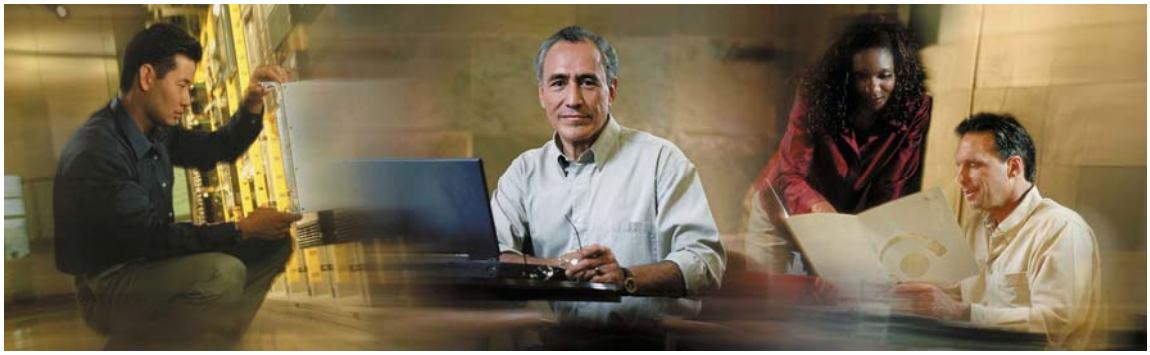

Cisco E-Mail Manager Installation and Configuration Guide

Cisco E-Mail Manager Release 5.0(0)

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Table Of Contents

Introduction

Introduction

Welcome to the *Cisco E-Mail Manager Installation and Configuration Guide for Cisco ICM/IPCC Enterprise & Hosted Editions*. This introduction contains the following sections:

- Audience
- Cisco E-Mail Manager Documentation
- Getting Started with E-Mail Manager
- Getting Help

Audience

This guide contains instructions for those who are installing and configuring E-Mail Manager.

Cisco E-Mail Manager Documentation

The following documentation is available for E-Mail Manager Release 5.0(0):

Document	Audience	Description	Where to Find
Cisco E-Mail Manager Overview Guide	All E-Mail Manager users.	An overview of E-Mail Manager functionality, capability, and architecture.	Cisco E-Mail Manager CD Help menu in the Administration Desktop Cisco Web site: www.cisco.com
Cisco E-Mail Manager Administration Guide	Administrators and managers working with the Administration Desktop.	Conceptual information about typical administrative and managerial tasks done through the Administration Desktop.	Cisco E-Mail Manager CD Help menu in the Administration Desktop Cisco Web site: www.cisco.com
Cisco E-Mail Manager Agent Guide	Managers who set up agents and determine how they will respond to e-mail messages, as well as those agents.	Conceptual information about typical agent tasks done through the Agent Desktop.	Cisco E-Mail Manager CD Help icon in the Agent Desktop Cisco Web site: www.cisco.com
Cisco E-Mail Manager Installation and Configuration Guide	Those who install and configure E-Mail Manager on the server.	Instructions and requirements for installing and configuring E-Mail Manager on the server.	Cisco E-Mail Manager CD Help menu in the Administration Desktop Cisco Web site: www.cisco.com

Cisco E-Mail Manager Database Guide	Those who maintain the database used by E-Mail Manager, and those who generate reports.	Descriptions of all database tables and columns	Cisco E-Mail Manager CD Help menu in the Administration Desktop Cisco Web site: www.cisco.com
Cisco E-Mail Manager Implementation and Customization Guide	Those who are implementing and customizing E-Mail Manager to fit particular business needs of the customer.	Guidelines on implementing E-Mail Manager to meet your business needs, instructions on customizing the look of the Web interface, and information about extending the capabilities of rules and templates.	Cisco E-Mail Manager CD Help menu in the Administration Desktop Cisco Web site: www.cisco.com
Cisco E-Mail Manager Application Programming Interface Guide	Programmers and developers creating external application to E-Mail Manager that works with agents and messages.	Reference information, instructions, and examples on building application that communicates with the E-Mail Manager API Server.	Cisco E-Mail Manager CD Help menu in the Administration Desktop Cisco Web site: www.cisco.com
Cisco E-Mail Manager External Data Access Guide	Programmers and developers customizing E-Mail Manager to work with data from an external database.	Information on the External Data Access toolkit, which demonstrates how data from external databases can be used within E-Mail Manager.	Cisco E-Mail Manager CD Help menu in the Administration Desktop Cisco Web site: www.cisco.com
Release Notes	Those who are administering and managing E-Mail Manager..	Information about the current release, known problems, and documentation updates.	Cisco E-Mail Manager CD Cisco Web site: www.cisco.com

In addition, for all screens in the Agent Desktop and the Administration Desktop, there is online help.

If you are integrating E-Mail Manager with ICM Software, you must also consult the Cisco ICM Software documentation set.

Getting Started with E-Mail Manager

This section contains the following information:

- Browser Versions & Settings
- Desktop Colors
- Logging In to the Agent Desktop
- Logging In to the Administration Desktop

For more information about getting started with E-Mail Manager, or if you cannot successfully log in, see your system administrator.

Browser Versions & Settings

For complete and current information on Browser Versions and Settings, see the Cisco Intelligent Contact Management Software Release 5.0(0) Bill of Materials (BOM).The BOM is available at:
http://www.cisco.com/univercd/cc/td/doc/product/icm/ccbubom/ccbubom.pdf.

Desktop Colors

To use E-Mail Manager successfully, set your PC to display at least 256 colors.

Logging In to the Agent Desktop

To log into the Agent Desktop, point your browser to the server in one of the following ways:

a. `http://<hostName>/<instanceName>`

b. `http://<hostName>/<instanceName>/default/cem/index.html`

c. `http://<hostname>/<instanceName>/uicommander?req=cem.userMaintenance.cemLoginStart`

Note: The instance name part of the URL is case-sensitive and must be entered exactly as the instance was named on the E-Mail Manager server. To automatically populate the Login Name field when the Log In page opens, include your user ID in the bookmarked URL. To do this, you must use the URL in option b above, and include the user iD as follows:

`http://<hostName>/<instanceName>/default/cem/index.html?user=`*`userID`*

Caution: Do not attempt to run multiple browser sessions on the same desktop with different user IDs or connected to different servers. Unexpected errors may result.

Logging In to the Administration Desktop

To log into the Administration Desktop, point your browser to the name of the server, followed by the port number, as follows:

`http://server-name:port-number`

The default port number for the Administration Desktop is 8088. If your installation has multiple instances, other instances will have different port numbers.

In the Log In screen, enter your Login Name and Password.

If there is another active session with your Login Name, you are prompted to close that session and log in again.

Caution: Do not attempt to run multiple browser sessions on the same desktop with different user IDs or connected to different servers. Unexpected errors may result.

Getting Help

For issues with Cisco E-Mail Manager, your system manager can open a case through the Technical Assistance Center on the Cisco Web site: www.cisco.com. You require your Contract ID to open a case.

If you have questions, please call us at 800-553-2447, option #3, or send email to tac@cisco.com. From outside of the United States, call 1-408-526-7209.

Overview of Installation Tasks

Overview of Installation Tasks

This overview contains the following sections:

- Before Beginning the Installation
- Installing E-Mail Manager
- Creating Additional Instances
- Installing Additional Servers
- Configuration Tasks After Installation

Before Beginning the Installation

Review system requirements and ensure you have the proper hardware and software.

- Understand the E-Mail Manager components.
- Understand E-Mail Manager Instances.
- Review the suggested configurations and determine your configuration needs. Determine the answer the following questions before you begin. If necessary, contact Cisco Technical Support for help.
- How many separate servers does E-Mail Manager need? Include servers for the CEM Server, each UI Server, the WebView Server, and one or two database servers.
- How many instances are needed?
- How many UI Servers are needed for each instance?
- Are the POP3 and SMTP Servers in place?
- Set up databases as necessary
- Ensure that you have a license file.

Ensure that the Network Interface Card (NIC) Settings are done.

NIC Settings

Note: NIC settings are applied to servers and are not required for agent/client desktops.

For optimal performance, follow the procedure below to set NIC settings to Full Duplex mode.

1. Go to **Start** -> **Settings** -> **Network and Dial-up Connections** -> **Local Area Connection**.
2. Right Click on **Local Area Connection** -> **Properties**.
3. A pop up appear. In the pop up screen, select **General tab -> Configure**.
4. Go to the **Advanced** tab and select the property **Link Speed & Duplex**.
5. Set the corresponding value to 100 Mbps Full or the highest value that is supported by the NIC and the switch.

Important:
Configure the NICs with the speed set explicitly to the maximum speeds supported (example 100Mbps on the 10/100 Card.), rather than to the auto mode. When you set the speed explicitly, set the speed on the NICs and the speed on the switch port to the same value. Failure to do so might hinder and perhaps disable Layer 2 connectivity, as well as delay overall performance.

Note: Cisco E-mail Manager does not support NIC Teaming.

For complete information on Cisco E-Mail Manager Requirements, see the Cisco Intelligent Contact Management Software Release 5.0(0) Bill of Materials (BOM). The BOM is available at:
http://www.cisco.com/univercd/cc/td/doc/product/icm/ccbubom/ccbubom.pdf.

Installing the E-Mail Manager

Using the Shell Installer

It is recommended that you install E-Mail Manager through the Shell Installer. You can select to install:

- CEM Server
- UI Server
- WebView Server

If you are installing all three servers on one computer, you can select all of them. If you are installing the servers on different computers, select the appropriate server(s) for the computer you are using. You will have to take the CD to the other servers and run the Shell Installer again.

The installer will detect whether you need to install the following supporting software:

- Java Development Kit
- ServletExec
- Sybase EAServer 4.1.1

Creating Additional Instances

During the initial installation, you are prompted to create an instance. Following the installation, you can create additional instances as needed through the Configuration Utility. Remember that each new instance requires a new installation of the UI Server and WebView Server.

Installing Additional UI Servers

After running the initial installation, you may select to install additional UI Servers:

- For one instance
- For additional instances

To do so, run the Shell Installer again and select to install the UI Server.

Note: Multiple UI Servers for different instances can exist on the same computer. However, multiple UI Servers for one instance must each be on a different computer.

Installing Additional WebView Servers

Install a new WebView Server for each additional instance you create.

Configuration Tasks after Installation

Tasks to perform after installation depend upon your needs and might include:

- Modifying an instance's configuration through the Configuration Utility
- Working with InBasket Folders
- Configuring Spell-Check
- Editing TServer Properties
- Configuring MailTrack
- Backing up the System
- Configuring Dr. Watson
- Removing installed components
- Troubleshooting

Components

Components

Cisco E-Mail Manager is comprised of three top-level components:

- CEM Server
- UI Server
- WebView Report Server

CEM Server

The CEM Server consists of the following sub-components:

- RServer, which processes incoming messages and serves the Administration Desktop.
- TServer, which controls database transactions.
- InBasket, which pulls messages from POP3 Mailboxes.
- LAMBDA (Load Adaptive Message-Base Data Archiving), which moves older messages to the LAMBDA database.

  Note: You must create a LAMBDA database for each E-Mail Manager instance, whether you activate the LAMBDA service or not.
- CIR (Cisco Independent Reporting), which replicates appropriate data to the CIR database for reporting purposes.
- SpellCheck, which provides spell-check capabilities for responses and templates in the Agent Desktop.

Typically, the CEM Server is installed on its own machine, separate from the databases, UI Server, and the WebView Report Server. One E-Mail Manager CEM Server can support multiple instances.

Following are the CEM Server requirements:

- Windows 2000 Server
- JDK 1.3.1

UI Server

The UI Server serves the Agent Desktop. The UI Server also receives commands and sends responses to external applications using the E-Mail Manager API.

Typically, the UI Server is installed on its own machine, separate from the CEM Server, the databases, and the WebView Report Server. Multiple UI servers can be installed for each instance of E-Mail Manager.

Following are the UI Server requirements:

- Windows 2000 Server
- Microsoft IIS 5.0 Web Server
- New Atlanta 4.1 Servlet Engine
- JDK 1.3.1

WebView Report Server

The WebView Report Server is used to generate historical reports from the CIR database using WebView. You access WebView through the Agent Desktop.

Typically, the WebView Report Server is installed on its own computer, separate from the CEM Server, the databases, and the UI Server.

