Multimedia 7.6

Deployment Guide

About Genesys

Genesys Telecommunications Laboratories, Inc., a subsidiary of Alcatel-Lucent, is 100% focused on software for call centers. Genesys recognizes that better interactions drive better business and build company reputations. Customer service solutions from Genesys deliver on this promise for Global 2000 enterprises, government organizations, and telecommunications service providers across 80 countries, directing more than 100 million customer interactions every day. Sophisticated routing and reporting across voice, e-mail, and Web channels ensure that customers are quickly connected to the best available resource—the first time. Genesys offers solutions for customer service, help desks, order desks, collections, outbound telesales and service, and workforce management. Visit www.genesyslab.com for more information.

Each product has its own documentation for online viewing at the Genesys Technical Support website or on the Documentation Library DVD, which is available from Genesys upon request. For more information, contact your sales representative.

Notice

Although reasonable effort is made to ensure that the information in this document is complete and accurate at the time of release, Genesys Telecommunications Laboratories, Inc., cannot assume responsibility for any existing errors. Changes and/or corrections to the information contained in this document may be incorporated in future versions.

Your Responsibility for Your System's Security

You are responsible for the security of your system. Product administration to prevent unauthorized use is your responsibility. Your system administrator should read all documents provided with this product to fully understand the features available that reduce your risk of incurring charges for unlicensed use of Genesys products.

Trademarks

Genesys, the Genesys logo, and T-Server are registered trademarks of Genesys Telecommunications Laboratories, Inc. All other trademarks and trade names referred to in this document are the property of other companies. The Crystal monospace font is used by permission of Software Renovation Corporation, www.SoftwareRenovation.com.

Technical Support from VARs

If you have purchased support from a value-added reseller (VAR), please contact the VAR for technical support.

Technical Support from Genesys

If you have purchased support directly from Genesys, please contact Genesys Technical Support at the following regional numbers:

Region	Telephone	E-Mail
North and Latin America	+888-369-5555 or +506-674-6767	support@genesyslab.com
Europe, Middle East, and Africa	+44-(0)-1276-45-7002	support@genesyslab.co.uk
Asia Pacific	+61-7-3368-6868	support@genesyslab.com.au
Japan	+81-3-6361-8950	support@genesyslab.co.jp

Prior to contacting technical support, please refer to the *Genesys Technical Support Guide* for complete contact information and procedures.

Ordering and Licensing Information

Complete information on ordering and licensing Genesys products can be found in the ***Genesys 7 Licensing Guide*.**

Released by

Genesys Telecommunications Laboratories, Inc. www.genesyslab.com

Document Version: 76mm_dep_01-2009_v7.6.101.00

Table of Contents

List of Procedures

Preface

Welcome to the *Multimedia 7.6 Deployment Guide*. This guide introduces you to the architecture, required components, and procedures relevant to the deployment of a Genesys Multimedia solution in your contact center.

This guide is valid only for the 7.6 release(s) of this product.

Note: For releases of this document created for other releases of this product, please visit the Genesys Technical Support website, or request the Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

This preface provides an overview of this document, identifies the primary audience, introduces document conventions, and lists related reference information:

Genesys Multimedia is a series of components working together to handle interactions from disparate media-based devices. It allows you to centralize your handling of the various communication channels that customers use to reach your interaction contact center. Bringing your Multimedia solution into production requires that you deploy a number of Genesys components, as well as several separate, third-party software applications, without which Multimedia cannot work.

Multimedia and the CIM Platform

Genesys Multimedia (formerly Multi-Channel Routing) is a cover term for Genesys components that work together to manage interactions whose media is something other than traditional telephonic voice (for example, e-mail or chat).

Multimedia includes some parts of the Genesys Customer Interaction Management (CIM) Platform, plus certain of the media channels that run on top of the Platform. See Figure 1 on page 13.

CIM Platform

The CIM Platform consists of the following components:

- Management Framework
- Reporting (CC Analyzer, CCPulse+)
- Interaction Management, which in turn consists of:
  - Universal Routing
  - Interaction Workflow
  - Knowledge Management
  - Content Analysis
  - Universal Contact History

On top of the CIM Platform are various media channels. Some, such as Genesys Network Voice, handle traditional telephony. Others, such as Genesys E-mail, handle other media.

Multimedia

Multimedia, then, consists of the following components:

- From the CIM Platform, all of Interaction Management components except for Universal Routing. This includes:
  - Interaction Workflow—Centralized handling of interactions irrespective of media type.
  - Knowledge Management—Creation and maintenance of standard responses and screening rules.
  - Content Analysis—Optional enhancement to Knowledge Management, applying natural language processing technology to categorize interactions.
  - Universal Contact History—Storage of data on contacts and on interactions (linked as threads).

  Universal Routing is not considered part of Multimedia because it deals with both traditional telephonic interactions and the nontraditional interactions that are handled in Multimedia.

- From the media channels, at least one of the following components:
  - Genesys E-mail—E-mail support.
  - Genesys Web Media—Chat capability.
  - Genesys Open Media—Ability to add customized support for other media (such as fax).
  - Optionally, Web Collaboration—The ability for agents and customers to co-browse (simultaneously navigate) shared web pages. This is an option that you can add to either Genesys Web Media or Inbound Voice.

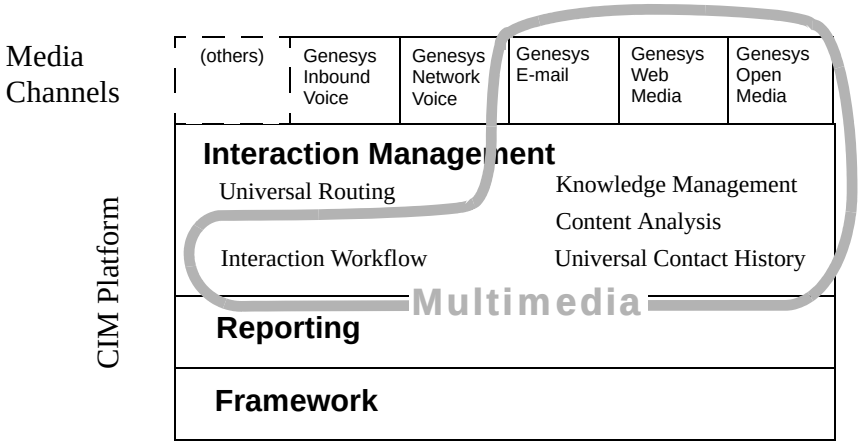


Figure 1: Multimedia in Relation to the CIM Platform and Media Channels

Note: Although Universal Routing is not considered part of Multimedia, any functioning solution (platform plus channels) that includes any part of the Interaction Management sector requires Universal Routing.

Licensing

Licensing requirements are:

- For each agent, one Multimedia Agent seat.
- For each media option, one media channel (E-mail and/or Web Media and/or custom media).
- For Genesys Content Analyzer, NLP Content Analysis license.

See the *Genesys 7 Licensing Guide* for additional details.

Reporting

Reporting templates are available for Multimedia. For details see the *Reporting Technical Reference Guide for the Genesys 7.x Release*.

Intended Audience

This guide, primarily intended for system administrators and anyone else who wants to configure and install Multimedia 7.6.1, assumes that you have a basic understanding of:

- Computer-telephony integration (CTI) concepts, processes, terminology, and applications.
- Network design and operation.
- Your own network configurations.
- Internet, e-mail, chat, and World Wide Web basics.

You should also be familiar with Genesys Framework architecture and functions.

Chapter Summaries

In addition to this preface, this document contains the following chapters:

- Chapter 1, “Overview,” on page 21, lists the components required for Multimedia 7.6.1, describes a sample architecture, and summarizes configuration methods. This chapter also includes a list of new features available in this release.
- Chapter 2, “Deployment Task Flow,” on page 31, provides a complete flow of the steps required to deploy your Multimedia solution, as well as links to the detailed procedures found elsewhere in the document.
- Chapter 3, “Deployment Planning,” on page 37, provides procedures and worksheets used in the planning phase: algorithms for calculating database size, a worksheet to help organize configuration values, and a table listing all required connections.
- Chapter 4, “Deploying Third-Party Web Applications,” on page 55, describes how to install non-Genesys components that are prerequisites for Multimedia 7.6.1. It also outlines platform issues that may be relevant to your environment.
- Chapter 5, “Model Configuration and Installation on Windows,” on page 91, provides instructions for installing Genesys components for a model installation of Multimedia 7.6.1 using a Windows environment.

- Chapter 6, “Deploying an E-Mail System in Secured Mode,” on page 145. desrcibes how to configure an e-mail system to work in secured mode using SSL.
- Chapter 7, “Deploying Multimedia in UNIX Environments,” on page 153, provides instructions for installing Genesys components for a model installation of Multimedia 7.6.1 using a Solaris, Linux, or AIX environment.
- Chapter 8, “Manual Deployment—Web Components and UCS,” on page 177, describes how to manually configure and install Web API Server, Web Compound Samples, Universal Contact Server, and Universal Contact Server Manager.
- Chapter 9, “UCS Proxy and Interaction Server Proxy,” on page 183, describes the manual deployment of Universal Contact Server Proxy and Interaction Server Proxy.
- Chapter 10, “Uninstalling Multimedia,” on page 189, describes how to uninstall Multimedia 7.6.1.
- Chapter 11, “Starting and Stopping Procedures,” on page 193, describes how to start and stop Multimedia 7.6.1.
- The Appendix, “Deploying an E-Mail Solution Using MIME Customization,” on page 199, describes how to ensure your e-mail solution is compliant with MIME standards.

Document Conventions

This document uses some stylistic and typographical conventions with which you might want to familiarize yourself.

Document Version Number

A version number appears at the bottom of the inside front cover of this document. Version numbers change as new information is added to this document. Here is a sample version number:

76mm_dep_03-2007_v7.6.001.00

You will need this number when you are talking with Genesys Technical Support about this product.

Type Styles

Italic

In this document, italic is used for the titles of documents, when a term is being defined, for emphasis, and for mathematical variables.

Examples

- Please consult the *Genesys 7 Migration Guide* for more information.
- *A customary and usual practice* is one that is widely accepted and used within a particular industry or profession.
- Do *not* use this value for this option.
- The formula, $x + 1 = 7$ where x stands for . . .

Monospace Font

A monospace font, which is shown in the following examples, is used for all programming identifiers and GUI elements.

This convention includes the *names* of directories, files, folders, configuration objects, paths, scripts, dialog boxes, options, fields, text and list boxes, operational modes, all buttons (including radio buttons), check boxes, commands, tabs, CTI events, and error messages; the values of options; logical arguments and command syntax; and code samples.

Examples

- Select the `Show variables on screen` check box.
- Click the `Summation` button.
- In the `Properties` dialog box, enter the value for the host server in your environment.
- In the `Operand` text box, enter your formula.
- Click `OK` to exit the `Properties` dialog box.
- The following table presents the complete set of error messages T-Server® distributes in `EventError` events.
- If you select `true` for the `inbound-bsns-calls` option, all established inbound calls on a local agent are considered business calls.

Monospace font is also used for any text that users must manually enter during a configuration or installation procedure, or on a command line:

Example

- Enter `exit` at the command line.

Screen Captures Used in This Document

Screen captures from the product GUI (graphical user interface), as used in this document, may sometimes contain a minor spelling, capitalization, or grammatical error. The text accompanying and explaining the screen captures corrects such errors *except* when such a correction would prevent you from installing, configuring, or successfully using the product. For example, if the

name of an option contains a usage error, the name would be presented exactly as it appears in the product GUI; the error would not be corrected in any accompanying text.

Square Brackets

Square brackets indicate that a particular parameter or value is optional within a logical argument, a command, or some programming syntax. That is, the parameter's or value's presence is not required to resolve the argument, command, or block of code. The user decides whether to include this optional information. Here is a sample:

```
smcp_server -host [/flags]
```

Angle Brackets

Angle brackets indicate a placeholder for a value that the user must specify. This might be a DN or port number specific to your enterprise. Here is a sample:

```
smcp_server -host <confighost>
```

Related Resources

Consult these additional resources as necessary:

- *Multimedia 7.6 Reference Manual*, which provides a reference listing of all configuration options and of field codes used in standard responses.
- *Multimedia 7.6 User's Guide*, which provides overall information and recommendations on the use and operation of Multimedia.
- *Multimedia 7.6 Universal Contact Server Manager Help*, which is a guide to the Universal Contact Server Manager user interface.
- *Multimedia 7.6 Knowledge Manager Help*, which is a guide to the Knowledge Manager user interface.
- *Multimedia 7.6 Web API Reference*, which is a Javadoc listing of classes, methods, fields, and constants of the Web API portion of the Web API Server component.
- *Multimedia 7.6 Web API Client Developer's Guide*, which describes the structure of the Web API, explains the Simple and Compound Samples, and describes procedures for customizing them.
- *Genesys 7 Events and Models Reference Manual*, which includes a set of basic interaction models, showing the components involved and the event messages sent among them. These models and events were formerly presented in the *Open Media Interaction Models Reference Manual*. The request messages that were also described in that book are now documented in the API References of the Platform SDK.

- For the Web Collaboration option, the following documents describing design and administration for the KANA Response Live Server, which is supplied by Genesys as part of the Web Collaboration product:
  - *Hipbone Client API Reference Guide*
  - *KANA Response Live Organization Administration*
  - *KANA Response Live Server Installation Guide*
  - *KANA Response Live System Administration Tool User Guide*
- *Genesys Desktop 7.6 Deployment Guide*, which describes deployment procedures for the Genesys Desktop.
- *Genesys Desktop 7.6 Developer's Guide*, which describes customizing the Genesys Desktop.
- *Genesys Desktop 7.6 Agent Help*, which is a guide to the Genesys Agent Desktop.
- *Genesys Desktop 7.6 Supervisor's Help*, which is a guide to the Genesys Supervisor Desktop.
- *Universal Routing 7.6 Reference Manual*, which contains descriptions of all routing strategy objects, including those that are specific to Multimedia.
- *Universal Routing 7.6 Strategy Samples*, which describes the sample strategies supplied with Universal Routing.
- *Universal Routing 7.6 Business Process User's Guide*, which contains step-by-step instructions for using Interaction Routing Designer to design interaction workflows. It also describes the sample business processes supplied with Multimedia.
- *Universal Routing 7.6 Interaction Routing Designer Help*, which is a guide to Interaction Routing Designer, including the portion of it that designs interaction workflows and business processes for Multimedia.
- "Multimedia Log Events" in *Framework 7.6 Combined Log Events Help*, which is a comprehensive list and description of all events that may be recorded in logs.
- The *Genesys Technical Publications Glossary*, which ships on the Genesys Documentation Library DVD and which provides a comprehensive list of the Genesys and CTI terminology and acronyms used in this document.
- The *Genesys 7 Migration Guide*, also on the Genesys Documentation Library DVD, which contains a documented migration strategy for Genesys product releases 5.x and later. Contact Genesys Technical Support for additional information.
- The Release Notes and Product Advisories for this product, which are available on the Genesys Technical Support website at http://genesyslab.com/support.
- The documentation on the other three members of the Genesys Customer Interaction Platform: Universal Routing, Reporting, and Management Framework.

Information on supported hardware and third-party software is available on the Genesys Technical Support website in the following documents:

- *Genesys Supported Operating Environment Reference Manual*
- *Genesys Supported Media Interfaces Reference Manual*

Genesys product documentation is available on the:

- Genesys Technical Support website at http://genesyslab.com/support.
- Genesys Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

Making Comments on This Document

If you especially like or dislike anything about this document, please feel free to e-mail your comments to Techpubs.webadmin@genesyslab.com.

You can comment on what you regard as specific errors or omissions, and on the accuracy, organization, subject matter, or completeness of this document. Please limit your comments to the information in this document only and to the way in which the information is presented. Speak to Genesys Technical Support if you have suggestions about the product itself.

When you send us comments, you grant Genesys a nonexclusive right to use or distribute your comments in any way it believes appropriate, without incurring any obligation to you.

Document Change History

This section lists topics that are new in the current release of this document, or that have changed significantly from the preceding release.

New in Version 7.6.1

The following topics have been added or significantly changed since the initial 7.6 release:

- Chapter 4, “Deploying Third-Party Web Applications,” on page 55 was updated to include KANA Response Live deployment procedures for Linux.
- Chapter 6, “Deploying an E-Mail System in Secured Mode,” on page 145 is new for the 7.6.1 release.
- Chapter 9, “UCS Proxy and Interaction Server Proxy,” on page 183 is new for the 7.6.1 release.

Chapter

1 Overview

Genesys Multimedia is a platform on which you can assemble a coordinated suite of components that processes, manages, and archives customer/agent interactions in the media of your choice. This chapter introduces the components, functionality, and concepts behind them.

The information in this chapter is divided among the following topics:

Functions and Components

Figure 2 shows the overall functionality of Multimedia, with any media type. This figure shows functions only, not components.

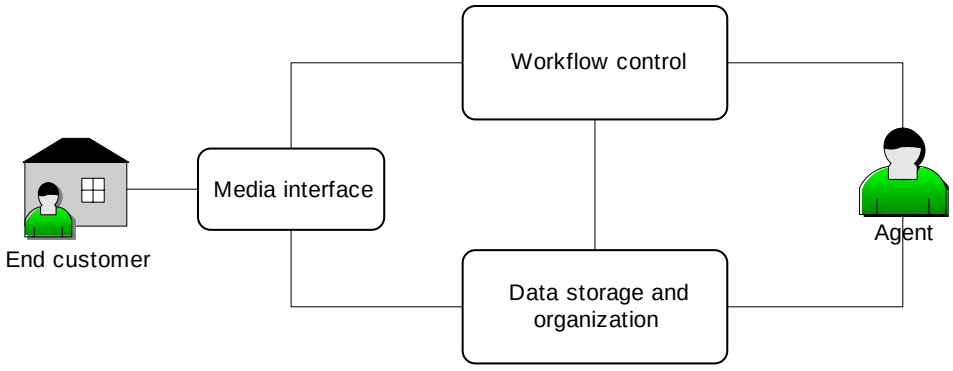


Figure 2: General Functioning of Multimedia

The three major functions shown in Figure 2 are:

- The **media interface,** which brings interactions into the system. It may interface with e-mail, the Web, or other media.
- A **database,** which stores the history of the interaction and associates it with related interactions to form a thread. It also stores contact information and other types of data used at different points in the processing of interactions.
- **Workflow control,** which determines where the interaction goes and what happens to it.

For some media types (such as chat), the media interface also communicates directly with the agent desktop.

The following sections explain these functions further and describe the components involved.

Media Interfaces

The media interfaces available with Multimedia 7.6.1 are **E-mail Server Java** and **Chat Server**.

Note: Multimedia 7.6.1 also supports the processing of open media interactions with the help of Genesys's Open Media SDK and Interaction SDK products. See the documentation for those products for more information.

- E-mail Server Java interfaces with the enterprise mail server and the Genesys Web API Server, bringing in new e-mail interactions and sending out replies or other outbound messages.
- Chat Server works with **Web API Server** to open, conduct, and close chat interactions between agents and customers.

To the workflow control components, these interfaces transmit operational data about each interaction, consisting of an identifying code plus some data about the interaction (date received, originating party, and so on).

To the data storage components, they transmit the body of the interaction—that is, a transcript of the e-mail or chat session.

Data Storage: Universal Contact Server

Universal Contact Server (UCS) interfaces with a database that stores the following:

- Contact information, such as names, addresses, phone numbers
- Contact history: previous interactions with this contact
- Other data used in processing interactions, such as standard responses and screening rules.

Your Multimedia installation (as part of the Universal Contact Server installation package) includes scripts for setting up the database (Microsoft SQL Server, Oracle, and DB2 are supported). **Universal Contact Server Manager** provides a user interface for setting data-archiving and pruning functions.

Workflow Control

The components illustrated in Figure 3 handle workflow control.

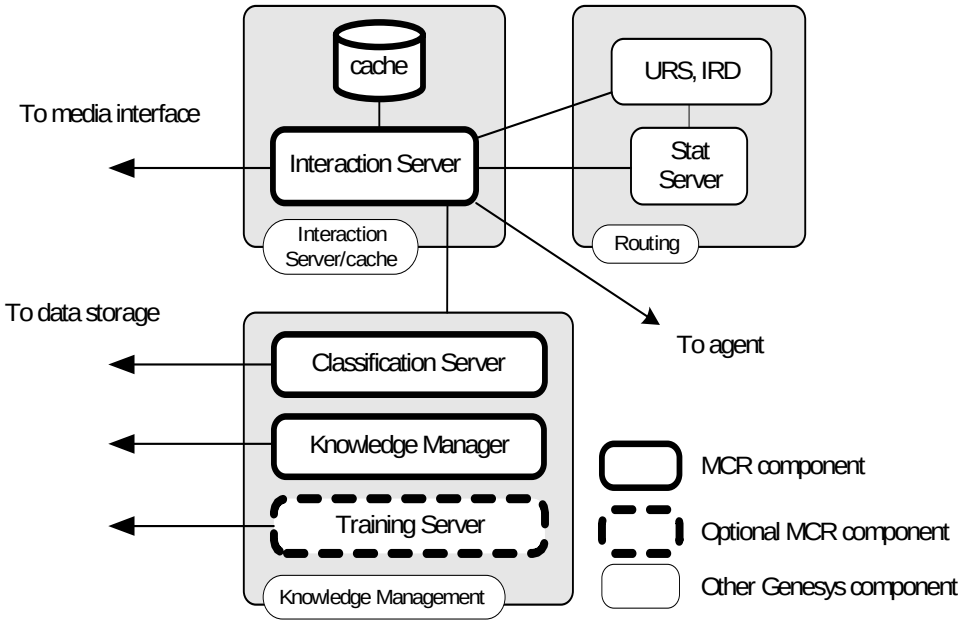


Figure 3: Workflow Control Components

Not shown in Figure 3 are other required Genesys Management Framework components, such as Configuration Server and the Management Layer.

The workflow control components fall into three groups, described in the following sections.

Interaction Server

Interaction Server is the central interchange for interaction flow.

- It receives interaction operational data from the media interface.
- It stores the operational data in a **cache** (a database) while receiving and transmitting information about the interaction. This cache also contains **queues** through which the interaction passes as part of its processing.
- It works in concert with the Routing components to route interactions according to interaction workflows and routing strategies (see the "Routing" section).
- It provides the means for agents to log in and indicate readiness.

Routing

Routing components include the following:

- **Interaction Routing Designer (IRD)** and **Universal Routing Server (URS)** design and execute **routing strategies,** which trigger functions such as automatic responses and screening; apply logic (segmentation and conditional branching) to the flow; and ultimately deliver the interaction to an agent or other target. Routing strategies are one of the two main types of objects used in interaction workflows (see the "Interaction Server" section).
- **Interaction Design**, a sub component of IRD, creates and displays **Business Processes,** which plot an overall path for interactions. Interaction workflows map a route for the interaction between contact center objects, principally queues and routing strategies (see the "Knowledge Management" section). Interaction workflows are executed by Interaction Server.
- **Stat Server** accumulates data about places, agents, and place/agent groups; converts the data into statistically useful information; and passes these calculations to other software applications. In particular, Stat Server provides information to URS about agents' capacities in terms of the number of interactions, the media type of an interaction, and so on.

Knowledge Management

Genesys Knowledge Management is made up of the following:

- **Classification Server**, which applies **screening rules** when triggered to do so by a routing strategy. Screening rules are basic pattern-matching queries performed on interaction contents. The results of these queries can then be referred to by further routing strategy logic. In the Genesys Content Analyzer option (see below), Classification Server also applies **models** to categorize incoming interactions. Both screening rules and models are stored in the Universal Contact Server database.
- **Training Server**, which trains the system to recognize categories. It is active only in the Content Analyzer option (see below).
- **Knowledge Manager,** which is the user interface component for Knowledge Management. You use Knowledge Manager to:
  - Manage the Standard Response Library, which is a collection of ready-made responses to common inquiries and topics.
  - Manage screening rules.
  - Manage **categories,** which are used to organize standard responses.

Genesys Content Analyzer is an optional enhancement to Knowledge Management, requiring a separate license. It uses natural language processing technology to analyze incoming interactions for assignment to the categories of the standard response category system. The statistical tools that enable this

analysis, called **models,** are built up and refined by Training Server as it processes collections of preclassified interactions. Setting up and scheduling these training sessions is another function of Knowledge Manager.

FAQ works with Genesys Content Analyzer to convert your category structure and standard responses into an Frequently Asked Questions (FAQ) list. You can either post the resulting list as text on your web site or use it as the source for an automatic question-answering facility.

Summary

To summarize interaction flow:

- At the highest level the flow is controlled by interaction workflows that Interaction Server executes.
- Each interaction workflow contains queues and routing strategies.
- Routing strategies may bring in other applications/components to apply processing to the interaction—for example, sending a transcription of the chat session to the customer.:
  - Send an acknowledgment or an automatic reply.
  - Apply a screening rule.
  - Apply content analysis (with Content Analyzer option only).
  - Forward or redirect the interaction.

Architecture

This section presents the architecture for Multimedia 7.6.1. Figure 4 shows the main Multimedia components.

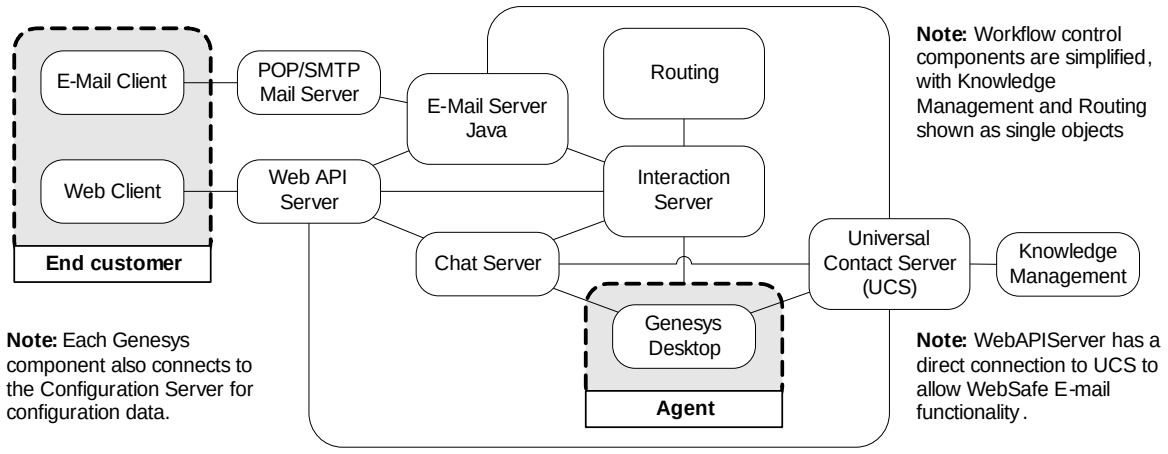


Figure 4: Multimedia Architecture

Note: For simplicity, not all connections and details are included in Figure 4. For example, many components (including Web API Server) connect to Stat Server.

Interaction processing generally proceeds according to the type of interaction. The following sections describe how two of the most common interactions types (e-mail and chat) are processed.

Processing E-Mail

This section describes how e-mails are processed.

1. E-mail interactions arrive in one of two ways:
   a. If the customer sends ordinary e-mail, the interaction arrives via the enterprise mail server.
   b. If the customer sends e-mail from a web site (by filling out a web form), the interaction arrives via the Web API Server.
2. E-mail Server Java stores the body of the interaction in the Universal Contact Server database, and then sends operational data on the interaction to Interaction Server.
3. Interaction Server parks the interaction's operational data in its cache and starts processing the data according to an interaction workflow.
4. What happens next depends on the interaction workflow and the routing strategies that it contains. The system may:
   - Apply a screening rule.
   - Assign the interaction to one or more categories (if Content Analyzer is present).
   - Generate an automatic response.
   - Route the interaction to an agent's desktop, possibly also sending an automatic acknowledgment to the customer.

   A supervisor may intervene at various points as long as the interaction's operational data remains in the Interaction Server's cache and the interaction is not being actively worked on by the Routing components.
5. The agent receives the interaction.
6. The agent may then:
   - Simply reply to the interaction.
   - Reply making use of a standard response. With the Content Analyzer option, the interaction may have arrived already equipped with a category assignment and associated suggested response. Otherwise, the agent may search manually for a category with suggested response.
   - Transfer the interaction to another agent.
   - Produce a collaborative response by consulting with other agents.
   - Return the interaction to the system for further processing.

7. When the agent or agents finally release the reply (typically to an Outbound queue in the Interaction Server cache), the interaction workflow may route it to a senior agent or supervisor for QA review. The reviewer decides whether to let the reply continue through the outbound part of the interaction workflow, return it to the agent for revision, or take other action.

Processing Web Media

This section describes how chat interactions are processed.

1. Chat interactions begin processing when the Web Client submits a customer's chat request to Chat Server.
2. Chat Server creates a chat session and asks Universal Contact Server to create an interaction record.
3. Chat Server submits the interaction to Interaction Server.
4. Interaction Server places the interaction in its initial queue and begins processing it according to an interaction workflow.
5. The interaction workflow and its component routing strategies may do various things, including sending a message to a customer prior to an agent actually handling the interaction, but eventually they select an agent who is available for chat sessions and send an invitation to that agent to participate in a chat session.
6. The agent accepts the invitation and connects to the chat session.
7. Agent and customer conduct a chat session.
8. The chat session ends.
9. Chat Server writes the content of the chat session to the Universal Contact Server database.
10. Any postprocessing occurs; for example, a transcript of the chat session is e-mailed to the customer.

Required Software Components

The components that you must have running to operate a Multimedia 7.6.1 environment can be grouped into the following categories. In this list, when the item is a generic description it is followed in parentheses by a typical instance:

- **Genesys components**
  - **Framework**
    - Any third-party items that Genesys Framework requires, such as a database engine and databases to run with DB Server. (See the *Genesys Supported Operating Environment Reference Manual* for a list of supported databases.)

    - Configuration Layer
    - Management Layer
  - Stat Server (from the Real-Time Metrics Engine)
  - Genesys Universal Routing (either an Enterprise Routing solution or a Network Routing solution)
  - **Multimedia**
    - Servers
    - Clients
- **Web components**
  - Web Server (such as Microsoft IIS)
  - Browser (such as Microsoft Internet Explorer)
  - Website content (Genesys supplies Web Client, a starter application that you can customize.)
- **Java components**
  - Java virtual machine (such as Java Runtime Environment or JRE)
  - Java web application container (such as Tomcat)

Notes: The 7.6.1 release of Genesys Multimedia supports only specific releases of Tomcat. Check the *Genesys Supported Operating Environment Reference Manual* for more information.

The Tomcat web application container requires the Java Development Kit (JDK), not just JRE.

- **Other items**
  - Database engine for Interaction Server and Universal Contact Server databases

How to Configure

You can configure Multimedia 7.6.1 in two ways:

- Using the wizards supplied with the software.
- Manually, using the following steps:
  - Creating objects in Configuration Manager, one for each Multimedia component.
  - Giving the objects the proper settings for options and other attributes.
  - Assigning the various connections that link components together.

Note: Whether you are deploying Multimedia exclusively to a Windows environment or to a Solaris, Linux, or AIX environment, Genesys strongly recommends that you use wizards to install and configure your Multimedia solution.

Chapter 4, beginning on page 55, describes the configuration for various third-party software components that Multimedia uses, such as Apache or Microsoft IIS for the web server. In your final deployment, you will of course substitute your own architecture (more or fewer hosts), settings (Configuration Layer Persons corresponding to actual agents in your environment), and third-party applications (such as WebSphere, rather than Apache or Microsoft IIS).

Chapter 5, beginning on page 91, describes a model wizard deployment on a single Windows host, such as you might use in a lab configuration. (The model does not suggest a production environment.) The sample includes specific values for all settings.

Genesys Multimedia 7.6.1 supports Windows, Solaris, Linux, and AIX operating systems. The model installation uses a Windows environment. Deployment for Solaris, Linux, and AIX environments is similar; the differences are described in Chapter 7, beginning on page 153.

If you want to configure and install Multimedia 7.6.1 manually in a Windows environment, consult:

- *Configuration Manager 7.6 Help* for instructions on using Configuration Manager.
- This chapter, Chapter 1, beginning on page 21, and Table 7 on page 93 for a list of required components.
- Chapter 5, beginning on page 91, and each component's configuration steps for the required connections between Multimedia components.
- *Multimedia 7.6 Reference Manual* for descriptions of all Multimedia options.

New in This 7.6.1 Release

This release includes the following new features:

- Knowledge Management
  - You can select the language for standard response spell check.
  - Screening rules can match the POP box from which the e-mail entered the Multimedia system, rather than the To address
  - Attachments to standard responses can be viewed in the Standard Response Editor.
  - Searching for standard responses can use additional attributes, such as active or not, approved or not, usage type, and others.
  - In creating a training object, you have the option of selecting an agent group rather than individual agents.
- Interaction Server
  - Support for multiple agent desktops
  - Ability to limit number of records in Snapshot query results
  - Ability to add user fields to the Interaction Server database

  - Built-in scheduling in workflow
  - Pre-routing segmentation of interactions for proportional queuing
  - Event Logger storing reporting events
- Platform support: IBM DB2 9.1.
- Support for Windows Vista for Knowledge Manager and Universal Contact Server Manager.
- Support for Windows Vista for Interaction Workflow Samples and Multimedia Configuration Wizards.
- New components: Interaction Proxy Server and UCS Proxy Server.
- E-mail Server Java: Support for internationalized domain names.
- Web Collaboration
  - Support for Internet Explorer 7 and Red Hat Enterprise Linux 4.
  - Support for MSSQL 2005.
- Current supported version of KANA Response Live is now version 10 R1 for Windows, and version 10 R2 for Solaris and Linux.
- Relevant new features of other Genesys products:
  - Support for Supervisor Desktop ability to take interactions that are being routed and removed them for redistribution.
  - Exposure of field code rendering in .NET SDK.
  - When a field code in a standard response returns an empty result, you can have the desktop display the field code source code rather than nothing.

Chapter

2 Deployment Task Flow

This chapter guides you through the various actions you must take to plan, deploy, and test your Multimedia solution.

You can find task flow information for the following operating systems:

Windows Deployment Task Flow

This task flow describes a model setup of a blended (e-mail and chat), single-tenant Multimedia solution deployed on a single Windows host machine, such as might be deployed in a lab setting. Complete these actions in the following order to deploy your solution.

Table 1: Task Flow for Windows Deployment

Objective	Related Procedures and Actions
1. Plan your deployment.	1. Choose which machines will host Multimedia and various third party components. For a sample architecture layout, see "Component Distribution" on page 38. 2. Choose which machines will host your databases. To help calculate the rough size of your databases, use the formulas in "Estimating Database Size" on page 39. 3. Print out and complete the Configuration Worksheet (Table 3 on page 43) with values that fit your deployment.
2. Complete all prerequisite actions.	1. Verify that all prerequisite components are in place. See Table 7 on page 93. 2. "Create Host" on page 94.

Table 1: Task Flow for Windows Deployment (Continued)

Objective	Related Procedures and Actions
2. Complete all prerequisite actions. (continued)	3. For deployments across multiple machines, see "Create a Shared Directory" on page 94. 4. If you have already installed KANA Response Live, you must stop it from running as a service. For more information, see "Remove the KANA Response Live Start Service" on page 94. 5. "Create Contact, Interaction (and Co-Browsing) Databases" on page 95.
3. Install and configure third-party software for processing Web-based interactions (chat and web e-mail).	Install, connect, and/or configure components that enable web services. Use one of the following web server/application container combinations. **Apache and Tomcat** For an Apache/Tomcat combination, complete these steps: 1. Downloading and installing the Java SDK, page 56. 2. Installing the Apache Web Server on Windows, page 57 3. Installing the Tomcat web application container on Windows, page 59 4. Installing the JK1 Connector with Apache, page 63 **IIS and Tomcat** For an IIS/Tomcat combination, complete these steps: 1. Installing the Tomcat web application container on Windows, page 59 2. Installing the JK1 Connector with IIS, page 65 **IIS and JRun** This guide does not provide detailed procedures for this configuration. Refer to the documentation from the relevant vendors for more information.
4. Install and configure third-party software for co-browsing * *Skip this step if you are not using co-browsing functionality.	To use Genesys co-browsing, install and configure the KANA Response Live Server. See Table 6 on page 75 for the deployment task flow. 1. Installing KANA Response Live for Windows, page 78 2. Configuring KANA Response Live for Windows, page 80 3. Testing the KANA Response Live installation on Windows, page 82 4. Launching a co-browsing session, page 87

Table 1: Task Flow for Windows Deployment (Continued)

Objective	Related Procedures and Actions
5. Configure Multimedia objects.	1. Installing the Multimedia Configuration Wizards, page 96. 2. Create sample workflows for routing simple test interactions through the contact center to an agent. See Installing and Starting Interaction Workflow Samples, page 96. 3. Configure Multimedia objects for installation. See Configuring Multimedia objects using the wizard, page 98. 4. Specify the `web-api port` for Chat Server, for dedicated communication with Web API Server. See Specifying a webapi-port for Chat Server, page 129.
6. Install Multimedia components	Performing an integrated installation of all Multimedia servers, page 131 **Note**: For deployments across multiple hosts, you need to launch the Integrated Installation one time for each host.
7. Verify connections	1. Double-check that the connections you made with the configuration wizard are in place. For a list of necessary connections, see Table 4 on page 52. 2. From Configuration Manager, add a connection from Stat Server to Interaction Server. Stat Server uses this connection to find and route interactions to available Multimedia agents. For more information, see Verifying connections, page 137.
8. Modify your databases to process interactions	Running scripts for your databases, page 136
9. Test the components	1. Testing the Multimedia servers, page 138 2. Testing the components using the Web-based TestTool761, page 139 Testing that Genesys Desktop can handle interactions, page 140
10. Test the setup	1. Configuring ABC Simple BP for routing e-mail interactions, page 141 2. Configuring ABC Simple Chat BP for routing chat interactions, page 142 3. Sending a test e-mail to a Desktop agent, page 142 4. Starting a test chat session with a Desktop agent, page 143 5. Sending a test web form e-mail to a Desktop agent, page 144

UNIX Deployment Task Flow

For Solaris, AIX, or Linux deployments, Genesys recommends that you use the Multimedia Configuration Wizards on a Windows host to configure and install components to other hosts. Complete the actions in the following order to deploy your solution.

Table 2: Task Flow for Solaris/AIX/Linux Deployment

Objective	Related Procedures and Actions

1. Prepare your environment.	1. Define an environment variable for your Multimedia directory.
	`GES_HOME_761`
	2. Create a shared directory on your UNIX host that your Windows host can access.
	OR
	Create a shared directory on the Windows host that your UNIX hosts can access.
	3. If you have already installed KANA Response Live, you must stop it from running as a service. Use the following command:
	`rm -f /etc/rc2.d/S88hipctl`
	4. Create your databases.

