PeopleSoft®

Enterprise PeopleTools 8.45 PeopleBook: PeopleSoft MultiChannel Framework

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Enterprise PeopleTools 8.45 PeopleBook: PeopleSoft MultiChannel Framework
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Open Source Disclosure

Contents

About This PeopleBook

PeopleBooks provide you with the information that you need to implement and use PeopleSoft applications.

This preface discusses:

- PeopleSoft application prerequisites.
- PeopleSoft application fundamentals.
- Related documentation.
- Typographical conventions and visual cues.
- Comments and suggestions.
- Common elements in PeopleBooks.

Note. PeopleBooks document only page elements that require additional explanation. If a page element is not documented with the process or task in which it is used, then either it requires no additional explanation or it is documented with common elements for the section, chapter, PeopleBook, or product line. Elements that are common to all PeopleSoft applications are defined in this preface.

PeopleSoft Application Prerequisites

To benefit fully from the information that is covered in these books, you should have a basic understanding of how to use PeopleSoft applications.

See *Enterprise PeopleTools 8.45 PeopleBook: Using PeopleSoft Applications*.

You might also want to complete at least one PeopleSoft introductory training course.

You should be familiar with navigating the system and adding, updating, and deleting information by using PeopleSoft windows, menus, and pages. You should also be comfortable using the World Wide Web and the Microsoft Windows or Windows NT graphical user interface.

These books do not review navigation and other basics. They present the information that you need to use the system and implement your PeopleSoft applications most effectively.

PeopleSoft Application Fundamentals

Each application PeopleBook provides implementation and processing information for your PeopleSoft database. However, additional, essential information describing the setup and design of your system appears in a companion volume of documentation called the application fundamentals PeopleBook. Each PeopleSoft product line has its own version of this documentation.

The application fundamentals PeopleBook consists of important topics that apply to many or all PeopleSoft applications across a product line. Whether you are implementing a single application, some combination of applications within the product line, or the entire product line, you should be familiar with the contents of this central PeopleBook. It is the starting point for fundamentals, such as setting up control tables and administering security.

Related Documentation

This section discusses how to:

- Obtain documentation updates.
- Order printed documentation.

Obtaining Documentation Updates

You can find updates and additional documentation for this release, as well as previous releases, on the PeopleSoft Customer Connection website. Through the Documentation section of PeopleSoft Customer Connection, you can download files to add to your PeopleBook Library. You'll find a variety of useful and timely materials, including updates to the full PeopleSoft documentation that is delivered on your PeopleBooks CD-ROM.

Important! Before you upgrade, you must check PeopleSoft Customer Connection for updates to the upgrade instructions. PeopleSoft continually posts updates as the upgrade process is refined.

See Also

PeopleSoft Customer Connection, https://www.peoplesoft.com/corp/en/login.jsp

Ordering Printed Documentation

You can order printed, bound volumes of the complete PeopleSoft documentation that is delivered on your PeopleBooks CD-ROM. PeopleSoft makes printed documentation available for each major release shortly after the software is shipped. Customers and partners can order printed PeopleSoft documentation by using any of these methods:

- Web
- Telephone
- Email

Web

From the Documentation section of the PeopleSoft Customer Connection website, access the PeopleBooks Press website under the Ordering PeopleBooks topic. The PeopleBooks Press website is a joint venture between PeopleSoft and MMA Partners, the book print vendor. Use a credit card, money order, cashier's check, or purchase order to place your order.

Telephone

Contact MMA Partners at 877 588 2525.

Email

Send email to MMA Partners at peoplesoftpress@mmapartner.com.

See Also

PeopleSoft Customer Connection, https://www.peoplesoft.com/corp/en/login.jsp

Typographical Conventions and Visual Cues

This section discusses:

- Typographical conventions.
- Visual cues.
- Country, region, and industry identifiers.
- Currency codes.

Typographical Conventions

This table contains the typographical conventions that are used in PeopleBooks:

Typographical Convention or Visual Cue	Description
Bold	Indicates PeopleCode function names, method names, language constructs, and PeopleCode reserved words that must be included literally in the function call.
Italics	Indicates field values, emphasis, and PeopleSoft or other book-length publication titles. In PeopleCode syntax, italic items are placeholders for arguments that your program must supply. We also use italics when we refer to words as words or letters as letters, as in the following: Enter the letter *O*.
KEY+KEY	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For ALT+W, hold down the ALT key while you press the W key.
`Monospace font`	Indicates a PeopleCode program or other code example.
“ ” (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meanings.
. . . (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe (|).

Typographical Convention or Visual Cue	Description
[ ] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object. Ampersands also precede all PeopleCode variables.

Visual Cues

PeopleBooks contain the following visual cues.

Notes

Notes indicate information that you should pay particular attention to as you work with the PeopleSoft system.

Note. Example of a note.

If the note is preceded by *Important!*, the note is crucial and includes information that concerns what you must do for the system to function properly.

Important! Example of an important note.

Warnings

Warnings indicate crucial configuration considerations. Pay close attention to warning messages.

Warning! Example of a warning.

Cross-References

PeopleBooks provide cross-references either under the heading “See Also” or on a separate line preceded by the word *See*. Cross-references lead to other documentation that is pertinent to the immediately preceding documentation.

Country, Region, and Industry Identifiers

Information that applies only to a specific country, region, or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a country-specific heading: “(FRA) Hiring an Employee”

Example of a region-specific heading: “(Latin America) Setting Up Depreciation”

Country Identifiers

Countries are identified with the International Organization for Standardization (ISO) country code.

See *About These PeopleBooks,* “ISO Country and Currency Codes,” ISO Country Codes.

Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in PeopleBooks:

- Asia Pacific
- Europe
- Latin America
- North America

Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in PeopleBooks:

- USF (U.S. Federal)
- E&G (Education and Government)

Currency Codes

Monetary amounts are identified by the ISO currency code.

See Appendix A, “ISO Country and Currency Codes,” ISO Currency Codes.

Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like to see changed about PeopleBooks and other PeopleSoft reference and training materials. Please send your suggestions to:

PeopleSoft Product Documentation Manager PeopleSoft, Inc. 4460 Hacienda Drive Pleasanton, CA 94588

Or send email comments to doc@peoplesoft.com.

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions.

Common Elements in These PeopleBooks

As of Date The last date for which a report or process includes data.

Business Unit An ID that represents a high-level organization of business information. You can use a business unit to define regional or departmental units within a larger organization.

Description Enter up to 30 characters of text.

Effective Date The date on which a table row becomes effective; the date that an action begins. For example, to close out a ledger on June 30, the effective date for the ledger closing would be July 1. This date also determines when you can view and change the information. Pages or panels and batch processes that use the information use the current row.

Once, Always, and **Don't Run** — Select Once to run the request the next time the batch process runs. After the batch process runs, the process frequency is automatically set to Don't Run.

Select Always to run the request every time the batch process runs.

Select Don't Run to ignore the request when the batch process runs.

Report Manager — Click to access the Report List page, where you can view report content, check the status of a report, and see content detail messages (which show you a description of the report and the distribution list).

Process Monitor — Click to access the Process List page, where you can view the status of submitted process requests.

Run — Click to access the Process Scheduler request page, where you can specify the location where a process or job runs and the process output format.

Request ID — An ID that represents a set of selection criteria for a report or process.

User ID — An ID that represents the person who generates a transaction.

SetID — An ID that represents a set of control table information, or TableSets. TableSets enable you to share control table information and processing options among business units. The goal is to minimize redundant data and system maintenance tasks. When you assign a setID to a record group in a business unit, you indicate that all of the tables in the record group are shared between that business unit and any other business unit that also assigns that setID to that record group. For example, you can define a group of common job codes that are shared between several business units. Each business unit that shares the job codes is assigned the same setID for that record group.

Short Description — Enter up to 15 characters of text.

See Also

Enterprise PeopleTools 8.45 PeopleBook: PeopleSoft Process Scheduler

Enterprise PeopleTools 8.45 PeopleBook: Using PeopleSoft Applications

PeopleSoft MultiChannel Framework Preface

This preface introduces the PeopleSoft MultiChannel Framework.

PeopleSoft MultiChannel Framework

PeopleSoft MultiChannel Framework delivers an integrated infrastructure to support multiple interaction channels for call center agents or other PeopleSoft users who must respond to incoming requests and notifications on these channels.

PeopleSoft MultiChannel Framework supports voice, email, chat, and generic event channels.

CHAPTER 1

Getting Started with PeopleSoft MultiChannel Framework

This chapter discusses:

- PeopleSoft MultiChannel Framework overview.
- PeopleSoft MultiChannel Framework setup.

PeopleSoft MultiChannel Framework Overview

PeopleSoft MultiChannel Framework provides the tools required to support multiple channels of communication between customers (users) and agents. Some PeopleSoft applications use PeopleSoft MultiChannel Framework, such as an email response management system (ERMS) from PeopleSoft CRM, or you can develop your own applications on the provided framework.

PeopleSoft MultiChannel Framework delivers an integrated infrastructure to support multiple interaction channels for call center agents or other PeopleSoft users who must respond to incoming requests and notifications on these channels. The channels supported include email, web-based chat, voice (CTI), generic events, and instant messaging. PeopleSoft MultiChannel Framework can be used from any PeopleSoft application.

In the planning phase of your implementation, take advantage of all PeopleSoft sources of information, including the installation guides, PeopleTools documentation, and the PeopleBooks that are specific to your applications.

Implementing PeopleSoft MultiChannel Framework

This section describes the steps required to implement PeopleSoft MultiChannel Framework.

Depending on your business use of PeopleSoft MultiChannel Framework, several activities are necessary for implementation.

- At a minimum you must configure a REN server.
- If you are using a PeopleSoft-supplied application, such as ERMS, you must also configure MCF servers, clusters, queues, and agents.
- You can also develop your own applications built on the PeopleSoft MultiChannel Framework.

Configuring REN Servers and Clusters

The real-time event notification (REN) server routes event notifications through the PeopleSoft MultiChannel Framework. Certain PeopleSoft applications, such as Reporting and Optimization, use the REN server to route notifications without using any of the rest of the PeopleSoft MultiChannel Framework. Therefore a minimal configuration of PeopleSoft MultiChannel Framework includes at least one REN server and REN server cluster.

REN-server specific security setup is required, including configuration of Real-time Event Notification Permissions for each role using a REN server alone or as part of PeopleSoft MultiChannel Framework.

Typically, a system administrator configures and manages REN servers and clusters.

See Chapter 5, “Configuring REN Servers,” page 43.

Configuring MCF Servers, Clusters, Queues, and Tasks

MCF servers (queue servers and log servers) work with REN servers to queue and route task notifications to agents. An implementation of PeopleSoft MultiChannel Framework requires configuration of MCF servers, MCF clusters, queues, and tasks.

Typically, a system administrator configures and manages MCF servers and clusters, and either a system administrator or an agent supervisor configures and manages queues and tasks.

See Chapter 6, “Configuring MCF Clusters,” page 57 and Chapter 7, “Configuring MCF Queues,” page 65.

Creating and Defining Agents

Agents are PeopleSoft users further defined as PeopleSoft MultiChannel Framework agents. Agents manage tasks assigned to them. Agents can log on to and accept tasks from the MultiChannel Console.

Typically, an agent supervisor defines agents and assigns agents to appropriate queues.

See Chapter 8, “Configuring MCF Agents,” page 79.

Developing for MCF

PeopleSoft MultiChannel Framework is delivered with sample pages demonstrating the use of email, web-based chat, generic, and instant messaging channels. An application developer can use these sample page definitions as the basis for application pages. The Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference includes detailed descriptions of PeopleSoft’s Mail Classes, MCFIMInfo Classes, and the Universal Queue Classes.

See Chapter 9, “Administering PeopleSoft MultiChannel Framework,” page 89; Chapter 11, “Developing for PeopleSoft MultiChannel Framework,” page 113; *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Mail Classes”; *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “MCFIMInfo Class” and *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Universal Queue Classes”.

Configuring PeopleSoft CTI

Included with PeopleSoft MultiChannel Framework is support for PeopleSoft CTI. PeopleSoft CTI requires supporting computer-telephony middleware and additional configuration separate from other channels of PeopleSoft MultiChannel Framework.

See Chapter 3, “Configuring PeopleSoft CTI,” page 11.

CHAPTER 2

Understanding PeopleSoft MultiChannel Framework

This chapter discusses:

- PeopleSoft MultiChannel Framework.
- PeopleSoft MultiChannel Framework elements and channels.
- PeopleSoft MultiChannel Framework architecture.

PeopleSoft MultiChannel Framework

PeopleSoft MultiChannel Framework delivers an integrated infrastructure to support multiple interaction channels for call center agents or other PeopleSoft users who must respond to incoming requests and notifications on these channels.

PeopleSoft MultiChannel Framework can be used from any PeopleSoft application.

In this context, the word *channel* refers to the technology used to communicate during an interaction. PeopleSoft MultiChannel Framework supports the following channels:

- Voice (telephone).
- Web collaboration (chat).
- Email.
- Generic tasks.
- Instant messaging.

The PeopleSoft MultiChannel Framework includes an HTML agent console, universal queueing, real-time task routing, customer to agent and collaborative chat, and centralized event logging.

PeopleSoft MultiChannel Framework Elements and Channels

This section discusses:

- PeopleSoft MultiChannel Framework elements.
- PeopleSoft MultiChannel Framework channels.
- PeopleSoft MultiChannel Framework universal queue.

- PeopleSoft MultiChannel Console.

PeopleSoft MultiChannel Elements

PeopleSoft Multichannel Framework comprises the following services and elements:

- Universal queue, running on the Universal Queue server process (PSUQSRV).
- Real-time event notification (REN) server, running on the REN server process (PSRENSRV).
- Multichannel framework (MCF) log, running on the MCFLOG server process (PSMCFLOG).
- Multichannel console, the HTML interface through which users manage the channel interactions assigned to them.
- Chat windows, the HTML interfaces used for customer-to-agent and collaborative chat sessions.
- Agents, identified by their expertise and responsibilities.
- PeopleCode built-in functions and an email application package.
- GETMAILTARGET connector running under PeopleSoft Integration Broker.

Each of these services and elements requires configuration.

In addition, each communication channel handled by PeopleSoft MultiChannel Framework requires supporting elements:

- Computer telephony integration (CTI) middleware to notify the system of telephone calls.
- An email server to store and serve email.
- Application pages to request customer-to-agent chat sessions and to provide context data and resolution logic for all interactions.
- Application pages or batch processes to enqueue generic events.

PeopleSoft MultiChannel Framework Channels

This section discusses support for communications channels offered by PeopleSoft MultiChannel Framework.

Voice

The agent console offers a softphone and full CTI support with Genesys and Cisco CTI middleware. Relevant application pages appear based on data attached to the call by the IVR and CTI middleware.

Web Collaboration

PeopleSoft application pages can include Live Help buttons that initiate customer to agent chat sessions. The customer and agent chat windows are browser-based and do not require a client installation or applet download. The universal queue routes chat requests to the first available agent with the skills required to handle that request. The agent chat window displays relevant customer information and enables the agent to push web content to the customer. The agent can manage multiple chat sessions from the agent console.

Agents can also conference peers and supervisors into a chat and transfer chat sessions to other agents or queues. Agents can also initiate collaborative chats with other agents on their buddy lists.

Email

PeopleSoft MultiChannel Framework enables applications to fetch Multipart Internet Mail Extensions emails from Post Office Protocol 3 and Internet Message Access Protocol 4 mail servers, store their parts in a database, and route the email to call center agents by either adding the email to worklists or enqueueing them on the universal queue. Large emails and binary attachments are not inserted into the database, but are instead stored in an attachment repository, accessible by URLs from a browser. The repository checks user and role-based security before retrieving an attachment. The email framework is built on PeopleSoft Integration Broker technology.

Generic Channel

Channels that are not provided by PeopleSoft MultiChannel Framework can be integrated by using the generic channel to enqueue tasks onto the universal queue.

Instant Messaging

PeopleSoft MultiChannel Framework includes the capability to use instant messaging called from an application page and using one of several instant messaging clients.

Universal Queue

The universal queue accepts, evaluates, and distributes incoming task requests from multiple communication channels: email, web chat, and generic notifications.

The universal queue handles email, chat, and generic tasks. It distributes workload across the call center, or any other pool of qualified users, based on the priority of the task and the availability of agents possessing the required skill level and language skills. Availability is based on agent presence and the cost of the new task (a measure of the task's impact on agent capacity) against the current workload of each agent.

Agents can forward tasks to other agents or to another queue. The task is removed from the transferring agent's workload and added to the accepting agent's workload.

Email and generic tasks that are not closed before the agent signs out persist in the database. Persisted tasks are reassigned to the same agent that accepted the tasks when the agent signs in again. A task that is not accepted, within configurable time limits, by the agent to whom it was assigned is reassigned to another qualified agent, if one is available. Tasks that are not resolved within configurable time limits are automatically escalated. Tasks that cannot be assigned to or are not accepted by any agent within configurable time limits are moved to an overflow table.

Voice tasks (CTI) are not queued or routed by the universal queue. They take precedence over all other tasks. However, the queue server adds the cost of voice tasks to the agent workload calculations it uses to queue and assign incoming tasks.

MultiChannel Console

The agent console is the web-browser-based desktop from which the user manages all tasks, irrespective of channel. The console combines CTI, chat, email, and generic notice response tools into one configurable window. Agents use the console to sign in, to select their current queue, to accept tasks, and to initiate and accept collaborative chat requests with buddy users. After accepting a task, additional browser-based windows appear to enable the agent's response. These windows are task-dependent and include elements developed specifically for supporting applications, such as email response management systems.

PeopleSoft MultiChannel Framework Architecture

This section discusses:

- PeopleSoft MultiChannel Framework server architecture.
- Chat architecture.
- Email architecture.

PeopleSoft MultiChannel Framework Server Architecture

The REN server (the PSRENSRV process) is essential to the framework architecture. MCF events are sent to REN servers, which then deliver them to recipients of those topics. The REN server is a modified web server using the HTTP 1.0 or HTTP 1.1 communications protocol. Communication with server processes and MCF browser windows is bidirectional, as the browser windows maintain persistent connections to the REN server. Events can be sent proactively to browser windows without polling or page refreshes.

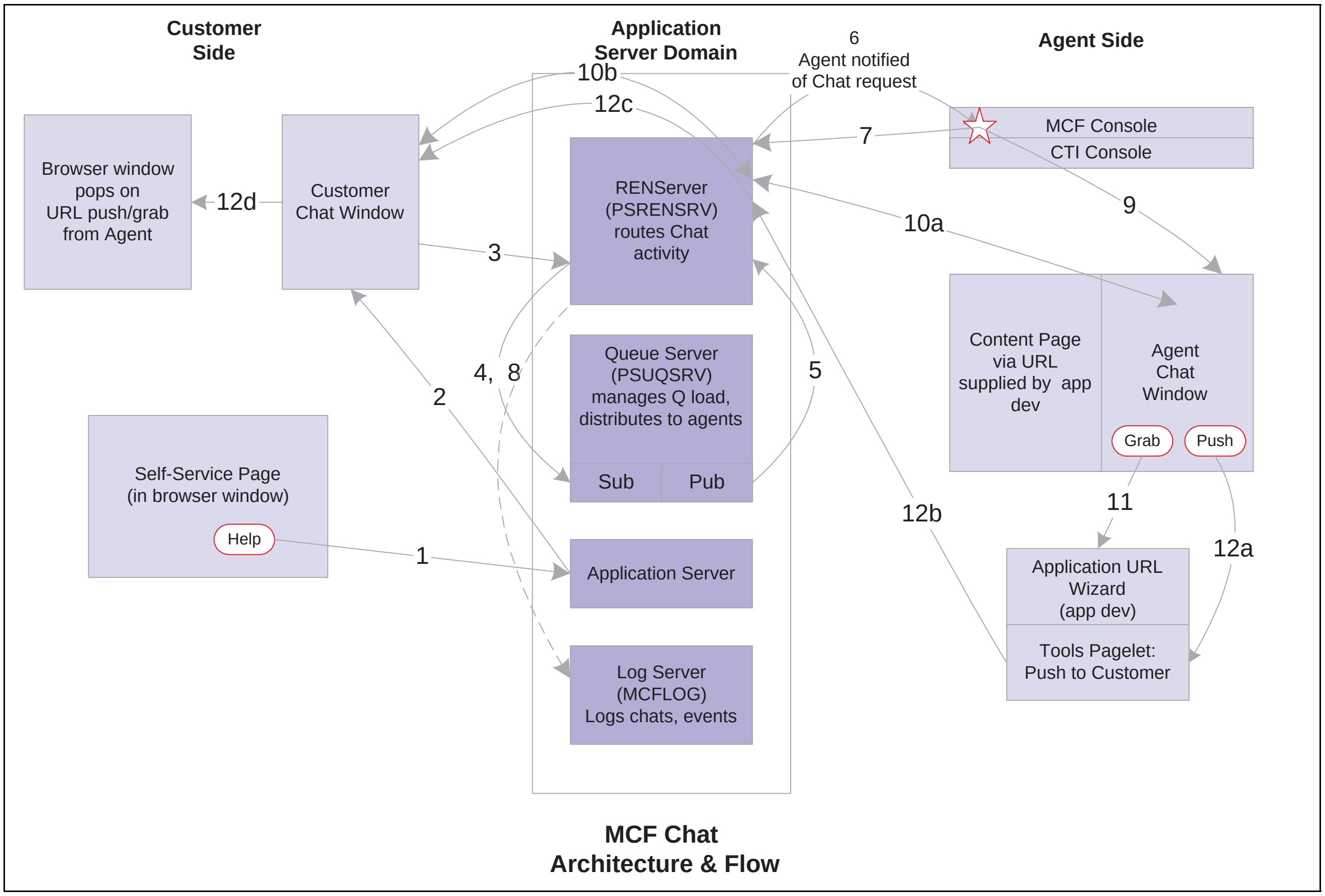
Applications send interaction and action requests (tasks) received from the supported communication channels to logical queues. The REN server notifies the universal queue server (the PSUQSRV process) responsible for that queue that a new task has arrived. Tasks are queued in order of priority until they can be assigned to an available agent qualified to respond to the task, at which time the queue server sends an assignment notification to the user's MultiChannel Console through the REN server.

The queue server routes work requests (tasks) to users based upon a set of configurable policy properties that define which agents can handle what types of tasks and when the tasks can be assigned. The queue server manages state information about the current status of active agents and active tasks.

The MCF log server logs MCF events and chat content to the database. Configure logging levels on the MCF administration pages.

Chat Architecture

The following diagram illustrates the architecture of a chat session.



Chat architecture and flow

1. When a customer clicks the Help button on an application page, InitChat() passes the following parameters to the application server:
   - Queue number.
   - Priority override.
   - Context page URL.
   - Query.

   See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode Language Reference*, “PeopleCode Built-in Functions”.
2. The application server posts to the REN server to notify the queue server that a customer chat is waiting.

   The application server then returns the name and port of the REN server and the iScript to build the customer chat window.
3. The customer chat window appears and communicates with the REN server to receive all events on that chat topic.
4. The REN server notifies the queue server that there’s a customer chat waiting.

   The queue server determines the appropriate agent according to workload, cost, agent availability, skill level, and language.
5. The queue server tells the REN server to notify the agent that the agent has been assigned a chat.
6. The REN server notifies the agent from the MultiChannel Console that the agent has been assigned a chat.

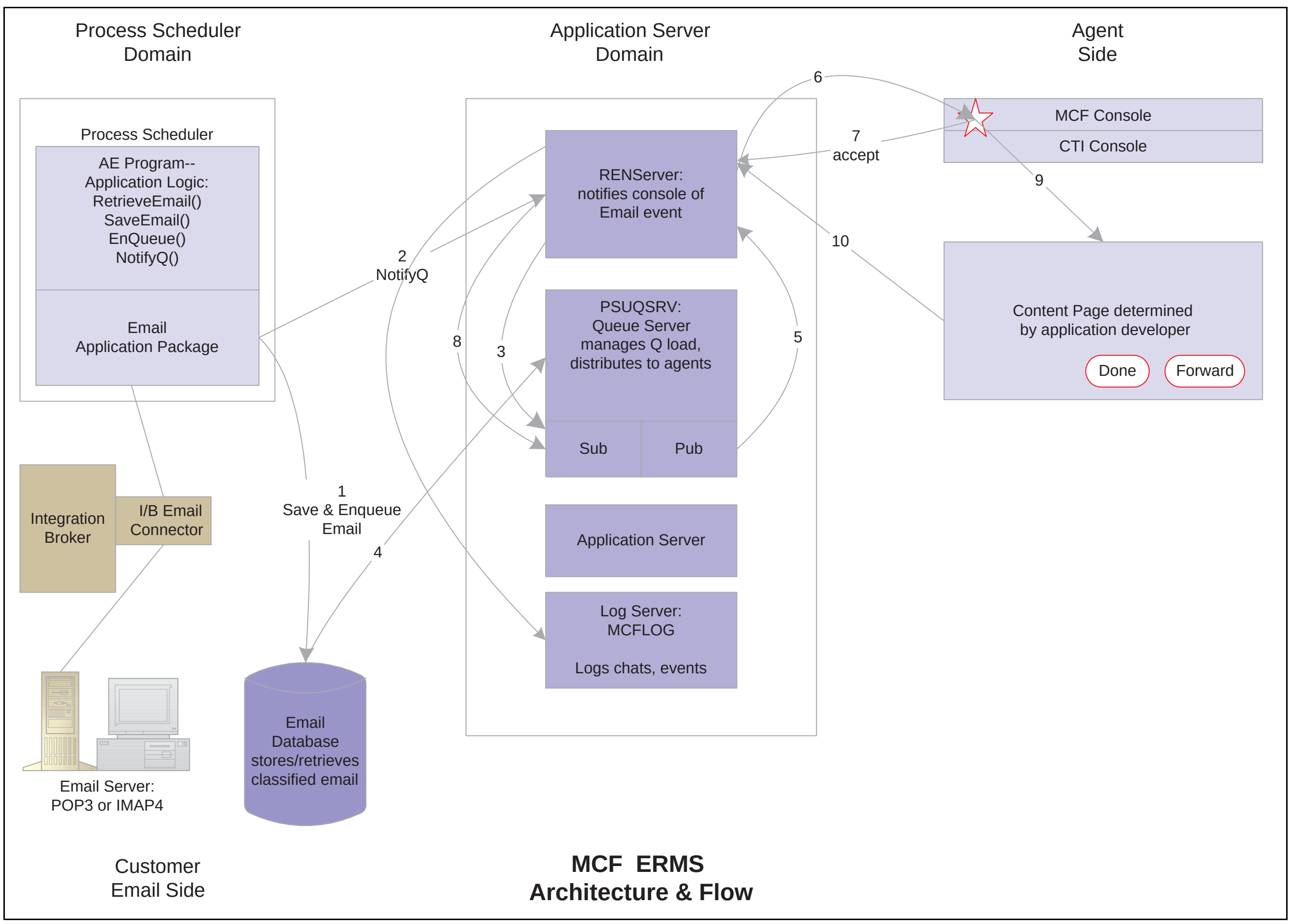
7. The agent, from the MultiChannel Console, notifies the REN server to notify the queue server that the agent has accepted the work.
8. The REN server notifies the queue that the agent has accepted the work.
9. The MultiChannel Console displays an agent chat window.

   The agent responds to inquiry.
10. Agent to customer two-way communication is mediated by the REN server.
11. If the agent chooses to grab a URL, the Grab button invokes the application URL wizard.
12. If the agent chooses to push a URL, the Push button invokes a pagelet (labeled with an *A* in the preceding diagram) to push a selected URL through the REN server (labeled with a *B* in the diagram) and customer chat window (labeled with a *C* in the diagram) to a new browser window.

The entire chat session can be logged through the MCF log server (labeled with a dotted line in the preceding diagram).

Email Architecture

This following diagram illustrates the architecture of email processing.



Email architecture and flow

1. A PeopleSoft Application Engine program uses the MCF email application package classes and PeopleCode built-in functions to save and enqueue email in a database.

2. The PeopleSoft Application Engine program notifies the REN server that email has been enqueued.
3. The REN server notifies the queue server of the waiting email.
4. The queue server retrieves email information required to determine appropriate routing from the database.

   The queue server determines the appropriate agent to handle each email according to workload, cost, agent availability, skill level, and language.
5. The queue server tells the REN server to notify the agent that the agent has been assigned an email.
6. The REN server notifies the agent from the MultiChannel Console that the agent has been assigned an email.
7. The agent, from the MultiChannel Console, notifies the REN server to notify the queue server that the agent has accepted the task.
8. The REN server notifies the queue that the agent has accepted the task.
9. The MultiChannel Console displays an agent email window, as determined by the application developer.

   The agent responds to the email.
10. The agent's resolution of the task is communicated back to the REN server by either the Done or Forward button.

Email events can be logged to a database by the MCF log server.

CHAPTER 3

Configuring PeopleSoft CTI

This chapter provides an overview of the PeopleSoft Computer Telephony Integration (CTI) console and discusses how to:

- Work with PeopleSoft CTI.
- Install and configure PeopleSoft CTI.
- Use PeopleSoft CTI.

Working with PeopleSoft CTI

PeopleSoft Computer Telephony Integration enables you to integrate your PeopleSoft applications with your call center. PeopleSoft CTI offers the following benefits:

- Seamlessly integrates your PeopleSoft application with the Genesys CTI Framework or Cisco Intelligent Contact Management (ICM) software to improve agent productivity. “Agents” refers to the individuals who interact with your customers using CTI.
- Requires only that you install a supported Web browser on the agent’s workstation.
- Enables agents to take advantage of browser-based call management and automatic population of PeopleSoft transaction pages with the relevant customer data associated with an incoming call.

PeopleSoft CTI is an optional component that you can integrate with the PeopleSoft MultiChannel Framework. That is, you have the option to incorporate a CTI channel within the MultiChannel Framework. PeopleSoft CTI requires third party middleware in the form of the Genesys CTI Framework or a Cisco ICM system. None of the other channels in the MultiChannel Framework require any additional third party middleware.

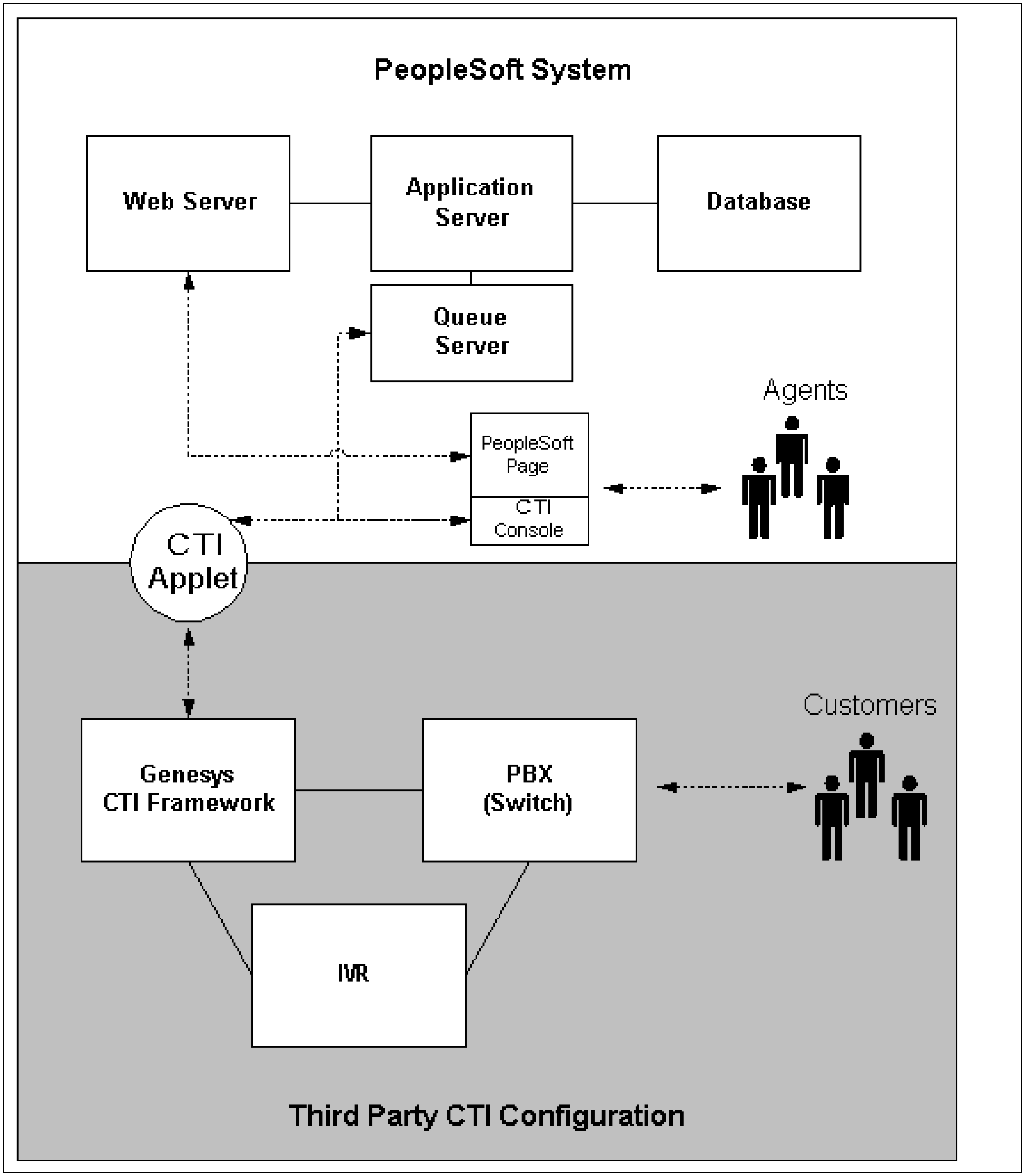
In PeopleSoft CTI, the CTI middleware performs the call routing. The Universal Queue is not involved in routing calls. For an incoming call, the CTI middleware notifies the MultiChannel Console, which then notifies the queue server so that the agent’s workload can be updated with the cost of a call.

The Components

The PeopleSoft CTI console works together with the IVR (Interactive Voice Response) system, the Genesys CTI Framework or a Cisco ICM system, an Automatic Call Distributor (ACD), and your PeopleSoft application.

When a customer calls, the caller enters their information (for example, an account number) using the IVR system. Using this information, the Genesys or Cisco CTI middleware routes the call to an appropriate ACD queue. The ACD sends the call to the next available agent on that queue and notifies the CTI middleware that there is an incoming call on that Directory Number (DN). The CTI middleware, in turn, notifies the CTI Console, and passes the customer's information as attached data. The CTI Console uses the attached data to determine what PeopleSoft transaction page to open (pop up) for the agent and what application data to retrieve from the database. The agent can manage the call using the CTI Console, which in turn communicates with the PBX using the CTI middleware.

The CTI console uses a Java applet that runs within the Web browser to communicate directly with your CTI middleware. The CTI console communicates to the Java Applet using JavaScript. The applet is delivered in a file called pCti.cab that is approximately 500KB. The applet resides in the browser cache to reduce network traffic and improve response time.



PeopleSoft CTI integration architecture

Note. PeopleSoft supports both Cisco and Genesys CTI solutions. In this document, when the phrase “your CTI vendor” or “CTI middleware” appears, assume it refers to either Cisco or Genesys products, as appropriate to your installation.

See Also

Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference, “Internet Script Classes (iScript)”

Required Components

This section describes components required for PeopleSoft CTI.

PeopleSoft CTI requires either:

- Genesys CTI, or
- Cisco CTI

and the Java Runtime Environment (JRE).

Required Genesys Components

PeopleSoft assumes that you already have a functioning Genesys system configured at your site. PeopleSoft ships the Genesys Java API as part of the CTI applet, however, PeopleSoft ships no other Genesys products.

To interact with the PeopleSoft CTI system, you need a Genesys T-Server installed and configured before you begin installing your PeopleSoft CTI system. Refer to your Genesys documentation for installation information.

In addition, your PeopleSoft application may require the following CTI components to attach data to incoming calls:

- Genesys Strategy Builder or Interaction Router or equivalent.
- An IVR supported by Genesys and capable of passing call data to Genesys.

For detailed information regarding specific versions that PeopleSoft supports, refer to the PeopleSoft Platforms database on Customer Connection.

Note. The Genesys Configuration Server is an optional but supported component.

Required Cisco Components

PeopleSoft assumes that you already have a functioning and appropriately licensed Cisco system configured at your site. PeopleSoft ships the Cisco Java API as part of the CTI applet, however, PeopleSoft ships no other Cisco products.

You need a Cisco ICM Central Controller Server installed and configured before you begin installing your PeopleSoft CTI system.

In addition, your PeopleSoft application may require an IVR supported by Cisco and capable of passing call data to Cisco. This enables CTI components to attach data to incoming calls.

Note. For detailed information regarding specific versions that PeopleSoft supports, refer to the PeopleSoft Platforms database on Customer Connection.

Required Java Runtime Environment

Java applets run within a Java Virtual Machine (JVM) that uses a “sandbox”(a controlled environment in which remote programs run) to restrict access to what the applets can do.

The PeopleSoft CTI console requires Microsoft Internet Explorer 5.0 or greater, or Netscape 6 or 7. PeopleSoft recommends that you install the Sun Java Plug-in 1.4.2 or later, which you can download from www.java.com.

Applet Protection

The CTI applet has an attached digital signature. This enables the PeopleSoft CTI Applet to open a network connection to the your CTI system as opposed to being able to only send data back to the Web server that downloaded it.

The digital signature protects the applet against tampering, and it requires the agent to grant permission to run the applet. When doing so, agents need to indicate whether such permission should be granted to any code signed by PeopleSoft for all subsequent sessions or just for the current session only. You need to instruct your end users to select the appropriate option for your site.

Installing and Configuring PeopleSoft CTI

This section describes how to install and configure the PeopleSoft CTI system. This information assumes that you already have a functioning CTI system installed and configured at your site.

Installing PeopleSoft CTI

When you run the PeopleSoft Pure Internet Architecture setup program, the PeopleSoft CTI files are installed automatically to your Web server.

Note. You do not need to select any additional options from the install program "wizard." The CTI files are installed by default.

Once you've run the PeopleSoft Pure Internet Architecture setup program, you need to enable the PeopleSoft CTI console and configure the system as discussed in the following sections.

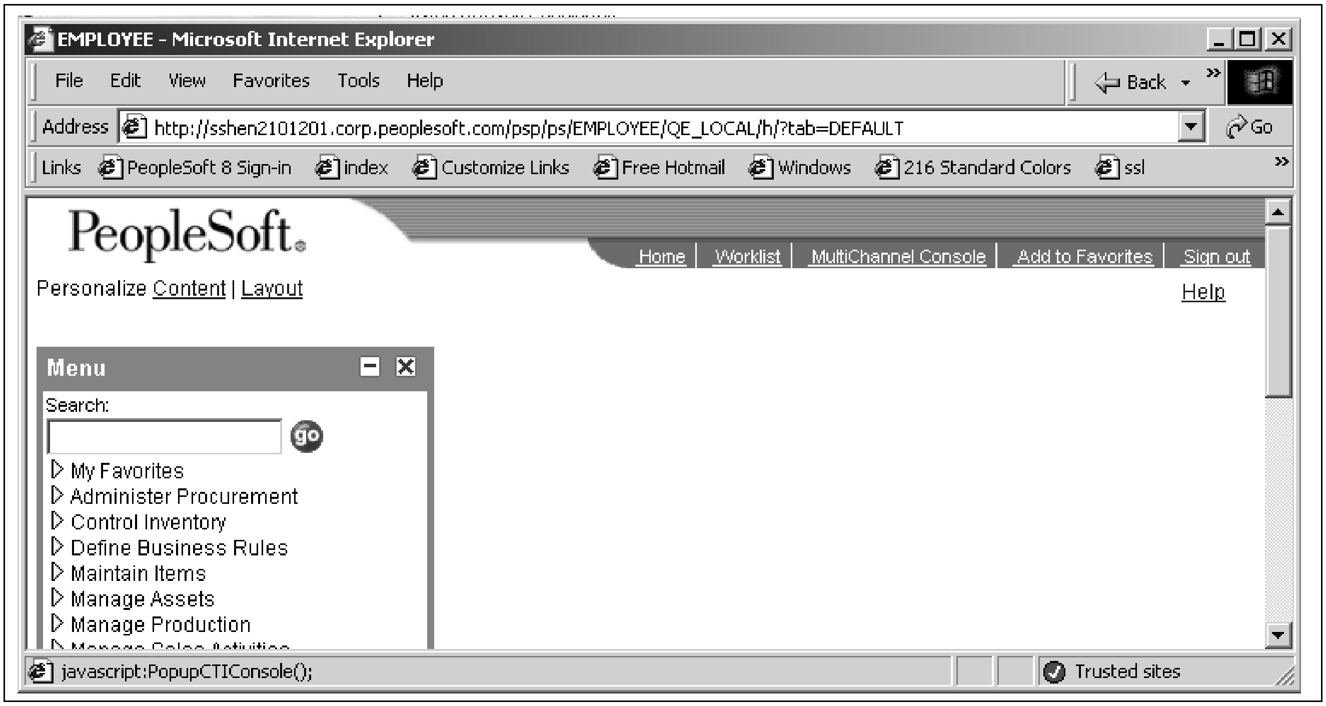
See Also

PeopleTools Installation Guide for your platform

CTI vendor product documentation

Enabling PeopleSoft CTI

If a user is set up as a CTI agent or a MultiChannel Framework agent, the user will see the following when signing on to PeopleSoft.



Agent Signon

Notice the MultiChannel Console link at the top of the screen. Users who are not set up as CTI or MultiChannel Framework agents do not see the link.

See Also

Enterprise PeopleTools 8.45 PeopleBook: Internet Technology, “Understanding Portal Technology”

Chapter 3, “Configuring PeopleSoft CTI,” Configuring CTI Agents, page 23

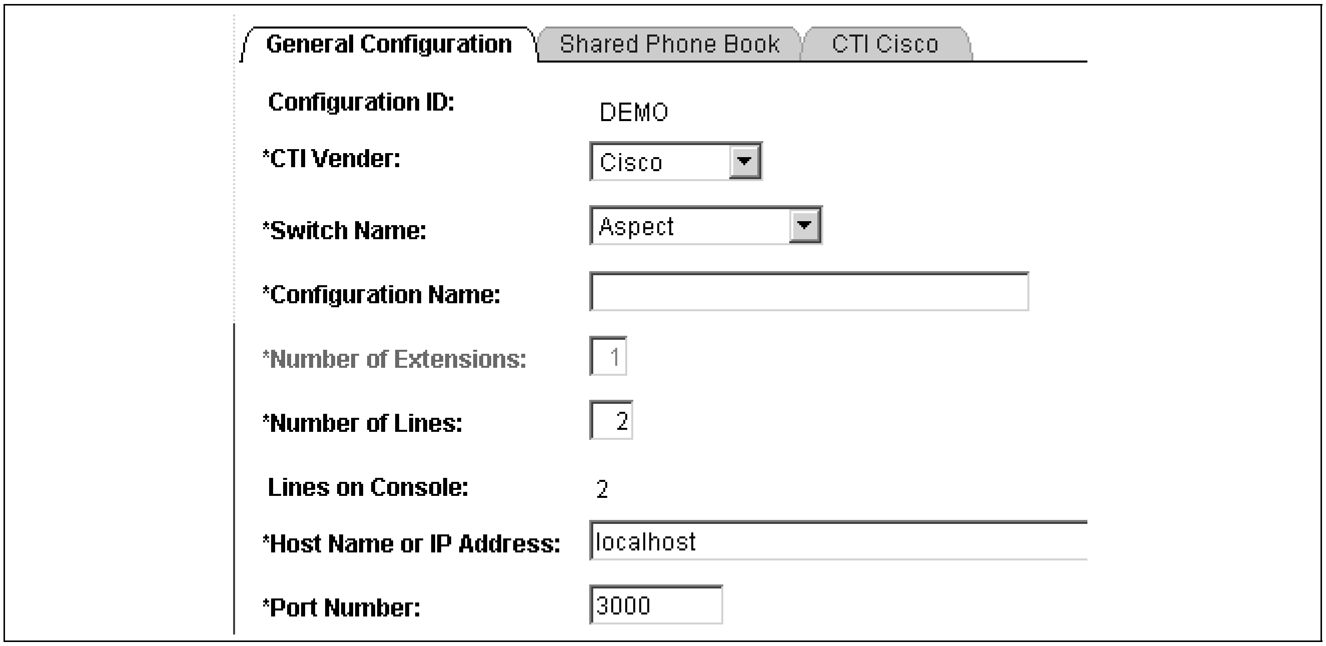
Creating CTI Configurations

Select PeopleTools, MultiChannel Framework, CTI Configuration, CTI.

On this page you create CTI configurations. A CTI Configuration contains all the information required for a user to be able to connect to one of the following:

- Genesys T-Server or Configuration Server.
- Cisco ICM Server.

To create a CTI configuration, you use the General Configuration page, the Shared Phone Book page, and the CTI Cisco/CTI Genysys page (depending on your CTI middleware).



General Configuration page

Configuration ID

Displays the name you gave the configuration when you created it. The name can’t be modified once created.

CTI Vendor

Select the vendor of your CTI solution. The options are:

- Genesys
- Cisco

This value controls whether the CTI Cisco page or the CTI Genesys page appears in the component. For example, if you select Cisco, the CTI Cisco page appears.

Switch Name

Choose from one of the supported switches. Currently, the supported switches are:

Genesys

- Siemens Hicom 300
- Nortel Meridian
- Avaya Definity G3
- Aspect

Consult the Genesys Framework T-Server Reference Manuals to check if features offered by the CTI Console are supported on your switch. For example, mute transfers are not supported on Aspect switches.

Cisco

- IPCC
- Avaya Definity G3
- Aspect

	Consult the Cisco documentation to check if features offered by the CTI Console are supported on your switch. For example, DND and mute transfers may not be supported for all switches.
Configuration Name	Add a descriptive name to help identify the configuration.
Number of Extensions	Number of extensions or directory numbers associated with the telephone. For Genesys, 1 or 2 can be used. Fir Cisco, only a value of 1 can be used.
Number of Lines	Number of lines associated with each extension. Depending on your configuration, you can specify up to two lines. If Number of Extensions is 1, this value should be 2. If Number of Extensions is 2, this value should be 1.
Lines on Console	Currently, the CTI console supports two lines. The only supported configurations are two extensions with one line each or one extension with two lines.
Host Name or IP Address	Enter the host name or IP address for one of the following: • Genesys T-Server or Configuration Server. • Cisco ICM Server.
Port Number	Enter the Port number on which the T-Server or Configuration Server listens.

To create a new configuration:

1. Select PeopleTools, CTI Configuration, CTI.
2. On the Find an Existing Value search page click Add a New Value.
3. On the Add New Value page, enter a Configuration ID.

