Customer ID from Invoice Num?	If the customer ID can be derived from the Invoice Num, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Can Get Customer ID from Order Num?	If the customer ID can be derived from the Order Num, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Can Get Customer ID from PO Num?	If the customer ID can be derived from the PO Num, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Can Get Customer ID from Request Num?	If the customer ID can be derived from the Request Num, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Can Get Customer ID from RMA Num?	If the customer ID can be derived from the RMA Num, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Can Get Customer ID from Serial Num?	If the customer ID can be derived from the Serial Num, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Can Get Customer ID from System Name?	If the customer ID can be derived from the System Name, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.

Deriving Rules for the Customer Product Initialization Phase

The Oracle Workflow Builder Customer Product initialization phase derives the Customer Product ID information from caller's responses to the IVRU. The phase is represented by the Derive Customer Product ID sub-process, which you drag onto the process diagram.

You can drag the following rules for derivation of Customer Product ID onto the Derive Customer Product ID sub-process. You can also use these rules directly in the Routing process diagram.

Refer to the following table for a description of customer product initialization phase rules.

Rule	Description
Customer Product ID Exists?	If the customer product ID is already known, this rule returns a Yes, otherwise it returns a No. Using this as the first rule in the Derive Customer Product ID sub-process, will allow for a quick exit from the sub-process without applying any derivation rules if the Customer Product ID is already known.
Can Get Customer Product ID from Reference Num?	If the customer product ID can be derived from the Reference Number, this rule derives the Customer Product ID and returns a Yes, otherwise it returns a No.
Can Get Customer Product ID from Request Num?	If the customer product ID can be derived from the Request Number, this rule derives the Customer Product ID and returns a Yes, otherwise it returns a No.
Can Get Customer Product ID from Serial Num?	If the customer product ID can be derived from the Serial Number, this rule derives the Customer Product ID and returns a Yes, otherwise it returns a No.

Deriving Rules for the Product Initialization Phase

The Oracle Workflow Builder Product initialization phase derives the Product ID information from the caller's responses to the IVR. The phase is represented by the Derive Product ID sub-process, which you drag onto the process diagram.

You can drag the following rules for derivation of Product ID onto the Derive Product ID sub-process. You can also use these rules directly in the Routing process diagram.

Refer to the following table for a description of product initialization phase rules.

Rule	Description
Product ID Exists?	If the product ID is already known, this rule returns a Yes, otherwise it returns a No. Using this as the first rule in the 'Derive Product ID' sub-process, will allow for a quick exit from the sub-process without applying any derivation rules if the Product ID is already known.
Can Get Product ID from Reference Num?	If the product ID can be derived from the Reference Number, this rule derives the Product ID and returns a Yes, otherwise it returns a No.
Can Get Product ID from Request Num?	If the product ID can be derived from the Request Number, this rule derives the Product ID and returns a Yes, otherwise it returns a No.

Rule	Description
Can Get Product ID from Serial Num?	If the product ID can be derived from the Serial Number, this rule derives the Product ID and returns a Yes, otherwise it returns a No.

Deriving Rules for Telesales Routing

The Oracle Workflow Builder routing functions for Oracle Telesales derive the Customer ID information from the caller's responses to the IVR. The phase is represented by the Derive Telesales Customer ID sub-process, which you drag onto the process diagram.

You can drag the following rules for derivation of Customer ID onto the Derive Telesales Customer ID sub-process. You can also use these rules directly in the Routing process diagram.

Refer to the following table for a description of Oracle Telesales routing rules.

Rule	Description
Customer ID from Address ID?	If the customer ID can be derived from the Address ID, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Customer ID from ANI?	If the customer ID can be derived from the ANI, this rule derives the Customer ID and returns a Yes, otherwise it returns a No.
Customer ID Exists?	If the Customer ID is already known, this rule returns a Yes, otherwise it returns a No. Using this as the first rule in the 'Derive Telesales Customer ID' sub-process, will allow for a quick exit from the sub-process without applying any derivation rules if the Product ID is already known.

Deriving Rules for Banking Routing

The Oracle Workflow Builder routing functions for Oracle Banking Center derive the group information from the caller's responses to the IVR. You can also use these rule functions directly in the Routing process diagram.

Refer to the following table for a description of Oracle Banking Center routing rules.

Rule	Description
Group from Bank Branch	If the group can be derived from the Bank Branch, this rule derives the Agent Ids based on the group.

Rule	Description
Group from Bank ID	If the group can be derived from the Bank Id, this rule derives the Agent Ids based on the group.
Group from Profitability	If the group can be derived from profitability, this rule derives the Agent Ids based on the group.