2. Configure Multimedia objects for installation	Launch the Multimedia Configuration Wizard from a Windows host to configure the components that will run in the Solaris, Linux, or AIX environments. 1. Installing the Multimedia Configuration Wizards, page 96 2. Installing and Starting Interaction Workflow Samples, page 96 3. Configuring Multimedia objects using the wizard, page 98
3. Install Third Party Components	On each host where you plan to install components, run the Third Party Components installation package from the following directory: `<platform>\ThirdPartyComponents` **Note**: For an explanation of the difference between Third Party Components and ThirdPartyApplications, see the note on page 55.
4. Install the Multimedia components	Run the installation package for each remaining component: `<component>\<platform>`

Table 2: Task Flow for Solaris/AIX/Linux Deployment (Continued)

Objective	Related Procedures and Actions
5. Install and configure third-party software for processing Web-based interactions	Install, connect, and/or configure components that enable web services. Use one of the following web server/application container combinations. **Solaris—WebLogic Web Application** 1. Deploying Genesys web applications for WebLogic, page 170 2. Checking your WebLogic configuration file, page 171 3. Deploying your web applications, page 172 4. Testing the WebLogic installation and deployment, page 175 **Solaris—Apache and Tomcat** • Obtaining Apache documentation from the CD, page 72 • Obtaining Tomcat documentation from the CD and the Web, page 73 **Solaris—WebSphere Web Application** 1. Deploying WebSphere on Solaris, page 160 2. Testing the WebSphere installation on AIX or Solaris, page 169 **AIX—WebSphere Web Application** 1. Deploying WebSphere on AIX, page 157 2. Testing the WebSphere installation on AIX or Solaris, page 169 **Linux—Apache and Tomcat** 1. Obtaining Apache documentation from the CD, page 72 2. Obtaining Tomcat documentation from the CD and the Web, page 73

Table 2: Task Flow for Solaris/AIX/Linux Deployment (Continued)

Objective	Related Procedures and Actions
6. Install and configure third-party software for co-browsing. (Solaris and Linux only)	To use Genesys co-browsing, install and configure the KANA Response Live Server. See Table 6 on page 75 for the deployment task flow. **Solaris or Linux** 1. Installing KANA Response Live for Solaris, page 83 2. Installing KANA Response Live for Linux, page 84 3. Creating the KANA database schema on Solaris or Linux, page 85 4. Configuring KANA Response Live for Solaris or Linux, page 86 5. Testing the KANA installation on Solaris or Linux, page 86 6. Launching a co-browsing session, page 87

Chapter

3 Deployment Planning

This chapter describes, in general terms, how to plan an effective deployment process for Multimedia 7.6.1. It covers these topics:

For further information about specific issues, see also the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.

Note: Genesys recommends that you configure Multimedia using the wizards provided with it and that, for Windows deployments, you install it using the integrated installation package. These utilities configure and install all Multimedia components

Overview

Chapter 5, beginning on page 91, and Chapter 7, beginning on page 153, describe deployment in detail. Before beginning the deployment process there are several things you can think about and do to make the process easier.

Genesys recommends that you configure Multimedia using the wizards provided with it and that, for Windows deployments, you install it using the integrated installation package. These utilities configure and install all Multimedia components.

This chapter provides general information on deployment planning. For further information about specific issues, see also the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.

Component Distribution

Genesys recommends that you divide Multimedia and associated components among several host machines. See Figure 5 for a sample architecture.

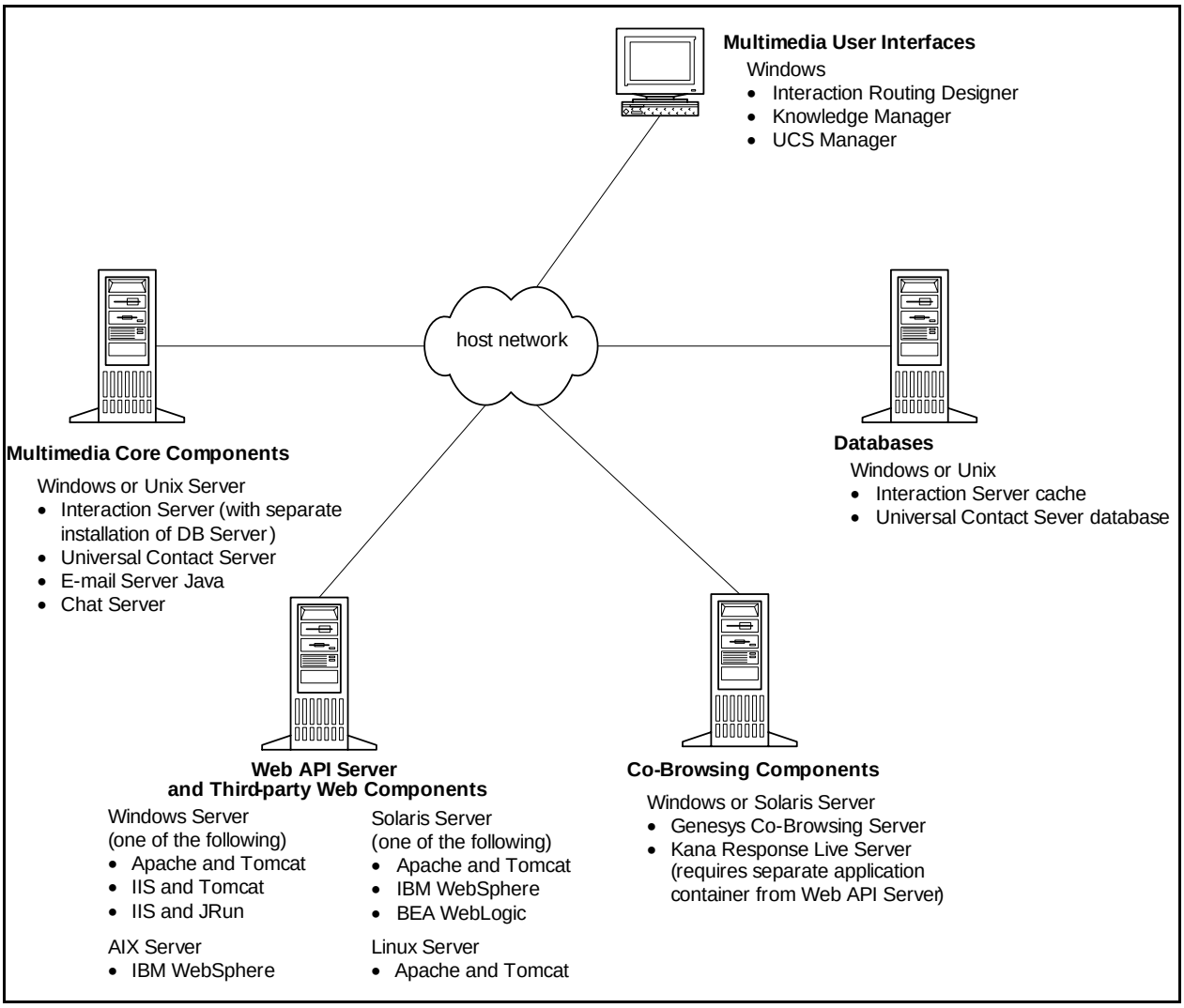


Figure 5: Sample Architecture for a Single-Tenant Multimedia Deployment

When choosing host machines for your Multimedia deployment, keep the following recommendations in mind:

- Keep web servers for different applications on separate machines. For example, Kana Response Live server installs its own instance of the Apache Tomcat application container, which you should keep separate from the Apache Tomcat used for Web API Server (according to the procedures available in this guide).

- Install Multimedia graphical user interface (GUI) applications on Windows hosts only. These GUI applications include:
  - Knowledge Manager
  - Universal Contact Server Manager
  - Interaction Workflow Samples
- Based on the load and nature of contact center media (e-mail, chat, or blended), you might need to deploy the following components on separate machines:
  - Universal Contact Server
  - E-mail Server Java
  - Chat Server

  For information about distributing Multimedia components across multiple hosts for load-balancing purposes, see the "Load Balancing and Backup Configuration" chapter of the *Multimedia 7.6 User's Guide.*
- You should also deploy the corporate mail server on a separate computer.

Estimating Database Size

This section suggests some ways of estimating the size of the Universal Contact Server (UCS) and Interaction Server databases. Please keep in mind that these are rough estimates only. The size of a database file on a hard drive depends on a number of factors other than the number of interactions it contains. For example:

- The size of a database file can vary according to the DBMS platform you are using.
- Interactions are not uniform in size. An e-mail may be as small as 4 KB or it may be 200 KB or more. Also, interactions can include attachments, which can increase size greatly.

Note: You can configure Universal Contact Server Manager to automatically archive and/or prune old messages to keep this database to a manageable size. See *Multimedia 7.6 Universal Contact Server Manager Help* for more information.

Beginning in 7.6.1, Event Logger functionality can be implemented. This feature requires its own database. For more information on Event Logger, including creating the database, refer to the "Event Logger" section in the "Interaction Server: Advanced Topics" section of the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.

Procedure: Estimating UCS database size for e-mail interactions

Start of procedure

1. Multiply the number of interactions expected each day by the number of days you want to keep the interactions.
2. Multiply the result by 25 KB (estimating 20 KB for the message body and 5 KB for headers, comments, and indexes).

   For example

   If you anticipate 100 incoming interactions per day and you want to keep 90 days' worth of history, reserve 100 x 90 x 25 KB or 225 MB of disk space.

   Note: Though the average interaction will probably be less than 25 KB in size, this is a reliable estimate of the amount of disk space required for contact and history records

3. Add 1 KB for each related contact in the database. So for 100,000 contacts, allow 100 MB for the database.

End of procedure

Next Steps

- Estimating UCS database size for chat interactions

Procedure: Estimating UCS database size for chat interactions

Start of procedure

1. Multiply the number of chat interactions expected each day by the number of days you want to keep the interactions.
2. Multiply the result by 5 KB.

   For example

   If you anticipate 1000 incoming chat interactions per day, and you want to keep 90 days' worth of history, reserve 1000 x 90 x 5 KB, or 450 MB of disk space.

3. Add 1 KB for each related contact in the database. So for 100,000 contacts, allow 100 MB for the database.

End of procedure

Next Steps

- Estimating the size of the Interaction Server database

Procedure:
Estimating the size of the Interaction Server database

Start of procedure

1. Use the following formula:

   (3.5 +*d*)m = *x* KB

   Where:

   - 3.5 KB is the size of system data and business properties (also called operational data). See the initialization script for the particular limit for each property.
   - *d* is the size, in KB, of attached user data. Attached data is normally 4 KB or less, but it may be more. Multimedia imposes an upper limit on the size of attached user data written in the logs. However, there is no limit set for the total amount of attached data that Interaction Server has to process.

     Tip: For more information about limits, see the *Multimedia 7.6 User's Guide*.

   - *m* is the expected maximum number of active interactions. In choosing this number for Genesys E-mail, take into consideration the large number of e-mails that may build up during off hours or system malfunctions.

     Tip: For example, if you limit attached user data to 64 KB and you expect a maximum of 10,000 active interactions, allow about 700 MB for the database.

End of procedure

Next Steps

- Completing the configuration worksheet

Configuration Worksheet

Before you begin deployment, it is helpful to assemble information that the configuration wizards will require you to supply.

Use the following worksheet (see Table 3) to plan your Multimedia deployment. After filling out the worksheet you are ready to start the configuration wizards.

This worksheet lists:

- Values (mostly Application object names and port numbers) that the wizards ask you to invent. You can invent them ahead of time in case you want to incorporate some systematically (for example, you may want all Application object names to start with a certain prefix, or you may want port numbers to be consecutive or to all start with the same two digits).
- Model Setup Values used during our model deployment. These provide a reference to help you during the deployment procedures.
- Names (or other attributes) of non-Multimedia objects that the wizards ask you to enter. Some of these are likely to exist already. Of those which do not, you can create them before, after, or (in some cases) while running the Multimedia Wizard. Here are two examples:
  - Multimedia requires several databases (tablespaces): one for Interaction Server, two for UCS, and one for Co-Browsing Server (if you plan on deploying it). See “Databases and Associated Configuration Objects” on page 44 for more information.
  - Multimedia requires a `Person` or `Access Group` object that UCS can use to log in to Configuration Server (see “Login account” on page 46).

The wizards also ask you to select some items from a list. This worksheet does not list most items of this type, but they are described in Chapter 5, beginning on page 91.

Procedure: Completing the configuration worksheet

Purpose: To provide a printable reference sheet that lists all the parameters required to deploy a Multimedia solution.

Start of procedure

1. Print out Table 3.
2. Add deployment information for your environment in the `Your Value` column.
3. Keep a copy of this worksheet with you during the deployment process.

End of procedure

Next Steps

- If you already have a web server and servlet for Web API Server installed, continue with Chapter 5 on page 91.

- If you still need to install a web server and servlet, before you start the configuration of Multimedia objects, continue with:

  Windows Chapter 5 on page 91

  UNIX Chapter 7 on page 153

Table 3: Configuration Worksheet

Field	Value	Model Setup Value	Description
Log In to Wizard Manager			
User name			User name for logging in to Configuration Server
User password			Password for logging in to Configuration Server
Application			Configuration Server Manager Application object name
Host			Host of Configuration Server
Port			Port on Configuration Server host where Configuration Server listens for queries
Solution			
Name		MM761	Invent a name for your Multimedia solution.
Tenant (in multi-tenant environment)			
Name			Name of the `Tenant` object holding the Multimedia solution that you are configuring.

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
Databases and Associated Configuration Objects **Note:** Before installing Multimedia, you must configure and install a DBMS and create four databases/tablespaces, one for Interaction Server, two for Universal Contact Server (one main, one archive), and one for Co-Browsing Server (if you plan on deploying it). You can do this before or after running the Multimedia Wizard.			
Interaction Server Database Objects			
Database Access Point (DAP)			
DAP Name		MM761_Ixn_DAP	Invent a name for the DAP to use with Interaction Server. If you intend to use the Event Logger functionality that is available in version 7.6.1, you will need another DAP. Configuration and deployment of Event Logger is explained in the "Event Logger" section in the "Interaction Server: Advanced Topics" section of the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.
DB Server			
Name		MM761_IxnDBServer	Name of the DB Server application object.
DBMS type		Microsoft SQL Server	Type of database management system you are using (Microsoft SQL, Oracle, DB2).
Host		MMHost	Host where you want DB Server installed.
Port		6110	Port where DB Server listens for queries.
SNMP Port		Not included in the model setup.	Port where DB Server listens for management commands (optional).

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
DBMS name		MMHost	Name of your database management system.
DBMS type		Microsoft SQL Server	Type of database management system you are using (Microsoft SQL, Oracle, DB2).
Database name		IxnDB	Name of the database (tablespace) for Interaction Server.
User name		sa	User name for logging in to the DBMS.
Password		<password for user sa>	Password for logging in to the DBMS.
Universal Contact Server (UCS) Database Objects			
DB Server			
Not needed because UCS uses JDBC to connect with the database.			
Database Access Point (DAP)			
DAP name		MM761_UCS_DAP	Invent a name for the DAP to use with UCS.
Host		MMHost	Host name where database is running.
Port		1433	Port where the database listens for queries (for example, 1521 is the default for Oracle, 1433 for Microsoft SQL, 50000 for DB2).
DBMS type		Microsoft SQL Server	Type of database management system you are using (Microsoft SQL, Oracle, DB2).
Database name		Customer	Name of the database (tablespace) for UCS.
User name		sa	User name for logging in to the DBMS.

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
Password		<password for user sa>	Password for logging in to the DBMS.
Universal Contact Server			
Name		MM761_UCS	Invent a name for your UCS Application object.
Host		MMHost	Host where you want UCS installed.
Port		6120	Listening port for requests.
Universal Contact Server API port		Default port value	Port for Remote Method Invocation (RMI) connection to the UCS API. Must be different from standard server port.
Login account		Not specified for the model setup. See the description, and choose a Person or Access Group accordingly.	The User Account (Person) or Access Group that UCS will use to log in to Configuration Server. **Note**: This Person or Access Group must have Administrator or higher access rights so it can update information in the Configuration Database. Use an existing account with these rights or create one for the purpose.
Multimedia Switch			
Name		In the model setup, we select New-Style Interaction Server, which creates a Multimedia switch and switching office automatically in the background.	Select or create a multimedia switch. **Note:** Include only one multimedia switch per tenant to preserve Stat Server and URS support for Interaction Server.

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
Switching Office			
Name		In the model setup, we select New-Style Interaction Server, which creates a Multimedia switch and switching office automatically in the background.	Select or create a switching office.
Interaction Server			
Name		MM761_IxnSrv	Invent a name for your Interaction Server Application Object.
Host		MMHost	Host where you want Interaction Server installed.
Port		6130	Port where Interaction Server listens for queries.
Stat Server			
Name		In the model setup, we select the existing, properly configured prerequisite Stat Server. See Table 7 for details.	Select or create a Stat Server.
Host			Host of Stat Server.
Port			Port where Stat Server listens for queries.
Application Cluster (optional)			
Name		Model setup does not use the Application Cluster.	Invent a name for your Application Cluster.
Web API Server			
Name		MM761_WebAPIServer	Invent a name for your Web API Server Application Object.
Host		MMHost	Host where you want Web API Server installed.

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
Port		80	Port for web server (defaults are 80 for HTTP, 443 for HTTPS); used for load balancing between web clients. This assumes that the web clients and Web API Server are installed on the same host.
Web Compound Samples			
Name		MM761_WebClient	Invent a name for your Web Compound Samples.
E-mail request preferences		Not included in the model setup.	The address from which replies to web e-mail requests will be sent.
Tenant			Name of the `Tenant` object holding the Multimedia solution that you are configuring.
UCS Manager			
Name		MM761_UCSMgr	Invent a name for your UCS Manager Application Object.
E-Mail Server Java (for Genesys E-mail)			
Name		MM761_E-mailServer	Invent a name.
Host		MMHost	Host where you want E-mail Server Java installed.
Port		6150	Listening port for requests
POP server		MMHost	The name of your corporate POP server.
SMTP server		MMHost	The name of your corporate SMTP server if different from the POP server.
POP3 user name and password		Not specified in the model setup. Use valid user information for your corporate mail server.	Address, user name and password for logging on to your POP server.

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
Default e-mail address domain		MMHost	Domain to be appended to e-mail (both incoming and outgoing) that does not already have a domain specified in its `To` address field.
External agent e-mail address		external@MMHost	Address to be used as the `From` address in messages to external agents and as the `To` address in messages from external agents. Typically, this is different from your general corporate e-mail addresses.
Integrated Web Form processing port (optional)		7777	Listening port number for Web Form–processing entry point.
Automated Reply Agent		Agent1	Notional agent name used in automatic responses. Typically this is something generic like `Genesys Technical Support`.
E-mail account(s) for customer access		<mailboxName1>@MMHost <mailboxName2>@MMHost	Account name and e-mail address. These are the accounts on your corporate POP server that E-mail Server Java will pull e-mails from and bring them into the Multimedia system. Be sure to also create them on your corporate mail server if they do not exist already.

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
Classification Server			
Name		MM761_ClassificationServer	Invent a name.
Host		MMHost	Host where you want Classification Server installed.
Port		6160	Listening port for requests.
Training Server			
Name		MM761_TrainingServer	Invent a name.
Host		MMHost	Host where you want Training Server installed.
Port		6170	Listening port for requests.
Knowledge Manager			
Name		MM761_KnowledgeManager	Invent a name.
Chat Server (for Genesys Web Media)			
Name		MM761_ChatServer	Invent a name.
Host		MMHost	Host where you want Chat Server installed.
Port		6180	Listening port for requests.
Webapi-port (recommended)		6181	A specific port for web client connections only.
ESP Server Port		6182	Listening port for ESP requests.
ESP default nickname		system	Name to be used in place of agent's name for use in automated chatting.
Co-Browsing Server			
Name		MM761_Co-BrowsingServer	Invent a name.

Table 3: Configuration Worksheet (Continued)

Field	Value	Model Setup Value	Description
Host		MMHost2	Host on which you want Co-Browsing Server installed.
Port		6195	Listening port for requests.
Co-Browsing Server alias			Invent a four-character name.
Co-Browsing Server Database Access Point (DAP) **Note:** If you use the UCS DAP for Co-Browsing Server as well, this is not needed. Genesys does not recommend using the same DAP.			
DAP name		In the model setup, we use the UCS DAP and Database for Co-Browsing Server.	Invent a name for the DAP to use with Co-Browsing Server.
Host			Host name where database is running.
Port			Port where the database listens for queries (for example, 1521 is the default for Oracle, 1433 for Microsoft SQL, 50000 for DB2).
DBMS type			Type of database management system you are using (Microsoft SQL, Oracle, DB2).
Database name			Name of the database (tablespace) for Co-Browsing Server.
User name			User name for logging on to the DBMS.
Password			Password for logging on to the DBMS.

Connections Table

Table 4 on page 52 lists connections that you set in the Configuration Layer for Multimedia components.

In addition to the information in Table 4, keep in mind that:

- Connections to Message Server are required only if you are running Multimedia 7.6.1 with the Management Layer.
- A Local Control Agent (LCA) runs on each host. All Genesys components on a host connect to the local LCA. Refer to the *Framework 7.6 Deployment Guide* for details on configuring LCAs.
- For Reporting purposes, you must also add a connection from your Reporting Stat Server to the Interaction Server.

Note: It is possible to have multiple connections to some components. These components are marked with a *. For information about how and why you use multiple connections, please see the "Load Balancing and Configuration" chapter of the *Multimedia 7.6 User's Guide*.

Table 4: Multimedia Application Connections

Application	Connects to
Chat Server	Interaction Server Message Server Universal Contact Server
Classification Server	Message Server Universal Contact Server
E-mail Server Java	Interaction Server Message Server Universal Contact Server
Interaction Server	Chat Server* Classification Server* E-mail Server Java* Interaction Server DAP* Message Server Stat Server (for reporting)* Universal Contact Server*

Table 4: Multimedia Application Connections (Continued)

Application	Connects to
Knowledge Manager	Universal Contact Server
Training Server	Message Server Universal Contact Server
Universal Contact Server	Message Server Stat Server* UCS DAPs
Universal Contact Server Manager	Universal Contact Server
Co-Browsing Server	JDBC-based DAP Message Server
Web API Server	Application Cluster* Chat Server* Co-Browsing Server E-mail Server Java* Interaction Server Message Server Solution Control Server Stat Server* Universal Callback Server* Universal Contact Server* Web API Server[a]

a. If this Web API Server is acting as a load balancer for other Web API Servers.

Chapter

4 Deploying Third-Party Web Applications

A web server and a web application container are prerequisites for deploying Multimedia. Your environment may already have its own established configuration of these components. This chapter describes the steps you must take to install and configure common combinations of these applications, including the Apache Web Server and the Apache Tomcat web application container in Windows, Linux, and Solaris environments, as well as the initial setup for WebSphere in an AIX environment. Be sure to check the *Genesys Supported Operating Environment Reference Manual* for the supported versions of the third-party software you are using. This chapter includes these sections:

Note: It is important to distinguish Third Party *Components* from third-party *applications*.

Multimedia Third Party Components—refers to a collection of files, mostly Java libraries, that Multimedia uses for its normal operation. Third Party Components are included in the integrated install, as described in Performing an integrated installation of all Multimedia servers, page 131. The Third Party Components installation package places these files in various locations on the host machine.

ThirdPartyApplications—refers to a directory on the Multimedia product CD that contains the web server Apache, the application container Tomcat, and various supporting files. Multimedia requires a

web server and an application container, but Apache and Tomcat are not the only supported types, and you are not required to install the particular copies in this directory; they are provided as a convenience.

Java Software Development Kit

Procedure: Downloading and installing the Java SDK

Purpose: This procedure describes how to download and install the Java SDK.

Start of procedure

1. Determine the correct Java software development kit (SDK) for your system. For supported releases of Java SDK on Windows, Solaris, Linux, and AIX systems, see the *Genesys Supported Operating Environment Reference Manual*.

   Tip: Multimedia 7.6.1 supports JDK 5.0, which uses the extended version number format of `1.5.0`.

2. Select one of the URLs from the list below, according to your system. Paste the URL into your browser, replacing `<release_number>` with `1.5.0`, or the supported release number that you found in Step 1.

Solaris	http://java.sun.com/j2se/<release_number>/install-solaris.html
Linux	http://java.sun.com/j2se/<release_number>/install-linux.html
Windows	http://java.sun.com/j2se/<release_number>/install-windows.html
AIX	http://www-1.ibm.com/support/docview.wss?rs=180&context=SSEQTP&uid=swg24006713

3. Make sure the `JAVA_HOME` environment variable points to the directory where Java SDK is located. For example, on Solaris it might be this path:

   ```
   JAVA_HOME=/usr/local/jdk1.5.0_11
   export JAVA_HOME
   ```

   Or for Windows, set the `JAVA_HOME` environment variable to something like `c:\jdk1.5.0_11`

End of procedure

Next Steps

- If you are deploying the Apache HTTP server and Tomcat Application Container on a Windows platform, see Installing Apache and Tomcat on Windows, page 57.
- If you are deploying the Apache HTTP server and Tomcat Application Container on a Solaris or Linux platform, see Configuring Apache and Tomcat for Linux or Solaris, page 72.

Installing Apache and Tomcat on Windows

This section describes procedures for installing the Apache Web Server and the Tomcat web application container in a Windows environment. The installation packages for both Apache and Tomcat are included on your Multimedia 7.6.1 CD.

If you are using Microsoft's Internet Information Server (IIS) as your web server, skip the instructions for installing Apache, proceed to the Tomcat instructions, and then use the steps in "Setting Up the JK1 Connector with IIS 5 or 6" on page 65 for further configuration details.

Apache

Genesys provides the Apache Web Server with your Multimedia software. Look for it in the third-party applications portion of the installation CDs.

Procedure: Installing the Apache Web Server on Windows

Purpose: This procedure outlines how to install the Apache Web Server on Windows.

Start of procedure

1. Shut down any other web servers (such as IIS) on the machine where Apache is to run.
2. On the Interaction Management CD, go to the directory `ThirdPartyApplications\Apache<release_number>\Windows\binary`. Find and double-click `apache_<release_number>-win32-x86-no_ssl-r2.msi`.
3. Click `Next` at the `Welcome` window.
4. Accept the license agreement, and click `Next`.
5. Click `Next` at the `Read This First` page.

6. At the `Server Information` prompt, enter the following information:
   a. Network domain
   b. Server name

   Note: Servers may have an external name that differs from the internal name. Be sure to use the right name for your situation.

   c. Administrator's e-mail address.
   d. Choose whether to run as a service. Keep the default if you want Apache running as a service; otherwise select the radio button to manually start and stop Apache. Click `Next` to continue.
7. Choose a typical or custom install.
8. Choose a destination folder. Genesys recommends that you use a short path name, such as `C:\ApacheGroup`.

   Warning! Do *not* include any spaces in the folder name (for example, use `ApacheGroup` instead of `Apache Group`).

9. Click `Install`. The Installation Wizard uses the settings you specified to install and configure Apache.
10. Click `Finish`. The installation is complete.

Note: Throughout this document, `<APACHE_HOME>` represents the folder you define here for your Apache installation. During installation, a sub-folder named `Apache2` may be created. If this is the case, `<APACHE_HOME>` represents the folder you define here as well as the sub-folder `Apache2` (`C:\ApacheGroup\Apache2`).

End of procedure

Next Steps

- If you plan on using Genesys Web Collaboration (Co-Browsing Server), you need to implement a Secure Socket Layer (SSL) for your web server. See Installing a new SSL certificate using IIS, page 76.
- Otherwise, proceed with Testing the Apache Web Server on Windows.

Procedure:
Testing the Apache Web Server on Windows

Start of procedure

1. From the Windows taskbar, select `Start > Programs > Apache HTTP Server <release_number> > Control Apache Server > Start`.

   Note: If Apache is already running, then the `Start` command displays an error message. Continue with Step 2 to confirm that Apache is running correctly.

2. Open a web browser and go to Apache's host (`http://<servername_or_IP>:80`). If Apache is running correctly, you will see a white page with the message `It works!`

End of procedure

Next Steps

- Installing the Tomcat web application container on Windows, page 59

Tomcat

Genesys provides the Tomcat web application container with your Multimedia software. Look for it in the `ThirdPartyApplications` folders of the installation CDs.

Note: The 7.6.1 release of Genesys Multimedia supports only specific releases of Tomcat. Check the *Genesys Supported Operating Environment Reference Manual* for more information.

Procedure:
Installing the Tomcat web application container on Windows

Start of procedure

1. On the Multimedia Interaction Management CD, go to the directory `ThirdPartyApplications\Tomcat_Servlet<release_number>\Windows\binary`. Find and double-click `apache-tomcat-<release_number>.exe`.
2. At the `Welcome to the Apache Tomcat Setup Wizard` window, click `Next`.

3. Click `I Agree` to accept the license agreement.
4. At the `Installation Options` window, select `Full` from the `Select type of install` drop-down list (see Figure 6 on page 60).

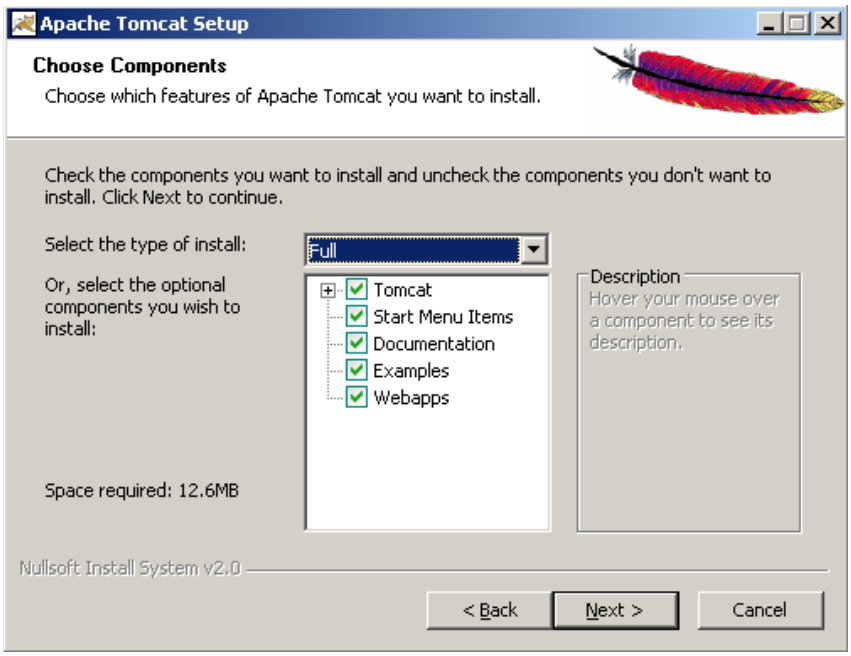


Figure 6: Tomcat Installation Options

5. Click `Next` to continue.
6. At the `Choose Install Location` window, enter a path to your Tomcat installation location, and click `Next`.

> Warning! *Do not* include any spaces in the folder name (for example, use `Tomcat6` instead of `Tomcat 6`).

7. Specify the `HTTP/1.1 Connector Port` and `Administrator Login` details for your Tomcat installation, and click `Next`.

> Tip: For the `HTTP/1.1 Connector Port`, you can use the default value of `8080`.

8. Confirm the location of your Java SDK, and click `Install`. The Installation Wizard uses the settings you specified to install and configure Tomcat.
9. Click `Finish`. The installation is complete.
10. Verify the values of the following environment variables (`Start/My Computer/Properties/Advanced/Environment Variables`), or create them if they do not already exist:
    - `CATALINA_HOME`—Your Tomcat installation directory.

- `JAVA_HOME`—Your JDK base directory, as described under "Java Software Development Kit" on page 56.

Note: Throughout this document, `<CATALINA_HOME>` represents the base directory of your Tomcat installation.

End of procedure

Next Steps

- Testing the Tomcat installation on Windows.

Procedure: Testing the Tomcat installation on Windows

If they exist, you should always start and stop Tomcat using the batch files `<CATALINA_HOME>\bin\startup.bat` and `<CATALINA_HOME>\bin\shutdown.bat`. Using `shutdown.bat` to stop Tomcat stops the executable and also closes various files that would otherwise remain open.

If there are no batch files, use the Tomcat Monitor (visible as an icon in the system taskbar) to start and stop Tomcat.

Tip: You can find an icon for the Tomcat Monitor in the system taskbar:

To start or stop Tomcat, right-click the Tomcat Monitor icon and select your action: `Start service`, `Stop service`, and so on.

Start of procedure

1. Verify that Apache is already running.
2. Start Tomcat using `<CATALINA_HOME>\bin\startup.bat`. If Tomcat is running correctly, you will see a console window (see Figure 7).

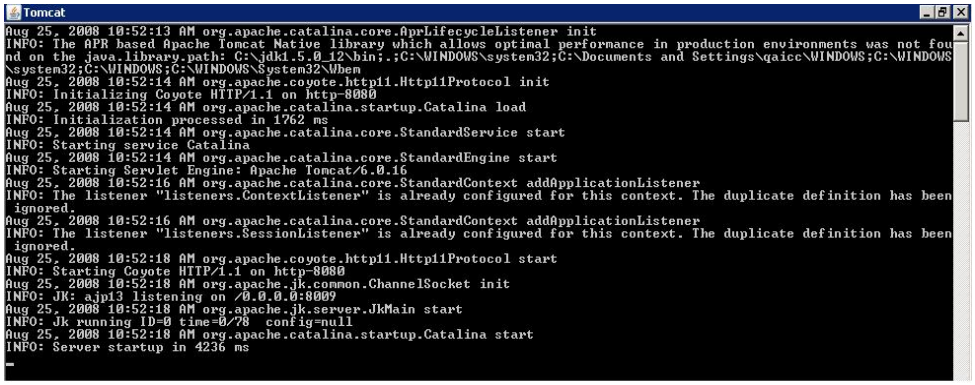


Figure 7: Tomcat Console Window

3. Further test the Tomcat installation by opening a browser to `http://localhost:8080`. You should see the web page displayed in Figure 8.

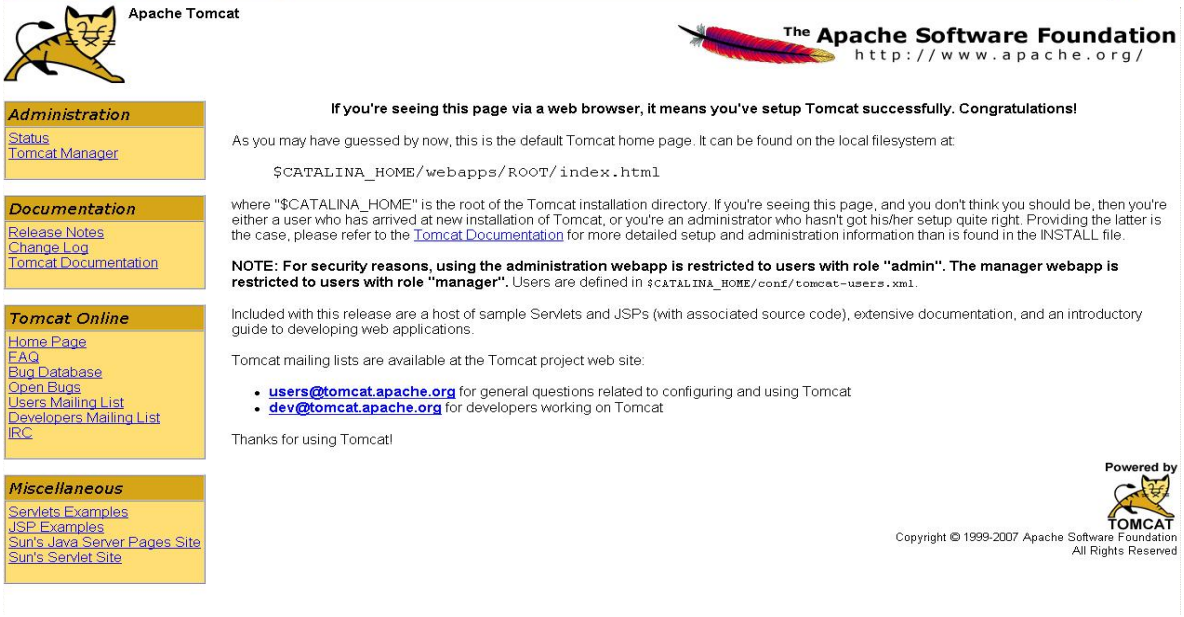


Figure 8: Successful Tomcat Installation Web Page

4. Shut down Tomcat. Use `shutdown.bat` if it exists, or press `Ctrl+C` from the console window if the batch file does not exist.
5. Shut down Apache. Select `Start > Programs > Apache HTTP Server <release_number> > Control Apache Server > Stop`.

End of procedure

Next Steps

- Connecting Tomcat and Its Web Server

Connecting Tomcat and Its Web Server

This section describes connecting Tomcat and its web server on the Windows platform.

Setting Up the JK1 Connector with Apache

Procedure: Installing the JK1 Connector with Apache

Start of procedure

1. On the Interaction Management CD, navigate to `ThirdPartyApplications\Tomcat\jk_apache_for_windows\binary` and locate the file that matches your version of Apache:
   - `mod_jk-apache-2.2.4.so` (for Apache 2.2 or later)
   - `mod_jk-apache-2.0.59.so` (for Apache 2.0.59 or later)
2. Copy this file to your `<APACHE_HOME>/modules` directory, and rename it to `mod_jk.so`.
3. In the `<CATALINA_HOME>/conf/jk` directory, create a file called `workers.properties`, with the following contents:

```
worker.list=ajp13
worker.ajp13.port=8009
worker.ajp13.host=localhost
worker.ajp13.type=ajp13
```

   Note: If there is no `jk` directory, create one.

4. In the `<APACHE_HOME>/conf` directory, create a file called `mod_jk.conf`, with the following contents:

```
<IfModule !mod_jk.c>
 LoadModule jk_module "<APACHE_HOME>/modules/mod_jk.so"
</IfModule>
JkWorkersFile "<CATALINA_HOME>/conf/jk/workers.properties"
JkLogFile "<CATALINA_HOME>/logs/mod_jk.log"
JkLogLevel emerg
JkMount /examples/* ajp13
```

5. Add the following statement to the end of the `<APACHE_HOME>/conf/httpd.conf` file:

```
Include "<APACHE_HOME>/conf/mod_jk.conf"
```

End of procedure

Next Steps

- After completing the installation, you should test the `JK1` connector to ensure that it functions properly. See Testing the JK1 Connector with Apache.