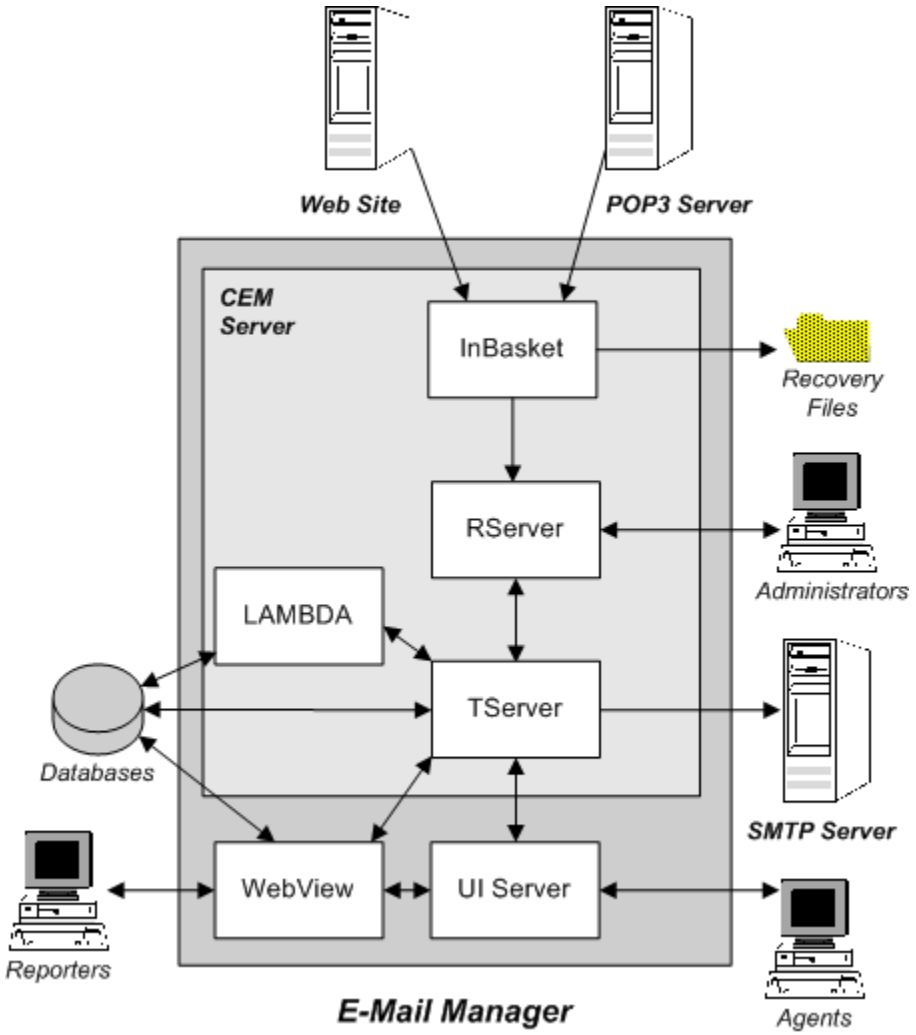
Following are the WebView Report Server requirements:

- Windows 2000 Server
- Microsoft IIS 5.0 Web Server
- New Atlanta 4.1 Servlet Engine
- JDK 1.3.1
- Jaguar CTS 3.6.1

Note: The upgrade version of Jaguar 3.6.1 is not supported in WebView.

Component View

The following figure shows how the E-Mail Manager components fit together.



Instances

Instances

This section contains the following information about instances:

- Overview
- Instances and the Core Server
- Instances and the UI Server
- Matrices of Instances
- Instances and Databases
- Instances and ICM Integration
- An Enterprise with One Instance
- An Enterprise with Multiple Instances in a Matrix
- Application Service Provider with Multiple Stand-alone Instances

Overview

An instance is a partition of E-Mail Manager that uses its own databases, has its own configuration, and processes e-mail messages separately. Data in one instance is not accessible to other instances. One E-Mail Manager installation can support multiple instances.

A small enterprise might use one instance. That instance may monitor multiple e-mail address and use rules to route messages to the appropriate department and employees.

A larger enterprise environment may configure multiple instances, each to serve a particular business function. For example, each of the following might be separate instances:

- Customer Support Instance - to process messages from customers with questions, with agents who work in the Customer Support department.
- Jobs Instance - to process inquiries about employment, monitored by Human Resources employees.
- Public Relations Instance - to process inquiries about the company and financial information, monitored by Marketing employees.

In an Application Service Provider (ASP) environment, an instance typically serves one ASP customer. The ASP can run multiple instances for each of their customers. Because data in an instance is not accessible to users on another instance, security is maintained.

Note: The configurations shown below are examples only and do not imply specific requirements; your environment and business needs may require a different configuration.

Instances and the CEM Server

One installation of the E-Mail Manager CEM Server can support multiple instances.

Important:

It is suggested that you do no create an instance by the name **cem**, however, if an instance already exists with the name **cem** and you also require WebView Server, install WebView on different machine than UI Server.

Instances and the UI Server

Each instance requires at least one UI Server. For example, if you create three instances, you must install the UI Server at least three separate times.

You can also install multiple UI Servers for a single instance, if the instance supports a large number of agents.

Note: Multiple Instances need to have different port numbers. When there are multiple CEM instances, the Configuration Manager requires a unique TServer listen port number for each instance. So the TServer listen port number will be different for different instances. The UI Server installation populates DB_PORTNUM depending on the CEM instance selected during installation.

Note: Multiple UI Servers for different instances can exist on the same computer. However, multiple UI Servers for one instance must each be on a different computer.

Instances and the WebView Server

Each instance requires its own WebView Server. For example, if you create three instances, you must install the WebView Server three separate times in three separate places.

Matrices

Multiple instances can be configured in a matrix. A matrix is a set of instances that can exchange messages through rules.

For example, a rule in one instance can test for messages that must have been sent to a different e-mail address that is monitored by a different E-Mail Manager instance. If the rule detects such a message, it can forward the message to a different instance in the matrix; that second instance will then process the message as if it were a new message.

You set up matrices in the General Tab of the Configuration Utility.

Instances and Databases

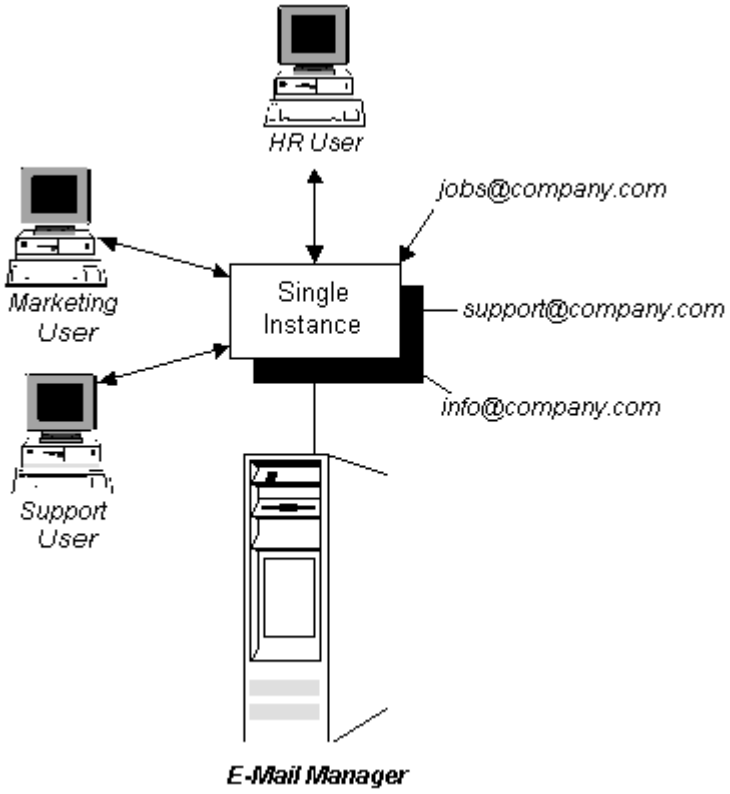
Each E-Mail Manager instance must have its own separate databases.

Instances and ICM Integration

Cisco E-Mail Manager is integrated with ICM software on an instance-by-instance basis. That is, you must configure each instance to integrate with ICM software, and you must perform ICM configuration tasks for each E-Mail Manager instance that will be integrated.

An Enterprise with One Instance

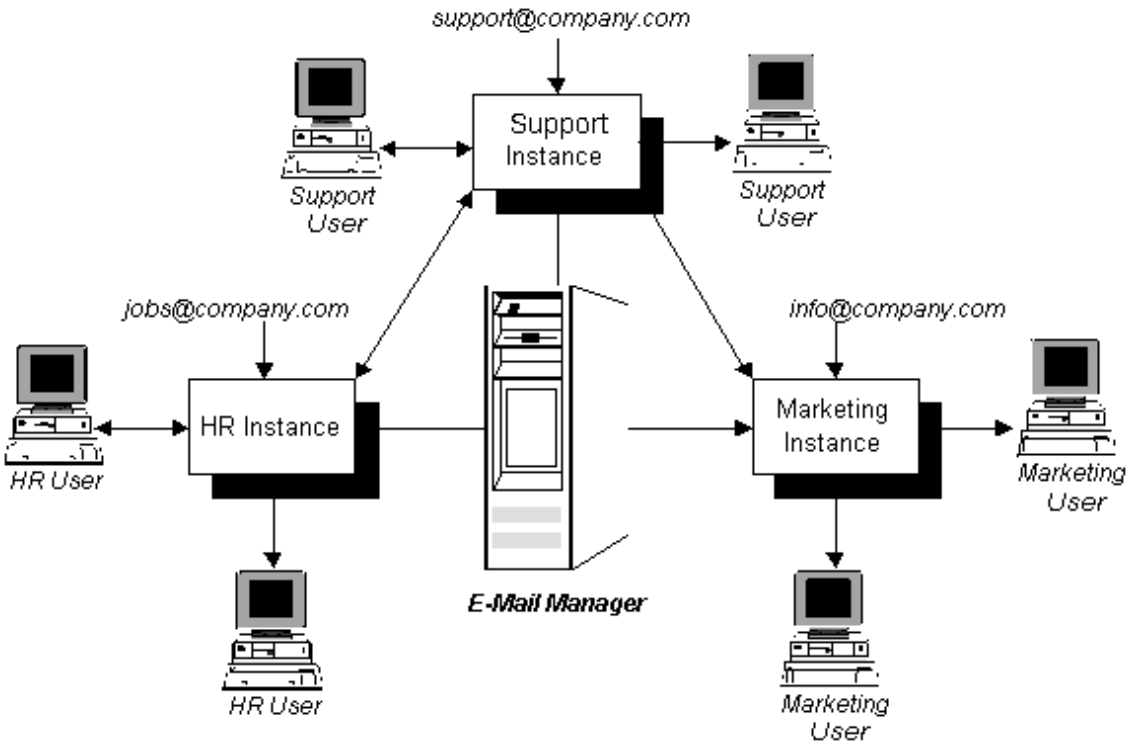
A small enterprise may choose to have one instance that serves all users in all departments, and that monitors all general e-mail addresses. The rules would route messages in the instance to the appropriate department or user. Such an example is shown below:



An Enterprise with Multiple Instances in a Matrix

A larger enterprise environment may set up multiple instances in a matrix. A matrix is a set of instances that can exchange messages through rules. Typically, each instance would process messages sent to one or more specific e-mail address, and exchange messages when the content of the message indicates that it was sent to the wrong e-mail address.