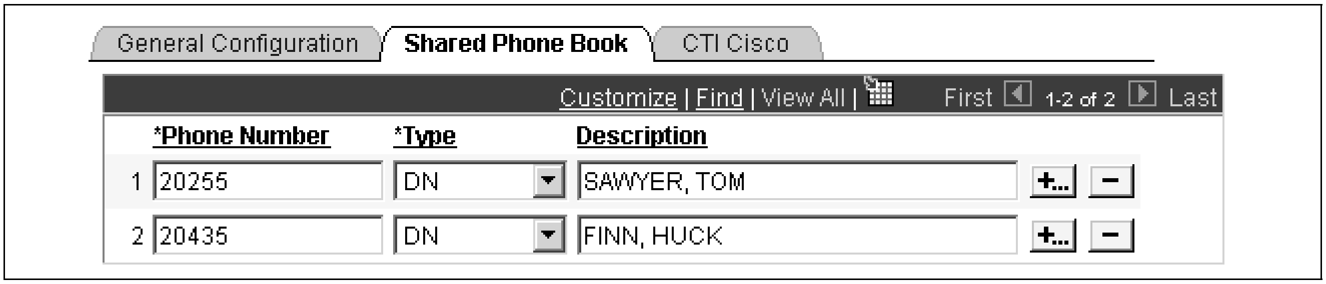
   There is a 4-character limit.
4. Click Add.

Shared Phone Book

Select PeopleTools, MultiChannel Framework, CTI Configuration, CTI, Shared Phone Book.

On this page, you can manage a list of frequently dialed phone numbers for a specific CTI configuration. These numbers appear when an agent connected to that CTI configuration selects the drop-down list when dialing a number from the CTI console. This saves the agents from manually entering frequently dialed numbers when making outbound calls.

Note. Phone lists are updated on the CTI Console only after the CTI applet launches. To refresh phone lists, refresh the browser and reactivate the console.



Shared Phone Book page

Phone Number Enter a frequently dialed phone number associated with this configuration.

Type Select either:

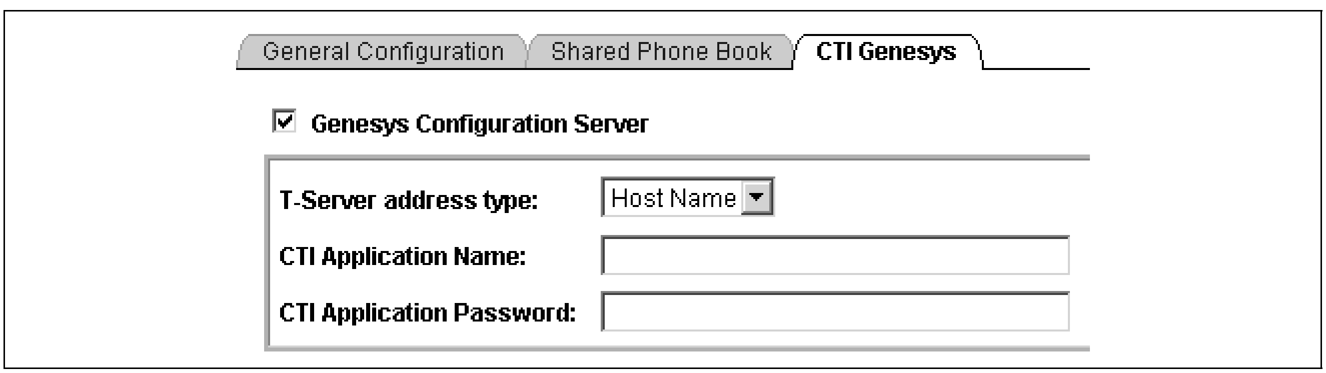
- DN. (Directory Number) This number identifies a telephone set on a PBX or in the public network. The caller dials this number to establish a connection to the addressed party. The DN can be a local PBX extension (a local DN) or a public network telephone number
- Queue. Directory Number identifying an ACD queue or group. Calls to a group are distributed to agents belonging to the group, according to ACD algorithms.

Description Add a description for the telephone number.

CTI Genesys Page

Select PeopleTools, MultiChannel Framework, CTI Configuration, CTI, CTI Genesys.

The CTI Genesys page provides additional options for Genesys implementations. This page only appears when Genesys is selected as CTI Vendor on the General Configuration page.



CTI Genesys page

Genesys Configuration Server Directs the CTI console to get data required for connecting to the T-Server from a Configuration Server instead of from the PeopleSoft database. Using a Configuration Server is transparent to the user/agent. When the agent activates the console, it requests a list of available T-Servers from the Configuration Server, and then the console sequentially attempts to connect to each T-Server in that list until it establishes a connection. If it reaches the end of the list without connecting to a T-Server, an error is returned to the agent.

Note. If you select this option, you enable the Application User Information group box at the bottom of this page. Enter the appropriate application user name and password for the Genesys system.

T-Server address type

If you are using a configuration server to indicate what T-Server to connect to (instead of connecting directly to a T-Server), you need to indicate whether the configuration server is returning the host name or the IP address of the T-server.

Specify the type of address that should be used when sending information to the T-Server. The options are Host Name and IP Address. Your selection should correspond to the Host Name or IP Address that you entered on the General Configuration page.

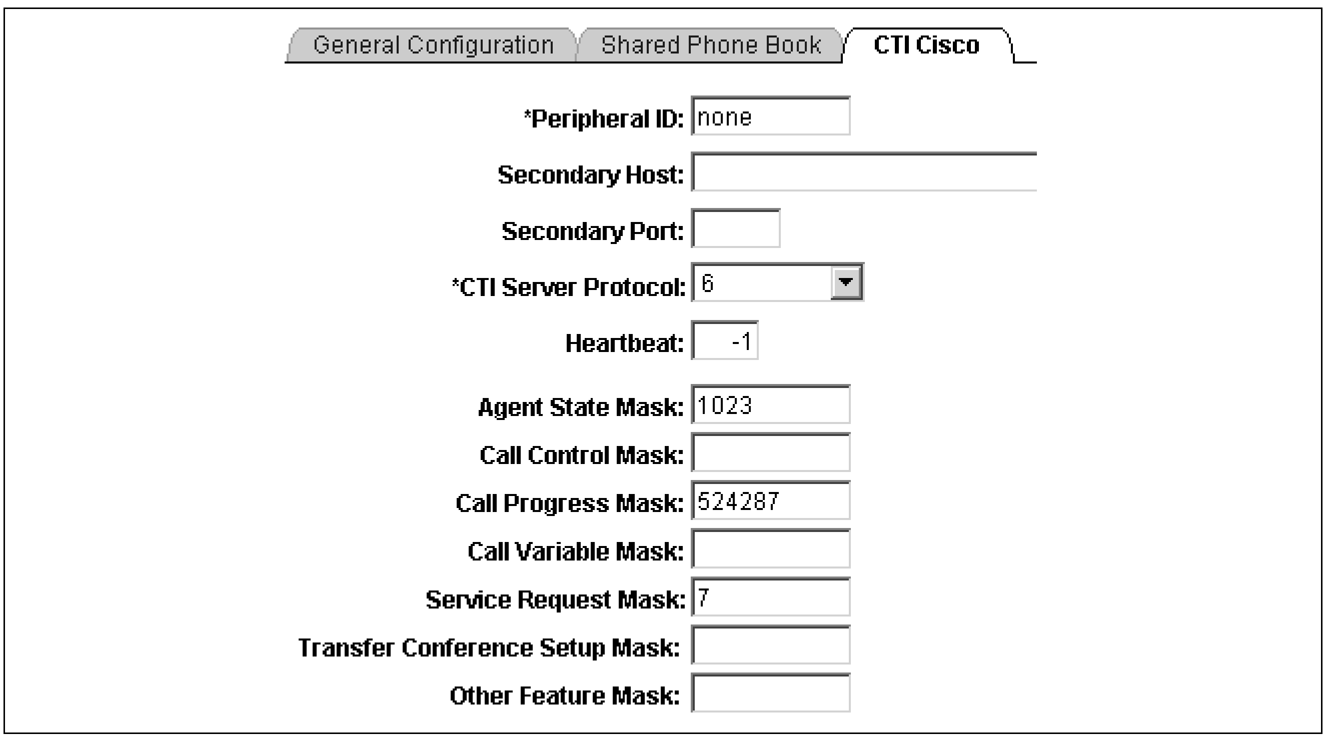
CTI Application Name/Password

Enter the Genesys Application Name and password used for signing on to the Genesys Configuration Server. Using this option, each user connects to the configuration server with the same application name.

CTI Cisco Page

Select PeopleTools, MultiChannel Framework, CTI Configuration, CTI, CTI Cisco.

The CTI Cisco page provides additional options for Cisco implementations. This page only appears when Cisco is selected as CTI Vendor on the General Configuration page.



CTI Cisco page

Peripheral ID

Specify the switch (ACD) that the current configuration uses. The peripheral ID is the alias used to identify a switch within the system.

Secondary Host/Port

Specify a second ICM server. In most cases, the secondary server is used for fail over and load balancing.

CTI Server Protocol

Enables you to set the server protocol for a configuration. Currently, only protocol 6 is supported.

Heartbeat

Specify an interval in seconds for the system to send a message to the CTI Server to make sure it is up and running. To disable the feature, enter –1. To enable it, enter a value in seconds. The minimum value is 5 seconds. Refer to the Cisco documentation for any recommendations for this option.

Agent State Mask

A combination of Agent State Masks that the CTI agent wants to receive. For instance, you may set the AGENT_AVAILABLE_MASK, when you want the application to receive “available” AGENT_STATE_EVENT messages. PeopleSoft supports the following masks:

AGENT_LOGIN_MASK

AGENT_LOGOUT_MASK

AGENT_NOT_READY_MASK

AGENT_AVAILABLE_MASK

AGENT_TALKING_MASK

AGENT_WORK_NOT_READY_MASK

AGENT_WORK_READY_MASK

AGENT_BUSY_OTHER_MASK

AGENT_HOLD_MASK

Note. This value may be overridden by a Cisco system-level mask.

Refer to your Cisco documentation for more information.

Call Control Mask

PeopleSoft does not currently use this mask in the CTI application. This option is reserved for future use.

Refer to your Cisco documentation for information on this mask.

Note. This value may be overridden by a Cisco system-level mask.

Call Progress Mask

Specifies any unsolicited call event messages that you want your application to receive. For instance, you can specify the events that a particular application depends on, such as Begin_Call, CALL_DELIVERED_EVENT, and so on. You can opt to skip events that the application does not depend on, and this can reduce network traffic.

PeopleSoft uses the following masks:

BEGIN_CALL_MASK

END_CALL_MASK

CALL_DATA_UPDATE_MASK

CALL_FAILED_MASK

CALL_DELIVERED_MASK

CALL_ESTABLISHED_MASK

CALL_HELD_MASK

CALL_RETRIEVED_MASK

CALL_CLEARED_MASK

CALL_CONNECTION_CLEARED_MASK

CALL_ORIGINATED_MASK

CALL_CONFERENCED_MASK

CALL_TRANSFERRED_MASK

CALL_DIVERTED_MASK

CALL_SERVICE_INITIATED_MASK

Note. Modify this value with caution. If you mistakenly elect to skip an event that an application depends on, the application can fail.

Note. This value may be overridden by a Cisco system-level mask.

Call Variable Mask

This option is intended for future use. It is not currently implemented for use with PeopleSoft applications.

Refer to your Cisco documentation for information on this mask.

Note. This value may be overridden by a Cisco system-level mask.

Service Request Mask

Enables you to adjust CTI Service Masks. PeopleSoft uses the following masks:

CTI_SERVICE_CLIENT_EVENTS

CTI_SERVICE_CALL_DATA_UPDATE

CTI_SERVICE_CLIENT_CONTROL

If you modify this option, do not enter a value lower than 7.

Refer to your Cisco documentation for more information on this option.

Note. This value may be overridden by a Cisco system-level mask.

Transfer Conference Setup Mask

Specifies the valid ways the application may be configured for a transfer or conference call.

Refer to your Cisco documentation for more information on this option.

Other Feature Mask

Enables you to specify the other features supported by an application.

Refer to your Cisco documentation for more information on this option.

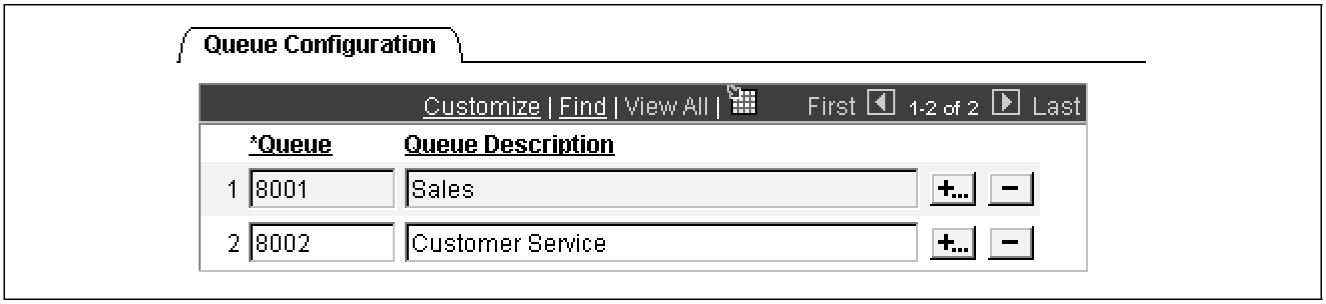
Two new parameters have been added for configuring the Cisco expanded call context variable. Configure these expanded call context variables in the Cisco middleware:

- user.PS.referenceID: CTI internal use only. The applet uses this parameter to identify a call.
- user.PS.OutboundContext: This variable, a string type, is attached to an outbound call. This variable can be used to associate an outbound call with the desired context.

Configuring CTI Queues

Select PeopleTools, MultiChannel Framework, CTI Configuration, Queue.

Use this page to add queues for agents.



Queue Configuration page

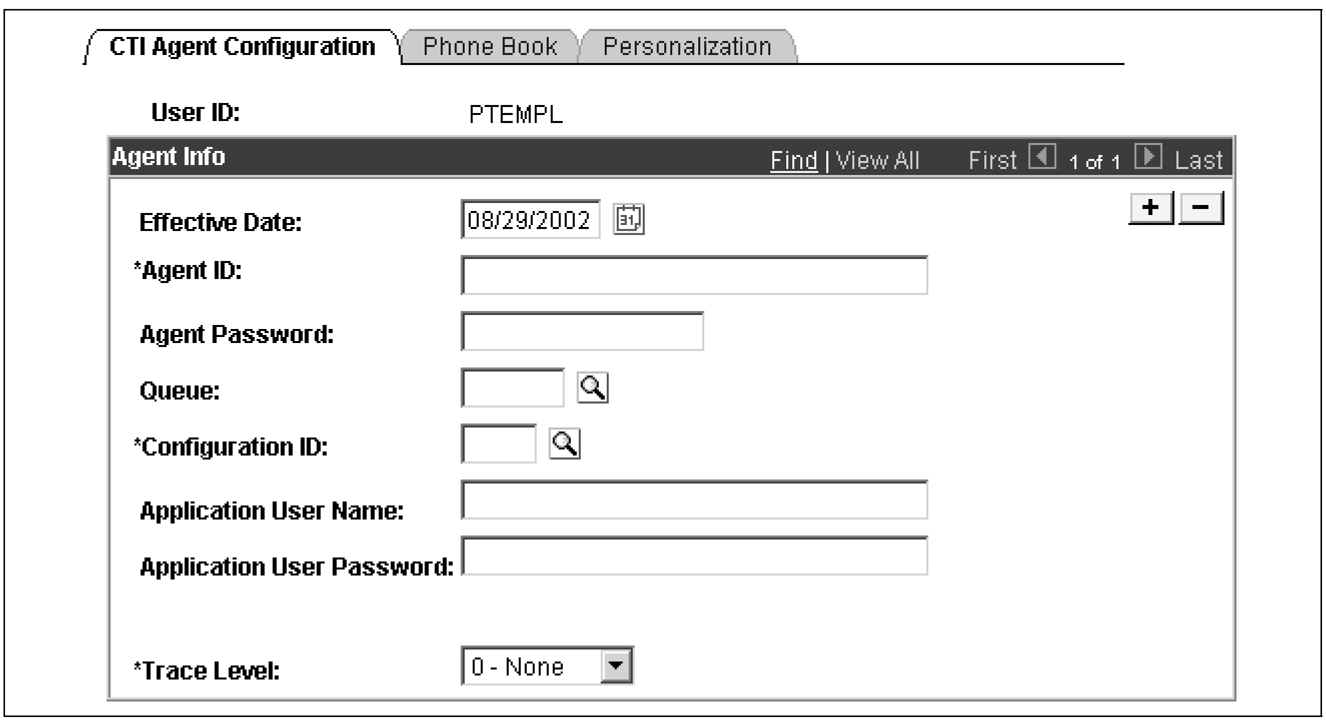
Queue Directory Number identifying an ACD group. Calls to a group are distributed to ACD agents belonging to that group, according to ACD algorithms.

Queue Description Enables you to add a brief description of the queue.

Configuring CTI Agents

Select PeopleTools, MultiChannel Framework, CTI Configuration, Agent.

Configuring CTI agents involves the CTI Agent Configuration page, the Phone Book page, and the Personalization page.



CTI Agent Configuration page

User ID Refers to the PeopleSoft User ID of the agent.

Agent Info

Effective Date Enter the date on which the current configuration should become active.

Agent ID Refers to the user ID of the agent within the switch.

Agent Password Enter the password the agent uses to sign on to the phone.

Queue Enter the name of the queue you want to assign to an agent. Use the Queue Configuration page to associate a queue with a Directory Number identifying an ACD group.

Configuration ID Select the name of the configuration that you want to associate with the agent. The Configuration ID is the name of the configuration you created using the General CTI Configuration page.

Application User Name/Password Enter the CTI user name and password of the agent.

CTI Client Signature

Note. This option only appears for Cisco configurations.

This control shows the “signature” of a particular agent. The signature uniquely identifies an agent if you have implemented call monitoring. Typically, this value appears as an email address, such as:

john.doe@yourcompany.com

Trace Level For Trace Level you have the following options:

- 0-None. Disables tracing.
- 1-Info. (Informational) Traces agent actions, such as dialing out, transfers, and so on.
- 2-Debug. Used to troubleshoot crashes and other major errors. If you ever need to open a PeopleSoft GSC case regarding a CTI issue, include a level 2-Debug trace.

Trace information is written to the browser’s Java Console, which must be enabled.

In Internet Explorer, you enable the Java Console by selecting Tools, Internet Options, Advanced, Java, Java Console.

You view the Java Console by selecting View, Java Console. To clear the console, press C on your keyboard.

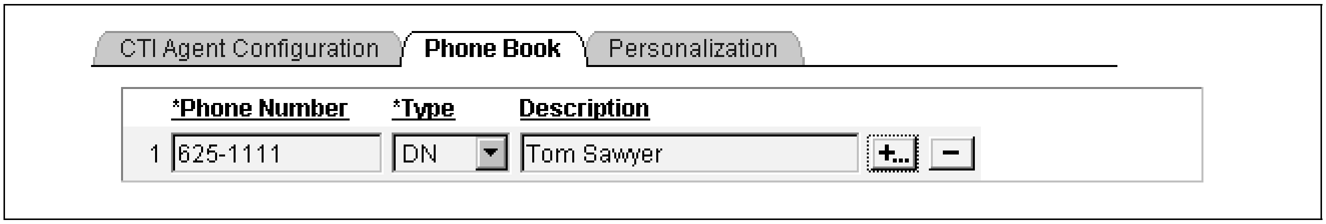
Note. Setting the trace level to 2-Debug can degrade performance. Unless you are troubleshooting the system, it is recommended that you set the trace level to None or Informational.

Phone Book Page

Select PeopleTools, MultiChannel Framework, CTI Configuration, Agent, Phone Book.

On this page, you can manage a list of frequently dialed telephone numbers for a *specific* CTI agent. These numbers appear when that agent selects the drop-down list box for a number to dial in the CTI console. This saves the agents having to manually enter frequently dialed numbers when making outbound calls.

Note. Phone lists are updated on the CTI Console only after the CTI applet launches. To refresh phone lists, refresh the browser and reactivate the console.



Phone Book page

Phone Number Enter frequently dialed telephone numbers associated with a particular agent.

Type Select either:

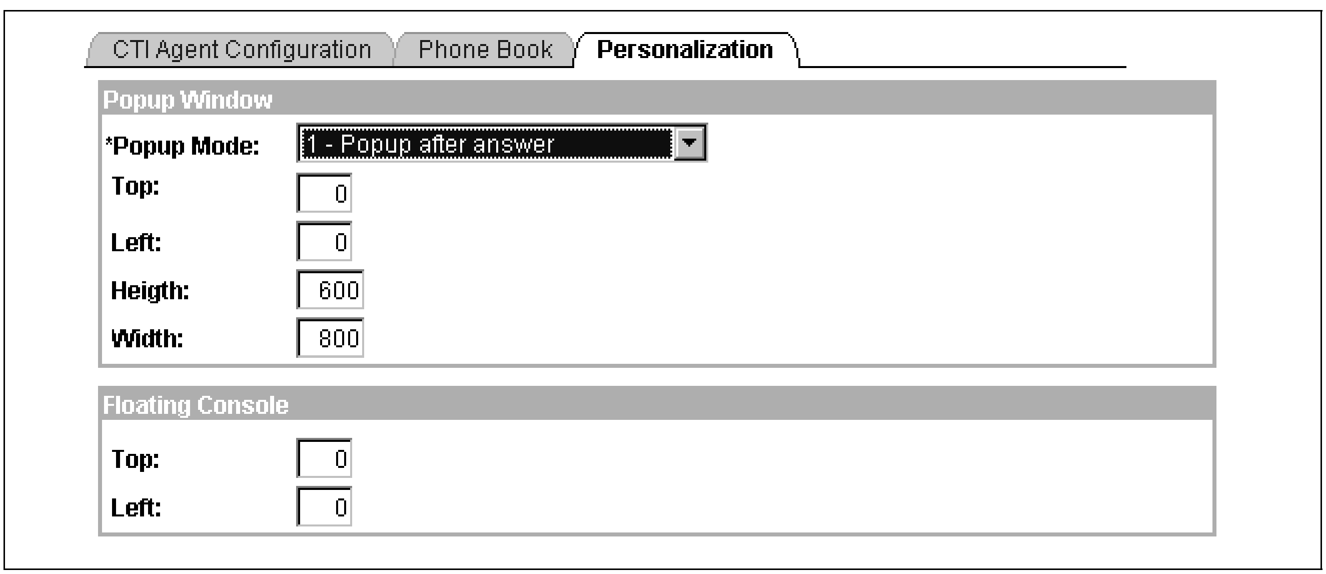
- DN. (Directory Number) This number identifies a telephone set on a PBX or in the public network. The caller dials this number to establish a connection to the addressed party. The DN can be a local PBX extension (a local DN) or a public network telephone number
- Queue. Directory Number identifying an ACD queue or group. Calls to a group are distributed to agents belonging to the group, according to ACD algorithms.

Description Add a description for the telephone number.

Personalization Page

Select PeopleTools, CTI Configuration, Agent, Personalization.

Use this page to personalize the popup windows' timing, size, and position on the desktop as well as the position of the floating console.



Personalization page

Popup Window

Popup Mode

Enables you to configure when the popup window appears. You can have it appear after the call is answered, or you can have it appear when there is an incoming call. If it appear before the call is answered, this enables the agent to determine if they should answer the call based on the information displayed in the popup.

The default Pop-up Mode is: *1- Popup after answer.*

In some cases, for example accepting a transfer, although you set the value as *0- Popup when incoming*, you still get the screen pop-up after you answer. This is because no call data was attached by the CTI vendor to the incoming event, and consequently the PeopleSoft CTI applet couldn't build the URL for the screen pop-up.

For example, assume party A is transferring a call to party B. Party B gets the incoming event, but party B doesn't get a screen pop-up. This is because the applet did not receive the user data to generate the URL despite the fact that the mode is set to *0*. But, after B answers this call, A completes the transfer. Then, B gets the event "partychanged", receives the user data, and generates the URL and pop-up screen.

Top

Specifies the top position, in pixels. This value is relative to the upper-left hand corner of the screen.

Left

Specifies the left position, in pixels. This value is relative to the upper-left hand corner of the screen.

Height

Specifies the height of the window, in pixels. The minimum value is 100.

Width

Sets the width of the window, in pixels. The minimum value is 100.

Logout when console is closed

Select to automatically log the agent out when the CTI console is closed. Only applies on a Genesys switch system; Cisco always logs out the CTI agent when the CTI console is closed

Floating Console

Top

Specifies the top position, in pixels. This value is relative to the upper-left corner of the screen.

Left

Specifies the left position, in pixels. This value is relative to the upper-left corner of the screen.

Viewing Your Information on the Agent Info Page

Select PeopleTools, CTI Configuration, Agent Information.

The Agent Info page is a read-only page that displays the following information about a CTI agent.

User ID

The agent's PeopleSoft User ID.

Agent ID

The agent's CTI middleware ID.

Queue

Reveals the queue to which an agent is assigned.

Configuration ID

Reveals the Configuration ID associated with the agent.

To view agent information:

1. Select PeopleTools, MultiChannel Framework, Configure CTI, Agent Information.
2. On the Find an Existing Value search page, enter the appropriate User ID in the Search by edit box.
3. Click Search.

Miscellaneous Page

Select PeopleTools, CTI Configuration, Miscellaneous.

The Miscellaneous page contains a parameter that enables you to redirect the base URL for users without a CTI middleware User ID. By doing so, these users do not see the CTI console when signing onto PeopleSoft Pure Internet Architecture.

Use Default Screen Popup URL

Select this option if you want to set a default URL for the screen pop-up.

The default method the system uses to determine what URL to use for the page launched for incoming calls is to examine the user data attached to that call. However, for customers that do not want to attach this user data to incoming calls, this option enables you to use the same URL for all screen pop-ups.

After selecting this option, enter the URL in the Default Screen Popup URL edit box.

Default Screen Popup URL

If the Use Default Screen Popup URL is selected, enter the value for the default URL.

Note. To ensure that the user does not have to sign on the pop-up window, the domain of the default URL must exactly match the domain of signon URL. If there is no domain for the signon URL, the machine name of the default URL should be the same as the machine name of the signon URL. If either the domain or the machine name do not match, the system prompts the user for user ID and password for first pop-up screen.

Matching Domains:

With the domain as peoplesoft.com, the machine names can be different. For example:

Signon URL:

http://ntserver1.peoplesoft.com/peoplesoft8/signon.html

Default URL:

http://uxserver2.peoplesoft.com/servlets/iclientservlet/peoplesoft8/?ICType=PANEL&Menu=UTILITIES&Market=GBL&Component=MESSAGE_CATALOG1&Target=Main1&LANGUAGE_CD=ENG&MESSAGE_SET_NBR=1

Without Matching Domains:

Without the matching domains, the machine name should be the same in both URLs. For example:

Signon URL:

http://ntserver1/peoplesoft8/signon.html

Default URL:

http://ntserver1/servlets/iclientservlet/peoplesoft8/?ICType=PANEL&Menu=UTILITIES&Market=GBL&Component=MESSAGE_CATALOG1&Target=Main1&LANGUAGE_CD=ENG&MESSAGE_SET_NBR=1

For more information on PeopleSoft single signon, see PeopleTools PeopleBooks: Security, Setup Options and Processes, Single Signon.

Demo: Outbound Call Page

Select PeopleTools, CTI Configuration, Demo: Outbound Call.

The Outbound Call page is an example of how you can customize an application page to allow a user to direct the CTI Console to dial a telephone number displayed on that page. The outbound calling demonstration works only when the CTI console is enabled and the user has registered with the CTI vendor.

URL Specify the URL of a page to pop up when dialing out.

Context ID Specify a string to attach to the call as outbound context.

Phone Number Enter the telephone number you want to dial. This field accepts numeric digits only. Do not enter special characters, such as "-"(hyphen), "."(period), or other separators.

Dial Click this button to dial the telephone number you entered.

Configuring Popup Windows

PeopleSoft CTI can launch and populate transaction pages in the following ways:

- Default URL. The same URL is used for all calls. The ANI (Automatic Number Identification) is passed in as a parameter to that URL. The ANI identifies the telephone number from which the incoming call originated and it may be useful in determining what application data to retrieve. For example, it may be the home phone number of a customer.
- Build the URL from attached Call Data. PeopleSoft CTI formats a URL for the browser with a specific target PeopleSoft menu, market and component. However, this method can't be used if you are accessing multiple databases through the PeopleSoft Portal.
- iScripts. PeopleSoft CTI opens the transaction page using an iScript. This method must be used if you are accessing multiple databases through the PeopleSoft Portal. The iScript communicates with the targeted database to populate the appropriate transaction page with the caller's data.

Note. The Call ID is passed in the URL string as a variable named *callID*.

Setting Up Genesys for Pop-up Windows

Unless you choose to use the default URL for your pop-up windows, you must create certain user-defined variables that are attached to each incoming call. These variables are then sent to the PeopleSoft CTI application providing instructions on which PeopleSoft Pure Internet Architecture page displays for the agent. This data is typically created and attached to the call using the Genesys Strategy Builder.

Note. The following variables are case sensitive. Match the case of the variables as shown in this section.

ICType

Represents the type of PeopleSoft service being called, either a panel (page) or a script.

If the ICTYPE is set to Panel, then the following three attached data variables must be set:

- Menu. The name of the menu within PeopleSoft containing the destination component.
- Market. The market property of the target component.
- PanelGroupName or Component. The target component name in the PeopleSoft Application.

If the ICTYPE is set to Script, then the following attached data variable, needs to be set:

ICScriptProgramName. This represents the location of the iScript, which is executed through the screen pop-up.

For more information on iScripts, refer to the PeopleCode Developer's Guide: "Internet Scripts".

Descr

Optional data for descriptive purposes only. You can add any descriptive information that might be useful to the agent. This information appears in the CTI console. For example, you may want the agent to be aware of the customer's priority status, as in "Gold Customer."

Application Specific Data

Any other attached data keys that are sent to the CTI console by the Genesys telephony server, such as customer number, are passed to the target application page as parameters.

The parameters are separated from the PeopleSoft URL by a question mark (?). Parameters are separated from other parameters by an ampersand (&). If you are using iScripts, you can use the GetParameter methods to read the parameters in your PeopleCode. If you choose to use ICPanels instead, the parameters are used as the key list.

Refer to your PeopleSoft application documentation for specific instructions on any other attached data keys that must be passed to the CTI console by Genesys.

Setting up Cisco for Pop-up Windows

Unless you choose to use the default URL for your pop-ups, you must create certain Expanded Call Context (ECC) variables. Expanded Call Context (ECC) variables are variables that you define and enable in the Cisco ICM Configuration Manager to store values associated with the call. These variables are sent to the PeopleSoft CTI Console when ICM notifies it of an incoming call, and the Console uses the variables to determine which PeopleSoft page to launch for the agent.

Every call data key used in your implementation must be registered in the Cisco ICM, before PeopleSoft can receive the attached call data from the IVR.

PeopleSoft only recognizes data keys with "user.PS." in front of all the PeopleSoft key names. For example,

```
user.PS.Descr
```

The following table contains the call data variables that must be created and registered in the ICM.

Note. The following variables are case sensitive. Match the case of the variables as shown in this section.

ICType	user.PS.ICType. 6 chars. The valid values are: Panel (page) or Script. It represents the type of PeopleSoft service being called, either a panel (page) or a script. If ICType is set to panel, the following variables apply: • user.PS.Component. 20 chars. This variable is required to specify the name of the destination component. • user.PS.Menu. 10 chars. This variable is required to specify the name of the menu within PeopleSoft containing the destination component. • user.PS.Market. 3 chars. This variable is required to specify the name of the Market of the destination component. If the ICType is set to Script, then the following variable applies: user.PS.ICScriptProgramName. 70 chars. If the ICTYPE is set to Script, then this variable is required to specify the location of the iScript, which is executed through the screen pop-up. For more information on iScripts, refer to the PeopleCode Developer’s Guide: "Internet Scripts".
Descr	user.PS.Descr. 30 chars. You can add any descriptive information that might be useful to the agent. This information displays in the control bar. For example, you may want the agent to be aware of the customer’s priority status, as in "Gold Customer."
Application Specific Data	Any other variables that the application requires must be prefixed with “*user.PS*.” PeopleSoft truncates the *user.PS*. before passing the parameter to the application. For example, user.PS.App1(3 chars) user.PS.App2(1 chars)

Note. Typical character sizes for these variables appear in the previous table. The actual size of these variables depends on the components specified by the PeopleSoft application you are using. Refer to your PeopleSoft application documentation for correct size information.

Supporting Single Signon

PeopleSoft CTI offers single signon. The console connects to the CTI middleware using the CTI user ID and password retrieved from the PeopleSoft database.

CTI Event Logging

CTI events are now logged in by the MCF logger in addition to MCF events. The logged CTI events can be viewed by navigating to PeopleTools, MultiChannel Framework, Universal Queue, Administration, CTI Event Log.

Only two CTI events are logged: Accept and Hangup. As a result, these events do not necessarily indicate the sequence of events on the CTI console as a result of an incoming voice call. For example, Accept may indicate an incoming call, transfer, or conference call.

Implementing "Free Seating"

When users sign on, they do not need to reenter telephone extensions and other user information if they have used the workstation before and the relevant information for the telephone associated with that workstation has not changed.

PeopleSoft enables free seating by maintaining a cookie on the workstation.

Troubleshooting

The following items identify some common issues and their solutions.

- If the CTI console's state becomes inconsistent with that of the telephone, do one of the following:
  - Use the phone set to manage the call, and once you have released the call, either unregister and reregister using the register button.
  - Click the browser's Refresh button to re-set the console.
- If the CTI Console system loses track of the teleset state, it returns to a neutral status showing both lines available. In this case, use the phone set to manage the call as opposed to using the CTI Console. Once you have released the call, you may need to de-register from and reregister with the CTI middleware.
- If agents attempt to activate the CTI Console, and get an error message indicating that there is already an active console (and there isn't), clear the PeopleSoft CTI cookies stored in the browser's cache.
- If you receive an unexpected error and intend to log an incident with PeopleSoft, include the browser's Java Console output with the incident.
- In general, ensure that agents have valid CTI middleware agent IDs associated with their PeopleSoft user IDs.
- If the agents activate the CTI console, but do not get the agent's Register button, this may indicate one of the following:
  - The applet could not communicate with the CTI middleware. Check that the CTI configuration data such as the host name and port number are correct and that the CTI servers are online.
  - You do not have rights to install the applet or some other CTI component on your workstation (security restrictions). Contact your system administrator.
- If you receive a Java error when clicking on the Register button of the CTI console, it may have to do with cookies. The browser may not be creating the CTI cookies that contain the extension and line details. Or, the cookies are being created on the wrong authentication domain. To solve this issue, make sure of the following:
  - Check the security options in your browser and make sure the ability to create cookies is enabled.
  - Make sure that you have set the correct AuthTokenDomain, which is the "ATDomain" value in the PeopleSoft Pure Internet Architecture setup program) when installing PeopleSoft Pure Internet Architecture to your Web server. This value sets the AuthTokenDomain value in the configuration.properties file.
- If the CTI Console is closed while the agent has a call ringing (alerting), Cisco ICM may not regain control of the phone and an agent may not be able to logon to that extension using the console. In such cases, the agent should pick up the handset and so that the PeopleSoft system can reconnect.
- On the CTI Console, if you see only a *_0* instead of *<extension>_0* it may indicate that the AuthTokenDomain value was set correctly during installation, but is not used for the login URL.
- If a DN on an activated CTI console does not match that input by the user, tell the user to clear cookies in the browser cache. If the same user connects to different PeopleSoft domains, one of which is a subdomain of the other, then do one of the following:
  - The user needs to clear cookies in the browser cache when switching PeopleSoft domains.

- If you specify AuthTokenDomain when configuring PeopleSoft, then the document domain is the AuthTokenDomain. So if users need to switch between domains, both need AuthTokenDomain set to the same value.

CHAPTER 4

Using PeopleSoft CTI

This chapter describes how to use PeopleSoft CTI.

Using PeopleSoft CTI

This section contains an overview discussion and covers the following topics:

- Understanding the PeopleSoft CTI interface.
- Signing on.
- Working with the control bar.
- Answering calls and using the call features.

Understanding How to Use PeopleSoft CTI

PeopleSoft CTI is a browser-based call management system that helps call agents work more efficiently with customers. PeopleSoft CTI integrates your Genesys or Cisco CTI middleware and your PeopleSoft applications. It exchanges data between the CTI system and your PeopleSoft applications so that the system automatically fills PeopleSoft transaction pages with the appropriate customer information—the information related to the caller.

With PeopleSoft CTI, you can perform the following tasks:

- Operate two lines or two extensions.
- Answer incoming calls.
- Release calls.
- Put a caller on hold.
- Monitor call status.
- Access PeopleSoft applications.
- Transfer callers.
- Initiate conference calls.
- Place an outbound call.

Note. PeopleSoft supports both Genesys and Cisco CTI systems. In the following sections, when the phrase "your CTI middleware" or "CTI vendor" appears, assume that it refers to either Genesys or Cisco products as appropriate for your installation.

Working With the Interface

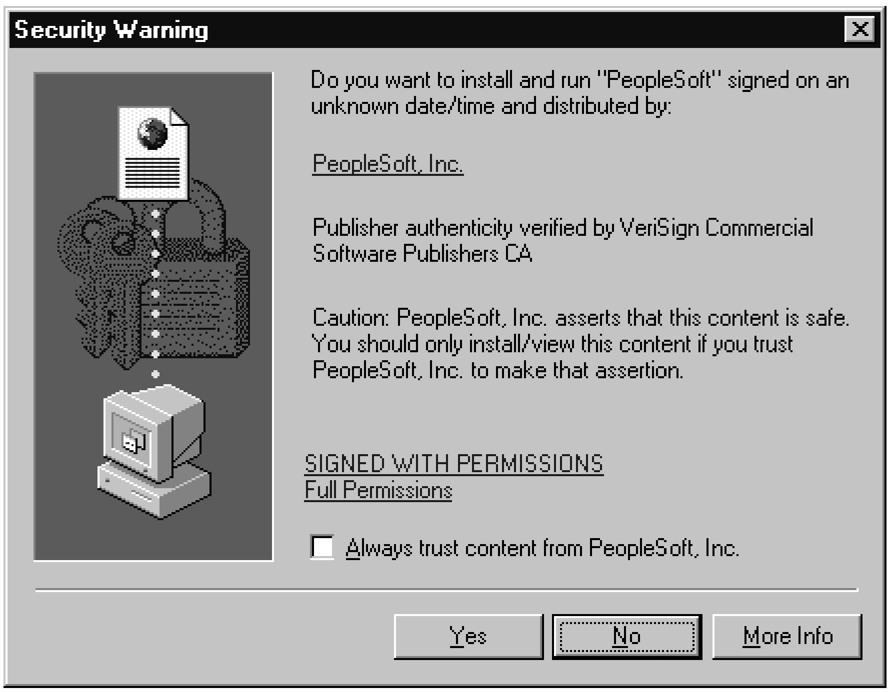
The PeopleSoft CTI interface is incorporated *within* the MultiChannel Framework Console. This document assumes you have read the documentation pertaining to the MultiChannel Framework Console.

Getting Started

Getting started with PeopleSoft CTI is a three-step process that involves the following:

- Signing on to PeopleSoft.
- Specifying your extension information.
- Connecting to your CTI middleware (either Genesys of Cisco).

The first time you access PeopleSoft CTI, a Security Warning dialog box *may* appear prompting you to "trust" information from PeopleSoft. Click the Yes button.



Security Warning dialog box

The Security Warning dialog box may not appear if:

- You have previously accepted PeopleSoft applets as trusted.
- The system is not correctly installed.

Note. If you have any questions or concerns about this warning, contact your system administrator.

To sign on to PeopleSoft CTI:

1. On the PeopleSoft signon page, enter your PeopleSoft user ID and password as you normally do to sign on to PeopleSoft.
2. On the CTI control bar, set your configuration by doing the following:
   - Make sure that your agent ID appears beneath the Agent ID label.

- Make sure that the appropriate queue name appears beneath the Queue label. Queues are discussed in a subsequent section.
- If you are signing on from a workstation with a different extension, specify the current extension(s) in the Extension edit boxes.
- The extension type indicates whether an agent can receive calls by way of a queue or just from a directory number (DN). If this value is set to queue, the console offers options that are “queue-specific,” such as being able to log on to a queue.
- Press the Activate button to sign on to Genesys or Cisco.

  This should enable you to access the CTI console.

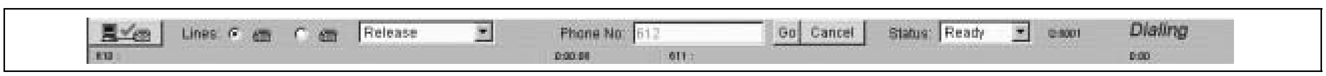
3. On the CTI Console, click the register button to register with the Genesys system.

   When the red ’X’ on the button becomes a green check mark, you are registered with Genesys. In most cases, this should not take more than 10-15 seconds.

Using the CTI Console

Change any registration parameters if necessary and click Set, or Activate (depending on your version). After doing so, the CTI interface appears, which looks similar to the following:

Note. Keep in mind that the PeopleSoft CTI interface operates *within* the MultiChannel Framework Console. CTI users will only see the MultiChannel Console if their user ID belongs to a role that has · MCF_AGENT or MCF_SUPR real-time event notification permissions, and· WEBLIB_MCF web libraries in their permission list.



CTI Console

Register (button)

Enables you to register and de-register with the CTI middleware. The button acts as a toggle switch. When the green checkmark appears, you are registered; when the red ’X’ appears you are not registered.

Lines

By clicking the radio button to the left of the telephone icon, you activate the associated line. The icon you select determines the active line. All call actions you choose apply only to the *active* line. The color of the icon reveals the activity on the line. The colors are:

- Blue. Inactive.
- Red. Ringing.
- Green. On call.
- Yellow. On hold.

Select Call Action

Select actions related to calls, including Answer, Hold, and Transfer. Which call action options appear depends on your current status. For instance, the Hold call action is only valid while you are on the line with a caller. Call action options are discussed in detail in the following section.

Status

Shows the agent status, as in Ready or Not Ready (to receive calls). It can also show Ready/DND (Do Not Disturb) if the agent is not using a Queue.

Q: (Queue)

If the agent belongs to an ACD group, the group appears here.

Messages Informational messages appear in the right corner of the CTI Console. Examples of such messages are “Dialing”, “Connected” and “Released.” These messages do not persist.

Note. Error messages appear in separate windows.

Call Duration The system tracks the amount of time spent on calls for each line.

Incoming Call Information Displays the string associated with the Descr call variable. For example, “Gold Customer.”

Note. A CTI agent on a Genesys switch system can choose on the agent customization page whether to automatically log out when the console is closed. Cisco always logs out the CTI agent when the CTI console is closed.

Understanding Call Actions

The Select Call Action drop-down list contains all of the options you have for handling calls. Depending on the status of the agent and/or the telephone line, certain selections from the drop-down list are not available.

After you select a call action there are two buttons, Go and Cancel, that appear to the right of the Select Call Action drop-down list. Go executes the selected call action, and Cancel stops the call action you executed.

The following list contains the call actions:

Dial When you are in Agent Ready or Agent Not Ready mode, you can call another party.

Answer Call Answers an incoming call. The Answer Call button displays and flashes only when there is an incoming call that is waiting to be answered.

Transfer Mute Transfers the caller to the desired number without speaking to the intended recipient. A dialog appears enabling you to enter the extension of the person to which you want to transfer the caller.

Note. This action is not supported on Aspect switches.

Transfer Transfers the caller to the desired number. You will have the opportunity to speak with the recipient before transferring the caller. A dialog appears enabling you to enter the extension of the person to which you want to transfer the caller.

Conference Enables you to add one or more individuals to your call.

Hold Places the caller on hold.

Retrieve Takes the caller out of hold status. Displays only when the caller is on Hold.

Release Disconnects the caller. This option is only available as a selection once a call is answered.

Change When an agent status is unknown, the system sets the status to “Change” so that the user can set the status manually to match the status for the telephone.

Note. You can transfer to or initiate a conference call with individuals who are not enabled to access PeopleSoft CTI. Their phone rings, but keep in mind that they do not get the popup screen showing customer data.

The following list of call actions are available depending on whether you are using a DN or Queue configuration:

Queue

Log on. Enables the agent to log an extension on to a queue.

Ready. Indicates the agent is ready to receive incoming calls. This option is available when the extension is associated with a queue and the status bar reads “Agent Not Ready.”

Not Ready. Stops incoming calls. This option is available when the extension is associated with a queue and the status bar reads “Agent Ready.”

Log off. Enables the agent to log an extension off a queue. When logged off, the agent is no longer participating in the queue.

DN

DND. (Do not disturb) This option is available when the extension is not associated with a queue.

Ready. Opposite of DND. This option is available when the extension is not associated with a queue.

Cisco Switch Considerations

The following list presents the limitations of the Cisco Systems IP Contact Center switch:

- MAKE_CALL is only supported when agent is in the Not Ready state.
- Consultative and blind transfers are supported. Placing a call on hold and making a new call and completing the transfer is not supported due to limitations in the Call Manager.
- Hold and retrieve are supported, but not during a consultative call as it disrupts the consult relationship in Call Manager.
- Only the conference initiator can add parties to the conference.
- Cisco does not support two applications managing the same call. Therefore, you cannot run a Cisco softphone and the PeopleSoft CTI console on the same workstation.

Note. Refer to your CTI vendor documentation for further information about any limitations imposed by a particular switch. In some cases, the switch limitations may actually be due to the CTI server, so be sure to refer to any server limitations that may also impose limitations upon the switch.

Answering a Call

After you have logged on to PeopleSoft CTI, you are ready to receive calls. For each incoming ACD call to your extension, the telephone extension icon turns red. Once you have accepted a call, the system does not send you more incoming calls until you have completed the current call.

To answer a call:

1. Click the radio button to the left of the telephone icon that has turned red.

   The answer option is automatically selected as the current option in the drop-down list when there is an incoming call.

2. Click Go.

The popup browser launches with the appropriate PeopleSoft transaction page displayed. The system determines which page to display based on caller information sent by the CTI middleware.

Once you have answered a call, you enter the not available status.

If an agent erroneously clicks Cancel instead of Go when accepting an incoming call, the agent can recover the call by:

- Selecting a call option.
- Selecting the line that is receiving the incoming call.

Transferring a Caller

Occasionally you need to transfer callers to other agents. PeopleSoft CTI supports two types of transfers:

- Transfer Mute. This option enables you to transfer a call without speaking to the target agent prior to transferring the call.
- Transfer. This option is also known as a "consultative" transfer, which means you consult with the target agent prior to transferring the call.

Note. You can always transfer or invite users to a conference call even if the called party is not CTI-enabled. The non-CTI-enabled user does not get a screen pop-up but their phone still rings.

Note. When initiating a transfer or conference call on the Cisco system and the contacted party does not answer, wait until the system notifies you of the unsuccessful connection before attempting another action. This can require 20-30 seconds.

Note. Cisco ICM does not notify client applications about some call events during two-step transfers or conferences. The result is the state of the PeopleSoft CTI Console may not stay synchronized with that of the teleset, especially if the teleset is used to initiate or complete these call actions. The CTI console should automatically resynchronize with the teleset when the call is completed.