Procedure: Testing the JK1 Connector with Apache

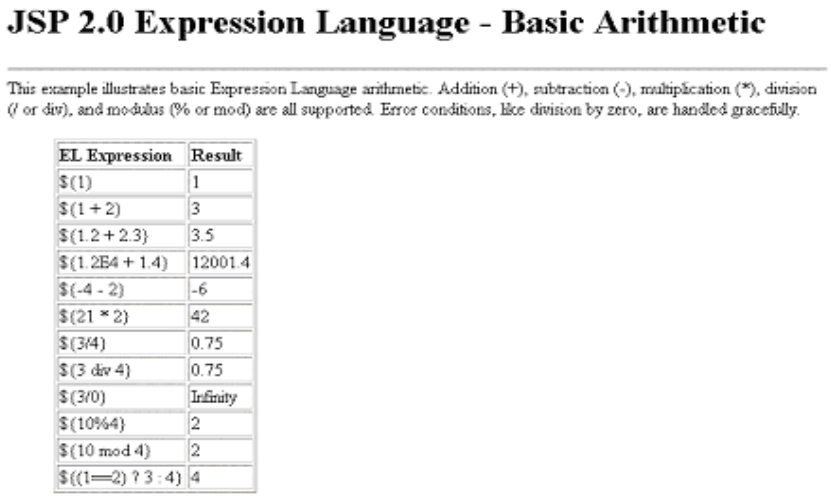
Start of procedure

1. Start Tomcat and Apache.

   Open a web browser and enter the following address:

   `http://localhost/examples/jsp/jsp2/el/basic-arithmetic.jsp`

   You should see the web page shown in Figure 9.



JSP 2.0 Expression Language - Basic Arithmetic

This example illustrates basic Expression Language arithmetic. Addition (+), subtraction (-), multiplication (*), division (/ or div), and modulus (% or mod) are all supported. Error conditions, like division by zero, are handled gracefully.

EL Expression	Result
${1}	1
${1 + 2}	3
${1.2 + 2.3}	3.5
${1.2E4 + 1.4}	12001.4
${-4 - 2}	-6
${21 * 2}	42
${3/4}	0.75
${3 div 4}	0.75
${3/0}	Infinity
${10%4}	2
${10 mod 4}	2
${(1==2) ? 3 : 4}	4

Figure 9: JK1 Test Page

End of procedure

Next Steps

- If you want your Multimedia solution to include co-browsing functionality, see Deploying KANA Response Live for co-browsing, page 74.
- Otherwise, you can begin to deploy the Model Setup of the Multimedia components. See Chapter 5 on page 91.

Setting Up the JK1 Connector with IIS 5 or 6

Procedure: Installing the JK1 Connector with IIS

Purpose: This procedure describes how to install the JK1 connector with IIS. This procedure applies to both IIS 5 and IIS 6. For IIS 6, follow all steps; for IIS 5, skip Steps 11 to 13.

Start of procedure

1. On the Interaction Management CD, go to `ThirdPartyApplications\Tomcat\jk_apache_for_windows\binary`, locate `isapi_redirect<release number>.dll`, and place it in `c:\jakarta-tomcat\bin`.
2. Create the properties files `workers.properties` and `uriworkermap.properties` in `c:\jakarta-tomcat\conf`.

   Here is a minimum `workers.properties`, using just `ajp13` to connect your IIS web server to the Tomcat engine.

```
# workers.properties
#
# This file provides minimal jk configuration properties needed to
# connect to Tomcat.
# Define 1 real worker using ajp13
#
worker.list=ajp13w
#
# Set properties for worker ajp13w
# Note that the name and the type do not have to match.
#
worker.ajp13w.type=ajp13
worker.ajp13w.host=localhost
worker.ajp13w.port=8009
```

   Here is a minimum example of `uriworkermap.properties`:

```
# This file provides sample mappings for example
# ajp13w worker defined in workermap.properties
/examples/*=ajp13w
```

> Note: The `workers.properties` and `uriworkermap.properties` files must be saved in Microsoft Windows/MS-DOS format. Otherwise, an error will occur when installing the Web API Server and setup will not proceed.

3. In the registry, create a new registry key named: `HKEY_LOCAL_MACHINE\SOFTWARE\Apache Software Foundation\Jakarta Isapi Redirector\1.0`
4. Add a string value with the name `extension_uri` and a value of `/jakarta/isapi_redirect.dll`.
5. Add a string value with the name `log_file` and a value pointing to where you want your log file to be (for example `c:\jakarta-tomcat\logs\isapi.log`).
6. Add a string value with the name `log_level` and a value for your log level (can be `debug`, `info`, `error` or `emerg`).
7. Add a string value with the name `worker_file` and a value which is the full path to your `workers.properties` file (for example, `c:\jakarta-tomcat\conf\workers.properties`).
8. Add a string value with the name `worker_mount_file` and a value which is the full path to your `uriworkermap.properties` file (for example `c:\jakarta-tomcat\conf\uriworkermap.properties`).
9. Using the IIS management console, add a new virtual directory to your IIS web site. The name of the virtual directory must be `jakarta`. Its physical path should be the directory where you placed `isapi_redirect.dll` (in our example it is `c:\jakarta-tomcat\bin`). While creating this new virtual directory assign it with `execute` access.
10. Using the IIS management console, add `isapi_redirect.dll` as a filter in your IIS web site. The name of the filter should reflect its task (for example, `tomcat`), its executable must be our `c:\jakarta-tomcat\bin\isapi_redirect.dll`.
    - For IIS 6, continue with Step 11.
    - For IIS 5, skip to Step 14.
11. Open IIS Manager, as shown in Figure 10.

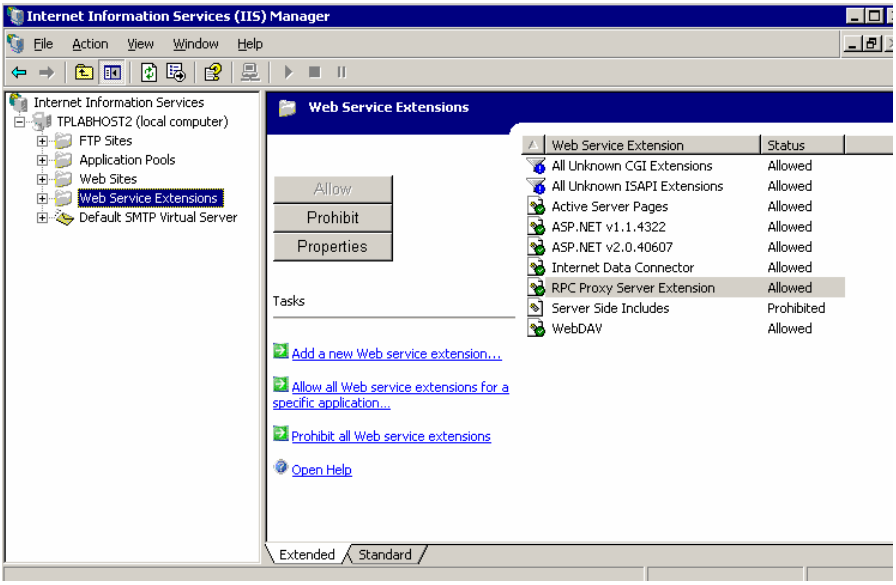


Figure 10: IIS Manager

12. Click `Add New Web Service Extension`. The resulting dialog box is shown in Figure 11 on page 67.

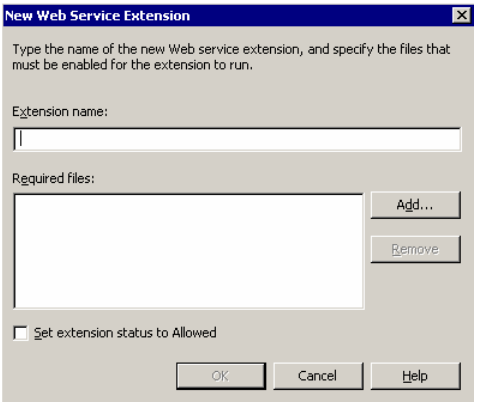


Figure 11: New Web Service Extension

13. In the New Web Service Extension dialog box:
    a. In the `Extension name` box, type `jakarta`.
    b. In the `Required files` box, click `Add` and browse to the location of the `isapi_redirect.dll` file.
    c. Select the `Set extension status to Allowed` check box, then click `OK`.
14. Restart the IIS service. Ensure that the filter you added in Step 10 is marked with a green up-pointing arrow.

End of procedure

Next Steps

- Testing the JK1 Connector with IIS

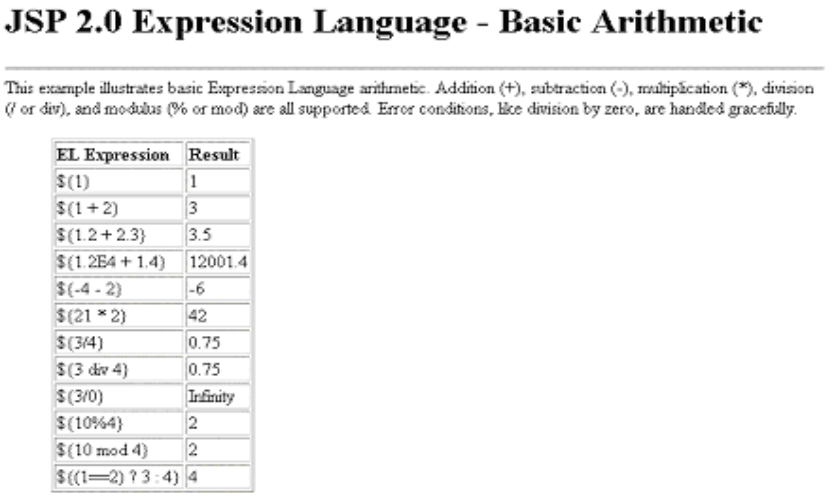
Procedure: Testing the JK1 Connector with IIS

Start of procedure

1. Start Tomcat. Start or restart IIS.
2. Open a web browser and go to:

   `http://localhost/examples/jsp/jsp2/el/basic-arithmetic.jsp`

   You should see the web page shown in Figure 12 on page 68.



JSP 2.0 Expression Language - Basic Arithmetic

This example illustrates basic Expression Language arithmetic. Addition (+), subtraction (-), multiplication (*), division (/ or div), and modulus (% or mod) are all supported. Error conditions, like division by zero, are handled gracefully.

EL Expression	Result
${1}	1
${1 + 2}	3
${1.2 + 2.3}	3.5
${1.2E4 + 1.4}	12001.4
${-4 - 2}	-6
${21 * 2}	42
${3/4}	0.75
${3 div 4}	0.75
${3/0}	Infinity
${10%4}	2
${10 mod 4}	2
${(1==2) ? 3 : 4}	4

Figure 12: JK1 Test Page

End of procedure

Next Steps

- Advanced Configuration of the Tomcat Context

Advanced Configuration of the Tomcat Context

To perform additional advanced configuration of your IIS-Tomcat implementation, see the following:

- Configuring IIS to serve static content, page 69
- Protecting the WEB-INF Directory, page 70
- Configuring Tomcat to serve multiple contexts, page 70

Procedure: Configuring IIS to serve static content

Purpose: To configure IIS-Tomcat so that IIS handles all static content (`.html`, `.jpg`, and so on), leaving Tomcat to process the Java Server Pages (JSP) and servlets.

Genesys Multimedia web applications (Web API Server) use a combination of static web pages and active java content. You can reduce processing time by letting IIS serve static pages, even if these files are part of a context already served by Tomcat. For example, the `.html` and `.gif` files in the `examples` context do not need to be served from the Tomcat process—it is enough for IIS to serve them.

Start of procedure

1. Configure IIS to include the Tomcat contexts.

   Adding a Tomcat context to IIS requires the addition of a new IIS virtual directory that covers the Tomcat context. For example, you could add a `/example` IIS virtual directory that covers the `D:\tomcat\webapps\examples` directory.

2. Configure the redirector to leave the static files for IIS.

   To configure the redirector, you must edit the `uriworkermap.properties` file to specify the URL-path pattern(s) that you want Tomcat to handle (usually only JSPs and servlets). For the `examples` context, you must replace the following line:

   ```
   /examples/*=ajp13
   ```

   with the following two lines:

   ```
   /examples/*.jsp=ajp13
   /examples/servlet/*=ajp13
   ```

   The second line is more explicit; it actually instructs the redirector to redirect only the following:

   - Requests to resources under `/examples/servlet/`.
   - Resources under `/examples/` whose name ends with `.jsp`.

   You can be more explicit and provide lines such as the following:

   ```
   /examples/servlet/<servletname>=ajp13
   ```

   This instructs the redirector to redirect requests whose URL path equals `/examples/servlet/<servletname>` to the worker named `ajp13`.

End of procedure

Next Steps

- If you want to do any more advanced configuration of the Tomcat context, return to the list of configuration options—see Advanced Configuration of the Tomcat Context, page 68.
- If you want your Multimedia solution to include co-browsing functionality, see Deploying KANA Response Live for co-browsing, page 74.
- Otherwise, you can begin to deploy the Model Setup of the Multimedia components—see Chapter 5 on page 91.

Procedure: Protecting the WEB-INF Directory

Each servlet application (context) has a special directory named `WEB-INF`. This directory contains sensitive configuration data and Java classes, and you must prevent web users from accessing or even seeing these directories. Although you can use the IIS management console to do this, the administrator must remember that it has been done. To avoid this complication, the redirector plugin automatically protects your `WEB-INF` directories by rejecting any request that contains `WEB-INF` in its URL-path.

Start of procedure

- You do not need to perform any actions to obtain this `WEB-INF` protection. The redirector plugin does this automatically.

End of procedure

Next Steps

- If you want to do any more advanced configuration of the Tomcat context, return to the list of configuration options—see Advanced Configuration of the Tomcat Context, page 68.
- If you want your Multimedia solution to include co-browsing functionality, see Deploying KANA Response Live for co-browsing, page 74.
- Otherwise, you can begin to deploy the Model Setup of the Multimedia components—see Chapter 5 on page 91.

Procedure: Configuring Tomcat to serve multiple contexts

Purpose: To configure the `workers.properties` file so that different Tomcat processes can serve different contexts—for example, to spread the load among different machines.

Summary

For Tomcat to serve multiple contexts, you must:

1. Define the *workers* (the Tomcat processes or instances) that you want to use.
2. Assign each context its own worker.

Start of procedure

1. Open the `workers.properties` file, located in the `<CATALINA_HOME>/conf` directory.
2. In the `worker.list` entry, add workers using the following format:

   ```
   worker.list=<a comma separated list of worker names>
   ```

   Example

   ```
   worker.list=ajp13, ajp13second
   ```

3. Add entries for each individual worker, one for each associated host and port, using the following format:

   ```
   worker.<worker name>.<property>=<property value>
   ```

   Example

   ```
   worker.ajp13.host=localhost
   worker.ajp13.port=8007
   worker.ajp13second.host=otherhost
   worker.ajp13second.port=8007
   ```

4. You can now assign the workers to serve the various contexts (one worker for each context).

   For example, look at the following `uriworkermap.properties` fragment:

   ```
   /examples/*=ajp13
   /webpages/*=ajp13second
   ```

   The `examples` context is served by `ajp13` while the `webpages` context is served by `ajp13second`.

End of procedure

Next Steps

- If you want to do any more advanced configuration of the Tomcat context, return to the list of configuration options—see Advanced Configuration of the Tomcat Context, page 68.
- If you want your Multimedia solution to include co-browsing functionality, see Deploying KANA Response Live for co-browsing, page 74.
- Otherwise, you can begin to deploy the Model Setup of the Multimedia components—see Chapter 5 on page 91.

Configuring Apache and Tomcat for Linux or Solaris

This section points you to third-party documentation on how to perform further Apache and Tomcat configuration for Solaris or Linux. You can obtain third-party documentation using either of these methods:

- Obtaining Apache documentation from the CD
- Obtaining Tomcat documentation from the CD and the Web

Note: For information about deploying Solaris or AIX with IBM WebSphere, or Solaris with BEA WebLogic, see the following sections:

- Deploying WebSphere on AIX or Solaris, page 156
- Deploying WebLogic on Solaris, page 169

Procedure: Obtaining Apache documentation from the CD

Start of procedure

1. From the Interaction Management CD, locate the `.html` file applicable to your operating system from one of the following folders:

   Solaris
   `ThirdPartyApplications\Apache2.2.9\solaris\apache_documentation.html`

   Linux
   `ThirdPartyApplications\Apache2.2.9\linux\apache_documentation.html`

2. Open the `apache_documentation.html` file. This document can assist you in installing and building Apache for a Solaris or Linux environment.

End of procedure

Next Steps

- If you have not done so already, configure and install Multimedia as outlined in:
  - Chapter 5 on page 91
  - Deploying Multimedia on UNIX Hosts, page 153

Procedure:
Obtaining Tomcat documentation from the CD and the Web

Start of procedure

1. From the Interaction Management CD, locate the `.html` file:

   `ThirdPartyApplications\TomCat_Servlet6.0.16\unix\tomcat_documentation.html`

2. Open the `tomcat_documentation.html` file. This document includes information about installing, configuring, and operating an Apache Tomcat server.
3. For documentation about installation, building, and configuring `mod_jk` for UNIX, see:

   `http://tomcat.apache.org/connectors-doc/index.html`

4. The site referenced above also describes how to connect Apache to Tomcat on UNIX.

Note: You can access links to these same locations from the port `8080` page of your local host when your Tomcat server is running:
`http://localhost:8080/docs`

End of procedure

Next Steps

- If you have not done so already, configure and install Multimedia as outlined in:
  - Chapter 5 on page 91
  - Deploying Multimedia on UNIX Hosts, page 153

Deployments with WebSphere on AIX or Solaris

If you intend to use WebSphere on AIX or Solaris for Multimedia and its Web-based interaction capabilities, necessary components, such as an Enterprise Archive project, are dynamically generated during installation of the Genesys Web API Server for AIX or Solaris. (This feature was introduced in the 7.2 release.) Details on how to deploy web projects are set out in Chapter 7, beginning on page 153, after configuration and installation of Multimedia itself.

Minimum Requirements

For hardware and operating system minimum requirements, see the *Genesys Supported Operating Environment Reference Manual*. Ensure that you have at least the following amount of free disk space on your installation host.

WebSphere Application Server 6.0

For AIX ® (32-bit WebSphere Application Server):

- Minimum 970 MB free disk space for installation (includes SDK)
- Minimum 512 MB physical memory; 1 GB recommended

Web Sphere Application Server 5.1

For Sun Solaris:

- Minimum 580 MB free disk space for installation (includes SDK)
- Minimum 256 MB physical memory; 512 MB recommended

Software

Use IBM HTTP Server 2.0.x and IBM WebSphere 5.0, 5.1, or 6.0.

Deploying KANA Response Live for co-browsing

KANA Response Live is used to enable the Multimedia Web Collaboration feature, which allows an agent to direct a client's web browser so that they can view websites at the same time.

This section describes how to install and configure KANA Response Live on the following platforms.

Table 5: KANA Response Live Supported Platforms

OS	Web Server	Application Container
Windows	Microsoft Internet Information Server (IIS)	Apache Tomcat
Solaris	Apache HTTP server	Apache Tomcat
Linux	Apache HTTP server	Apache Tomcat

Prerequisites

- Create a new Microsoft SQL or Oracle database to use with KANA Response Live.
- Request and install an SSL certificate for your server. See Installing a new SSL certificate using IIS, page 76.

Table 6: Task Flow to Deploy KANA Response Live

Objective	Related Procedures and Actions
1. Install KANA Response Live	Follow the procedure for your operating system: • Installing KANA Response Live for Windows, page 78 • Installing KANA Response Live for Solaris, page 83 • Installing KANA Response Live for Linux, page 84
2. Create the database schema.	**Windows** On Windows deployments, the database schema is created automatically during installation. **Solaris and Linux** For Solaris and Linux deployments, you must manually create the schema: • Creating the KANA database schema on Solaris or Linux, page 85
3. Configure additional settings.	**Windows** For Windows deployments: 1. Change the `router.enabled` option in the `config.properties` file to false. 2. Point the `Home Directory` in IIS to your KANA installation folder. For the full procedure, see Configuring KANA Response Live for Windows, page 80. **Solaris or Linux** For Solaris or Linux deployments: 1. Change the `router.enabled` option in the `config.properties` file to `false`. 2. Install a valid SSL certificate in the Apache Web Server directory. For the full procedure, see Configuring KANA Response Live for Solaris or Linux, page 86.

Table 6: Task Flow to Deploy KANA Response Live (Continued)

Objective	Related Procedures and Actions
4. Test the installation.	**Windows** For Windows, you can start running the KANA Response Live server by launching the `.bat` files in `kana\hbroot\bin`. For the full procedure, see Testing the KANA Response Live installation on Windows, page 82. **Solaris or Linux** For Solaris or Linux, you can start the KANA server using the following command: `/usr/local/kana/hipctl start` For the full procedure, see Testing the KANA installation on Solaris or Linux, page 86.
5. Test co-browsing functionality.	Use the following URLs to start a test co-browsing session: • **Windows:** `http://<hostname>/index.html` • **Solaris or Linux:** `http://<hostname>/responselive/index.html` For the full procedure, see Launching a co-browsing session, page 87.

Procedure: Installing a new SSL certificate using IIS

Purpose: To configure an SSL certificate for your Kana Response Live server, using Microsoft IIS Manager.

Start of procedure

1. To open IIS Manager, select `Start > Administrative Tools > Internet Information Services (IIS) Manager`.
2. In the left frame, expand `Server_Name(local computer)`, find and right-click `Default Web Site`, and then select `Properties`.
3. On the `Directory Security` tab, in the `Secure communications` section, click `Server Certificate`.

   The Web Server Certificate Wizard opens.
4. On the `Welcome` page, click `Next`.
5. Select `Create a new certificate`, and then click `Next`.

6. Select `Prepare the request now, but send it later`, and then click `Next`.
7. Enter a name for your certificate, select a bit length (the higher the bit length, the stronger the encryption), and then click `Next`.
8. On the `Organization Information` page, enter your company name in the `Organization` box and a descriptive name for your organizational unit in the `Organizational unit` box.
9. Enter either the fully qualified domain name (FQDN) or the server name as the `Common name` for your website—the address you want users to enter when browsing to your site.

   Tip: For the `Common name`, make sure you use a valid DNS name. It must match the external FQDN of your website. For intranet-only purposes, you can use the internal FQDN for your sever, or the NetBIOS name.

10. Enter your location information, and then click `Next`. Do not use abbreviations for `State/province` or `City/locality`.

    The `Certificate Request File Name` page opens.
11. Enter the path and file name where you want to save your certificate request, and then click `Next`.
12. Review the summary of your certificate request information, and then click `Next`.

    IIS creates the certification file.
13. Click `Finish`.
14. At this point, you need to send the certification file to the online Certificate Authority of your choice. Contact the Certificate Authority for directions on how to submit your request.
15. When you receive the response file from the Certificate Authority, you need to reopen the certificate installation wizard. Again on the `Directory Security` tab of your `Default Web Site Properties` dialog box, click `Server Certificate`. Click `Next` to continue.
16. Select `Process the pending request and install the certificate`, and then click `Next`.
17. Enter the location of the certificate file you received from the Certificate Authority, and then click `Next`.
18. Review the summary, and then click `Next`.
19. Click `Finish`.

End of procedure

Next Steps

- Installing KANA Response Live for Windows

Installing and Configuring KANA Response Live for Windows

Use these procedures to install and configure KANA Response Live in a Windows environment.

Procedure: Installing KANA Response Live for Windows

Purpose: This procedure outlines how to install KANA Response Live for Windows.

Prerequisites

- Installing a new SSL certificate using IIS, page 76

Start of procedure

1. Locate and double-click the KANA Response Live setup file. For Windows, this file is called `V<version>_Win_Tomcat_IIS_DB_CHAT.exe`.

   Note: For Multimedia 7.6.1, the current supported version for Windows is KANA Response Live Version 10 R1. The file on the 7.6.1 CD is `V10.1.0.17_Win_Tomcat_IIS_DB_CHAT.exe`.

2. Enter your Web Server and Application Server host names, and click `Next`.

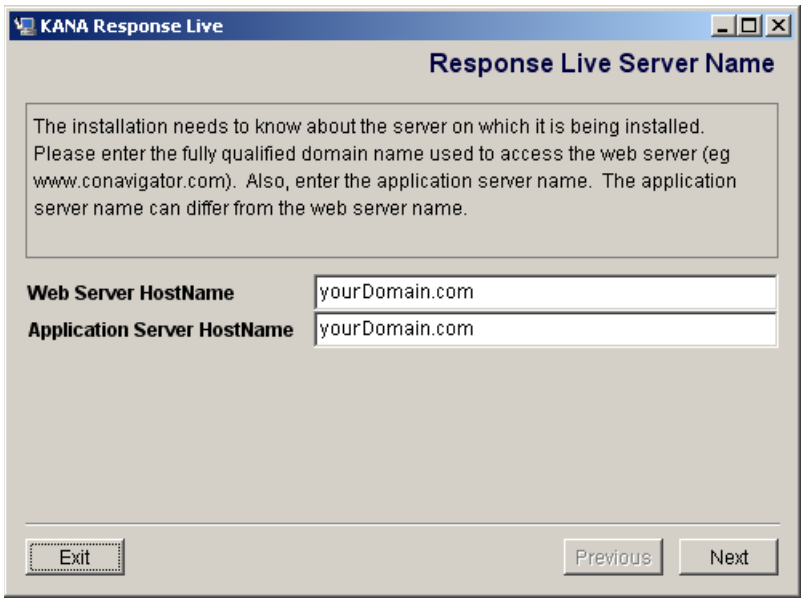


Figure 13: KANA Response Live Installation

3. Select the database type you created, and click `Next`.

4. Enter login parameters for the database instance that you created, and click `Next`.
5. Enter a Server ID, and click `Next`. This Server ID is a unique name of four characters or less.
6. If you did not enter valid database login information, the `Database Check Result` page displays an error message. To correct the information, click `Previous` to return to the appropriate pages. To continue, click `Next`.
7. Click `Next` to start the preinstallation checks.

   If you did not install a valid SSL certificate before installing KANA Response Live, a warning appears (see Figure 14). Click `Next` to continue, and install your SSL certificate after completing the installation.

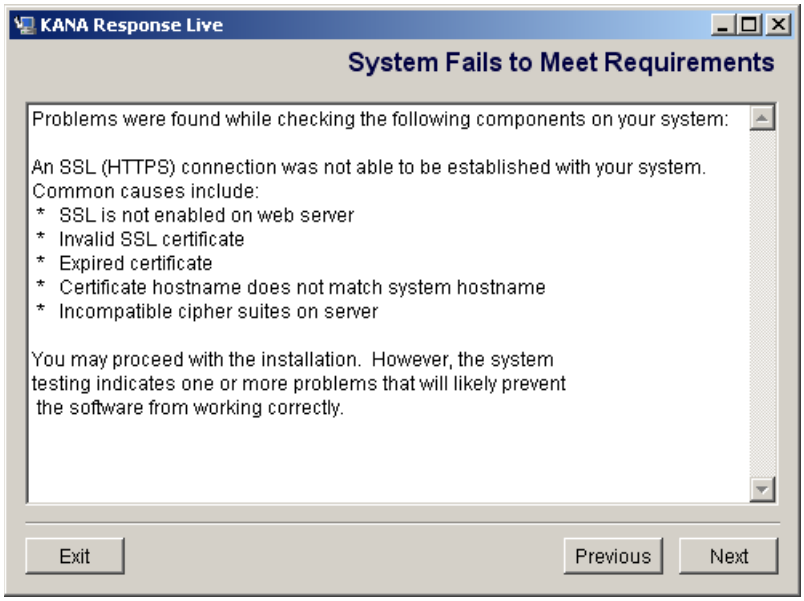


Figure 14: System Requirements Warning

8. Click `Next` at the `Introduction` page.
9. Choose the installation folder for KANA Response Live, and click `Install`.

   Warning! Do *not* include any spaces in the folder name (for example, use `ResponseLive` instead of `Response Live`).

10. Click `Next`.
11. Leave the `Yes` checkbox unselected, and click `Next`.
12. At the `Launch Page` page, click `Next`.
13. Click `Done`. The installation is complete.

End of procedure

Next Steps

- Configuring KANA Response Live for Windows, page 80

Procedure: Configuring KANA Response Live for Windows

Purpose: After installing KANA Response Live on your Windows machine, you need to make the following additional configurations:

- Update your `config.properties` file. Change the `router.enabled` option in the `config.properties` file to `false`.
- Change your IIS Default Web Site so that the `Home Directory` points to your KANA installation folder.

Note: KANA Response Live has many other functions and configurable options that are not described in this *Deployment Guide*. To ensure compatibility, Genesys does not recommend making use of additional functionality or changing any options other than those described below.

Prerequisites

- Configuring KANA Response Live for Windows, page 80

Start of procedure

1. To update your `config.properties` file, complete the following actions:
   a. Open the `config.properties` file located in `<KANA_HOME>\hbroot\conf`.
   b. Change the `router.enabled` option to `false`.
   c. Save and close the properties file.
2. To change your IIS Default Web Site home directory, complete the following actions:
   a. Open Internet Information Services (IIS) Manager.
   b. Right-click on `Default Web Site`, and select the `Properties` option (Figure 15 on page 81).

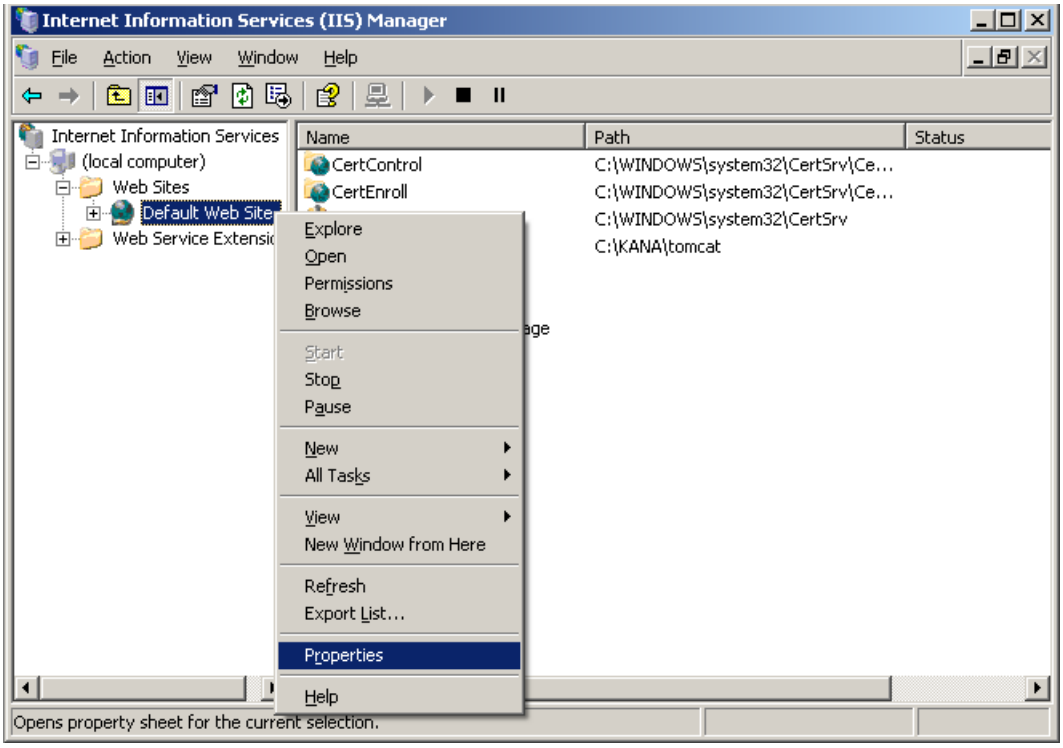


Figure 15: Internet Information Services (IIS) Manager

c. On the `Default Web Site Properties` page, select the `Home Directory` tab (Figure 16).

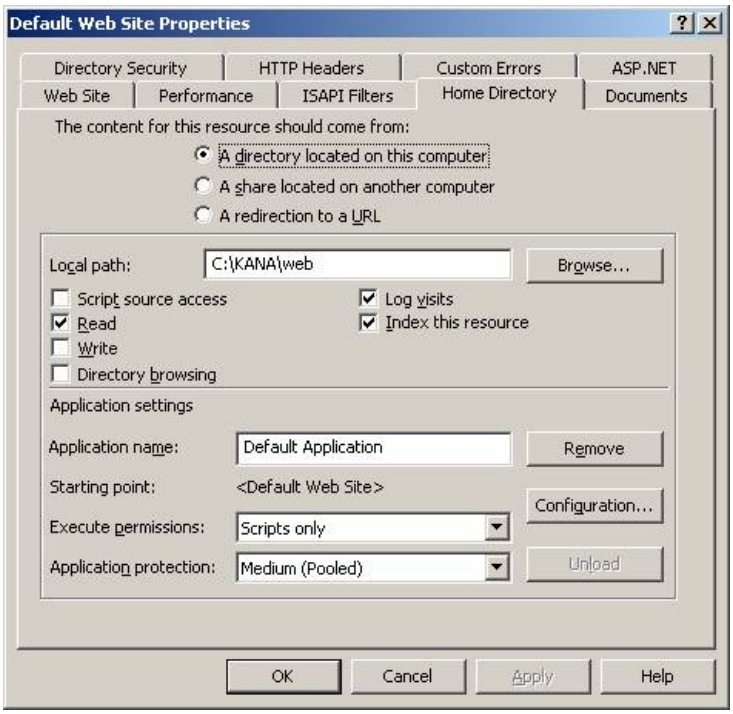


Figure 16: Default Web Site Properties

d. Change the `Local path` value to `<KANA_HOME>\web`.

e. Click `OK` to save the change.

End of procedure

Next Steps

- Testing the KANA Response Live installation on Windows

Note: To configure Kana Response Live application server to support a single remote web server, make the following change on the Response Live application server:
In the System Administration Tool, edit the `ISystems` properties for the Response Live Server. In the `Host Servers`, change `Login Cookie Domain` to the IIS Server domain name.

Procedure: Testing the KANA Response Live installation on Windows

Purpose: This procedure describes how to test the KANA Response Live installation on Windows.

Prerequisites

- Configuring KANA Response Live for Windows, page 80

Start of procedure

1. Locate and double-click the following files (in the order listed) to start your KANA Response Live installation:
   a. `hipregistry.bat`
   b. `router.bat`
   c. `tomcat.bat`
2. Start (or restart) your Web Server.
3. Follow the steps listed in Launching a co-browsing session, page 87 to test co-browse functionality.

End of procedure

Next Steps

- Launching a co-browsing session, page 87

Installing and Configuring KANA Response Live for Solaris or Linux

To install KANA Response Live on a Solaris or Linux system, you must use a user that has superuser permissions and has write permissions in the `/usr/local` directory, such as `root`.

Procedure: Installing KANA Response Live for Solaris

Purpose: This procedure outlines how to install KANA Response live for Solaris.

Start of procedure

1. Transfer the KANA Response Live software package to the system, using the following command:
   `pkgadd -d Cona_sparc-V<version>_sol7-sparc.`

   Note: For Multimedia 7.6.1, the current supported version for Solaris and Linux is KANA Response Live Version 10 R2. For Solaris, use the `Cona_sparc-V10.2.0.9-sol7-sparc` file on the CD.

2. Select `1` and press `Enter`.
3. Type the fully qualified domain name of your system and press `Enter`.
4. A message will appear asking where you want to install. Press `Enter` to select the default location `/usr/local/kana`. You cannot install in any other directory, as this path name is hard-coded.
5. A message will appear asking for the packages to install. Press `Enter` to select the default all option and start the installation process. The installer creates the KANA Response Live files and copies them to the KANA Response Live installation directory `/usr/local/kana`.
6. Select the database type that you created. For details, see “Prerequisites” on page 75.
7. At the prompt, type the database host name and press `Enter`.
8. Enter the following information about your database, as prompted:
   a. Database server name.
   b. Database instance name.
   c. Administrator’s user name.
   d. Administrator’s password.
9. Enter a server ID. This ID is a unique name of four characters or less.

10. Press `Y` to confirm the information you entered, and to transfer the package.

End of procedure

Next Steps

- Creating the KANA database schema on Solaris or Linux

Procedure: Installing KANA Response Live for Linux

Purpose: This procedure describes how to install KANA Response Live for Linux.

Start of procedure

1. Transfer the KANA Response Live software package to the system, using the following command:
`./pkginst add`

Note: For Multimedia 7.6.1, the current supported version for Solaris and Linux is KANA Response Live Version 10 R2. For Linux, use `Cona_linux-V10.2.0.9-linux.tar`. This file will need to be unzipped. To do so, enter `tar -xvf <filename>` at the command prompt, then the command above can be entered.

2. Press `Enter`.

3. Type the fully qualified domain name of your system and press `Enter`.

4. Select the database type that you created. For details, see "Prerequisites" on page 75.

5. Enter the following information about your database, as prompted:
   a. Database server name.
   b. Database instance name.
   c. Administrator's user name.
   d. Administrator's password.

6. Enter a server ID. This ID is a unique name of four characters or less.

Note: If the following message appears during installation, it can be ignored.
`./postinstall_k: line 37: ndd: command not found`
It will not have any affect on the installation.

7. The installation generates a dummy certificate.

Note: Installation on Linux ends *without* a successful completion message (as it does after installation on Solaris).

End of procedure

Next Steps

- Creating the KANA database schema on Solaris or Linux

Procedure: Creating the KANA database schema on Solaris or Linux

Purpose: This procedure describes how to create the KANA database schema on Solaris or Linux.

Prerequisites

- Installing KANA Response Live for Solaris, page 83
- Installing KANA Response Live for Linux, page 84

Start of procedure

1. Enter the following commands to start the installation script:
   ```
   cd /usr/local/kana/hbroot/bin
   ./clinstaller.sh
   ```
2. Select the database type that you created. For details, see "Prerequisites" on page 75.
3. Enter the following information about your database, as prompted:
   a. Database instance name.
   b. Administrator's user name.
   c. Administrator's password.
   d. Database server name.
4. Type the KANA Response Live server name and press `Enter`.
5. Enter the server ID that you specified in Step 9 of the "Installing KANA Response Live for Solaris" section.
6. Enter the database tablespace name.
7. Press `Y` to confirm the information that you have entered, and to install the database schema.

End of procedure

Next Steps

- Configuring KANA Response Live for Solaris or Linux

Procedure:
Configuring KANA Response Live for Solaris or Linux

Purpose: This procedure describes how to configure KANA Response Live for Solaris or Linux.

Prerequisites

- Installing KANA Response Live for Solaris, page 83
- Installing KANA Response Live for Linux, page 84

Note: KANA Response Live has many other functions and configurable options that are not described in this *Deployment Guide*. To ensure compatibility, Genesys does not recommend making use of additional functionality or changing any options other than those described below.

Start of procedure

1. Update your `config.properties` file:
   a. Open the `config.properties` file located in `/usr/local/kana/hbroot/conf`.
   b. Change the `router.enabled` option to `false`.
   c. Save and close the `config.properties` file.
2. In order for the KANA Response Live Server to function, you must install a valid SSL certificate in the packaged Apache Web Server located at: `/usr/local/kana/apache`

End of procedure

Next Steps

- Testing the KANA installation on Solaris or Linux.