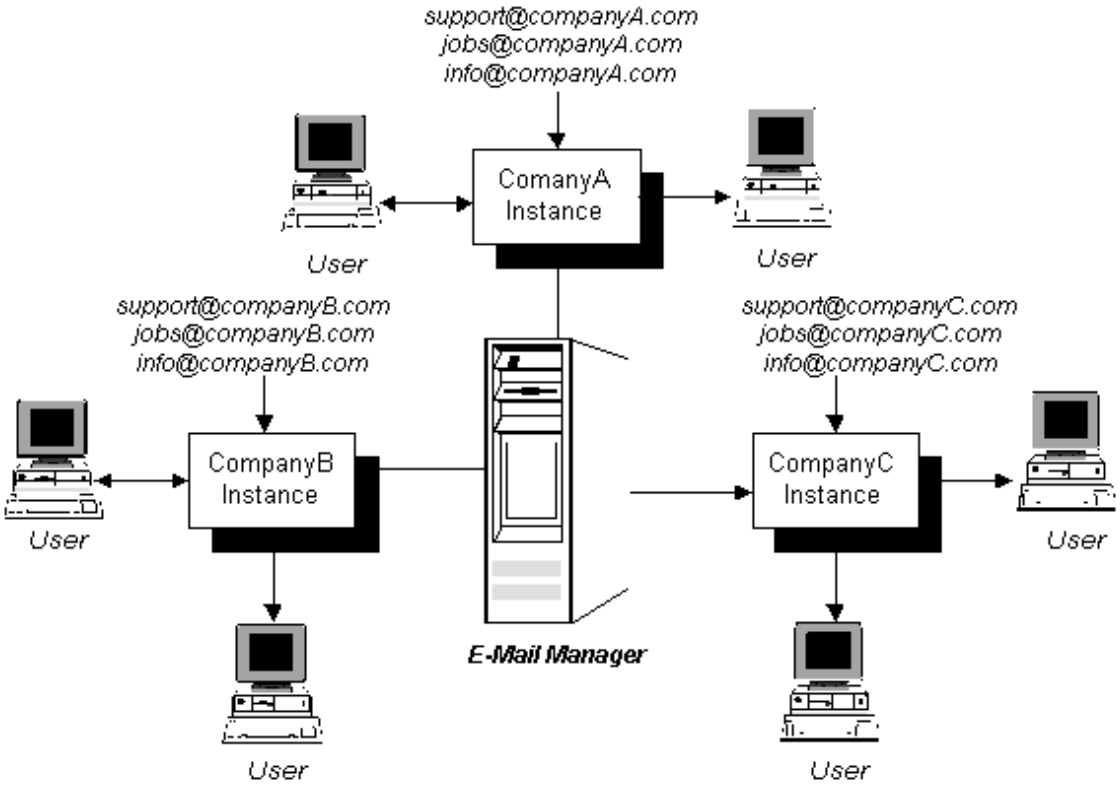
Such an example is shown below:



Application Service Provider with Multiple Stand-alone Instances

An application service provider may set up multiple instances, but without a matrix. Each instance serves one customer, and that customer's data remains separate and private from all others.

Such an example is shown below:



License Information

License Information

This topic contains the following sections:

- Licenses
- How to Get and Use Licenses
- Apache License

Licenses

Cisco E-Mail Manager uses a licensing scheme called the FLEXlm. You must have a valid FLEXlm license for each instance of E-Mail Manager. The FLEXlm license for an instance specifies:

- How many agents are allowed in the instance
- Whether or not you can use the Low Level Rule editor
- Whether or not you can use MailTrack

How to Get and Use Licenses

This section describes the following tasks:

- Obtaining a FLEXlm License
- Installing a FLEXlm License

Obtaining a FLEXlm License

To obtain a FLEXlm license:

1. Locate the Product Authorization Key (software serial number) on the back of the Cisco E-Mail Manager CD.

2. In a Web Browser, open the Cisco Software Registration Web page.

   Registered Cisco Connection Online users:

   http://www.cisco.com/cgi-bin/Software/FormManager/formgenerator.pl

Non-registered users:

http://www.cisco.com/pcgi-bin/Software/FormManager/formgenerator.pl

3. On the Software Registration page, select Cisco E-Mail Manager from the list of software forms.

4. Follow the instructions on the Cisco E-Mail Manager registration page. When you have completed the form and entered your Product Authorization Key, a license file with the extension .lic will be sent to your e-mail address. The license file will enable the number of seats and features you purchased.

Installing a FLEXlm License

You install a FLEXlm license when you start the Configuration Utility.

Caution:

- Do not overwrite license files in the license directory. Cisco E-Mail Manager calculates your licensed seats based on all license files in the license directory.

- Copying the license file within the \license directory will not add seats to your existing license(s). Cisco E-Mail Manager ignores duplicate files.

- Do not modify license files. Cisco E-Mail Manager does not recognize INCREMENT lines that have been altered or added to the file.

Apache License

The Apache Software License, Version 1.1

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Database Information

Database Information

This topic contains the following sections:

- Cisco E-Mail Manager Databases
- How to Prepare Microsoft SQL 2000 Databases
- How to Set Up Oracle Database Instances

Cisco E-Mail Manager Databases

This section contains the following information about E-Mail Manager Databases:

- Databases Used by Cisco E-Mail Manager
- Supported Database Types
- Disk Space For Databases
- Database Locations
- Database Instances
- Creating Databases

Databases Used by Cisco E-Mail Manager

Cisco E-Mail Manager uses the following databases:

Database	Description
Primary Transaction Database	The main database used by E-Mail Manager. This database stores such things as messages and agent and skill group settings. Each E-Mail Manager instance has its own Primary Transaction Database.
LAMBDA Database	The database used to store older messages. Messages are moved to the Lambda Database according to the settings you specify in the Configuration Utility. Each E-Mail Manager instance has its own LAMBDA Database.

Cisco Independent Reporting (CIR) Database	The database used to generate reports. Data used in reports is replicated to this database automatically from Primary Transaction Databases of each instance.

The tables and columns in the tables for each database are described in the *Cisco E-Mail Manager Database Guide.*

Supported Database Types

Database options for Cisco E-Mail Manager are:

- Microsoft SQL Server 2000
- Oracle 9i

Note: Oracle 9i is supported for Cisco E-Mail Manager from CEM 5.0 (0) Service Release 3 onwards.

Disk Space for Databases

You must have at least 3 Gigabytes of free disk space on the server where you create the databases for a single instance.

Database Locations

The Primary Transaction Database and the LAMBDA Database must always reside on the same database server.

In smaller configurations, the CIR Database can reside on the same database server as the Primary Transaction database and the LAMBDA Database.

For larger installations, it is recommended that the CIR Database reside on a separate database server.

Databases and Instances

Each E-Mail Manager instance must have its own separate databases.

Creating Databases

You create databases for E-Mail Manager instances through the Configuration Utility.

Note: When installing the CIR database on a database server other than the PTD, you must make sure the system clocks on the two database servers are synchronized.

A simple way to do this is to use the 'NET TIME' command, to set the local system clock to be the same as a remote clock, as in:

```
DOS> NET TIME \\computer /SET /YES
```

Where 'computer' is the reference computer.

Caution:

- You must create the Primary Transactional Database before creating the LAMBDA and CIR databases.
- You must create the LAMBDA and CIR databases, even if you do not plan on using LAMBDA or reporting.

Note: The size of the database can be configured during installation. Depending on the load at the customer end, the DBA needs to adjust the table space size to 128K, 256K or larger.

How to Prepare Microsoft SQL Server 2000 Databases

Follow these guidelines if you are using a Microsoft SQL Server database.

Note: This document only contains guidelines for installing a Microsoft SQL Server database for use with E-Mail Manager and does not provide instructions for the tasks described. For such information, see your Microsoft SQL Server documentation.

You must install MS SQL Server before you install E-Mail Manager. However, you do not need to create databases for E-Mail Manager; the databases are created when you are use the Configuration Utility.

Caution:

When installing Microsoft SQL Server:

- In the Collations Settings screen, select Dictionary Order, case-insensitive, for use with 1252 Character Set.
- For security reasons, do not use a blank password for the SA account.

- By default, the auto-extent for Cisco E-Mail Manager Microsoft SQL databases is turned off. If you turn on this option, be aware that new extents are being allocated, and resize tables accordingly.

- If you have multiple installations of Microsoft SQL Server on one computer, in the database tabs in the Configuration Utility, you must specify the port number of the installation you intend to use. To find the port number of a Microsoft SQL Server installation:

    1. Run the Server Network Utility application.

    2. Select the correct instance name in the Instance(s) on this server: list.

    3. Select the TCP/IP protocol from the list of Enabled protocols list.

    4. Click the Properties tab. The Default Port value is shown.

Note: The minimum number of licenses with which you must install MS SQL Server in order to use it with E-Mail Manager is 20 per E-Mail Manager instance. This includes Server plus user client access license (CAL) or Server plus device client access license (CAL)

For more information on how many licensees you need for your configuration of E-Mail Manager, contact Cisco Technical Support.

Prior to completing the Licensing dialog box; refer to the *Cisco ICM/IPCC Enterprise and Hosted Edition Hardware and System Software Specification (Bill of Materials) http://www.cisco.com/univercd/cc/td/doc/product/icm/ccbubom/index.htm* "SQL Server 2000 Licensing" section. In addition, ensure that you meet all the terms of the licensing agreement between you and your software OEM.

In the Licensing dialog box, select the Licensing method and the number of devices or connections, as appropriate. Click Continue.

Note: If you choose Processor License, make sure there are sufficient concurrent connection licenses so that the system does not run into licensing problems. A minimum of 40 concurrent connections is required. The precise number depends on the accessing need.

Cisco E-Mail Manager requires the iNet JDBC Driver to use the MSSQL Server database management software. If the iNET JDBC driver is not previously installed, it will be installed automatically when you install E-Mail Manager. The location of the iNet JDBC driver is set automatically in the database tabs in the Configuration Utility.

How to Setup Oracle Database Instances

This section contains the following information:

- Oracle Instances and the E-Mail Manager Databases
- Character Set
- Creating the Oracle Instance
- Creating the Oracle Service

Follow these guidelines for creating a database instance if you are using an Oracle 9i database.

Note: This document only provides recommendations for creating a database instance for use with Cisco E-Mail Manager. There may be additional requirements based on your system and needs. For more information, see your Oracle documentation or contact Cisco Technical Support.

In addition to the Oracle database management software, you must install the Oracle THIN JDBC driver.

Note: During installation if a new Oracle Driver is added, place the new driver in a separate directory from the previous Oracle drivers. This is important because the configuration utility does not distinguish between the old and new drivers.

Oracle Instances and the E-Mail Manager Databases

The Primary Transaction Database, LAMBDA Database, and the CIR Database for one E-Mail Manager instance all use one Oracle instance. You create a single Oracle instance as described below, and in the Configuration Utility, create tables for the three E-Mail Manager databases in that one instance.

Character Set

When installing Oracle database management software, select to use Unicode character set.

In order for the database instance you created for E-Mail Manager to support the Unicode character set, you must add the following lines to the database instance creation script:

```
CHARACTER SET UTF8

NATIONAL CHARACTER SET UTF8;
```

Creating the Oracle Instance

After installing the Oracle database management software, you must create a database instance. For the database instance, you must follow these guidelines:

- Create a Custom Database
- Select Online Transaction Processing (OLTP) for the database type.
- Select a minimum of 20 for Concurrently Connected Users. A higher number is recommended.
- Select Dedicated Server Mode.
- Set Maximum Datafiles to 700.
- Set Maximum Log Files to 70.
- Set Maximum Log Members to 5.
- Check Enable Archive Log.
- Set Log Archive Buffers to 5.
- Add the SID to the listener.ora file.

Creating the Oracle Service

After you have created the database instance, you must create the Oracle Service for the database instance.

After you create the Oracle Service:

- Create 8 additional redo logs for the database instance.
- In the initInstance.ora file:
- Set the open_cursors parameter to 800.
- Add the line LOG_ARCHIVE_START =true to the archive section of the database init file.

After modifying the initinstance.ora file, you must restart the Oracle service for the database instance.

Caution:

- You must ensure that the temporary database size is at least half of the anticipated size of the main E-Mail Manager database.

- By default, the auto-extent for E-Mail Manager Oracle databases in turned off. If you turn on this option, be aware that new extents are being allocated, and resize tables accordingly.

Database Connection Problems

For details on Database Connection Problems, see the Configuration Troubleshooting section.

ICM Integration Information

ICM Integration Information

Cisco E-Mail Manager can be integrated with ICM software. In an integrated environment, ICM software can route e-mail messages, as well as telephone calls (and, if used, Web Collaboration sessions), to agents who are common across the different applications. Through this integration, your contact center can achieve more efficient routing and enhance agent productivity. Furthermore, because agents are common across the different applications, you can monitor and report on agent activity across multiple channels.

Cisco E-Mail Manager is integrated with ICM software on an instance-by-instance basis. That is, configure each instance to integrate with ICM software, and perform ICM configuration tasks for each E-Mail Manager instance to be integrated.

For more information regarding how to configure ICM components, please refer to the section Configuring ICM Software for Integrated Applications in the *ICM Configuration Guide for Cisco ICM Enterprise and Hosted Editions.* The ICM Configuration Guide is available at:
http://www.cisco.com/univercd/cc/td/doc/product/icm/icmentpr/icm70doc/coreicm7/config7/icme70cg.pdf

For a high-level overview of integrating E-Mail Manager with ICM software, see the *Multichannel Software Implementation Map for Cisco ICM/IPCC Enterprise & Hosted Editions*, and the *Multichannel Software Overview for Cisco ICM/IPCC Enterprise & Hosted Editions*.

How to Set Up E-Mail Manager for ICM Integration

This section describes three types of tasks you must perform to integrate E-Mail Manager with ICM software:

- ICM Configuration Tasks
- E-Mail Manager Instance Configuration Tasks
- E-Mail Manager Administration Tasks
- E-Mail Manager - ICM Integration Troubleshooting

ICM Configuration Tasks

Before configuring an E-Mail Manager instance that is to be integrated with ICM software, you must perform certain setup tasks through the ICM software.