To perform a Transfer Mute:

1. Make sure the appropriate telephone line is selected and green.
2. From the Select Call Action drop-down list select *TransferMute*.
3. In the Phone No. edit box, select the number you want to dial.

   The drop-down list contains all the numbers from the shared phonebook and agent phone book. If the number you want to dial does not appear, click Dial other number and manually enter the number.
4. Click Go.

   This connects the caller to the new agent and releases your line.

   The system prompts the recipient of the transfer that it is transferring a call from your extension. When the recipient accepts the transfer, the PeopleSoft page connected to the caller’s case opens as it did for you when you first received the call.

To perform a Transfer (consultative):

1. Make sure the appropriate telephone line is selected and green.
2. From the Select Call Action drop-down list select *Transfer*.

3. In the Phone No. edit box, select the number you want to dial.

   The drop-down list contains all the numbers from the shared phonebook and agent phone book. If the number you want to dial does not appear, click Dial other number and manually enter the number.

4. Click Go.

   When using one extension with two lines, the outbound call you make to the agent to whom you are transferring the incoming call gets initiated on your second line and the incoming call gets placed on hold. Once the outbound call is established you can consult with the recipient and place that call on hold. To complete the transfer, you need to go back to the first line and select Complete and click Go. This will release the call on the second line and transfer the call on the first line to the recipient of the transfer.

   When using two extensions each with one line, the CTI Console does not have access to the outbound call to the intended recipient of the transfer. Once the outbound call is established you can consult with the recipient. You do not have to toggle between the two lines, and do not have the ability to put the recipient on hold.

5. To complete the transfer, select *Complete* and click Go.

Initiating Conference Calls

If you find that you need the assistance of other agents to answer a caller’s questions, you can use the conference feature to include the appropriate agent(s) on a call.

To initiate a conference call:

1. Make sure the appropriate telephone line is selected and green.
2. From the Select Call Action drop-down list select *Conference*.
3. From the drop-down list of all numbers from the shared and agent phone books, select a number to be dialed.

   If the number is not there, select *Dial other number* to get an edit box and enter the number to be dialed.

4. Click Go.

   The system notifies the target agent of the incoming call (conference). The PeopleSoft page associated to the caller’s case opens for the target agent as it did for you when you first received the call.

   This feature depends upon two parameters set up by the administrator:

   • Default Screen Popup URL.

- Personalization: Screen Popup Mode.

  If the default URL for screen popup is set and the Screen popup mode is 0 (popup when incoming) for the second Agent, the agent gets the screen popup as soon as the call is transferred.

  If the Screen popup is set to 1 (popup after answer), the screen pops up only after the first agent completes the transfer/conference call. However if the default URL for the screen popup is not set then it doesn't matter whether the mode is 0 or 1. In that case, the second Agent gets the screen popup only after the first Agent completes the transfer/conference call.

  When using one extension with two lines, the outbound call you make to the agent to whom you are inviting to the conference gets initiated on your second line and the incoming call gets placed on hold. Once the outbound call is established you can consult with the third party, and place that call on hold. To complete the conference, you need to go back to the first line and select Complete and click Go. This releases the call on the second line and starts the conference on the first line.

  When using two extensions each with one line, the CTI Console does not have access to the outbound call to the third party. Once the outbound call is established you consult with the target agent. You do not have to toggle between the two lines, and do not have the ability to put the recipient on hold. To start the conference, select Complete and click Go.

5. After consulting with the target agent, select *Complete* from the Select Call Action drop-down list, and click Go.

Working With the Hold Status

Putting calls on hold and retrieving calls on hold is likely to be the call action you perform most.

To place a call on hold:

1. Make sure the appropriate telephone line is selected and green.
2. From the Select Call Action drop-down list select *Hold*.
3. Click Go.

To retrieve a call on hold:

1. Make sure appropriate telephone line is selected and yellow.

   The retrieve option is automatically selected as the current option in the drop-down list when there is a call on hold.

2. Click Go.

Disconnecting a Caller

After you have finished with a call in the mini console, follow this procedure to release the call.

To release a call:

1. Make sure you no longer require the call to remain active.
2. On the mini console control bar, select *Release* from the Lines drop-down list.
3. Click Go.

   The system automatically places you in "wrap-up" mode, which enables you to regroup before accepting more incoming calls. Technically, when in "wrap-up" mode, your status is Agent Not Ready. When you are ready to accept incoming calls, select Agent Ready.

Switching "Agent Ready" Status

Your agent status determines whether you can receive incoming calls.

- To activate "Agent Ready" status:

  From the Select Call Action drop-down list, select *Agent Ready*.

  When you are ready, the system routes incoming calls to your extension(s).

- To activate "Do Not Disturb" status:

  From the Select Call Action drop-down list, select *DND*.

  With Do Not Disturb, your extension/s will not accept incoming calls.

  Note. This status is not available to agents associated with an ACD queue.

- To activate "Agent Not Ready" status:

  From the Select Call Action drop-down list, select *Agent Not Ready*.

  This status is typically used when an agent is at their desk, but temporarily unable to receive calls. While you are not ready, the system routes calls to other available agents.

  Note. This status applies only to agents associated with an ACD queue.

Dialing an Outbound Call

You can use PeopleSoft CTI to place a call, while the agent status is either Agent Ready or Agent Not Ready.

Note. If you have multiple extensions assigned to you, *do not* call one of your extensions from the other.

To place an outbound call:

1. Make sure you are in Agent Ready or Agent Not Ready status.
2. Click the radio button next to the telephone icon representing a free line.

   For example, if you had a customer on hold on one line, you select the icon for the second line.
3. From the Select Call Action drop-down list select *Dial*.
4. From the drop-down list showing all numbers from the shared and agent phone books, select a number to be dialed.

   If the number is not there, select “Dial other number” to get an edit box and enter the number to be dialed.
5. Click Go.

   As with any other call you receive, you have access to all the call actions for calls you initiate. You can transfer the person you’ve called, place the line on hold, or initiate a conference with another party.

   Note. The system places you in Agent Not Ready status until you release the call.

   When making an outbound call:

   - A URL can be specified to popup a page. When popping the page, the outbound call data is also attached to the URL so that an application can collect information such as the ANI, DNIS, and so on.

- A context ID (such as a customer case number or an invoice number) is attached to the call data. This allows PeopleSoft application context to be passed on to Cisco or Genesys middleware where it may be stored. This context can be used to establish a relationship between the outbound call and the application context when the call was made.

See Also

Chapter 3, “Configuring PeopleSoft CTI,” Shared Phone Book, page 18

Completing a Call

When you disconnect, or release, a call from the mini console, the system disconnects you from the CTI middleware, and the mini console becomes disabled (unavailable for entry). However, the PeopleSoft page remains active so that you can finish updating information if needed.

When you become available to accept incoming calls depends upon how your system administrators have set up your CTI middleware. Genesys has a setting known as "wrap-up time," which allows an agent a certain amount of time to update the previous caller’s information or regroup before accepting more calls.

Using Hotkeys

To help you easily select options with PeopleSoft CTI offers the following hotkeys. Hotkeys are combinations of keyboard buttons you can press instead of using a mouse.

Hotkey	Description
ALT + R	Registers your phone extensions with the CTI middleware.
ALT + 1	Makes Extension 1 the active line.
ALT + 2	Makes Extension 2 the active line.
ALT + S	Presents a list of applicable call actions for you to select.
ALT + P	Presents a list of frequently called telephone numbers for you to select.
ALT + G	Enables you to execute a call action.
ALT + C	Enables you to cancel a call action.
ALT + Z	Enables you to check agent status.

CHAPTER 5

Configuring REN Servers

This chapter provides an overview of Real-time Event Notification (REN) servers and discusses how to:

- Configure REN server security.
- Configure REN servers.
- Configure REN server clusters.

Understanding REN Servers

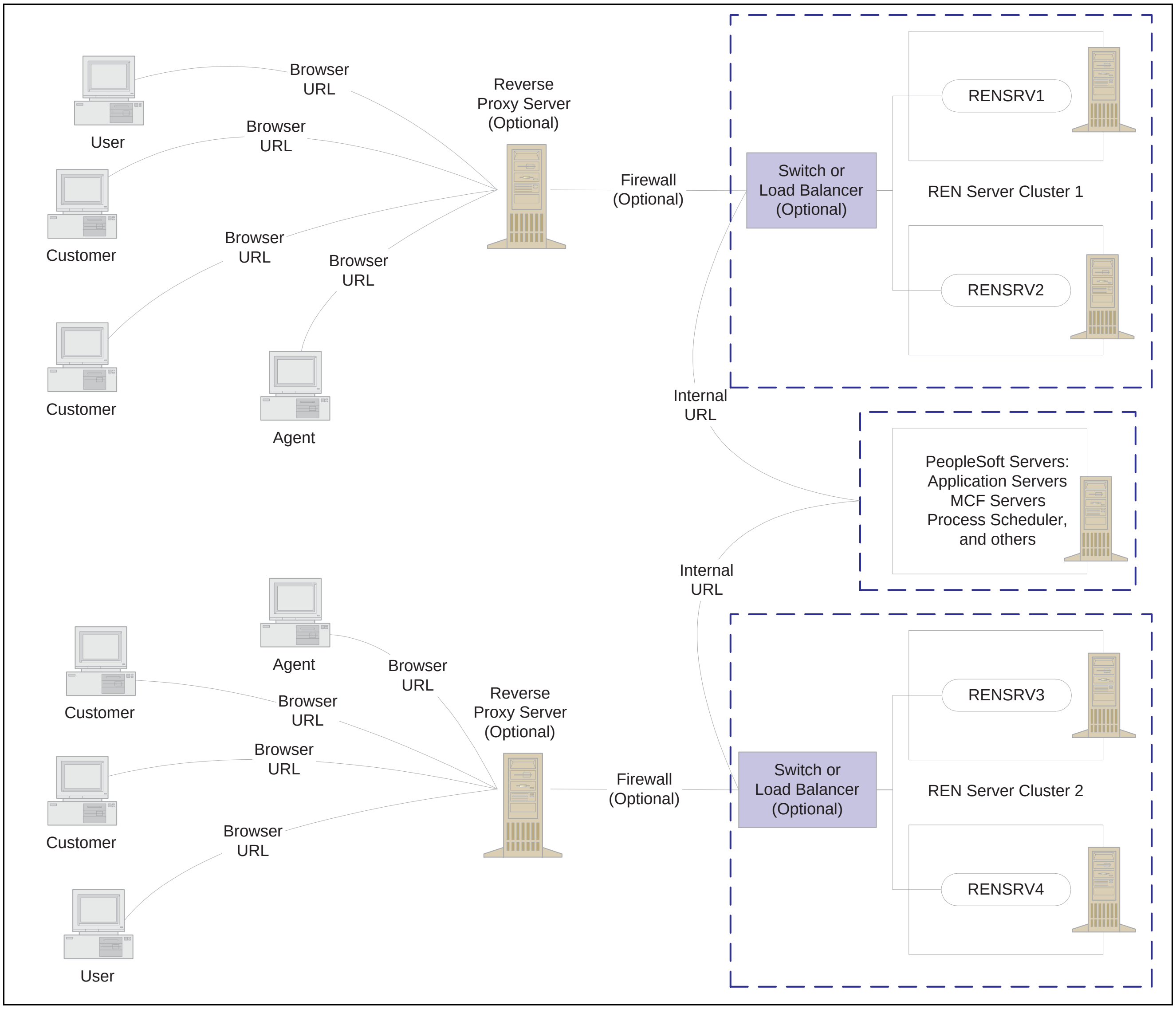
The REN server, an application server domain process, is essential to PeopleSoft MultiChannel Framework (MCF) architecture. MCF events are sent to REN servers, which deliver them to recipients of those topics.

REN servers are also used by other PeopleSoft applications to push event notifications to users, such as the Reporting Window output option and the Optimization Progress Window.

The REN server is a modified web server using the HTTP 1.0 or 1.1 communications protocol. Communication with MCF server processes and browser windows is bidirectional, as they maintain persistent connections to the REN server. Events can be sent proactively to browser windows without polling or page refreshes.

Configuring REN Server Failover, Scalability, and Security

REN servers can be configured to support both failover and scalability, and should be protected with firewalls and appropriate security measures, as illustrated in the following diagram.



REN server configuration example

REN Server Failover

Although the REN server is integrated into an application server domain, it is not a standard PeopleTools server process (it has no database connection) and therefore has a separate failover mechanism. There are two scenarios for failure recovery:

- For a standalone REN server, BEA Tuxedo restarts the server if it fails. MCF servers and consoles reconnect to the REN server. However, any active browser sessions (such as MCF chat) will be interrupted until a connection can be reestablished between the chat console and the recycled REN server.
- For clustered REN servers, each REN server in the cluster is a peer that mirrors the current state.

  This configuration has two advantages over a standalone REN server:

  - Clustered REN servers guard against hardware failure (provided the clustered REN servers are on different host machines).
  - Active browser sessions are not lost.

REN Server Clusters

You can configure a REN server cluster with only one REN server member. However, a REN server cluster configured with two or more REN servers provides failover.

All REN servers in a cluster mirror each other and appear to external processes as a single URL. The REN server cluster must have an HTTP load balancer or switch as its front end. All connections with browsers and application server processes address the front end's URL. The load balancer should use an active standby content switching rule to route all traffic to a designated REN server in the cluster. The front end selects an alternate member of the cluster only when the designated REN server fails to respond. .

The REN server cluster maintains mirrored state in all members by relaying events with HTTP messages. The REN server cluster therefore does not address scalability issues. Clustering REN servers does not improve performance and may increase processing overhead and internal network traffic. The internal HTTP connections between cluster members should be high speed for best performance.

If a REN server crashes, it does not rejoin the cluster, because it would not be synchronized with the other clustered REN servers. The entire cluster must be shut down and rebooted in order to restore all members back to full participation.

Incoming cluster requests must eventually route to the front end's HTTP address. Queue servers and application servers use the cluster URL, which is typically set to be the URL of the front end. Browser clients make requests using the browser URL, which may be set to the front end, or to a server that proxies to the load balancer. If browser transactions are encrypted with Secure Socket Layer (SSL), then the browser URL is an HTTPS address to a reverse proxy server or SSL accelerator.

Note. If you use SSL between the browser and REN server, then you must use a reverse proxy server or SSL accelerator.

Configuring REN Server Security

Protect the REN server behind firewalls. A reverse proxy server can be used between browser clients and the REN server. Browser sessions can be SSL-encrypted using a reverse proxy server or hardware SSL accelerator.

Note. The security of your PeopleSoft system, and configuration of load balancers, switches, and reverse proxy servers, is beyond the scope of this document. Refer to your PeopleBooks for more information.

REN server access from browser clients is restricted to users currently logged into PeopleSoft with appropriate REN server permissions. You must enable single signon security to obtain REN server access. Permission to access REN server applications is granted on permission lists, which are in turn associated with security roles and user IDs. Clients lacking access permission receive a "403 Forbidden" page from the REN server.

Note. REN server access requires that single signon is enabled.

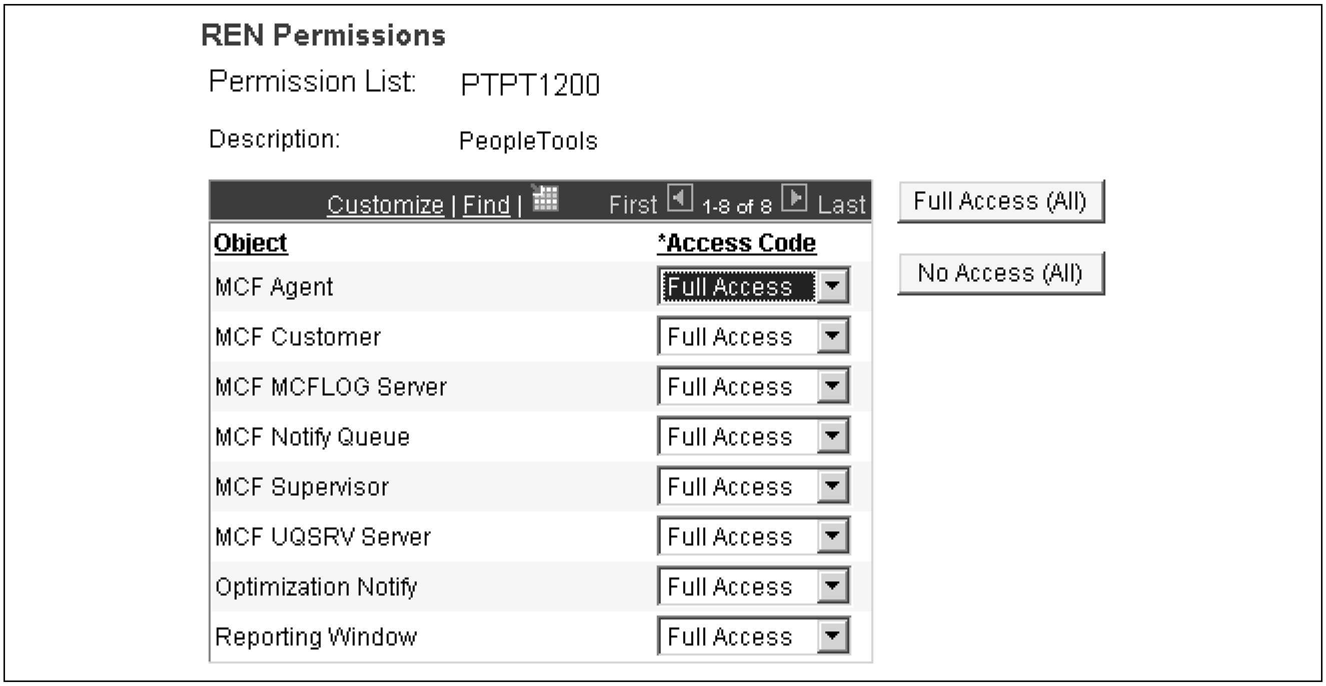
See Also

Enterprise PeopleTools 8.45 PeopleBook: Security Administration

Enterprise PeopleTools 8.45 PeopleBook: System and Server Administration

Defining Permission Lists for REN Server Access

Define access to REN servers in the appropriate permission lists.



REN Permissions page

To define access to REN servers in a permission list:

1. Select PeopleTools, Security, Permissions & Roles, Permission Lists.
2. On the search page, search for and select your permission list.
3. On the Permission List page, select the PeopleTools tab.
4. Click “Realtime Event Notification Permissions.”
5. On the REN Permissions page, select your permissions.

   To enable REN server access for roles defined with the current permission list, select Full Access. For example, users who require access to the MultiChannel Console must have Full Access defined for the MCF Agent permission.

   The MultiChannel Console link appears in the header for any user with full access permissions defined for the MCF Agent object. However, the user must also be configured as an MCF or CTI agent to access the MultiChannel Console.

Note. To enable access to the Report-to-Window functionality, add WEBLIB_RPT to the permission list’s Web Libraries page, and set Reporting Window to Full Access on the REN Permissions page.

Configuring REN Servers

This section discusses how to:

- Create REN servers.
- Configure REN servers.
- Determine REN server configuration options.
- Cluster REN servers.

Page Used to Configure REN Servers

Page Name	Object Name	Navigation	Usage
REN Server Configuration	REN_SERVER_DET_PG	PeopleTools, REN Server Configuration, REN Server Definition	Define a REN server.

Creating REN Servers

Depending on your requirements, choose one of two REN server creation and configuration options:

- To create a single REN server in a particular database using default configuration parameters, create an application server domain using PSADMIN. Event Notification is turned on by default in the quick-configure menu. An associated REN server cluster is also created by default.
- To create additional REN servers in a particular database, configure each REN server as required on the REN Server Definition and REN Server Cluster pages. Then create the associated application server domains. Event Notification is turned on by default in the quick-configure menu..

When a REN server starts up it looks for configuration information in the database, using the application server domain name and host name as keys. If the associated configuration information exists in the database, the REN server uses it. If no such configuration information exists, the REN server is configured using defaults, which also configure a REN server cluster for each REN server.The default REN server configuration can be changed using the REN Server Configuration pages, but such changes do not take effect until the REN server starts up again.

Note. You can create only one REN server per application server domain.

Configuring REN Servers

Specify REN server configuration parameters depending on your network topology and server arrangement.

Define the parameters for REN server configuration in three locations:

- Authentication token domain, set during PeopleSoft Pure Internet Architecture installation or in web profile configuration.
- PSRENSRV parameters, including cluster and browser URLs, set on the PeopleTools REN Server Configuration pages. Configuration parameters set on the REN Server Configuration pages override any defaults in PSADMIN.

Authentication Token Domain

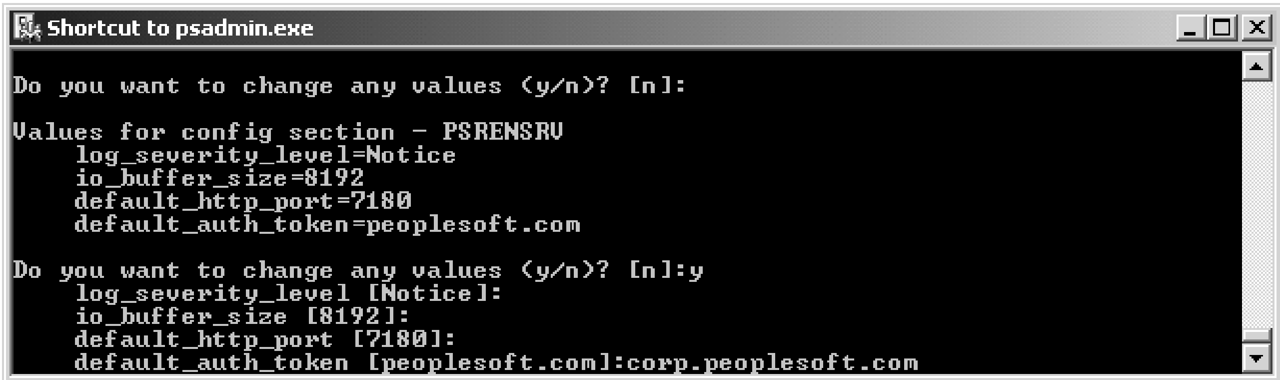
The authentication token domain tells PeopleSoft Pure Internet Architecture the internet domain name that browser clients use when accessing PeopleSoft applications across the internet. The token is required to comply with the same-origin security policy enforced by most browsers. The domain name specified in the REN Server Configuration page must be identical to the domain name specified as the authentication token domain during PeopleSoft Pure Internet Architecture installation.

If not set during PeopleSoft Pure Internet Architecture installation, define the authorization token in web profile configuration to match the REN server configuration.

Note. You must specify the authentication token domain if the REN server and the PeopleSoft Pure Internet Architecture web server have different DNS names (for example, if they are on different machines).

Configuring a REN Server With PSADMIN

If necessary, you can specify parameters in the PSRENSRV section of PSADMIN domain configuration, as illustrated in the following screen shot.



Configuring PSRENSRV in PSADMIN

Specify parameters as described in the following table:

Parameter	Default	Description
log_severity_level	Notice	This is the logging level for the REN server. Select from one of the following log severity levels, from less to more logged data: Error, Warning, Notice, Debug. **Note.** Do not use Debug in a production environment.
io_buffer_size	8192	This is the TCP buffer size used when serving content. Do not exceed a value of 65536. If the REN server is running on Microsoft Windows NT, change io_buffer_size to a minimum value of 56000.

Parameter	Default	Description
default_http_port	7180	The REN server's HTTP port. The default value is 7180. The default_http_port parameter takes effect only when a REN server starts up for the first time and the database does not already contain configuration information for the REN server.
default_auth_token	peoplesoft.com	The fully qualified domain name of the application server. This value should match the value of the web server's authentication token domain. The default_auth_token parameter takes effect only when a REN server starts up for the first time and the database does not already contain configuration information for the REN server.

After specifying REN server configuration parameters, be sure to specify Y (Yes) when asked if you want event notification configured.

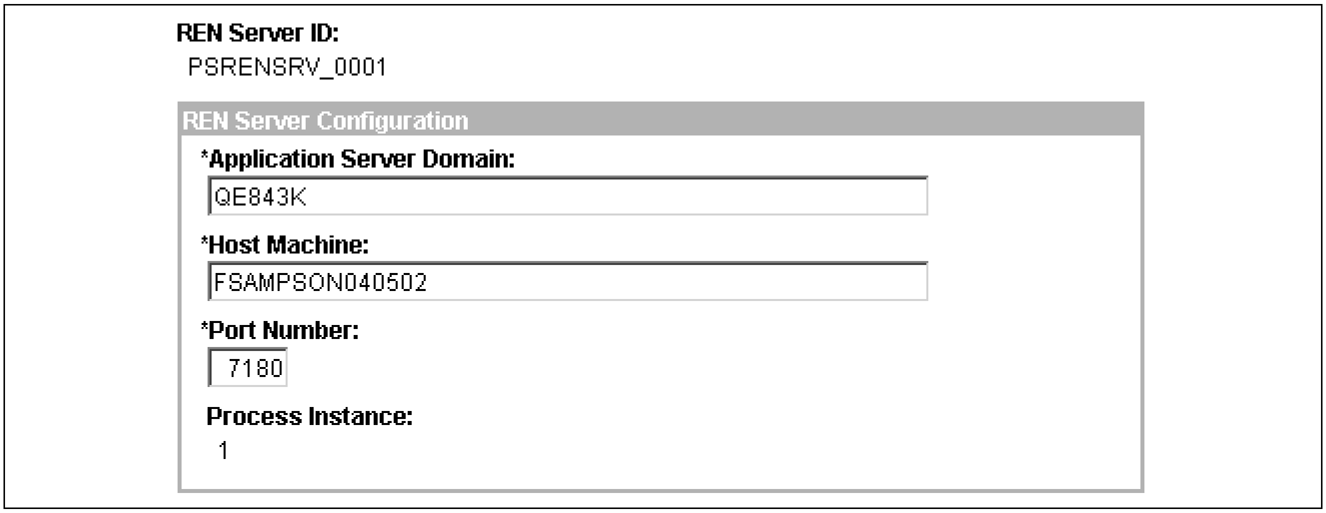
Note. REN server configuration parameters are written to the psrenconfig.txt file in the application server directory. Use REN server definition and configuration pages to modify configuration parameters whenever possible.

Note. Use static IP addresses for your web servers. If you use dynamic IP addresses (DHCP), ensure that the domain name server (DNS) can map fully qualified domain names to the dynamic IP addresses.

Note. If you are using Microsoft Internet Explorer internet security zones, include both the web server and REN server addresses in the same security zone; alternatively, exclude both addresses from security zones.

Defining REN Servers

Define REN servers on the REN Server Definition page.



REN Server Configuration page

Application Server Domain Specify the application server domain serving this REN server.

Host Machine Specify the host machine on which the specified application server domain runs.

Port Number Specify the HTTP port number on which this REN server is addressed.

Change the HTTP port value if multiple REN servers run on the same host machine to avoid port conflicts.

Process Instance Reserved for future use.

Determining REN Server Configuration Options

This section discusses some possible REN server configurations, dependent on domain server topology.

Simple Configuration: Mycompany.com

In this configuration, the REN server is on the host machine “MachA”, the REN server uses the default port number 7180, DNS addresses the host machine as MachA.mycompany.com, and there is no SSL or reverse proxy server involved.

Parameter	Value
PeopleSoft Pure Internet Architecture Authentication Token Domain	mycompany.com
Authorization Token in REN Server Cluster Configuration	mycompany.com
REN Server Cluster Root Path	/psren
REN Server Cluster URL	http://MachA:7180
REN Server Browser URL	http://MachA.mycompany.com:7180

Reverse Proxy Server with SSL Configuration

This configuration includes a single REN server and a reverse proxy server. The reverse proxy server could be either a dedicated reverse proxy server or a web server with a proxy plug-in configured to redirect both PeopleSoft Pure Internet Architecture and REN server requests. The application server host machine is MachA, and the REN server uses its default port 7180. The reverse proxy server is on MachRPS using port 8080 for HTTP. The DNS server must recognize MachRPS.mycompany.com.

Parameter	Value
PeopleSoft Pure Internet Architecture Authentication Token Domain	mycompany.com
Authorization Token in REN Server Cluster Configuration	mycompany.com
REN Server Cluster Root Path	/psren
REN Server Cluster URL	http://MachA:7180
REN Server Cluster Browser URL	http://MachRPS.mycompany.com:8080

For SSL, install certificates on the reverse proxy server, set the server to encrypt all communications, and use HTTPS URLs from the browser. In this example the reverse proxy server uses port 8443 for SSL.

Note. If you use SSL between the browser and REN server, then you must use a reverse proxy server or SSL accelerator.

Parameter	Value
PeopleSoft Pure Internet Architecture Authentication Token Domain	mycompany.com
Authorization Token in REN Server Cluster Configuration	mycompany.com
REN Server Cluster Root Path	/psren
REN Server Cluster URL	http://MachA:7180 **Note.** The cluster URL should never be a secure HTTP address.
REN Server Browser URL	https://MachRPS.mycompany.com:8443 **Note.** This is a secure HTTP address (HTTPS).

See Also

Enterprise PeopleTools 8.45 PeopleBook: Security Administration

Configuring REN Server Clusters

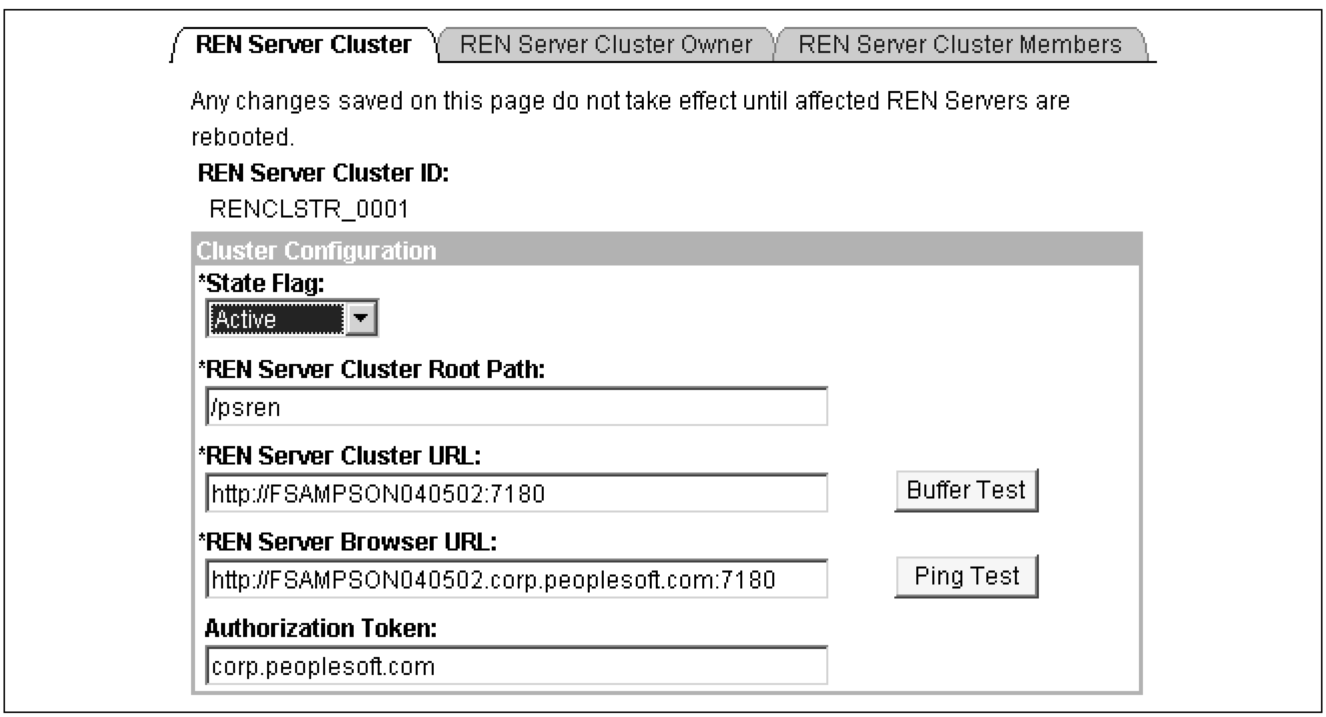
REN server clusters address failover and scalability.

Pages Used to Configure REN Server Clusters

Page Name	Object Name	Navigation	Usage
REN Server Cluster	REN_CLUSTER_PG	PeopleTools, REN Server Configuration, REN Server Cluster, REN Server Cluster	Define a REN server cluster.
REN Server Cluster Owner	REN_OWNER_PG	PeopleTools, REN Server Configuration, REN Server Cluster, REN Server Cluster Owner	Define the ownership of the REN server cluster.
REN Server Cluster Members	REN_CLUST_RSERV_PG	PeopleTools, REN Server Configuration, REN Server Cluster, REN Server Cluster Members	Define the REN server clusters member REN servers.

Clustering REN Servers

Configure a REN server cluster using REN Server Cluster pages.



REN Server Cluster page

By default, if you start a REN server from PSADMIN without configuring a REN server cluster, then a cluster is created with a cluster ID RENCLSTR_000n

State Flag

Select Active or Inactive.

This flag determines whether the cluster can receive new client requests. For scalability, configure multiple REN server clusters with the same ownership and set them to active status. Then the reporting window and customer chat applications will direct new client requests to a randomly chosen active REN server cluster. If all clusters are inactive, the client receives an error message.

If the cluster supports MCF servers, current chat sessions continue even after a cluster is inactive. But the MCF system does not route an additional requests to an inactive cluster.

Inactivate a cluster before deleting the cluster, or before removing a member REN server from the cluster. You can inactivate a REN server cluster without deleting the cluster.

REN Server Cluster Root Path

The default REN server cluster root path is /psren. Change this as required so that multiple REN server clusters are addressable through a single reverse proxy server.

Changes to the root path should also be reflected in the URL mapping of any reverse proxy server.

REN Server Cluster URL

The REN server cluster URL is the address used to reach the REN server cluster internally.

This is the URL used by internal processes. If the MCF cluster is served by a REN server cluster, the Cluster URL is that of the switch or load balancer in front of the clustered REN servers. The cluster URL must be unique for each cluster. No two clusters can address the same cluster URL. Specify the cluster URL in the form <http://<DNS_machine_ name>:<port>, where:

- <DNS_machine_name> is the server machine name recognized by your DNS.
- <port> is the REN server port number; the default value is 7180.

  This port number is the REN server port number or the port number of a proxy server, load balancer, or other front end.
- The protocol must be HTTP; it cannot be HTTPS.

Buffer Test

Click Buffer Test to initiate a test of the REN servers' ability to break up and send a large file using multiple internal buffers.

The buffer test bypasses REN server security, and does not depend on specified domain names (authorization token), so you can use it to verify that the REN server is running on the network.

REN Server Browser URL

The REN server browser URL is the address used by external clients and by agent chat to reach the application served by this REN server cluster.

The Browser URL may be different from the Cluster URL, which should not have to go through any firewall, reverse proxy server or other outward-facing security barrier. If the REN server is reached through a load balancer, switch, or reverse proxy server, specify the fully-qualified URL of that device as accessed from the user's browser. The URL must be the address of the gateway machine (proxy server, load balancer, or SSL accelerator). Specify the address in the form http: or https://<DNS_machine_ name>.<domain_name>:<port>, where:

- <DNS_machine_name> is the server machine name recognized by your DNS.
- <domain_name> is the full-qualified domain name recognized by your DNS.
- <port> is the REN server port number; the default value is 7180.

  This port number is the REN server port number or the port number of a proxy server, load balancer, or other front end.

Ping Test

Click Ping to initiate a test of the REN server specified in the Browser URL fields. Failure may indicate that a URL or authorization token is incorrectly specified, the REN server is not running, or that single sign-on is not implemented.

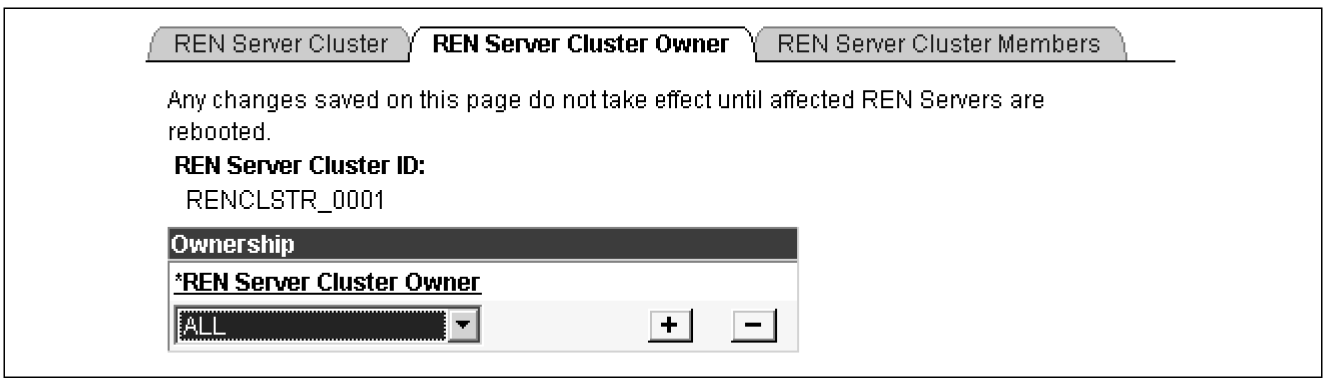
Authorization Token

Specify the authorization token domain. This must be the same as the authentication domain specified in the PeopleSoft Pure Internet Architecture installation or in the web profile configuration.

Note. Authorization token domain and authentication domain are the same thing.

Configuring REN Server Ownership

Configure REN server ownership using the REN Server Cluster Owner page.



REN Server Cluster Owner page

REN Server Cluster Owner

Select the owner of this REN server cluster from the drop-down list. Options are:

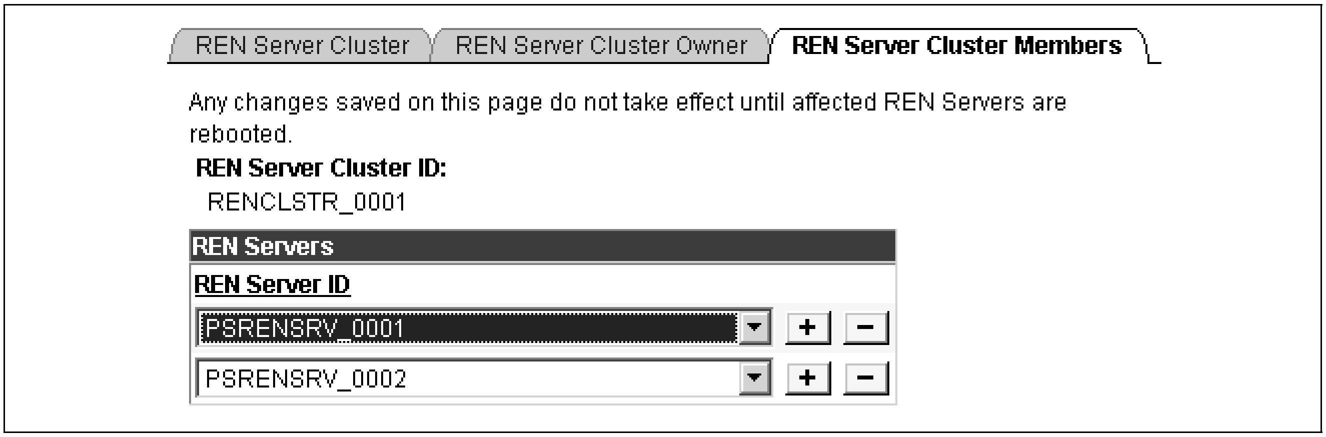
- All
- MCF
- Optimization
- Reporting

Specifying an owner for a REN server cluster limits client access to that cluster. This is useful to ensure performance under load.

Specifying an owner for a REN server cluster also supports security. For example, an MCF cluster can only be created on a REN server cluster owned by MCF or ALL.

Configuring REN Server Cluster Members

Configure REN server cluster members using the REN Server Cluster Members page



REN Server Cluster Members page

REN Server ID Select a REN server from the drop-down list.

Each REN server can only belong to one REN server cluster.

CHAPTER 6

Configuring MCF Clusters

This chapter discusses how to:

- Configure PeopleSoft MultiChannel Framework for scalability and failover.
- Create MCF clusters.
- Configure MCF clusters.

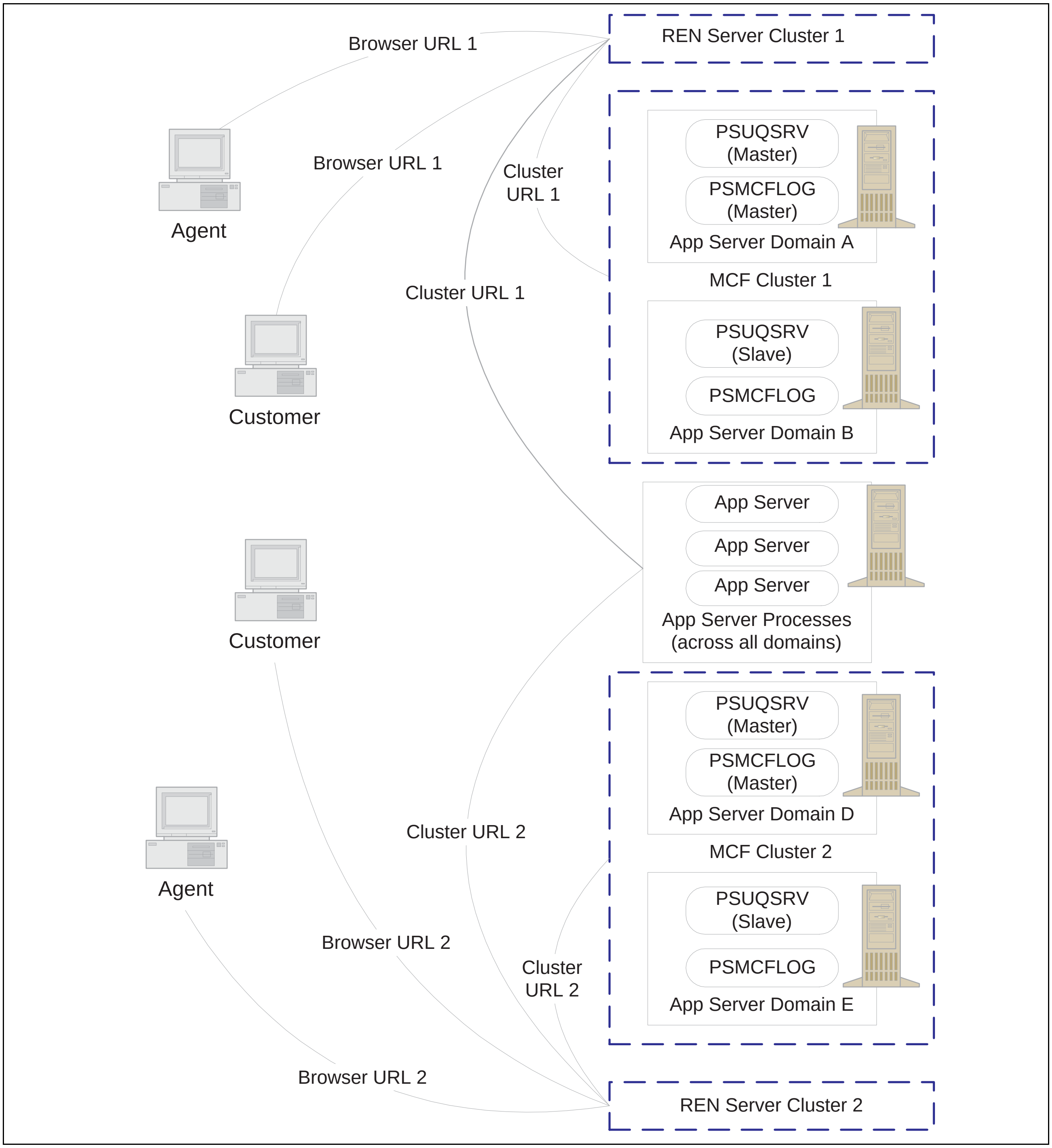
Understanding PeopleSoft MultiChannel Framework Scalability and Failover

This section discusses:

- PeopleSoft MultiChannel Framework cluster architecture.
- MCF clusters.
- Logical queues and physical queues.
- Queue server failover.
- MCF log server failover.
- MCF cluster configuration.
- Queue server scalability.
- Recommended configurations.

PeopleSoft MultiChannel Framework Cluster Architecture

In a PeopleSoft system, all application server processes—including MCF servers and real-time event notification (REN) servers—belong to an application server domain. Each domain can have only one REN server process (PSRENSRV), one queue server process (PSUQSRV), and one MCF log server process (PSMCFLOG). Domains can be redundantly clustered to provide failover. Logical queues can be serviced by multiple clusters for scalability. Support for scalability and failover is integrated into the configuration process.



PeopleSoft MultiChannel Framework cluster architecture

MCF Clusters

An MCF cluster is a group of multiple MCF-enabled application server domains where all queue servers and log servers communicate with the same REN server cluster. Only one queue server and one log server in an MCF cluster are active at any one time. These are called the masters. The rest are dormant and redundant, and are called the slaves. If a master drops out of the cluster for any reason, the slaves elect a new master to take its place.

Logical Queues and Physical Queues

PeopleSoft MultiChannel Framework enables the configuration of both logical and physical queues.

A logical queue is an application-level queue that receives work requests (tasks) relating to an application area, such as chat requests regarding sales information, and routes them to agents capable of handling the work. For example, you might configure a logical queue called SALES for sales inquiries and another called SUPPORT for support issues.

Logical queues can be partitioned into physical queues for scalability. A physical queue is managed by a single MCF cluster. For scalability, the tasks enqueued on a logical queue are distributed by the framework among all available physical queues. For example, the SALES queue could be serviced by four MCF clusters across four physical queues: SALES1, SALES2, SALES3, and SALES4.

Each agent can only be assigned to one physical queue within each logical queue. Each agent can be assigned to multiple logical queues.

Queue Server Failover

The queue server process (PSUQSRV) is a BEA Tuxedo–managed server with a standard PeopleSoft database connection. Each queue server process is the central routing point for one or more physical queues. The queue server maintains state information for work requests, work in progress, agent availability, and agent workload. Queue server state is written to database records, except for the assignment of chat to agents.

The queue server can recover from a crash because most of its state is written to the database. When a queue server reboots, it checks the database and loads state information for open work tasks. The queue server connects to its REN server and issues restart queries to each console so it can rebuild agent assignment information, which may have changed while the queue server was down.

Although a single queue server can recover state after recovering from software failure, this does not guard against hardware failure. Multiple queue server processes running on multiple host machines and configured in a cluster provide failover for hardware failure. Unlike the REN server cluster, the clustered queue servers operate as one master and many slaves. The master handles all routing decisions, while slave processes monitor the master and step in only if it fails. Any rebooted queue server rejoins the cluster in a slave role. Any slave promoted to master loads state from the database and issues queries to consoles as if it were the only process in the cluster.

Each queue server process follows a fixed procedure to ensure the cluster has at most one functioning master. Database locks eliminate possible race conditions, and the master periodically writes a timestamp to indicate its health. The masterinterval parameter controls the frequency at which the master process must update the timestamp in the cluster table. The masterinterval parameter corresponds to the maximum time after a master queue server fails before another queue server process takes over. Minimizing this value provides rapid failover response time but also requires frequent database updates.