Procedure:
Testing the KANA installation on Solaris or Linux

Purpose: This procedure describes how to test the KANA installation.

Prerequisites

- Creating the KANA database schema on Solaris or Linux, page 85
- Configuring KANA Response Live for Solaris or Linux, page 86

Start of procedure

1. Start your KANA Response Live installation using the following command:
   `/usr/local/kana/hipctl start`

   Note: After the Genesys Web Collaboration Server is installed, you do not use this command to start or stop KANA Response Live. Instead, use the following commands:

   Start Genesys Web Collaboration:
   `/usr/local/kana/hipctl_start.sh`

   Stop Genesys Web Collaboration:
   `/usr/local/kana/hipctl_stop.sh`

2. Follow the steps listed in Step 1 on page 87 to test co-browsing functionality.

End of procedure

Next Steps

- Launching a co-browsing session

Launching a Co-Browsing Session

Complete the following procedure to launch a test co-browsing session using either the Windows, Solaris, or Linux deployment of KANA Response Live.

Procedure: Launching a co-browsing session

Purpose: Once KANA Response Live is installed, you can use two hosts to test the co-browsing sessions.

Start of procedure

1. On the first host, open the KANA Response Live launch page in a web browser (see Figure 17 on page 88).

   Windows: `http://<hostname>/index.html`

Solaris or Linux: `http://<hostname>/responselive/index.html`

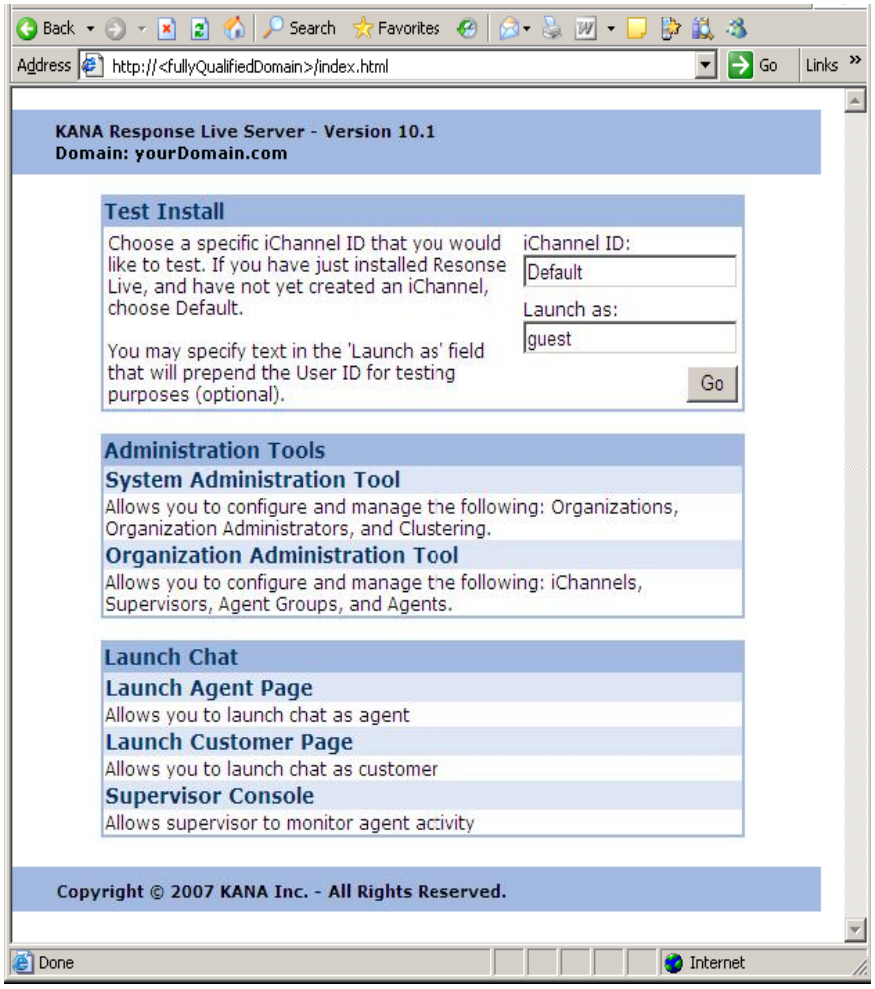


Figure 17: KANA Response Live Launch Page

2. Enter the channel and user ID, and click `Go`.

   `iChannel ID: Default`

   `Launch as: guest`

3. On the second host, repeat Steps 1 and 2.

4. On the first host, enter the user ID for the second host into the `Connect With` field (see Figure 18 on page 89), and click `Go`.

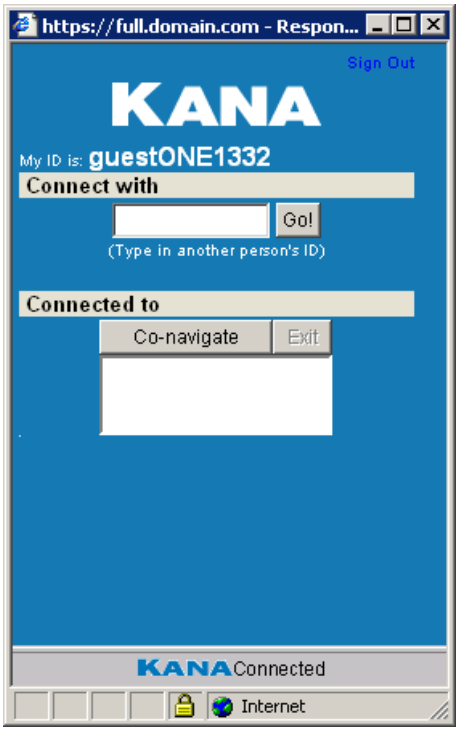


Figure 18: Web Collaboration Connection Window

5. On the second host, click `Yes` to accept the Web Collaboration session (see Figure 19).

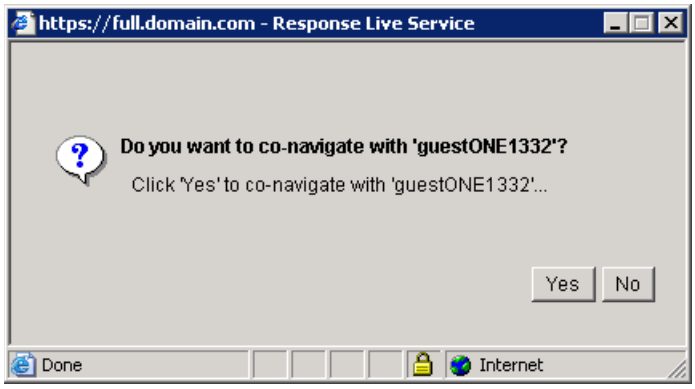


Figure 19: Request for Web Collaboration

A new web browser window opens on both hosts, showing the shared web session.

`Note:` Before installing the Genesys Co-Browsing components, you should remove the KANA Response Live start service. See “Remove the KANA Response Live Start Service” on page 94 for details.

End of procedure

Next Steps

- Chapter 5 on page 91

Chapter

5 Model Configuration and Installation on Windows

This chapter describes a model single-tenant setup, using a Windows environment, such as might be deployed in a lab setting. This model setup, which includes all Genesys and third-party components, is assumed to be a first-time installation.

The information in this chapter is divided among the following topics:

This chapter assumes that you are familiar with the use of the Genesys Configuration Manager. See *Framework 7.6 Configuration Manager Help* for detailed directions on using Configuration Manager.

For your own deployment, be sure to use the "Configuration Worksheet" on page 41 to help you plan the specifics of your solution.

The Model Environment

The model environment is deployed on one computer with the network name `MMHost` and with the following software components:

- Genesys Framework

- Universal Routing
- Genesys Desktop (a Genesys-designed agent desktop, not part of Multimedia)
- Stat Server (part of Real-Time Metrics Engine)
- POP3 e-mail server
- All Multimedia components
- Web components, including web server and Java components

Overall Strategy

The strategy for configuring and installing the model environment is as follows:

1. **Prerequisites**

   You must have some items installed and operating before starting, including Framework, Routing, and various third-party applications. This document does not describe installation procedures for these components beyond what is available in Chapter 4, beginning on page 55. (For detailed information on deploying a given non-Multimedia component, see the related *Deployment Guide* for that component.)

   You should also create a shared directory to receive the installation packages for the Multimedia components.

2. **Web Server and Web Application Container**

   Install, connect, and/or configure components that enable web services.

   - Install and connect Apache, then Tomcat. (See Chapter 4.)

3. **Configuration**

   Install and use the Multimedia 7.6.1 Configuration Wizards that Genesys supplies to guide you through the process of configuring this solution. These wizards help you configure a number of different components, and each component wizard has its own name. Throughout this section, however, these wizards will generally be referred to as the Multimedia 7.6.1 Configuration Wizards, unless identifying a specific component wizard by name is more helpful.

   Note: You can configure most of the components and contact center objects you need from within the Multimedia 7.6.1 Configuration Wizards interface.

   a. Install the Multimedia Configuration Wizards.
   b. Install Interaction Workflow Samples.
   c. Configure contact center objects—`Switching Office, Switch, Places.`

   d. Configure Multimedia objects—Media servers, clients, other components.

4. **Installation**

   Install the Multimedia 7.6.1 components.

   a. Perform integrated installation of Multimedia servers.

   b. Install Genesys Desktop.

5. **Testing the setup**

   a. Test individual components.

   b. Test your model setup as a whole and troubleshoot any problems.

The following sections of this chapter describe these procedures in detail.

Prerequisites

The model setup uses the components listed in Table 7.

Table 7: Prerequisite Components

Type of Component	Component Used
Operating System	A supported Windows environment.
Web Server	Apache Web Server.
Web Application Container	Tomcat.
E-mail (POP3) Server	Third-party e-mail server.
Java Environment	Java Runtime Environment (JRE). For supported versions, see the *Genesys Supported Operating Environment Reference Manual*.
Database Server	Microsoft SQL 2000. For other supported databases, see the *Genesys Supported Operating Environment Reference Manual*.
License Server	License Server 9.5; License File: `7260@MMHost`.

Table 7: Prerequisite Components (Continued)

Type of Component	Component Used
Genesys Framework, including • Management Layer • Stat Server (part of Real-Time Metrics Engine)	Genesys Framework, single tenant.
	Management Layer.
	Stat Server Application object name `Stat_Server`. **If installing a new Stat Server:** • Do so prior to running the Multimedia 7.6.1 Configuration Wizards. • Make sure you select Stat Server Java Extensions (SSJE). SSJE requires a Java Runtime Environment (JRE) on the computer hosting this instance of Stat Server. **If using an existing Stat Server:** • You will likely need to enable SSJE. This requires creating new Java sections in the Stat Server application object and installing new java extension files. For details, consult the *Stat Server 7.6 Deployment Guide*.
Genesys Universal Routing	Genesys Universal Routing, with a multimedia routing strategy enabling e-mail and chat.

Be sure you have these components installed and operating properly before installing Multimedia 7.6.1. For instructions, see the documentation for Genesys Framework and Universal Routing.

Create Host

If you plan on installing Multimedia on the same computer as Genesys Framework, you should already have a `Host` object created and available for your Multimedia deployment. However, if you have not already done so, or if you want to install Multimedia on a different computer than Framework, create the `Host` object in the Configuration Layer for the machine that will host your model environment.

Create a Shared Directory

If you plan to install Multimedia components across multiple hosts, create a shared directory on your local drive or network to receive the installation packages. Genesys recommends that you do this before starting the configuration and installation process. (This is unnecessary if you plan to install Multimedia on a single host.)

Remove the KANA Response Live Start Service

If you plan to install Genesys Co-Browsing components, you should remove the KANA Response Live start service. For Windows systems, check the Windows Services application to ensure that KANA Response Live Service is

configured to start manually and is not running. For Solaris systems, use the `rm -f /etc/rc2.d/S88hipctl` command to remove the start service.

Create Contact, Interaction (and Co-Browsing) Databases

Create three databases in your SQL Server RDBMS. Two of these will accommodate Universal Contact Server contact information, and the other will handle Interaction Server's one table for tracking transient data. If you are also deploying Co-Browsing Server, you may want to create an additional database for it. (Alternatively, you can use the UCS database to store Co-Browsing Server information.) You will use the names of these databases during your creation of Multimedia Database Access Points (DAPs). After configuration and installation, you will run scripts against these databases to make them available to Genesys servers.

Note: For DB2 RDMS users, before running your database scripts, you need to create an additional table space with a corresponding buffer pool page size of at least 8 KB.

Web Server and Web Application Container

The installation of the web server and the web application container are described in Chapter 4, beginning on page 55. Any further instructions in this chapter coincide with steps you may need to take in using wizards to deploy Multimedia.

Configuring Multimedia Objects

The first step in configuring Multimedia 7.6.1 is to install the Multimedia 7.6.1 Configuration Wizards.

The second step is to install the Interaction Workflow Samples. Doing so provides you with a number of Configuration Layer objects that are useful later, when implementing the model environment.

Note: Because Multimedia requires specific configuration objects, including certain `Queue` and `View` objects, if you do not install the Interaction Workflow Samples first, you must create these objects manually to allow the wizard to install the solution. If you create these objects prior to running the wizard, the wizard uses them. If you do not install the Samples first, and if you have not created these objects previously, you must create and configure the default `Queue` objects for E-mail Server Java and Chat Server prior to completing the Multimedia deployment.

The Multimedia 7.6.1 Configuration Wizards take you through a step-by-step configuration process, allowing you to create Configuration Layer objects and to associate them with each other as needed. After you configure each

component, the wizard copies the software to the directory you specify. Once you have configured all the Multimedia components, you will install them with the Multimedia Installation Starter. See “Installing Multimedia Components” on page 129 for more details.

Note: At certain points, the configuration or installation wizards might prompt you to restart your computer. If you receive such a prompt, allow the restart to occur, then continue with the configuration or installation process.

Procedure: Installing the Multimedia Configuration Wizards

Prerequisites

- Interaction Management CD.
- Start the Configuration Layer.

Start of procedure

1. Install the Multimedia Configuration Wizards and Genesys Wizard Manager.

   In the root directory of the Interaction Management CD, find `Setup.exe`. Run `Setup.exe` and follow the directions. You may want to read the Wizard Advisory supplied with the wizard.
2. If you intend to configure your Stat Server as you configure Multimedia, you should also install the configuration wizard for this product.

End of procedure

Next Steps

- Installing and Starting Interaction Workflow Samples

Procedure: Installing and Starting Interaction Workflow Samples

Purpose: To instantiate objects in the Configuration Layer, which you will find helpful when completing the full Multimedia configuration and installation.

Interaction Workflow Samples use a number of preconfigured `Script` objects of various subtypes, including `Simple Routing`, `Interaction Queue`, `Workbin`, and `Interaction View`.

Start of procedure

1. Install the Interaction Workflow Samples.
   a. On your Interaction Management CD, find and double-click `Setup.exe` in the `solution_specific\InteractionWorkflowSamples\windows` directory.
   b. At the welcome page for the installation wizard, click `Next`.
   c. Specify the destination for Interaction Workflow Samples, and click `Next`.
   d. Click `Install`.
   e. Click `Finish`.
2. Start the Interaction Workflow Samples.
   a. From the Windows taskbar, select `Start > Programs > Genesys Solutions > Multi-Channel Routing 7.6.1 > Interaction Workflow Samples > Start Interaction Workflow Samples`. This launches the Interaction Workflow Samples Wizard.
   b. Login to Configuration Manager using your user name and password.
   c. At the `Welcome to Interaction Workflow Samples Wizard` window, click `Next`.
   d. If using a multi-tenant environment, select the `Tenant` and click `Next`.

      Tip: During the installation, the setup procedure does not look for possible name conflicts between existing objects and new components from the Interaction Workflow Samples. It overwrites any existing objects.

      In order to prevent the loss of existing objects, Genesys recommends you install the new samples into a separate tenant. Alternatively, you should use IRD's Business processes export capability to create backups of workflows and strategies related to an existing configuration.

   e. Specify a destination directory for the strategy files, and click `Next`.

      You may want to select the directory used for your Interaction Routing Designer strategies, unless it already contains strategies with same file names, which would then be overwritten. If you do decide to use that particular directory, make a backup of its content before proceeding.

      Tip: Do not select the `StrategyFiles` directory created during installation of your Interaction Workflow Samples as the target here. This causes file "collision," since the source and target files are then identical.

   f. At the `Import Completed` window, click `Next`.

g. Click `Finish`.

Once you exit the wizard, you can view the new objects (over 180 of them) installed with these Samples, by opening the `<tenant>\Scripts` folder in Configuration Manager.

End of procedure

Next Steps

- Configuring Multimedia objects using the wizard

Procedure: Configuring Multimedia objects using the wizard

Purpose: To configure all Multimedia components required for a Multimedia solution. Use the Multimedia Configuration Wizards to launch the main wizard and any supplementary wizards necessary for your deployment.

This procedure provides values for a model setup on a single Windows host, with two databases. Substitute the model values for the values that you entered on your Configuration Worksheet on page 43.

Note: If you are deploying Co-browsing Server, you must install that component and the supporting third-party software, KANA Response Live Server, on a separate host from the Web API Server. Other than Co-Browsing Server, all other components can reside on the same host machine.

Prerequisites

- Installing the Multimedia Configuration Wizards, page 96
- Installing and Starting Interaction Workflow Samples, page 96
- Interaction Management CD (for Multimedia Objects)
- Management Framework CD (for adding DB Servers)
- Depending on the type of solution that you purchased, you also require the following CDs:
  - Genesys Email CD
  - Knowledge Management CD
  - Genesys Web Media CD
  - Genesys Web Collaboration CD
- A license server running on the host computer
- A completed Configuration Worksheet (see Table 3 on page 43).

Summary of the Wizards

The Multimedia Configuration Wizards consist of a main wizard and multiple secondary wizards, which are launched automatically when you indicate that you want to configure particular components. The wizard presents only those pages that are applicable for your deployment, or for the stage of deployment that you have reached.

Table 8 summarizes the flow of the main and secondary wizards to deploy the model setup. The information in the `Key Actions and Inputs (Model Setup)` column gives you the model-specific data inputs and actions for that section of the wizard.

Table 8: Configuration Wizard Work Flow

Wizard Step	Key Actions and Inputs (Model Setup)
1. Launch the Multimedia Configuration Wizard, page 105	`Start > Programs > Genesys Solutions > Multi-Channel Routing 7.6.1 > Multimedia Configuration Wizards > Start Wizard Manager`
2. Give your solution a name, page 105	Solution name: `MM761`
3. Select Simple or Custom Configuration, page 106	Select `Custom Configuration`.
4. Copy the IP to your shared directory, page 106	Copy the IP from the Interaction Management CD, and paste it to your shared directory. For more info, see Create a Shared Directory, page 94.
5. Select or add a Message Server, page 107	Add a Message Server from the existing Framework components.

Table 8: Configuration Wizard Work Flow (Continued)

Wizard Step	Key Actions and Inputs (Model Setup)
Add the Database Access Points and associated DB Servers:	At the `Solution Components: Data Access Point` page, click `Add` to launch the Database Access Points Wizard, which you run several times to create the following: • Interaction Server DAP • DB Server for Interaction Server database • A shared DAP for Universal Contact Server and Co-Browsing Server **Note:** You must create all required DAPs and DB Servers here, before moving on to other components. The wizard does not permit you to create DAPs later in the configuration. If you intend to use the Event Logger functionality that is available in version 7.6.1, you will need another DAP. Configuration and deployment of Event Logger is explained in the "Event Logger" section in the "Interaction Server: Advanced Topics" section of the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.
6. Create the Interaction Server DAP, page 107	`Name = MM761_Ixn_DAP`

7. Add the Interaction DB Server, page 107	`Name = MM761_IxnDBServer`
	`Host = MMHost`
	`Default Port = 6110`
	`DBMS Type = mssql`
	For the model setup, you can skip `TLS Settings` and `Backup Server Information`.
	Select `MM761_IxnDbServer` to finish configuring the DAP.

Table 8: Configuration Wizard Work Flow (Continued)

Wizard Step	Key Actions and Inputs (Model Setup)
8. Configure the Interaction Server DAP, page 108	DBMS Type = mssql DBMS Name = MMHost Database Name/SID = IxnDB User Name = sa Password = <password for user sa> Case Conversion = any **Note:** The Interaction Server DAP must have its Case Conversion attribute (on the DB Info tab) set to any or upper. Setting it to lower causes an error when Interaction Server initializes.
9. Create the Universal Contact Server DAP (Main), page 109	This DAP uses a JDBC connection. You do not need to create a DB Server, but make sure you enable JDBC access and clear the DBMS name. DAP Name = MM761_UCS_DAP Database Name/SID = Customer JDBC Port = 1433 JDBC Role = Main
10. Add the Universal Contact Server, page 110	At the Solutions Components: Universal Contact Server Page, click Add to launch the Universal Contact Server Wizard. Name = MM761_UCS Server Host = MMHost Server Default Port = 6120
11. Select the type of Interaction Server, page 111	• If you select New-Style Interaction Server, the wizard creates a multimedia Switch object for you. Continue at Step 13. • If you select Switch-based Interaction Server and the wizard detects a properly configured Multimedia type Switch object, continue at Step 14. • If you select Switch-based Interaction Server and the wizard does not detect a properly configured Multimedia-type Switch object, continue at Step 12. For the model setup, select New-Style Interaction Server and continue at Step 13.

Table 8: Configuration Wizard Work Flow (Continued)

Wizard Step	Key Actions and Inputs (Model Setup)

12. Create a Multimedia Switch object (Switch-based Interaction Server only), page 112	For Switch-based Interaction Server only. Our model setup uses the following names:
	`Switch = MM761_Switch`
	`Switching Office = MM761_Switching_Office`
	`Switch Type = Multimedia Switch`

13. Configure Framework Resources, page 113	This wizard lists all current Framework resources (Agents, Places, and so on), and prompts you to create any missing resources that the solution requires. Note that: • If you selected `New-Style Interaction Server`, this wizard launches before you configure the Interaction Server itself. • If you selected `Switch-based Interaction Server`, this wizard launches as the last step in configuring the Interaction Server.

14. Configure the Interaction Server, page 115	`Name = MM761_IxnSrv`
	`Host = MMHost`
	`Default Port = 6130`
	`License Server Host = MMHost`
	`License Server Port = 7260`

15. Select a Stat Server, page 117	This wizard connects your existing Stat Server to all necessary components with one action—click `ADD`.
16. Add a Universal Routing Server, page 117	Add your existing Universal Routing Server to the solution. For the full procedure, see page 117.
17. Add an Application Cluster, page 117	Use this wizard to group components for load-balancing. Otherwise, you can skip this step.

Table 8: Configuration Wizard Work Flow (Continued)

Wizard Step	Key Actions and Inputs (Model Setup)

18. Add the Web API Server, page 118	For our model setup, enter the following values:
	`Name = MM761_WebAPIServer`
	`Host = MMHost`
	`Default Port = 80` (or `443` if using `https`)
	Add connections to: Message Server, UCS, Stat Server, Interaction Server, SCS
	You can also use this wizard to add .NET Web API Server & Samples. Follow the same steps, but copy the following installation package:
	`DotNetWebAPIServer_CompoundSamples`

19. Add Web Compound Samples and Web Client, page 119	For our model setup, name the samples and client: `MM761_WebClient`
20. Add the Universal Contact Server Manager, page 120	For our model setup, name the UCS Manager: `MM761_UCSMgr` Add a connection to UCS.
21. Select Additional CDs for Installation, page 121	Launch the wizards for the rest of your purchased components—the wizards launch one after another, depending on how many you select. For the full procedure, see page 121

22. Add E-mail Server Java, page 121	Skip this step if your solution does not include e-mail interactions.
	`Name = MM761_E-mailServer`
	`Port = 6150`
	Add connections to: Message Server, Interaction Server, and UCS
	POP Server Info
	For the model setup, use `MMHost` as the POP3 and SMTP server host. Adjust accordingly if your enterprise is using a POP3 server.
	For details about creating addresses and accounts, and enabling web form e-mail, see the full procedure on page 121.

Table 8: Configuration Wizard Work Flow (Continued)

Wizard Step	Key Actions and Inputs (Model Setup)

Complete the Knowledge Management Wizard:
23. Add the Classification Server, page 123
	Skip these steps if you did not purchase Knowledge Manager.
	`Name = MM761_ClassificationServer`
	`Port = 6160`
	Add connections to: Message Server, UCS, and Interaction Server

24. Add the Training Server, page 124	`Name = MM761_TrainingServer`
	`Port = 6170`
	Add connections to: Message Server and UCS.

25. Add the Knowledge Manager, page 124	`Name = MM761_KnowledgeManager`

26. Add the Chat Server, page 125	Skip this step if your solution does not include chat interactions.
	`Name = MM761_ChatServer`
	`Port = 6180`
	`ESP Server Port = 6182`
	Add connections to: Message Server, Interaction Server, and UCS

27. Add the Co-Browsing Server, page 126	Skip this step if your solution does not include co-browsing functionality.
	`Name = MM761_Co-BrowsingServer`
	`Default Port = 6195`
	Add connections to: Message Server and a JDBC-based DAP (`MM761_UCS_DAP` in the model setup).

28. Create Capacity Rules, page 127	Select a folder in the Configuration Server where the rules will be stored, and then select the rules that Multimedia will use as its default.
29. Complete the wizard, page 127	If you quit the wizard before you reach this point, the solution details do not enter the Configuration Database. However, any components that you create remain available for further configuration.

Start of procedure

1. Launch the Multimedia Configuration Wizard

a. To launch the Genesys Wizard Manager, from the Windows taskbar, select `Start > Programs > Genesys Solutions > Multi-Channel Routing 7.6.1 > Multimedia Configuration Wizards > Start Wizard Manager`.

b. Click `log into the Configuration Layer`. This opens the main Wizard Manager window (see Figure 20).

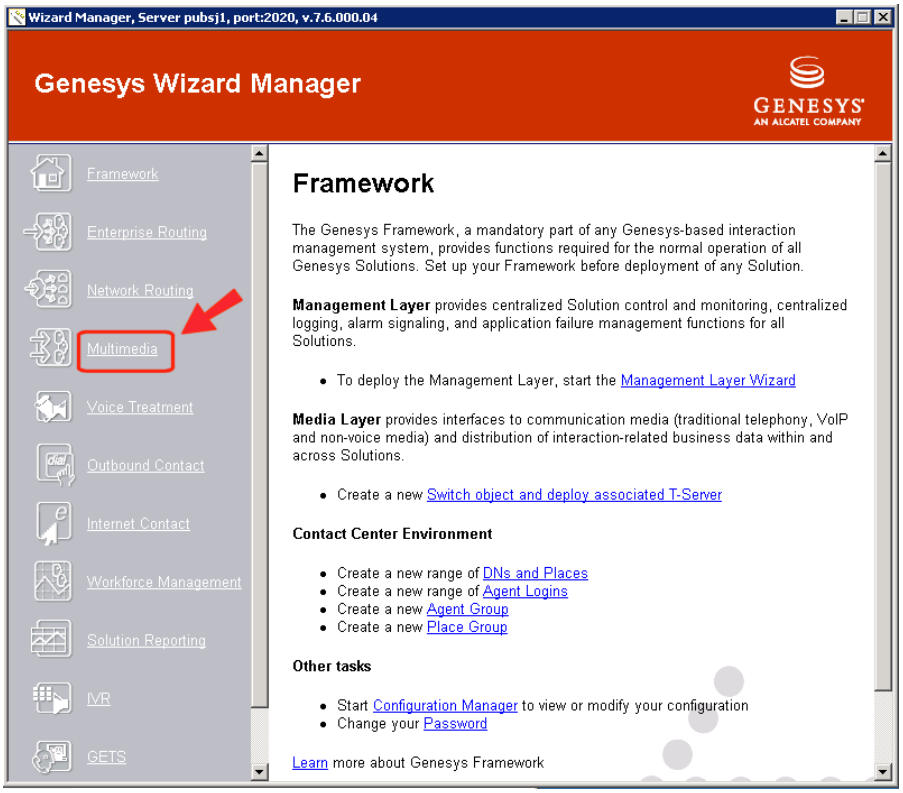


Figure 20: Wizard Manager

c. Select `Multimedia` from the menu on the left side of the window (Figure 20), and then select `Deploy Multimedia Solution in your contact center`. The Multimedia Configuration Wizard `Welcome` page opens.

d. Click `Next` to begin configuring Multimedia objects.

2. Give your solution a name

At the `Solution Name` page, enter a name for your solution and click `Next`.

```
Name = MM761
```

3. Select Simple or Custom Configuration

a. At the `Configuration Process Selection` page, select one of the following:

- `Simple single-host configuration`
- `Custom Configuration`

For our model setup, select `Custom Configuration`, as shown in Figure 21.

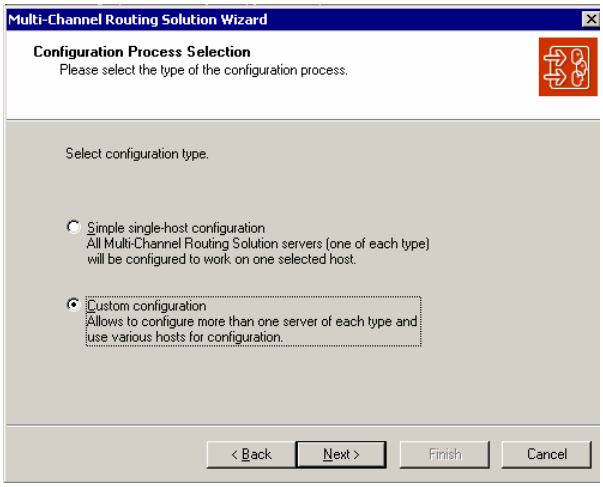


Figure 21: .Configuration Process Selection

b. Click `Next`.

Note: The `Simple single-host configuration` option is available for a predefined host in Windows deployments only. This chapter describes the custom configuration process. If you choose the simple configuration with Windows, use this chapter by skipping those steps that the wizard does not present to you during deployment.

4. Copy the IP to your shared directory

a. At the `Installation Package` page, click `Have Disk` and navigate to the Interaction Management CD.

b. To select a destination for the package, click `Browse` and navigate to your shared directory (see “Create a Shared Directory” on page 94). Click `Next`.

Note: Multimedia uses this group of components for installation. In later steps you will copy to this directory installation packages that are specific to each Multimedia component.

c. At the `Installation Ready` page, confirm that your software is ready for installation and click `Next`.

5. Select or add a Message Server

a. At the `Solution Components: Message Server` page, select or add a Message Server.

b. Click `Next`.

6. Create the Interaction Server DAP

At this point in the wizard, you begin creating your DAPs and associated DB Servers. You must create all DAPs and DB Servers here, before moving on to other components. The Multimedia Configuration Wizard does not permit you to create DAPs later in the configuration. Relaunch the Database Access Point Wizard as necessary.

a. At the `Solution Components: Data Access Point` page, click `Add`.

b. At the `Browse for Application` page, click the `New Application` icon as shown in Figure 22.

Figure 22: New Application Icon

c. Create a new DAP.

d. Enter your Database Access Point name:

`Name = MM761_Ixn_DAP`

7. Add the Interaction DB Server

a. Click the folder icon beside `DB Server`, and then click the `New Application` icon to run the DB Server Wizard.

b. At the `DB Server Name` page, enter a name for your Interaction Server database:

`Name = MM761_IxnDBServer`

c. At the `Server Information` page, enter your host and port information:

`Host = MMHost`

`Default Port = 6110`

d. At the `Installation Package` page, copy the DB Server installation package. Select a source (the Management Framework CD) and a destination (the shared directory). Click `Next`.

e. At the `Installation Ready` page, confirm that your DB Server software is ready for installation, and then click `Next`.

f. At the `Listening Ports and Transport Layer Security (TLS) Settings` page, click `Next`.

Note: For our model setup, we do not require any additional ports. If you want to install additional ports, you can do so in Configuration Manager later.

g. `DBMS Type = mssql`

h. `Log Configuration:`
Click `Next`.

Note: For our model setup, we use only the default settings for all log options.

i. At the `Backup Server Information` page, because no backup servers are configured, clear the checkbox and click `Next`.

j. Click `Finish` to exit the DB Server Wizard. The Database Access Point Wizard will resume.

8. Configure the Interaction Server DAP

a. `Browse for Application (DB Server):`
Select the DB Server you just configured (`MM761_IxnDBServer`) and click `OK`.

b. `Database Access Point Name and Type:`
The `Name` and `DB Server` are already filled in. Clear the `Enable JDBC access` box and click `Next`.

Note: It is important to clear the `Enable JDBC access` box. Failing to do so can lead to a configuration problem.

c. `Database Information:`
`DBMS Type = mssql`
`DBMS Name = MMHost`
`Database Name/SID = IxnDB`
`User Name = sa`
`Password = <password for user sa>`

d. `Case Conversion = any`

Note: The Interaction Server DAP must have its `Case Conversion` attribute set to `any` or `upper`. Setting it to `lower` causes an error when Interaction Server initializes.

e. Click `Finish` to complete the Database Access Point Wizard and return to the Multimedia Configuration Wizard.

f. `Browse for Application:`
Select the Database Access Point that was just configured (`MM761_Ixn_DAP`) and click `OK`.

9. Create the Universal Contact Server DAP (Main)

For our model deployment, create a single DAP and database for both UCS and Co-Browsing Server. In your deployment, you can create both a `Main` database and an `Archive` database. You can also create a fourth database for Co-Browsing Server.

Note: UCS and Co-Browsing Server connect to their databases directly through JDBC. You do not need to create DB Server `Application` objects for these servers.

a. `Solution Components: Database Access Point:`
Click `Add` to open the Database Access Point Wizard. Click the `New Application` icon to configure a new DAP.

b. `Database Access Point Name and Type:`
`Name = MM761_UCS_DAP`
`DB Server = [NONE]`
Select `Enable JDBC access.`

c. `Database Information:`
`DBMS Type = mssql`
`DBMS Name = ""`
`Database Name / SID = Customer`
`User Name = sa`
`Password = <password for user sa>`

Warning! If you do not clear the `DBMS Name` box, your UCS and your Co-Browsing Server will not work properly.

d. `JDBC Connection:`
`Host = MMHost`
`Port` (for JDBC) `= 1433` (Microsoft SQL default)
`Role = Main`

Note: If your RDBMS is Microsoft SQL Server on a different host, select the host where you have Microsoft SQL Server installed, and enter the connection information for that instance of the database.

e. `Case Conversion = any`

f. Click `Finish` to complete the Database Access Point configuration and return to the Multimedia Configuration Wizard.

g. `Browse for Application:`
Select the Database Access Point that was just configured (`MM761_UCS_DAP`) and click `OK`.

h. Click `Next`.

Warning! If you are using a Microsoft SQL 2005 database, an additional configuration step is recommended for the UCS DAP.

In Configuration Manager, create a `settings` section on the `Options` tab. Create a new option, setting the option name as `prepare` and the option value to `false`.

For additional details, see the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.

10. Add the Universal Contact Server

a. `Solution Components: Universal Contact Server:`
Click `Add`.

b. `Browse for Application (Contact Server):`
Click the `New Application` icon.

c. `Universal Contact Server Name:`
`Name = MM761_UCS`

d. `Log Configuration:`
Click Next.

e. `Server Information:`
`Host = MMHost`
`Default Port = 6120`

f. `Universal Contact Server API Port:`
Accept the default port value, or enter a port number where UCS should listen for third-party protocol connections. Click `Next`.

g. `Application Connections: Message Server:`
Click `Add`, select the Message Server, and then click `Finish` and `Next`.

h. `Application Connections: Database Access Point:`
Click `Add`, select `MM761_UCS_DAP`, and then click `Finish` and `Next`.

i. `Universal Contact Server Login Account:`
UCS uses the Configuration Layer to pass some of its information back and forth to certain components. Select the user account (Configuration Layer `Person` object) or Access Group that UCS is to use to log in to the Configuration Layer. The selected account or access group must have write access to the tenant in use.

Note: For more information on access requirements for this user account, see "Limitations: UCS" in the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.

j. Installation Package:

i. Click Have Disk, navigate to the Interaction Management CD, and then click OK.

ii. Click Browse, navigate to your shared directory, and then click Next.

k. Installation Ready:
Click Next.

l. Click Finish to exit the Universal Contact Server Wizard and return to the Multimedia Wizard.

m. Browse for Application (Contact Server):
Select the Universal Contact Server and click OK.

n. Click Next.

11. Select the type of Interaction Server

At the Interaction Server Selection page, select the type of Interaction Server that you plan to use. For the model setup, select New-style Interaction Server (see Figure 23).

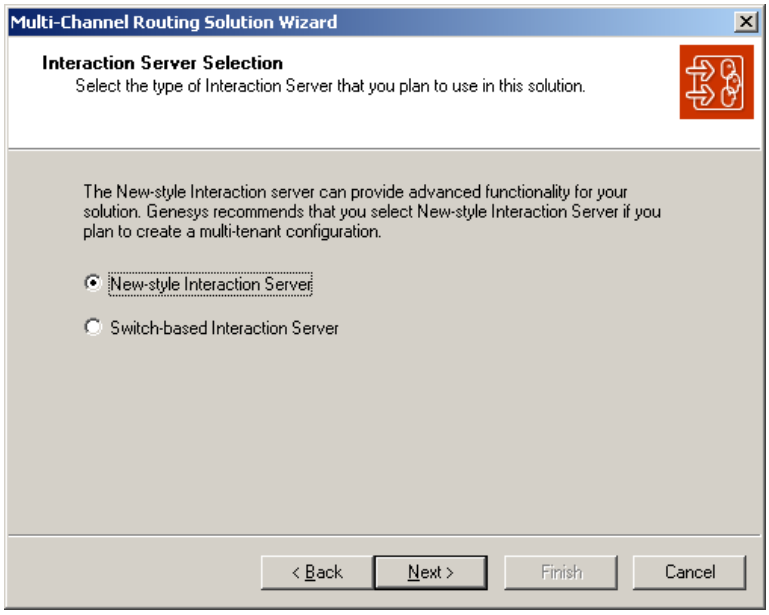


Figure 23: Interaction Server Application Object Choice

- If you select New-Style Interaction Server, the Multimedia Configuration Wizard automatically creates a multimedia Switch object for you in the background. Continue at Step 13 on page 113.
- If you select Switch-based Interaction Server, the Multimedia Configuration Wizard checks for the required, telephony-related Configuration Layer resources.
  - If your configuration includes a properly configured Multimedia type Switch object, continue at Step 14 on page 115.

— If your configuration does not include a properly configured `Multimedia` type `Switch` object, continue at Step 12 on page 112.

Note: Before attempting to run your Multimedia solution, check Configuration Manager for the existence of a `Multimedia Switch` object. If for some reason the wizard has failed to create one, use the Framework Wizard to create it. No other configuration is required; the components that require this switch are able to locate it automatically.