Setting Profile Options

There are no system profile options to set for Oracle Telephony Manager.

Configuring and Testing Integration Points

When implementing and troubleshooting Oracle Telephony Manager, consideration should be given to the PBX components being configured and operational. Troubleshooting should begin at the third-party CTI middleware layer and progress up through the stack.

It is important to verify proper configuration of the PBX CTI link and its communication to the CTI middleware and, subsequently, to the Oracle Call Center Connectors server.

In some cases, troubleshooting CTI issues must include the customer's PBX/CTI engineer to ensure proper configuration on the PBX and its proprietary CTI link.

Testing an Implementation Project

Restarting the Server Monitor

If the Server Monitor goes down and you restart it, all clients of the Server Monitor automatically re-register with the Server Monitor and other servers. The server launcher also automatically reconnects when the Server Monitor restarts.

Starting Servers

When you need monitoring, Oracle suggests that you start the Server Monitor first. When the Server Monitor is in use, you can start the Inbound Telephony Server before starting Oracle Telephony Manager.

When the Server Monitor is *not* in use, Oracle Telephony Manager must be running before you can start the Inbound Telephony Server. If you start the server monitor at any time after startup, the monitored servers will automatically connect to it.

Monitored servers detect when the server monitor starts and by default connect to the server monitor within five minutes. To change this connect default value specify the `sm_reconnect_interval` parameter in the SERVER.INI file and the SMI.INI file.

Starting the Server Monitor

On Windows NT, Oracle recommends that you start the Server Monitor as the service `OracleServerMonitor_ServerName`. To start the server monitor in console window, run the batch file SM.BAT from

the home directory.

On UNIX, to start the server monitor, run the script file SM.SH.

Starting the Server Launcher

The server launcher performs remote startup of the server monitor. The server launcher is installed automatically in the installation of any call center server. The server launcher must run on every machine that a) runs any call center and telephony server and b) requires remote startup. When the server monitor notifies

the server launcher, the server launcher starts an NT service on Windows NT and starts a background process on UNIX.

Starting the Server Monitor Command Line

To access the Server Monitor commands, you need to start another command line.

On Windows NT, run the file SMCMD.BAT.

On UNIX, run the file SMCMD.SH.

Administering Server Monitor Commands

Refer to the following table for a description of command line commands for administering the Server Monitor.

Command	Definition
HELP	Display the server monitor commands.
SHUTDOWN	Shutdown the server monitor and server monitor command line tool.
STATUS	Display server monitor status information.
GC	Initiate server monitor Garbage Collect.
RSTART(serverName)	Start a remote server.
RSTOP(serverName)	Stop a remote server.
RSTATUS(serverName)	Show the status of a remote server.
RSTATUS	Display the status of all servers that are monitored by the server monitor.
RLIST	Display a list of servers installed on different hosts.
STOPCMDLINE	Stop the command line interface.

Auto-Restart of Servers with the Server Monitor

You can configure your servers to be re-started automatically on a crash. Currently only the Inbound Telephony Server, the Oracle Telephony Manager, the Oracle Telephony Media Controller(s), the Email Center server, the Oracle Routing Server(s) connect to the server monitor and can avail of this fault tolerance functionality. The Oracle Server Launcher must be running on every node that has any of the aforementioned servers connected to the server monitor. *By default Server Monitor is configured to restart all servers automatically on a crash.* To disable auto-restart for all servers set the parameter AUTO_RESTART_DISABLED to TRUE in the SM.INI file. To disable auto- restart for a specific server set the parameter AUTO_RESTART_DISABLED to TRUE in the servers init file (SVR.INI). Example configurations for init files follow:

Configuration 1

auto_restart_disabled=true in sm.ini

Result: No server will be restarted automatically.

Configuration 2

auto_restart_disabled=false in sm.ini

auto_restart_disabled=true in ors.ini (the Oracle Routing Servers init file), auto_restart_disabled=false in otm.ini (the Oracle Telephony Managers init file)

Result: If the Oracle Routing Server crashes, it will not be restarted automatically

Restarting a Crashed Server Application

Before you restart a crashed server application on the same server, you need to wait the length of time equal to the server refresh rate, which is currently one minute. If

you restart sooner, you will receive the error message `Server by name "ServerName" is already running`. If you shut down the Windows NT service or, on Solaris, invoke the "shutdown" command off the command line interface, you do not need to wait before restarting.