Note: For details about the ICM Configuration information, see the ICM Installation Guide for Cisco ICM Enterprise Edition.

While performing the ICM setup tasks, be sure to note the ICM configuration information, as you will need to enter this information in the E-Mail Manager Configuration Utility ICM Tab.

The ICM Configuration tasks include:

1. Create the Application Instance for the E-Mail Manager instance. Note the Application Instance Name and Application Key, as you will need to enter these in the ICM Tab.

   Note: One Application Instance that is part of ICM software maps to one E-Mail Manager instance. The word 'instance' is used in both ICM software and E-Mail Manager, and there is a one-to-one relationship, though the terms mean different things in the different applications.

2. Create a Media Routing Domain for the E-Mail Manager instance. Note the Media Routing Domain ID, as you will need to enter this in the ICM Tab.

3. Configure ConAPI Connection configuration information. Note the ConAPI Remote Connection Name, the Remote Service Name, Registry Port, and Host Name, as you will need to enter these in the ICM Tab in the CEM Configuration Utility.

Some ICM configuration tasks do not need to be complete before you configure the E-Mail Manager instance. However, they must be complete before you start the E-Mail Manager instance. These tasks include:

1. Create one or more peripherals that will be used by the E-Mail Manager instance.

2. Configure the Peripheral Gateway for the Media Routing Domain.

3. Configure the Media Routing Peripheral Interface Manager (MR PIM).

   Caution: When creating the MR PIM that is to be used by E-Mail Manager, you must set the Application Connection Port to MR PIM Listen Port in CEM Configuration Manager. By default, the MR PIM Listen Port in CEM Configuration Manager is 1600.

E-Mail Manager Instance Configuration Tasks

Once ICM software has been configured to allow an E-Mail Manager instance to integrate with it, configure the instance on E-Mail Manager. You enter the ICM-integration configuration information in the E-Mail Manager Configuration Utility's ICM Tab. For more details, see the ICM Tab in E-Mail Manager Configuration Utility.

E-Mail Manager Administration Tasks

After you have configured the instance for integration through the CEM Configuration Utility's ICM Tab, you can begin to use the E-Mail Manager instance. However, there are several integration-related tasks remaining, which you complete through the Administration Desktop:

1. Enable peripherals.

2. Configure ICM Routing skill groups and agents. You can create agents through E-Mail Manager, as well as enable agents for E-Mail Manager that were created in ICM software.

3. Configure rules to route messages to ICM Routing skill groups.

4. Periodically verify and synch the E-Mail Manager database with the ICM database

For information on completing these tasks, see the Cisco E-Mail Manager Administration Guide.

E-Mail Manager – ICM Integration Troubleshooting

For information on E-Mail Manager – ICM Integration troubleshooting, see the Configuration Troubleshooting section in this guide.

IIS and ServletExec Information

IIS and ServletExec Information

This topic contains the following sections:

- IIS and ServletExec
- Turning off IIS Logging
- Running the IIS Lockdown Tool
- Set the Virtual Machine Minimum Heap Size

Also refer to the UI Server and Agent Desktop sections in the Configuration Troubleshooting topic.

IIS and ServletExec

Both the UI Server and the WebView Server require that IIS and ServletExec be installed on the Windows 2000 Server. You must ensure that IIS is installed as part of Windows 2000 Server prior to installing E-Mail Manager. The Shell Installer automatically installs ServletExec when required.

Turning off IIS Logging

By default, IIS logs every HTTP get and post command. When used with E-Mail Manager, this logging can create very large log files that can negatively impact performance. To increase performance, it is recommended that you turn off IIS logging.

To turn off IIS logging:

1. From the **Start** menu, select **Administrative Tools>Internet Information Services**.
2. Navigate the tree using the + sign to the Default Web Site.
3. Right click **Default Web Site** and select **Properties**.
4. Clear the **Enable Logging** checkbox.
5. Click **OK**.
6. Repeat steps 3 to 5 for the Administrative Web Site.

Running the IIS Lockdown Tool

If you choose, you can install the IIS Lockdown Tool on servers running the UI Server and the WebView Server. The IIS Lockdown Tool is a wizard which reduces IIS's vulnerability to virus attack by turning off unnecessary IIS features. It is available at:
http://www.microsoft.com/windows2000/downloads/recommended/iislockdown/default.asp.

When running the IIS Lockdown Tool:

1. Stop the IIS Admin service.

2. Start the IIS Lockdown Tool. The Welcome screen opens.

3. Click **Next >**. The Lockdown Type screen opens.

4. Select **Advanced Lockdown**. The Remove Script Mappings screen opens.

5. Leave all boxes checked, accepting the defaults. Click **Next>**. The Additional Lockdown Actions screen opens.

6. Clear the checkbox next to **Remove the Scripts virtual directory**.

   Caution:

   You must clear the **Remove the Scripts virtual directory** option for the UI Server to function correctly.

7. Click **Next>** and complete the running of the IIS Lockdown Tool.

Setting the Virtual Machine Minimum Heap Size

When you install the UI Server, the installation program automatically sets the following:

- ServletExec Virtual Machine Minimum Heap Size to 16384K.

- Virtual Machine Maximum Heap Size to 65535K.

These settings support a UI Server that has 50 simultaneous connected users.

If the UI Server has to support more than 50 simultaneous users, you must increase these values as follows:

- Increase the Minimum Heap Size by 16384K for each additional 50 simultaneous users, or part thereof.

- Set the Maximum Heap Size to the greater of 65536K or the Minimum Heap Size value.

Following are several examples:

- To support 125 simultaneous users:

    - Set the Minimum Heap Size to 3 X 16384K; that is, 49152K.

    - Set the Maximum Heap Size to 65536K.

- To support 225 simultaneous users:

    - Set the Minimum Heap Size to 5 X 16384K; that is, 81920K.

    - Set the Maximum Heap Size to 81920K.

Ensure that you have enough physical memory in your Web Server so that it does not cause the server to page.

Installing Cisco E-Mail Manager

Installing Cisco E-Mail Manager

This topic contains the following sections:

- Before Installing E-Mail Manager
- How to Use the Shell Installer
- How to Install the Java Development Kit
- How to Install New Atlanta ServletExec
- How to Install Sybase EAServer 4.1.1
- How to Install the CEM Server
- How to Install the UI Server
- How to Install the WebView Server

Before Installing E-Mail Manager

Before installing E-Mail Manager, review the overview of installation tasks.

Installation Process

The installation process installs the following components:

- CEM Server
- UI Server for each instance
- WebView Server

Each of these components has specific supporting software requirements. If you are using the Shell Installer and the server you are installing on does not have the required software installed, the installation program prompts you to install the missing software.

How to Use the Shell Installer

The Shell Installer

Cisco E-Mail Manager includes a Shell Installer that manages the installation of the E-Mail Manager components and the required supporting software. It is suggested that you install all components through the Shell Installer. The Shell installer automatically detects whether the server has the required supporting software.

To use the Shell Installer:

1. After unzipping the installation file, in the `Shell Installer` folder, click `Setup.exe`. The Welcome dialog box opens.

2. Click **Next>**. The Select Components dialog box opens.
   In this dialog box, the E-Mail Manager components are listed. To the right of the components, in the Description field, the required supporting software is listed for the currently highlighted component. If this software is not installed on the server, the installation program will automatically install the software.

3. Select the components you want to install.

4. Click **Next>**. The Select Options dialog box opens, listing the supporting software required. Supporting software components that are already installed are not checked; you can check these components to reinstall them. Supporting software components that are not installed and must be installed to support the components you selected in Step 2 are checked and cannot be cleared.

5. Select only components you need to reinstall, then click **Next>**. The installation then progresses through the selected components and the supporting software. The installation sequence depends on the selected components and the required supporting software.

   If you are installing on a server with no components or supported software installed, the Shell Installer will install programs in the following order:

   - Java Development Kit
   - New Atlanta ServletExec
   - Sybase EAServer 4.1.1
   - CEM Server
   - UI Server
   - WebView Server

How to Install the Java Development Kit (JDK)

To install JDK:

1. The Shell Installer may automatically install JDK if it determines it is required. You can also launch the installation program by clicking the `j2sdk-1_3_1-win.exe` file in the `Shell Installer\JDK` folder. The Welcome dialog box opens.

2. Click **Next>**. The Software License Agreement dialog box opens.

3. Read the License Agreement, then click **Yes**. The Choose Destination Location dialog box opens.

4. Accept the default installation folder, or click **Browse** and select a different folder. Then click **Next>**. The Select Components dialog box opens.

5. You must select Program Files; other components are optional. Click **Next>** when you have selected components as needed. The installation program then installs JDK. When the installation is complete, the Setup Complete dialog box opens.

6. Click **Finish**.

How to Install New Atlanta ServletExec

This section describes how to:

- Prepare to install New Atlanta ServletExec
- Install New Atlanta ServletExec

Prepare to Install New Atlanta ServletExec

Before installing NewAtlanta ServletExec, ensure that the IIS is properly installed. For more information, visit www.microsoft.com.

Installing NewAtlanta ServletExec

To install New Atlanta ServletExec:

1. The Shell Installer may automatically install New Atlanta ServletExec if it determines it is required. You can also launch the installation program by clicking the `Setup.exe` file in the `Shell Installer\NewAtlanta` folder. The Welcome message opens.

2. Click **Next>**. The License Agreement opens:

3. Read the License Agreement, then click **Yes**. The readme file opens:

4. Read the notes carefully, then click **Next>**. The Choose Destination Location dialog box for support files opens.

5. Accept the default installation folder, or click Browse and select a different folder. Then click **Next>**. The Choose Destination Location dialog box for the ServletExec_ISAPI.dll opens.

6. Accept the default destination, or click **Browse** and select a different folder. Then click **Next>**. The installation program then installs New Atlanta ServletExec. When the installation is complete, the InstallShield Wizard Complete dialog box opens.

7. Click **Finish**.

How to Install Sybase EAServer 4.1.1

To install Sybase EAServer 4.1.1:

1. The Shell Installer may automatically install Sybase EAServer 4.1.1 if it determines it is required. You can also launch the installation program by clicking the `Setup.exe` file in the `Shell Installer\EAServer` folder. The Choose Destination Location dialog box opens.

2. Accept the default installation folder, or click **Browse** and select a different folder. Then click **Next>**.

   The installation runs. This can take about 15 minutes.

How to Install the CEM Server

This section describes how to:

- Prepare to install the CEM Server
- Install the CEM Server
- Complete the CEM Server Installation

Preparing to Install the CEM Server

Before installing the CEM Server, ensure that your system meets the CEM Server requirements. You must also ensure that you have obtained a license for at least the first instance.

Installing the CEM Server

To install the CEM Server:

1. The Shell Installer will automatically install the CEM Server if you selected to do so. You can also launch the installation program by clicking the `SETUP.EXE` file in the `Shell Installer\CeM` folder. When the installer starts, the Welcome dialog box opens.

2. Read the Welcome message, then click **Next>**. The Choose Destination Location dialog box opens.

3. If you want to change the default installation location, `C:\Program Files\Cisco\E-Mail Manager`, click **Browse** and select a folder. When the location is correct, click **Next>**. The Select Program Folder dialog box opens.

4. The installation creates a program folder named E-Mail Manager by default. To change this, enter or select the new name. When the name is correct, click **Next>**. The Ready to copy files dialog box opens.

5. Review the installation selections listed in the dialog box. If any settings are incorrect, click **<Back** and change your selections. When the settings are correct, click **Next>**. The installation runs.

6. When the installation is complete, you are prompted to open the Cisco E-Mail Manager Configuration Utility.

7. Click **OK** to launch the Configuration Utility and create the first E-Mail Manager instance. For more information about how to create an instance, see the Instances section in this guide.

Completing the CEM Server Installation

After you have configured the first instance, saved settings and closed the Configuration Utility, you must complete the installation. In the installation program window, the Setup Complete dialog box opens. Click **Finish**.

How to Install the UI Server

This section describes how to:

- Prepare to install the UI Server
- Install the UI Server

Preparing to Install the UI Server

Before installing the UI Server, ensure that your system meets the UI Server requirements.

In addition:

- Ensure that the IIS Service is stopped.
- If you are installing the UI Server on a different computer than the instance folder in the CEM Server folder, ensure that the CEM Server folder is shared, so that you can browse to it through the network during installation.
- Ensure that the instance for which you are installing the UI Server is created.