---

12. Create a Multimedia Switch object (Switch-based Interaction Server only)

a. If you select `Switch-based Interaction Server`, the wizard checks for the following:

- A `Multimedia`-type switch
- A connection from the switch to a `T-Server` type Interaction Server

If the wizard fails to detect either the switch or its connection to T-Server, then it issues a warning (see Figure 24).

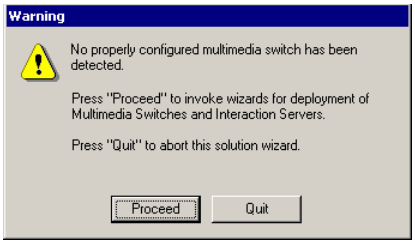


Figure 24: Switch Warning

b. Click `Proceed` to launch the Switch Wizard.

Note: You can use a preexisting `Switch` object (that is connected to a properly configured Interaction Server) from your Configuration Layer, if available.

Multimedia Switch and Switching Office

c. To create a new `Multimedia` type `Switch` object, provide a unique name for it and click `Next`. (The wizard allows you to create the new `Switch` only in folders designated to contain objects of type `Switch`.)

```
Name = MM761_Switch
```

Note: Even though the Configuration Layer permits assignment of multiple `Switches` of type `Multimedia Switch` to a single Interaction Server `Application` object, Genesys does not currently support such a configuration. This type of configuration can lead to unpredictable behavior on the part of the application that is connected to the switches.

---

d. `Switching Office:`
Click `Add` to create a new `Switching Office` object. Provide the name and type, and click `Finish`.

```
Name = MM761_Switching_Office
Switch Type = Multimedia Switch
```

e. At the `Switch Summary` page, click `Next`. See Figure 25 for a sample summary of a `Switch` object's properties.

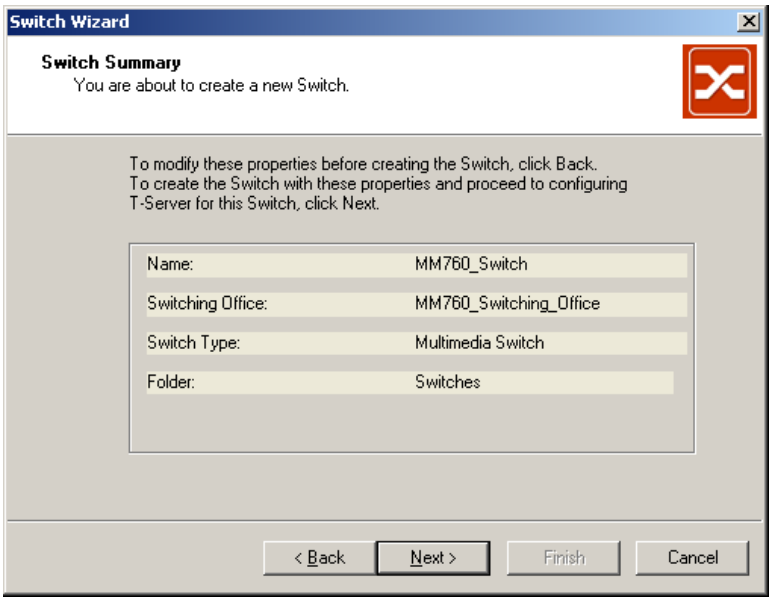


Figure 25: Multimedia Switch Summary Information

13. Configure Framework Resources

a. If you select `New-Style Interaction Server`, the wizard opens the `Framework Resources` page (see Figure 26 on page 114). This page lists the following:

- Current Framework resources
- Any missing resources required to support the media types served by your switch

b. To create the missing resources now, select **`Create missing objects and review the Framework resources again`**, and then click **`Next`**. For our model setup, select this option**`missing objects and review the Framework resources again`**, and then click **`Next`**. For our model setup, select this option.
In your own deployment, you can choose to wait until after you finish the wizard to create the required objects. Select `Continue the solution creation process with the Framework resources as they are now.`

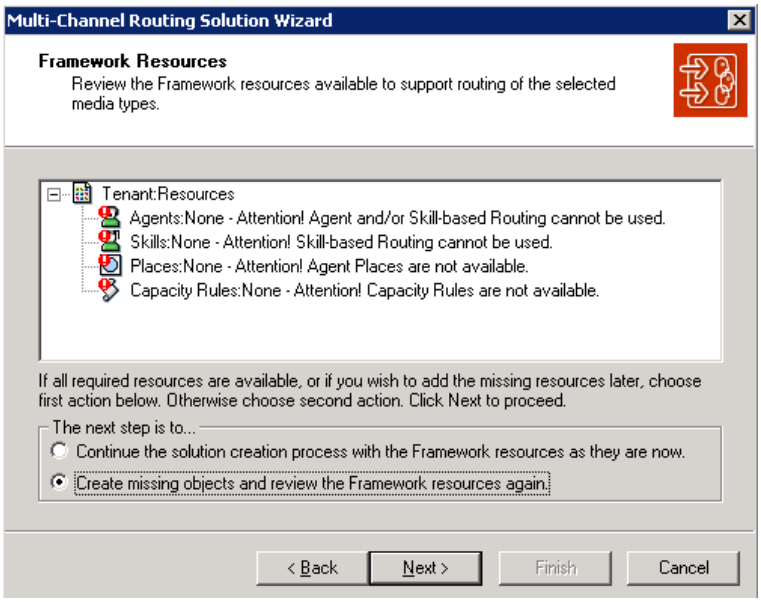


Figure 26: Framework Resources

c. At the `Framework Objects` page, select the object type you want to create from the drop-down menu. For our model setup, create and configure the various objects as follows:

Table 9: Framework Resource Object Types

Object Type	Model Setup
Place	Create `Place` objects to facilitate the routing of multimedia interactions: `Place Name = Agent1Place` **Note**: Do not create any DNs associated with this `Place` object, though you may want to create a `Place Group` object for this place, as suggested in the wizard.
Capacity Rule	By default, as the final step of the solution's configuration, the wizard creates and installs three capacity rules for your tenant. Do not create any capacity rules here (although you can, if you have previously installed the Resource Capacity Wizard, which is available on the Real-Time Metrics Engine CD).

Table 9: Framework Resource Object Types (Continued)

Object Type	Model Setup
Agent	Create Person objects to represent agents in your model setup and assign agent IDs to them. (Also use this step to create any Person objects you intend to use as the autoreply agents for supplying agent-related information in standard responses). Refer to the *Framework 7 Deployment Guide* for the full list of steps required to create Person objects. Agent Name = Agent One Employee ID = Agent1 User Name = Agent1 Password = Agent1 **Note**: The agent values supplied here are for general use in this chapter's model setup, and do not correspond to the actual steps suggested by the wizard for the creation of Person objects. A Person object's user name must be unique within the Configuration Database. This is not a concern for this model installation, which is in a single-tenant environment. If you were installing more than one Multimedia set of components in a multi-tenant environment, you would use distinct names across tenants.
Agent Login:	Create Agent Login objects to enable agents to log in to the switch. The agent login code must correspond to the agent login numbering of your switch.
Skill:	You do not need to create skills for this model installation.

14. Configure the Interaction Server

a. Solution Components: Interaction Server:
Click Add and then click the New Application icon to run the Interaction Server Wizard.

Note: If you use a switch-based Interaction Server in a multi-tenant environment, you need to install one Interaction Server per tenant that requires one. That is, for reporting purposes, a given Interaction Server cannot serve the needs of multiple tenants.

As a new feature introduced in the 7.2 release, use of the new style Interaction Server supports multi-tenancy. One Interaction Server can serve multiple tenants.

b. Interaction Server Name:
Name = MM761_IxnSrv

c. `Log Configuration`. Accept the default log settings and click `Next`.

d. `Server Information`:
`Host = MMHost`
`Default Port = 6130`

e. Use the Connection Wizard to connect to Message Server.

f. `Application Connections: Database Access Point`:
Add the DAP you created for Interaction Server, `MM761_Ixn_DAP`.

A message box will appear asking you to confirm the DAP settings. Click `Yes` to review the settings, and then click `OK` to confirm the settings. Click `Next`.

g. `Application Connections: Servers for Third-Party Protocol`
If you already installed related Multimedia components (Universal Contact Server, E-mail Server Java, and Classification Server, for instance), you can connect to them now using this page.

For our model setup, click `Next`

h. `License Server Connection`:
Specify the license options to use (either a license host and port or a local filename) and click `Next`.
`License Server Host = MMHost`
`License Server Port = 7260`

i. `Feature license counters`:
Specify the number of licenses for Interaction Server features. Click `Next`.

j. `Installation Package`:
Copy the Interaction Server installation package. Select a source and destination. Click `Next`.

k. `Installation Ready`:
Confirm that your Interaction Server software is ready for installation, and then click `Next`.

l. Click `Finish` to exit the Interaction Server Wizard and return to the Multimedia Wizard.

m. Do one of the following:

- If you selected `New-style Interaction Server`, the wizard returns you to the `Browse for Application (Interaction Server)` page. Select the Interaction Server and click `OK`.
- If you selected `Switch-based Interaction Server`, the wizard asks if you want to configure Framework resources. Refer to Configure Framework Resources, page 113 for details on how to create resources you might need in your environment.

n. Click `Next`.

15. Select a Stat Server

`Solution Components: Stat Server:`
Click `Add` and select a Stat Server. This connects all the appropriate components in your Multimedia solution to this Stat Server.

`Note:` Even though the wizard allows you to create a Stat Server here, do not do so. Prior to using the wizard, you should have one Stat Server per Multimedia tenant already configured and installed in your environment. (Table 7 on page 93 lists prerequisite details.)

If you receive the warning message in Figure 27, this indicates that Stat Server does not yet have a connection to Interaction Server. This connection is required for both the routing and reporting of Multimedia interactions.

- If you click `Yes`, you may receive an error message if the Stat Server wizard is not installed on your machine. The connection cannot be created at this time.
- If you click `No` (the recommended approach), make sure that you add the connection from Stat Server to Interaction Server before you attempt to use routing or reporting with the Multimedia solution.

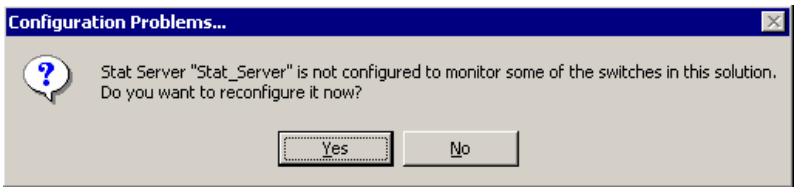


Figure 27: Offer to Reconfigure Stat Server

16. Add a Universal Routing Server

At the `Universal Routing Server` (URS) page, select the URS that you created and installed as one of the prerequisites for your Multimedia installation. If you receive a warning message similar to the one shown in Figure 27, but stating that URS is not configured to monitor Interaction Server, click `Yes` to reconfigure now, or click `No` to reconfigure later.

Tip: If you click No, make sure you add the required connections after configuration and installation are complete. For more information, see Verifying Connections, page 137

17. Add an Application Cluster

At the `Application Cluster` page, add an application cluster if you intend to group your Multimedia components into groups for load-balancing purposes. After giving a name to your new application cluster, the

Application Cluster Wizard invites you to group, for instance, Chat Server, E-mail Server Java, and Web API Server, as well as other application clusters. See Figure 28.

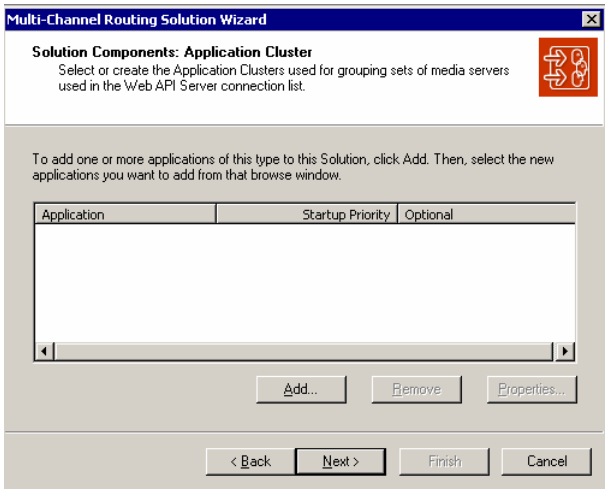


Figure 28: Application Connections in Application Cluster Wizard

18. Add the Web API Server

a. `Solution Components: Web API Server:`
Click `Add` and then click the `New Application` icon to run the Web API Server Wizard.

b. `Web API Server Name:`
`Name = MM761_WebAPIServer`

c. `Log Configuration:`
Accept the default log settings and click `Next`.

`Warning!` For Web API Server .NET, you must use Configuration Manager to specify the *full path* of your log file in the `log/all` section of the `Options` tab in your Web API Server `Application` object. If only a file name is specified, Web API Server does not create a log file.

Full permissions should be granted to the `Everyone` user for the folder containing your log file.

---

d. `Server Information:`
Enter the server information, and click `Next`.
`Host = MMHost`
`Default Port = 80` (Use your web server's `http` port here. The value might be `443` if you are using the `https` port.)

e. `Application Connections: Message Server:`
Use the Connection Wizard to connect to Message Server. Click `Next`.

f. Application Connections: Servers for Load Balancing:
Connect to the applications that Web API Server will use for load balancing and click Next. Such applications might include Chat Server and E-mail Server Java, if you have them. If you do not have them, click Next.

g. Application Connections: Universal Contact Server:
Use the Connection Wizard to connect to Universal Contact Server. Click Next.

h. Application Connections: Stat Server:
Use the Connection Wizard to connect to Stat Server. Click Next.

i. Application Connections: Interaction Server:
Use the Connection Wizard to connect to Interaction Server. Click Next.

j. Application Connections: Solution Control Server:
Use the Connection Wizard to connect to Solution Control Server. Click Next.

Note: Web API Server will not work without a connection to Solution Control Server.

k. Installation Package:
Copy the Web API Server installation package. Select a source and destination. Click Next.

l. Installation Ready:
Confirm that your Web API Server software is ready for installation, and then click Next.

m. Click Finish to exit the Web API Server Wizard and return to the Multimedia Wizard.

n. Browse for Application (Web API Server):
Select the Web API Server and click OK.

o. Click Next.

19. Add Web Compound Samples and Web Client

a. Solution Components: Web Compound Samples:
Click Add, and then click the New Application icon to run the Web Compound Samples Wizard. The Web Compound Samples enable you to begin configuring and working with components that handle interactions that arrive in your contact center through a website. The procedure for adding the Web Compound Samples includes creating and configuring a Web Client object in the Configuration Layer. The Web Client serves as an account for interactions that arrive through the Web API Server.

> Note: For environments using WebSphere and WebLogic, the samples are presented as part of an enterprise archive (EAR) project.

b. `Web Compound Samples Name:`
`Name = MM761_WebClient`

c. `Installation Package:`
Copy the Web Compound Samples installation package. Select a source and destination. Click `Next`.

d. `Installation Ready:`
Confirm that your Web Compound Samples software is ready for installation, and then click `Next`.

e. Click `Finish` to exit the Web Compound Samples Wizard and return to the Multimedia Wizard.

f. `Browse for Application (Web Client):`
Select the Web Client and click `OK`.

g. Click `Next`.

20. Add the Universal Contact Server Manager

a. `Solution Components: Universal Contact Server Manager:`
Click `Add` and then click the `New Application` icon to run the Universal Contact Server Manager Wizard.

b. `Universal Contact Server Manager Name:`
`Name = MM761_UCSMgr`

c. `Application Connections: Universal Contact Server:`
Use the Connection Wizard to connect to Universal Contact Server. Click `Next`.

d. `Installation Package:`
Copy the UCS Manager installation package. Select a source and destination. Click `Next`.

e. `Installation Ready:`
Confirm that your UCS Manager software is ready for installation, and then click `Next`.

f. Click `Finish` to exit the Universal Contact Server Manager Wizard and return to the Multimedia Wizard.

g. `Browse for Application (Contact Server Manager):`
Select the Universal Contact Server Manager and click `OK`.

h. Click `Next`.

21. Select Additional CDs for Installation

Based on how you plan to implement Multimedia, identify any additional CDs you need to complete this installation.

The list of CDs that the wizard presents (shown in Figure 29) may include some you have not purchased. Select only those CDs that apply to your environment. For the purposes of the model environment, this section describes an installation using all possible CDs. If you select more than one CD, the wizard presents the appropriate component-related wizards in order.

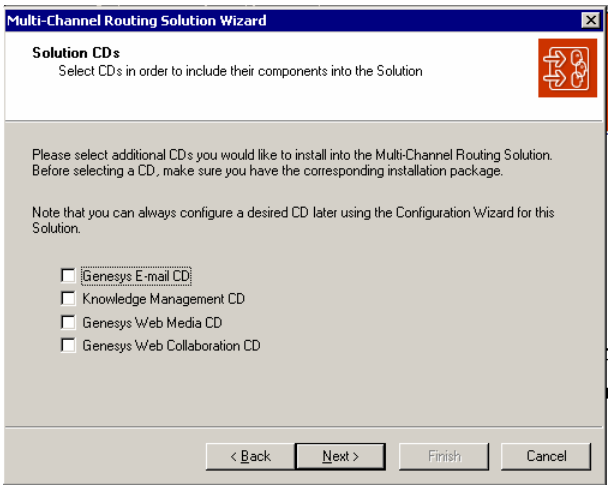


Figure 29: Other CDs for Multimedia Installation

22. Add E-mail Server Java

a. `Solution Components: E-mail Server Java:`
Click `Add` and then click the `New Application` icon to run the E-mail Server Java Wizard.

b. `E-mail Server Java Name:`
`Name = MM761_E-mailServer`

c. `Log Configuration:`
Accept the default log settings and click `Next`.

d. `Server Information:`
`Host = MMHost`
`Default Port = 6150`

e. Use the wizard to connect to Message Server, Interaction Server, and Universal Contact Server.

f. `The Names of the POP3 and SMTP Servers:`
`POP3 server name = MMHost`
`POP server type = POP3`
`SMTP server name = MMHost`

Notes: This model installation uses `MMHost` as its POP3 and SMTP servers.

If you are using your enterprise POP3 server, enter its name as the `POP3` server name value. You do not need to enter a value for the `SMTP` server name if it is the same server that you used for `POP3` server name.

g. `POP3 User Name:`
Add information about the e-mail account identified as the administrator on the POP3 server.
- `Address = <mailboxName>@MMHost`
- `User name = <username>`
- `Password = <password>`

h. `Default Domain for E-mail Addresses:`
`E-mail address default domain name = MMHost`

i. `External Agent E-mail Address:`
`External Agent e-mail address = external@MMHost`

j. `Web Form Processing:`
Enable Web Form Processing by selecting the check box, and provide a port where the Web API Server should listen for requests—for example `IWF Processing Port = 7777.` (See Figure 30.)

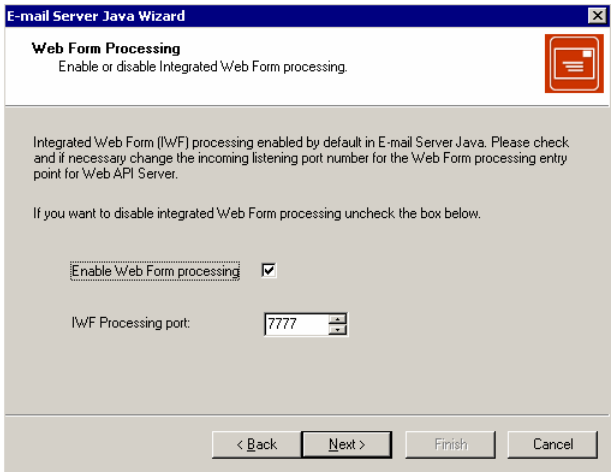


Figure 30: Information for Web Form Processing

k. `Automated Reply Agent:`
This e-mail address is used to supply field values in automated responses generated in the contact center. Select an existing Person object from the Configuration Layer.

l. `Auto-reply Agent = Agent1`

m. Installation Package:
Copy the E-mail Server Java installation package. Select a source and destination. Click Next.

n. Installation Ready:
Confirm that your E-mail Server Java software is ready for installation, and then click Next and Finish.

o. Browse for Application (E-mail Server):
Select the E-mail Server and click OK.

p. E-mail Accounts:
Configure e-mail accounts that exist on your corporate e-mail server for customers to use when contacting your company—for example:
Customer access account 1 = <mailboxName1>@MMHost
Customer access account 2 = <mailboxName2>@MMHost

Note: If you installed the Interaction Workflow Samples, then your configuration will automatically include the following three e-mail accounts (which are used in the samples):
Customer support, Tech support, and Warranty support.

If you did not install the Interaction Workflow Samples before running the wizard, then no e-mail accounts are shown. You must add and configure at least one e-mail account before continuing.

q. Click Finish to exit the E-Mail Wizard.

23. Add the Classification Server

If you selected the Knowledge Management CD in Step 21 on page 121, the wizard now guides you through the configuration of the Classification Server, Training Server, and Knowledge Manager.

a. Solution Components: Classification Server:
Click Add, and then click the New Application icon to run the Classification Server Wizard.

b. Classification Server Name:
Name = MM761_ClassificationServer

c. Log Configuration:
Accept the default log settings and click Next.

d. Server Information:
Host = MMHost
Default Port = 6160

e. Application Connections:
Use the wizard to connect to Message Server, Universal Contact Server, and Interaction Server.

f. Access to License:
Specify the license options to use (either a license host and port or a local filename) and click Next.
License Server Host = MMHost
License Server Port = 7260

g. Installation Package:
Copy the Classification Server installation package. Select a source and destination. Click Next.

h. Installation Ready:
Confirm that your Classification Server software is ready for installation, and then click Next.

i. Click Finish to exit the Classification Server Wizard and return to the Knowledge Management Wizard.

j. Browse for Application (Classification Server):
Select the Classification Server and click OK.

24. Add the Training Server

a. Solution Components: Training Server:
Click Add, and then click the New Application icon to run the Training Server Wizard.

b. Training Server Name:
Name = MM761_TrainingServer

c. Log Configuration:
Accept the default log settings and click Next.

d. Server Information:
Host = MMHost
Default Port = 6170

e. Use the Connection Wizard to connect to Message Server and Universal Contact Server.

f. Installation Package:
Copy the Training Server installation package. Select a source and destination. Click Next.

g. Installation Ready:
Confirm that your Training Server software is ready for installation, and then click Next.

h. Click Finish to exit the Training Server Wizard and return to the Knowledge Management Wizard.

i. Browse for Application (Training Server):
Select the Training Server and click OK.

25. Add the Knowledge Manager

a. Solution Components: Knowledge Manager:
Click Add, and then click the New Application icon to run the Knowledge Manager Wizard.

b. Training Server Name:
Name = MM761_KnowledgeManager

c. Use the Connection Wizard to connect to Universal Contact Server.

d. Knowledge Manager Options:
Indicate that you have a Classification Server Content Analysis license installed by selecting the check box of the same name. If you do not have this license, do not select this check box.

e. Installation Package:
Copy the Knowledge Manager installation package. Select a source and destination. Click Next.

f. Installation Ready:
Confirm that your Knowledge Manager software is ready for installation, and then click Next.

g. Click Finish to exit the Knowledge Manager Wizard and return to the Knowledge Management Wizard.

h. Browse for Application (Knowledge Manager):
Select the Knowledge Manager and click OK. Click Finish to exit the Knowledge Management Wizard.

26. Add the Chat Server

a. Solution Components: Chat Server.
Click Add, and then click the New Application icon to run the Chat Server Wizard.

b. Chat Server Name:
Name = MM761_ChatServer

c. Log Configuration. Accept the default log settings and click Next.

d. Server Information:
Host = MMHost
Port = 6180

e. Use the Connection Wizard to connect to Message Server, Interaction Server, and Universal Contact Server.

f. Extended Service Protocol Settings:
Identify what port and nickname you want to use for Extended Service Protocol (ESP) chat. (See Figure 31.)

ESP refers to the ability of URS to submit messages directly from a strategy into a chat session—for example, to greet a customer who is waiting for an agent.

Click Next.

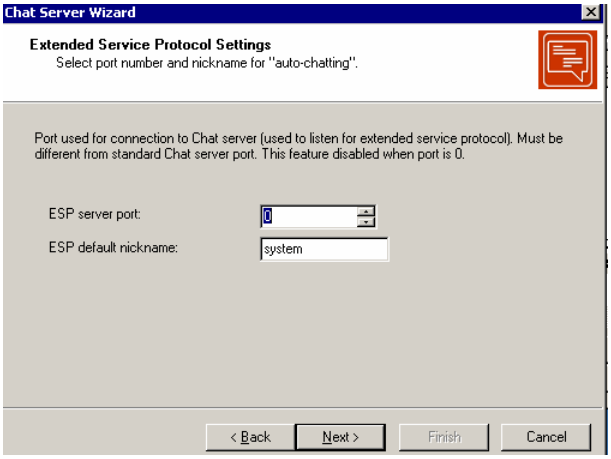


Figure 31: Configure ESP Settings for Chat Server

g. `Installation Package:`
Copy the Chat Server installation package. Select a source and destination. Click `Next`.

h. `Installation Ready:`
Confirm that your Chat Server software is ready for installation, and then click `Next`.

i. Click `Finish` to exit the Chat Server Wizard and return to the Genesys Web Media Wizard.

j. `Browse for Application (Chat Server):`
Select the Chat Server and click `OK`. Click `Next`.

k. Click `Finish` to exit the Genesys Web Media Wizard.

27. Add the Co-Browsing Server

a. `Solution Components: Co-Browsing Server:`
Click `Add`, and then click the `New Application` icon to run the Co-Browsing Server Wizard.

b. `Co-Browsing Server Name:`
`Name = MM761_Co-BrowsingServer`

c. `Log Configuration:`
Accept the default log settings and click `Next`.

d. `Server Information`
`Host = MMHost2`
`Default Port = 6195`

> Tip: You must install Co-Browsing Server and the supporting third-party software, KANA Response Live Server, on a separate host from the Web API Server—`MMhost2` for the model setup. To install and configure Kana Response Live, see "Deploying KANA Response Live for co-browsing" on page 74.

e. Use the wizard to connect to Message Server and a JDBC-based DAP. (You can use the `MM761_UCS_DAP` that you created.)

f. `Installation Package:`
Copy the Web Collaboration installation package. Select a source and destination. Click `Next`.

g. `Installation Ready:`
Confirm that your Co-Browsing Server software is ready for installation, and then click `Next`.

h. Click `Finish` to exit the Co-Browsing Server Wizard and return to the Genesys Web Collaboration Wizard.

i. `Browse for Application (Co-Browsing Server):`
Select the Co-Browsing Server and click `OK`. Click `Next`.

j. Click `Finish` to exit the Genesys Web Collaboration Wizard and return to the Multimedia Configuration Wizard.

k. `Solution Components: Web API Server:`
Follow the on-screen instructions to configure servers for load balancing. Click `Next`.

28. Create Capacity Rules

a. `Resource Capacity Rules Deployment:`
Select a folder in the Configuration Server where Multimedia should store its resource capacity rules. Click `Next`.

b. `Resource Capacity Rules Selection:`
From the drop-down menu, select the capacity rule you want to use as the default for Multimedia. The wizard assigns that rule to the `Tenant` object associated with your deployment in the previous step. Click `Next`.

29. Complete the wizard

a. `Solution Summary:`
At this point the wizard lists the solution components you have collected for use with Multimedia. Click `Next` to finish the configuration or `Back` to change the configuration of some solution component. See Figure 32 on page 128 for a sample of the `Solution Summary` page.

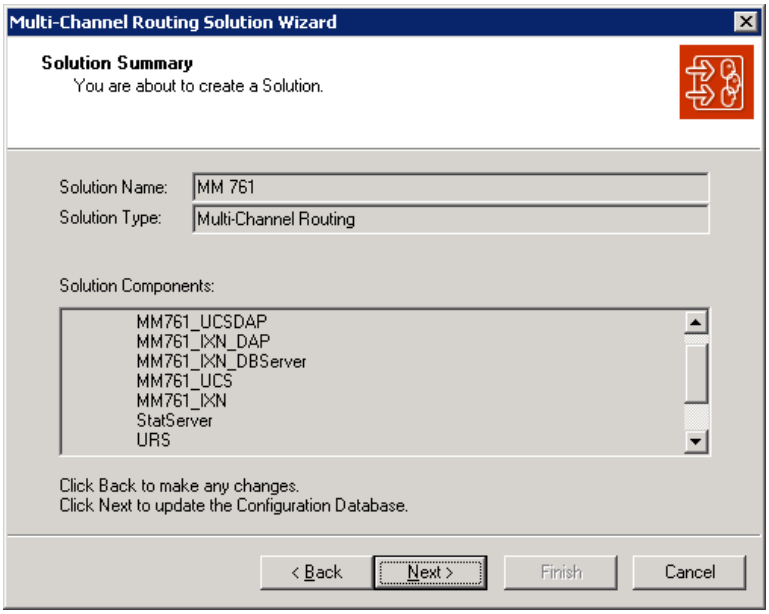


Figure 32: Solution Summary

b. `Completing the Multimedia Solution Wizard:`
Click `Finish` to confirm your solution configuration. Remember that you can change configuration details at a later time as well.

`Note:` Only at this point, when you exit the wizard, are the details of your solution configuration entered into the Configuration Database. Exiting the wizard prior to this point requires that you begin the solution configuration from the beginning. Any components you create along the way, however, are available during subsequent solution configuration using the wizard.

End of procedure

Next Steps

- For Chat Server, Genesys recommends that you specify an additional port for dedicated communication with Web API Server: see Specifying a webapi-port for Chat Server, page 129.
- If you want Chat Server to use the same port for communicating with both Web API Server and your call center agents (not recommended), then continue at Performing an integrated installation of all Multimedia servers, page 131

Procedure:
Specifying a webapi-port for Chat Server

Purpose: To establish a dedicated port for Chat Server communication with Web API Server.

Note: Chat Server can function using a single port for communicating with both web clients and agents. However, for system security Genesys recommends that you specify an additional `webapi-port`, which allows only web clients to communicate through it. Only this port should be opened/exposed to outside connections, thus prohibiting agent connections over a firewall.

Start of procedure

1. In Configuration Manager, on the `Options` tab, double-click `Settings`.
2. Double-click `webapi-port`, and then enter the model setup value of `6181`. Refer to the Configuration Worksheet, page 43 if using different values than the model.
3. Click `OK`, then `OK` again.

   Your change takes effect immediately.

End of procedure

Next Steps

- Performing an integrated installation of all Multimedia servers, page 131

Installing Multimedia Components

This section describes the installation process for Multimedia 7.6.1 components after you have finished configuring them with the wizards.

For Windows-only installations and the Windows portions of Solaris, Linux, and AIX installations, Genesys provides an installation package that integrates the installation of most or all Multimedia 7.6.1 components. The installation package is copied to one host as part of the process of running the Multimedia Configuration Wizards. Start `IPStarter.exe`, located in the `Windows/` subdirectory of your installation directory, one time for each Windows host that is part of your Multimedia deployment. (Each time you run `IPStarter.exe`, you are installing the appropriate components for the given Windows host.)

For Solaris, Linux, or AIX installations, after going through the configuration process, install Multimedia components by first manually copying them from

their deployed locations (where the wizards placed them) to each Solaris, Linux, or AIX host. Then manually install each component separately by launching its own setup. Detailed information on Solaris, Linux, and AIX installations is available in “Deploying Multimedia on UNIX Hosts” on page 153.

Note: For all platforms, you need to install the Third Party Components, before installing individual components. (This does not affect Chat Server, Interaction Server, and Co-Browsing Server.)

On Windows, if you use `IPStarter.exe`, that executable takes care of this for you automatically. On each Solaris, Linux, or AIX host, however, you must manually run the Third Party Components setup before you run the setup for the other Multimedia components on that host.

For an explanation of the difference between Third Party Components (executable) and ThirdPartyApplications (directory), see the note on page 55.

For the purposes of this section, the host where you have the Multimedia installation directory is called the *local host.* Any other hosts that you configured to receive Multimedia components are called *remote hosts.*

Generalized Installation Procedure

The general outline of how the integrated installation proceeds is as follows:

1. Local host
   a. The installer presents a list of Multimedia components that you configured to run on the local host, and asks you to verify it.
   b. The installer presents a list of components for which you did not specify a host, and asks if you want to install them on the local host.
   c. The installer installs the appropriate components on the local host.
2. Remote hosts
   a. From each remote host in turn, you must access the installation package from its shared directory on the local host (see “Create a Shared Directory” on page 94).
   b. The installation package then begins to install on the remote host.

Individual Component Installation

If for some reason you want to install individual components rather than using the integrated installation package, be aware that the directory structure of the individual installation packages looks like this:

```
<componentA>
AIX
Linux
Solaris
Windows
<componentB>
AIX
Linux
Solaris
Windows
...
aix
ThirdPartyComponents
linux
ThirdPartyComponents
solaris
ThirdPartyComponents
windows
Configuration Wizards
ThirdPartyComponents
```

That is, for each Multimedia component other than Common and Third Party Components, there is a directory named for the component. That directory contains subdirectories holding the installation packages for the supported operating systems.

To perform an integrated installation of all Multimedia Servers, see the next section.

Procedure: Performing an integrated installation of all Multimedia servers

Start of procedure

1. Starting the Integrated Installation
   a. Go to your shared directory, on which you had the Genesys Wizard Manager place the Multimedia components (for example, `\\MMHost\GenesysSetup`). Find and run `windows\IPStarter.exe`.
   b. At the `Welcome` window, click `Next` to proceed.

c. If any components were not assigned to a specific computer while running the Configuration Wizards, the `Host independent components dialog` page lists those components. Select the check box of any of these components that you want to install on the current machine (the host computer of the installation package). Click `Next`.

d. At the `Ready to start dialog` page, click `Next` to proceed.

e. The Integrated Installation takes you through each component's necessary installation steps. Prior to each subsequent component's installation, the installer displays a list of component directories (see Figure 33) containing:

- Components that have been installed, each with a green check mark next to it.
- Components not yet installed, with no markings next to them.
- The component to be installed next, with a blue check mark next to it.

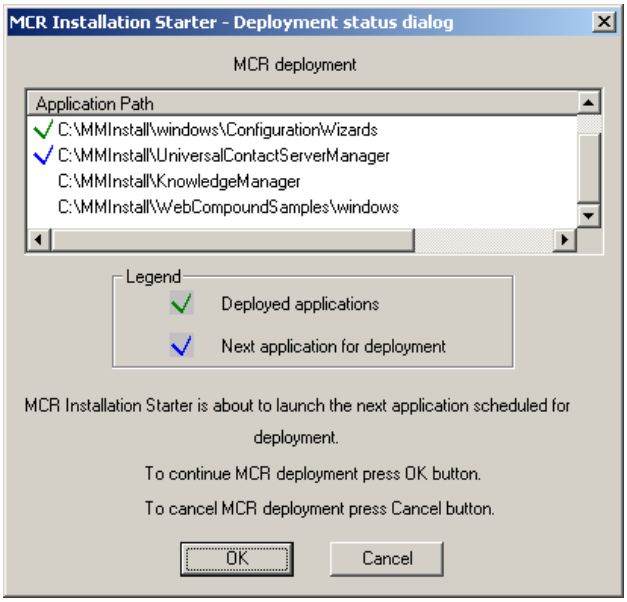


Figure 33: Deployment Status Window

2. Installing Third Party Components

> Note: For an explanation of the difference between Third Party Components (executable) and ThirdPartyApplications (directory), see the note on page 55.

a. On the `Servlet Engine` page, select your web application container and click `Next`.

b. On the `Choose Servlet Location` page, enter the location of your web application container and click `Next`.

c. Confirm the location of your Multimedia Third Party Components and click `Install`.

d. Click `Finish`.

3. Installing Configuration Wizards

If you do not already have the Genesys Multimedia Configuration Wizards installed on this host, the Installation Starter will install them for you in the existing `Wizards` directory. You may need to restart your host after Multimedia Configuration Wizards installation.

If you already have the Genesys Multimedia Configuration Wizards installed on this host, click `Cancel` on the first page of the Multimedia Configuration Wizards setup.

4. Installing Universal Contact Server

a. Click `Next, and then` click `Install`.

b. Click `Finish`.

Note: Once you install any given Multimedia component on your computer, the wizard uses that directory for all other Multimedia components. You are not allowed to install these components across different directories.

---

5. Installing Interaction Server

a. Click `Next`, then `Install`, if ready for installation.

b. Click `Finish`.

6. Installing Web API Server

Note: If Co-Browsing Server is going to be installed with Web API Server on the same host, then you must install KANA Response Live Server first. See “Deploying KANA Response Live for co-browsing” on page 74 for details.

In addition to following the steps listed here, installing the Web API Server requires that you refer back to the installation of your web server and your web services container. Installation of those components is described in Chapter 4, “Deploying Third-Party Web Applications,” on page 55.

To install the Web API Server:

a. Select from the list the Web API components (as in Figure 34) to be installed. Click `Next`.

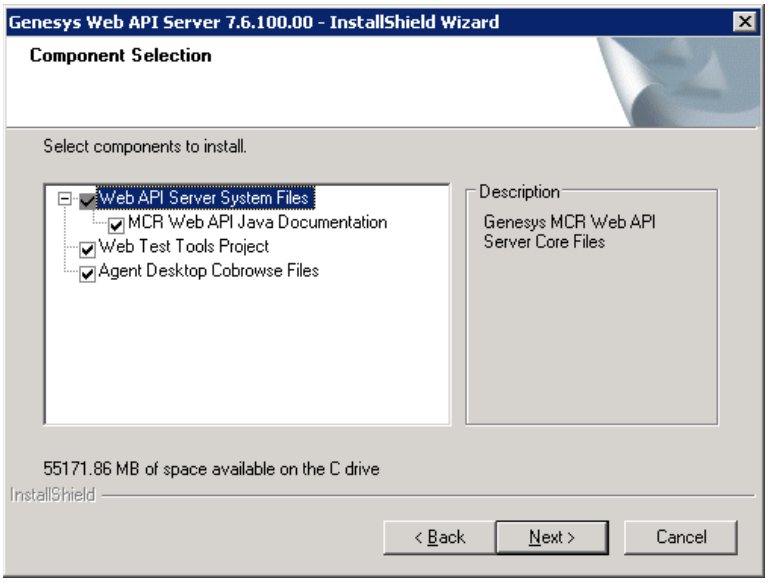


Figure 34: Web API Server Component Choices

b. Select the web server and web application container. Click `Next`.

c. Browse to the web server location. Click `Next`.

d. Browse to the web application container location. Click `Next`.

e. Confirm the location of the `worker.properties` file you created during installation of the web application container (`<CATALINA_HOME>\conf\jk` directory). Click `Next`.

f. Select the `worker.properties` file. Click `Next`.

g. Select the `ajp13` worker. Click `Next`.

h. Select a server-side code page—that is, the preferred language for processing all requests to Web API Server. Click `Next`.

i. At the `Start Copying Files` page, confirm your current settings. Click `Next`.

j. Click `Yes`, and then `Finish`.