Configuring Oracle Telephony Manager to Run in Passive Mode

When run in passive mode, Oracle Telephony Manager bypasses any routing rules. Passive mode is typically used when a call center prefers traditional ACD routing features and / or the statistics and reporting tools of a switch vendor.

In passive mode, the ACD / PBX system completely handles the routing and queueing of inbound calls. Oracle Telephony Manager does not monitor or respond to routing requests from the switch, and skill-based routing is essentially inactive. As calls arrive at the agents' extensions, Oracle Telephony Manager monitors the calls and captures any associated data (for example, ANI or DNIS) for screen pops.

For Nortel Meridian only, when Oracle Telephony Manager is in passive mode, the ACD / PBX system routes inbound calls and delivers then to the ACD DN, also known as the Automatic Call Distribution key, on the teleset. When Oracle Telephony Manager is in active mode, skill-based routing directs inbound calls to the DN (Directory Number), also known as the Single Call Ringing key, on the teleset.

Use this procedure to configure Oracle Telephony Manager to run in passive mode.

Prerequisites

None

Steps

1. Navigate to the Server Locator window.

a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

   The Call Center Administration window appears.

b. Click **Server Admin**.

   The Server Locator window appears.

2. Select the Server tab.
3. Run a query to display the Telephony Manager of interest.
4. In the Server Parameters area, set the value of the PASSIVE_MODE parameter to TRUE.

Configuring Telephony Manager to Run in Active Mode

Use this procedure to configure Oracle Telephony Manager to run in active mode.

Prerequisites

None

Steps

1. Navigate to the Server Locator window.

   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.

   b. Click **Server Admin**.

      The Server Locator window appears.

2. Select the Server tab.
3. Run a query to display the Telephony Manager of interest.
4. In the Server Parameters area, set the value of the PASSIVE_MODE parameter to FALSE.

Connecting Inbound Telephony Server to Oracle Telephony Manager

Inbound Telephony Server is a server process which monitors and forwards inbound telephony and web callback requests to Telephony Manager Server (OTM).

The Inbound Telephony Server is required when running OTM in active mode, routing inbound telephony and / or web callback requests.

To configure Inbound Telephony Server to connect to OTM, configure the parameter OTM_SERVER_NAME with the appropriate Telephony Manager Server name.

Configuring Oracle Telephony Manager to Run in Standalone Mode

Standalone Oracle Telephony Manager is a single server application that handles both media queueing and media control. Standalone configuration is suitable for call centers with fewer than 300 agents, and is easier to maintain than distributed configurations.

Use this procedure to configure Oracle Telephony Manager to run in standalone mode.

Prerequisites

None

Steps

1. Navigate to the Server Locator window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.

   b. Click **Server Admin**.

      The Server Locator window appears.
2. Select the Server tab.
3. Run a query to display the Telephony Manager of interest.
4. In the Server Parameters area, set the value of the STANDALONE parameter to TRUE.

Configuring Oracle Telephony Manager to Run in Distributed Mode

Distributed configuration can support call centers with more than 1000 agents, and has better scalability than standalone configuration. A distributed Oracle Telephony Manager system consists of one media queue server application, that is, Oracle Telephony Manager, and one or more media controller server applications, that is, Telephony Media Controller.

Use this procedure to configure Oracle Telephony Manager to run in distributed mode.

Prerequisites

None

Steps

1. Navigate to the Server Locator window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.

   b. Click **Server Admin**.

      The Server Locator window appears.
2. Select the Server tab.
3. Run a query to display the Telephony Manager of interest.
4. In the Server Parameters area, set the value of the STANDALONE parameter to FALSE.

Configuring Media Controller to Run in Distributed Mode

Use this procedure to configure Oracle Telephony Media Controller to run in distributed mode.

Prerequisites

None

Steps

1. Navigate to the Server Locator window.
   a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Call Center Administration**.

      The Call Center Administration window appears.

   b. Click **Server Admin**.

      The Server Locator window appears.

2. Select the Server tab.
3. Run a query to display a Telephony Media Controller in the same server group as the Telephony Manager of interest.
4. In the Server Parameters area, set the value of the OTM_SERVER_NAME parameter to the server name of the Telephony Manager Server.

Connecting Oracle Telephony Manager to Routing Servers

You can configure up to three routing servers per Oracle Telephony Manager. A load-balancing algorithm distributes the calls among the routing servers.

To configure Oracle Telephony Manager to connect to routing servers, configure the parameter `ROUTING_SERVER_1, ROUTING_SERVER_2, ROUTING_SERVER_3` with the appropriate routing server names.