Note: Multiple UI Servers for different instances can exist on the same computer. However, multiple UI Servers for one instance must each be on a different computer.

Installing the UI Server

To install the UI Server:

1. The Shell Installer will automatically install the UI Server if you selected to do so. You can also launch the installation program by clicking the `Setup.exe` file in the `Shell Installer\UIServer_Install` folder. When the installer starts, the Welcome dialog box opens.
2. You are prompted to stop IIS Services. Ensure that IIS Services are stopped before proceeding. The Welcome screen then opens.

3. Click **Next>**. If you are installing the UI Server for an instance on this computer, you are then prompted to select the instance for which the UI Server is being installed. Only instances for which you have not previously installed a UI Server on this computer are listed as choices. If you are installing the UI Server on a different computer, instance choices are not listed. Instead, you must browse the network and locate the location of the instance directory.

4. Select the instance and click **Next>**. You are then prompted to select the path to the instance. The default path is selected by default.

5. If you need to change the path, click **Browse** and select the folder where the instance exists. When the path is correct, click **Next>**. The TServer connection properties are then displayed.

6. The connection properties must be correct. Click **Next>** to proceed. You are then prompted to select the location to install the UI Server

7. By default, the UI Server is installed in the instance folder. To change this, click **Browse** and select a folder. When the installation folder is correct, click **Next>** to proceed. The installation then runs.

8. When the installation is complete, you are prompted to restart IIS Services.

9. When IIS Services are running, click **Finish** to close the installation program.

How to Install the WebView Server

This section describes how to:

- Prepare to install the WebView Server
- WebView and New Atlanta Servlet Exec ISAPI 4.1 Licenses
- Install the WebView Server

Preparing to Install the WebView Server

Before installing the WebView Server:

- Ensure that the IIS Service is stopped.
- Ensure that the instance to which you are installing the WebView Server is configured.
- Ensure that the CIR database has been configured through the Configuration Utility.

WebView and New Atlanta ServletExec ISAPI 4.1 Licenses

Cisco distributes and automatically installs the 1 and 2-CPU licenses for New Atlanta ServletExec ISAPI 4.1 when WebView is installed. If the server that you are installing WebView on has 4 or more processors, then you must get a 4-CPU or greater than 4-CPU license from New Atlanta.

Install a 4-CPU or greater license of New Atlanta

1. When you have obtained the 4-CPU or greater than 4-CPU license from New Atlanta, with a text editor, open the file `<NewAtlantaRoot>\ServletExec ISAPI\ServletExec Data\servers.properties`, where `<NewAtlantaRoot>` is the New Atlanta directory and its location; for example: `C:\New Atlanta`.

2. Change the line `servletexec.serial=xxxxxxx`, where `xxxxxxx` is the old license number, to read `servletexec.serial=<new_license>`, where `<new_license>` is your new license number.

3. Save the file as a text file.

4. Restart the IIS Admin NT service for the change to take effect.

Installing the WebView Server

The Shell Installer will automatically install the WebView Server if you selected to do so. You can also launch the installation program by clicking the `Setup.exe` file in the `Shell Installer\WebView` folder.

To install the WebView Server:

1. When the installer starts, the Welcome dialog box opens. Click **Next>**. The installer tests IIS Services. If IIS is installed correctly, the installation continues.

2. You are prompted to select the language for WebView. Select the language and click **Next>**.

3. Enter the following information:

   - Select **MSSQL Server 2000** or **Oracle 9i**.

   - Database Server Host Name - Enter the name of the server where the CIR database is located. You can also specify the IP address of the server instead of server name where the CIR database is located.

   - Database Name or Service ID - Enter the name of the database, if using MS SQL. If using Oracle, enter the Service ID of the database.

- Port - The port is entered automatically based on the type of database you select. Only change this value if you are not using the default port for the database.

  Note: WebView installation fails when the reporting Database runs on a port other than the default port 1433.

  When SQL Server is installed as 2-Node Active / Active SQL Server cluster, two separate SQL Server instances run on both the nodes. Each instance will have its own IP address and default port that SQL listens on and this port is dynamically set, which is not 1433. Hence, in Database Server Host Name, instead of providing just the ServerName, enter ServerName\InstanceName.

- User Name - Enter the login name used in the CIR DB tab of the Configuration Utility.

- Password - Enter the password used for the User Name.

4. Click **Next>**. You are then prompted to select the Application and Instance Name to report against.

5. The Application field has **cem** automatically selected. Select the instance that this WebView Server is to be used for, then click **Next>**. You are then prompted to select the drive where WebView is to be installed.

6. Select the drive where WebView is to be installed. The folder name on the drive is `cem`. Click **Next>**. You are then prompted for the CEM host Name and the location of report templates.

7. Enter the name of the computer where the CEM Server is located, or click the top **Browse** button to find the computer. Click the bottom **Browse** button to locate the templates. Template folders are located in the CEM Server installation, at: `CEM Server\bin\cir_cem_templates`. In this path, select the `mssql` or `oracle` folder. Be sure to select templates for the correct database type. When the Host Name and template location are correct, click **Next>**. You are then prompted for UI Server authentication information.

8. Enter the UI Server information:

- UI Server Host Name - The name of the computer where the UI Server is located.

- Authentication Protocol - Select **HTTP** or **Socket**.

- For HTTP authentication, enter 80 for the Port.

- For Socket authentication, enter the Password and Port defined in the `UIServer\uiroot\WEB-INF\properties\xmltcpadapter-props.xml` file. The default Password is "launch_it" and the default Port is "1441".

  Note: The WebView installation will work from all UI Servers for the E-Mail Manager instance. You must enter information for one UI Server for authentication purposes only.

9. Click **Next>**. The installation then runs. When complete, you are prompted to install WebView for an additional instance.

10. Click **Yes** to repeat these steps for another instance, or No to complete the installation. When the installation is complete, you are prompted to restart the computer, which is necessary before you can run WebView.

11. If you want to defer restarting the computer, change the selection to No.

12. Click **Finish**.

How to Install CEMWatcher?

To install CEMWatcher, simply copy the CEMwatcher directory and its contents from the CD to a folder on the computers from which you want to run CEMWatcher. Ensure that the directory is write-enabled and all computers running CEMWatcher have JRE 1.3 (or later) installed.

You can install multiple instances of CEMWatcher in different folders on the same computer and configure each to monitor the same or different E-Mail Manager instances. You can also install CEMWatcher on multiple computers and configure each to monitor the same or different E-Mail Manager instances.

Typically, you would install CEMWatcher on its own computer, not on a computer running any component of the E-Mail Manager system. You would not install CEMWatcher on the computers running the CEM Server, the UI Server, the POP3 Server, the SMTP Server, or the Database Server, because if one of these computers fail, causing E-Mail Manager to fail, CEMWatcher fails as well and you do not receive notification.

Configuration Utility Information

Configuration Utility Information

This topic contains the following sections:

- The Configuration Utility
- How to Use the Configuration Utility
- About the Configuration Utility Tabs

The Configuration Utility

The Configuration Utility is a Java-based tool installed with the E-Mail Manager CEM Server and is used to configure instance settings. When you first install the Core Server, the Configuration Utility opens automatically and prompts you to configure the first instance. You use the Configuration Utility to create and configure additional instances as needed.

Before working with the Configuration Utility, understand the root user and the settings to be configured.

Configuration Settings

You use the Configuration Utility to configure the following types of settings for the instance, which correspond to tabs in the Configuration Utility interface:

- General settings
- Primary, LAMBDA and CIR DB settings
- Logging settings
- Advanced settings
- Httpd settings
- LAMBDA settings
- CIR settings
- ICM Integration settings
- Memory Settings

The Root User

The root user is the administrator who can use the Configuration Utility to work with any E-Mail Manager instance on the computer, and who can create additional instances. When you first open the Configuration Utility, you must log in as the root user.

When you install E-Mail Manager, the root Username is "root" and the Password is "pass".

How to Use the Configuration Utility

Following are general tasks you perform in the Configuration Utility:

- Creating the First Instance
- Installing a License File
- Using Tabs
- Starting the Configuration Utility
- Modifying the Root User
- Creating an Additional Instance
- Modifying and Saving Configuration Settings
- Working with Services

Creating the First Instance

After you install E-Mail Manager, the Configuration Utility starts. The Create a New Instance dialog box opens.

1. Enter the Instance Name that you want for the first instance.

   Caution: If the E-Mail Manager instance is to be integrated with ICM software, the Enterprise Name of the instance must be established in the ICM Configuration Manager. You must use this name as the name of the E-Mail Manager instance. For more information, see the ICM Tab section.

   Note: An instance name must be 32 characters or less, and can contain only letters, numbers, and the underscore (_) character.

2. Enter the root Username and Password.

   When you first install E-Mail Manager, the root Username is "root" and the Password is "pass". You can modify the root Username and Password after first opening the Configuration Utility.

3. Click **Continue**.

4. Install a license file.

   After you create the first E-Mail Manager instance, a help wizard guides you through the configuration process. You must read the instructions in the help frame and click the **Next>** button to progress through the configuration.

Installing a License file

For each instance you create, you must install a license file as follows:

1. You are prompted to install a license file.

   If you choose not to install a license file, the instance will not function.

2. Click **Yes**. The file browser opens.

3. Navigate to the correct folder and select the license file, and click **Load License File**.

Caution:

- Do not overwrite license files in the license directory. Cisco E-Mail Manager will calculate your licensed seats based on all license files in the license directory.

- Copying the license file within the \license directory will not add seats to your existing license(s). Cisco E-Mail Manager will ignore duplicate files.

- Do not modify license files. Cisco E-Mail Manager will not recognize INCREMENT lines that have been altered or added to the file.

Using Tabs

To configure the E-Mail Manager instance, you enter or set configuration information in the following categories:

- General
- Primary, LAMBDA and CIR DB
- Logging
- Advanced
- Httpd
- LAMBDA
- CIR
- ICM
- Memory

Each category has a corresponding tab in the Configuration Utility.

To set configuration information for that category, click on the corresponding tab to go to the appropriate configuration page.

Starting the Configuration Utility

You start the Configuration Utility through the Windows Start menu as follows:

1. From the **Start > Programs > E-Mail Manager > Cisco E-Mail Manager Configuration**, or the path and command you set when you installed E-Mail Manager, to start the Configuration Utility.

2. Select an instance from the drop-down list.

3. Enter the Username and Password. If you intend to create new instance or modify the root user, you must log in as the root user. Otherwise, you can log in using the Username and Password configured for the instance.

4. Click **OK**.

5. If you did not previously install a license file, you are prompted to do so.

Modifying the Root User

The root user is the administrator who can use the Configuration Utility to work with any E-Mail Manager instance on the computer, and who can create additional instances.

When you install E-Mail Manager, the root Username is "root" and the Password is "pass".

To change the root Username and Password:

1. Start the Configuration Utility.

   Note: You must log in as the root user.

2. From the File menu, select Set Root User. The Change Root User dialog box opens.

3. Enter the Existing Root Username and Existing Password. These must be the values used to log in to the Configuration Utility.

4. Enter the New Root Username and New Password.

5. Reenter the new password in the Confirm Password field.

6. Click **OK**.

Creating Additional Instances

Before creating additional instances, you must purchase the appropriate license from Cisco Systems.

To create an additional instance:

1. From the **Start** menu, select **Programs/E-Mail Manager/Cisco E-Mail Manager Configuration**, or the path and command you set when you installed E-Mail Manager, to start the Configuration Utility.

2. Start the Configuration Utility.

   Note: You must log in as the root user.

3. From the **File** menu, select **New Instance**.

4. You are prompted to save changes to the existing instance. Click **Yes** or **No**. You are then prompted to enter the name of the new instance.

5. Enter the name of the new instance.

   Caution: If the E-Mail Manager instance is to be integrated with ICM software, the Enterprise Name of the instance must be established in the ICM Configuration Manager. You must use this name as the name of the E-Mail Manager instance. For more information, see the ICM Tab section.

   Note: An instance name must be 32 characters or less, and can contain only letters, numbers, and the underscore (_) character.

   The Configuration Utility opens and you can modify the configuration settings of the instance.

Modifying and Saving Configuration Settings

This section describes how to modify and save the Configuration Settings of Cisco E-Mail Manager.

Modifying Configuration Settings

To modify configuration settings of an existing instance:

1. Start the Configuration Utility.

2. Use the tabs as needed to make changes.

3. Save the configuration settings.

Saving Configuration Settings

To save configuration settings:

1. From the **File** menu, select **Save Config Files**. Or, exit the Configuration Utility. You are prompted to save the configuration settings

2. Click **Yes** to save the changes. The changes are then confirmed. Or click **No** to exist without changing the configuration.