7. Installing E-Mail Server Java

a. Click `Next`, then `Install` if ready for installation.

b. Click `Finish`.

8. Installing Classification Server

a. Click `Next`, then `Install` if ready for installation.

b. Click `Finish`.

9. Installing Training Server

a. Click `Next`, then `Install` if ready for installation.

b. Click `Finish`.

10. Installing Chat Server
    a. Click `Next`, then `Install` if ready for installation.
    b. Click `Finish`.
11. Installing Universal Contact Server Manager
    a. Click `Next`, and then `Install`.
    b. Click `Finish`.
12. Installing Knowledge Manager
    a. Click `Next`, then `Install`.
    b. Click `Finish`.

> Note: Beginning in release 7.6.1, the error log is written to the following location: `Documents and Settings\<local account>\My Documents\KM_ErLog`. The log is generated when Knowledge Manager is started. This change was made to comply with Vista security systems.

13. Installing Web Compound Samples
    a. Confirm the list of necessary samples to be installed. Click `Next`.
    b. Select the web server and web application container. Click `Next`.
    c. Browse to the web server location. Click `Next`.
    d. Browse to the web application container location. Click `Next`.
    e. Confirm the location of the `worker.properties` file you created during installation of the web application container (`<CATALINA_HOME>\conf\jk` directory). Click `Next`.
    f. Select the same worker file used for your Web API Server installation. Click `Next`.
    g. Select the `ajp13` worker. Click `Next`.
    h. Select the tenant ID. Click `Next`.
    i. Confirm the system configuration information about Co-Browsing Server. Click `Next`.
    j. On the `Specify code page` indicate the preferred language for processing requests to samples. Click `Next`.
    k. On the `Webstarter Configuration` page, confirm your settings. Click `Next`.
    l. Click `Finish`.
14. Installing Co-Browsing Server
    a. Enter the fully qualified domain name of the web server and the unique server identifier. Click `Next`.
    b. Browse to the root folder containing your KANA Response Live server. (See “Deploying KANA Response Live for co-browsing” on page 74.) Click `Next`.

c. Browse to the destination folder where the application will be installed, and click `Next`.

d. Click `Install`, then `Finish`.

The integrated installation is now complete.

End of procedure

Next Steps

- Creating Databases and Running Scripts

Creating Databases and Running Scripts

If you have not already done so, create the databases for Interaction Server, Universal Contact Server, and Co-Browsing Server. For UCS, you may also want to create an `Archive` database to store older UCS data and ease storage in the `Main` UCS database.

`Note:` If you intend to use the Event Logger functionality that is available in version 7.6.1, you will need to create another database and run the corresponding script. Configuration and deployment of Event Logger is explained in the "Event Logger" section in the "Interaction Server: Advanced Topic" section of the "Ongoing Administration and Other Topics" chapter of the *Multimedia 7.6 User's Guide*.

Procedure: Running scripts for your databases

Start of procedure

1. At the starting directory for each component, locate the SQL script folder:

Component	Script Folder
Interaction Server	`Script`
UCS	`sql-scripts`
Co-Browsing Server	`dbscripts`

2. Run the database scripts for each component.

> Note: Only one Universal Contact Server database pair (`Main` and `Archive`) is allowed per `Tenant`.

End of procedure

Next Steps

- Verifying connections

Verifying Connections

At this point in the Multimedia installation process, you must update the configuration settings for some components before continuing. Refer to Table 4 on page 52 for a list of connections that must be set in the Configuration Layer. Refer to the *Multimedia 7.6 Reference Manual* for information on option settings.

Procedure: Verifying connections

Start of procedure

1. In Configuration Manager, verify that the required connections have been made in the Multimedia `Application` objects. See Table 4 on page 52 for a detailed list of the connections you need to add to the Multimedia objects.
2. Add a connection from Stat Server to Interaction Server.
3. Add a connection from Universal Routing Server to Interaction Server.

End of procedure

Next Steps

- Testing the Multimedia servers

Testing Multimedia Components

The minimum required components for testing include:

- Local Control Agent
- DB Server
- Configuration Server
- Message Server

- Solution Control Server
- Solution Control Interface
- Stat Server
- Universal Routing Server

Procedure:
Testing the Multimedia servers

Purpose: To test that the Multimedia servers will successfully launch and run free of errors.

> Tip: General instructions for starting and stopping your Multimedia solution are in Chapter 11 on page 193. This section provides startup instructions for the sole purpose of testing your solution.

Prerequisites

- Before testing the Multimedia servers, ensure that both Universal Contact Server and Interaction Server have connections to Stat Server (if you have not already made these connections).
- Confirm that both Stat Server and Universal Routing Server have connections to Interaction Server.
- Be sure Genesys Framework is running.
- Before testing chat and web form e-mail, restart the host(s) running the Chat Server, and ensure that your POP3 e-mail server is up and running.

Start of procedure

1. Start the servers in this order:
   a. DB Server for Interaction Server
   b. Interaction Server
   c. Universal Contact Server
   d. E-mail Server Java
   e. Chat Server
   f. Classification Server
   g. Training Server
   h. Co-Browsing Server
   i. Web Server and Web Application Container for Web API Server launch
2. After each server starts, check its console window for errors.

End of procedure

Next Steps

- Testing the components using the Web-based TestTool761

Procedure:
Testing the components using the Web-based TestTool761

An application for testing the components, called TestTool761, is included as part of the installation of Web API Server. Use this tool to test the various Java classes and servlets that run the Multimedia solution

Start of procedure

1. Open a web browser window and enter the following URL:
   `http://<WebAPIServerhost>/TestTool761`

   Note: The address used to access the testing application is case sensitive.

   You should see a window that looks like the one in Figure 35.

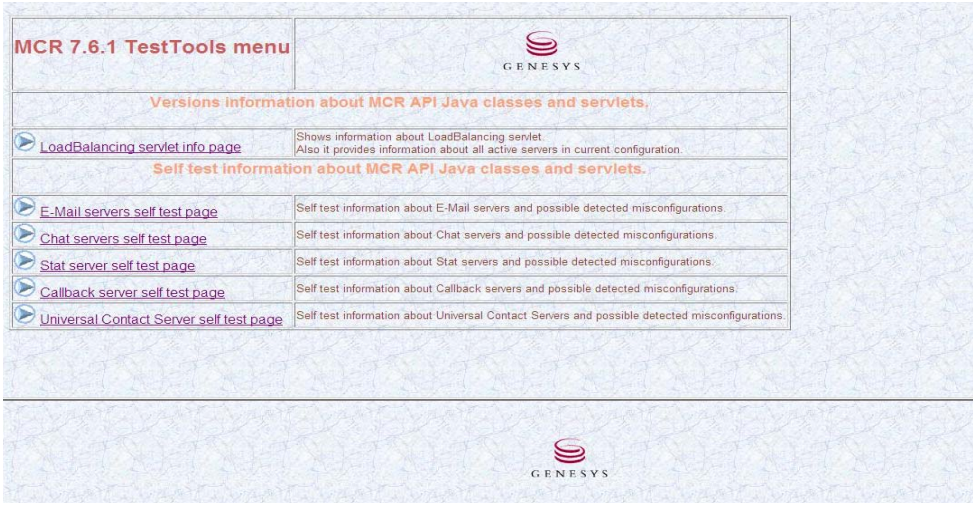


Figure 35: Multimedia 7.6.1 Test Tools Page

2. Click any of the links to launch the various testing tools. The results of the test display in the bottom frame of the web page.

End of procedure

Next Steps

- Testing that Genesys Desktop can handle interactions

Procedure:
Testing that Genesys Desktop can handle interactions

Purpose: To log in the Genesys Desktop agent that will receive test Multimedia interactions (e-mail, chat, and web e-mail).

Test agent handling of interactions by configuring and installing Genesys Desktop. For instructions on how to do this, see the *Genesys Desktop 7.6 Deployment Guide.*

Note: After installing Genesys Desktop, use Configuration Manager to ensure that the Desktop `Application` object has a connection to your Interaction Server or if applicable, Interaction Server Proxy.

Start of procedure

1. Enter the following URL into your web browser:
   `http://<Host_IP_Address:port>/gdesktop`
2. To log in an agent, enter the following information:
   - Agent ID
   - Password
   - The name of the agent's associated Place

End of procedure

Next Steps

- Testing the Setup

Testing the Setup

Next you should test your installation's functionality. This requires that you implement an interaction workflow. The workflow and its associated routing strategies can be very simple. The simplest way to test the setup is to use the `ABC Simple BP` and the `ABC Simple Chat BP` business processes that are installed as part of your Interaction Workflow Samples installation.

Using the Sample Business Processes

The `ABC Simple BP` receives e-mail interactions that enter the system and delivers them to an agent group. This business process also allows the agent who works on a given interaction to reply to it and send a resulting outbound e-mail. The `ABC Simple Chat BP` does essentially the same thing, but for chat interactions; it receives chat interactions that enter the system and delivers

them to an agent group. See the *Universal Routing 7.5 (or later) Business Process User's Guide* for more details on these and the other sample business processes. That guide also describes how to work with strategies and queues in the Interaction Design portion of IRD.

Procedure: Configuring ABC Simple BP for routing e-mail interactions

Start of procedure

1. Set E-mail Server Java `default-inbound-queue` option (in the `email-processing` section) to the value `Inbound queue`, which is the name of the inbound queue in `ABC Simple BP`.

   Note: If you installed the Interaction Workflow Samples before using the wizard installation, you will find that two `Interaction Queue` objects named `Inbound queue` and `Outbound queue` already exist in your `<Tenant>\Scripts` folder in Configuration Manager. Use the `Inbound queue` name as the value for this E-mail Server Java default queue option.

2. The `Person` object you plan to use for handling e-mail interactions must be a member of the `Agent Group` named `E-mail distribution for processing`, which serves as a target for interactions in the `Process ABC` strategy of this sample business process.
3. From the Interaction Design portion of IRD, if they are not already activated, activate the two strategies that this business process uses, `Process ABC` and `Send ABC`.

   See the *Universal Routing 7.5* (or later) *Business Process User's Guide* and *Universal Routing 7.6 Interaction Routing Designer Help* for additional instructions on creating and activating/loading routing strategies.

End of procedure

Next Steps

- Configuring ABC Simple Chat BP for routing chat interactions

Procedure:
Configuring ABC Simple Chat BP for routing chat interactions

Start of procedure

Be sure you have set the following prior to testing this workflow:

1. If you installed the Interaction Workflow Samples before using the wizard installation, you will find that an `Interaction Queue` object named `Chat inbound queue` already exists in your `<Tenant>\Scripts` folder in Configuration Manager. That queue is also the value for the Chat Server `default` option (in the `endpoints:<tenant_id>` section). Make sure this is the case.
2. The `Person` object you plan to use for handling chat interactions must be a member of the `Agent Group` named `Chat distribution for processing`, which serves as a target for interactions in the `Chat inbound strategy` strategy of this sample business process.
3. From the Interaction Design portion of IRD, if they are not already activated, activate the three strategies this business process uses: `Chat send transcript email strategy`, `Chat request transcript send strategy`, and `Chat inbound strategy`.

   See the *Universal Routing 7.5* (or later) *Business Process User's Guide* and *Universal Routing 7.6 Interaction Routing Designer Help* for additional instructions on creating and activating/loading routing strategies.

End of procedure

Next Steps

- Sending a test e-mail to a Desktop agent

Procedure:
Sending a test e-mail to a Desktop agent

Purpose: To send a test e-mail from your installed Multimedia solution to a Genesys Desktop agent using the `ABC Simple BP` routing strategy.

Start of procedure

1. If you have not already started the necessary components (as noted in "Testing Multimedia Components" on page 137), do so now.
2. Open your e-mail client and send an e-mail to the POP box that E-mail Server Java checks (the value of that component's `address` option).

3. Ready an agent at the Genesys Desktop and look for the arrival of the e-mail interaction.
4. If the inbound e-mail fails (for example, E-mail Server Java does not see the message or E-mail Server Java sends the message to a bad directory), check each of the E-mail Server Java options, logs, and the routing strategies for possible errors.

End of procedure

Next Steps

- Starting a test chat session with a Desktop agent

Procedure:
Starting a test chat session with a Desktop agent

Purpose: To start a test chat session between a sample customer from the Web Client and a Genesys Desktop agent, using the Web Client and the ABC Simple Chat routing strategy.

Start of procedure

1. Start the web server and the web application container, if you have not already.
2. If you have not already started the necessary components (as noted in "Testing Multimedia Components" on page 137), do so now.
3. Ready an agent at the Genesys Desktop.
4. Start the Web Client by opening a browser and selecting a `Chat` link from `http://<WebAPIServerhost>/WebAPISamples761`.
5. Click `Chat Sample with user typing notification`.
6. Fill in customer data and click `Start Chat`.
7. Look for the arrival of the chat interaction at the Genesys Desktop.
8. If chat does not work (for example, a `disconnected from chat server` message appears or the customer joins but the agent does not), check each of the manual install steps. Specifically, check the:
   - Chat Server options.
   - Web API Server options.
   - WebAPISamples761 parameters, contained in the `constants.jsp` file.

End of procedure

Next Steps

- Sending a test web form e-mail to a Desktop agent

Procedure:
Sending a test web form e-mail to a Desktop agent

Purpose: To send a test web form e-mail from the Web Client to a Genesys Desktop agent.

Start of procedure

1. If you have not already started the necessary components (as noted in "Testing Multimedia Components" on page 137), do so now.
2. Start the Web Client by opening a browser and clicking the `E-mail over the Web sample` link from `http://<WebAPIServerhost>/WebAPISamples761`.
3. Fill in customer data and click `Submit`.
4. Ready an agent at the Genesys Desktop and look for the arrival of the web form e-mail interaction.
5. If web form e-mail does not work (for example, no `thank you page` displays, a `thank you` page displays with an error, or a `thank you` page displays but the e-mail never pops to the desktop), check each of the manual install steps.

End of procedure

Next Steps

- You have completed all steps for testing the setup of Multimedia 7.6.1.

Chapter

6 Deploying an E-Mail System in Secured Mode

This chapter describes how to configure an e-mail system to work in secured mode using SSL. This applies to POP3, IMAP4, and SMTP. The information in this chapter is divided among the following sections:

Configuring the Corporate E-Mail Server

This section describes the procedures for configuring the corporate mail server, such as Lotus Domino, to work in secured mode using SSL. This section includes the following procedure:

Procedure: Configuring the corporate e-mail server to work in secured mode

Prerequisites

- Microsoft Certificate Services must be installed on `Host1` (in this example, `Host1` is running Windows 2000 Server):
  - IIS must be installed
  - Navigate to `Control Panel > Add/Remove Programs > Add/Remove Windows Components > Certificate Services`

- A corporate mail server such as Lotus Domino, which is used in this procedure, must be installed on `Host2`. In this example, Lotus Domino version 5.3 is used.

Start of procedure

1. From a browser on `Host2`, go to website of the Certification Authority (CA) at the following URL: `http://Host1/Certsrv`
   a. From the main menu select `Retrieve the CA certificate revocation list` and `Install this CA certification Path`.
   b. From the main menu select `Retrieve the CA certificate revocation list` and `Download CA certificate (Base 64 encoded)`
   c. Save the file `certnew.cer` in `c:\temp` (this is the trust certificate).
2. From Lotus Domino administration, open SSL Domino Administration by selecting `File > Database > Open`. Select the server and open `Server Certificate Admin` (file `certsrv.nsf`).
3. The Domino SSL Administration Page has four top-level menu sections. The following is a sample configuration:
   a. Create Key Ring

      Key Ring File Name: `JavaEmail.kyr`

      key ring password: `password`

      Common name: `Host2`

      Organization: `Company`

      State or Province: `State`

      Country: `Country`
   b. Create Certificate Request

      Key ring file name: `JavaEmail.kyr`

      Create Certificate Request:
      i. The certificate request in PKCS format is displayed.
      ii. Copy the request by selecting all the text in a temporary file.
      iii. On the CA website, select `Request a certificate > Advance Request > Submit a certificate request using a base64 encoded PKCS...`
      iv. Copy the request in PKCS format and submit.
      v. Launch `Programs > Administrative Tools > Certification Authority`
      vi. Select the last certificate in the `Pending Requests` folder and issue it.
      vii. In the `Issued Certificates` folder, open this certificate and copy it to a new file: `certificate.cer`.
      viii. Copy the file `certificate.cer` to `\\Host2\temp`.

c. Install Trusted Root Certificate into Key Ring
   Key ring file name: `JavaEmail.kyr`
   Certificate Label: `Microsoft Certificate Authority`
   Certificate Source: File: `C:\temp\certnew.cer`
d. Install Certificate into Key Ring
   Key ring file name: `JavaEmail.kyr`
   Certificate Source: File: `C:\temp\certificate.cer`
   Select `Merge Certificate into Key Ring`.

4. Copy the `JavaEmail.kyr` and `JavaEmail.sth` files from `c:\Lotus\Notes\Data` to `c:\Lotus\Domino\Data`.
5. In Domino Administration, set the `SSL key file name` in Internet Ports to `JavaEmail.kyr`.
6. Enable SSL on the Domino POP, IMAP, and SMTP ports.
7. Restart the Domino server.

End of procedure

Next Steps

- Configuring SSL for E-mail Server Java

Configuring SSL for E-mail Server Java

This section describes procedures for configuring your E-mail Server Java application to work with SSL. This configuration is supported for E-mail Server Java version 7.0 and above. The following procedures are included in this section:

- Generating the .keystore file
- Modifying the E-mail Server Java startup command line
- Configuring E-mail Server Java's POP, IMAP, and SMTP ports

Procedure: Generating the .keystore file

Prerequisites:

- Configuring the corporate e-mail server to work in secured mode

Start of procedure

1. Copy the `certificate.cer` file to the host running E-mail Server Java (`Host3` for this sample configuration).
2. Use the Java `keytool` utility that is available with the JRE to import the certificate. Use the JRE installed with Multimedia Third Party Components. The utility can be found in `<Multimedia_Install_Dir>/jre/bin` for Unix operating systems, and in `<Multimedia_Install_Dir>\jre\bin` for Windows operating systems.

   For example:

   ```
   keytool -import -file certificate.cer
   ```
3. A `.keystore` file is generated. On Windows, the default path to find this file is `C:/Documents and settings/<username>/.KeyStore`

End of procedure

Next Steps

- Modifying the E-mail Server Java startup command line

Procedure: Modifying the E-mail Server Java startup command line

Purpose: To provide E-mail Server Java with the location of the `.keystore` file on startup.

Prerequisites

- Generating the .keystore file

Start of procedure

1. Locate the E-mail Server Java startup file (`startServer.bat` and `setini.bat` on Windows operating systems, or `startServer.sh` on Unix operating systems).
2. Open the file in a text editor and modify the startup command line so E-mail Server Java can locate the .keystore file. For example:

   ```
   java -Djavax.net.ssl.trustStore="C:/Documents and
   settings/<username>/.KeyStore" --Xmx512M ....
   ```
3. Save and close the file.

End of procedure

Next Steps

- Configuring E-mail Server Java's POP, IMAP, and SMTP ports

Procedure: Configuring E-mail Server Java's POP, IMAP, and SMTP ports

Purpose: The ports must be configured in order for the e-mail system to work in secured mode.

Prerequisites

- Generating the .keystore file
- Modifying the E-mail Server Java startup command line

Start of procedure

1. In Configuration Manager, open the properties for your E-mail Server Java application.
2. In the `Options` tab, locate the `[pop-client]` section for IMAP and configure the `type`, `port`, and `enable-ssl` options. For example:

   ```
   [pop-client1]
   type = IMAP
   ```

   `port = 993` (the default SSL port for IMAP)

   `enable-ssl = TRUE`
3. Locate the `[pop-client]` section for POP3 and configure the `type`, `port`, and `enable-ssl` options. For example:

   ```
   [pop-client2]
   type = POP3
   ```

   `port = 995` (the default SSL port for POP3)

   `enable-ssl = TRUE`
4. Locate the [smtp-client] section and configure the `port` and `enable-ssl` options. For example:

   `port = 465` (the default SSL port for SMTP)

   `enable-ssl = TRUE`
5. Save your changes.

End of procedure

Next Steps

- Configuring the mailer to work in secured mode

Configuring the Mailer

This section describes the procedures to configure the mailer, such as Outlook Express, to work in secured mode with SSL. This section contains the following procedure:

- Configuring the mailer to work in secured mode

Procedure: Configuring the mailer to work in secured mode

Prerequisites

- A mailer (Outlook is used in this example) must be installed on `Host4`.

Start of procedure

1. On the Certificate Authority website (`http://Host1/Certsrv`), select `Retrieve the CA certificate revocation list` and `Install this CA certification Path`.
2. Select `Request a certificate > User Certificate Request (E-Mail Protection Certificate)`. The following is a sample configuration):

   Name: `client1` (this field must be set to the name of your Outlook account)

   E-Mail: `client1@mail.com`

   City: `City`

   State: `State`

   Country: `Country`

   Submit the request.
3. Launch `Programs > Administrative Tools > Certification Authority`.
   a. Select and issue the last certificate in the `Pending Requests` folder.
   b. Locate the certificate in the `Issued Certificates` folder, open it and copy it to a new file `client1.cer`.
   c. Copy `client1.cer` to `\\Host4\temp` (Outlook is located on `Host4`).
4. On `Host4`, open the certificate named `client1.cer` located in `c:\temp\` and install it.
5. Open Outlook and choose `Tools > Accounts > Mail`, and select the `client1` account.
   a. In `Security`, select the certificate in `Signing certificate` and `Encrypting preferences`.
   b. In `Advanced`, validate SSL and provide the correct port numbers.

6. In Tools > Options, select the Security tab.
   a. Select Digitally sign all outgoing messages.
   b. Click on Advanced and select Always encrypt to myself when sending encrypted mail, Include my digital ID when sending signed messages and Add senders' certificates to my address book.

End of procedure

Chapter

7 Deploying Multimedia in UNIX Environments

This chapter describes procedures for configuring and installing Multimedia components in UNIX environments—Solaris, AIX, and Linux—as well as for configuring the Web API components in a WebSphere or WebLogic environment.

This chapter has these sections:

Note: You can deploy all Multimedia 7.6.1 components on UNIX platforms, except for the following user interfaces:

- Knowledge Manager
- Universal Contact Server Manager
- Interaction Workflow Samples

Deploying Multimedia on UNIX Hosts

Configuring and installing Multimedia 7.6.1 on Solaris, AIX, or Linux follows the general procedure introduced in Chapter 5, beginning on page 91. You can use the Multimedia 7.6.1 Configuration Wizards on a Windows host to configure components that will run in UNIX environments. For the installation phase, however, you should proceed in a slightly different fashion than you would for a Windows-only environment. The main difference is that after configuration, you will need to manually copy the individual component installation packages to each UNIX host, as initially suggested in “Installing Multimedia Components” on page 129. Also consider the guidelines under

"Copying Installations to Remote Computers" in Chapter 8, "Deploying with Configuration Wizard Framework," of the *Framework 7.6 Deployment Guide*.

After you copy the software to the UNIX hosts, do one of the following:

- Run the setup for individual components manually.
- Use the Multimedia CD on each host to run the setup for the components directly from that CD.

Note: For all platforms, before you install individual components, but with two exceptions, you must first install the Third Party Components provided for you. On Windows, if you use `IPStarter.exe`, it takes care of this automatically. On Solaris , AIX, or Linux, however, you must manually run the Third Party Components setup on each host before you run the setup for the other Multimedia components for that host.

Interaction Server and Chat Server are exceptions to this guideline. On Windows for Chat Server, and on all platforms for Interaction Server, you can install without first installing Third Party Components.

For an explanation of the difference between Third Party Components (executable) and ThirdPartyApplications (directory), see the note on page 55.

Procedure: Deploying Multimedia on Solaris, AIX, or Linux from a Windows host

Purpose: To suggest how you might use the Multimedia Configuration Wizards on a Windows host to configure and install components to other hosts for Solaris, AIX, or Linux deployments.

Start of procedure

1. On each Solaris, AIX, or Linux host, define the variable `GES_HOME_761` to target the directory containing Multimedia components.

Warning! Do not include any spaces in the `GES_HOME_761` name (for example, use `MCR761` instead of `MCR 7.6.1`).

---

2. When you run the Multimedia Configuration Wizard, it will ask you to specify the destination for copying installation packages. Do one of the following:
   - Create a shared directory on your Solaris, AIX, or Linux computer for the installation package deployment, making sure that it is accessible from the Windows host.

- Create a shared directory on a Windows host (as recommended in "Create a Shared Directory" on page 94 for the Windows installation), making sure that it is accessible from the Solaris, Linux, or AIX host(s) that will run your Multimedia components.

In either case you must copy all installation packages to the Solaris, Linux, or AIX computer(s) that will host your Multimedia solution.

3. On a Windows machine, run the Multimedia Wizards as described in Chapter 5, beginning on page 91.

   The Wizards copy the installation packages using a directory structure such as the following:

```
<componentA>
        IBM_AIX
        Linux
        Solaris
        Windows_2000
        Windows_Server_2003
<componentB>
        IBM_AIX
        Solaris
        Windows_2000
        Windows_Server_2003
...
aix
        ThirdPartyComponents
linux
        ThirdPartyComponents
solaris
        ThirdPartyComponents
windows
        CommonWizardComponentSet
        ThirdPartyComponents
```

4. After completing configuration using the Wizards, begin installation by running the installation package in `<platform>\ThirdPartyComponents` on each host where you plan to install components.
5. Continue installation by running the installation package for each remaining Multimedia component. You will find that package in the `<platform>` subdirectory contained in the directory named for each component.

End of procedure

Next Steps

- For Solaris deployments, you need to install and configure one of the following web application servers:
  - Deploying WebLogic on Solaris, page 169

  - Deploying WebSphere on AIX or Solaris, page 156
  - Configuring Apache and Tomcat for Linux or Solaris, page 72
- For AIX deployments, you need to deploy the following web application server:

  Deploying WebSphere on AIX or Solaris, page 156
- For Linux deployments, you need to install and configure the following:
  - Configuring Apache and Tomcat for Linux or Solaris, page 72

Deploying WebSphere on AIX or Solaris

In Multimedia 7.6.1, you can use the IBM WebSphere Application Server in both AIX and Solaris deployments. After configuring and installing Multimedia as outlined in Chapter 5 on page 91, and in "Deploying Multimedia on UNIX Hosts" on page 153, you need to enable your WebSphere deployment to use the Web API Server and the MCR 7.6.1 Samples.

For AIX deployments, WebSphere is the only supported web server. For Solaris, however, you can use WebSphere, Apache/Tomcat, or WebLogic in your deployment. For WebSphere deployment procedures, see:

- Deploying WebSphere on AIX, page 157
- Deploying WebSphere on Solaris, page 160
- Testing the WebSphere installation on AIX or Solaris, page 169

Note: For information about deploying Solaris with Apache or WebLogic, see the following sections:

- "Configuring Apache and Tomcat for Linux or Solaris" on page 72
- "Deploying WebLogic on Solaris" on page 169

Prerequisites

This section assumes that you have your WebSphere environment ready to go, and that you have completed the model setup. The steps outlined in this section use values you entered for that model installation.

Checklist of Genesys Components for Your AIX or Solaris Host

Your Multimedia installation of the Web API Server created an EAR project, `MCR_API_EAR.ear`, with three parts: Third Party Components, Web API, and Compound Samples.

Note: For an explanation of the difference between Third Party Components (executable) and ThirdPartyApplications (directory), see the note on page 55.

Environment

This document refers to the root directory for IBM WebSphere as <WEBSPHERE_HOME>. The root directory for the IBM HTTP Server, an Apache-based Web Server, is <IHS_HOME>. <MCR_API_EAR> represents the base directory of your MCR_API_EAR.ear file location. A sample directory structure in this case might be:
<WEBSPHERE_HOME>/AppServer/installedApps/DefaultNode/MCR_API_EAR.ear.

Note: For instructions on how to configure and install Genesys Web API Server and the Compound Web Samples, see the Web API Server sections of the following procedures:

- Configuring Multimedia objects using the wizard, page 98
- Performing an integrated installation of all Multimedia servers, page 131

Procedure: Deploying WebSphere on AIX

Note: Although WebSphere 5.x is supported, the following procedures apply to WebSphere 6.0.

Start of procedure

1. Launch your WebSphere 6.0 Application Server.
2. Start the Administrative Console.
3. In the left frame, click Applications > Enterprise Applications.
4. In the right frame, select the Default Application and click Stop. (You must do this because the WebSphere default application shares the same context root as the one you created in your EAR project.)
5. In the left frame, click Applications > Install New Application.
6. In the right frame, for Local path, browse to or enter the full path to your EAR project. Click Next.
7. Retain defaults and click Next.
8. Retain defaults and click Next.

9. Under `Map modules to servers`, select your web and application servers from the `Clusters and Servers` list.
10. Check each `Module` corresponding to your web projects. Click `Apply`. Click `Next`. See Figure 36.

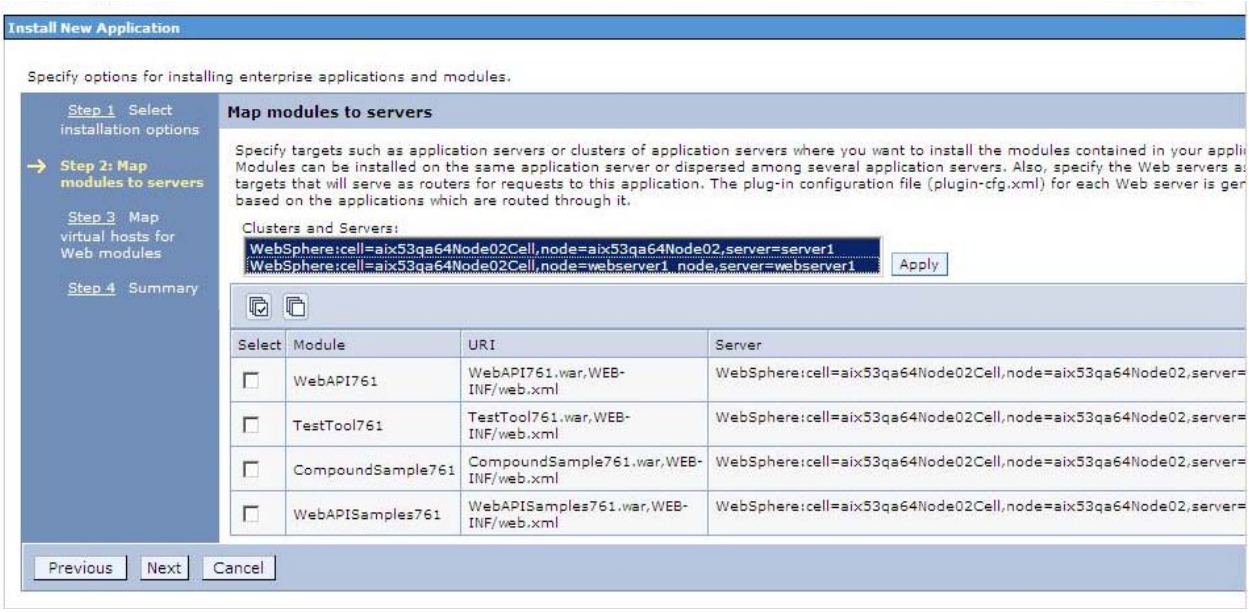


Figure 36: Map Modules to Application Servers

11. Click `Next`.
12. Review the summary and click `Finish`.
13. Click the `Save to Master Configuration` link.
14. Click `Save`.
15. In the left frame, click `Servers > Web Servers`.
16. In the right frame, select your web server. Click `Generate Plug-in`.
17. You must also update the web server configuration file to accommodate the specifics of your deployment.
    a. Locate the `<IHS_HOME>/conf/httpd.conf` file.
    b. Add the following text (one for each web project, with your environment's specifics), indicating a virtual root, to the end of `httpd.conf`:

```
Alias /CodeBase761 "<MCR_API_EAR>/CodeBase761"
Alias /CoBrowse761 "<MCR_API_EAR>/CoBrowse761"
Alias /CompoundSample761 "<MCR_API_EAR>/CompoundSample761.war"
Alias /WebAPISamples761 "<MCR_API_EAR>/WebAPISamples761.war"
Alias /TestTool761 "<MCR_API_EAR>/TestTool761.war"
```

    Also see, for example, Figure 37 on page 159.

```
#
#CoreDumpDirectory "/.1/WS6.02/IBMIHS/corefiles"

LoadModule was_ap20_module /.1/WS6.02/IBMIHS/Plugins/bin/mod_was_ap20_http.so
WebSpherePluginConfig /.1/WS6.02/AppServer/profiles/default/config/cells/aix53qa64Node02Cell/nodes/webserver1_node/servers/webserver1/plugin

Alias /CodeBase761 "/data/WS6.02/AppServer/profiles/default/installedApps/aix53qa64Node02Cell/MCR_API_EAR.ear/CodeBase761"
Alias /AgentCoBrowse761 "/data/WS6.02/AppServer/profiles/default/installedApps/aix53qa64Node02Cell/MCR_API_EAR.ear/AgentCoBrowse761"
Alias /CompoundSample761 "/data/WS6.02/AppServer/profiles/default/installedApps/aix53qa64Node02Cell/MCR_API_EAR.ear/CompoundSample761.war"
Alias /WebAPISamples761"/data/WS6.02/AppServer/profiles/default/installedApps/aix53qa64Node02Cell/MCR_API_EAR.ear/WebAPISamples761.war"
Alias /TestTool761 "/data/WS6.02/AppServer/profiles/default/installedApps/aix53qa64Node02Cell/MCR_API_EAR.ear/TestTool761.war"

Alias /gdesktop "/data/WS6.02/AppServer/profiles/default/installedApps/aix53qa64Node02Cell/gdesktop_war.ear/gdesktop.war"
```

Figure 37: Sample Text Required in httpd.conf File

c. Save the `httpd.conf` file.

d. Restart the IHS Web Server.

18. In the Genesys Configuration Layer, make the following change to your Web API Server `Application` object:

In its `Log` section, update the `messagefile` option with the full path to your log and message files for the web project, for example:

`<MCR_API_EAR>/WebAPI761.war/webapimsg.lms`.

19. Back in WebSphere, in the left frame, go to `Applications > Enterprise Applications`. In the right frame, stop all non-Genesys web applications.

20. Now select your EAR in the right frame and click `Start`. The status of the application should be a green right-pointing arrow, as shown in Figure 38.

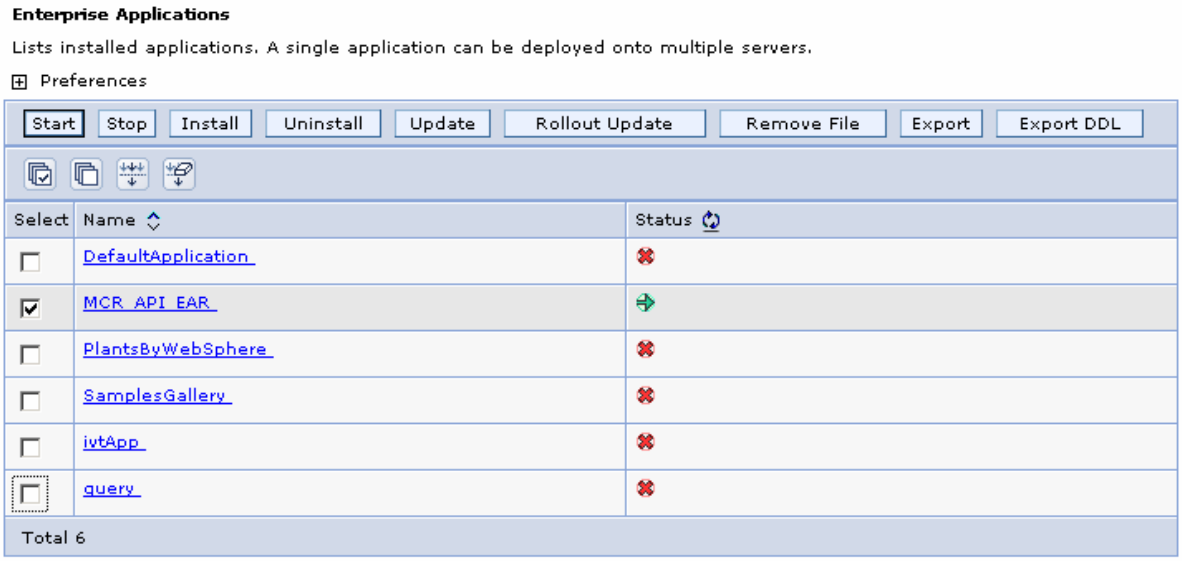


Figure 38: Start Your EAR Application

End of procedure

Next Steps

- Testing the WebSphere installation on AIX or Solaris, page 169

Procedure: Deploying WebSphere on Solaris

The following procedures and sample screens apply to WebSphere version 5.1.1.10. For other versions of WebSphere, variations may occur.

Start of procedure

1. Launch your WebSphere Application Server.
2. Login to the Administrative Console (typically using the address `http://<yourhost>:9090/admin`) and proceed to the main page (see Figure 39).

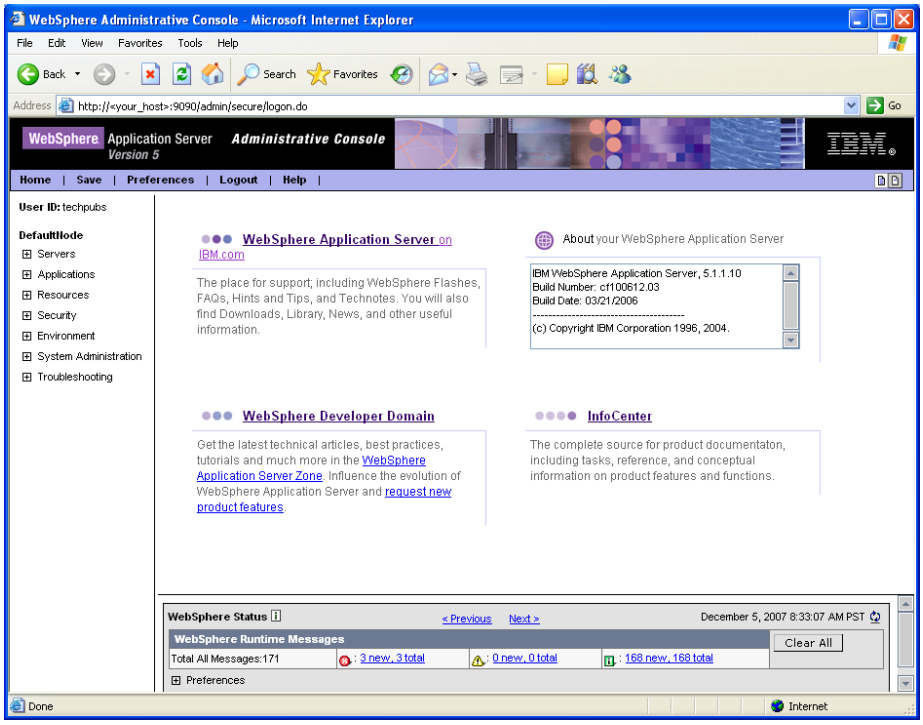


Figure 39: Administration Console—Main Page

3. In the left frame of the main page, click `Applications > Enterprise Applications` (see Figure 40).

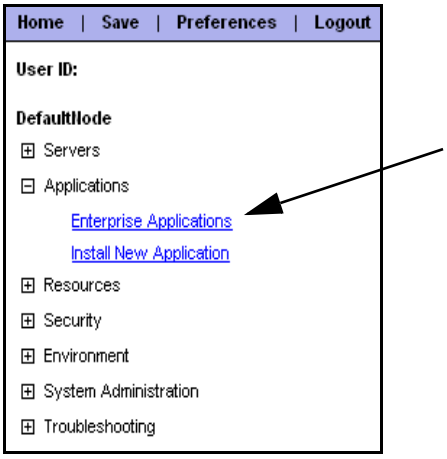


Figure 40: Click Enterprise Applications

4. After the `Enterprise Application` page opens, in the right frame, select `Default Application`, and then click `Stop` (see Figure 41).