See Chapter 7, “Configuring MCF Queues,” Cluster Tuning, page 73.

Each queue server must be part of an MCF cluster, and each MCF cluster must include at least one queue server. An MCF cluster of only one queue server provides no redundancy against hardware failure.

In summary, configure queue servers to provide hardware failover as follows:

1. Each queue server is part of an MCF cluster.

   To support hardware failover, distribute master and slave queue servers over multiple hosts.

2. Every queue server in an MCF cluster communicates with the same REN server ID.

   Therefore, REN server failover is also crucial.

See Chapter 5, “Configuring REN Servers,” page 43.

3. The first queue server that places a valid master entry for itself in the cluster table becomes the master queue server.

   In most cases the master queue server is the first queue server started. There is no configuration parameter to designate master or slave queue server within a cluster.

4. After an MCF cluster’s master queue server is established, all other cluster members become slave queue servers.

5. If the slave queue servers within a cluster detect a failure of the master queue server, the remaining slave servers compete to become the master queue server.

   If the master queue server reboots before a slave takes over, the master queue server also competes.

   There is no configuration parameter to designate priority among slave servers.

MCF Log Server Failover

The MCF log server (PSMCFLOG) is a BEA Tuxedo–managed server similar to the queue server. Each MCF log server receives events sent by a REN server and is responsible for writing MCF events to the database.

The MCF log server logs events to PS_MCFUQEVENTLOG. By default, the log server does not log periodic state information broadcasts from the queue server to the MultiChannel Console. If you need to log these events, configure logging on the Cluster Tuning page. You can also configure the log server to log the contents of chat sessions. Chat session logging is turned off by default. Logged chats are stored in PS_MCFCHATLOG.

If the MCF log server crashes, it resumes functioning immediately after restarting. When the first slave log server detects a failed master, it takes over as the master log server for the cluster. The new master log server again receives all base topics, but it does not log chat sessions that started or continued during the time the original master log server failed. The new master log server does not log per-agent events for agents that were signed in at, or during, the time of the failure.

An MCF log server is created along with a queue server when you enable MCF servers during domain configuration. There is no specific log server configuration during domain configuration.

MCF Cluster Configuration

Each MCF cluster includes a minimum of one queue server and one log server communicating with one REN server. An MCF cluster is typically identified by the ID of the REN server cluster serving it. There is no configuration limit to the maximum number of queue servers in an MCF cluster.

In MCF architecture, a chat client initiates contact with an agent through the designated external (browser) URL for a REN server. This URL can point to a load balancer, switch, reverse proxy server, or other hardware or software directing requests through a firewall. The external URL is also known as the browser URL, because it supports the MCF browser windows (agent chat, customer chat, and MultiChannel Console).

For communication of queue servers, log servers, and application servers with REN servers—for example, handling email requests—behind a firewall, you can use an internal URL. Specify both internal (cluster) and external (browser) REN server URLs during MCF cluster configuration.

Note. If no security is implemented, the browser and cluster URLs may be the same.

Queue Server Scalability

PeopleSoft MultiChannel Framework is scalable to support large capacity call centers or other large organizations. The basic strategy is to divide the workload by spreading it over several MCF clusters. This is accomplished by creating multiple physical queues for each logical queue and spreading the management responsibility for each physical queue to separate queue server processes, preferably on multiple host machines. This technique should not be confused with failover protection, which also adds processes and machines. In failover, the added processes are clustered together and do not provide performance improvement.

Organize applications using PeopleSoft MultiChannel Framework around logical queues (for example, Sales queue and Support queue). Incoming work tasks are sent to a logical queue. PeopleSoft MultiChannel Framework then assigns the task to one of the corresponding physical queues. This assignment is random across the queues. Since only one physical queue per logical queue can be serviced by a single MCF cluster, this balances load across the servers.

For example, a logical Support queue might be split into physical Support-1 and Support-2 queues such that work requests are randomly distributed between the two physical queues. Half the agents receive from one queue and half to the other. This splits the workload evenly between the two queue server processes, while still presenting one logical Support queue to the application.

PeopleSoft Recommendations

Consider the following configuration options to ensure maximum reliability and scalability of your PeopleSoft MultiChannel Framework installation.

- Configure multiple MCF servers in a cluster across multiple host machines.

  This provides protection against single-point failures.

  Each MCF cluster requires a REN server cluster. Configuring multiple REN server clusters is functionally the same as configuring multiple MCF clusters for scalability. Inside a REN server cluster, configuring multiple REN servers is functionally the same as multiple queue servers for failover.

- Use REN server clusters only for failover.

  REN server clusters do not enhance performance.

- Split logical queues into more than one physical queue if there is more work on that queue than a single process or machine can handle.
- If an application server domain is likely to be restarted regularly for reasons not related to PeopleSoft MultiChannel Framework, configure PeopleSoft MultiChannel Framework in a separate domain.

  Regular restarting of MCF servers affects performance because the MCF servers must recover state when they are recycled or when a slave takes over from a master server.

Configuring MCF Servers

PeopleSoft MultiChannel Framework depends on processes configured and booted as part of an application server domain. Configure MCF processes (servers) through PSADMIN, along with other processes in each application server domain.

Note. The REN server process can be utilized by applications separate from the queue server and MCF log processes. In this case you can configure the application server domain for event notification without creating the MCF servers.

See Chapter 5, “Configuring REN Servers,” page 43.

Understanding MCF Server Configuration

After considering performance and failover issues, the MCF system administrator provides configuration information that describes the arrangement of queues, domains, queue server processes, REN server processes, MCF processes, and URL addresses.

REN server processes are configured on PeopleSoft Pure Internet Architecture pages after being initiated in an application server domain. Each queue server process is uniquely identified in the system by combining the machine name, domain subdirectory name, and process identifier. MCF log processes use the same queue server identification scheme.

See Also

Chapter 5, “Configuring REN Servers,” page 43

Creating Queue Servers

Create a queue server and log server that start when an application domain is started by selecting feature 9, MCF Servers, from the quick-configure menu during application domain configuration.

Configuring MCF Clusters

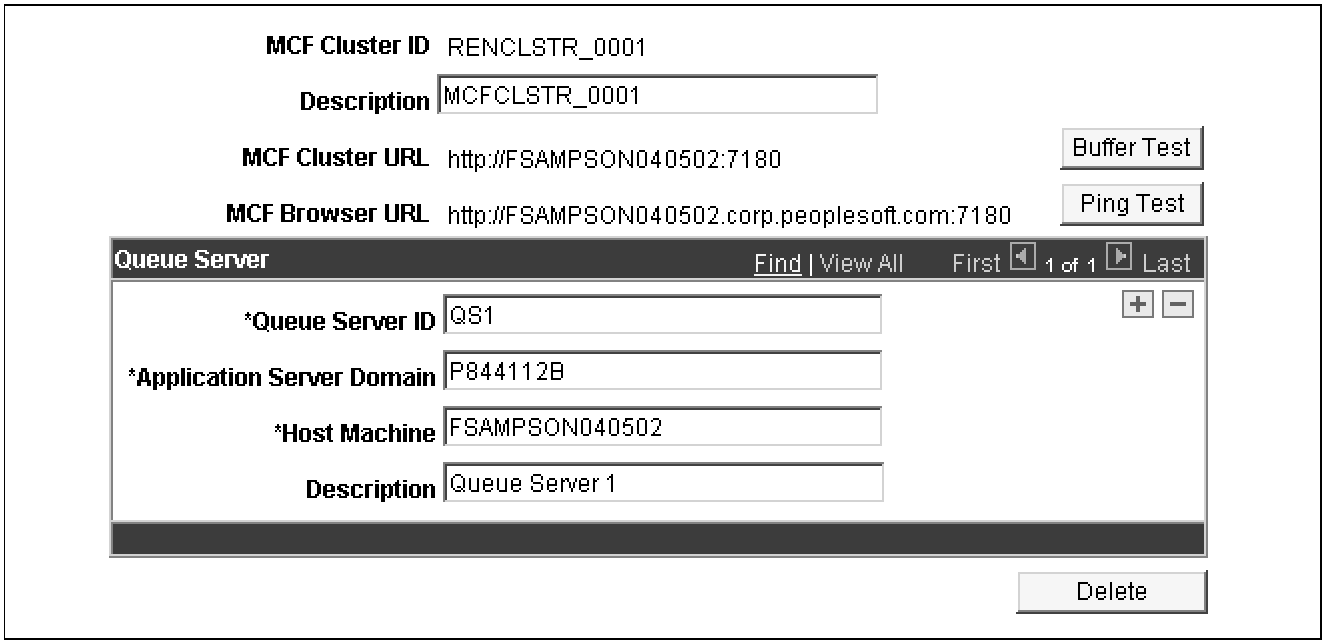
Use the UQ Cluster (universal queue cluster) page to configure clusters.

Page Used to Configure MCF Clusters

Page Name	Object Name	Navigation	Usage
MCF Cluster	MCF_UQCLUSTER	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Cluster	Define a cluster of queue servers.

Defining MCF Clusters

Access the MCF Cluster page.



MCF Cluster page

MCF Cluster URL

Displays the URL for the REN server that serves this cluster. This is the URL used by internal processes. If the MCF cluster is served by a REN server cluster, the cluster URL is that of the switch or load balancer in front of the clustered REN servers.

Buffer Test

Click to initiate a test of the REN server's ability to break up and send a large file using multiple internal buffers.

The buffer test is not dependent on specified domain names, so you can use it to verify that RENSRV is running on the network.

MCF Browser URL

Displays the URL for the REN server cluster that serves this MCF cluster for external clients and for agent chat. The browser URL may be different from the cluster URL, which should not have to go through any firewall, reverse proxy server, or other outward-facing security barrier.

Ping Test

Click to initiate a test of the REN server specified in the URL fields. Failure may indicate that a URL is incorrectly specified.

Delete

Click to delete the entire MCF cluster. There must not be any active agents or tasks on the cluster.

Note. If the cluster's queue server configuration is changed, changes to the actual application server domains must be made manually using PSADMIN. For example, if a cluster member (queue server) is removed, the affected application server domain must be shut down and reconfigured (set the MCF Servers field to No) using PSADMIN. If the cluster URL is changed, all associated queue server domains must be shut down and rebooted.

Queue Server

An MCF cluster can consist of a primary queue server and any number of backup servers.

Each cluster requires a minimum of one queue server. The primary queue server is the first queue server started, and the remaining queue servers are backups. If the primary queue server fails, the system determines the subsequent primary queue server among the backups.

You can add a queue server to a cluster by adding a new row. Before removing a queue server, ensure that it is not the master, then shut down its domain. Then click Delete (the minus sign).

If a domain is started with a queue server that does not belong to a cluster, the universal queue server and MCF log server poll the MCF configuration tables indefinitely until the queue server is assigned to a cluster.

Queue Server ID	Enter a unique identifier for each queue server to identify its entries in the database control tables. The log server process paired with this queue server uses this same ID to identify its entry in the log cluster table.
Application Server Domain	Specify the application server domain of which this queue server is a member.
Host Machine	Specify the name of the application server host machine.

CHAPTER 7

Configuring MCF Queues

This chapter discusses how to:

- Define queues.
- Configure tasks.
- View the cluster summary page.
- Tune cluster parameters.
- Notify clusters of changed parameters.

See Also

Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference, “Universal Queue Classes”

Defining Queues

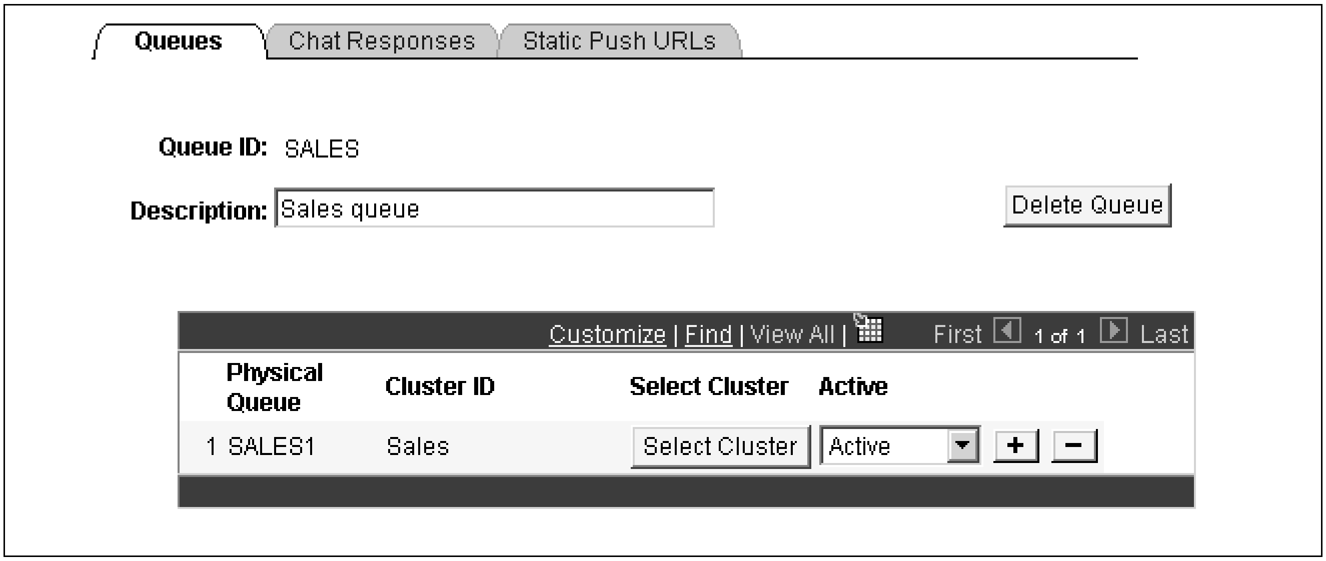
This section describes MCF queues and their elements.

Pages Used to Define Queues

Page Name	Object Name	Navigation	Usage
Queues	MCF_QUEUE_PG	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Queue, Queue	Add a queue.
Chat Responses	MCFSYSMSG_PG	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Queue, Chat Responses	Define messages that every agent can use.
Static Push URLs	MCFQUEUEURL_PG	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Queue, Static Push URLs	Define URLs that each agent can push to a client.

Defining Queues

Access Queues.



Queue page

Queue ID

Queue IDs must be alphanumeric, may not end in a numeral, but may include underscore characters.

Delete Queue

Click to remove this queue.

Deleting a logical queue means that no work or agents can be assigned to the queue, and the queue is removed from all agents' available queues.

You can delete a logical queue only if all of its constituent physical queues are inactive and have no tasks. Verify that no application code assigns tasks to a queue before deleting the queue. All agents assigned to the child physical queue will receive a message notifying them to log off of their MultiChannel Consoles when the logical queue is deleted.

Physical Queue

Physical Queue uniquely identifies that part of a logical queue serviced by the selected MCF cluster.

Physical queue IDs always end in a number; for example, Sales2. The physical queue identifier automatically increments by one for each physical queue added.

Physical queue IDs are automatically generated. The maximum number of physical queues is nine.

Cluster ID

The Cluster ID identifies the MCF cluster that services this physical queue. Click Select Cluster to choose from configured MCF clusters.

Each MCF cluster can only service one physical queue per logical queue. For example, an MCF cluster could service physical queue Sales1, or Sales2, but not both.

An MCF cluster can service multiple physical queues belonging to different logical queues. For example, an MCF cluster could service physical queues Sales1, Marketing2, and COBOL1.

Select Cluster

Click Select Cluster to choose a cluster from a list of available MCF clusters.

The selected MCF cluster will service this physical queue. The primary queue server in this cluster will manage tasks and agents assigned to this physical queue.

Active

Select *Active* or *Inactive* from the drop-down list.

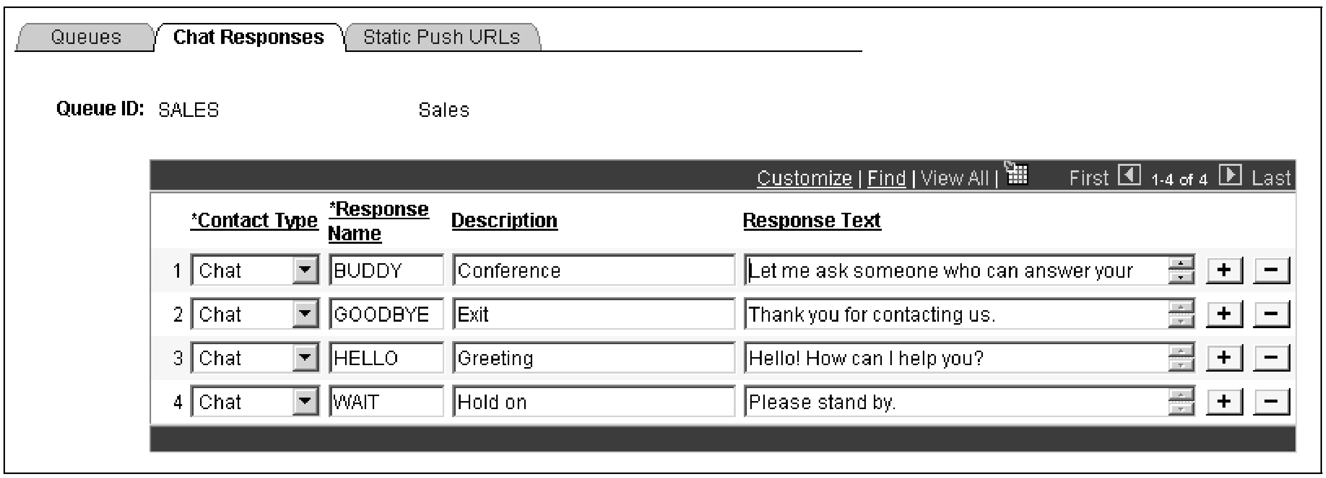
The queue server will not send new tasks to an inactive physical queue. Agents and existing tasks will remain on an inactive physical queue. The physical queue must be active to receive new queued tasks.

Only inactive physical queues can be deleted from a logical queue. Inactivate a physical queue and complete or transfer all assigned tasks before deleting the physical queue.

Active and inactive status support “follow-the-sun” practices. For example, Sales1 could be supported in the London office, and Sales2 could be supported in the San Francisco office when the London office is closed by activating and inactivating the appropriate queues.

Defining Chat Responses

Access the Chat Responses page.



Queue Chat Responses page

Chat responses specified on this page are available to all agents logged on to this queue.

Contact Type

Specify one of the following contact types:

- Chat
- Email (not currently supported)
- Generic (not currently supported)

Response Name

The response name appears in the agent’s Template Messages drop-down list for all agents who belong to a physical queue on this logical queue

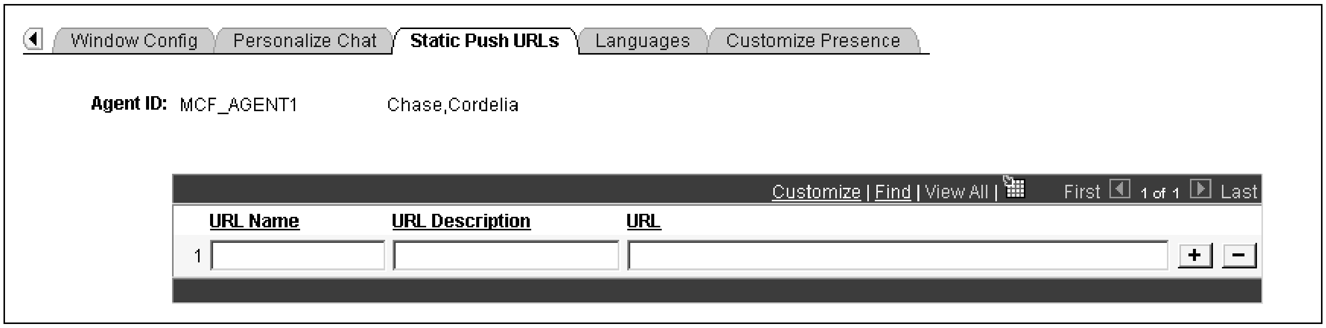
All chat responses are downloaded when the agent launches the agent chat console by accepting a customer chat. Template messages are not available in collaborative chat.

Response Text

The specified message appears in the client chat window when selected by the agent.

Defining Static Push URLs

Access the Queue Push URLs page.



Static Push URLs page

Static URLs enable the agent to push a predefined URL to the customer, which appears in a popup window for the customer. The agent can edit these URLs in the chat window after selecting them.

URL Name Specify a name to identify the URL.

The URL name appears in the agent's Static URL drop-down list for all agents that belong to this logical queue

URL Description Specify a description of the URL.

This description appears only on this page to further describe this URL or, for example, its reason for inclusion.

URL Specify the queue push URL.

The URL must include the opening http:// and any required parameters.

All static URLs defined for the queue are downloaded when the agent launches the agent chat console by accepting a customer chat. Static URLs are not available in collaborative chat.

If you send a static push URL that is a PeopleSoft Pure Internet Architecture URL, be sure that the recipient has permissions to access that portal , node, or page.

Configuring Tasks

This section discusses how to configure tasks.

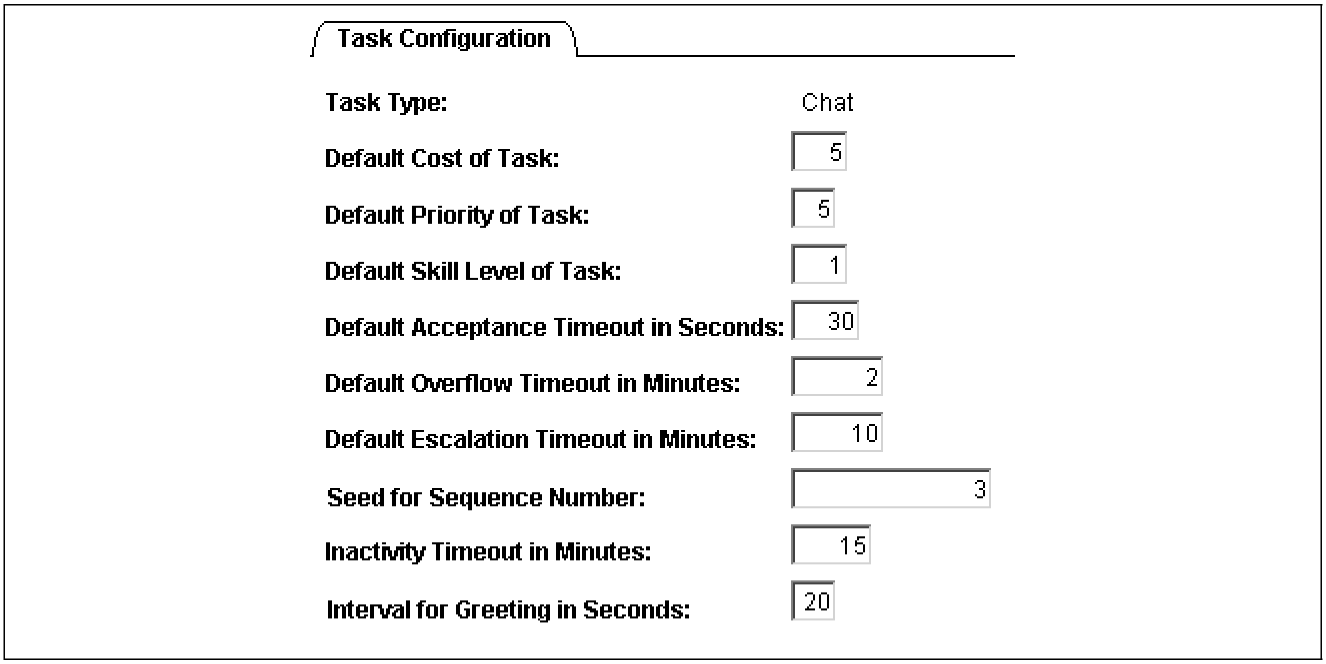
Page Used to Configure Tasks

Page Name	Object Name	Navigation	Usage
Task Configuration	MCF_TASKCFG_PG	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Tasks	Configure tasks such as chat, email, voice, and generic alerts.

Tasks

Define values for different types of tasks that the queue server uses to assign tasks to appropriate agents, and to manage tasks that are not accepted or closed within configurable time limits.

Access the Tasks page.



Task Configuration page

Default Cost of Task

Specify the cost of the task.

Cost is a measure of the workload each task places on an agent. The cost of a task is an estimate of the task's expected complexity and of the time required to resolve the task. The minimum value is *0*, and there is no maximum value.

The costs of tasks assigned to an agent are added up and evaluated against the maximum workload for each agent to determine if the agent can receive additional tasks. For example, if an agent has a maximum workload of 100, and the default cost of a chat is 20, the agent can manage five concurrent chat sessions, assuming the default cost is not overridden in the InitChat() built-in function call and that no other task types have been assigned.

Note. Although priority has no effect on voice tasks (which are not queued), voice task cost is included in calculating an agent's workload.

Default costs are:

- Chat: *5*
- Email: *2*
- Generic: *1*
- Voice: *10*

Default Priority of Task

Specify the priority of this task. A higher value means a higher priority. Tasks are ordered on a physical queue based on their assigned priority.

The minimum value is *0* and there is no maximum value.

A queue server gives precedence to a task of higher priority value over a task of lower priority value when looking for an agent to assign the task to. This means that the queue server will always assign a task of priority 100 to a qualified available agent before it looks for an agent for a task of priority 10. If two tasks have the same priority, they will be assigned in the order of their enqueue time.

The value specified here can be overridden in the EnQueue() or InitChat() built-in function call.

Note. Priority has no effect on voice tasks, which are not queued; however, voice task cost is included in calculating an agent's workload.

Default priorities are:

- Chat: *5*
- Email: *2*
- Generic: *1*
- Voice: *10*

Default Skill Level of Task

Specify the minimum agent skill required to handle this task.

The queue server assigns this task type to an available agent with the lowest skill level on that queue greater than or equal to the skill level required by the task.

The minimum value is *0*, and there is no maximum value.

The value specified here can be overridden in the EnQueue() or InitChat() built-in function call.

Default skill levels are:

- Chat: *1*
- Email: *1*
- Generic:*1*
- Voice (not currently supported): *2*

Default Acceptance Timeout in Seconds

Specify the period of time that an agent has to accept an assigned task (click on the flashing icon on the MultiChannel Console). If the task is not accepted within this time the task is re-enqueued for assignment to another agent.

The queue server uses an algorithm to minimize reassignment of tasks which previously timed out to the same agent.

The value specified here can be overridden in the EnQueue() or InitChat() built-in function call.

Default acceptance timeouts are:

- Chat: *30*
- Email: *30*
- Generic: *30*
- Voice (not currently supported): *10*

Default Overflow Timeout in Minutes	Specify the overflow timeout. The overflow timeout is the time period that a queue server has to find an agent who accepts a task (click on flashing icon on the MultiChannel console). If the task is not accepted within this time, the task is removed from the queue and placed in the overflow table. This table can be managed from the Overflow Administration page. The value specified here can be overridden in the EnQueue() or InitChat() built-in function call. Default overflow timeouts are: • Chat: *2* • Email: *120* • Generic: *120* • Voice (not currently supported): *1*
Default Escalation Timeout in Minutes	Specify the default escalation timeout. The escalation timeout is the time period within which a task must be closed. If the task is not closed within this time, the task is removed from the queue and from the agent's accepted task list (that is, the task is unassigned) and the task is placed in the escalation table. This table can be managed from the Escalation Administration page. Escalation timeout is only valid on a chat session after it is accepted by an agent, and has no effect on voice (CTI). The value specified here can be overridden in the EnQueue() or InitChat() built-in function call. Default escalation timeouts: • Chat: *10* • Email: *480* • Generic: *480* • Voice (not currently supported): *2*
Seed for Sequence Number	This field displays the current cumulative count of tasks of this type enqueued. Do not modify this value until it has reached its upper limit of 2,147,483,647. This value does not apply for the voice task type.
Inactivity Timeout in Minutes	Specify the inactivity timeout Inactivity timeout applies to chat only. The inactivity timeout is the time period within which an agent or customer must participate in a chat. If the chat session is dormant for more than this time, the chat is terminated. The default value is *15* minutes.
Interval for Greeting in Seconds	Specify the interval, in seconds, over which the initial greeting appears in a customer chat window while the system searches for an available agent.

Note. All task parameters are delivered with sample values. Determine a range for these values appropriate to your business requirements. For example, task cost could vary over a range of 1 to 100 instead of 1 to 10.

See Also

Chapter 8, “Configuring MCF Agents,” Creating Agents, page 79

Viewing the Cluster Summary

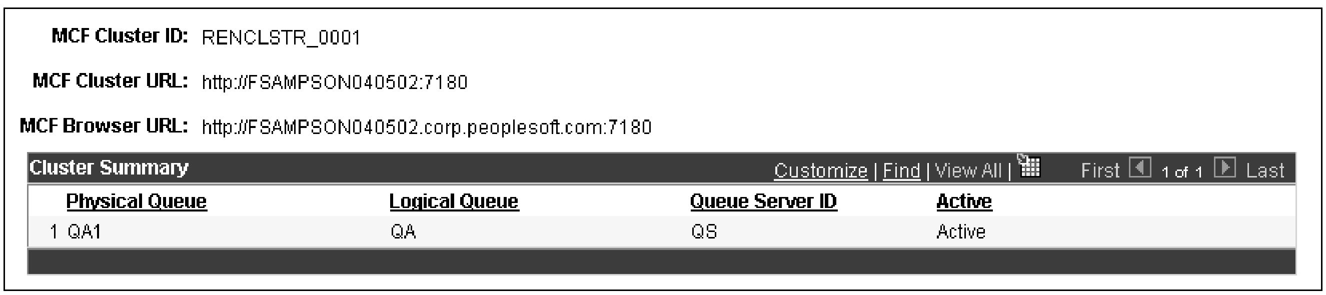
This section discusses how to view the Cluster Summary page.

Page Used to View the Cluster Summary

Page Name	Object Name	Navigation	Usage
Cluster Summary	MCF_RENSRV_PG	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Cluster Summary	View summary information about MCF clusters.

Cluster Summary

Access the Cluster Summary page.



Cluster Summary page

The Cluster Summary page displays the associated MCF cluster URLs and queue details for the selected MCF cluster. The information cannot be changed from this page.

Tuning Cluster Parameters

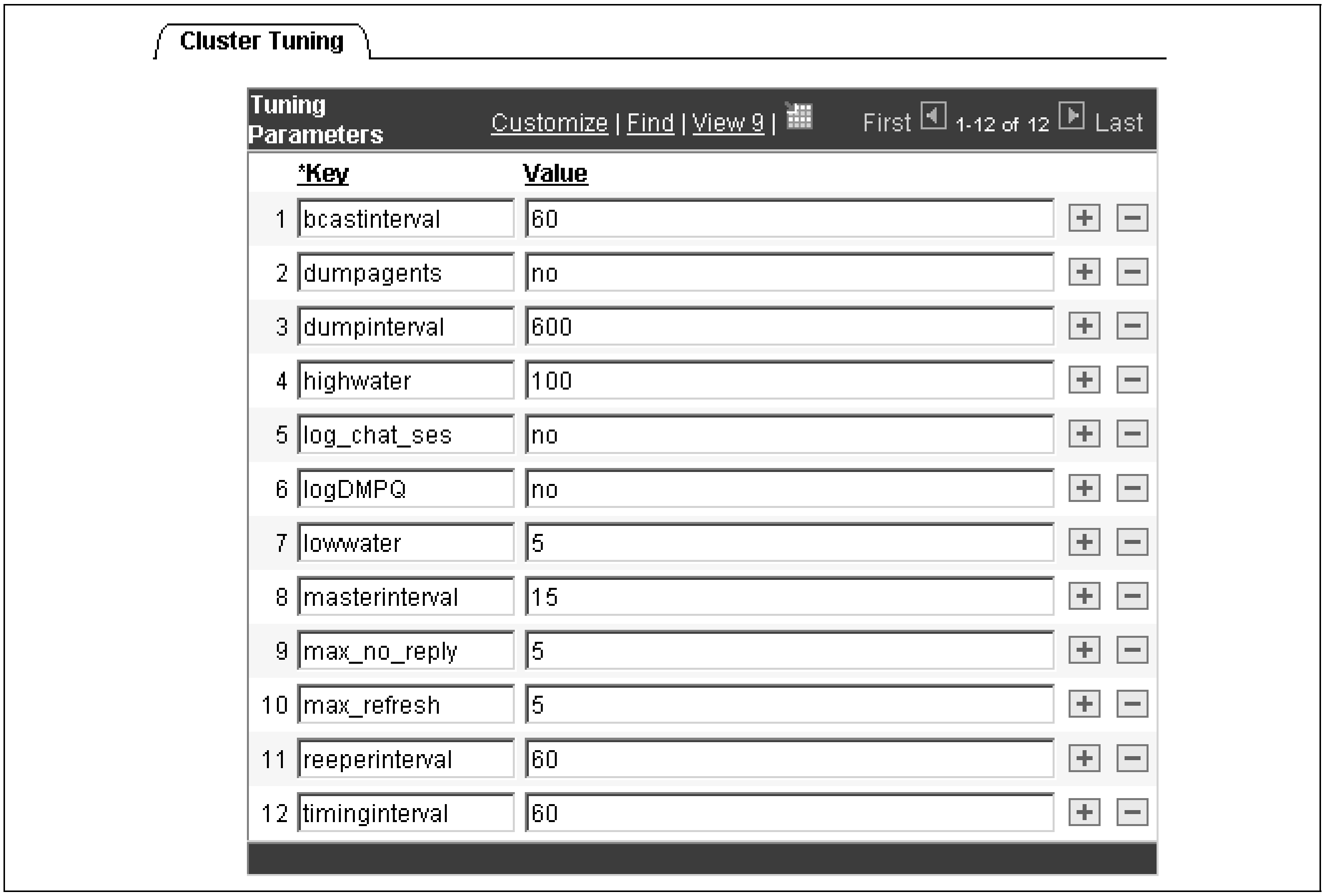
This section discusses how to tune cluster parameters.

Page Used to Tune Clusters

Page Name	Object Name	Navigation	Usage
Cluster Tuning	MCF_SYSTEM_KV_PG	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Cluster Tuning	Modify MCF cluster parameters to tune performance.

Cluster Tuning

Access the Cluster Tuning page.



Cluster Tuning page

Use the Cluster Tuning page to set MCF cluster parameters to optimize performance or enable logging according to the following table.

Key	Default value	Usage
bcastinterval	*60*	Interval, in seconds, after which the number of unassigned tasks per physical queue and the number of agents logged into each physical queue is broadcast to the MultiChannel Consoles for display next to the queue names. A smaller value provides more accurate queue statistics, but increases the load on the queue server and REN server. A larger value decreases queue server and REN server load, but also decreases statistical accuracy.

Key	Default value	Usage
dumpagents	*No*	Specify *Yes* if the status of agent activity should be written to the database during the periodic state dumps. Logging agent status increases queue server load, but provides information on agent performance. See Chapter 9, “Administering PeopleSoft MultiChannel Framework,” Agent State Summary, page 94.
dumpinterval	*600*	Interval, in seconds, after which the queue state is written to the database. A smaller value increases load on the queue server, but provides more frequent statistics. A larger value decreases load on the queue server, but provides less frequent statistics. A value of less than one minute will significantly reduce queue server performance. See Chapter 9, “Administering PeopleSoft MultiChannel Framework,” Queue Server State, page 93. See Chapter 9, “Administering PeopleSoft MultiChannel Framework,” Queue State Summary, page 93.
highwater	*100*	Maximum number of persistent tasks retrieved from the database and cached in memory in the queue server. The high and low water mark values determine how often, and how many, persistent tasks should be read into memory. A higher value causes the queue server to retrieve more persistent tasks at one time, which results in less-frequent access to the database, but also more tasks for the queue server to manage, slowing performance. A lower value speeds performance, but requires more frequent access to the database. If a large number of enqueued tasks cannot be routed by the queue server (for example, a call center handling a specific physical queue is offline), increase the highwater mark so that tasks that can be routed can fit into memory cache.
logDMPQ	*No*	Specify *Yes* if you want PSMCFLOG to log REN server event notifications resulting from bcastinterval broadcasts . Only the event is logged, not its contents. See Chapter 9, “Administering PeopleSoft MultiChannel Framework,” Event Log, page 97.

Key	Default value	Usage
log_chat_ses	*No*	Specify *Yes* to turn on logging of the contents of chat sessions. See Chapter 9, "Administering PeopleSoft MultiChannel Framework," Chat , page 96.
lowwater	*5*	Minimum number of persistent tasks cached in memory in the queue server. When the lowwater value is reached, the queue server retrieves another batch of persistent tasks, up to the highwater value. The high and low water mark values determine when, and how many, persistent tasks should be read into memory. A higher value requires the queue server to access the database more frequently. A lower value can cause the queue server to run out of persistent tasks before refreshing its queue. PeopleSoft recommends that the lowwater value be greater than or equal to the maximum number of agents logged onto any physical queue at one time.
masterinterval	*15*	Interval, in seconds, after which a cluster master writes updates its timestamp in its cluster tables. Slave clusters check the timestamp to determine that the master cluster is still running. A lower value enables rapid discovery of a failed master server, but increases queue server overhead. A higher value reduces queue server overhead, but delays discovery of a failed master server. If a only one queue server is configured for an MCF cluster, this value can be large.
reeperinterval	*60*	Interval, in seconds, after which deleted task are cleared from memory in the queue server. A lower value increases queue server load but clears memory more frequently. A higher value decreases queue server load but clears memory less frequently.
timinginterval	*60*	Interval, in seconds, after which the database is checked for expired or overflowed persistent tasks. This parameter does not affect real-time tasks. A lower value increases queue server load but detects timed out tasks more quickly. A higher value decreases queue server load but detects timed out tasks less frequently.

Key	Default value	Usage
max_refresh	*5*	Sets the maximum number of consecutive times that results are discarded when refreshing the task queue from the database if there is an intervening notification of new persistent tasks.
max_no_reply	*5*	Sets the maximum number of consecutive agent timeouts before the queue server automatically logs out the agent and sets the agent's console status as Assumed Unavailable.

Notifying Clusters of Changed Parameters

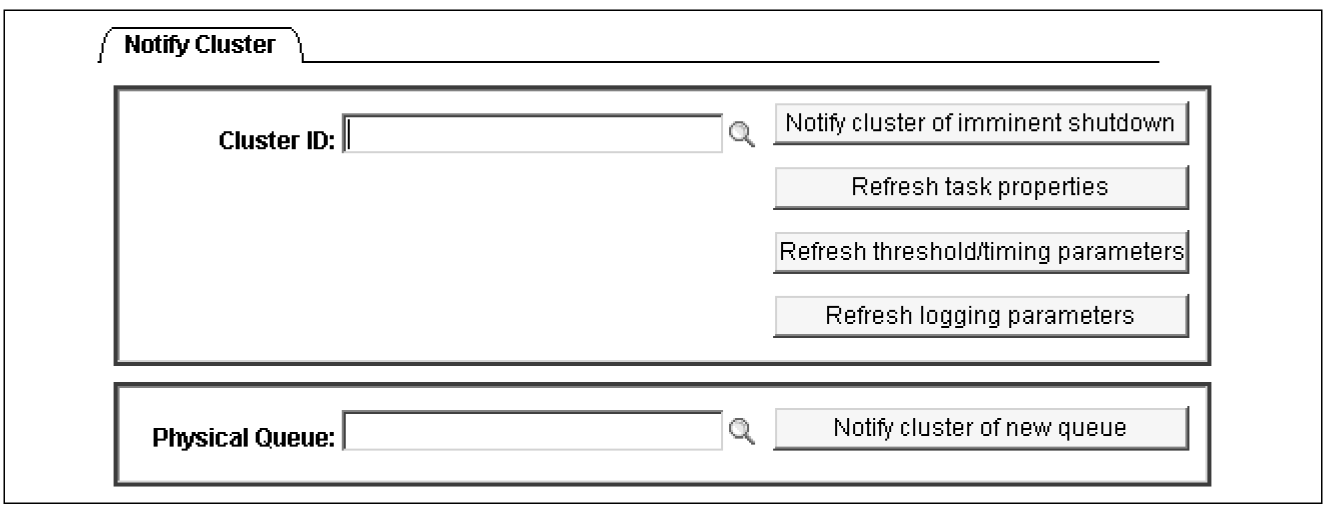
This section discusses how to notify clusters of changed parameters.

Page Used to Notify Cluster

Page Name	Object Name	Navigation	Usage
Notify Cluster	MCF_CL_NOTIFY_PG	PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Cluster Notify	Notify a cluster of changes to parameters, configuration, or of shutdown.

Cluster Notify

Access the Notify Cluster page.



Notify Cluster page

Use the Notify Cluster page to notify an MCF cluster of certain changes to its parameters, constituent queues, or that its application servers are being shut down.

For example, after changing MCF cluster parameters on the Cluster Tuning page use the Notify Cluster page to refresh the tuning parameters.

Notify cluster of imminent shutdown	Click to send a message to every agent logged on to the selected MCF cluster that they have been logged off. Send this notification if the cluster's application servers are being shut down.
Refresh task properties	Click to load task properties that have been changed on the Tasks page for the selected MCF cluster.
Refresh threshold/tuning parameters	Click to reload parameters, other than logging parameters, changed on the Cluster Tuning page for the selected MCF cluster.
Refresh logging parameters	Click to reload logging parameters changed on the Cluster Tuning page for the selected MCF cluster.
Notify cluster of new queue	Click to notify the selected MCF cluster that the selected physical queue has been added.

CHAPTER 8

Configuring MCF Agents

This chapter discusses:

- Defining agents.
- Defining optional agent characteristics.

Defining Agents

This section discusses how to:

- Create agents.
- Specify languages that an agent supports.
- Customize an agent's presence.

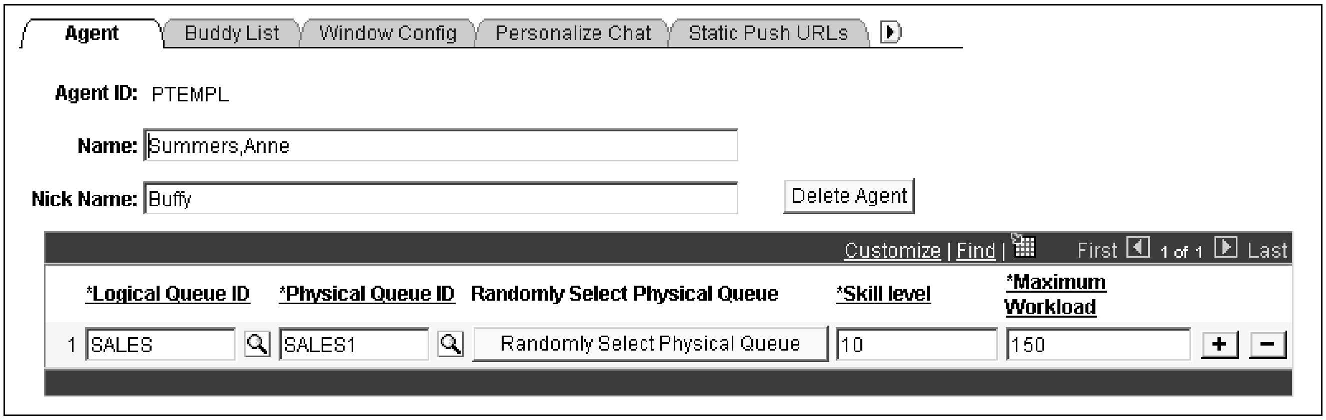
These three agent definition pages form the basis of agent configuration. Other parameters are optional.

Pages Used to Define Agents

Page Name	Object Name	Navigation	Usage
Agent	MCF_AGENT_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Agent	Specify name, skill level, maximum workload, and queues for each agent.
Languages	MCF_AGENTLANG_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Languages	Specify the languages an agent is qualified to use. Specify at least one language.
Personalize Presence	MCFAGENTPRES_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Personalize Presence	Specify an agent's presence options.

Creating Agents

Access the Agent page.



Agent page

After an agent is created with an existing PeopleSoft user ID, the MultiChannel Interaction Console link appears on the user's PeopleSoft Pure Internet Architecture pages.

Name

Enter the full name, in PeopleSoft format, of this agent.

The agent name appears in other agents' buddy lists.

Nick Name

Enter a short name for this agent.

The agent nickname identifies this agent in chat sessions and logs.

Delete Agent

An agent cannot be deleted if the agent still has accepted tasks on any queues to which the agent belongs. Before deleting an agent ensure that the agent is logged off from all queues that the agent is assigned to.

Logical Queue ID

Enter the ID of a logical queue to which this agent is assigned.

Each agent may be assigned to more than one logical queue. An agent can only log on to one queue at a time from the MultiChannel Console.

Note. Do not overwrite the logical queue except when first creating an agent, as the agent's tasks may lose their assignment.

Physical Queue ID

Agents are randomly assigned to a physical queue when the logical queue is associated with the agent. An agent that services a logical queue logs on to a physical queue managed by a specific MCF cluster.

While an agent can service multiple logical queues, the agent can only belong to one physical queue per logical queue.

Note. Do not overwrite the physical queue except when first creating an agent, as this may orphan tasks. Use the Physical Queues Move Agent page.

Randomly Select Physical Queue

Click to assign another physical queue (within this logical queue) randomly. This will help to spread multiple agents evenly over available physical queues.

Skill Level

Select the skill level of this agent for the tasks assigned for this queue. This is a required field.

The agent is only assigned tasks requiring a skill level less than or equal to the skill level specified here. If there is more than one qualified agent available to accept the task, the queue server gives preference to the agent with the lowest skill level.

Each agent can have a different skill level for each queue to which the agent is assigned.

Maximum Workload

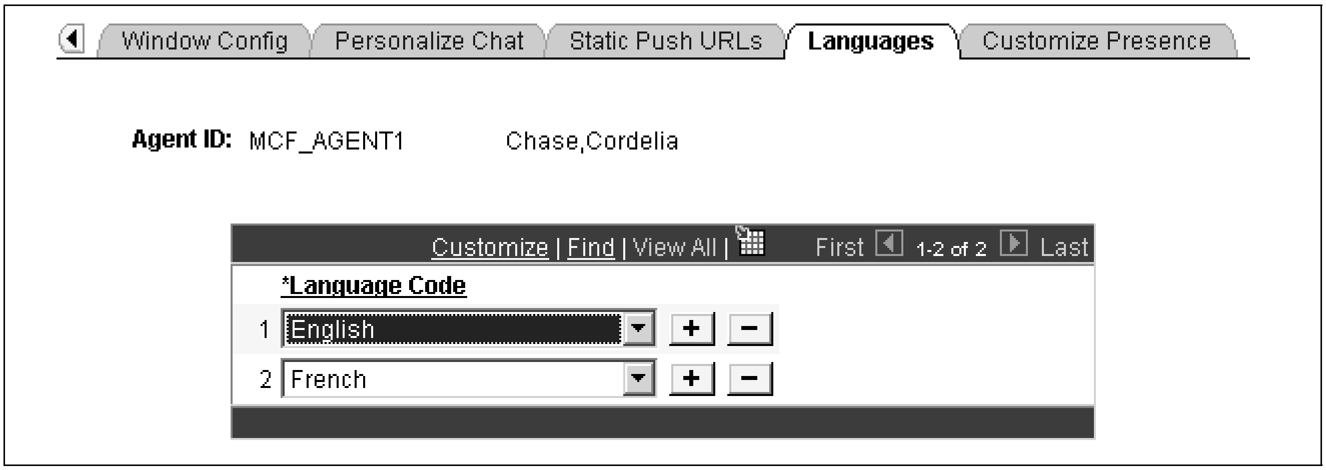
Select the maximum load this agent can be assigned before tasks are held or assigned to other agents. This is a required field.