3. If you save configuration settings, you must restart the Windows service for the instance.

Working with Windows Services

Typically, you can work with E-Mail Manager services through the Windows 2000 interface.

You can also work with E-Mail Manager services through the Configuration Utility. This may be helpful when you make configuration changes and must immediately restart the service for the instance to have those changes take effect.

Note: You can only use the Configuration Utility to work with the Windows service for the instance; you must start the Windows Service for the Core Server through the Windows 2000 interface.

- To start the Windows Service for the current instance loaded in the Configuration Utility, from the **Servers** menu, select **Start**.
- To stop the Windows Service for the current instance loaded in the Configuration Utility, from the **Servers** menu, select **Stop**.
- To reinstall the Windows Service for the current instance loaded in the Configuration Utility, from the **Servers** menu, select **Reinstall Service**.

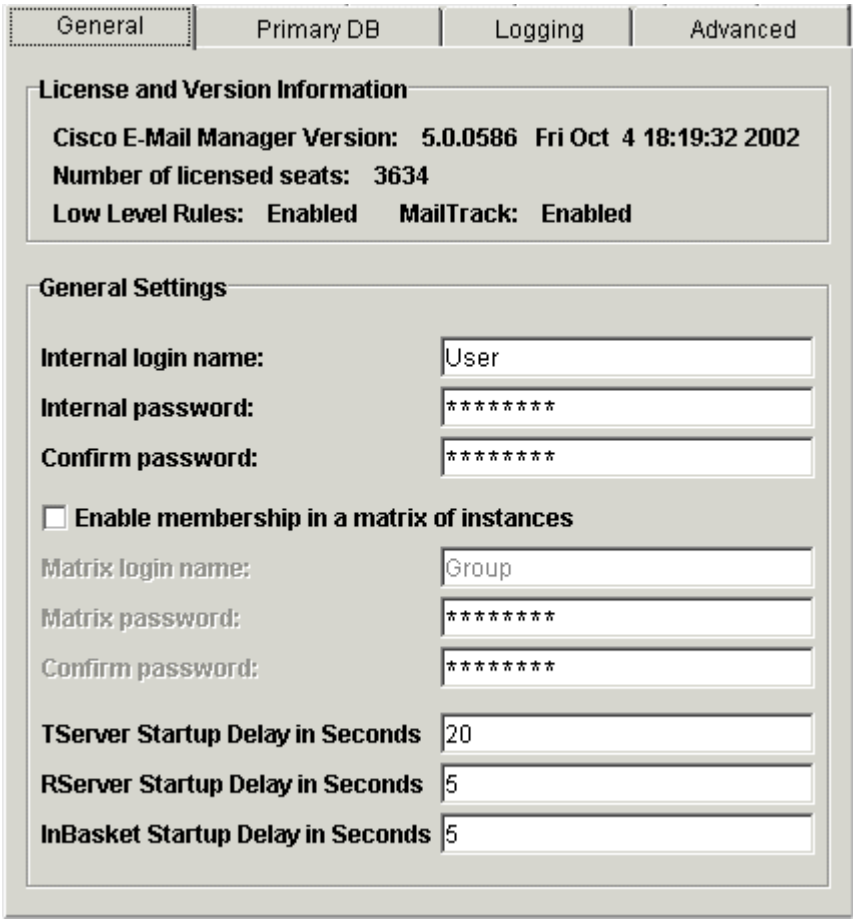
About the Configuration Utility Tabs

The Configuration Utility includes:

- General
- Primary, LAMBDA and CIR DB
- Logging
- Advanced
- Httpd
- LAMBDA
- CIR
- ICM
- Memory

General Tab

The figure below shows the General Tab. Following the figure are descriptions of the settings in this tab:



Internal Login Name and Password

The internal login name and password are used to control access to configuration settings for this E-Mail Manager instance.

Enter a username and password using any combination of letters and numbers.

Matrix Settings

To create a matrix of E-Mail Manager instances able to communicate with one another, for each instance in the matrix you must:

- Check **Enable membership in a matrix of instances**.

  Note: In order to use cloning in system rules, you must check this option.

- Enter the same Matrix username and matrix Password for each instance.

  Note: If you enable membership in a matrix of instances, you must change the default username and password.

For more information and help with setting up a matrix of E-Mail Manager Instances, contact Cisco Technical Support.

Server Startup Delays

When E-Mail Manager launches, the components startup in the following order:

1. TServer
2. RServer
3. InBasket

Increasing the delay times for these components can give the other applications running in conjunction with E-Mail Manager more time to start before the system checks for them. The recommended delay times for each component are:

- TServer = 20 seconds
- RServer = 5 seconds
- InBasket = 5 seconds

Note: These times are consecutive, not simultaneous.

If you continue to have problems restarting the server, contact Cisco Technical Support.

Primary, LAMBDA and CIR Database Tabs

The following figure shows the Primary DB Tab. Following the figure are descriptions of the settings in this tab.

Note: This section applies to the Primary Transactional Database, the LAMBDA Database, and the CIR Database. The instructions and prompts are the same regardless of the database you are configuring.

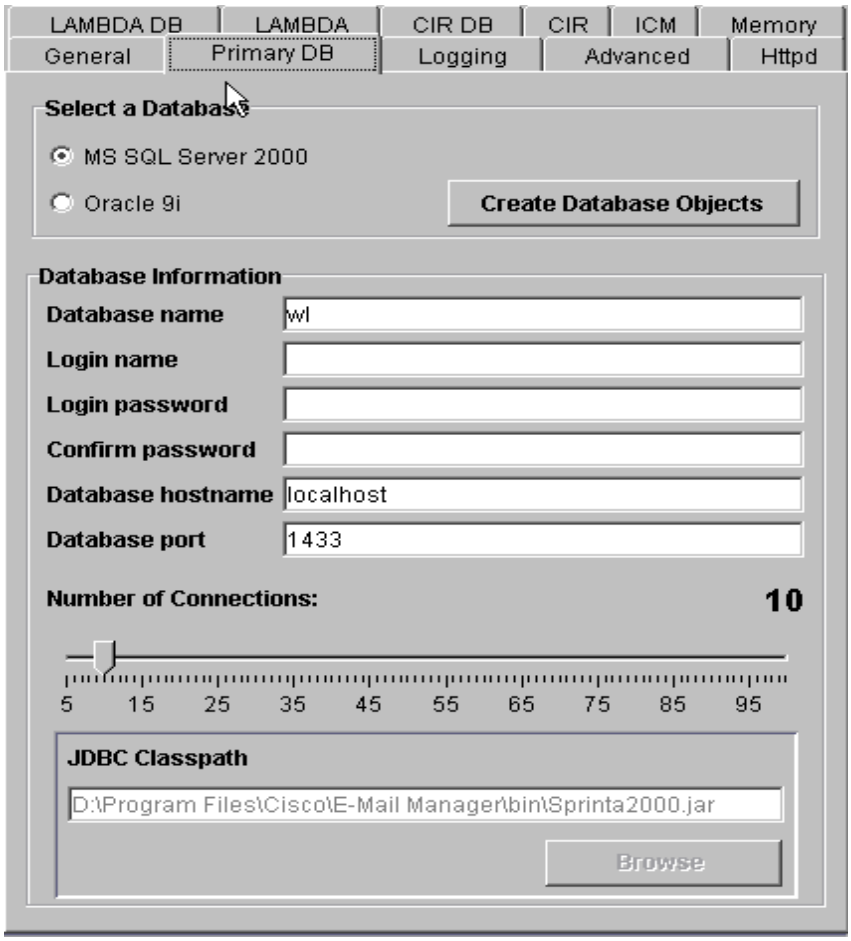
Important:

If you have a huge database with 3-4 years of data, and LAMBDA/CIR not executed for long time, then it is advisable that you don't configure the LAMBDA/CIR to run 24/7 immediately as it might cause performance issues.

You can schedule LAMBDA/CIR for smaller durations and reduce the backlog data. Once the backlog is reduced, you can configure LAMBDA/CIR to run 24/7.

Cautions:

- You must create the Primary Transactional Database before creating the LAMBDA and CIR databases.
- You must create the LAMBDA and CIR databases, even if you do not plan on using LAMBDA or reporting.



Database Type and the JDBC Driver

The Configuration Utility checks for the location of the JDBC driver when you select a database type. If the JDBC driver is not in the default location, you are prompted to locate it.

If the JDBC driver for the database is not found, you are prompted to select the new location.

1. Click **Yes** to select a new location. The Select Directory dialog box opens.

2. Find the correct directory and click **Select Directory**. The Configuration Utility then tests the path.

You can modify the path after selecting it by clicking **Browse**, and test the patch by clicking **Test**.

After the JDBC driver is located, you may be prompted to close and restart the Configuration Utility.

Database Information

Enter the database information as follows:

1. Enter the Database Name.

   Caution: If you are using Microsoft SQL Server, do not use a hyphen (-) in the database name.

   Note: If you are using Microsoft SQL Server, this must be a unique database name on your system. If you are using Oracle, this must be the name of the Oracle instance you are connecting to, which must be created before installation.

2. Enter the Login username and Login password.

   Note:

   - For Oracle, the login name must be unique for each instance of E-Mail Manager using this Oracle database instance, as it will be used to create a tablespace for the application.
   - The Login user is created with the database; you must not use an existing database user.

3. Enter the Database hostname of the server containing the database. If the database and E-Mail Manager installation are on the same server, enter "localhost".

4. Enter the Database port. For MS SQL, the default is 1433; for Oracle, the default is 1521.

5. Change the number of database connections for the Primary database. The number of connections will be configurable from a minimum of 7 to a maximum of 100. The default value for database connections will be 10. The number of connections configured is reported in a label field.

6. Click **Create Database Objects**.

7. You are asked whether you want to create database tables based on the settings entered.

8. Click **Yes** to proceed. You are asked whether you want to run the script now, or to defer table creation.

9. Click **Yes** to create the tables now, or **No** to defer the table creation.

10. You are prompted for the database administrator login information.

11. Enter the Database administrator's username and password and click **Login**.

12. You then enter database information.

    For all databases, you set the pre-allocated size and location for:

    - Metadata and Data tables
    - Indexes
    - Temp directories (for Oracle) / Log Directories (for MSSQL)

    For the Primary Transaction Database and the LAMBDA database, but not the CIR database, you also provide values for Large Object storage.

    Note: To improve performance of larger databases, you can place database elements with different read/write behavior on different discs. For example, you can separate table lookups with random disk access from indexes or large object stores that have sequential access.

    If you selected **Run Now**, the database tables are created. A series of confirmation messages indicate that the table creation was successful.

    If the error occurred because of incorrect login information or problems connecting to the database server, you must be able to return and correct the information, and rerun the script. If another error occurs, contact Cisco Technical Support for instructions on how to recover.

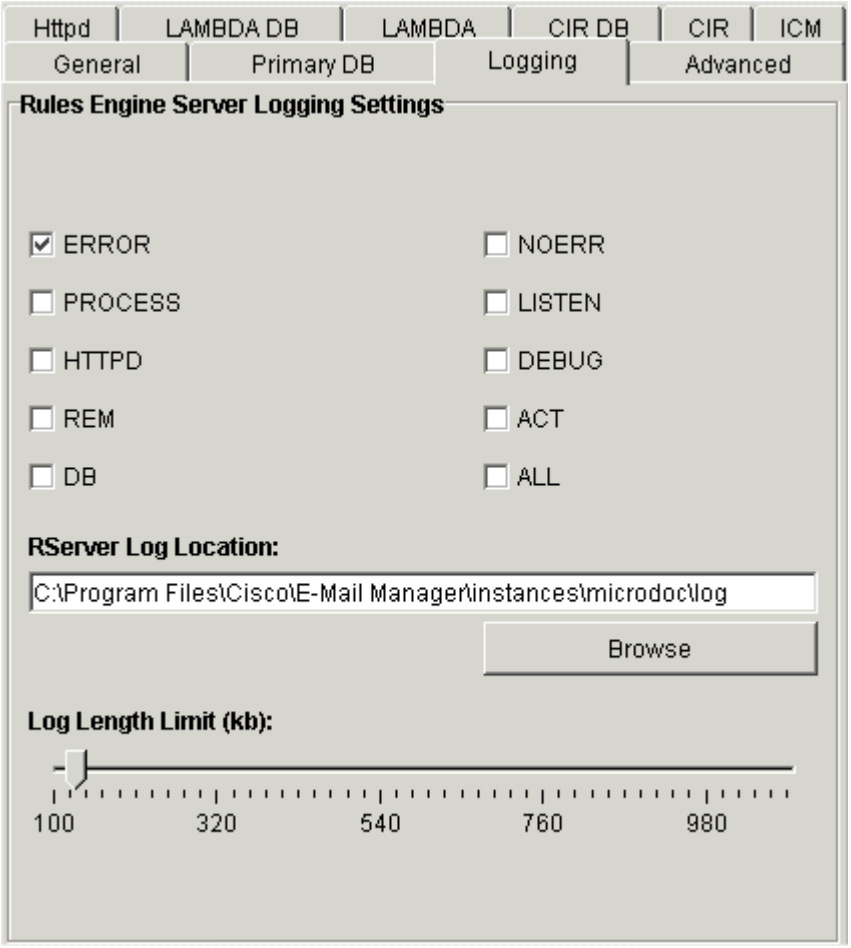
    The scripts that have been run for this instance are in:

    `[installation root directory]\Instances\[name of instance]\db-script.`

    Note: If you selected **Run Later**, database creation scripts are created in the installation folder. The scripts are located in `[installation root directory]\Instances\[name of instance]\db-script`. You can run these scripts from either the command-line or graphical script-running utilities for your database.