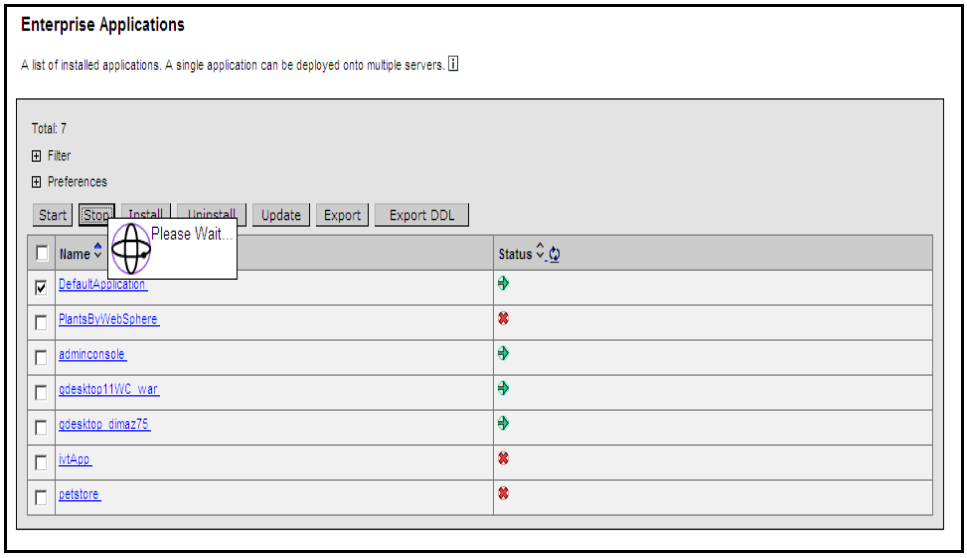


Figure 41: Stop the Default Application

Tip: You must click `Stop`, because the WebSphere default application shares the same context root as the one you created in your `EAR` project.

5. After the page refreshes, in the left frame, click `Applications > Install New Application` (see Figure 42).

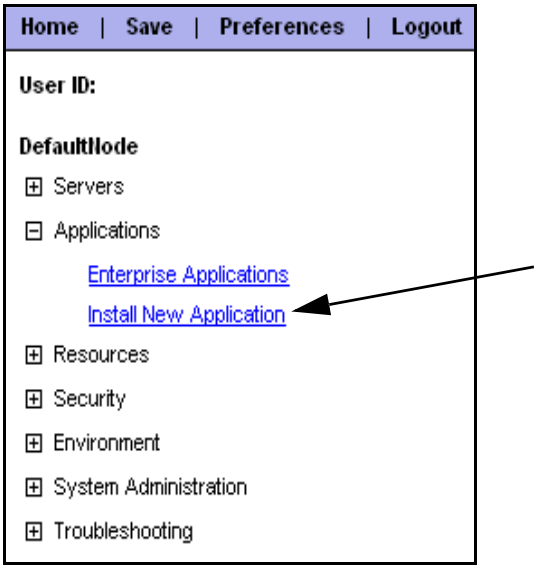


Figure 42: Click Install New Application

6. After the `Install New Application` page opens, in the right frame, enter the full path to the `MCR_API_EAR.ear` file that was prepared when you ran the installation package script (see Figure 43). Click `Next`.

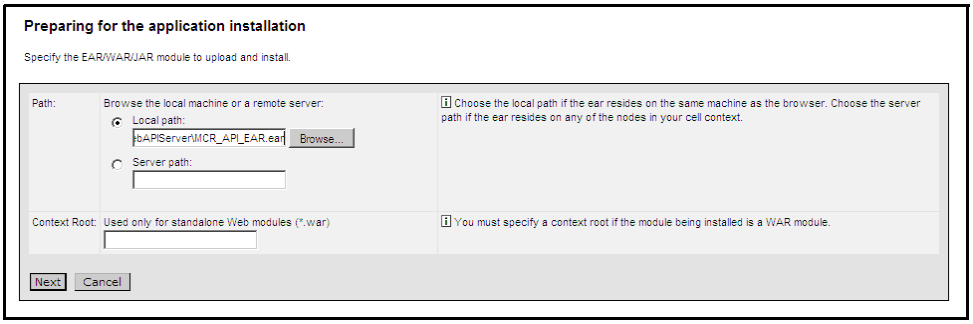


Figure 43: Enter the Path to the MCR API EAR File

Tip: If you experience difficulties, check access permissions for your UNIX user account as it applies to the `.ear` file.

7. Retain the `Override` and `Virtual Host` defaults, (see Figure 44) and click `Next`.

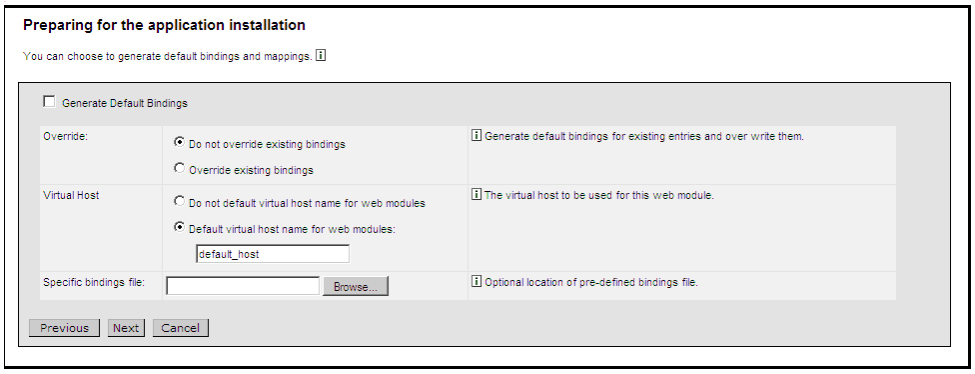


Figure 44: Retain Defaults

8. At the `Step 1` page (see Figure 45), retain all defaults, or change the `Application Name` value (retaining defaults for the remaining fields), and then click `Next`.

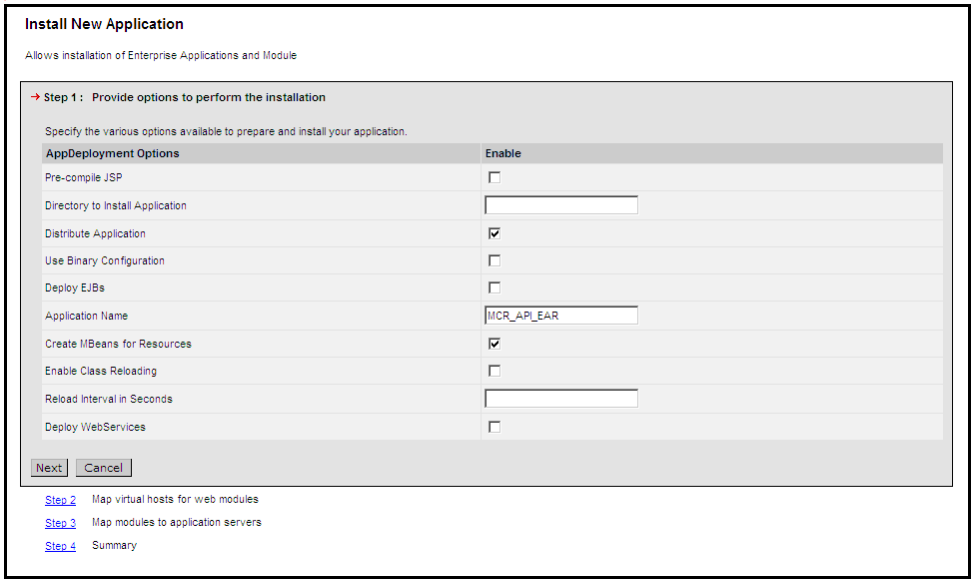


Figure 45: Change Application Name

9. At the `Step 2` page (see Figure 46), select all the checkboxes and click `Next`.

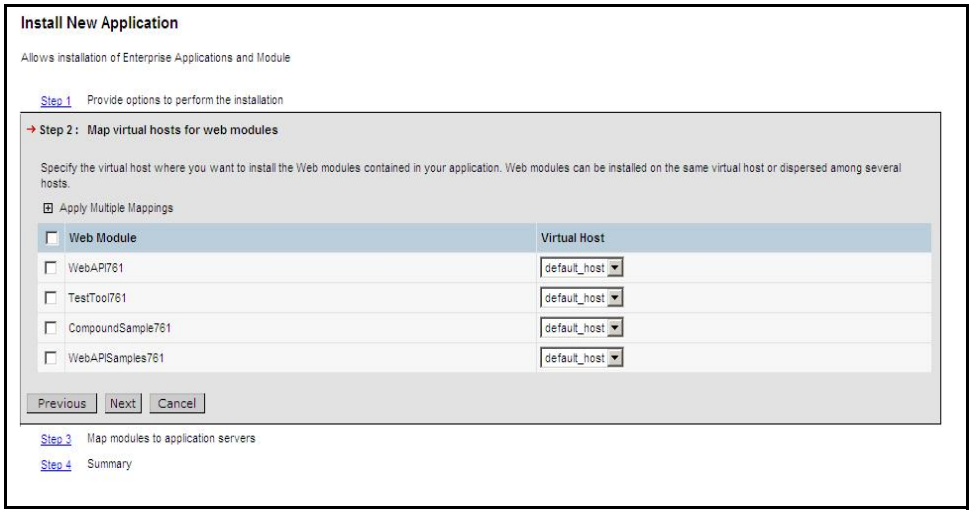


Figure 46: Select All Checkboxes

10. At the `Step 3` page (seeFigure 47) , select your web and application servers from the `Clusters and Servers` drop-down list, and then click `Apply`.

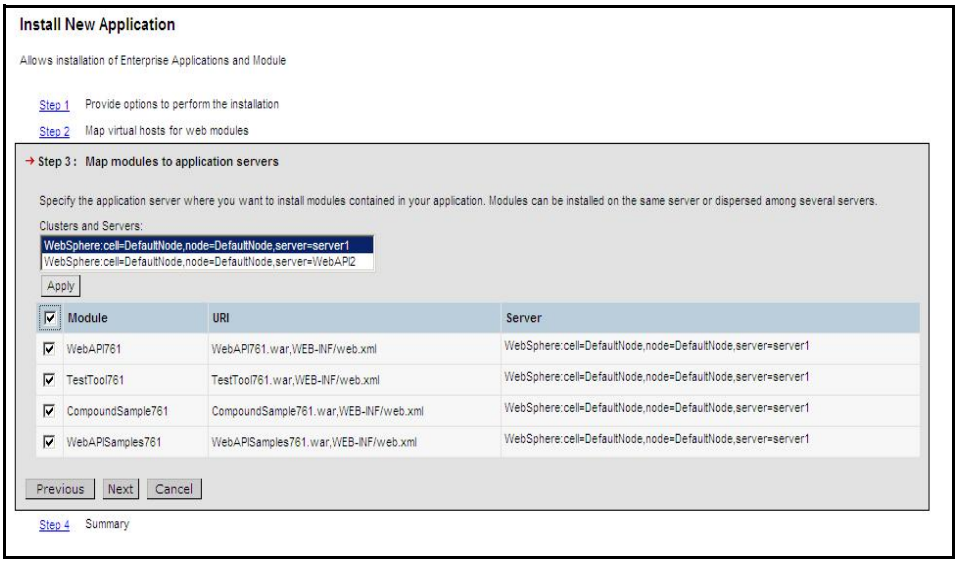


Figure 47: Select Your Web and Application Servers

11. From the list of modules, select all the checkboxes and click `Next`.

12. At the `Step 4` page (see Figure 48), review the summary of the your install options. If it is correct, click `Finish`. Otherwise, click `Previous` to return to an earlier page and make any necessary changes.

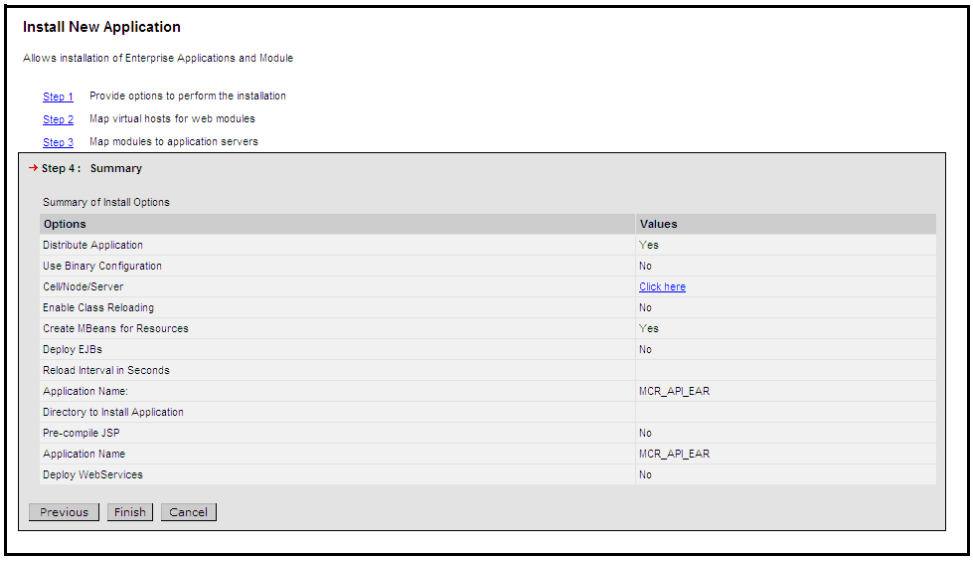


Figure 48: Review the Summary

After a few moments, you will receive a message notifying you that the installation was successful (see Figure 49).

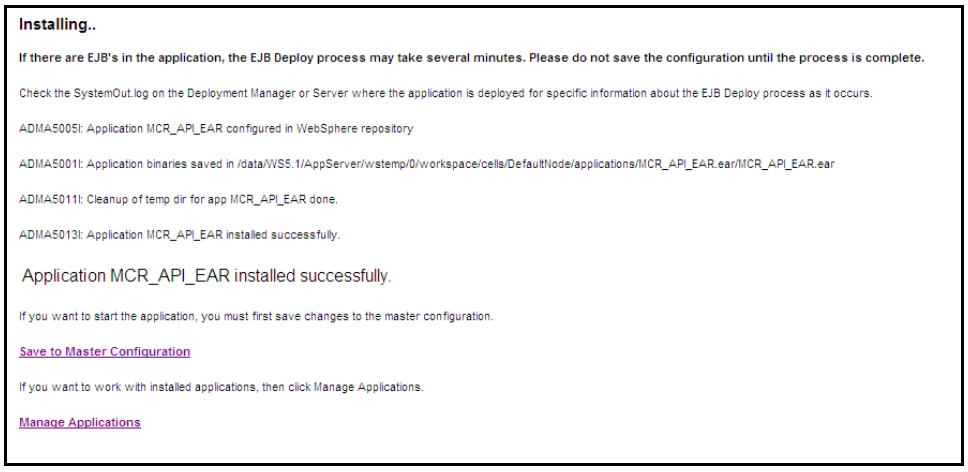


Figure 49: Notice of Successful Installation

13. Click the `Save to Master Configuration` link in the middle of the right frame.

14. At the confirmation page (see Figure 50), click `Save`.

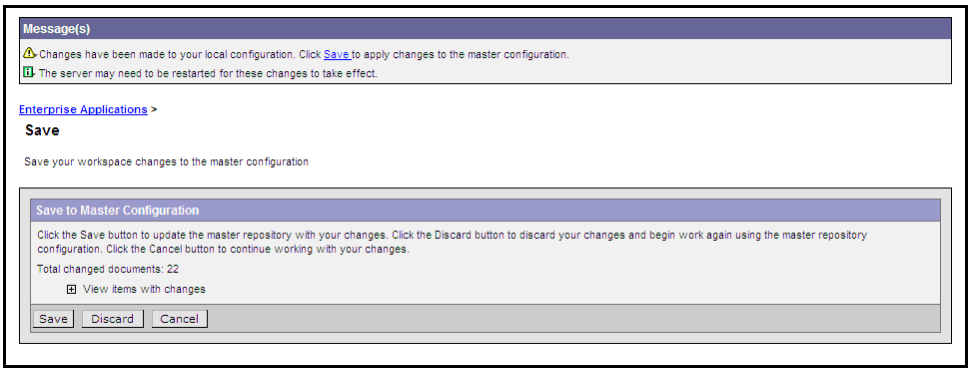


Figure 50: Confirmation Page

After the save is complete, the main WebSphere `Admin` page opens.

15. If you are using the IBM HTTP Server to provide frontline access to WebSphere, you must also do the following:

a. In the navigation tree in the left frame, click `Environment > Update Web Server Plugin` (see Figure 51).

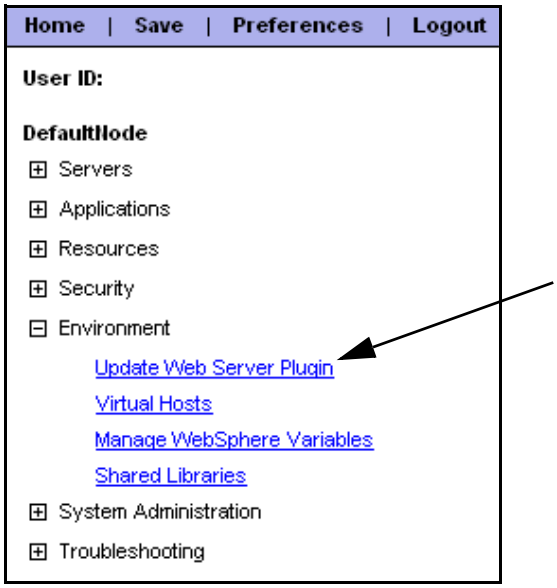


Figure 51: Click Update Web Server Plugin

b. At the `Update web server plugin configuration` confirmation page (as shown in Figure 52), click `OK`.

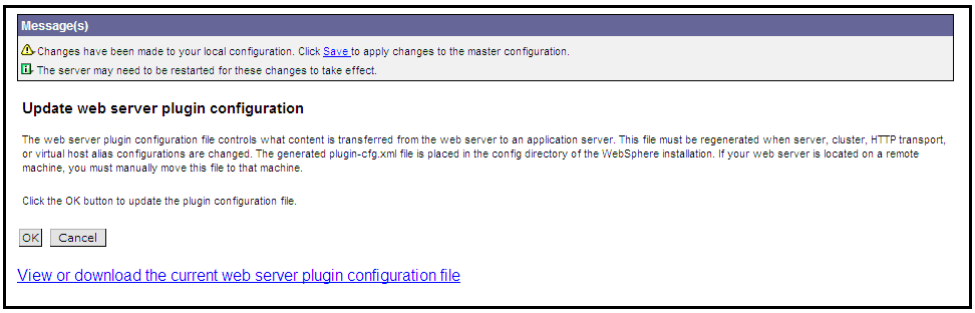


Figure 52: Update Web Server Plugin Confirmation Page

c. Update the web server configuration file to accommodate the specifics of your deployment. To do this, locate the `<IHS_HOME>/conf/httpd.conf` file and add following text (one for each web project, with your environment's specifics), indicating a virtual root, to the end of it:

```
Alias /CodeBase761 "<MCR_API_EAR>/CodeBase761"
Alias /AgentCoBrowse761 "<MCR_API_EAR>/AgentCoBrowse761"
Alias /CompoundSample761 "<MCR_API_EAR>/CompoundSample761.war"
Alias /WebAPISamples761 "<MCR_API_EAR>/WebAPISamples761.war"
Alias /TestTool761 "<MCR_API_EAR>/TestTool761.war"
```

For an example of an amended `http.conf` file, see Figure 53:

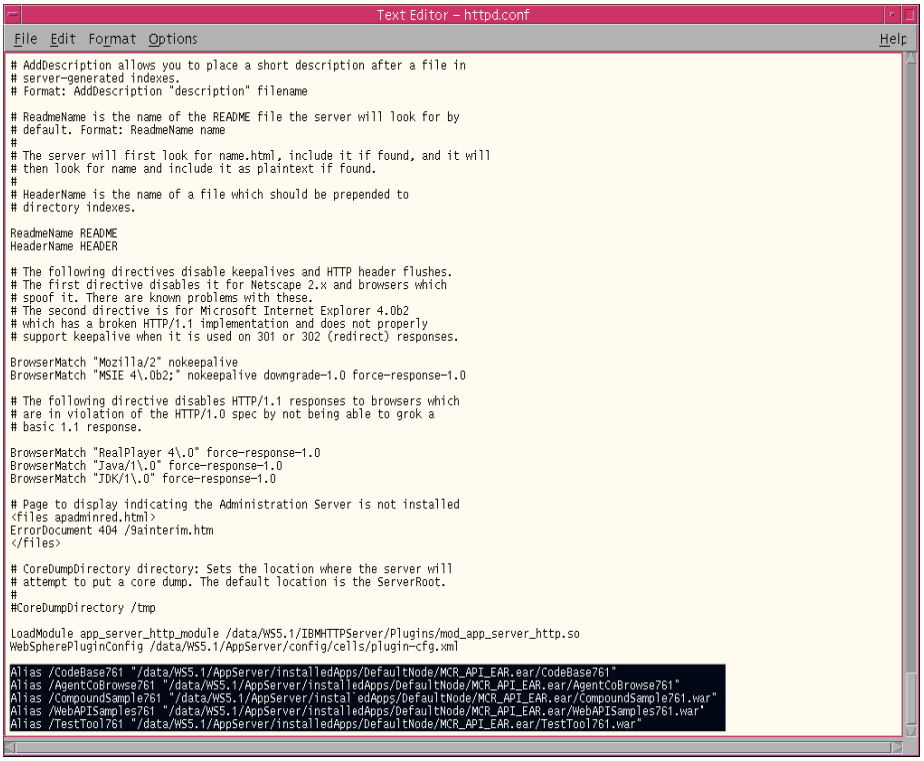


Figure 53: Sample http.conf File

d. Save the `http.conf` file.

e. Restart the IHS Web Server.

16. In the Genesys Configuration Layer, make the following change to your Web API Server `Application` object:

- In its `Log` section, update the `messagefile` option with the full path to your log and message files for the web project, for example:

  `<MCR_API_EAR>/WebAPI761.war/webapimsg.lms`.

17. Back in WebSphere, in the left frame, go to `Applications > Enterprise Applications`.

18. At the `Enterprise Applications` page, in the right frame, select your Web API Server EAR application and click `Start`.

The status arrow next to your EAR application should change to green as shown in Figure 54.

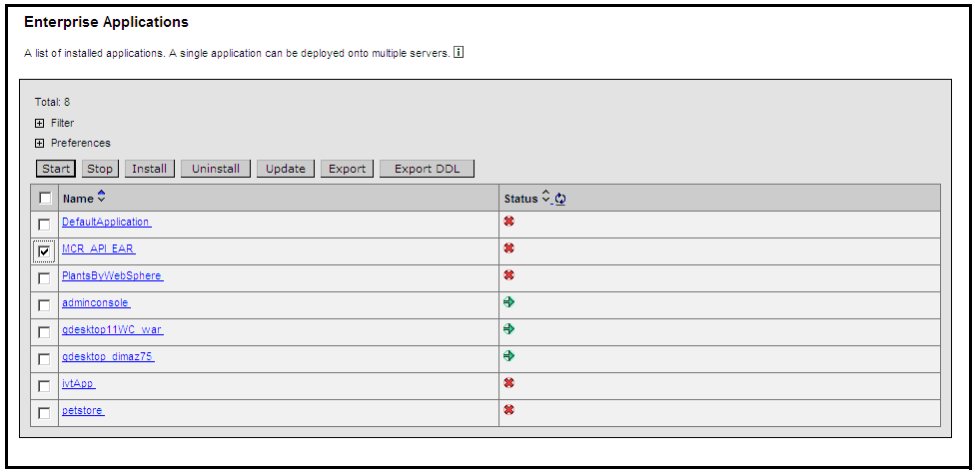


Figure 54: Start Your EAR Application

End of procedure

Next Steps

- Testing the WebSphere installation on AIX or Solaris, page 169

Procedure:
Testing the WebSphere installation on AIX or Solaris

Purpose: Use the Genesys MCR 7.6.1 Samples Pages to test the your IBM WebSphere deployment.

Start of procedure

1. Launch the IBM HTTP Server.
2. Enter the following address in your browser:

   `http://<yourhost>/WebAPISamples761/`

   The main MCR 7.6.1 Samples page opens. If you can access and work with those sites, you successfully performed the installation.

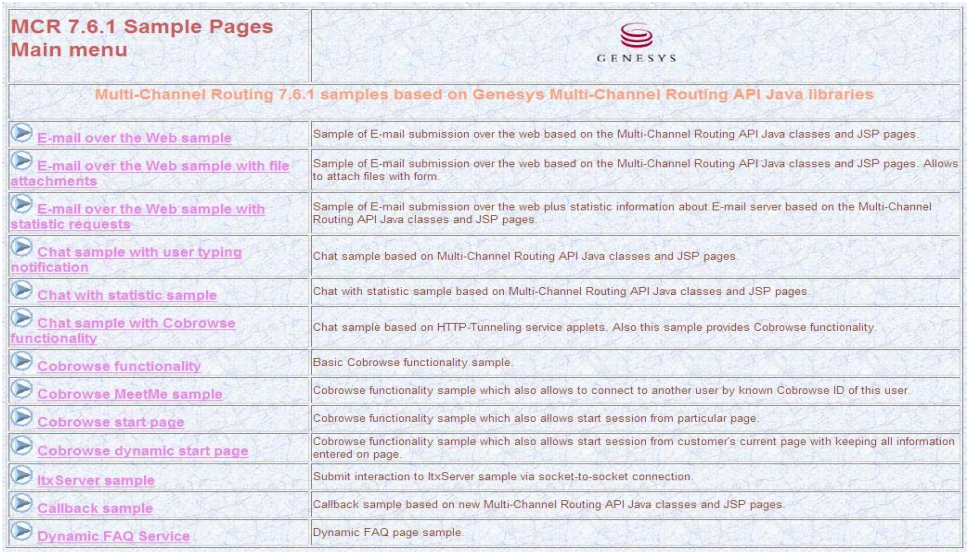


Figure 55: MCR 7.6.1 Web API Samples

End of procedure

Next Steps

- You have completed all the actions required to deploy WebSphere on AIX or Solaris

Deploying WebLogic on Solaris

For deployment on Solaris, after configuring and installing Multimedia as outlined in Chapter 5, beginning on page 91, and “Deploying Multimedia on UNIX Hosts” on page 153, you need to enable a web application to use Web API Server and the Web Samples. You can deploy any of the following web applications on Solaris hosts:

- BEA WebLogic Server—See this section for deployment details.
- IBM WebSphere Application Server—See "Deploying WebSphere on AIX or Solaris" on page 156 for details.
- Apache HTTP Server and Apache Tomcat Application Container—See "Configuring Apache and Tomcat for Linux or Solaris" on page 72 for details.

Prerequisites

This section assumes that you have your WebLogic environment installed and ready, and that you have completed the model setup. The steps outlined in this section use values you entered for that model installation.

Checklist of Genesys Components for Your Solaris Host

Your Multimedia installation of the Web API Server created an EAR project, `MCR_API_EAR.ear`, with the following components:

- `WebAPI761.war`—Web API
- `TestTool761.war`—Test tool
- `CompoundSample761.war`—Compound Samples
- `WebAPISamples761.war`—Web API Samples

Procedure: Deploying Genesys web applications for WebLogic

Start of procedure

1. Run the `install.sh` script.
2. Enter the host name where you will install the Web API Server.
3. If you have not specified configuration information using a Wizard, you are prompted to enter the following information:
   - Configuration Server Hostname
   - Network Port
   - User Name
   - Password
   - Backup Configuration Server Hostname
   - Backup Network Port
4. Specify which application to install.
5. Choose the web server type, and then enter the web server root directory.
6. Enter the WebLogic domain directory that you are using.

7. Select the `code page·character set` pair for processing requests from computers with different locale settings.
8. Choose the `CompoundSample` application to install.
9. Enter the fully qualified host name where Co-Browsing Server is installed.
10. Enter the Configuration Server tenant name.
11. Press Enter to confirm the destination directory, and to begin the installation.

    The installer will extract the necessary files to the locations you specified, and will update the following files:

    - `<Apache root>/conf/httpd.conf`.
    - All related `*.jsp` files.
    - `startWebLogic.sh`.

End of procedure

Next Steps

- Checking your WebLogic configuration file, page 171

Procedure: Checking your WebLogic configuration file

WebLogic automatically generates a `config.xml` configuration file during the first run of the domain created in DEVELOPMENT mode. This configuration file specifies which Web API applications WebLogic starts.

To confirm that your Multimedia web application will run correctly, complete the following steps:

Start of procedure

1. Locate and open your WebLogic `config.xml` file.
2. Search for the following lines inside your configuration file:

```
<Application Name="_appsdir_MCR_API_EAR_ear"
     Path="/data/bea/user_projects/domains/webapisrv/applications/MCR_API_EAR.ear"
     StagingMode="nostage" TwoPhase="true">
   <WebAppComponent Name="WebAPI761" Targets="myserver" URI="WebAPI761.war"/>
   <WebAppComponent Name="TestTool761" Targets="myserver" URI="TestTool761.war"/>
   <WebAppComponent Name="CompoundSample761" Targets="myserver"
     URI="CompoundSample761.war"/>
   <WebAppComponent Name="WebAPISamples761" Targets="myserver"
     URI="WebAPISamples761.war"/>
</Application>
```

Warning! If the Multimedia web application is not present in your `config.xml` file, then remove the `.app_poller_lastrun` file located in the `<WebLogic_Domain>/<MCR_SERVER>` folder and restart your WebLogic server. WebLogic will regenerate the `config.xml` file and add the MCR application automatically.

End of procedure

Next Steps

- Deploying your web applications, page 172

Procedure: Deploying your web applications

Genesys web applications for WebLogic are deployed automatically during the installation process. However, if you choose to create a custom package based on the Web API Server, then you will have to use WebLogic to manually deploy the related web applications.

Start of procedure

1. Start your Admin and Managed servers, if they are not already running.
2. Open your web browser and start the Administrative console.
3. Log in using your username and password.
4. Open the `Deployments` section for your domain, and select `Applications` as shown in Figure 56.

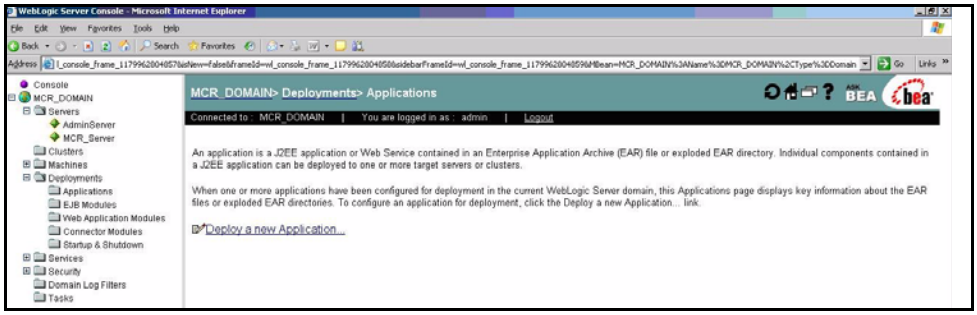


Figure 56: Deploy a Web Application in WebLogic

Note: For this procedure, the only Managed server shown in WebLogic Server Console screenshots is called MCR_Server.

5. Click `Deploy a new Application`.

6. Specify the full path to your `MCR_API_EAR.ear` application archive, and then click “Target Application” button. See Figure 57.

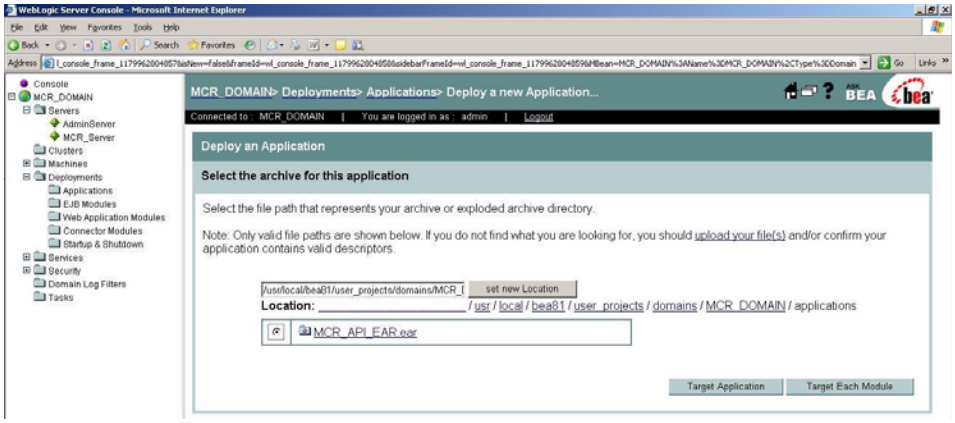


Figure 57: Select a Target Application

7. Select your Managed Servers, and click Continue. See Figure 58.

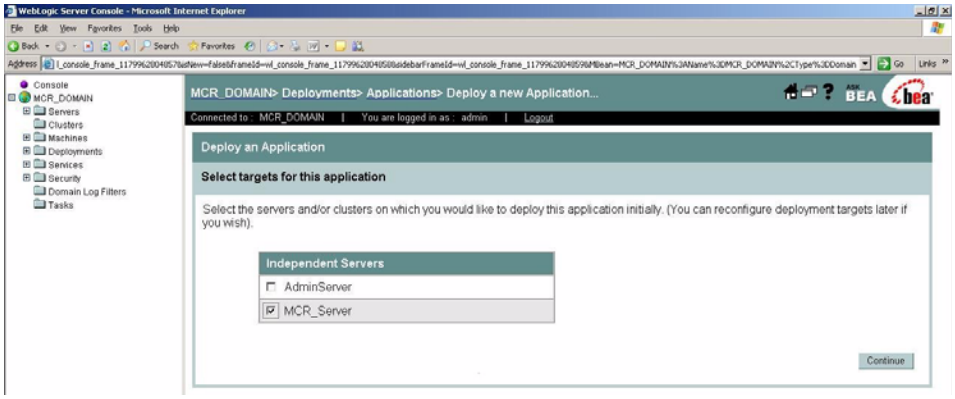


Figure 58: Select the Managed Servers

8. At the `Review your choices and deploy` page, confirm that the Deployment Targets setting is correct and then click `Deploy`. See Figure 59 on page 174.

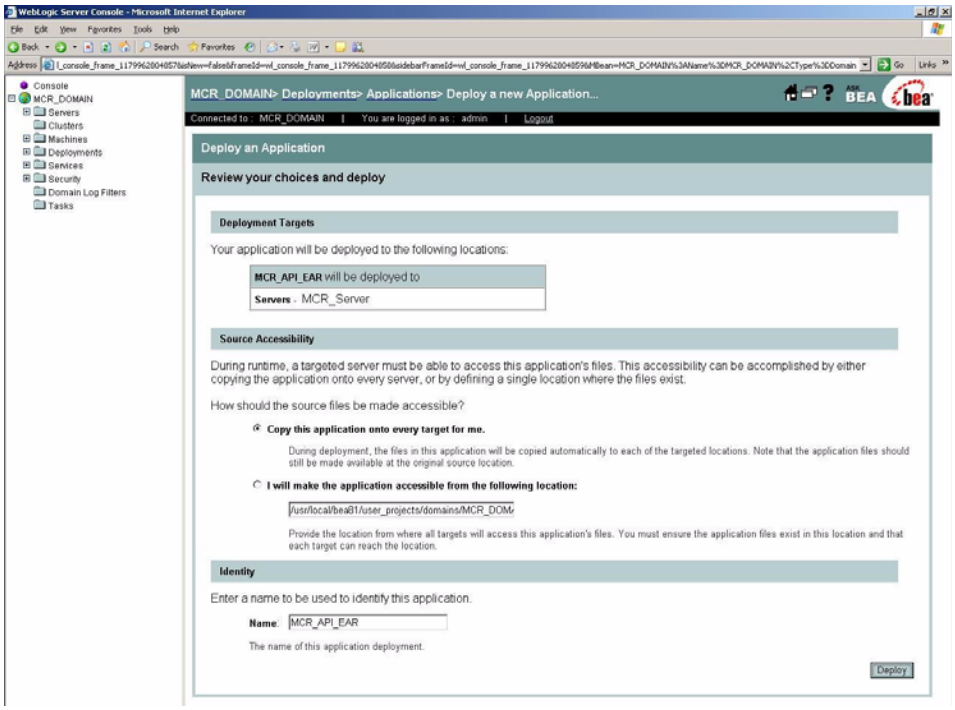


Figure 59: Confirm Application Details

9. The deployment is now complete.

Check your summary page to ensure that each module in the web application has a deployment status of “Available”, as shown in Figure 60.