The cost of each accepted task is added to the agent's current workload. A task is not assigned to an agent if its cost pushes the agent's current workload over the maximum.

Note. Do not delete a queue from an agent's list unless that agent has no open accepted tasks on that queue.

Specifying Languages That an Agent Supports

Access the Languages page.



Languages page

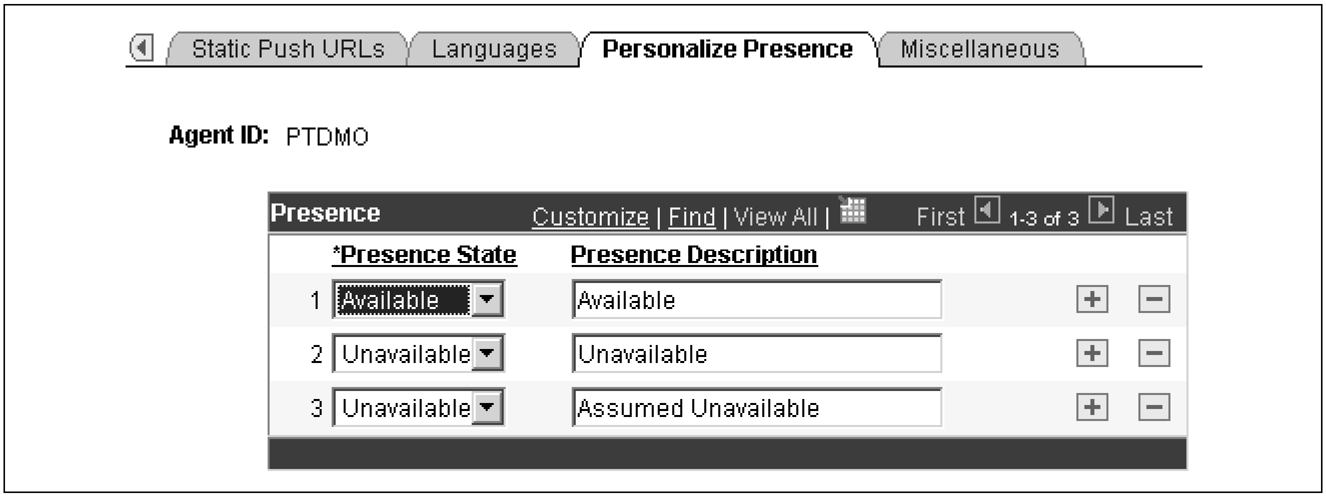
Specify the languages each agent is qualified to support.

The agent is only assigned tasks that have been enqueued with a language code in the agent's language list. For the EnQueue() built-in function, the language code is specified as a parameter. For the InitChat() built-in function, the language code is determined by the user profile of the initiator.

If you do not specify a language code for a new agent, the default value is *English*.

Customizing an Agent's Presence

Access the Agent Presence page.



Customize Presence page

Each agent can customize the presence description displayed when the agent is available or unavailable. The queue server only understands the presence state, available or unavailable, but you can specify more specific presence descriptions when displaying or logging an agent's presence. For example, Lunch, Meeting, or Indisposed are unavailable states that can be used for tracking agent time and activity.

If you do not specify presence descriptions, default values are used.

Presence State Select *Available* or *Unavailable.*

Presence Description Enter a description for each agent state.

The description appears in logs of agent activity and when agent presence is displayed.

Defining Optional Agent Characteristics

This section discusses how to:

- Set up buddy lists.
- Configure windows.
- Personalize chat.
- Specify agent-specific URLs.
- Specify miscellaneous parameters.

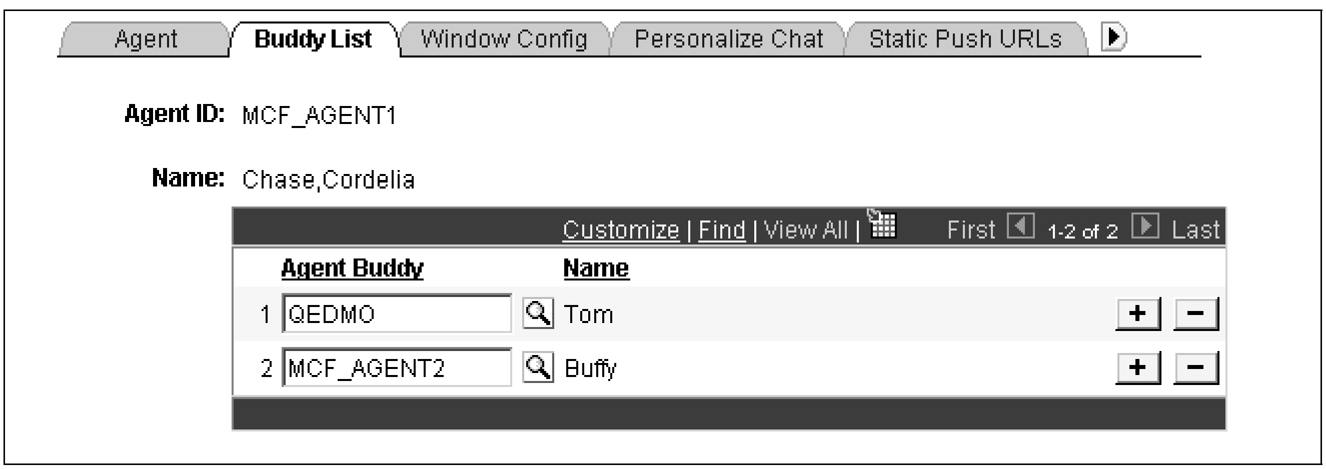
These agent configuration pages are considered optional because most do not have default values and can remain unconfigured without affecting an agent's ability to log on to a queue and accept tasks.

Pages Used to Define Optional Agent Characteristics

Page Name	Object Name	Navigation	Usage
Buddy List	MCFAGENTBUDDY_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Buddy List	Specify a list of other agents.
Window Config (window configuration)	MCFAGENTCUST_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Window Config	Configure the specified agent's window.
Personalize Chat	MCFAGENTMSG_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Agent Messages	Specify agent-specific messages, in addition to available system messages.
Static Push URLs	MCFAGENTURL_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Agent Push URLs	Specify agent-specific URLs, in addition to system push URLs.
Miscellaneous	MCF_AGENTMISC	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent, Miscellaneous	Specify miscellaneous behaviors.

Setting Up Buddy Lists

Access the Agent Buddy List page.



Buddy List page

The agent's buddy list facilitates collaborative chat and chat conferencing.

Agent Buddy Select another agent with whom this agent can have a chat session or can ask to conference onto another chat.

Each agent buddy must be logged onto a physical queue on the same cluster to be able to chat. If two agents must be able to chat but they do not share a cluster, use the Physical Queue Move Agent page to move the agents onto physical queues on the same MCF cluster.

Name

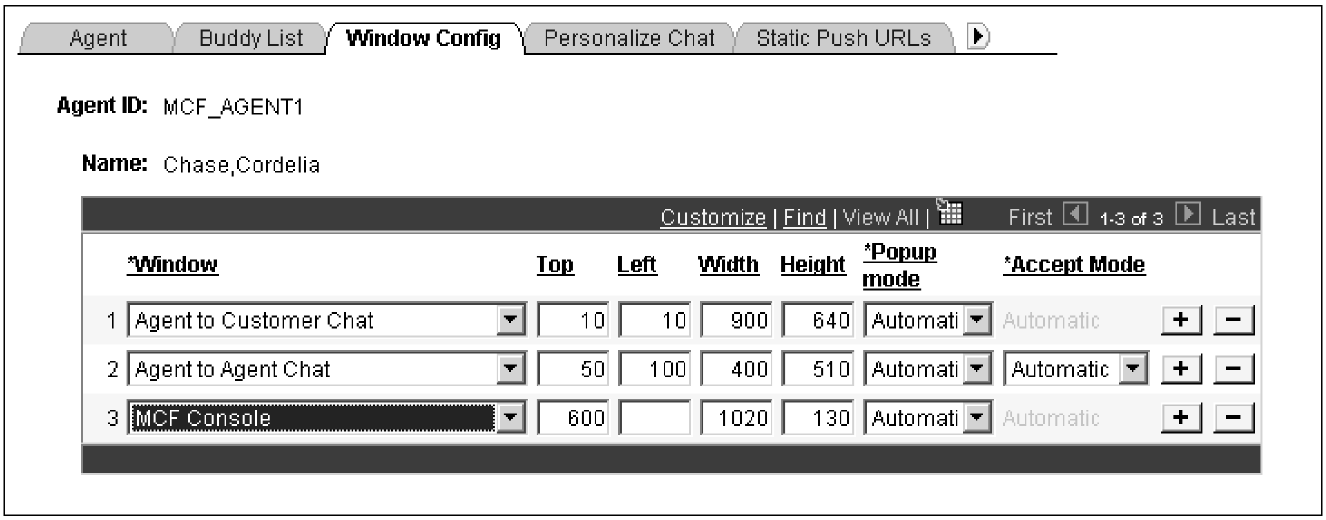
Displays the buddy agent’s nickname.

The name appears in the buddy list on the MultiChannel Console or agent chat window.

An agent’s presence as shown in the buddy list on the MultiChannel Console or on the Invite Agent list on the chat console indicates the agent’s availability for chat or conference.

Configuring Windows

Access the Window Config page.



Window Configuration page

You set the initial agent window placement and size by specifying parameters on this page. The windows may be resized and moved by agent.

Window

Select the window to which the specified configuration applies.

Select from:

- *Agent to Agent Chat*
- *Agent to Customer Chat*
- *E-mail*
- *Generic Alert*
- *Grab URL*
- *MultiChannel Console*

Top and **Left**

Enter the distance in pixels from the top and left edge of the screen when the window first appears.

Width and **Height**

Enter the width and height, in pixels, of the window when it first appears.

Popup Mode

Select from:

*Automatic:*The window appears automatically. For customer-initiated chat or tasks initiated from the EnQueue() built-in function, the task is automatically accepted as well. For agent-initiated chat, the agent can elect not to accept the task; in effect, the agent can preview the task. If this is the desired behavior, set Accept Mode to *Manual.* If you want agent-to-agent tasks to function like customer-initiated tasks, set Accept Mode to*Automatic.*

*Manual:*The window does not appear until the agent clicks the task on the agent MultiChannel Console. For customer-initiated chat or tasks initiated from the EnQueue() built-in function, clicking the task means that the task is automatically accepted as well. For agent-initiated chat, the behavior depends on the setting for the Accept Mode field.

Accept Mode

Select from:

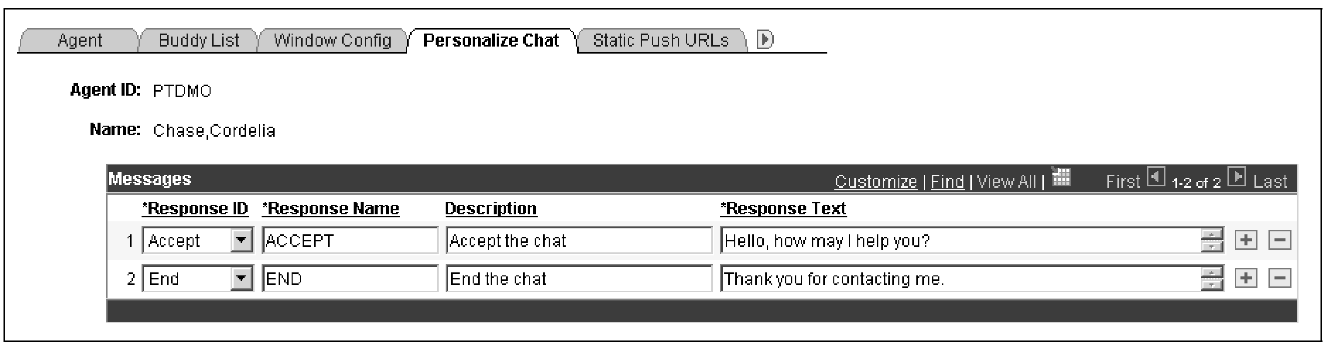
Automatic: Agent-to-agent chats are automatically accepted without requiring the agent to click the icon.

*Manual:*Agent-to-agent chats require the agent to click the icon.

Accept mode only affects collaborative chat.

Personalizing Chat

Access the Agent Personalize Chat page.



Personalize Chat page

An agent can create personalized responses in addition to the system responses defined for each queue.

Response ID

Responses, except those identified by Other, are linked to specific events. These responses, except for those identified Other, are always sent on these events from this agent. If an agent does not have a customized response for a specific event, it is read from a default response set.

Select from:

- *Abandon:*A chat is abandoned when a chat initiator closes the chat window before the chat is accepted by an agent. This message appears when the agent accepts the abandoned chat.
- *Accept:*This greeting is automatically sent to the chat initiator when an agent accepts a chat.
- *Deny:*Only applies to collaborative chat. If an agent elects not to accept a chat, this message is automatically sent to the chat initiator.

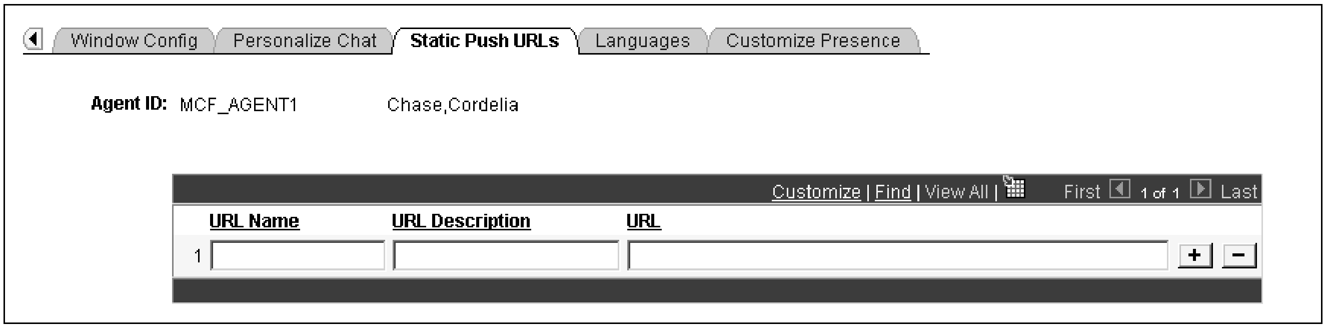
- *End:* If either party exits a chat after the chat is accepted, this message is displayed from the agent.
- *Forward:*If the agent forwards a chat session to another queue, this message is sent to the customer.
- *Other:* These messages are never automatically sent in a chat session. Their message names appear in the template message drop-down list. These messages are appended to the template messages (chat responses) defined for the queue.

Response Name This name appears in the agent's template response drop-down list.

Response Text Enter the response text to appear in the chat window.

Specifying Agent-Specific URLs

Access the Agent Static Push URLs page.



Static Push URLs page

This page defines URLs that this agent can send to a client browser. These URLs are in addition to the URLs defined in the queue configuration page.

URL Name The URL name appears in the agent's static URL drop-down list.

URL Description This description appears only on this page, to further describe this URL or, for example, its reason for inclusion.

URL Enter the queue push URL.

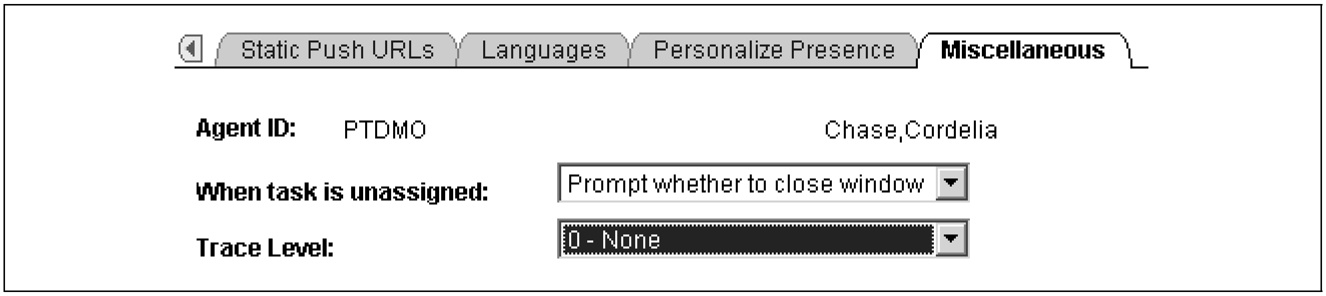
The URL must include the opening http:// and any required parameters.

All static URLs defined for the agent are downloaded when the agent launches the agent chat console by accepting a customer chat. Static URLs are not available in collaborative chat.

If you send a PeopleSoft Pure Internet Architecture URL, be sure that the recipient has permissions to access that portal , node, or page.

Specifying Miscellaneous Parameters

Access the Miscellaneous page.



Miscellaneous page.

When task is unassigned

Select from the following options the action that occurs when a task assigned to an agent is unassigned:

- *Prompt whether to close window* (default).
- *Close the task window*
- *Do not close the task window*

Trace Level

Select from the following log trace levels:

- *0 — None*
- *1 — Information*
- *2 — Debug*

If a value other than *0* is selected, a tracer window appears to display activities and events on the chat or MultiChannel Console for debugging purposes.

CHAPTER 9

Administering PeopleSoft MultiChannel Framework

This chapter discusses how to:

- Manage physical queues.
- View queue server, queue, and agent state.
- View chat and event logs.
- Administer overflowed and escalated tasks.

Administering Physical Queues

This section discusses how to:

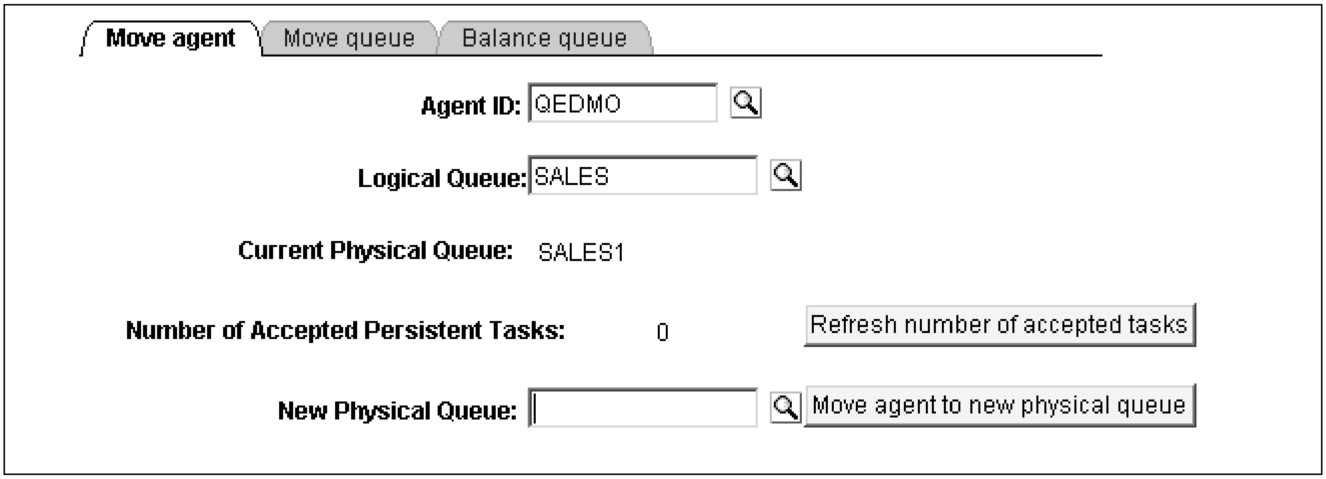
- Move agents between physical queues.
- Move queues.
- Balance queues.

Page Used to Administer Physical Queues

Page Name	Object Name	Navigation	Usage
Physical Queues	MCF_DEMO_AGENTQ	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Physical Queues	Move agents or queues or balance queues.

Moving Agents

Access the Move Agent page.



Move Agent page

You can move an agent, and any open persistent tasks associated with that agent, from one physical queue to another physical queue on the same logical queue. For example, if an agent is transferred to another office, you can move the agent to another physical queue on a server closer to the new office.

Logical Queue

Select the logical queue within which the agent is to be moved.

Number of Accepted Persistent Tasks

Displays the number of persistent tasks this agent has accepted on this physical queue.

This number is updated and displayed when you select the logical queue.

Refresh number of persistent tasks

Click to update the number of persistent tasks accepted by this agent on the current physical queue.

New Physical Queue

Specify the new physical queue to which this agent and the agent's persistent tasks will be assigned.

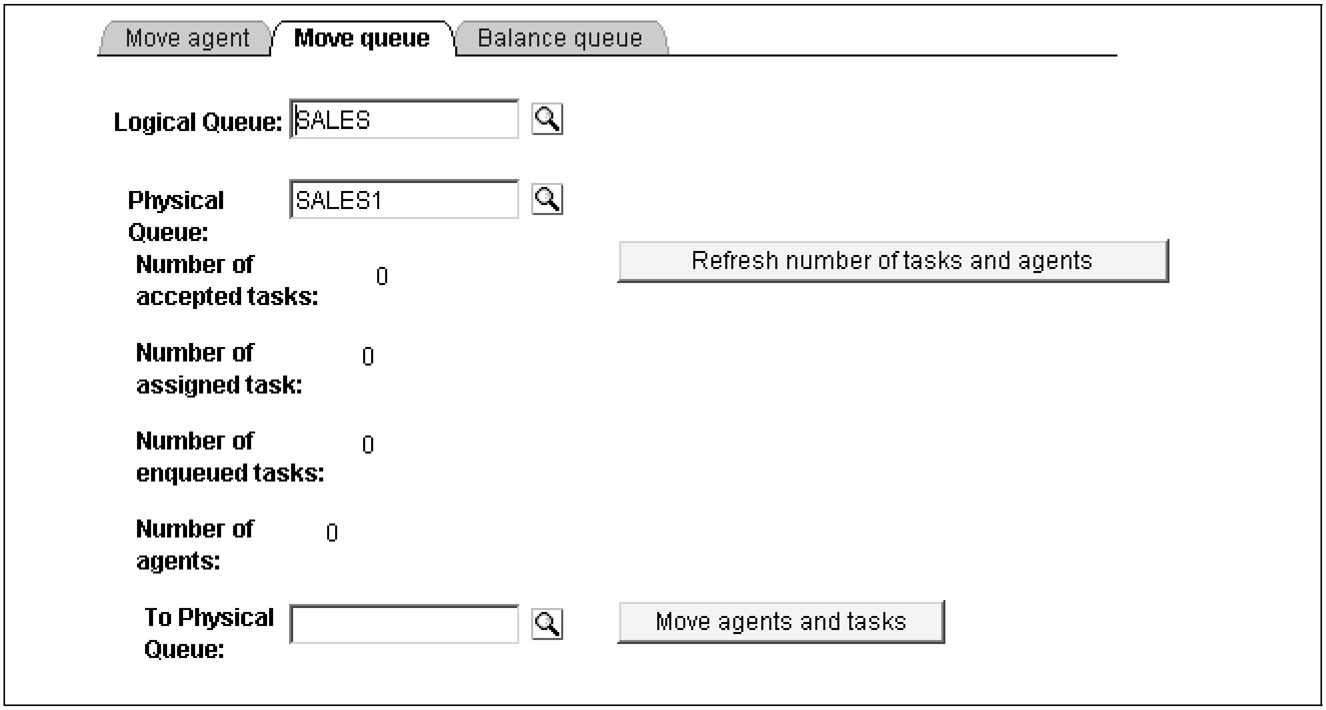
Move agent to new physical queue

Click to perform the action.

Note. Ongoing chat sessions are not affected by the move agent action.

Moving Queues

Access the Move Queue page.



Move Queue page

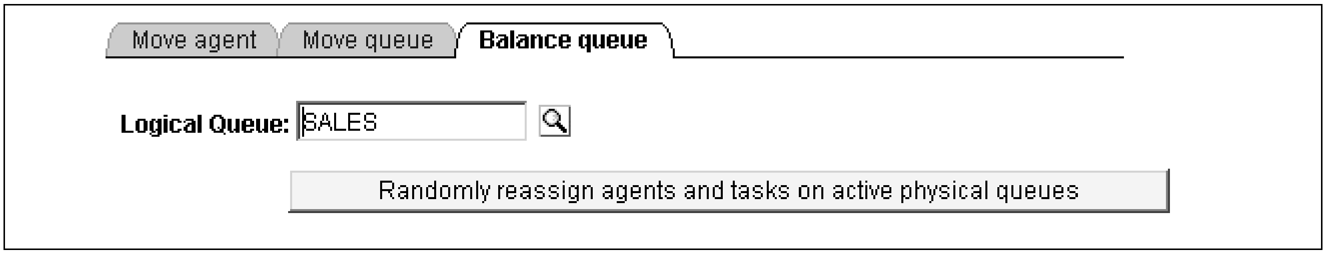
Move all agents and their open persistent tasks from one physical queue to another physical queue within the same logical queue. For example, to delete a physical queue, move its agents and persistent tasks to another queue before deleting the first queue. Or, if the cluster serving this physical queue is overloaded, you can create another physical queue on another cluster, mark the first physical queue as inactive, create another physical queue on another cluster and move agents and persistent tasks from the inactive physical queue to the new physical queue.

Logical Queue	Select the logical queue within which the selected physical queue's agents and persistent tasks will be moved.
Physical Queue	Select the physical queue from which agents and persistent tasks will be moved.
Number of accepted tasks and **Number of assigned tasks**	Displays the number of accepted and assigned tasks open on this physical queue.
Refresh number of tasks and agents	Click to update the number of agents and persistent tasks assigned to this queue.
Number of enqueued tasksand**Number of agents**	Displays the number of enqueued tasks and assigned agents on this physical queue.
To Physical Queue	Specify the physical queue to which the currently assigned agents and tasks will be moved.
Move agents and tasks	Click to move the assigned agents and tasks to the specified physical queue.

Note. The physical queue must be inactive before moving agents and tasks. Inactivate the physical queue on the Queues page. Agents on the inactive physical queue are automatically logged off before being moved.

Balancing Queues

Access the Balance Queue page.



Balance Queue page

Over time, the distribution of agents and their associated skill levels, languages, and so on, across the physical queues belonging to a logical queue may change as agents are added or deleted. Rather than manually rebalancing the queue by moving individual agents, you can use the Balance Queue page to randomly reassign agents and their open persistent tasks across all the active physical queues belonging to the selected logical queue.

Logical Queue

Select the logical queue across which agents and persistent tasks will be balanced.

Randomly reassign agents and tasks on active physical queues

Click to balance agents and tasks across active physical queues.

This action redistributes agents and tasks assigned to this logical queue across all active physical queues without regard to previous assignments. Ensure that agents assigned to the affected physical queues have shut down their MultiChannel Consoles. They are *not* logged off automatically.

Viewing Queue Server, Queue, and Agent State

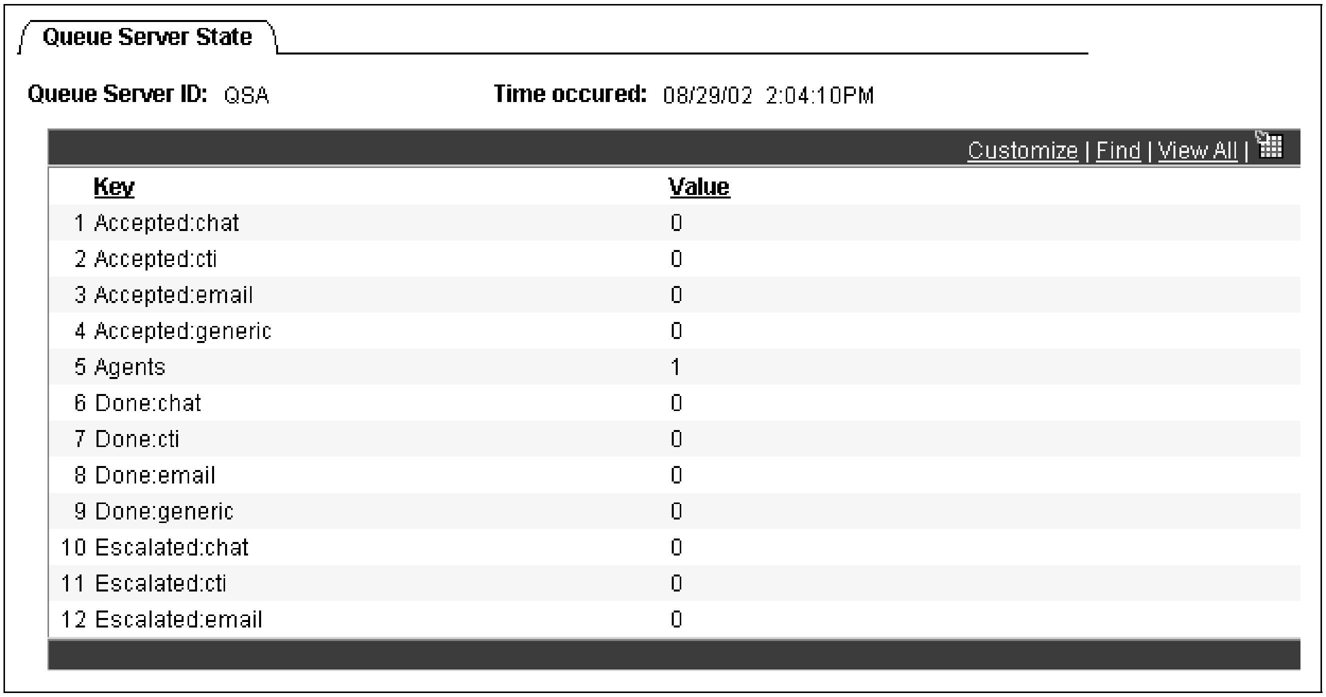
This section discusses how to view queue server, queue and agent states.

Pages Used to View Queue Server, Queue and Agent States

Page Name	Object Name	Navigation	Usage
Queue Server State	MCFQSERVSTATE_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Queue Server State	Examine state of a queue server at a particular time.
Queue State Summary	MCFQUEUESTATE_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Queue State Summary	Display state of a queue.
Agent State Summary	MCFAGENTSTATE_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Agent State Summary	View agent state.

Queue Server State

Access the Queue Server State page.


Queue Server State

Queue Server ID: QSA **Time occured:** 08/29/02 2:04:10PM

Customize | Find | View All |

	Key	Value
1	Accepted:chat	0
2	Accepted:cti	0
3	Accepted:email	0
4	Accepted:generic	0
5	Agents	1
6	Done:chat	0
7	Done:cti	0
8	Done:email	0
9	Done:generic	0
10	Escalated:chat	0
11	Escalated:cti	0
12	Escalated:email	0

Queue Server State page

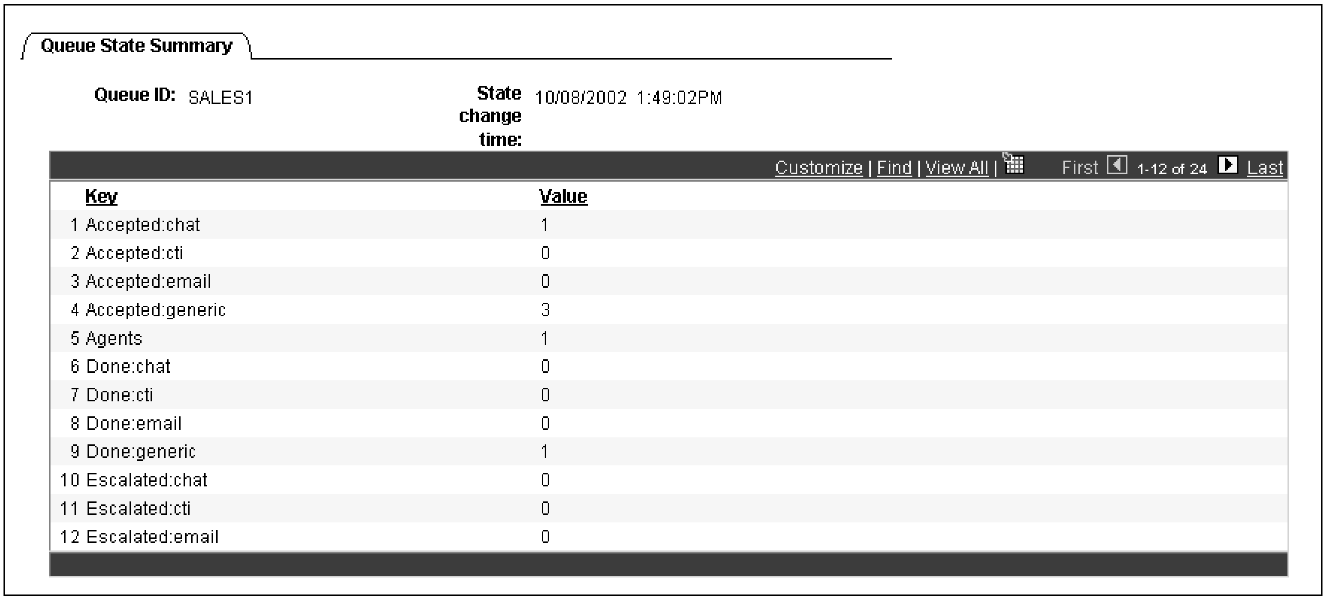
The Queue Server State page displays cumulative diagnostic totals for the selected queue server, at the selected time, across all physical queues serviced by this queue server. Cumulative totals are reset after each state dump.

This state information comprises statistics to measure load and throughput that can be analyzed and used for tuning the system. For example, if counts are very high, consider adding another physical queue to balance the load.

The state stamps are inserted for every primary queue server by cluster at configurable intervals, irrespective of user activity. The intervals are configured on the Cluster Tuning page.

Queue State Summary

Access the Queue State Summary page.


Queue State Summary

Queue ID: SALES1 State change time: 10/08/2002 1:49:02PM

Customize | Find | View All | First 1-12 of 24 Last

	Key	Value
1	Accepted:chat	1
2	Accepted:cti	0
3	Accepted:email	0
4	Accepted:generic	3
5	Agents	1
6	Done:chat	0
7	Done:cti	0
8	Done:email	0
9	Done:generic	1
10	Escalated:chat	0
11	Escalated:cti	0
12	Escalated:email	0

Queue State Summary page

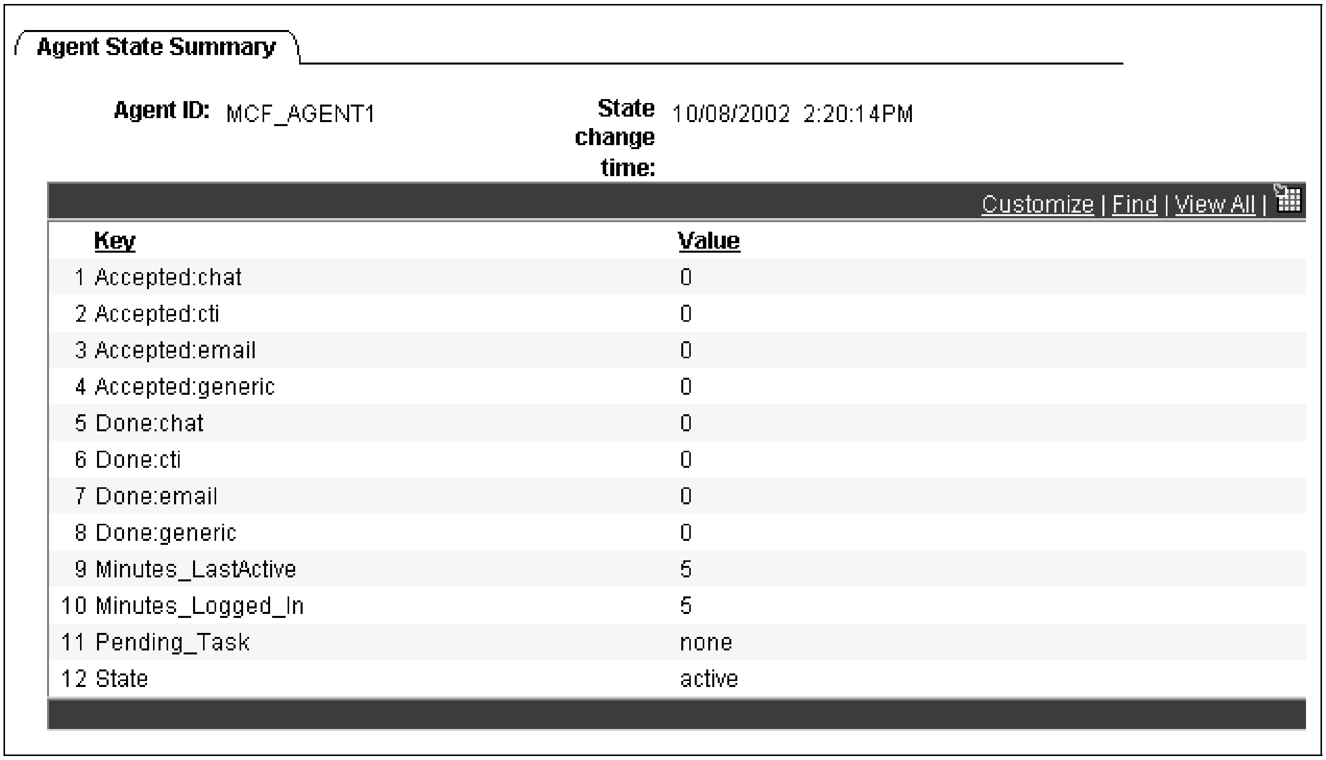
The Queue State Summary page displays cumulative diagnostic totals for the selected physical queue.

This state information comprises statistics to measure load and throughput that can be analyzed and used for tuning the system. For example, if counts are very high for this queue, consider adding another physical queue to balance the load.

The state stamps are inserted for every physical queue at configurable intervals, irrespective of user activity. The intervals are configured on the Cluster Tuning page.

Agent State Summary

Access the Agent State Summary page.


Agent State Summary

Agent ID: MCF_AGENT1

State change time: 10/08/2002 2:20:14PM

Customize | Find | View All |

	Key	Value
1	Accepted:chat	0
2	Accepted:cti	0
3	Accepted:email	0
4	Accepted:generic	0
5	Done:chat	0
6	Done:cti	0
7	Done:email	0
8	Done:generic	0
9	Minutes_LastActive	5
10	Minutes_Logged_In	5
11	Pending_Task	none
12	State	active

Agent State Summary page

The Agent State Summary page displays cumulative totals for the selected agent.

This state information comprises statistics to measure agent performance and status that can be analyzed and used for performance evaluation.

The state stamps are inserted for every agent at configurable intervals, irrespective of user activity. State is only recorded for agents currently logged on. The intervals are configured on the Cluster Tuning page by setting dumpinterval. Enable agent logging by setting dumpagent to yes.

An agent state of Active indicates the agent is available; Inactive indicates the agent is not available.

Note. On a busy system, recording state information frequently affects performance.

Viewing Chat and Event Logs

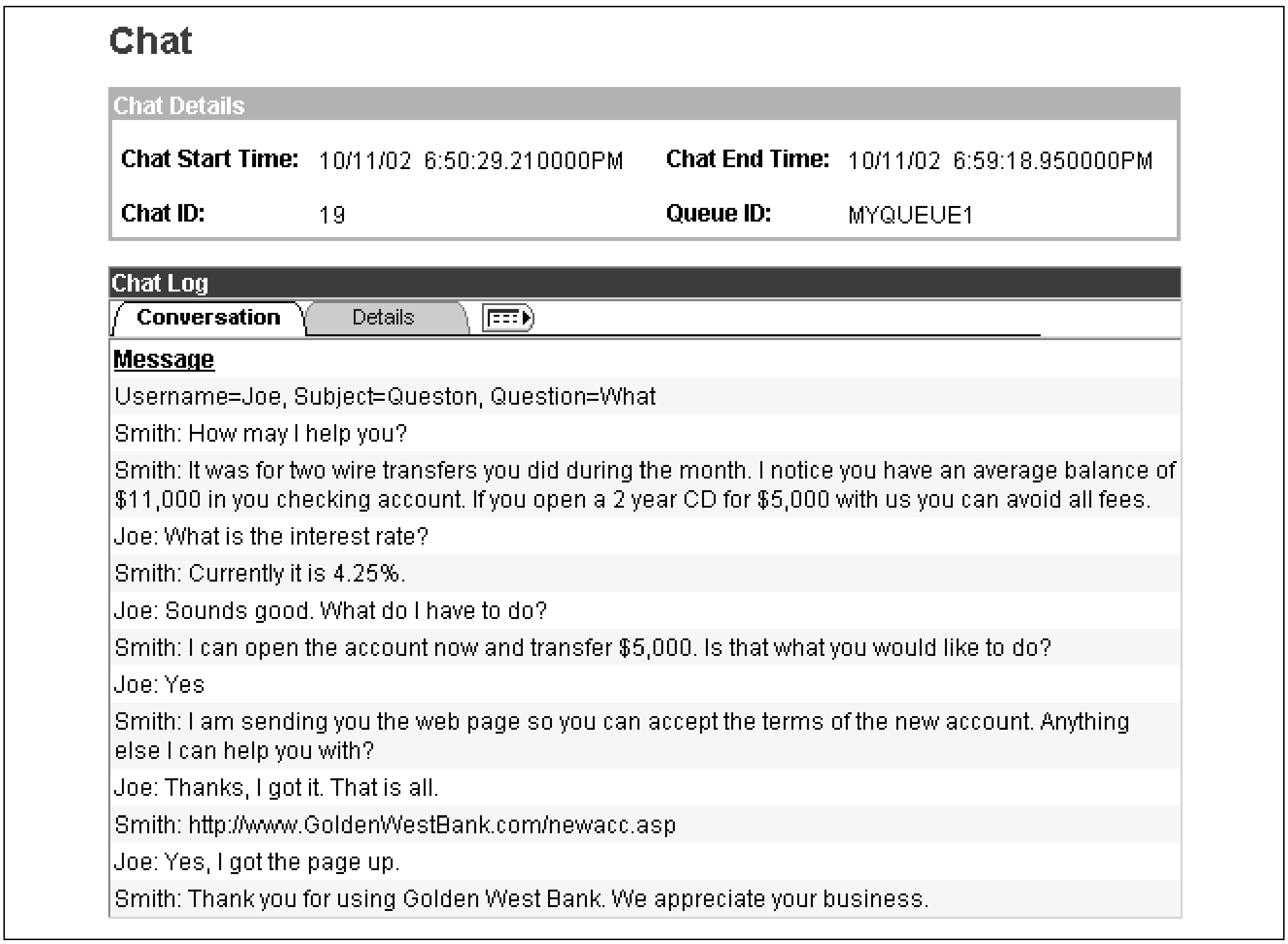
This section discusses how to view chat and event logs.

Pages Used to View Chat and Event Logs

Page Name	Object Name	Navigation	Usage
Chat	MCF_CHAT_MINLOG_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Chat Log	View the log of a specified chat session.
Event Log	MCF_EVENTLOG_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Event Log	View a log of events and display details.

Chat

Access the Chat page.



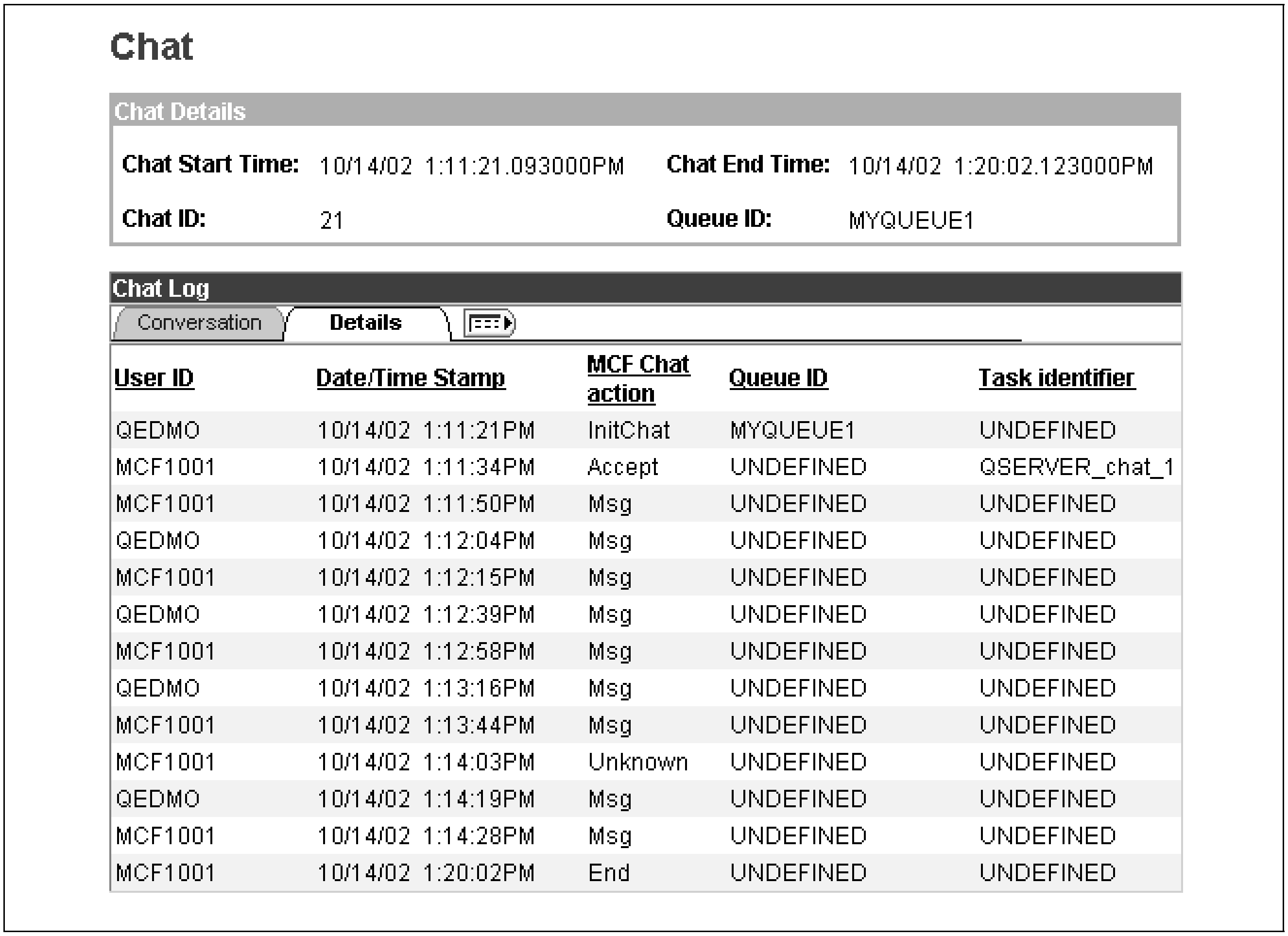
Chat page: Conversation tab

If enabled, this log records the contents and events of every chat session.