Logging Tab

The following figure shows the Logging Tab. Following the figure are descriptions of the settings in this tab:



Rules Engine Server Logging Settings

By default, no Rules Engine logging is checked.

Caution: If you check **ALL**, very large log files might be generated.

If you check **NOERR**, all logging is suppressed, including error messages.

For normal operation, it is recommended that you check **ERROR** so that errors are logged, but not low-level operations.

Log File Location

The log file folder and filename are detected automatically. You can change these settings by entering a new path or clicking Browse.

Note: Each instance must have its own log file folder.

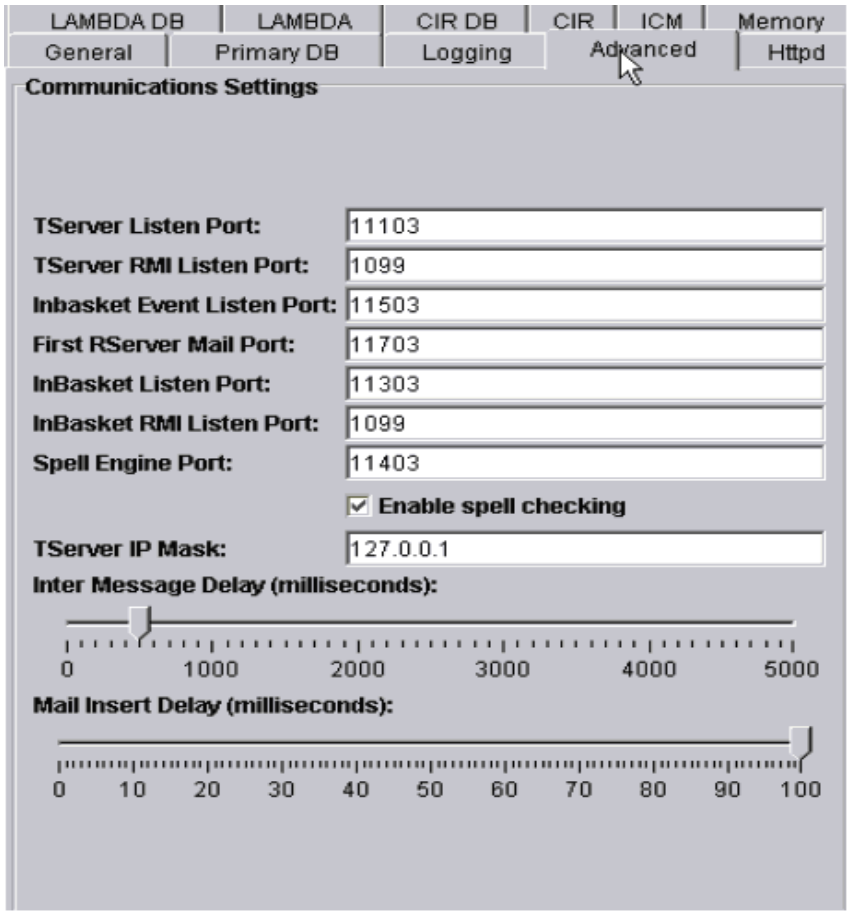
Log Length Limit

The default log length limit is 131,072 bytes. Move the slider to modify the maximum log file size.

When a log file reaches the size limit, the current log file is closed and a new file started. A low log length limit will produce many small log files; a high log length limit produces a few large log files.

Advanced Tab

The following figure shows the Advanced Tab. Following the figure are descriptions of the settings in this tab:



Communication Settings

TServer Listen Port: The TCP/IP port where TServer listens for connections. This port setting must not be used by another application on this server.

TServer RMI Listen Port: This port setting does not have to be unique, and need not be changed.

TServer Events Port: The TCP/IP port the Transaction Server uses for events.

RServer Inbound Mail Port: The TCP/IP port where RServer listens for connections from the InBasket. This port setting must not be used by another application on this server.

InBasket Listen Port: The TCP/IP port where the InBasket listens for connections. This port setting must not be used by another application on this server

InBasket RMI Listen Port: This does not have to be unique, and need not be changed.

Spell Engine Port: The port that the spell engine listens on. This port setting must not be used by another application on this server.

To use spell check for responses sent from this E-Mail Manager instance, check **Enable spell checking**. Click here for information on configuring spell-check.

TServer IP Mask: The IP Mask for connection to TServer. If the E-Mail Manager instance uses UI Servers on other computers, you must edit this field to be sure that the servers running the UI Servers have access to TServer.

If TServer and UI Server reside on different computers, then change the TServer IP Mask to 255.255.255.255 to connect UI Server with TServer.

If the TServer and UI Server reside on the same computer then the TServer IP Mask do not require any configuration. The default value for TServer IP Mask is 127.0.0.1.

Inter Message Delay

The delay (in milliseconds) that occurs between each incoming message process.

A higher value provides for faster user interface performance, but slows incoming mail processing. A lower value provides for faster incoming mail processing, but slower user interface performance.

Mail Insert Delay

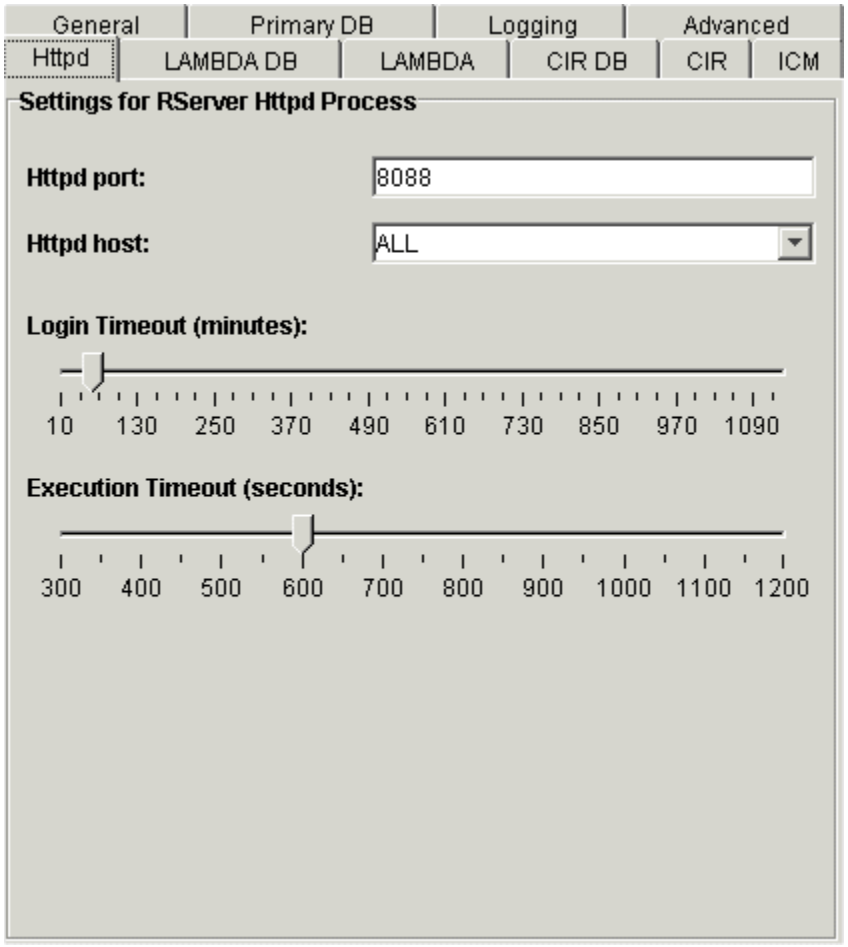
Mail Insert Delay is the delay between each database operation involving incoming mail. This is measured in milliseconds,

A higher value provides for faster user interface performance, but slows incoming mail processing. A lower value provides for faster incoming mail processing, but slower user interface performance.

The Mail Insert Delay settings have a greater effect on the user interface performance and incoming mail processing than does the Inter Message Delay.

Httpd Tab

The figure below shows the Httpd Tab. Following the figure are descriptions of the settings in this tab:



HTTPD Port

You can set the HTTPD Port to a port that no other Web server on the computer is using.

HTTPD Host

By default, the RServer listens on all IP addresses assigned to the server. This is the default setting ALL.

If you are running more than one instance of E-Mail Manager on a server and want each instance to listen on a different IP address, select the IP address to listen to here.

Note: If RServer is assigned an IP address, it will not respond to connections from a browser on the local machine if "localhost" is typed in the URL. You will need to either type the IP address specified above, or a hostname that can be resolved to this IP address by your nameserver.

Login Timeout

The Login Timeout setting is the amount of time users can be idle without being disconnected. The default setting is 1 hour.

Note: If you set the Login Timeout too low, users may lose work on replies that they are composing.

Execution Timeout

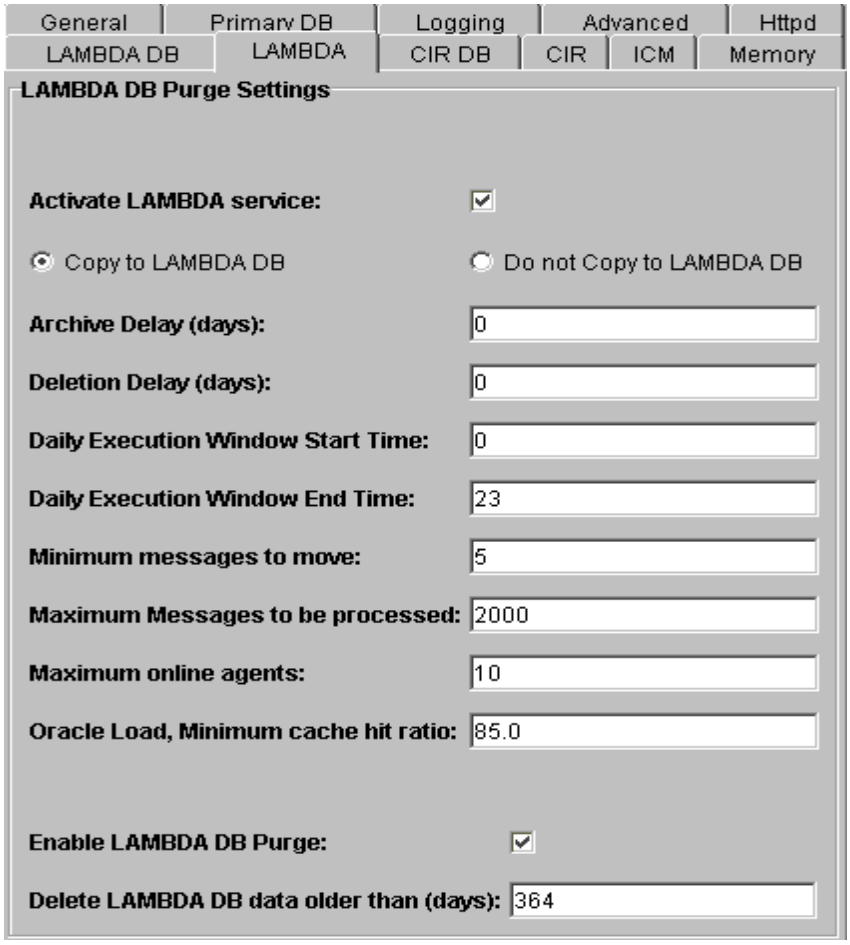
The Execution timeout determines how long user operations set to happen in the background will execute before timing out. The default setting is 10 minutes.

Note: If you set this value too low, some complex operations may not complete. If you set this value too high, system performance may be degraded.

LAMBDA Tab

LAMBDA refers to the functionality in E-Mail Manager that moves older messages to a separate database called the LAMBDA Database. LAMBDA prevents the Primary E-Mail Manager database from becoming too large.