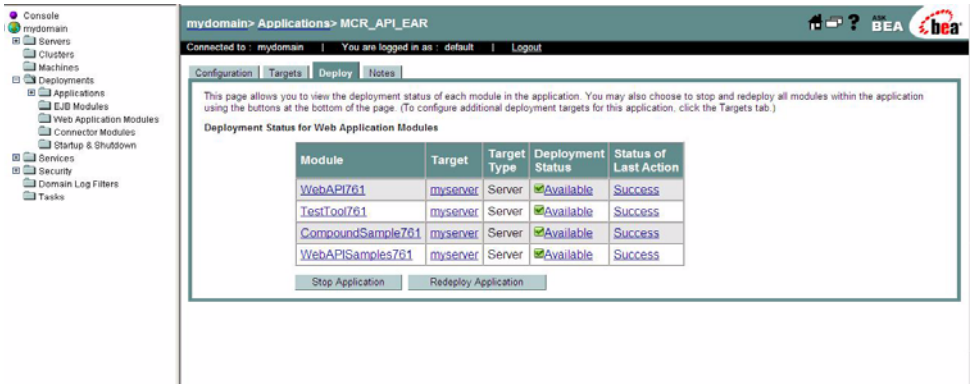


Figure 60: Application Summary Page

End of procedure

Next Steps

- Testing the WebLogic installation and deployment, page 175

Procedure:
Testing the WebLogic installation and deployment

Start of procedure

1. Ensure Apache is running.
2. Start WebLogic.
3. In a browser, enter the following addresses:
   - http://<Apache host>:<Apache listen port>/TestTool761
   - http://<Apache host>:<Apache listen port>/WebAPISamples761
   - http://<Apache host>:<Apache listen port>/CompoundSample761

   If you can access and work with those sites, you have successfully completed the installation and deployment.

   Note: The addresses listed above are case sensitive.

End of procedure

Next Steps

- You have completed all the actions required to deploy WebLogic on Solaris.

Chapter

8 Manual Deployment—Web Components and UCS

This chapter describes the manual deployment of Web API Server and Web Compound Samples, together called the Multimedia Web Components, and Universal Contact Server (UCS) and UCS Manager.

The information in this chapter is divided among the following topics:

Introduction

It is possible that you may want to use Web API Server, Web Compound Samples (together called the Multimedia Web Components) or UCS and UCS Manager without deploying the other Multimedia components. For example, Genesys Voice Callback requires these three components. In such a situation you may want to install these components on their own without using the Multimedia Configuration Wizard or the Multimedia integrated installation. This chapter describes procedures for such manual configuration and installation.

Requirements

These components require certain other components to operate:

- The Multimedia Web Components require a web server and an application container. See Chapter 4 for a description of installing these objects.
- Web API Server, UCS, and UCS Manager require Multimedia Third Party Components installed on the host. Step 1 of Installing Multimedia Web Components and UCS, page 180 describes configuration and installation of this component.

Note: For an explanation of the difference between Third Party Components (executable) and ThirdPartyApplications (directory), see the note on page 55.

Configuring Multimedia Web Components and UCS

In the Configuration Layer, create or edit the following `Application` objects:

1. Creating or editing the Web API Server application object, page 178
2. Creating or editing the UCS application object, page 179
3. Creating or editing the UCS Manager application object, page 180

Procedure:
Creating or editing the Web API Server application object

Start of procedure

1. Create an `Application` object if it does not already exist.
2. Open the `Properties` dialog box of the `Application` object.
3. On the `Host` tab:
   - In the `Host` box, enter the name of the desired host.
   - In the `Communication Port` box, enter the number of the web server HTTP port.
4. On the `Connections` tab, add connections to:
   - Solution Control Server (mandatory)
   - Universal Callback Server
   - Chat Server
   - E-mail Server

- Interaction Server
- Stat Server
- Config Server, if you support Genesys Advanced Disconnect Detection Protocol (ADDP)
- Co-Browsing Server

Only the connection to Solution Control Server is mandatory. Make additional connections based on your planned configuration.

End of procedure

Next Steps

- Creating or editing the UCS application object

Procedure: Creating or editing the UCS application object

UCS requires one database (the main database). It can optionally use a second (archive) database to store older UCS data and ease storage in the main database.

Start of procedure

1. Create the main and (optional) archive databases if you have not already done so. See also "Creating Databases and Running Scripts" on page 136.
2. Run the SQL script located in the `sql_scripts` folder of the UCS starting directory.
3. Create a Database Access Point (DAP) for the main database. Create a second DAP for the archive database if you have one. Use the JDBC connection type.
4. Create a UCS Application object if it does not already exist.
   a. On the `Server Info` tab, enter the host name and communication port.
   b. On the `Start Info` tab, enter the working directory.
   c. On the `Connections` tab, add connections to:
      - Message Server
      - Stat Server
      - The two DAPs that you created in the Step 3.
   d. Click `Apply`.
   e. On the `Security` tab, in the `Log On As` area, select the `This Account` check box, and then select a Person or Access Group with privileges that are high enough to include write permission.

f. On the `Options` tab, `ports` section, specify for the option `ucsapi` a valid network port number that UCS will use for connections from Java clients.

End of procedure

Next Steps

- Creating or editing the UCS Manager application object

Procedure: Creating or editing the UCS Manager application object

Start of procedure

1. Create a UCS Manager Application object if it does not exist.
2. On the `Connections` tab, add a connection to UCS.

End of procedure

Next Steps

- Installing Multimedia Web Components and UCS

Installing Multimedia Web Components and UCS

Complete the following procedure to install the Multimedia Web Components and UCS.

Procedure: Installing Multimedia Web Components and UCS

Start of procedure

1. Install the Multimedia Third Party Components on the same host as UCS and the Multimedia Web Components.
   a. Locate and double-click `Setup.exe`.
   b. Select the servlet container that you are using.
   c. Enter or browse to the location of the servlet container.

2. Install the Multimedia Configuration Wizards.

   Genesys Multimedia Configuration Wizards are required by the installation of Web API Server and Web Compound Samples.

   Locate and double-click `Setup.exe`.

3. Install Web API Server and Web Compound Samples

   Manual Deployment of Web API Server and the Web Compound Samples is identical, except for two steps, to the Wizard deployment as described in "Add the Web API Server" on page 118 and "Add Web Compound Samples and Web Client" on page 119. The differences are:

   a. You must locate and double-click `Setup.exe`.

   b. During the installation you need to provide Configuration Layer connection parameters.

4. Install UCS

   a. Locate and double-click `Setup.exe`.

   b. Enter information for login to your Configuration Server:
      - `Host`
      - `Port`
      - `User`
      - `Password`

5. Install UCS Manager:

   Locate and double-click `Setup.exe`.

End of procedure

Chapter

9 UCS Proxy and Interaction Server Proxy

This chapter describes the manual deployment of Universal Contact Server Proxy and Interaction Server Proxy. These two components are new in release 7.6.1.

This chapter includes these sections:

Deploying UCS Proxy

Some operating systems have limits to the number of open connections that will be supported. To work around this operating system limitation, Universal Contact Server Proxy has been introduced in release 7.6.1. Desktop applications can be configured to connect to UCS Proxies instead of the main Universal Contact Server, allowing many more available connections. This component is not part of the Multimedia Configuration Wizards and must be installed manually. UCS Proxy only supports connections from desktop application.

Note: UCS Proxy supports High Availability in Warm Standby mode.

Requirements

This component works with Universal Contact Server. In order to work properly, all components that are needed by Universal Contact Server must be installed. This will depend on your environment and how you are using

Universal Contact Server. For more details, refer to the chapter that is applicable to you:

- Chapter 5, "Model Configuration and Installation on Windows," on page 91 for a typical Multimedia Solution running on Windows.
- Chapter 7, "Deploying Multimedia in UNIX Environments," on page 153 for a sample deployment of a Multimedia Solution running on UNIX.
- Chapter 8, "Manual Deployment—Web Components and UCS," on page 177, for environments that are not using all Multimedia components, but that do require Universal Contact Server, such as Voice Callback.

Deploying Universal Contact Server Proxy can be divided into the following procedures:

1. Creating the Universal Contact Server Proxy application object, page 184
2. Installing Universal Contact Server Proxy, page 185
3. Configuring Genesys Desktop to use UCS Proxy, page 185

Procedure: Creating the Universal Contact Server Proxy application object

Purpose: Before installing the Universal Contact Server Proxy component, a corresponding `Application` object must exist in the Configuration Database.

Prerequisites

- A Universal Contact Server `Application` object must already be configured.

Start of procedure

1. Create an `Application` object for UCS Proxy if it does not already exist.
   a. Import the Universal Contact Server Proxy application template from the Interaction Management CD.
   b. Create a new `Application` object based on the template.
2. Open the `Properties` dialog box of the `Application` object.
3. On the `Server Info` tab:
   - In the `Host` box, enter the name of the desired host.
   - In the `Communication Port` box, enter the port UCS Proxy will use for listening.
4. On the `Connections` tab, add connections to:
   - the primary Universal Contact Server (mandatory)
   - Message Server (optional)

5. Click `Apply`.
6. If you would like to configure your UCS Proxy for HA, repeat this procedure for the second UCS Proxy.

End of procedure

Next Steps

- Installing Universal Contact Server Proxy

Procedure: Installing Universal Contact Server Proxy

Prerequisites

- Creating the Universal Contact Server Proxy application object

Start of procedure

1. Locate the `Setup.exe` for Universal Contact Server Proxy (available on the Interaction Management CD).
2. Double-click `Setup.exe`.
3. Enter the login information for your Configuration Server:
   - `Host`
   - `Port`
   - `User`
   - `Password`
4. Select the appropriate UCS Proxy `Application` object from the list.

End of procedure

Next Steps

- Configuring Genesys Desktop to use UCS Proxy

Procedure: Configuring Genesys Desktop to use UCS Proxy

Purpose: In order to take advantage of the benefits provided by UCS Proxy, your desktop `Application` must be updated to connect to the UCS Proxy instead of the main Universal Contact Server.

Start of procedure

1. Login to Configuration Manager.
2. Locate the Genesys Desktop `Application` object and open its `Properties` dialog box.
3. On the `Connections` tab, remove the connection to the main Universal Contact Server.
4. Add a connection to the UCS Proxy.
5. Click `Apply`.

End of procedure

Deploying Interaction Server Proxy

Some operating systems have limits to the number of open connections that will be supported. To work around this operating system limitation, Interaction Server Proxy has been introduced in release 7.6.1. Desktop applications can be configured to connect to Interaction Server Proxies instead of the main Interaction Server, thereby allowing many more available connections. This component is not part of the Multimedia Configuration Wizards and must be installed manually. Interaction Server Proxy only supports connections from desktop applications.

`Note:` Interaction Server Proxy supports HA in Warm Standby mode.

Requirements

This component works with Interaction Server. In order to work properly, all components that are needed by Interaction Server must be installed. For more details, refer to the chapter that is applicable to you:

- Chapter 5, “Model Configuration and Installation on Windows,” on page 91 for a typical Multimedia Solution running on Windows.
- Chapter 7, “Deploying Multimedia in UNIX Environments,” on page 153 for a sample deployment of a Multimedia Solution running on UNIX.

Deploying Interaction Server Proxy can be divided into the following procedures:

1. Creating the Interaction Server Proxy application object, page 187
2. Installing Interaction Server Proxy, page 187
3. Configuring Genesys Desktop to use Interaction Server Proxy, page 188

Procedure:
Creating the Interaction Server Proxy application object

Purpose: Before installing the Interaction Server Proxy component, a corresponding `Application` object must exist in the Configuration Database.

Prerequisites

- An Interaction Server `Application` object must already be configured.

Start of procedure

1. Create an `Application` object for Interaction Server Proxy if it does not already exist.
   a. Import the Interaction Server Proxy application template from the Interaction Management CD.
   b. Create a new `Application` object based on the template.
2. Open the `Properties` dialog box of the `Application` object.
3. On the `Server Info` tab:
   - In the `Host` box, enter the name of the desired host.
   - In the `Communication Port` box, enter the TCP port Interaction Server Proxy will use for listening.
4. On the `Connections` tab, add connections to:
   - the primary Interaction Server (mandatory)
   - Message Server (optional)
5. Click `Apply`.
6. If you would like to configure your Interaction Server Proxy for HA, repeat this procedure for the second Interaction Server Proxy.

End of procedure

Next Steps

- Installing Interaction Server Proxy

Procedure:
Installing Interaction Server Proxy

Prerequisites

- Creating the Interaction Server Proxy application object

Start of procedure

1. Locate the `Setup.exe` for Interaction Server Proxy (available on the Interaction Management CD).
2. Double-click `Setup.exe`.
3. Enter the login information for your Configuration Server:
   - `Host`
   - `Port`
   - `User`
   - `Password`
4. Select the appropriate Interaction Server Proxy `Application` object from the list.

End of procedure

Next Steps

- Configuring Genesys Desktop to use Interaction Server Proxy

Procedure: Configuring Genesys Desktop to use Interaction Server Proxy

Purpose: In order to take advantage of the benefits provided by Interaction Server Proxy, your desktop `Application` object must be updated to connect to the Interaction Server Proxy instead of the main Interaction Server.

Start of procedure

1. Login to Configuration Manager.
2. Locate the Genesys Desktop `Application` object and open its `Properties` dialog box.
3. On the `Connections` tab, remove the connection to the main Interaction Server.
4. Add a connection to the Interaction Server Proxy.
5. Click `Apply`.

End of procedure

Chapter

10 Uninstalling Multimedia

This chapter describes how to uninstall Multimedia components. It covers the following topics:

Using Wizards to Uninstall Multimedia

Complete the following procedure to uninstall Multimedia.

Procedure: Uninstalling Multimedia using the wizards

Start of procedure

1. Launch the Genesys Wizards Manager.
2. Click `Multimedia` on the left side of the window. The Wizard presents a list of currently installed Multimedia Solutions. Selecting one of them enables you to change or uninstall the solution (Figure 61).

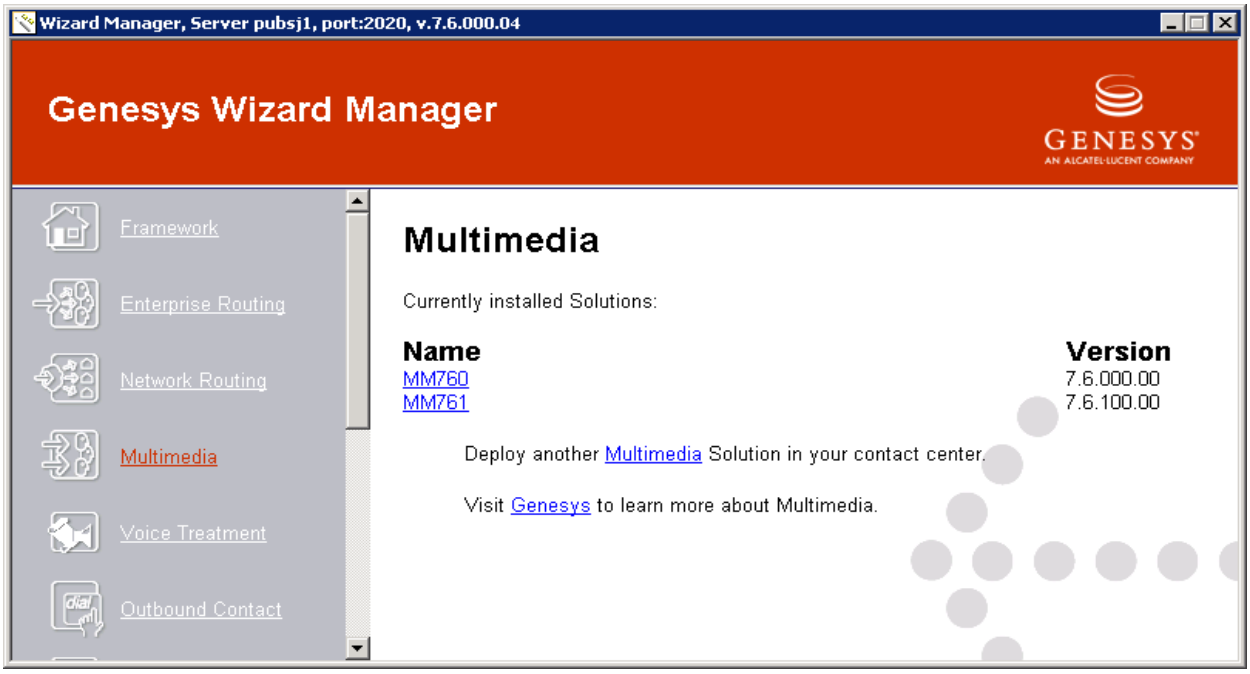


Figure 61: Genesys Wizard Manager

3. Click `Uninstall`. The Wizard asks you to confirm your decision, and then uninstalls the solution.

End of procedure

Next Steps

- Removing Multimedia components

Removing Multimedia Components

Use the following procedure to remove Multimedia components from each host machine.

Procedure: Removing Multimedia components

Start of procedure

1. From the Windows `Start` menu, open the Control Panel (`Settings > Control Panel`) and click `Add or Remove Programs`.
2. At the `Add or Remove Programs` dialog box, select these programs:
   - Genesys .Net Web API Server & Samples 7.6.1

- Genesys Chat Server 7.6.1
- Genesys Classification Server 7.6.1
- Genesys Co-Browsing Server 7.6.1
- Genesys E-mail Server Java 7.6.1
- Genesys Interaction Server 7.6.1
- Genesys Interaction Server Proxy 7.6.1
- Genesys Interaction Workflow Samples 7.6.1
- Genesys Knowledge Manager 7.6.1
- Genesys Multimedia Configuration Wizards 7.6.1
- Genesys Multimedia Third Party Components 7.6.1
- Genesys Training Server 7.6.1
- Genesys Universal Contact Server 7.6.1
- Genesys Universal Contact Server Proxy 7.6.1
- Genesys Universal Contact Server Manager 7.6.1
- Genesys Web API Server 7.6.1
- Genesys Web Compound Samples 7.6.1

3. Click `Change/Remove`. Repeat this step as needed for each component listed in Step 2.
4. Using Windows Explorer, browse to the `GCTI` main directory and delete the complete Multimedia subdirectory, including all subfolders.
5. In your RDBMS, delete the tables and databases that relate to Multimedia. For the model setup presented in Chapter 5, beginning on page 91, for instance, this would mean deleting the `IxnDB`, `Customer`, and, possibly, co-browse databases from the Microsoft SQL 2000 RDBMS on host `MMHost`. If you have an `Archive` instance of your Universal Contact Server database, you would delete its `Customer` database as well. If you have an Event Logger database, you would delete that as well.
6. Consult with your database administrator about deleting the database files themselves.
7. Delete your Web Samples virtual directories by using the IIS Management Console or the Internet Service Manager.

End of procedure

Next Steps

- You have completed all the necessary steps to uninstall your Multimedia 7.6.1 Solution.

Removing Genesys Desktop

To remove Genesys Desktop, refer to the *Genesys Desktop 7.6 Deployment Guide*.

Chapter

11 Starting and Stopping Procedures

This chapter describes how to start and stop Multimedia 7.6.1. It covers these topics:

Starting with Solution Control Interface

Complete the following procedure to start Multimedia using the Solution Control Interface (SCI).

Procedure: Starting Multimedia using SCI

Note: You cannot use Solution Control Interface to start or stop Web API Server. See "Starting Manually" for instructions on how to start your Web API Server.

Prerequisites

You must start all of the following Genesys components before starting SCI:

- Local Control Agent
- Primary Database Server
- Configuration Server
- Solution Control Server (SCS)

Start of procedure

1. Start SCI.
2. Go to the `Solutions` view.
3. Select the name of your Multimedia solution on the `List` pane. (For the model installation, the name is `MM761`.)
4. Click `Start` on the toolbar or select `Start` from the shortcut menu and confirm the action in the dialog box.

   The command to start Multimedia is sent to SCS, which uses Local Control Agents (LCAs) to activate the solution components in the Solution configuration object.

   After all of the Multimedia components have reported a status of `Running` within the configured timeout, SCI reports a successful start of Multimedia by changing the solution status from `Pending` to `Running`.

> Note: Because many components are shared by a number of solutions, some Multimedia components can have status `Running` before the solution as a whole has started.

End of procedure

Next Steps

- You have completed all of the steps to start Multimedia using SCI.

For more information, see *Framework 7.6 Solution Control Interface Help*. To view the Help file, open SCI, and then launch the Help file.

For information about the following Management Layer topics, see the documentation for Genesys Framework 7.6:

- Message Server
- Solution Control Server
- Solution Control Interface
- Local Control Agent
- Log Database

Starting Manually

This section describes how to manually start Multimedia and the Multimedia servers. For information on manually starting Database Server, Message Server, and Stat Server, see the *Framework 7.6 Deployment Guide*. For Universal Routing, see the *Universal Routing 7.6 Deployment Guide*.

Procedure: Starting Multimedia components from the command line

Start of procedure

1. A `*.bat` (or `*.sh` for UNIX) file for Interaction Server is available in its installation directory (as is the case with almost all Multimedia components). You can use this file to start Interaction Server (or the given component). Or you can start Interaction Server by using a command line with the following command-line options:

   `-host` The name of the host where Configuration Server is running

   `-port` The Configuration Server port

   `-app` The `Application` object name in the Configuration database

   `-l` The port and host of the license server

   You can place the command line with the specified command-line parameters in your own `*.bat` file. For Solaris, Linux, and AIX environments, you should also place the command line parameters in the startup script.

   Example

   ```
   interaction_server.exe -host cs-host -port 2020
   -app "IxnSrv" -l 7260@MMHost
   ```

End of procedure

Procedure: Starting Multimedia components as services

Services may include LCA and the web server.

Start of procedure

1. From the Windows `Start` menu, select `Settings > Control Panel`.
2. In the `Control Panel` window, select `Administrative Tools > Component Services`.
3. In the `Component Services` window, verify that a given service is running. If it is not, start it.

End of procedure

Procedure:
Starting Multimedia from the Windows Start menu

You can start all Multimedia applications from the Windows `Start` menu.

Start of procedure

- From the Windows `Start` menu, select `Start > Programs > Genesys Solutions > Multi-Channel Routing 7.6.1 > <ApplicationName> > <Shortcut to Application>`.

End of procedure

Note on E-mail Server Java

Before starting E-mail Server Java, make sure the computer where it is installed has TCP/IP loaded and that it can communicate with the corporate mail server. If the server has a dial-up connection to the Internet, connect to the Internet before starting E-mail Server Java.

As soon as you start the e-mail POP server, E-mail Server Java retrieves all the messages stored in the specified POP mailbox and stores them in the Interaction Server database. If you are evaluating e-mail functionality, empty the POP mailbox ahead of time.

Stopping with Solution Control Interface

Complete the following procedure to stop Multimedia using SCI.

Procedure:
Stopping Multimedia using SCI

Start of procedure

1. Start the SCI.
2. Go to the `Solutions` view.
3. Select the name of your Multimedia solution on the `List` pane (`MM761` in the model setup).

4. Click `Stop` on the toolbar or select `Stop` from the shortcut menu and confirm the action in the dialog box.

   The command to stop Multimedia is sent to SCS, which uses LCAs to terminate the solution components in the reverse order of the component startup. (The component startup order is defined in the Solution configuration object.)

   SCI reports a successful de-activation of Multimedia after all of the solution components have terminated within the configured timeout. Upon a successful de-activation of Multimedia, its status changes from `Running` to `Stopped`.

   > Note: Because many components are shared by a number of solutions, some Multimedia components can continue to have the status `Running` after the solution has stopped.

End of procedure

Next Steps

- You have completed all the steps to stop Multimedia using SCI.

Appendix

Deploying an E-Mail Solution Using MIME Customization

Multipurpose Internet Mail Extensions (MIME) is a standard that allows e-mail messages to include graphics, audio or video files, or text in languages other than English.

This appendix describes how to create a custom transformer that enables you to modify the content of e-mails and still ensure that they are compliant with MIME standards.

Overview

MIME customization in a Genesys e-mail handling environment ensures that you have normalized formats for all e-mail messages processed by your system and stored in the UCS database. To accomplish this, your e-mail solution uses a custom transformer to transform any MIME content in incoming or outgoing messages.

You implement this solution by using MIME customization APIs (as described in "Creating a custom transformer" on page 201) to change the content of incoming and outgoing e-mails. After creating the custom MIME transformer, you configure the E-mail Server Java `Application` object to enable the MIME customization option. For details, see "Configuring the E-Mail Server Java Application Object" on page 203.

Your custom server then does all of the work required to handle incoming and outgoing e-mail messages as needed.

- When an e-mail message is received, E-mail Server Java uses the custom MIME transformer to transform the message before saving it in the UCS database.
- When an e-mail message is sent, E-mail Server Java uses the custom MIME transformer to transform the message (if it requires MIME customization) before sending it to the external e-mail server.

Configuration Process

Complete the following procedure to deploy a MIME-compliant e-mail solution.

Procedure: Deploying a MIME-compliant e-mail solution

Start of procedure

1. Viewing a sample transformer
2. Creating a custom transformer
3. Configuring the E-mail Server Java application object, page 203

End of procedure

Procedure: Viewing a sample transformer

E-mail Server Java 7.6.1 includes a sample incoming MIME transformer. This sample is an “MS-TNEF Microsoft specific format to MIME” transformer, and can be found in the `mimeapi` subdirectory.

Start of procedure

1. Open the directory where E-mail Server Java 7.6.1 is installed.
2. In the `mimeapi` subdirectory, you can find the following files:
   - `esj-mime-api-doc.jar`—Javadoc documentation for the API.
   - `esj-mime-api.jar`—The actual API archive.
   - `samples`—A subdirectory, containing the following files:
     - `TNEFMimeTransformer.java`—Java source code for this sample.

- `readme.txt`—A readme file describing the sample.

> Tip: Use the instructions in the `readme.txt` to download the JTNEF library and then compile the source. After you complete these two actions, you can use the sample to transform MS-TNEF incoming mails into regular MIME messages.

End of procedure

Next Steps

- Creating a custom transformer, page 201

Procedure: Creating a custom transformer

Overview

To transform MIME content of e-mail messages, you must create a custom transformer. Your transformer code needs two Java classes: one to implement the API for transforming MIME content of incoming e-mail, and another to provide an API that transforms MIME content of outgoing e-mail. Both of these classes return the transformation result, and contain the following parameters:

- `input`—The MIME message content.
- `config`—Properties contained in the `[mime-custom-outbound-properties]` section of your E-mail Server Java `Application` object.
- `debugLogStream`—Log object to be used for debugging purposes.

Each custom class that you create should satisfy the following conditions:

- Implements one of the two appropriate interfaces (see "Incoming E-Mail Customization API" and "Outgoing E-Mail Customization API" for details).
- Is thread-safe.
- Does not change the MIME message ID.

Start of procedure

1. Create two Java classes: one for transforming incoming e-mail, another for transforming outgoing e-mail. Use the following interfaces:
   - Incoming E-Mail Customization API, page 202
   - Outgoing E-Mail Customization API, page 202
2. Bundle these two classes into a JAR file called `mimecustomization.jar`.

3. Place the new JAR file in the `esj\lib\external\` folder of your E-mail Server Java installation.

End of procedure

Next Steps

- Configuring the E-mail Server Java application object, page 203

Incoming E-Mail Customization API

Your custom transformer for incoming e-mail must implement the following interface:

EmailInTransformer Interface

```
public interface EmailInTransformer {
   public TransformerResult transform(byte[] input, java.util.Properties config,
        java.io.PrintStream debugLogStream);
      public class TransformerResult {
         public static TransformerResult noTransformationNeeded();
         public static TransformerResult succesfull(byte[] transformedInput);
         public static TransformerResult failure(String failureReason, FailureAction
              failureAction);
         // Implementation details skipped ·
      }

      public class FailureAction {
         public static final FailureAction RETRY;
         public static final FailureAction BYPASS_TRANSFORMATION;
         public static final FailureAction DEPEND_ON_BAD_FORMAT_OPTION;
         // Implementation details skipped ·
      }
   }
}
```

Outgoing E-Mail Customization API

The only difference between this API and the incoming e-mail customization API is that the `failureAction` parameter and class have been removed. If a transformation fails, then the original message is sent to the external e-mail server.

Your custom transformer for outgoing e-mail must implement the following interface:

EmailOutTransformer Interface

```
public interface EmailOutTransformer {
   public TransformerResult transform(byte[] input, java.util.Properties config,
```

```
        java.io.PrintStream debugLogStream);
     public static class TransformerResult {
        public static TransformerResult noTransformationNeeded();
        public static TransformerResult succesfull(byte[] transformedInput);
        public static TransformerResult failure(String failureReason);
        // Implementation details skipped ·
     }
   }
}
```

Configuring the E-Mail Server Java Application Object

After you create the custom MIME transformer, configure the E-mail Server Java `Application` object to specify the class names and configuration settings used with your custom transformer. E-mail Server Java will use the values you specify to transform content that is sent and received as e-mail messages.

Procedure: Configuring the E-mail Server Java application object

Start of procedure

In Configuration Manager, configure the following sections on the `Options` panel of your E-mail Server Java `Application` object:

- `[mime-custom-inbound-properties]`—Content in this section is passed to the `EmailInTransformer.transform()` method using the `config` parameter. You can use this section to define custom options and settings.

  This section is not part of the default template. Add this section manually to set options for your custom transformer for incoming e-mail.
- `[mime-custom-outbound-properties]`—Content in this section is passed to the `EmailOutTransformer.transform()` method using the `config` parameter. You can use this section to define custom options and settings.

  This section is not part of the default template. Add this section manually to set options for your custom transformer for outgoing e-mail.
- `[mime-customization]`—Use this section to enable or disable the MIME customization, to specify the fully qualified class names of your custom classes, or to set allow optional debugging or saving features.

  See Table 10 on page 205 for details about the options applicable to this section.

End of procedure

Next Steps

- You have completed the actions required to deploy a MIME-compliant e-mail solution.

MIME Customization Options Table

Table 10: MIME Customization Options Section

Option Name	Value	Description
[mime-customization] Section		
enable-inbound	Default Value: `false` Valid Values: `true`, `false`	If set to `true`, sends inbound e-mail messages to the specified inbound MIME transformer class.
enable-outbound	Default Value: `false` Valid Values: `true`, `false`	If set to `true`, sends outgoing e-mail messages to the specified outbound MIME transformer class.
enable-inbound-debug-log	Default Value: `false` Valid Values: `true`, `false`	If set to `true`, activates the inbound debug logger.
enable-outbound-debug-log	Default Value: `false` Valid Values: `true`, `false`	If set to `true`, activates the outbound debug logger.
inbound-class-name	Default Value: "" Valid Values: <*any string*>	Specifies the fully qualified name of the custom inbound transformer.
outbound-class-name	Default Value: "" Valid Values: <*any string*>	Specifies the fully qualified name of the custom outbound transformer.
inbound-keep-received-mime	Default Value: `false` Valid Values: `true`, `false`	Controls the way E-mail Server Java saves the content of MIME messages. If set to `true`, and if the message was transformed successfully, then saves the unmodified MIME content of incoming e-mails received in the UCS database (along with the transformed content).
outbound-keep-sent-mime	Default Value: `false` Valid Values: `true`, `false`	Controls the way E-mail Server Java saves the content of MIME messages. If set to `true`, and if the message was transformed successfully, then saves the transformed MIME content of outgoing e-mails is also saved in the UCS database (along with the initial content).

Message Flow Pattern

Incoming E-Mail Message Flow

Figure 62 shows the message pattern for incoming e-mail messages.

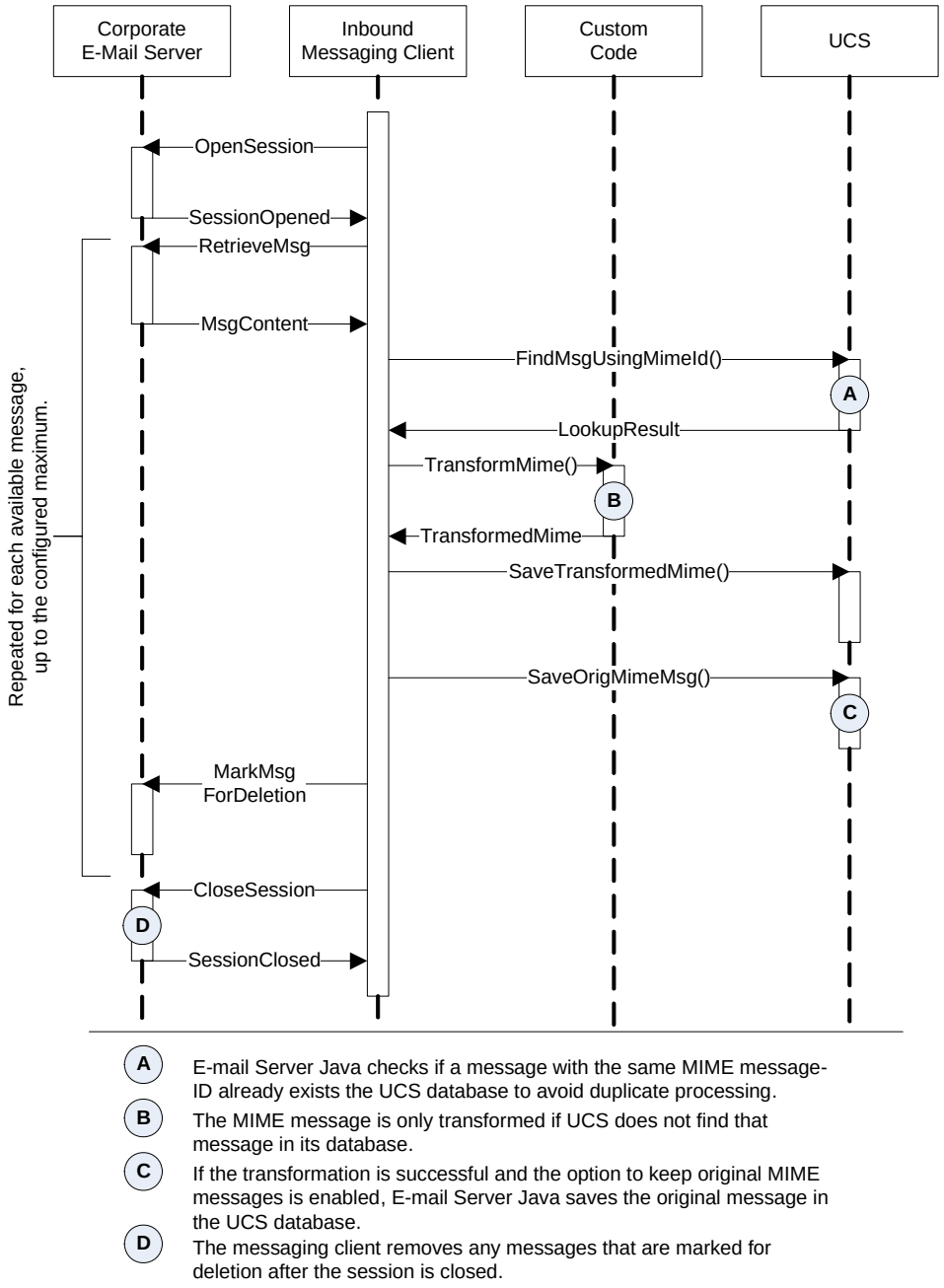
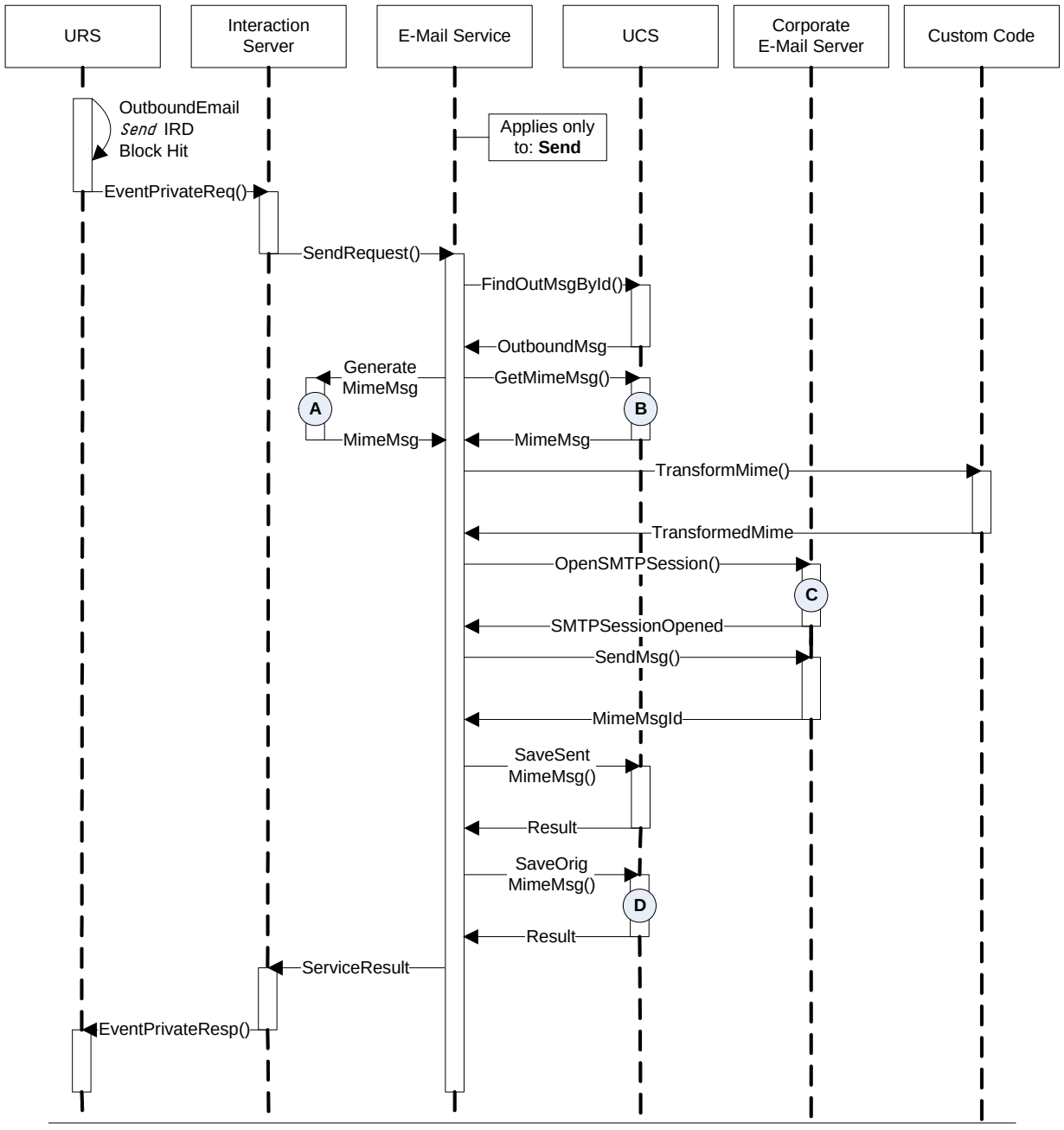


Figure 62: Message Flow for Incoming E-Mail

Outgoing E-Mail Message Flow

Figure 63 shows the message pattern for outgoing e-mail messages.



A Only if the MIME message does not exist in the UCS database.

B Only if the MIME message already exists in the UCS database.

C Only if required. SMTP sessions are pooled, and closed when unused for a configured time period.

D Only if Transformation was successful and the option to keep original MIME messages is enabled.

Figure 63: Message Flow for Outgoing E-Mail

Index

Symbols

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W