To enable chat logging, set log_chat_ses = yes on the Cluster Tuning page. For this parameter to take effect, click Refresh logging parameters on the Cluster Notify page.

Details Tab

Select the Details tab.


Chat

Chat Details

Chat Start Time: 10/14/02 1:11:21.093000PM Chat End Time: 10/14/02 1:20:02.123000PM

Chat ID: 21 Queue ID: MYQUEUE1

Chat Log

Conversation Details

User ID	Date/Time Stamp	MCF Chat action	Queue ID	Task identifier
QEDMO	10/14/02 1:11:21PM	InitChat	MYQUEUE1	UNDEFINED
MCF1001	10/14/02 1:11:34PM	Accept	UNDEFINED	QSERVER_chat_1
MCF1001	10/14/02 1:11:50PM	Msg	UNDEFINED	UNDEFINED
QEDMO	10/14/02 1:12:04PM	Msg	UNDEFINED	UNDEFINED
MCF1001	10/14/02 1:12:15PM	Msg	UNDEFINED	UNDEFINED
QEDMO	10/14/02 1:12:39PM	Msg	UNDEFINED	UNDEFINED
MCF1001	10/14/02 1:12:58PM	Msg	UNDEFINED	UNDEFINED
QEDMO	10/14/02 1:13:16PM	Msg	UNDEFINED	UNDEFINED
MCF1001	10/14/02 1:13:44PM	Msg	UNDEFINED	UNDEFINED
MCF1001	10/14/02 1:14:03PM	Unknown	UNDEFINED	UNDEFINED
QEDMO	10/14/02 1:14:19PM	Msg	UNDEFINED	UNDEFINED
MCF1001	10/14/02 1:14:28PM	Msg	UNDEFINED	UNDEFINED
MCF1001	10/14/02 1:20:02PM	End	UNDEFINED	UNDEFINED

Chat page: Details tab

The Details tab displays detailed information about the selected chat conversation.

Event Log

The event log records PeopleSoft MultiChannel Framework events sent to the REN server, excluding chat content (which is logged in the chat log). The event log can be used for debugging as well as for system monitoring. For example, you can determine when agents log in and log out, or when the queue server was first notified of newly enqueued events.

Data displayed in the event log depends on the event type. Not all fields apply to every event.

To enable logging of state broadcast events, set logDMPQ to yes on the Cluster Tuning page. For this parameter to take effect, click Refresh logging parameters on the Cluster Notify page.

Time is displayed and searched on in the format MM/DD/YYYY HH:MM:SSA/PM.

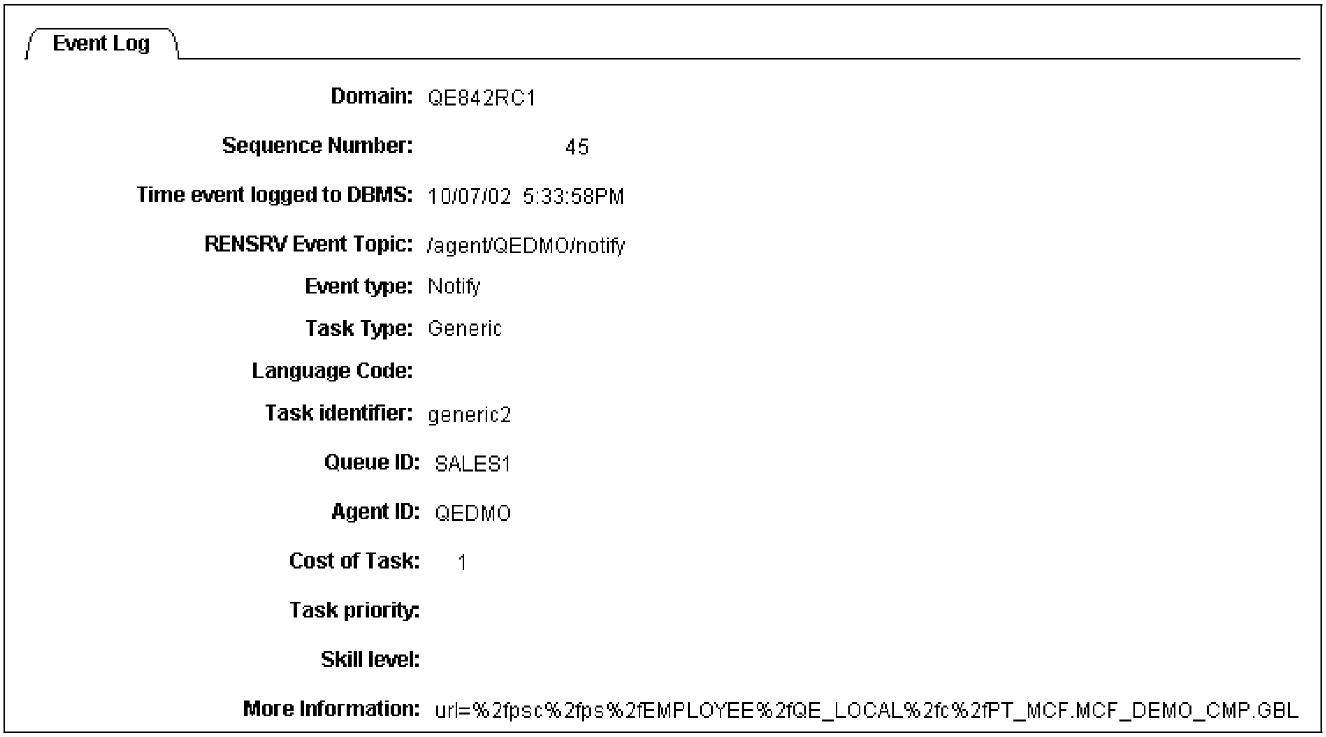
Search Results

View All First 1-100 of 150 Last

Domain	Time event logged to DBMS	Event type	Task Type
QE842RC1	10/07/2002 5:22:52PM	Login	(blank)
QE842RC1	10/07/2002 5:24:25PM	DB Cntct	Generic
QE842RC1	10/07/2002 5:24:25PM	Notify	Generic
QE842RC1	10/07/2002 5:24:39PM	DB Cntct	Generic
QE842RC1	10/07/2002 5:24:55PM	Unassign	(blank)
QE842RC1	10/07/2002 5:24:55PM	Notify	Generic
QE842RC1	10/07/2002 5:25:25PM	Unassign	(blank)
QE842RC1	10/07/2002 5:25:25PM	Notify	Generic
QE842RC1	10/07/2002 5:25:55PM	Unassign	(blank)
QE842RC1	10/07/2002 5:25:55PM	Notify	Generic
QE842RC1	10/07/2002 5:26:25PM	Unassign	(blank)
QE842RC1	10/07/2002 5:26:25PM	Notify	Generic
QE842RC1	10/07/2002 5:26:55PM	Unassign	(blank)
QE842RC1	10/07/2002 5:26:55PM	Notify	Generic
QE842RC1	10/07/2002 5:26:58PM	Accept	Generic
QE842RC1	10/07/2002 5:26:58PM	Notify	Generic
QE842RC1	10/07/2002 5:27:28PM	Unassign	(blank)
QE842RC1	10/07/2002 5:27:28PM	Notify	Generic
QE842RC1	10/07/2002 5:27:58PM	Unassign	(blank)
QE842RC1	10/07/2002 5:27:58PM	Notify	Generic
QE842RC1	10/07/2002 5:28:28PM	Unassign	(blank)
QE842RC1	10/07/2002 5:28:28PM	Notify	Generic
QE842RC1	10/07/2002 5:28:58PM	Unassign	(blank)
QE842RC1	10/07/2002 5:28:58PM	Notify	Generic
QE842RC1	10/07/2002 5:29:28PM	Unassign	(blank)
QE842RC1	10/07/2002 5:29:28PM	Notify	Generic
QE842RC1	10/07/2002 5:29:58PM	Unassign	(blank)
QE842RC1	10/07/2002 5:29:58PM	Notify	Generic
QE842RC1	10/07/2002 5:30:28PM	Unassign	(blank)

Search results page

Domain	The application server domain on which this event occurred.
Time event logged to DBMS	The time that this event was recorded in the database.
Event Type	The type of event, as described in the table that follows.
Task Type	The type of task for this event: chat, email, generic, or voice (not currently supported).



Event Log page

The following table lists possible event types.

Name	Translate Table Value	REN MultiChannel Framework Topic	Description
Accepted	ACPD	/agent/<agentID> /accepted Agent 's list of accepted tasks	Agent 's list of accepted tasks
Accept	ACPT	/queue/agents/accept	Agent accepts an assigned task
Bcst Admin	BCST	/queue/admin/statedump	Broadcast universal queue information
Contact	CNCT	/queue/contact	Real-time contact (for example, chat)
DB Cntct	DBCT	/queue/dbcontact	Database management system contact (such as email or generic)
Dump Q	DMPQ	/queue/<queueID>/state	Dump queue state information to log

Name	Translate Table Value	REN MultiChannel Framework Topic	Description
Done	DONE	/queue/agents/dequeue	Done (dequeue)
Forward	FWD	/queue/agents/forward	Forward
Notify	NTFY	/agent/<agentID>/notify	Notify agent of assigned task
Presence	PRES	/queue/agents/presence	Agent's presence change
Restrt Ack	RACK	/queue/agents/restartack	Restart acknowledgement
Read Cfg	READ	/uqsrv/reread/defaults	Reread defaults
Restart	RSRT	/queue/<queueID>/restart	Restart
Unknown	UNKN	UNKNOWN	Unknown REN server event
Unassign	USGN	/agent/<agentID> /unassign	Unassign

The following table lists event log subtopics.

Name	Translate Table ValueP	REN MultiChannel Framework Topic	Required Argument Value	Meaning
Abandon	ABAN	/chat/<userID> /<chatID>	ps_type=abandon	Abandoned chat session
End	END	/chat/<userID> /<chatID>	ps_type=end	End chat session
Login	LGIN	/queue/agents /loginstate	ps_state=login	Log on
Logout	LGOT	/queue/agents /loginstate	ps_state=logout	Log out

Name	Translate Table ValueP	REN MultiChannel Framework Topic	Required Argument Value	Meaning
Message	MSG	/chat/<userID> /<chatID>	ps_type=msg	Message
Push URL	PUSH	/chat/<userID> /<chatID>	ps_type=pushurl	Push URL
Timeout	TOUT	/chat/<userID> /<chatID>	ps_type=timeout	Timeout chat session

Application Server Logging

Diagnostic PSUQSRV and PSMCFLOG traces are written to each application server domain's log directory. The trace level is determined by the LogFence setting in the domain configuration. You can set the LogFence parameter with PSADMIN configuration of the application server domain. The following table lists LogFence setting values.

LogFence Setting	Tracing Level
1	Fatal errors
2	Errors
3	Warnings
4	Level 1 Diagnostic: Logs the queues that the universal queue is servicing, logs new queues that are added, and logs agent logon and logout.
5	Level 2 Diagnostic: Logs most debugging information, except periodic events (such as timer check and heartbeat).
6	Level 3 Diagnostic: Logs everything, including periodic events.

Administering Overflow and Escalated Tasks

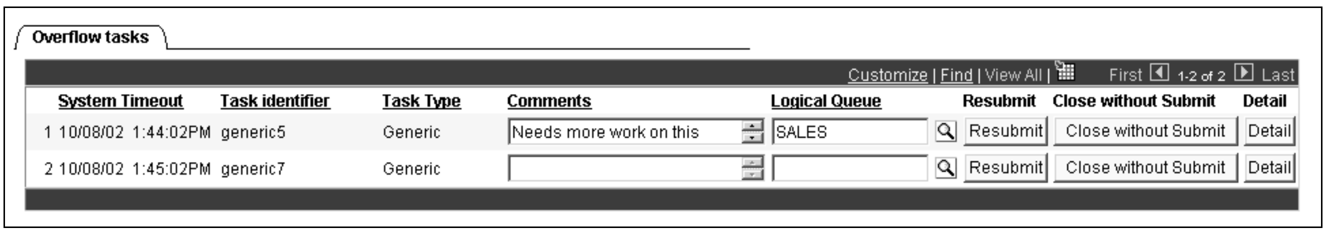
This section discusses how to administer overflow and escalated tasks.

Pages Used to Administer Overflow and Escalated Tasks

Page Name	Object Name	Navigation	Usage
Overflow Administration	MCF_OVERFLOWL_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Overflow Admin	View a list of overflow events.
Escalation Administration	MCF_ESCAL_PG	PeopleTools, MultiChannel Framework, Universal Queue, Administration, Escalation Admin	View a list of escalated events.

Overflow Administration

Access the Overflow Tasks page.



Overflow Tasks page

Use this page to manage tasks that could not be assigned to an agent within the specified overflow timeout.

System Timeout Displays the time at which the overflow occurred.

Task Type Types include chat, email, generic, and voice (not currently supported).

Comments Enter optional text commentary about the task's resolution.

For example, note that the customer sent follow-up email that was answered by an agent.

Logical Queue Select a logical queue to resubmit this task to.

Resubmit Click to send the task to the specified logical queue to retry assignment.

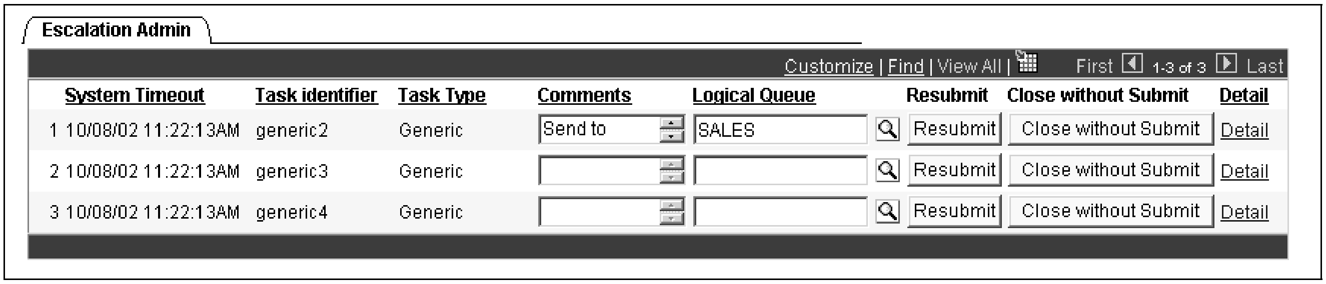
Only persistent tasks can be resubmitted; chat cannot be resubmitted.

Close Without Submit Click to close this task without sending it to retry assignment.

Detail Click to display additional information about the task.

Escalation Administration

Access the Escalation Admin page.



Escalation Admin page

Use this page to manage accepted persistent tasks that have been automatically unassigned from agents because they were not closed within the specified escalation timeout. Tasks can be resubmitted or closed.

System Timeout Displays when the escalation occurred.

Task Type Types include chat, email, generic, and voice (not currently supported).

Logical Queue Select a logical queue to submit this task to.

Resubmit Click to send the task to the specified logical queue to retry assignment.

Only persistent tasks can be resubmitted; chat cannot be resubmitted.

Comments Enter optional text commentary about the task's resolution.

For example, note that the customer sent follow-up email that was answered by an agent.

Detail Click to view additional information about this escalated task.

Close Without Submit Click to close this task without sending it back to retry assignment.

CHAPTER 10

Managing Tasks and Using Chat in PeopleSoft MultiChannel Framework

This chapter discusses how to:

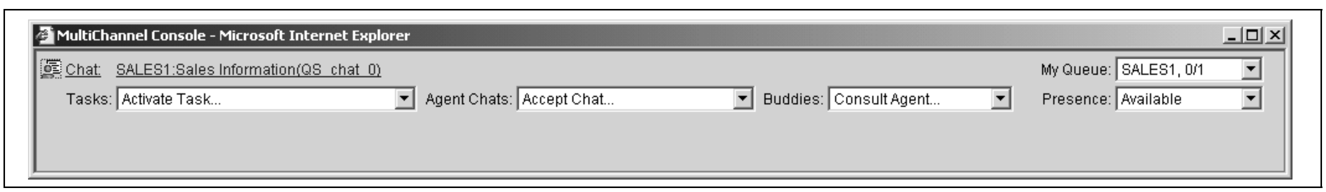
- Manage tasks using the MultiChannel Console.
- Communicate with customers and agents using chat.

Managing Tasks With the MultiChannel Console

Use the MultiChannel Console to accept, respond to, transfer and complete tasks, and to initiate or join chat sessions.

Using the MultiChannel Console to Work With Tasks

If you are identified as an agent in PeopleSoft MultiChannel Framework, the MultiChannel Console navigation tool appears in the universal navigation header. To access the console, click the tool.



MultiChannel Console

You cannot launch two MultiChannel Consoles on the same workstation.

You can launch consoles on different workstations using the same user ID, but you cannot log on to physical queues served by the same MCF cluster.

When the MultiChannel Console is launched, it attempts to connect to the REN server associated with the last physical queue listed in the My Queue drop-down list. If that REN server is not running, the agent receives an error message. If one or more of the agent's physical queues are associated with a running REN server, the agent can log on by selecting another queue.

Newly assigned tasks appear as a link above the Tasks drop-down list, and display a flashing icon. Click the link to accept the task. Accepted tasks appear in the Tasks drop-down list.

Collaborative chat requests (agent-to-agent chats) may appear as a link above the Agent Chats drop-down list, but all collaborative chat requests (accepted or not) appear in the Agent Chats drop-down list.

Configure the size and initial location of the MultiChannel Console on the Agent Window Configuration page.

Note. If you use web content zones in Microsoft Internet Explorer security options, your PeopleSoft Pure Internet Architecture web server address and your REN server address must be in the same security zone.

Note. If you use Secure Sockets Layer (SSL) security, you may receive a security warning message when your console first opens. You can accept the warning message without compromising SSL security.

Tasks

After you accept an assigned task, the task appears here.

Activate a task to work on by selecting it. Activating a task brings the window associated with that task to the foreground. If the associated task window is not running, it is launched by the console.

A task is removed from the task list when you mark the task as done using one of the following methods:

- For email and generic tasks, the task's application page may include a Done button; refer to the application's documentation.
- For chat, the task is done when the chat dialog ends.

Agent Chats

Displays a list of your collaborative chats, both accepted and requested, including a label indicating if the chat is inbound or outbound. Select a chat to activate it.

If you are invited to join in a chat session (conference), the conference chat is added to the list. After you accept the conference, the conference is added to the Tasks drop-down list and removed from the Agent Chats drop-down list. The chat is removed from the list when the chat dialog ends.

Buddies

Includes agents identified as buddies in your agent configuration. Add buddies on the Buddy List page of the Agent component.

To initiate a collaborative chat, select an agent. A chat dialog box appears.

Note. You can only initiate a collaborative chat with an agent who appears on your buddy list. However, if you appear on another agent's buddy list, that agent can initiate a collaborative chat with you, even if that agent is not one of your buddies.

My Queues

The physical queues that you can access.

To log on to a queue, select it.

To change queues, select a new queue. You are logged off from the old queue and logged on to the selected queue.

Add or delete queues on the Queues page of the Agent component.

Presence

Displays your current presence and enables selection of a new presence. Select from:

- *Active*
- *Inactive*

Customize presence labels to more closely track agent activity. Edit your presence options on the Presence page of the Agent component.

If you select an inactive presence, an icon appears in the upper-left corner of the MultiChannel Console. Changes in agent presence are logged and include the customized presence description.

Presence status persists for eight hours from the time of its last change.

You can use hot key combinations, described in the following table, to navigate between MultiChannel Console fields.

Hot Key Combination	Opens
ALT + A	Agent chats
ALT + B	Buddies
ALT + P	Presence
ALT + Q	My Queues
ALT + T	Tasks

Communicating With Customers and Agents Using Chat

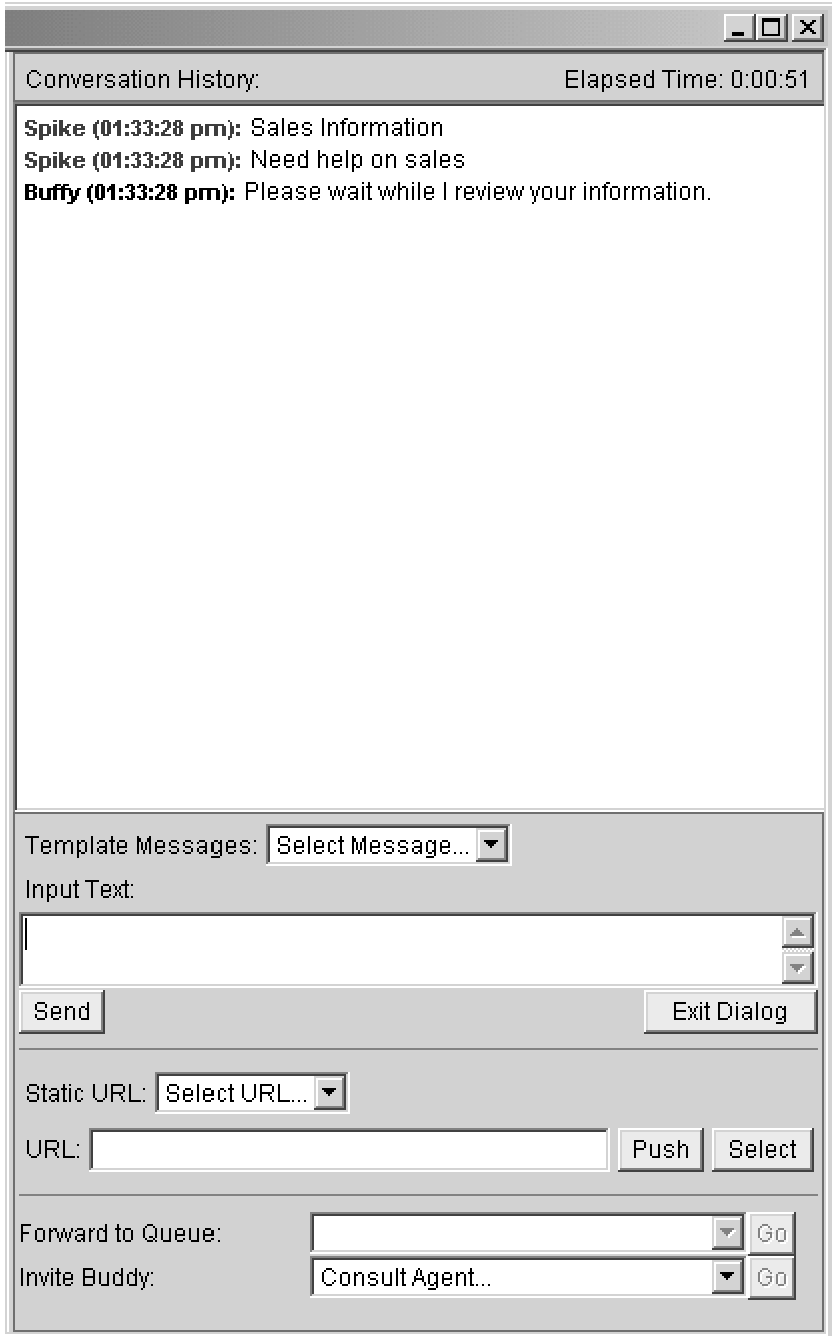
This section discusses how to:

- Use the agent chat window.
- Use the customer chat window.

Using the Agent Chat Window

When you accept a chat task, a chat window opens.

The format of the agent chat window and the contents of its right pane are delivered as part of PeopleSoft MultiChannel Framework. The content of the left pane is determined by application developers, and is passed as a parameter to the InitChat() built-in function.



Agent chat window

Configure the size and initial location of the agent chat window on the Agent Window Configuration page.

Conversation History

Lists progress of the chat, line by line.

If chat logging is enabled, the conversation is recorded in the database chat log by the MCF log server. View the chat log by selecting PeopleTools, MultiChannel Framework, Universal Queue, Administration, Chat Log.

If accessibility features are not turned off in your personalizations, an additional text box appears below the conversation history. The most recent customer input appears in the secondary text box, which can be read by screen reading software.

Template Messages

Send the customer a standard message by selecting one from the list.

The message text appears in the Input Text box. Click Send to send the message.

Edit template messages for each queue at PeopleTools, MultiChannel Framework, Universal Queue, Configuration, Queue, Chat Responses.

Input Text

To respond to the customer, enter text, then click Send or Enter.

The maximum size of the text that can be sent at one time is 4096 bytes (4 kilobytes).

Send

Click to send the contents of the Input Text box.

Exit Dialog

Click to end the chat.

The chat window remains open, allowing you to return to the page for follow-up work after the customer exits the dialog.

Static URL and **Push**

To send a static URL to the customer, select a URL name, then click Push.

When a URL is pushed to a customer, a browser window for that URL is launched on the customer's workstation.

URL

Displays static and grabbed URLs.

Select

Click to launch an application page, from which a URL can be returned to populate the URL field.

The format of the URL wizard page that appears when you click Grab is defined by application developers. PeopleSoft supplies a sample URL wizard page.

See Chapter 11, "Developing for PeopleSoft MultiChannel Framework," Using the URL Wizard, page 115.

Forward to Queue

To forward the current chat to another queue, select the queue.

You can only forward to another physical queue, and that physical queue must be served by same MCF cluster as the physical queue that assigned the chat.

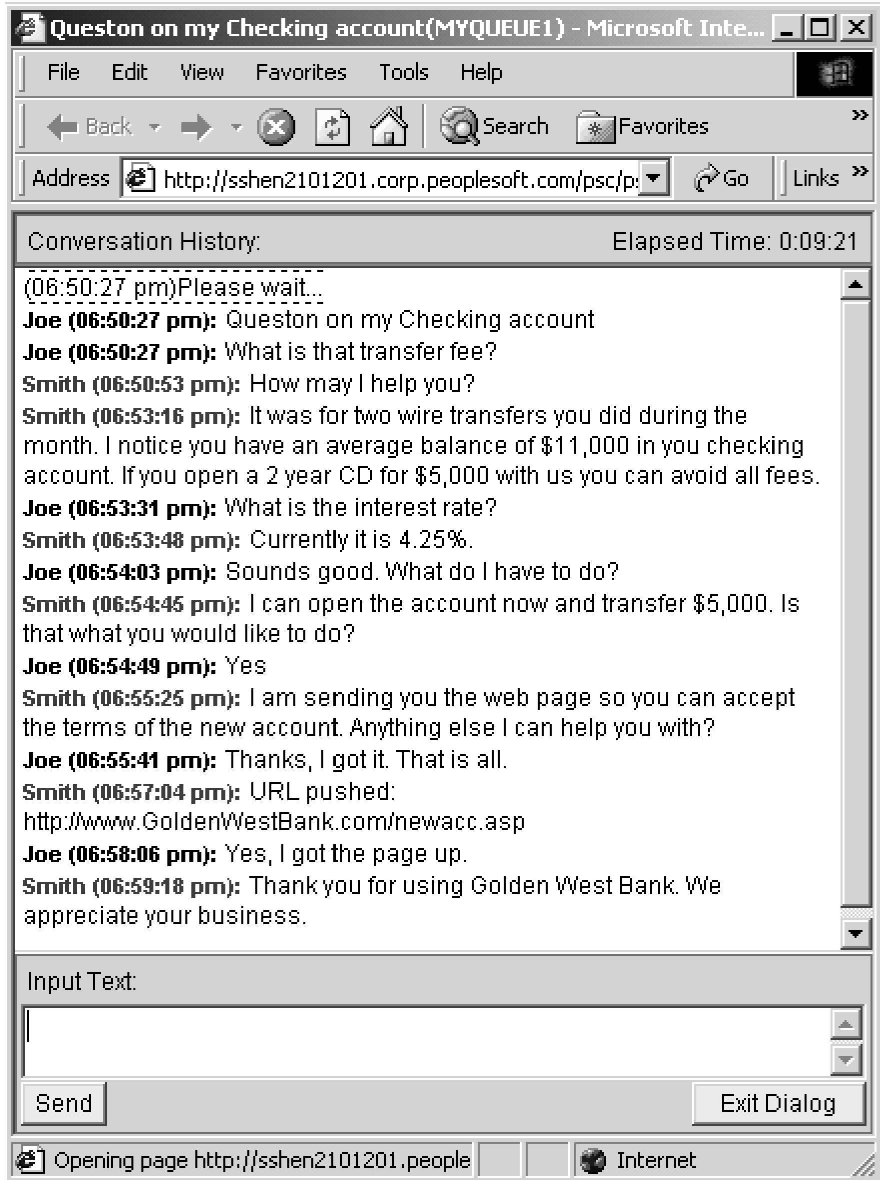
Invite Buddy

To request that another agent join the chat, select the agent and click Go.

The buddy must be logged on to a physical queue that is served by the same MCF cluster as the physical queue that sent you this chat. Chat conferencing is only supported on customer-initiated chat sessions.

Using the Customer Chat Window

When a customer initiates a chat, a chat window appears.



Customer chat window

The format and content of the customer chat window is delivered as part of PeopleSoft MultiChannel Framework. The customer chat window includes a conversation history text box, input text box, and Send and Exit Dialog buttons.

If accessibility features are not turned off in My Personalizations, an additional text box appears below the conversation history. The most recent agent input appears in the secondary text box, which can be read by screen reading software.

Input Text	The customer enters text here. The maximum size of the text that can be sent at one time is 4096 bytes (4 kilobytes).
Send	Click to send the input text to the agent.
Exit Dialog	Click to end the chat and close the chat window.

Note. The agent collaborative chat window is substantially the same as the customer chat window.

CHAPTER 11

Developing for PeopleSoft MultiChannel Framework

This chapter discusses how to:

- Work with sample pages.
- Use PeopleCode built-in functions.
- Use Universal Queue classes.

Note. Applications use the PeopleCode built-in function GenerateComponentContentRelURL() to build the relative URLs of the pages that appear when the agent accepts a task. This built-in function takes the portal node as a parameter. This node must have a content URI configured in the PeopleSoft Portal administration pages to ensure that the correct URL is generated.

Working With Sample Pages

This section discusses how to:

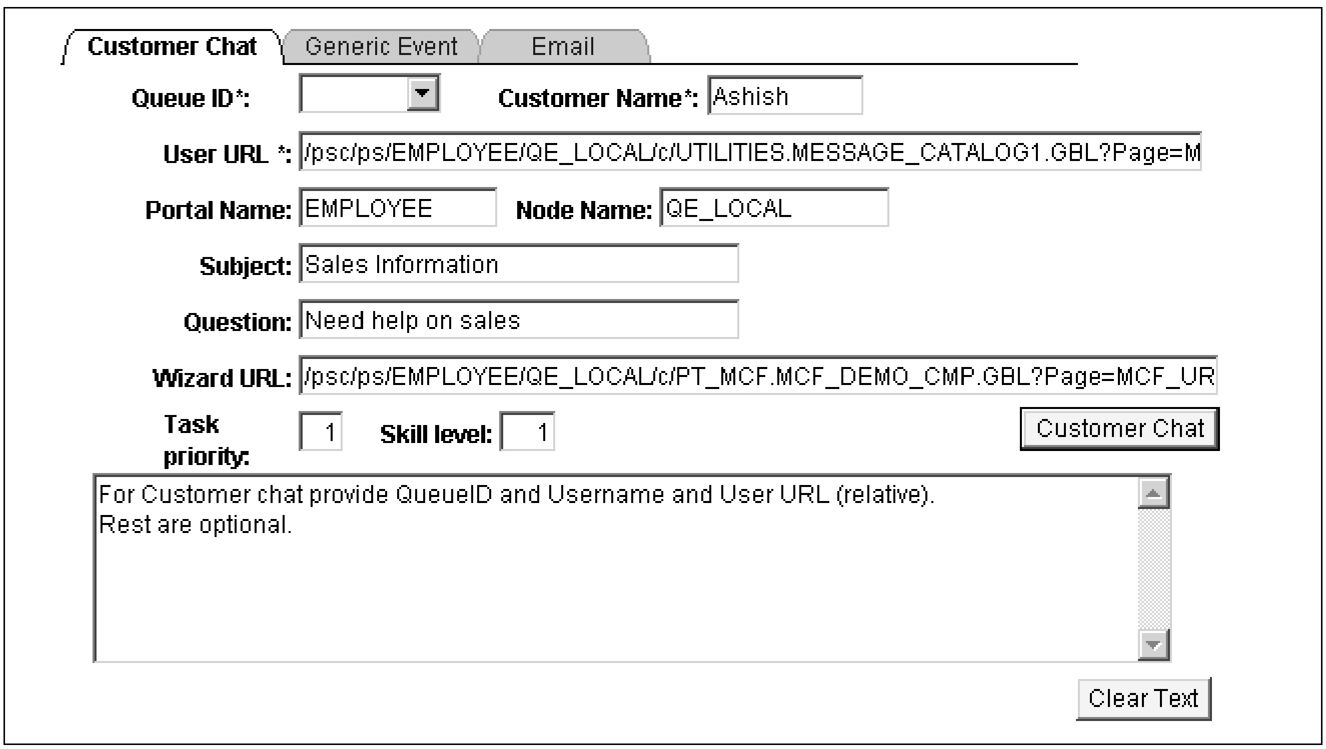
- Use the Customer Chat sample page.
- Use the URL wizard.
- Use the Generic Event sample page.
- Use the Generic Event window.
- Use the Email sample page.
- Use the Email window.

Pages Used to Work With Sample Pages

Page Name	Object Name	Navigation	Usage
Customer Chat	MCF_DEMO_PG	PeopleTools, MultiChannel Framework, Universal Queue, Sample Pages, Customer Chat	View a customer chat session and built-in functions.
Generic Event	MCF_DEMO_NOTIFY_PG	PeopleTools, MultiChannel Framework, Universal Queue, Sample Pages, Generic Event	View a generic event notification and built-in functions.
Email	MCF_DEMOEM_NTFY_PG	PeopleTools, MultiChannel Framework, Universal Queue, Sample Pages, Email	View email retrieval, built-in functions, and application package classes.

Using the Customer Chat Sample Page

Access the Customer Chat page.



Customer Chat page

This page demonstrates the InitChat() built-in function, including required and optional parameters.

This page is not intended for production use. On a typical application page, the developer includes a Live Help or Customer Chat button that calls the InitChat() built-in function and passes required parameters, including the context of the chat request. The sample customer chat page demonstrates values that can be included in the InitChat() parameters. The user may not be prompted for any information.

To run a sample chat:

1. Access the MultiChannel Console.

2. Open the Customer Chat page.
3. Open the Queue ID drop-down list and select the queue you are logged onto.

   The other fields are automatically populated with values that generate a sample chat session. You can change the values as long as valid required values are included.

   The User URL is a required field that contains the application page URL to send to the agent chat browser.

   The optional Wizard URL field represents a grab URL; the actual page that appears is determined by InitChat() parameters.

   The text box displays error messages and additional information for using the sample page.
4. Click Customer Chat.

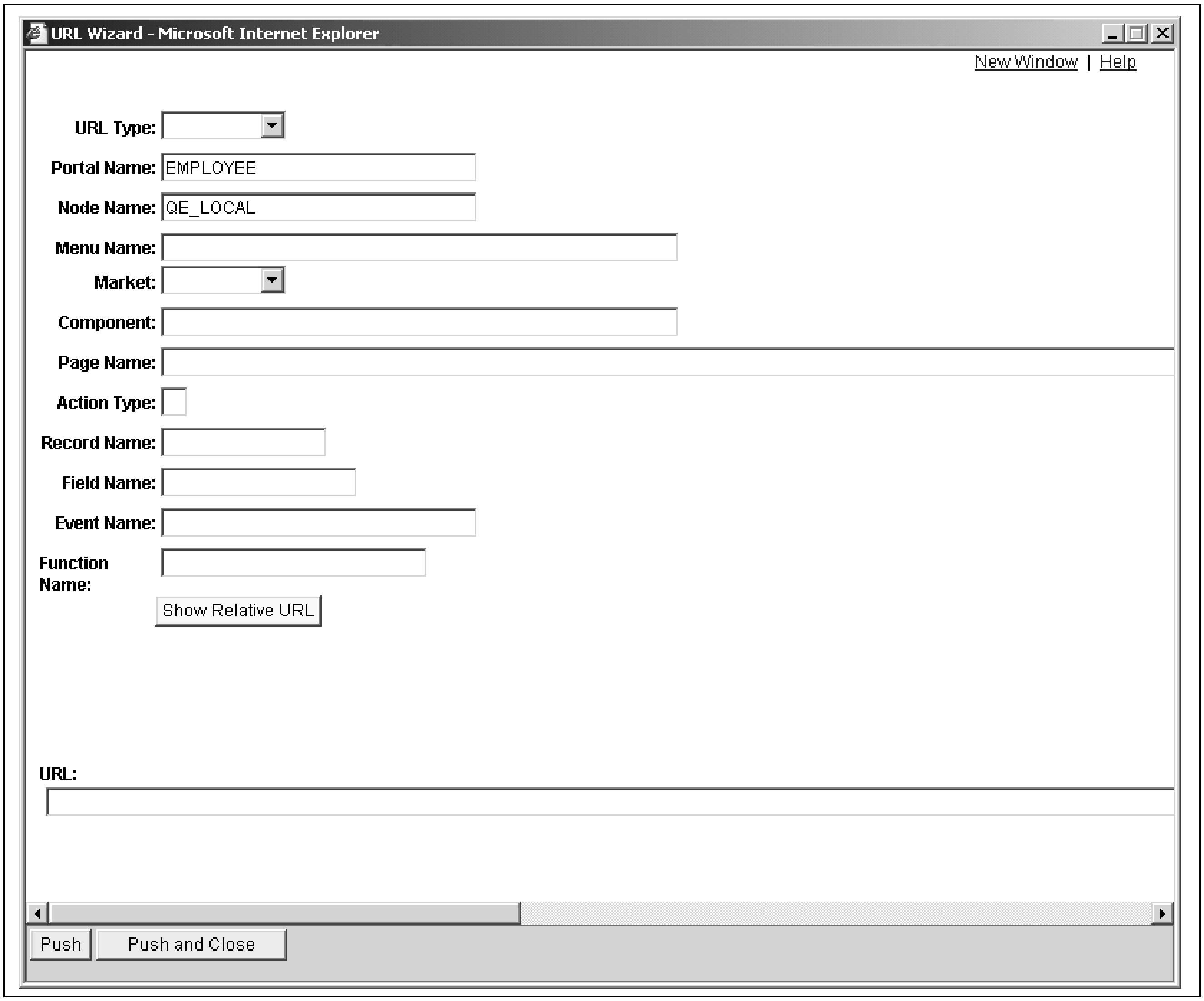
   The customer chat window appears.
5. On the MultiChannel Console, click the flashing chat notification icon to accept the chat session.

   The agent chat window appears.

   You can input text as both agent and customer to demonstrate chat functionality.

Using the URL Wizard

Click Selectfrom the agent chat window during a chat session to open the URL wizard.



URL Wizard page

Use the wizard to form a URL to send to the customer. The URL Wizard page is a template that demonstrates constructing a URL and sending it to a customer. The URL wizard can be used as-is or as the basis for developing URL generation for your application.

URL Type

Select the type of URL being grabbed:

- *Component:* Generates a PeopleSoft Pure Internet Architecture component URL.

  Component URL generation uses the PeopleCode built-in function **GenerateComponentContentRelURL**.

  See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode Language Reference*, “PeopleCode Built-in Functions”.
- *External:* Not currently used.
- *Gen URL:* Not currently used.
- *iScript:* Generates a PeopleSoft Pure Internet Architecture iScript URL.

iScript URL generation uses the PeopleCode built-in function **GenerateScriptContentRelURL**.

See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode Language Reference*, “PeopleCode Built-in Functions”.

Fields not required by the selected URL type are not available.

Show Relative URL
Click to display the relative URL generated by the values you have entered into the page’s fields.

URL
Displays the generated relative URL.

Push
Click to send the generated relative URL to the customer’s chat window.

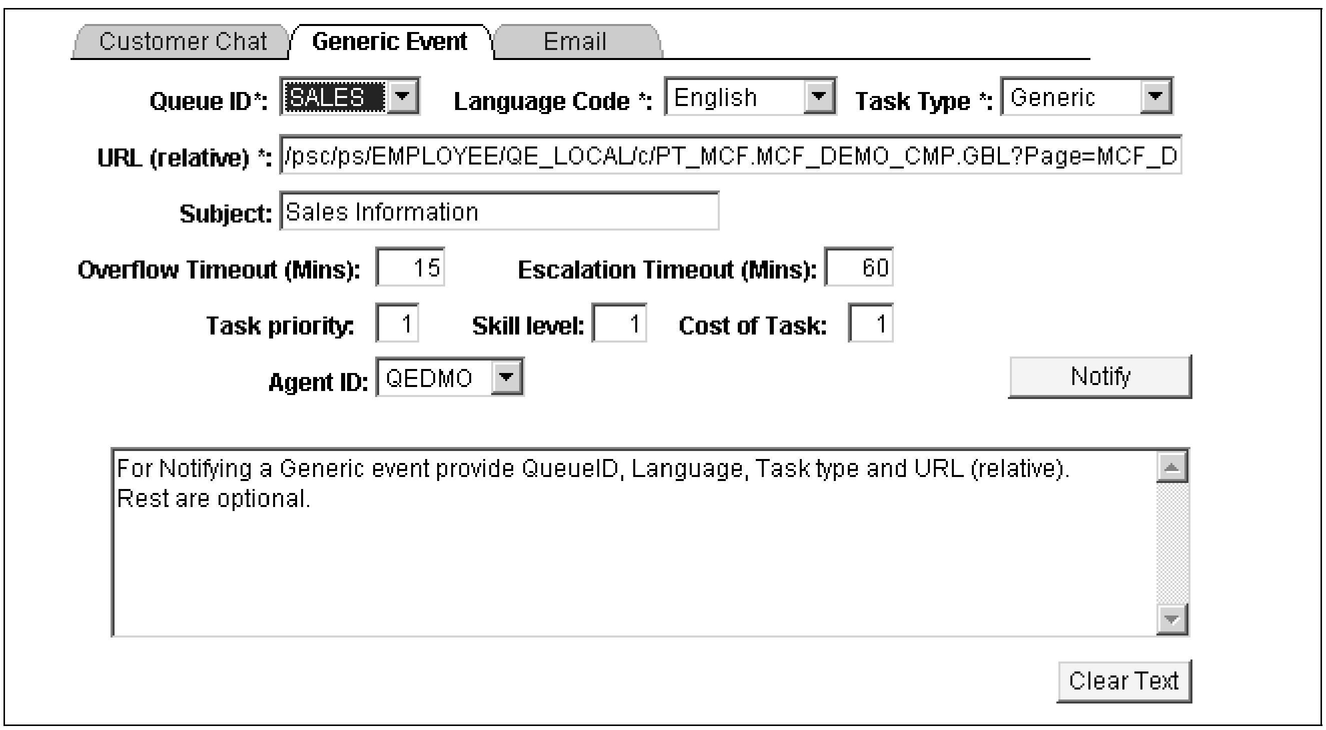
The Push button demonstrates functionality that must be included in an application-specific URL wizard.

Push and Close
Click to send the generated relative URL to the customer’s chat window and close the URL wizard.

The Push and Close button demonstrates functionality that must be included in an application-specific URL wizard.

Using the Generic Event Sample Page

Access the Generic Event page.



Generic Event page

This page demonstrates a generic persistent event using the EnQueue() and NotifyQ() built-in functions, including required and optional parameters.

This page is not intended for production use. On a typical application page, the developer includes an Enqueue or similar button that calls the EnQueue() built-in function and passes required parameters, including the context of the request. The sample customer chat page demonstrates values that can be included in the EnQueue() parameters. The user may not be prompted for any information.

To run a sample generic event:

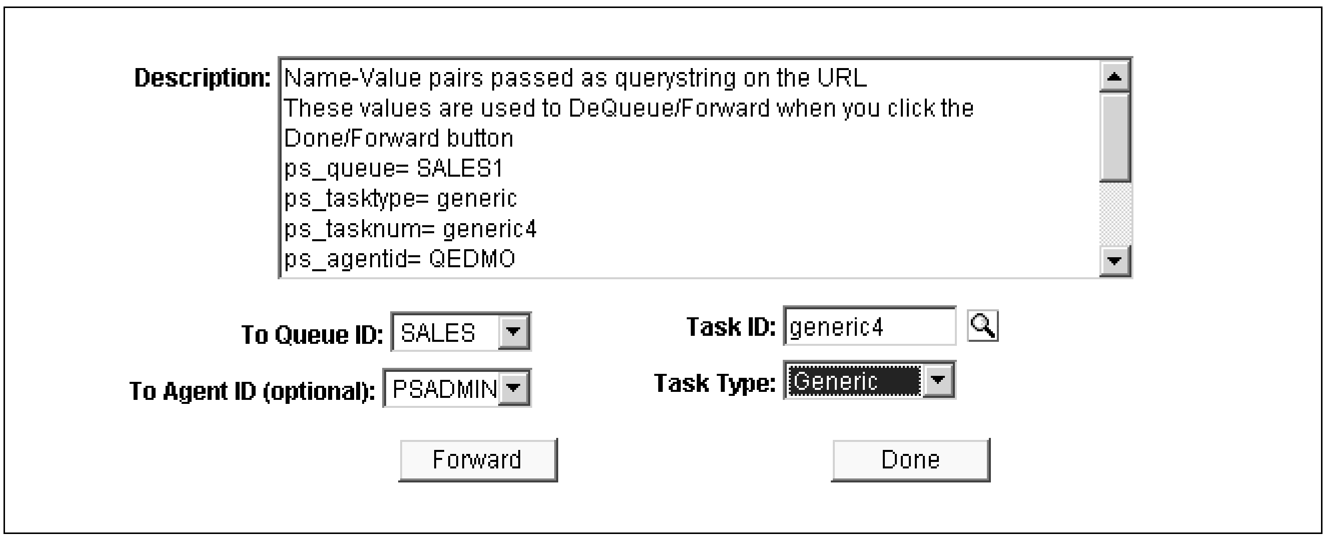
1. Access the MultiChannel Console.
2. Open the Generic Event page.
3. Open the Queue ID drop-down list and select the queue you are logged onto.
4. Open the Agent ID drop-down list and select the agent ID that you are logged on with.
5. Select *Generic* for the task type.
6. Click Notify.
7. On the MultiChannel Console, click the flashing event notification icon to accept the event.

   The Generic Event window appears.

Using the Generic Event Window

The format of the generic event window is determined by application developers. PeopleSoft supplies a sample generic event window to demonstrate the available functionality, including the DeQueue() built-in.

Configure the size and initial location of the generic event window on the Agent Window Configuration page.



Generic Event window

Description Displays text from the generic event.

To Queue ID Select a queue to which the generic event will be forwarded.

Task ID Select the task ID of the generic event to forward.

To Agent ID Select the agent ID to whom the generic event will be forwarded.

Task Type Select the task type of the generic event to be forwarded.

Forward Click to send the generic event to the selected agent or queue.

The Forward button demonstrates the functionality of the Forward() built-in function.

Done

Click to notify the REN server that you are done with this task. A message asks if you want to close the window.

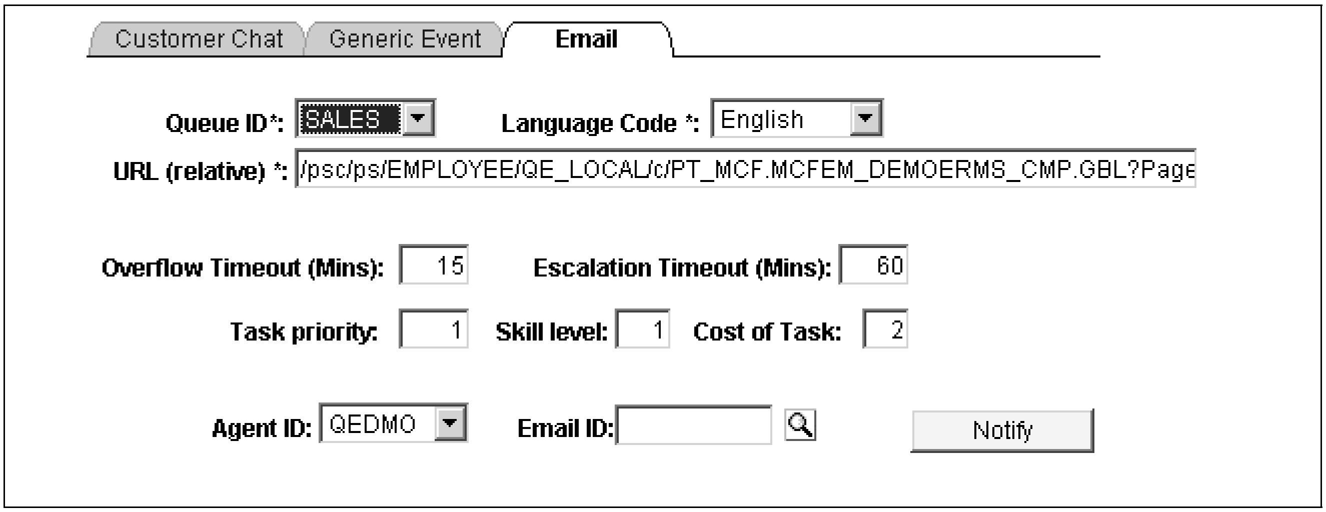
The Done button demonstrates the functionality of the DeQueue() built-in function.

See Also

Enterprise PeopleTools 8.45 PeopleBook: PeopleCode Language Reference, “PeopleCode Built-in Functions”

Using the Email Sample Page

Access the Email page.



Email page

The email sample pages are intended for demonstration purposes and should not be used in production.

EnQueue() and NotifyQ() may also be called from PeopleSoft Application Engine batch programs.

See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode Language Reference*, “PeopleCode Built-in Functions”.

Note. To fully demonstrate the functionality of the Email sample page, an email must be read and written to the email database using the GetMail - Server sample page.

To process a sample email:

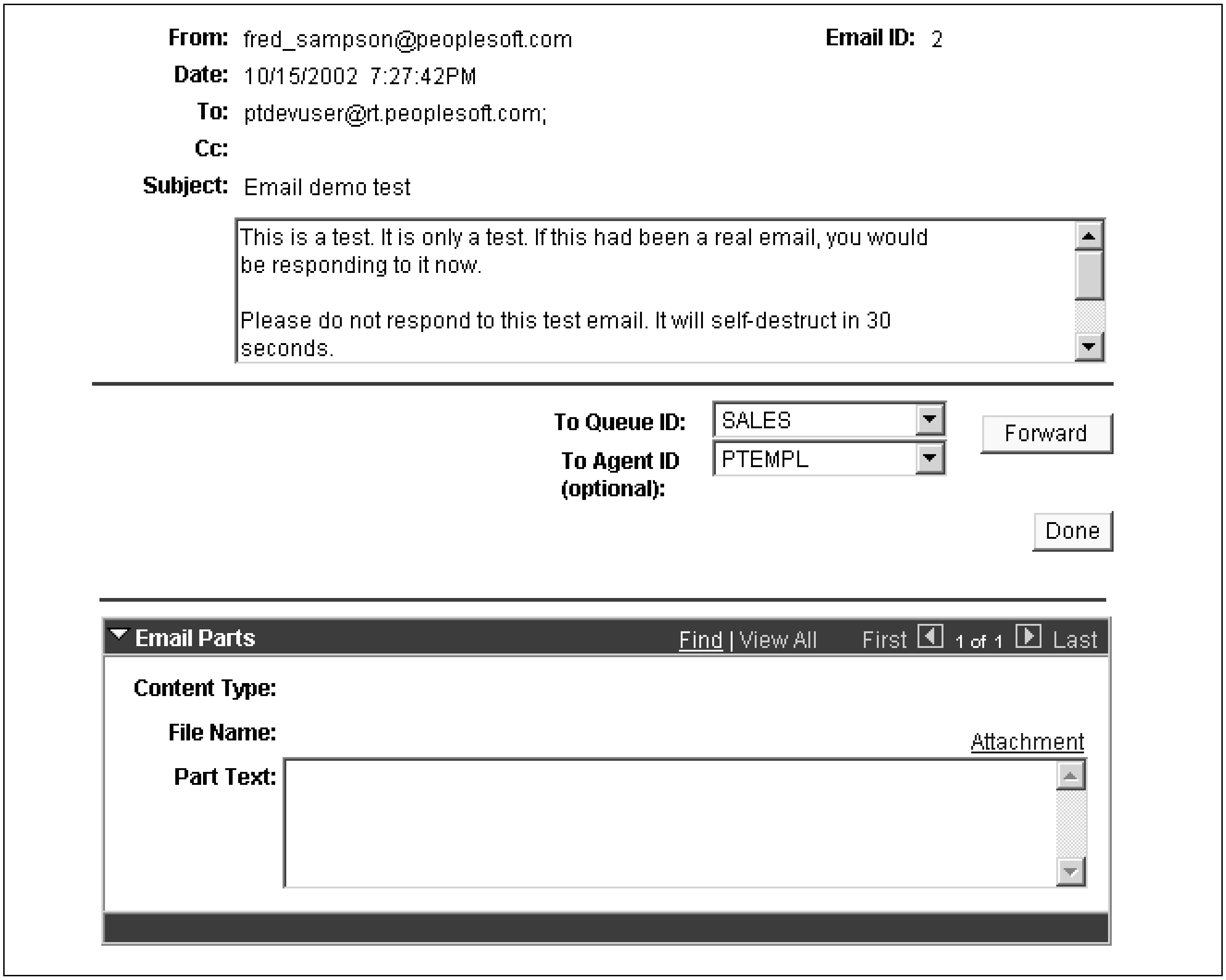
1. Access the MultiChannel Console.
2. Open the Email page.
3. Open the Queue ID drop-down list and select the queue you are logged onto.
4. Open the Agent ID drop-down list and select the agent ID that you are logged on with.
5. Click Notify.
6. On the MultiChannel Console, click the flashing email notification icon to accept the email.

The email window appears.

Using the Email Window

The format of the email window is determined by application developers. PeopleSoft supplies a sample email event window to demonstrate available functionality.

Configure the size and initial location of the email event window on the Agent Window Configuration page.



Email window

To Queue ID

To forward the email to another queue, select a queue ID from the drop-down list and click Forward.

To Agent ID

To forward the email to another agent, select an agent ID from the drop-down list and click Forward.

Forward

Click to forward the email to the specified queue or agent.

This Forward button demonstrates the functionality of the Forward() built-in function.

Done

Click to exit the email and remove it from the queue.

The Done button demonstrates the functionality of the DeQueue() built-in.

Email Parts If an email has been broken into parts stored in the email database, or has an attachment, they can be accessed here.

See Also

Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference, “Mail Classes”

Enterprise PeopleTools 8.45 PeopleBook: PeopleCode Language Reference, “PeopleCode Built-in Functions”

Using PeopleCode Built-in Functions with PeopleSoft MultiChannel Framework

PeopleSoft MultiChannel Framework uses several PeopleCode built-in functions. Application developers use these functions to communicate task requests and parameters to the queue server. For example, use InitChat code behind a button on an application page to initiate a chat session with an agent.

The built-in function are:

- DeQueue

  Use DeQueue to notify the queue server that an enqueued task has been completed and to remove the task from the queue.

- EnQueue

  Use EnQueue to add a task to an active physical queue belonging to the specified logical queue.

- Forward

  Use Forward to transfer a task from one agent to another agent or another logical queue.

- InitChat

  Use InitChat to place a customer chat request on a queue.

- NotifyQ

  Use NotifyQ to notify the queue server of a task enqueued by EnQueue.

See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode Language Reference*, “PeopleCode Built-in Functions”.

Using Universal Queue Classes

The universal queue classes provide the means by which applications can inspect objects that are processed by the queue server, such as tasks, agents, and queues. The classes also enable tasks to reenter the queue with their original task ID, as well as keep task times based on its original entry into the system.

See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Universal Queue Classes”.

CHAPTER 12

Configuring the Email Channel

This chapter provides an overview of the email channel and discusses how to:

- Configure PeopleSoft Integration Broker for the email channel.
- Use demonstrate the email channel.

Understanding the Email Channel

Because the email channel uses a PeopleSoft Integration Broker gateway, the email channel requires additional configuration outside of PeopleSoft MultiChannel Framework configuration pages.

PeopleSoft Multichannel Framework provides a framework for:

- Fetching emails from a mail server.
- Storing and retrieving email parts in a database.
- Managing attachments.
- Queueing of emails by the queue server.

Application developers use the PeopleCode application package PT_MCF_MAIL to develop PeopleSoft Application Engine programs and PeopleSoft Pure Internet Architecture components for email processing.

See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference,* “Mail Classes”.

PeopleSoft MultiChannel Framework email channel features include:

- The GETMAILTARGET target connector.
- A PeopleCode application package, PT_MCF_MAIL, to retrieve, store, and delete email.
- Support for both Post Office Protocol 3 (POP3) and Internet Message Access Protocol 4 (IMAP4) email protocols.
- Support for email attachments, including:
  - An attachments repository running on same web server as PeopleSoft Integration Broker.
  - URL access to email attachments.
  - A relative addressing scheme to enable flexibility of repository location.
  - User- and role-based security to control access to attachments.
- The option to access email headers, attachments, and body from the mail server.
- Support for multiple message size thresholds to control distribution of email between the database, the attachment repository, and the mail server.

- Support for UTF8 Unicode as supported by the Sun Java Runtime Environment (JRE) 1.3.1 or later.

  See http://java.sun.com.
- Time zone conversions to support global service-level agreements.
- Sample email application pages demonstrating the functionality of the PT_MCF_MAIL application package.

Configuring PeopleSoft Integration Broker for the Email Channel

Configure nodes and gateways for the email channel in PeopleSoft Integration Broker.

See Also

Enterprise PeopleTools 8.45 PeopleBook: PeopleSoft Integration Broker, “Managing Integration Gateways”

Pages Used to Configure Integration Broker for Email

Page Name	Object Name	Navigation	Usage
Node Info	IB_NODE	PeopleTools, Integration Broker, Node Definitions, Node Info	Define the MCF_GetMail node.
Connectors	IB_NODECONN	PeopleTools, Integration Broker, Node Definitions, Connectors	Define the MCF_GetMail connector.
Gateways	IB_GATEWAY	PeopleTools, Integration Broker, Gateways, Gateway ID	Set up the PeopleSoft Integration Broker gateway for the MCF_GetMail connector node.

Configuring the Gateway

Access the Gateways page.

To configure the gateway:

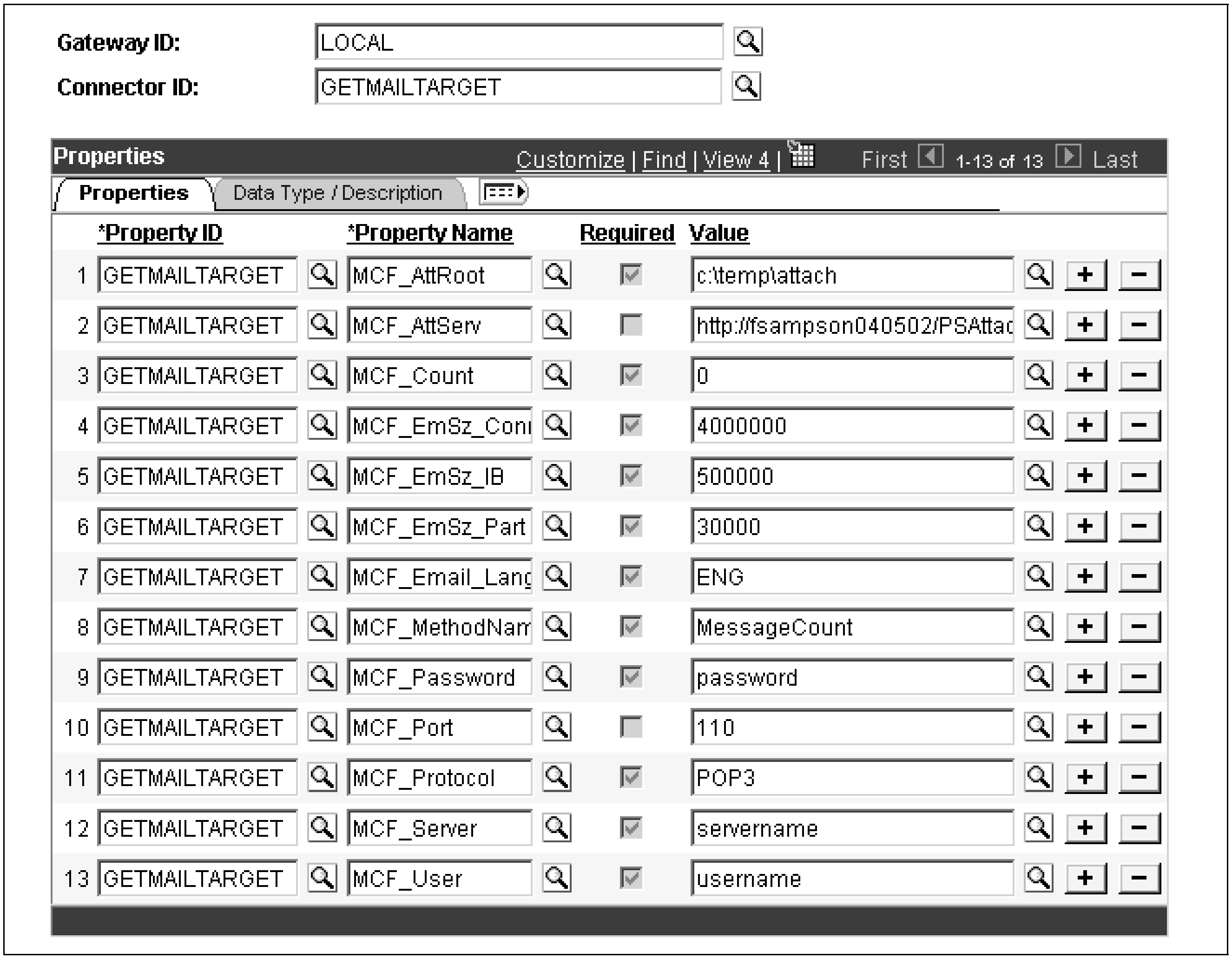
1. Create a local gateway.
2. Specify the gateway URL in the form http://<gatewayservername>/PSIGW/PeopleSoftListeningConnector, where <gatewayservername> is the fully qualified host name for the gateway machine.

   For example, http://host1.peoplesoft.com/PSIGW/PeopleSoftListeningConnector.
3. Save the page.
4. Click Load.

   The connector properties appear.
5. Save the page again.
6. Configure the GETMAILTARGET connector properties.

Configuring GETMAILTARGET Properties

Access the Connectors page.



Connectors page

Configure GETMAILTARGET connector properties on the MCF_GETMAIL node. You can also set threshold values for email routed to the attachment repository.

The following table lists node properties:

Property Name	Default Value	Description
MCF_AttRoot	None	Defines the location of the attachment repository on the gateway. For example, if the attachment root is c:\temp\, then attachments for emails addressed to user name *support* are downloaded to c:\temp\<mail server host name>\<mailbox>. All email attachments, and email parts not of the type text/plain, are always written to the attachment repository. A relative URL is returned to the application that allows the application to access the attachment. Attachment security is managed at a user and role level using the PT_MCF_EMAIL application package.
MCF_AttServ	http://<machine_ name>.<domain_name> /PSAttachServlet/ps/	Defines the location of the MCF attachment repository servlet, located on the gateway web server. Attachment relative URLs are appended to this address to create a fully qualified URL to reference an attachment in the repository. **Note.** If your web server is installed with a PeopleSoft Pure Internet Architecture site name other than *ps*, include the site name in the specified path.
MCF_Count	0	Defines the default number of emails retrieved from the mail server unless otherwise specified in the SyncRequest. The PeopleSoft MultiChannel Framework email application package always specifies the number of emails to be retrieved and does not reference this property.

Property Name	Default Value	Description
MCF_EmSz_Conn	4000000	Defines the connector threshold, in bytes. This parameter ensures that emails retrieved from a POP3 mail server do not exceed the available memory on the gateway server. Email content retrieved from IMAP4 servers can be streamed to a file on the attachment repository, but content retrieved from POP3 servers must first be read into memory before being written to a file. Therefore, the MCF_EmSz_Conn threshold can be set very high for IMAP4 mail servers. PeopleSoft MultiChannel Framework does not process an email if its size is greater than this value. The status returned to the application is *1*. The triggering email is neither downloaded nor deleted from the mail server. Only the email header is returned to the application. See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Mail Classes”.
MCF_EmSz_IB	500000	Defines the PeopleSoft Integration Broker threshold, in bytes. This is the maximum size message that the GETMAILTARGET connector can send through PeopleSoft Integration Broker. The purpose of this threshold is to ensure that retrieved emails do not exceed the available memory on the gateway server and that the server running the application that requested the emails. A PeopleSoft Integration Broker message can contain one or more emails, depending on the number of emails the application retrieves per message. As soon as this threshold is reached, the remainder of the triggering email is written to the repository, and no more emails are retrieved. Emails fetched prior to the triggering email are returned normally. The triggering email is returned with a return status of *2*, indicating that some of its parts were written to the repository. See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Mail Classes”.
MCF_EmSz_Part	30000	Defines the text part threshold, in bytes. If any text part of an email exceeds this value , the part is routed to the attachment repository. This ensures that excessively large objects of text are not written to the database. For databases with limitations on the maximum size of rows or long text field lengths, this value must be lower than that limit to avoid SQL errors when saving emails.

Property Name	Default Value	Description
MCF_Email_Lang_CD	ENG	Defines the expected language of emails downloaded by this node. This code is included in the email header returned to the application. Configure a node for each language you expect to handle, because Simple Mail Transfer Protocol (SMTP) mail servers and clients do not guarantee correct identification of the email’s language when creating an email.
MCF_MethodName	MessageCount	Defines the methods associated with the application class package. The defined method is the default method used unless otherwise specified in the SyncRequest. The email application package always specifies the method to be used and does not reference this property. See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Mail Classes”.
MCF_Password	None	Defines the default password for the mailbox unless otherwise specified in the SyncRequest. See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Mail Classes”.
MCF_Port	110	Defines the mail server port to be used. By default, POP3 servers use port 110 and IMAP4 servers use port 143. Confirm the port number with your system administrator and set it accordingly here.
MCF_Protocol	POP3	Defines the protocol used by the connector to access emails on the mail server. Supported values are POP3 or IMAP4.
MCF_Server	None	Defines the fully qualified host name of the mail server. This is the default fully qualified host name of the mail server, unless otherwise specified in the SyncRequest. For example, bigserver.peoplesoft.com. See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “Mail Classes”.

Property Name	Default Value	Description
MCF_User	None	Defines the user name for the email account (mailbox) being accessed. This is the default user name used unless otherwise specified in the SyncRequest. For example, if emails are addressed to support@peoplesoft.com, the user name is *support*.
MCF_Force_Download_ Attachments	*False*	Enables downloading attachments that might otherwise be interpreted as text. If set to True all attachments, including text/plain, irrespective of their size, are downloaded to the attachment repository. This property enables reading of non-ASCII attachments.

Note. The POP3 and IMAP4 email protocols calculate message size differently. POP3 does not include header size, but IMAP4 does. As a result, message sizes affecting thresholds behave differently depending on the protocol used.

Note. Multipurpose Internet Mail Extensions (MIME), is an Internet standard for representing multipart and multimedia data in email so that they can be exchanged between different email systems. The parts may be nested. PeopleSoft embeds the Sun JavaMail API to implement support for the MIME standard. However, all parts of an email are represented in PeopleSoft as level 1 rowsets, regardless of whatever hierarchy existed in the original email. Email clients determine the MIME format of the emails sent from them, so identical email content sent from different email clients may have a different MIME structures.

Demonstrating the Email Channel

This section discusses how to:

- Use the GetMail - Server page.
- Use the MailStore - DB page.

PeopleSoft provides email sample pages to demonstrate functionality of the PT_ MCF_MAIL application package.

Note. The email sample pages are not intended for any purpose other than demonstration and troubleshooting.

The email sample pages can be also used to test the configuration of your integration gateway and MCF_GETMAIL node.

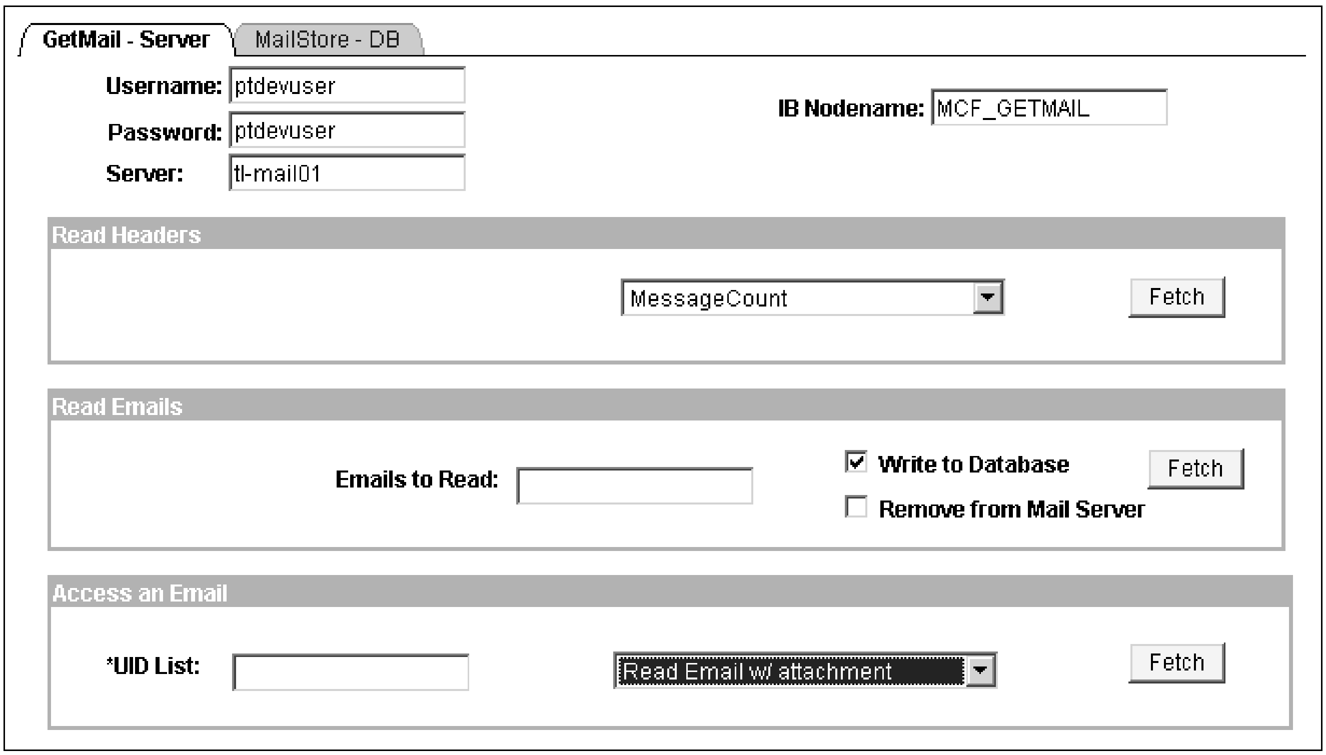
Note. Using the email sample pages requires access to a mail server.

Pages Used to Use Email Sample Pages

Page Name	Object Name	Navigation	Usage
GetMail - Server	MCFGETMAIL_PG	PeopleTools, MultiChannel Framework, Email, Sample Pages, GetMail - Server	Demonstrate GetMail functionality.
MailStore - DB	MCFMAILSTORE_PG	PeopleTools, MultiChannel Framework, Email, Samples Pages, MailStore - DB	Demonstrate MailStore functionality.

Using the GetMail - Server Page

Access the GetMail - Server page.



GetMail - Server page

This page demonstrates reading or deleting emails from the mail server. It also demonstrates the storage and retrieval of emails to and from the database tables. Output of the response to each of the requests is written to a file at %PS_SERVDIR%/files/mcfdata.out on the application server. Check this file after each test for the output data.

To demonstrate email functionality, send an email to the user name and server that you specify on the GetMail - Server page.

Username and **Password**	Specify a valid username and password for an account on the mail server.
Server	Specify the mail server.
IB Nodename(integration broker node name)	Specify the PeopleSoft Integration Broker node used to access email from the mail server.

The default is MCF_GETMAIL

Read Headers

Specify the method to be called, then click Fetch. Select from:

- *Message Count:*Writes the number of emails in the specified mailbox to the output file mcfdata.out.
- *ReadHeadersWithAttach:*Writes headers and attachment information for all emails in the specified mailbox to the output file mcfdata.out.

Emails to Read

Specify the number of emails to retrieve from the specified mailbox and write to the output file mcfdata.out.

Write to Database

Select to have the retrieved emails written to the database as well as to the output file mcfdata.out.

Remove from Mail Server

Select to delete emails from the mail server after they have been retrieved .

UID List(unique identifier list)

Specify the unique ID of an email to be retrieved or deleted. To delete, you can enter a comma-delimited list of unique email IDs (UID) to be deleted.

Each email has a unique number (the UID) associated with it that is permanently guaranteed not to refer to any other email in the mailbox. To find the UID of an email, run the *ReadHeadersWith Attach* option first, which returns the UID for each email. If an invalid UID is specified, one empty row is returned.

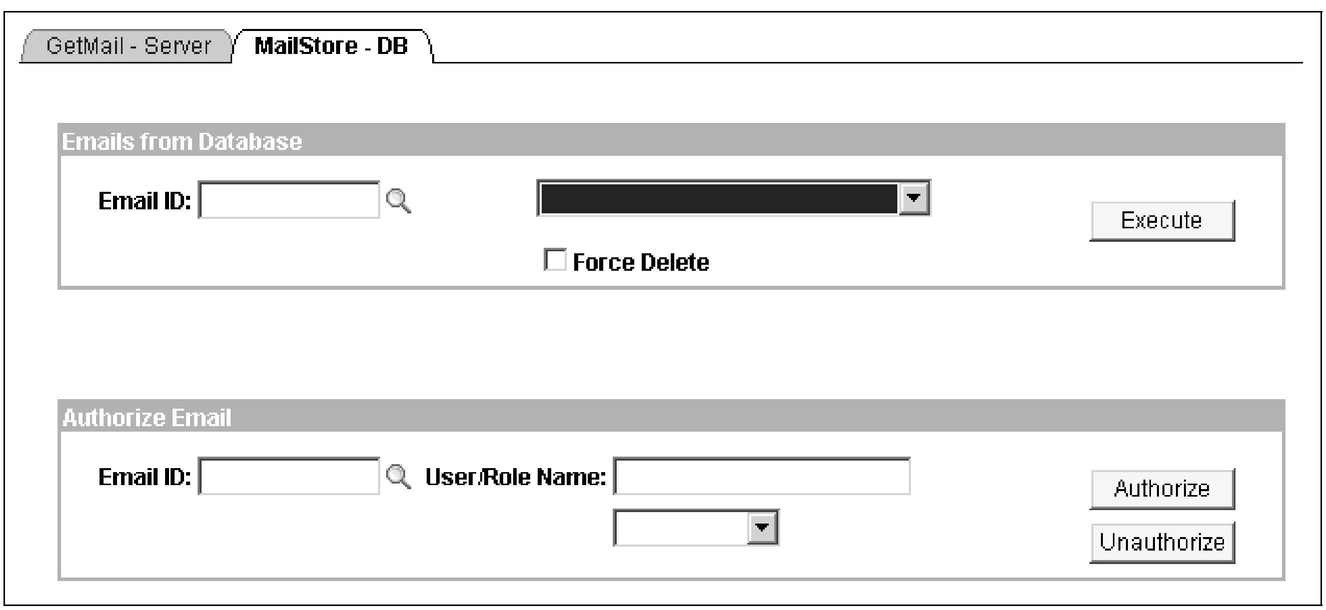
Access an Email

Select from:

- *Read Email w/ attachment:*Retrieves the specified email from the specified mailbox and writes it to the output file mcfdata.out.
- *Remove Message*Deletes the specified email from the specified mailbox.

Using the MailStore - DB Page

Access the MailStore - DB page.



MailStore - DB page

View an example of how to access emails from the database (how to retrieve and delete email) and how to authorize email attachments for viewing or deletion using the PT_MCF_MAIL application package provided with PeopleSoft MultiChannel Framework.

Email ID

Specify the PeopleSoft email ID (not to be confused with the UID) with which the email was saved to the database.

Emails from Database

Select a value, and then click Execute:

- *Delete Email from Database:*Deletes the specified email from the database and any corresponding attachments from the repository.
- *Retrieve Email:*Retrieves the specified email from the database and writes it to the output file mcfdata.out.

Force Delete

Select after specifying *Delete Email from Database* to force the deletion even if there is an error deleting the associated attachments from the repository.

User/Role Name

Specify a PeopleSoft user ID or role to be authorized to view the attachment associated with the selected email. Then click Authorize.

After specifying an ID or role, select *User* or *Role* from the drop-down list and click Authorize. You can also choose to unauthorize the user.

See Also

Chapter 11, “Developing for PeopleSoft MultiChannel Framework,” Using the Email Sample Page, page 119

Handling Email

This section describes some factors to consider when handling email using PeopleSoft MultiChannel Framework.

Time Zone Offsets

Set the values of email sent time timezone offset (in minutes) and receive time timezone offset (in minutes) whenever possible. The default value is 800 which indicates timezone information not available. When available the values range from +720 to -720.

Email Headers

Set the Reference IDs and Reply-To IDs whenever possible. If the email headers contain message IDs in the References and In-Reply-To sections they will be extracted.

Connector Determination of Email Size

The connector sometimes cannot determine the size of the message. In such cases the size is set to 0 and an error message is written to the gateway error log.

CHAPTER 13

Configuring Instant Messaging

This chapter discusses how to configure instant messaging in PeopleSoft MultiChannel Framework.

See Also

Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference, “MCFIMInfo Class”

Understanding Instant Messaging

PeopleSoft has extended the HTML chat functionality delivered in PeopleTools 8.42 to popular instant messaging networks. Users can initiate an outbound chat with a customer using instant messaging networks such as AOL Instant Messenger, IBM/Lotus Sametime, or Yahoo! Messenger. This enables an external user to participate in a business transaction through instant messaging.

PeopleSoft MultiChannel Framework enables instant messaging through public networks (AOL Instant Messenger and Yahoo! Messenger) and through an enterprise Lotus Sametime Connect network.

You can enable a user to initiate an instant messaging session from any page using either a button or PeopleCode.

PeopleSoft does not supply the client for any supported instant messaging software. Each user must install the appropriate client software. However, presence detection for AOL Instant Messenger and Yahoo! Messenger users functions even without installed client software.

Note. The instant messaging presence detection integration in PeopleTools (the “IM Integration”) is subject to the respective IM vendor’s network availability. In addition, the IM Integration is based on protocols made available by the respective IM Network vendors. Such protocols are subject to change at any time by the vendor. Therefore, PeopleSoft is not responsible for the availability or performance of any of the IM Networks or for any change in an IM vendor’s protocol which may render the IM Integration inoperable.

Configuring Instant Messaging

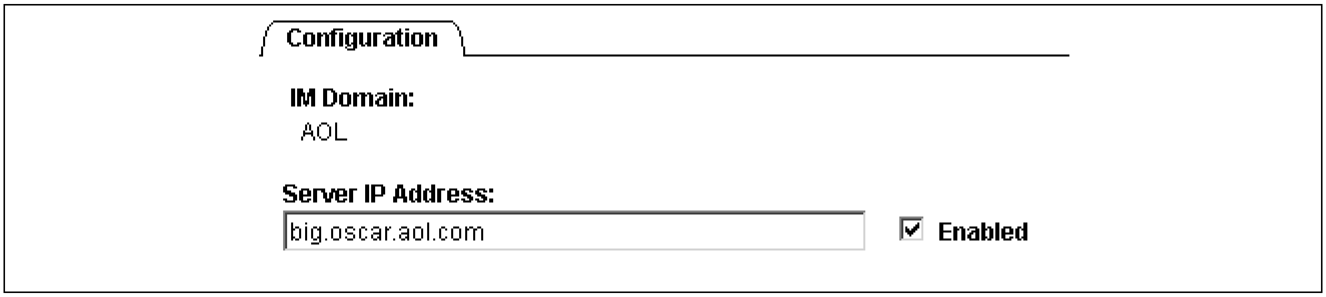
This section discusses how to configure instant messaging.

Page Used to Configure Instant Messaging

Page Name	Object Name	Navigation	Usage
Configuration	MCF_IM_CFG_PG	PeopleTools, MultiChannel Framework, Instant Messaging, Configuration	Specify or edit server IP address for instant messaging domains.

Configuring Instant Messaging

Configure instant messaging by enabling domains.



Configuration page

IM Domain The instant messaging service name.

Server IP Address The host name and port (if applicable) of the instant messaging service.

Warning! Do not alter the server address for Yahoo! or AOL.

The server addresses for Yahoo and AOL are preconfigured. However, specify the address for your Sametime Connect server.

Enabled Select Enabled to enable the configured instant messaging service.

If the enabled flag is unselected the network is still available, but the buttons will always show presence as offline.

Configuring Instant Messaging Servers

The supported public instant messaging networks, Yahoo! Messenger and AOL Instant Messenger, require installation of client software, but no server configuration. Installation and configuration of the client software is the responsibility of your administrators and customers, and is beyond the scope of this document

Lotus Sametime Connect is an instant messaging network running on an enterprise Sametime/Domino server, which must be configured to support PeopleSoft MultiChannel Framework instant messaging. To administer instant messaging with Sametime Connect, install Sametime Links and configure the server to allow anonymous users to connect to the server and query for the presence of other known users. Refer to your Lotus/Domino server documentation for more information.

Using the Instant Messaging Sample Pages

View sample implementations of instant messaging PeopleCode and buttons on the sample pages.

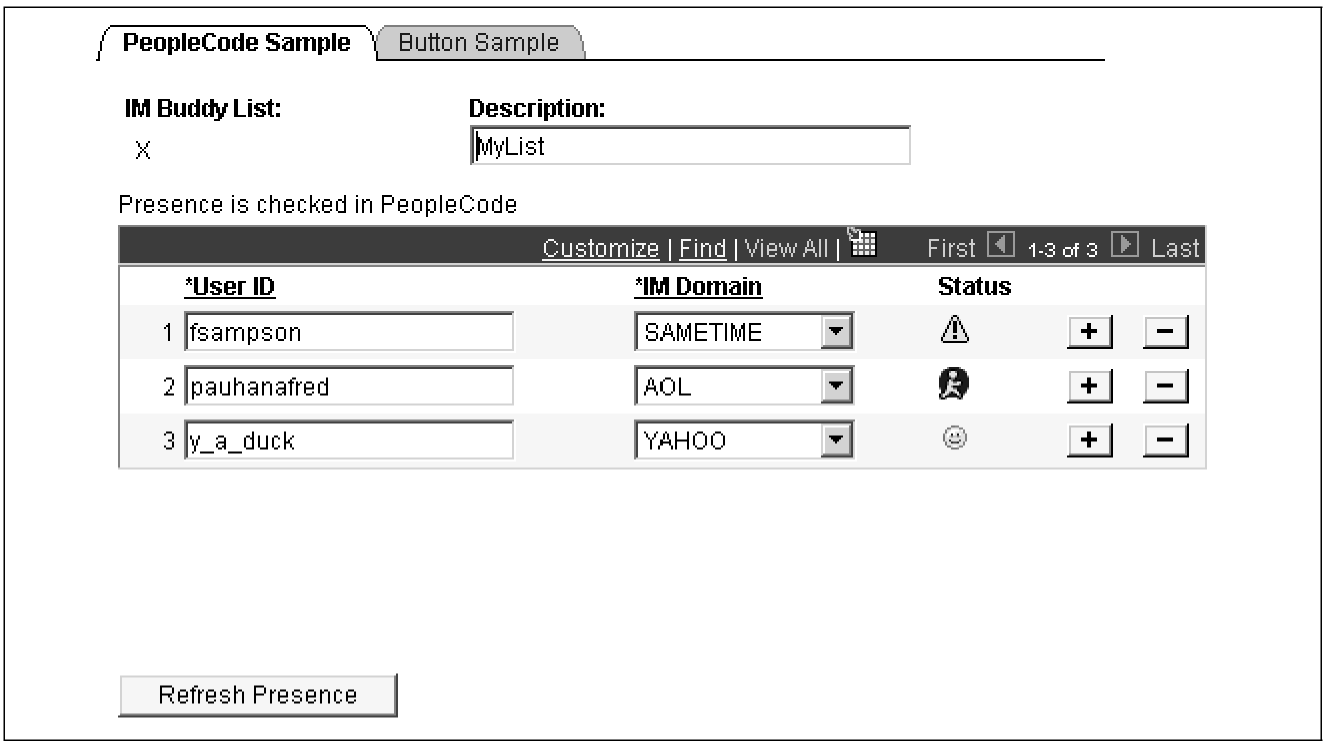
Pages Used to Test Instant Messaging

Page Name	Object Name	Navigation	Usage
PeopleCode Sample	MCF_IM_DEMO_PG	PeopleTools, MultiChannel Framework, Instant Messaging, Sample Pages, PeopleCode Sample	Set up buddy lists and view presence for configured instant messaging clients using PeopleCode.
Button Sample	MCF_IM_DEMO1_PG	PeopleTools, MultiChannel Framework, Instant Messaging, Sample Pages, Button Sample	View presence for configured instant messaging clients using the instant messaging button.

Using the PeopleCode Sample Page

The PeopleCode Sample page demonstrates the use of instant messaging PeopleCode. The sample pages are intended for demonstration purposes, and should not be used in production.

See *Enterprise PeopleTools 8.45 PeopleBook: PeopleCode API Reference*, “MCFIMInfo Class”.



PeopleCode Sample page

IM Buddy List An identifier for the list.

Description A description for the list.

User ID The user ID must be that of a valid user of the instant messaging service specified in IM Domain.

IM Domain Select the instant messaging service associated with the specified user ID from the drop-down list.

Status

An icon displays the presence status of the specified user. The icons vary with the instant messaging service.

Click the icon to initiate an instant messaging session with the selected user. The user must be online.

Note. Yahoo! and AOL do not update presence automatically. Use the Refresh Presence button to check the current status of Yahoo! and AOL users.

Refresh Presence

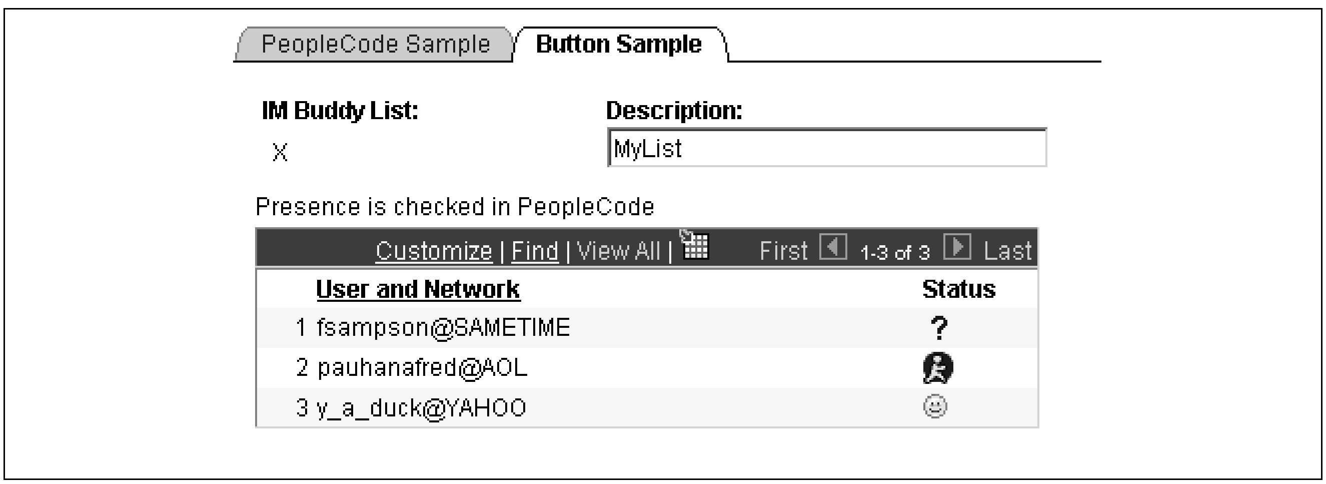
Click the Refresh Presence button to check the status of AOL and Yahoo users.

Note. PeopleCode does not support presence detection in Sametime, so the Sametime user status does not display on the PeopleCode Sample page. Use the instant messaging button if you intend to check presence of or connect to Sametime users.

Using the Button Sample Page

The Button Sample page demonstrates the use of the instant messaging button implemented in PeopleSoft Application Designer. The sample pages are intended for demonstration purposes, and should not be used in production.

See *Enterprise PeopleTools 8.45 PeopleBook: PeopleSoft Application Designer*, "Using Page Controls," Specifying Destination Types.



Button Sample page

IM Buddy List

An identifier for this list.

Description

A description for this list.

User and Network

User ID and instant messaging service ID.

Status

Presence status of the specified user.

Click the icon to initiate an instant messaging session with the selected user. You can send an instant message even if the user is not online.

APPENDIX A

ISO Country and Currency Codes

PeopleBooks use International Organization for Standardization (ISO) country and currency codes to identify country-specific information and monetary amounts.

This appendix discusses:

- ISO country codes.
- ISO currency codes.

See Also

"About These PeopleBooks Preface," Typographical Conventions and Visual Cues

ISO Country Codes

This table lists the ISO country codes that may appear as country identifiers in PeopleBooks:

ISO Country Code	Country Name
ABW	Aruba
AFG	Afghanistan
AGO	Angola
AIA	Anguilla
ALB	Albania
AND	Andorra
ANT	Netherlands Antilles
ARE	United Arab Emirates
ARG	Argentina
ARM	Armenia
ASM	American Samoa
ATA	Antarctica

ISO Country Code	Country Name
ATF	French Southern Territories
ATG	Antigua and Barbuda
AUS	Australia
AUT	Austria
AZE	Azerbaijan
BDI	Burundi
BEL	Belgium
BEN	Benin
BFA	Burkina Faso
BGD	Bangladesh
BGR	Bulgaria
BHR	Bahrain
BHS	Bahamas
BIH	Bosnia and Herzegovina
BLR	Belarus
BLZ	Belize
BMU	Bermuda
BOL	Bolivia
BRA	Brazil
BRB	Barbados
BRN	Brunei Darussalam
BTN	Bhutan
BVT	Bouvet Island
BWA	Botswana
CAF	Central African Republic
CAN	Canada
CCK	Cocos (Keeling) Islands

ISO Country Code	Country Name
CHE	Switzerland
CHL	Chile
CHN	China
CIV	Cote D'Ivoire
CMR	Cameroon
COD	Congo, The Democratic Republic
COG	Congo
COK	Cook Islands
COL	Colombia
COM	Comoros
CPV	Cape Verde
CRI	Costa Rica
CUB	Cuba
CXR	Christmas Island
CYM	Cayman Islands
CYP	Cyprus
CZE	Czech Republic
DEU	Germany
DJI	Djibouti
DMA	Dominica
DNK	Denmark
DOM	Dominican Republic
DZA	Algeria
ECU	Ecuador
EGY	Egypt
ERI	Eritrea
ESH	Western Sahara

ISO Country Code	Country Name
ESP	Spain
EST	Estonia
ETH	Ethiopia
FIN	Finland
FJI	Fiji
FLK	Falkland Islands (Malvinas)
FRA	France
FRO	Faroe Islands
FSM	Micronesia, Federated States
GAB	Gabon
GBR	United Kingdom
GEO	Georgia
GHA	Ghana
GIB	Gibraltar
GIN	Guinea
GLP	Guadeloupe
GMB	Gambia
GNB	Guinea-Bissau
GNQ	Equatorial Guinea
GRC	Greece
GRD	Grenada
GRL	Greenland
GTM	Guatemala
GUF	French Guiana
GUM	Guam
GUY	Guyana
GXA	GXA - GP Core Country

ISO Country Code	Country Name
GXB	GXB - GP Core Country
GXC	GXC - GP Core Country
GXD	GXD - GP Core Country
HKG	Hong Kong
HMD	Heard and McDonald Islands
HND	Honduras
HRV	Croatia
HTI	Haiti
HUN	Hungary
IDN	Indonesia
IND	India
IOT	British Indian Ocean Territory
IRL	Ireland
IRN	Iran (Islamic Republic Of)
IRQ	Iraq
ISL	Iceland
ISR	Israel
ITA	Italy
JAM	Jamaica
JOR	Jordan
JPN	Japan
KAZ	Kazakstan
KEN	Kenya
KGZ	Kyrgyzstan
KHM	Cambodia
KIR	Kiribati
KNA	Saint Kitts and Nevis

ISO Country Code	Country Name
KOR	Korea, Republic of
KWT	Kuwait
LAO	Lao People's Democratic Rep
LBN	Lebanon
LBR	Liberia
LBY	Libyan Arab Jamahiriya
LCA	Saint Lucia
LIE	Liechtenstein
LKA	Sri Lanka
LSO	Lesotho
LTU	Lithuania
LUX	Luxembourg
LVA	Latvia
MAC	Macao
MAR	Morocco
MCO	Monaco
MDA	Moldova, Republic of
MDG	Madagascar
MDV	Maldives
MEX	Mexico
MHL	Marshall Islands
MKD	Fmr Yugoslav Rep of Macedonia
MLI	Mali
MLT	Malta
MMR	Myanmar
MNG	Mongolia
MNP	Northern Mariana Islands

ISO Country Code	Country Name
MOZ	Mozambique
MRT	Mauritania
MSR	Montserrat
MTQ	Martinique
MUS	Mauritius
MWI	Malawi
MYS	Malaysia
MYT	Mayotte
NAM	Namibia
NCL	New Caledonia
NER	Niger
NFK	Norfolk Island
NGA	Nigeria
NIC	Nicaragua
NIU	Niue
NLD	Netherlands
NOR	Norway
NPL	Nepal
NRU	Nauru
NZL	New Zealand
OMN	Oman
PAK	Pakistan
PAN	Panama
PCN	Pitcairn
PER	Peru
PHL	Philippines
PLW	Palau

ISO Country Code	Country Name
PNG	Papua New Guinea
POL	Poland
PRI	Puerto Rico
PRK	Korea, Democratic People's Rep
PRT	Portugal
PRY	Paraguay
PSE	Palestinian Territory, Occupie
PYF	French Polynesia
QAT	Qatar
REU	Reunion
ROU	Romania
RUS	Russian Federation
RWA	Rwanda
SAU	Saudi Arabia
SDN	Sudan
SEN	Senegal
SGP	Singapore
SGS	Sth Georgia & Sth Sandwich Is
SHN	Saint Helena
SJM	Svalbard and Jan Mayen
SLB	Solomon Islands
SLE	Sierra Leone
SLV	El Salvador
SMR	San Marino
SOM	Somalia
SPM	Saint Pierre and Miquelon
STP	Sao Tome and Principe

ISO Country Code	Country Name
SUR	Suriname
SVK	Slovakia
SVN	Slovenia
SWE	Sweden
SWZ	Swaziland
SYC	Seychelles
SYR	Syrian Arab Republic
TCA	Turks and Caicos Islands
TCD	Chad
TGO	Togo
THA	Thailand
TJK	Tajikistan
TKL	Tokelau
TKM	Turkmenistan
TLS	East Timor
TON	Tonga
TTO	Trinidad and Tobago
TUN	Tunisia
TUR	Turkey
TUV	Tuvalu
TWN	Taiwan, Province of China
TZA	Tanzania, United Republic of
UGA	Uganda
UKR	Ukraine
UMI	US Minor Outlying Islands
URY	Uruguay
USA	United States

ISO Country Code	Country Name
UZB	Uzbekistan
VAT	Holy See (Vatican City State)
VCT	St Vincent and the Grenadines
VEN	Venezuela
VGB	Virgin Islands (British)
VIR	Virgin Islands (U.S.)
VNM	Viet Nam
VUT	Vanuatu
WLF	Wallis and Futuna Islands
WSM	Samoa
YEM	Yemen
YUG	Yugoslavia
ZAF	South Africa
ZMB	Zambia
ZWE	Zimbabwe

ISO Currency Codes

This table lists the ISO country codes that may appear as currency identifiers in PeopleBooks:

ISO Currency Code	Description
ADP	Andorran Peseta
AED	United Arab Emirates Dirham
AFA	Afghani
AFN	Afghani
ALK	Old Lek
ALL	Lek
AMD	Armenian Dram

ISO Currency Code	Description
ANG	Netherlands Antilles Guilder
AOA	Kwanza
AOK	Kwanza
AON	New Kwanza
AOR	Kwanza Reajustado
ARA	Austral
ARP	Peso Argentino
ARS	Argentine Peso
ARY	Peso
ATS	Schilling
AUD	Australian Dollar
AWG	Aruban Guilder
AZM	Azerbaijanian Manat
BAD	Dinar
BAM	Convertible Marks
BBD	Barbados Dollar
BDT	Taka
BEC	Convertible Franc
BEF	Belgian Franc
BEL	Financial Belgian Franc
BGJ	Lev A/52
BGK	Lev A/62
BGL	Lev
BGN	Bulgarian LEV
BHD	Bahraini Dinar
BIF	Burundi Franc
BMD	Bermudian Dollar

ISO Currency Code	Description
BND	Brunei Dollar
BOB	Boliviano
BOP	Peso
BOV	Mvdol
BRB	Cruzeiro
BRC	Cruzado
BRE	Cruzeiro
BRL	Brazilian Real
BRN	New Cruzado
BRR	Brazilian Real Dollar
BSD	Bahamian Dollar
BTN	Ngultrum
BUK	N/A
BWP	Pula
BYB	Belarussian Ruble
BYR	Belarussian Ruble
BZD	Belize Dollar
CAD	Canadian Dollar
CDF	Franc Congolais
CHF	Swiss Franc
CLF	Unidades de fomento
CLP	Chilean Peso
CNX	Peoples Bank Dollar
CNY	Yuan Renminbi
COP	Colombian Peso
CRC	Costa Rican Colon
CSD	Serbia Dinar

ISO Currency Code	Description
CSJ	Krona A/53
CSK	Koruna
CUP	Cuban Peso
CVE	Cape Verde Escudo
CYP	Cyprus Pound
CZK	Czech Koruna
DEM	Deutsche Mark
DJF	Djibouti Franc
DKK	Danish Krone
DOP	Dominican Peso
DZD	Algerian Dinar
ECS	Sucre
ECV	Unidad de Valor
EEK	Kroon
EGP	Egyptian Pound
EQE	Ekwele
ERN	Nakfa
ESA	Spanish Peseta
ESB	Convertible Peseta
ESP	Spanish Peseta
ETB	Ethiopian Birr
EUR	euro
FIM	Markka
FJD	Fiji Dollar
FKP	Falklands Isl. Pound
FRF	French Franc
GBP	Pound Sterling

ISO Currency Code	Description
GEK	Georgian Coupon
GEL	Lari
GHC	Cedi
GIP	Gibraltar Pound
GMD	Dalasi
GNE	Syli
GNF	Guinea Franc
GNS	Syli
GQE	Ekwele
GRD	Drachma
GTQ	Quetzal
GWE	Guinea Escudo
GWP	Guinea-Bissau Peso
GYD	Guyana Dollar
HKD	Hong Kong Dollar
HNL	Lempira
HRD	Dinar
HRK	Kuna
HTG	Gourde
HUF	Forint
IDR	Rupiah
IEP	Irish Pound
ILP	Pound
ILR	Old Shekel
ILS	New Israeli Sheqel
INR	Indian Rupee
IQD	Iraqi Dinar

ISO Currency Code	Description
IRR	Iranian Rial
ISJ	Old Krona
ISK	Iceland Krona
ITL	Italian Lira
JMD	Jamaican Dollar
JOD	Jordanian Dinar
JPY	Yen
KES	Kenyan Shilling
KGS	Som
KHR	Riel
KMF	Comoro Franc
KPW	North Korean Won
KRW	Won
KWD	Kuwaiti Dinar
KYD	Cayman Islands dollar
KZT	Tenge
LAJ	Kip Pot Pol
LAK	Kip
LBP	Lebanese Pound
LKR	Sri Lanka Rupee
LRD	Liberian Dollar
LSL	Loti
LSM	Maloti
LTL	Lithuanian Litas
LTT	Talonas
LUC	Convertib Francl
LUF	Luxembourg Franc

ISO Currency Code	Description
LUL	Financial Franc
LVL	Latvian Lats
LVR	Latvian Ruble
LYD	Libyan Dinar
MAD	Moroccan Dirham
MAF	Mali Franc
MDL	Moldovan Leu
MGF	Malagasy Franc
MKD	Denar
MLF	Mali Franc
MMK	Kyat
MNT	Tugrik
MOP	Pataca
MRO	Ouguiya
MTL	Maltese Lira
MTP	Maltese Pound
MUR	Mauritius Rupee
MVQ	Maldive Rupee
MVR	Rufiyaa
MWK	Malawian Kwacha
MXN	Mexican Peso
MXP	Mexican Peso
MXV	Mexican UDI
MYR	Malaysian Ringgit
MZE	Mozambique Escudo
MZM	Metical
NAD	Namibia Dollar

ISO Currency Code	Description
NGN	Naira
NIC	Cordoba
NIO	Cordoba Oro
NLG	Netherlands Guilder
NOK	Norwegian Krone
NPR	Nepalese Rupee
NZD	New Zealand Dollar
OMR	Rial Omani
PAB	Balboa
PEI	Inti
PEN	Nuevo Sol
PES	Sol
PGK	Kina
PHP	Philippine Peso
PKR	Pakistan Rupee
PLN	Zloty
PLZ	Zloty
PTE	Portuguese Escudo
PYG	Guarani
QAR	Qatari Rial
ROK	Leu A/52
ROL	Leu
RUB	Russian Ruble
RUR	Russian Federation Rouble
RWF	Rwanda Franc
SAR	Saudi Riyal
SBD	Solomon Islands

ISO Currency Code	Description
SCR	Seychelles Rupee
SDD	Sudanese Dinar
SDP	Sudanese Pound
SEK	Swedish Krona
SGD	Singapore Dollar
SHP	St Helena Pound
SIT	Tolar
SKK	Slovak Koruna
SLL	Leone
SOS	Somali Shilling
SRG	Surinam Guilder
STD	Dobra
SUR	Rouble
SVC	El Salvador Colon
SYP	Syrian Pound
SZL	Lilangeni
THB	Baht
TJR	Tajik Ruble
TJS	Somoni
TMM	Manat
TND	Tunisian Dinar
TOP	Pa’anga
TPE	Timor Escudo
TRL	Turkish Lira
TTD	Trinidad Dollar
TWD	New Taiwan Dollar
TZS	Tanzanian Shilling

ISO Currency Code	Description
UAH	Hryvnia
UAK	Karbovanet
UGS	Uganda Shilling
UGW	Old Shilling
UGX	Uganda Shilling
USD	US Dollar
USN	US Dollar (Next day)
USS	US Dollar (Same day)
UYN	Old Uruguay Peso
UYP	Uruguayan Peso
UYU	Peso Uruguayo
UZS	Uzbekistan Sum
VEB	Bolivar
VNC	Old Dong
VND	Dong
VUV	Vatu
WST	Tala
XAF	CFA Franc BEAC
XAG	Silver
XAU	GOLD
XBA	European Composite Unit
XBB	European Monetary Unit
XBC	European Unit of Account 9
XBD	European Unit of Account 17
XCD	East Caribbean Dollar
XDR	SDR
XEU	EU Currency (E.C.U)

ISO Currency Code	Description
XFO	Gold-Franc
XFU	UIC-Franc
XOF	CFA Franc BCEAO
XPD	Palladium
XPF	CFP Franc
XPT	Platinum
XTS	For Testing Purposes
XXX	Non Currency Transaction
YDD	Yemeni Din
YER	Yemeni Rial
YUD	New Yugoslavian Dinar
YUM	New Dinar
YUN	Yugoslavian Dinar
ZAL	Financial Rand
ZAR	Rand
ZMK	Zambian Kwacha
ZRN	New Zaire
ZRZ	Zaire
ZWC	Rhodesian Dollar
ZWD	Zimbabwe Dollar

Glossary of PeopleSoft Terms

absence entitlement — This element defines rules for granting paid time off for valid absences, such as sick time, vacation, and maternity leave. An absence entitlement element defines the entitlement amount, frequency, and entitlement period.

absence take — This element defines the conditions that must be met before a payee is entitled to take paid time off.

accounting class — In PeopleSoft Enterprise Performance Management, the accounting class defines how a resource is treated for generally accepted accounting practices. The Inventory class indicates whether a resource becomes part of a balance sheet account, such as inventory or fixed assets, while the Non-inventory class indicates that the resource is treated as an expense of the period during which it occurs.

accounting date — The accounting date indicates when a transaction is recognized, as opposed to the date the transaction actually occurred. The accounting date and transaction date can be the same. The accounting date determines the period in the general ledger to which the transaction is to be posted. You can only select an accounting date that falls within an open period in the ledger to which you are posting. The accounting date for an item is normally the invoice date.

accounting split — The accounting split method indicates how expenses are allocated or divided among one or more sets of accounting ChartFields.

accumulator — You use an accumulator to store cumulative values of defined items as they are processed. You can accumulate a single value over time or multiple values over time. For example, an accumulator could consist of all voluntary deductions, or all company deductions, enabling you to accumulate amounts. It allows total flexibility for time periods and values accumulated.

action reason — The reason an employee's job or employment information is updated. The action reason is entered in two parts: a personnel action, such as a promotion, termination, or change from one pay group to another—and a reason for that action. Action reasons are used by PeopleSoft Human Resources, PeopleSoft Benefits Administration, PeopleSoft Stock Administration, and the COBRA Administration feature of the Base Benefits business process.

action template — In PeopleSoft Receivables, outlines a set of escalating actions that the system or user performs based on the period of time that a customer or item has been in an action plan for a specific condition.

activity — In PeopleSoft Enterprise Learning Management, an instance of a catalog item (sometimes called a class) that is available for enrollment. The activity defines such things as the costs that are associated with the offering, enrollment limits and deadlines, and waitlisting capacities.

In PeopleSoft Enterprise Performance Management, the work of an organization and the aggregation of actions that are used for activity-based costing.

In PeopleSoft Project Costing, the unit of work that provides a further breakdown of projects—usually into specific tasks.

In PeopleSoft Workflow, a specific transaction that you might need to perform in a business process. Because it consists of the steps that are used to perform a transaction, it is also known as a step map.

agreement — In PeopleSoft eSettlements, provides a way to group and specify processing options, such as payment terms, pay from a bank, and notifications by a buyer and supplier location combination.

allocation rule — In PeopleSoft Enterprise Incentive Management, an expression within compensation plans that enables the system to assign transactions to nodes and participants. During transaction allocation, the allocation engine traverses the compensation structure from the current node to the root node, checking each node for plans that contain allocation rules.

alternate account — A feature in PeopleSoft General Ledger that enables you to create a statutory chart of accounts and enter statutory account transactions at the detail transaction level, as required for recording and reporting by some national governments.

AR specialist — Abbreviation for *receivables specialist.* In PeopleSoft Receivables, an individual in who tracks and resolves deductions and disputed items.

arbitration plan — In PeopleSoft Enterprise Pricer, defines how price rules are to be applied to the base price when the transaction is priced.

assessment rule — In PeopleSoft Receivables, a user-defined rule that the system uses to evaluate the condition of a customer’s account or of individual items to determine whether to generate a follow-up action.

asset class — An asset group used for reporting purposes. It can be used in conjunction with the asset category to refine asset classification.

attribute/value pair — In PeopleSoft Directory Interface, relates the data that makes up an entry in the directory information tree.

authentication server — A server that is set up to verify users of the system.

base time period — In PeopleSoft Business Planning, the lowest level time period in a calendar.

benchmark job — In PeopleSoft Workforce Analytics, a benchmark job is a job code for which there is corresponding salary survey data from published, third-party sources.

book — In PeopleSoft Asset Management, used for storing financial and tax information, such as costs, depreciation attributes, and retirement information on assets.

branch — A tree node that rolls up to nodes above it in the hierarchy, as defined in PeopleSoft Tree Manager.

budgetary account only — An account used by the system only and not by users; this type of account does not accept transactions. You can only budget with this account. Formerly called “system-maintained account.”

budget check — In commitment control, the processing of source transactions against control budget ledgers, to see if they pass, fail, or pass with a warning.

budget control — In commitment control, budget control ensures that commitments and expenditures don’t exceed budgets. It enables you to track transactions against corresponding budgets and terminate a document’s cycle if the defined budget conditions are not met. For example, you can prevent a purchase order from being dispatched to a vendor if there are insufficient funds in the related budget to support it.

budget period — The interval of time (such as 12 months or 4 quarters) into which a period is divided for budgetary and reporting purposes. The ChartField allows maximum flexibility to define operational accounting time periods without restriction to only one calendar.

business event — In PeopleSoft Receivables, defines the processing characteristics for the Receivable Update process for a draft activity.

In PeopleSoft Sales Incentive Management, an original business transaction or activity that may justify the creation of a PeopleSoft Enterprise Incentive Management event (a sale, for example).

business unit A corporation or a subset of a corporation that is independent with regard to one or more operational or accounting functions.

buyer In PeopleSoft eSettlements, an organization (or business unit, as opposed to an individual) that transacts with suppliers (vendors) within the system. A buyer creates payments for purchases that are made in the system.

catalog item In PeopleSoft Enterprise Learning Management, a specific topic that a learner can study and have tracked. For example, "Introduction to Microsoft Word." A catalog item contains general information about the topic and includes a course code, description, categorization, keywords, and delivery methods. A catalog item can have one or more learning activities.

catalog map In PeopleSoft Catalog Management, translates values from the catalog source data to the format of the company's catalog.

catalog partner In PeopleSoft Catalog Management, shares responsibility with the enterprise catalog manager for maintaining catalog content.

categorization Associates partner offerings with catalog offerings and groups them into enterprise catalog categories.

channel In PeopleSoft MultiChannel Framework, email, chat, voice (computer telephone integration [CTI]), or a generic event.

ChartField A field that stores a chart of accounts, resources, and so on, depending on the PeopleSoft application. ChartField values represent individual account numbers, department codes, and so forth.

ChartField balancing You can require specific ChartFields to match up (balance) on the debit and the credit side of a transaction.

ChartField combination edit The process of editing journal lines for valid ChartField combinations based on user-defined rules.

ChartKey One or more fields that uniquely identify each row in a table. Some tables contain only one field as the key, while others require a combination.

checkbook In PeopleSoft Promotions Management, enables you to view financial data (such as planned, incurred, and actual amounts) that is related to funds and trade promotions.

Class ChartField A ChartField value that identifies a unique appropriation budget key when you combine it with a fund, department ID, and program code, as well as a budget period. Formerly called *sub-classification.*

clone In PeopleCode, to make a unique copy. In contrast, to *copy* may mean making a new reference to an object, so if the underlying object is changed, both the copy and the original change.

collection To make a set of documents available for searching in Verity, you must first create at least one collection. A collection is set of directories and files that allow search application users to use the Verity search engine to quickly find and display source documents that match search criteria. A collection is a set of statistics and pointers to the source documents, stored in a proprietary format on a file server. Because a collection can only store information for a single location, PeopleSoft maintains a set of collections (one per language code) for each search index object.

collection rule	In PeopleSoft Receivables, a user-defined rule that defines actions to take for a customer based on both the amount and the number of days past due for outstanding balances.
compensation object	In PeopleSoft Enterprise Incentive Management, a node within a compensation structure. Compensation objects are the building blocks that make up a compensation structure's hierarchical representation.
compensation structure	In PeopleSoft Enterprise Incentive Management, a hierarchical relationship of compensation objects that represents the compensation-related relationship between the objects.
condition	In PeopleSoft Receivables, occurs when there is a change of status for a customer's account, such as reaching a credit limit or exceeding a user-defined balance due.
configuration parameter catalog	Used to configure an external system with PeopleSoft. For example, a configuration parameter catalog might set up configuration and communication parameters for an external server.
configuration plan	In PeopleSoft Enterprise Incentive Management, configuration plans hold allocation information for common variables (not incentive rules) and are attached to a node without a participant. Configuration plans are not processed by transactions.
content reference	Content references are pointers to content registered in the portal registry. These are typically either URLs or iScripts. Content references fall into three categories: target content, templates, and template pagelets.
context	In PeopleCode, determines which buffer fields can be contextually referenced and which is the current row of data on each scroll level when a PeopleCode program is running.
	In PeopleSoft Enterprise Incentive Management, a mechanism that is used to determine the scope of a processing run. PeopleSoft Enterprise Incentive Management uses three types of context: plan, period, and run-level.
control table	Stores information that controls the processing of an application. This type of processing might be consistent throughout an organization, or it might be used only by portions of the organization for more limited sharing of data.
cost profile	A combination of a receipt cost method, a cost flow, and a deplete cost method. A profile is associated with a cost book and determines how items in that book are valued, as well as how the material movement of the item is valued for the book.
cost row	A cost transaction and amount for a set of ChartFields.
current learning	In PeopleSoft Enterprise Learning Management, a self-service repository for all of a learner's in-progress learning activities and programs.
data acquisition	In PeopleSoft Enterprise Incentive Management, the process during which raw business transactions are acquired from external source systems and fed into the operational data store (ODS).
data elements	Data elements, at their simplest level, define a subset of data and the rules by which to group them.
	For Workforce Analytics, data elements are rules that tell the system what measures to retrieve about your workforce groups.
dataset	A data grouping that enables role-based filtering and distribution of data. You can limit the range and quantity of data that is displayed for a user by associating dataset rules with user roles. The result of dataset rules is a set of data that is appropriate for the user's roles.

delivery method In PeopleSoft Enterprise Learning Management, identifies the primary type of delivery method in which a particular learning activity is offered. Also provides default values for the learning activity, such as cost and language. This is primarily used to help learners search the catalog for the type of delivery from which they learn best. Because PeopleSoft Enterprise Learning Management is a blended learning system, it does not enforce the delivery method.

In PeopleSoft Supply Chain Management, identifies the method by which goods are shipped to their destinations (such as truck, air, rail, and so on). The delivery method is specified when creating shipment schedules.

delivery method type In PeopleSoft Enterprise Learning Management, identifies how learning activities can be delivered—for example, through online learning, classroom instruction, seminars, books, and so forth—in an organization. The type determines whether the delivery method includes scheduled components.

directory information tree In PeopleSoft Directory Interface, the representation of a directory's hierarchical structure.

document sequencing A flexible method that sequentially numbers the financial transactions (for example, bills, purchase orders, invoices, and payments) in the system for statutory reporting and for tracking commercial transaction activity.

dynamic detail tree A tree that takes its detail values—dynamic details—directly from a table in the database, rather than from a range of values that are entered by the user.

edit table A table in the database that has its own record definition, such as the Department table. As fields are entered into a PeopleSoft application, they can be validated against an edit table to ensure data integrity throughout the system.

effective date A method of dating information in PeopleSoft applications. You can predate information to add historical data to your system, or postdate information in order to enter it before it actually goes into effect. By using effective dates, you don't delete values; you enter a new value with a current effective date.

EIM ledger Abbreviation for *Enterprise Incentive Management ledger.* In PeopleSoft Enterprise Incentive Management, an object to handle incremental result gathering within the scope of a participant. The ledger captures a result set with all of the appropriate traces to the data origin and to the processing steps of which it is a result.

elimination set In PeopleSoft General Ledger, a related group of intercompany accounts that is processed during consolidations.

entry event In PeopleSoft General Ledger, Receivables, Payables, Purchasing, and Billing, a business process that generates multiple debits and credits resulting from single transactions to produce standard, supplemental accounting entries.

equitization In PeopleSoft General Ledger, a business process that enables parent companies to calculate the net income of subsidiaries on a monthly basis and adjust that amount to increase the investment amount and equity income amount before performing consolidations.

event A predefined point either in the Component Processor flow or in the program flow. As each point is encountered, the event activates each component, triggering any PeopleCode program that is associated with that component and that event. Examples of events are FieldChange, SavePreChange, and RowDelete.

In PeopleSoft Human Resources, also refers to an incident that affects benefits eligibility.

event propagation process In PeopleSoft Sales Incentive Management, a process that determines, through logic, the propagation of an original PeopleSoft Enterprise Incentive Management event and creates a derivative (duplicate) of the original event to be processed by other objects.

	Sales Incentive Management uses this mechanism to implement splits, roll-ups, and so on. Event propagation determines who receives the credit.
exception	In PeopleSoft Receivables, an item that either is a deduction or is in dispute.
exclusive pricing	In PeopleSoft Order Management, a type of arbitration plan that is associated with a price rule. Exclusive pricing is used to price sales order transactions.
fact	In PeopleSoft applications, facts are numeric data values from fields from a source database as well as an analytic application. A fact can be anything you want to measure your business by, for example, revenue, actual, budget data, or sales numbers. A fact is stored on a fact table.
forecast item	A logical entity with a unique set of descriptive demand and forecast data that is used as the basis to forecast demand. You create forecast items for a wide range of uses, but they ultimately represent things that you buy, sell, or use in your organization and for which you require a predictable usage.
fund	In PeopleSoft Promotions Management, a budget that can be used to fund promotional activity. There are four funding methods: top down, fixed accrual, rolling accrual, and zero-based accrual.
generic process type	In PeopleSoft Process Scheduler, process types are identified by a generic process type. For example, the generic process type SQR includes all SQR process types, such as SQR process and SQR report.
group	In PeopleSoft Billing and Receivables, a posting entity that comprises one or more transactions (items, deposits, payments, transfers, matches, or write-offs). In PeopleSoft Human Resources Management and Supply Chain Management, any set of records that are associated under a single name or variable to run calculations in PeopleSoft business processes. In PeopleSoft Time and Labor, for example, employees are placed in groups for time reporting purposes.
incentive object	In PeopleSoft Enterprise Incentive Management, the incentive-related objects that define and support the PeopleSoft Enterprise Incentive Management calculation process and results, such as plan templates, plans, results data, user interaction objects, and so on.
incentive rule	In PeopleSoft Sales Incentive Management, the commands that act on transactions and turn them into compensation. A rule is one part in the process of turning a transaction into compensation.
incur	In PeopleSoft Promotions Management, to become liable for a promotional payment. In other words, you owe that amount to a customer for promotional activities.
item	In PeopleSoft Inventory, a tangible commodity that is stored in a business unit (shipped from a warehouse). In PeopleSoft Demand Planning, Inventory Policy Planning, and Supply Planning, a noninventory item that is designated as being used for planning purposes only. It can represent a family or group of inventory items. It can have a planning bill of material (BOM) or planning routing, and it can exist as a component on a planning BOM. A planning item cannot be specified on a production or engineering BOM or routing, and it cannot be used as a component in a production. The quantity on hand will never be maintained. In PeopleSoft Receivables, an individual receivable. An item can be an invoice, a credit memo, a debit memo, a write-off, or an adjustment.
KPI	An abbreviation for *key performance indicator.* A high-level measurement of how well an organization is doing in achieving critical success factors. This defines the data value or calculation upon which an assessment is determined.

LDIF file
Abbreviation for *Lightweight Directory Access Protocol (LDAP) Data Interchange Format file.* Contains discrepancies between PeopleSoft data and directory data.

learner group
In PeopleSoft Enterprise Learning Management, a group of learners who are linked to the same learning environment. Members of the learner group can share the same attributes, such as the same department or job code. Learner groups are used to control access to and enrollment in learning activities and programs. They are also used to perform group enrollments and mass enrollments in the back office.

learning components
In PeopleSoft Enterprise Learning Management, the foundational building blocks of learning activities. PeopleSoft Enterprise Learning Management supports six basic types of learning components: web-based, session, webcast, test, survey, and assignment. One or more of these learning component types compose a single learning activity.

learning environment
In PeopleSoft Enterprise Learning Management, identifies a set of categories and catalog items that can be made available to learner groups. Also defines the default values that are assigned to the learning activities and programs that are created within a particular learning environment. Learning environments provide a way to partition the catalog so that learners see only those items that are relevant to them.

learning history
In PeopleSoft Enterprise Learning Management, a self-service repository for all of a learner's completed learning activities and programs.

ledger mapping
You use ledger mapping to relate expense data from general ledger accounts to resource objects. Multiple ledger line items can be mapped to one or more resource IDs. You can also use ledger mapping to map dollar amounts (referred to as *rates*) to business units. You can map the amounts in two different ways: an actual amount that represents actual costs of the accounting period, or a budgeted amount that can be used to calculate the capacity rates as well as budgeted model results. In PeopleSoft Enterprise Warehouse, you can map general ledger accounts to the EW Ledger table.

library section
In PeopleSoft Enterprise Incentive Management, a section that is defined in a plan (or template) and that is available for other plans to share. Changes to a library section are reflected in all plans that use it.

linked section
In PeopleSoft Enterprise Incentive Management, a section that is defined in a plan template but appears in a plan. Changes to linked sections propagate to plans using that section.

linked variable
In PeopleSoft Enterprise Incentive Management, a variable that is defined and maintained in a plan template and that also appears in a plan. Changes to linked variables propagate to plans using that variable.

load
In PeopleSoft Inventory, identifies a group of goods that are shipped together. Load management is a feature of PeopleSoft Inventory that is used to track the weight, the volume, and the destination of a shipment.

local functionality
In PeopleSoft HRMS, the set of information that is available for a specific country. You can access this information when you click the appropriate country flag in the global window, or when you access it by a local country menu.

location
Locations enable you to indicate the different types of addresses—for a company, for example, one address to receive bills, another for shipping, a third for postal deliveries, and a separate street address. Each address has a different location number. The primary location—indicated by a *1*—is the address you use most often and may be different from the main address.

logistical task
In PeopleSoft Services Procurement, an administrative task that is related to hiring a service provider. Logistical tasks are linked to the service type on the work order so that different types of services can have different logistical tasks. Logistical tasks include both preapproval tasks (such as assigning a new badge or ordering a new

laptop) and postapproval tasks (such as scheduling orientation or setting up the service provider email). The logistical tasks can be mandatory or optional. Mandatory preapproval tasks must be completed before the work order is approved. Mandatory postapproval tasks, on the other hand, must be completed before a work order is released to a service provider.

market template In PeopleSoft Enterprise Incentive Management, additional functionality that is specific to a given market or industry and is built on top of a product category.

match group In PeopleSoft Receivables, a group of receivables items and matching offset items. The system creates match groups by using user-defined matching criteria for selected field values.

MCF server Abbreviation for *PeopleSoft MultiChannel Framework server.* Comprises the universal queue server and the MCF log server. Both processes are started when *MCF Servers* is selected in an application server domain configuration.

merchandising activity In PeopleSoft Promotions Management, a specific discount type that is associated with a trade promotion (such as off-invoice, billback or rebate, or lump-sum payment) that defines the performance that is required to receive the discount. In the industry, you may know this as an offer, a discount, a merchandising event, an event, or a tactic.

meta-SQL Meta-SQL constructs expand into platform-specific Structured Query Language (SQL) substrings. They are used in functions that pass SQL strings, such as in SQL objects, the SQLExec function, and PeopleSoft Application Engine programs.

metastring Metastrings are special expressions included in SQL string literals. The metastrings, prefixed with a percent (%) symbol, are included directly in the string literals. They expand at run time into an appropriate substring for the current database platform.

multibook In PeopleSoft General Ledger, multiple ledgers having multiple-base currencies that are defined for a business unit, with the option to post a single transaction to all base currencies (all ledgers) or to only one of those base currencies (ledgers).

multicurrency The ability to process transactions in a currency other than the business unit's base currency.

national allowance In PeopleSoft Promotions Management, a promotion at the corporate level that is funded by nondiscretionary dollars. In the industry, you may know this as a national promotion, a corporate promotion, or a corporate discount.

node-oriented tree A tree that is based on a detail structure, but the detail values are not used.

pagelet Each block of content on the home page is called a pagelet. These pagelets display summary information within a small rectangular area on the page. The pagelet provide users with a snapshot of their most relevant PeopleSoft and non-PeopleSoft content.

participant In PeopleSoft Enterprise Incentive Management, participants are recipients of the incentive compensation calculation process.

participant object Each participant object may be related to one or more compensation objects.

See also *compensation object*.

partner A company that supplies products or services that are resold or purchased by the enterprise.

pay cycle In PeopleSoft Payables, a set of rules that define the criteria by which it should select scheduled payments for payment creation.

pending item In PeopleSoft Receivables, an individual receivable (such as an invoice, a credit memo, or a write-off) that has been entered in or created by the system, but hasn't been posted.

PeopleCode	PeopleCode is a proprietary language, executed by the PeopleSoft application processor. PeopleCode generates results based upon existing data or user actions. By using business interlink objects, external services are available to all PeopleSoft applications wherever PeopleCode can be executed.
PeopleCode event	An action that a user takes upon an object, usually a record field, that is referenced within a PeopleSoft page.
PeopleSoft Internet Architecture	The fundamental architecture on which PeopleSoft 8 applications are constructed, consisting of a relational database management system (RDBMS), an application server, a web server, and a browser.
performance measurement	In PeopleSoft Enterprise Incentive Management, a variable used to store data (similar to an aggregator, but without a predefined formula) within the scope of an incentive plan. Performance measures are associated with a plan calendar, territory, and participant. Performance measurements are used for quota calculation and reporting.
period context	In PeopleSoft Enterprise Incentive Management, because a participant typically uses the same compensation plan for multiple periods, the period context associates a plan context with a specific calendar period and fiscal year. The period context references the associated plan context, thus forming a chain. Each plan context has a corresponding set of period contexts.
plan	In PeopleSoft Sales Incentive Management, a collection of allocation rules, variables, steps, sections, and incentive rules that instruct the PeopleSoft Enterprise Incentive Management engine in how to process transactions.
plan context	In PeopleSoft Enterprise Incentive Management, correlates a participant with the compensation plan and node to which the participant is assigned, enabling the PeopleSoft Enterprise Incentive Management system to find anything that is associated with the node and that is required to perform compensation processing. Each participant, node, and plan combination represents a unique plan context—if three participants are on a compensation structure, each has a different plan context. Configuration plans are identified by plan contexts and are associated with the participants that refer to them.
plan template	In PeopleSoft Enterprise Incentive Management, the base from which a plan is created. A plan template contains common sections and variables that are inherited by all plans that are created from the template. A template may contain steps and sections that are not visible in the plan definition.
planned learning	In PeopleSoft Enterprise Learning Management, a self-service repository for all of a learner's planned learning activities and programs.
planning instance	In PeopleSoft Supply Planning, a set of data (business units, items, supplies, and demands) constituting the inputs and outputs of a supply plan.
portal registry	In PeopleSoft applications, the portal registry is a tree-like structure in which content references are organized, classified, and registered. It is a central repository that defines both the structure and content of a portal through a hierarchical, tree-like structure of folders useful for organizing and securing content references.
price list	In PeopleSoft Enterprise Pricer, enables you to select products and conditions for which the price list applies to a transaction. During a transaction, the system either determines the product price based on the predefined search hierarchy for the transaction or uses the product's lowest price on any associated, active price lists. This price is used as the basis for any further discounts and surcharges.
price rule	In PeopleSoft Enterprise Pricer, defines the conditions that must be met for adjustments to be applied to the base price. Multiple rules can apply when conditions of each rule are met.

price rule condition In PeopleSoft Enterprise Pricer, selects the price-by fields, the values for the price-by fields, and the operator that determines how the price-by fields are related to the transaction.

price rule key In PeopleSoft Enterprise Pricer, defines the fields that are available to define price rule conditions (which are used to match a transaction) on the price rule.

process category In PeopleSoft Process Scheduler, processes that are grouped for server load balancing and prioritization.

process group In PeopleSoft Financials, a group of application processes (performed in a defined order) that users can initiate in real time, directly from a transaction entry page.

process definition Process definitions define each run request.

process instance A unique number that identifies each process request. This value is automatically incremented and assigned to each requested process when the process is submitted to run.

process job You can link process definitions into a job request and process each request serially or in parallel. You can also initiate subsequent processes based on the return code from each prior request.

process request A single run request, such as a Structured Query Report (SQR), a COBOL or Application Engine program, or a Crystal report that you run through PeopleSoft Process Scheduler.

process run control A PeopleTools variable used to retain PeopleSoft Process Scheduler values needed at runtime for all requests that reference a run control ID. Do not confuse these with application run controls, which may be defined with the same run control ID, but only contain information specific to a given application process request.

product category In PeopleSoft Enterprise Incentive Management, indicates an application in the Enterprise Incentive Management suite of products. Each transaction in the PeopleSoft Enterprise Incentive Management system is associated with a product category.

programs In PeopleSoft Enterprise Learning Management, a high-level grouping that guides the learner along a specific learning path through sections of catalog items. PeopleSoft Enterprise Learning Systems provides two types of programs—curricula and certifications.

progress log In PeopleSoft Services Procurement, tracks deliverable-based projects. This is similar to the time sheet in function and process. The service provider contact uses the progress log to record and submit progress on deliverables. The progress can be logged by the activity that is performed, by the percentage of work that is completed, or by the completion of milestone activities that are defined for the project.

project transaction In PeopleSoft Project Costing, an individual transaction line that represents a cost, time, budget, or other transaction row.

promotion In PeopleSoft Promotions Management, a trade promotion, which is typically funded from trade dollars and used by consumer products manufacturers to increase sales volume.

publishing In PeopleSoft Enterprise Incentive Management, a stage in processing that makes incentive-related results available to participants.

record group A set of logically and functionally related control tables and views. Record groups help enable TableSet sharing, which eliminates redundant data entry. Record groups ensure that TableSet sharing is applied consistently across all related tables and views.

record input VAT flag Abbreviation for *record input value-added tax flag.* Within PeopleSoft Purchasing, Payables, and General Ledger, this flag indicates that you are recording input VAT on the transaction. This flag, in conjunction with the record output VAT flag, is used to determine the accounting entries created for a transaction and to determine how a transaction is reported on the VAT return. For all cases within Purchasing and Payables where VAT information is tracked on a transaction, this flag is set to Yes. This flag is not used in PeopleSoft Order Management, Billing, or Receivables, where it is assumed that you are always recording only output VAT, or in PeopleSoft Expenses, where it is assumed that you are always recording only input VAT.

record output VAT flag — Abbreviation for *record output value-added tax flag.*

See *record input VAT flag.*

reference data — In PeopleSoft Sales Incentive Management, system objects that represent the sales organization, such as territories, participants, products, customers, channels, and so on.

reference object — In PeopleSoft Enterprise Incentive Management, this dimension-type object further defines the business. Reference objects can have their own hierarchy (for example, product tree, customer tree, industry tree, and geography tree).

reference transaction — In commitment control, a reference transaction is a source transaction that is referenced by a higher-level (and usually later) source transaction, in order to automatically reverse all or part of the referenced transaction's budget-checked amount. This avoids duplicate postings during the sequential entry of the transaction at different commitment levels. For example, the amount of an encumbrance transaction (such as a purchase order) will, when checked and recorded against a budget, cause the system to concurrently reference and relieve all or part of the amount of a corresponding pre-encumbrance transaction, such as a purchase requisition.

regional sourcing — In PeopleSoft Purchasing, provides the infrastructure to maintain, display, and select an appropriate vendor and vendor pricing structure that is based on a regional sourcing model where the multiple ship to locations are grouped. Sourcing may occur at a level higher than the ship to location.

relationship object — In PeopleSoft Enterprise Incentive Management, these objects further define a compensation structure to resolve transactions by establishing associations between compensation objects and business objects.

remote data source data — Data that is extracted from a separate database and migrated into the local database.

REN server — Abbreviation for *real-time event notification server* in PeopleSoft MultiChannel Framework.

requester — In PeopleSoft eSettlements, an individual who requests goods or services and whose ID appears on the various procurement pages that reference purchase orders.

role — Describes how people fit into PeopleSoft Workflow. A role is a class of users who perform the same type of work, such as clerks or managers. Your business rules typically specify what user role needs to do an activity.

role user — A PeopleSoft Workflow user. A person's role user ID serves much the same purpose as a user ID does in other parts of the system. PeopleSoft Workflow uses role user IDs to determine how to route worklist items to users (through an email address, for example) and to track the roles that users play in the workflow. Role users do not need PeopleSoft user IDs.

roll up — In a tree, to roll up is to total sums based on the information hierarchy.

run control — A run control is a type of online page that is used to begin a process, such as the batch processing of a payroll run. Run control pages generally start a program that manipulates data.

run control ID — A unique ID to associate each user with his or her own run control table entries.

run-level context	In PeopleSoft Enterprise Incentive Management, associates a particular run (and batch ID) with a period context and plan context. Every plan context that participates in a run has a separate run-level context. Because a run cannot span periods, only one run-level context is associated with each plan context.
search query	You use this set of objects to pass a query string and operators to the search engine. The search index returns a set of matching results with keys to the source documents.
section	In PeopleSoft Enterprise Incentive Management, a collection of incentive rules that operate on transactions of a specific type. Sections enable plans to be segmented to process logical events in different sections.
security event	In commitment control, security events trigger security authorization checking, such as budget entries, transfers, and adjustments; exception overrides and notifications; and inquiries.
serial genealogy	In PeopleSoft Manufacturing, the ability to track the composition of a specific, serial-controlled item.
serial in production	In PeopleSoft Manufacturing, enables the tracing of serial information for manufactured items. This is maintained in the Item Master record.
session	In PeopleSoft Enterprise Learning Management, a single meeting day of an activity (that is, the period of time between start and finish times within a day). The session stores the specific date, location, meeting time, and instructor. Sessions are used for scheduled training.
session template	In PeopleSoft Enterprise Learning Management, enables you to set up common activity characteristics that may be reused while scheduling a PeopleSoft Enterprise Learning Management activity—characteristics such as days of the week, start and end times, facility and room assignments, instructors, and equipment. A session pattern template can be attached to an activity that is being scheduled. Attaching a template to an activity causes all of the default template information to populate the activity session pattern.
setup relationship	In PeopleSoft Enterprise Incentive Management, a relationship object type that associates a configuration plan with any structure node.
share driver expression	In PeopleSoft Business Planning, a named planning method similar to a driver expression, but which you can set up globally for shared use within a single planning application or to be shared between multiple planning applications through PeopleSoft Enterprise Warehouse.
single signon	With single signon, users can, after being authenticated by a PeopleSoft application server, access a second PeopleSoft application server without entering a user ID or password.
source transaction	In commitment control, any transaction generated in a PeopleSoft or third-party application that is integrated with commitment control and which can be checked against commitment control budgets. For example, a pre-encumbrance, encumbrance, expenditure, recognized revenue, or collected revenue transaction.
SpeedChart	A user-defined shorthand key that designates several ChartKeys to be used for voucher entry. Percentages can optionally be related to each ChartKey in a SpeedChart definition.
SpeedType	A code representing a combination of ChartField values. SpeedTypes simplify the entry of ChartFields commonly used together.
staging	A method of consolidating selected partner offerings with the offerings from the enterprise’s other partners.

statutory account	Account required by a regulatory authority for recording and reporting financial results. In PeopleSoft, this is equivalent to the Alternate Account (ALTACCT) ChartField.
step	In PeopleSoft Sales Incentive Management, a collection of sections in a plan. Each step corresponds to a step in the job run.
storage level	In PeopleSoft Inventory, identifies the level of a material storage location. Material storage locations are made up of a business unit, a storage area, and a storage level. You can set up to four storage levels.
subcustomer qualifier	A value that groups customers into a division for which you can generate detailed history, aging, events, and profiles.
Summary ChartField	You use summary ChartFields to create summary ledgers that roll up detail amounts based on specific detail values or on selected tree nodes. When detail values are summarized using tree nodes, summary ChartFields must be used in the summary ledger data record to accommodate the maximum length of a node name (20 characters).
summary ledger	An accounting feature used primarily in allocations, inquiries, and PS/nVision reporting to store combined account balances from detail ledgers. Summary ledgers increase speed and efficiency of reporting by eliminating the need to summarize detail ledger balances each time a report is requested. Instead, detail balances are summarized in a background process according to user-specified criteria and stored on summary ledgers. The summary ledgers are then accessed directly for reporting.
summary time period	In PeopleSoft Business Planning, any time period (other than a base time period) that is an aggregate of other time periods, including other summary time periods and base time periods, such as quarter and year total.
summary tree	A tree used to roll up accounts for each type of report in summary ledgers. Summary trees enable you to define trees on trees. In a summary tree, the detail values are really nodes on a detail tree or another summary tree (known as the *basis* tree). A summary tree structure specifies the details on which the summary trees are to be built.
syndicate	To distribute a production version of the enterprise catalog to partners.
system function	In PeopleSoft Receivables, an activity that defines how the system generates accounting entries for the general ledger.
TableSet	A means of sharing similar sets of values in control tables, where the actual data values are different but the structure of the tables is the same.
TableSet sharing	Shared data that is stored in many tables that are based on the same TableSets. Tables that use TableSet sharing contain the SETID field as an additional key or unique identifier.
target currency	The value of the entry currency or currencies converted to a single currency for budget viewing and inquiry purposes.
template	A template is HTML code associated with a web page. It defines the layout of the page and also where to get HTML for each part of the page. In PeopleSoft, you use templates to build a page by combining HTML from a number of sources. For a PeopleSoft portal, all templates must be registered in the portal registry, and each content reference must be assigned a template.
territory	In PeopleSoft Sales Incentive Management, hierarchical relationships of business objects, including regions, products, customers, industries, and participants.
TimeSpan	A relative period, such as year-to-date or current period, that can be used in various PeopleSoft General Ledger functions and reports when a rolling time frame, rather

than a specific date, is required. TimeSpans can also be used with flexible formulas in PeopleSoft Projects.

trace usage In PeopleSoft Manufacturing, enables the control of which components will be traced during the manufacturing process. Serial- and lot-controlled components can be traced. This is maintained in the Item Master record.

transaction allocation In PeopleSoft Enterprise Incentive Management, the process of identifying the owner of a transaction. When a raw transaction from a batch is allocated to a plan context, the transaction is duplicated in the PeopleSoft Enterprise Incentive Management transaction tables.

transaction state In PeopleSoft Enterprise Incentive Management, a value assigned by an incentive rule to a transaction. Transaction states enable sections to process only transactions that are at a specific stage in system processing. After being successfully processed, transactions may be promoted to the next transaction state and “picked up” by a different section for further processing.

Translate table A system edit table that stores codes and translate values for the miscellaneous fields in the database that do not warrant individual edit tables of their own.

tree The graphical hierarchy in PeopleSoft systems that displays the relationship between all accounting units (for example, corporate divisions, projects, reporting groups, account numbers) and determines roll-up hierarchies.

unclaimed transaction In PeopleSoft Enterprise Incentive Management, a transaction that is not claimed by a node or participant after the allocation process has completed, usually due to missing or incomplete data. Unclaimed transactions may be manually assigned to the appropriate node or participant by a compensation administrator.

universal navigation header Every PeopleSoft portal includes the universal navigation header, intended to appear at the top of every page as long as the user is signed on to the portal. In addition to providing access to the standard navigation buttons (like Home, Favorites, and signoff) the universal navigation header can also display a welcome message for each user.

user interaction object In PeopleSoft Sales Incentive Management, used to define the reporting components and reports that a participant can access in his or her context. All Sales Incentive Management user interface objects and reports are registered as user interaction objects. User interaction objects can be linked to a compensation structure node through a compensation relationship object (individually or as groups).

variable In PeopleSoft Sales Incentive Management, the intermediate results of calculations. Variables hold the calculation results and are then inputs to other calculations. Variables can be plan variables that persist beyond the run of an engine or local variables that exist only during the processing of a section.

VAT exception Abbreviation for *value-added tax exception.* A temporary or permanent exemption from paying VAT that is granted to an organization. This terms refers to both VAT exoneration and VAT suspension.

VAT exempt Abbreviation for *value-added tax exempt.* Describes goods and services that are not subject to VAT. Organizations that supply exempt goods or services are unable to recover the related input VAT. This is also referred to as exempt without recovery.

VAT exoneration Abbreviation for *value-added tax exoneration.* An organization that has been granted a permanent exemption from paying VAT due to the nature of that organization.

VAT suspension Abbreviation for *value-added tax suspension.* An organization that has been granted a temporary exemption from paying VAT.

warehouse A PeopleSoft data warehouse that consists of predefined ETL maps, data warehouse tools, and DataMart definitions.

work order In PeopleSoft Services Procurement, enables an enterprise to create resource-based and deliverable-based transactions that specify the basic terms and conditions for hiring a specific service provider. When a service provider is hired, the service provider logs time or progress against the work order.

worksheet A way of presenting data through a PeopleSoft Business Analysis Modeler interface that enables users to do in-depth analysis using pivoting tables, charts, notes, and history information.

worklist The automated to-do list that PeopleSoft Workflow creates. From the worklist, you can directly access the pages you need to perform the next action, and then return to the worklist for another item.

XML schema An XML definition that standardizes the representation of application messages, component interfaces, or business interlinks.

yield by operation In PeopleSoft Manufacturing, the ability to plan the loss of a manufactured item on an operation-by-operation basis.

zero-rated VAT Abbreviation for *zero-rated value-added tax.* A VAT transaction with a VAT code that has a tax percent of zero. Used to track taxable VAT activity where no actual VAT amount is charged. Organizations that supply zero-rated goods and services can still recover the related input VAT. This is also referred to as exempt with recovery.

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