The following figure shows the LAMBDA Tab. Following the figure are descriptions of the settings in this tab:



Activate LAMBDA Service

The check box for activating LAMBDA Service is hidden and enabled by default. To deactivate the LAMBDA process, the check box has to be made visible. To view the check box use Control + Shift + F5, and then un-check the check box for deactivation.

Failure to enable the check box will not initiate the LAMBDA process. This will lead to accumulation of data in the Primary database and will impact the operations of Cisco E-Mail Manager by inducing slowness.

Two options are available for the LAMBDA process:

- Copy to LAMBDA DB - LAMBDA moves the **Marked for Archive** (MFA) messages from the Primary Transaction Database to the LAMBDA database.

- Do not Copy to LAMBDA DB - LAMBDA directly deletes the messages from the Primary Transaction Database without copying to LAMBDA database based on the age of messages. This process is triggered based on the “Deletion Delay” set in the CEM Configuration Manager.

Examine the values of the options below and change as necessary.

Archive Delay (days)

The parameter Archive Delay is there for the 'Copy to LAMBDA' option. Enter the number of days for which the LAMBDA process has to wait before moving the messages from the Primary Transaction Database to the LAMBDA database. The default value for retaining the **Marked for Archive** (MFA) messages in the database is 30. This parameter can have values starting from 0 – 999 days.

For the option 'Do not Copy to LAMBDA DB', the parameter Archive Delay is disabled in the Configuration Manager. The messages are deleted from the Primary database based on the value (in days) entered in the Deletion Delay parameter.

Deletion Delay (days)

Enter the number of days after which the message is moved to the LAMBDA database or deleted from the Primary Transaction Database. The default value for Deletion Delay is 30. The number of days permitted for retaining the message is between 0 – 999.

Daily Execution Window Start Time

Enter the hour for the LAMBDA process to start executing.

Daily Execution Window End Time

Enter the hour for the LAMBDA process to stop executing.

Note: You must consider setting this window to the hours of the least heavy agent and message load for the instance.

Important:

From Cisco E-Mail Manager 5.0 Service Release 6 onwards, Daily Window Execution End Time can have values from 0 to 24.

LAMBDA Window Start Time is restricted to have any value between 0-23 hours. However, LAMBDA Window End Time can have values between 0-24 hours only from CEM Service Release 6. In Cisco E-Mail Manager Service Releases 4 and 5, the LAMBDA Window End Time is restricted to have values between 0-23 hours.

Users who now want to run LAMBDA process till midnight needs to specify 24 or 0 as the end time and XX as the start time. For example if users want LAMBDA process to run between 2300 and 0000 hours, they need to specify Window Start Time as 23 and Window End time as 24 or 0.

For users who want to run LAMBDA 24 hours, they need to give Window Start Time as 0 and Window End time can be 0 or 24

Note: If LAMBDA is set to run between 0 to 24 hours, LAMBDA will run from 0 to 23.59 hours only, it will not run for the last 1 minute, which is from 23.59 to 00:00.

Minimum messages to move

Enter the minimum number of messages to be moved to the LAMBDA database at one time. The LAMBDA process will execute if and only if the number of messages is greater than the value specified by this parameter. The default value is 1000.

Setting this value has performance implications: The smaller the number, the more often messages will be moved, and the more often performance will decrease.

Maximum Messages to be processed

Enter the maximum number of messages to be processed at a time. This parameter allows messages to be processed in batches if the messages are more than the value specified in this parameter. The default value is 2000.

Maximum online agents

Enter the maximum number of agents that can be logged in to CEM.

Setting this value has performance implications: The higher the number of agents, the greater the performance decreases while messages are moved.

Oracle Load, Minimum Cache Hit Ratio

The percentage entered is the minimum cache hit ratio; the database server can have when LAMBDA process is executed. If the cache hit ratio is lower than this value, LAMBDA will not run at that time.

Enable LAMBDA DB Purge

Check this option to enable LAMBDA DB purge. By default, the LAMBDA DB purge process is enabled.

Each time the LAMBDA cycle is executed, the number of messages specified in the parameter **Maximum Messages to be processed** is purged from the LAMBDA database.

If the number of messages eligible for LAMBDA purge is 1000 and the value specified in the parameter **Maximum Messages to be processed** is set as 100, then in one LAMBDA session, only 100 messages will be purged.

Delete LAMBDA DB data older than (days)

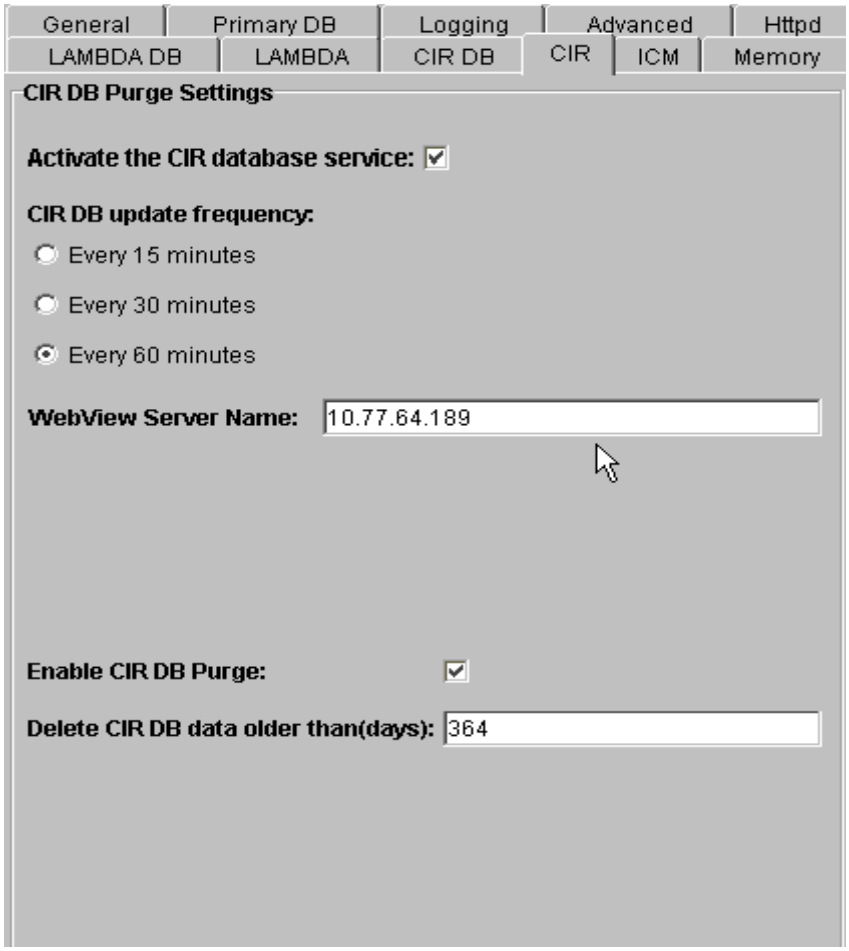
Enter the number of days for deleting the messages from the LAMBDA DB. The data older than the specified number of days will be purged.

The default value for this parameter is 364 days. If the value is given as 20 days, then the messages which are in the LAMBDA database for more than 20 days will be purged.

CIR Tab

CIR refers to the Cisco Independent Reporting database, from which reports are generated.

The following figure shows the CIR Tab. Following the figure are descriptions of the settings in this tab:



Activate the CIR database service

Check this box to enable data to be replicated to the CIR database so that reports can be generated.

The check box for activating CIR database service is hidden and enabled by default. To deactivate the process, the check box has to be made visible. To view the check box use **Control + Shift + F5**, and then un-check the check box for deactivation.

CIR DB update frequency

Select this option to have data replicated to the CIR database.

WebView Server Name

Enter the name of the server where you WebView for this instance is installed.

Enable CIR DB Purge

Check this option to enable CIR DB purge. By default, the CIR DB purge process is enabled.

The subset of the eligible messages specified by the parameter 'Maximum Messages to be processed' in the LAMBDA tab will be purged at a single CIR session.

Delete CIR DB data older than (days)

Enter the number of days for deleting the messages from the CIR DB. The data older than the specified number of days will be purged.

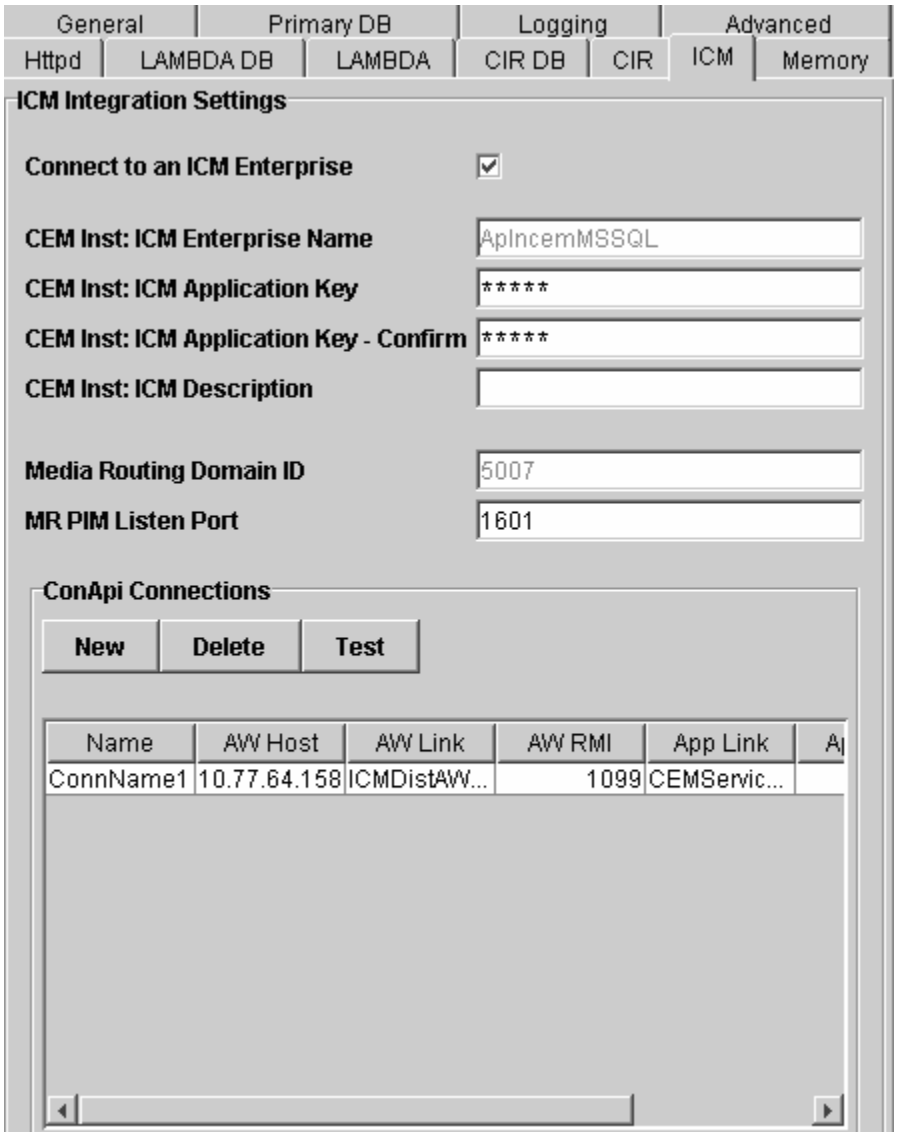
The default value for this parameter is 364 days. If the value is given as 20 days, then the messages which are in the CIR DB for more than 20 days will be purged.

Note: The CIR DB Purge will delete messages from the CIR Database only after the messages have been completely deleted from both the Primary database and LAMBDA database. Hence, the CIR DB Purge is dependant on LAMBDA DB Purge. CIR Purge Delay depends on the Deletion Delay time of messages both from LAMBDA and Primary Databases.

ICM Tab

Configure the instance's connection to ICM in this tab to have an integrated system with ICM software.

The following figure shows the ICM Tab in Cisco E-Mail Manager.



Caution:

Make sure that the ICM Setup is complete, before CEM installation.

CEM Inst: ICM Enterprise Name

The Enterprise Name of the E-Mail Manager instance must be established in the ICM Configuration Manager when you or another administrator created the Media Routing Domain and Application Instance to be used by E-Mail Manager.

Note: This field is case-sensitive. In this field, enter the same name as given in ICM Configuration Manager.

CEM Inst: ICM Application Key

The Application Key of the instance must be established in the ICM Configuration Manager. You must confirm this value by entering it a second time.

Note: This field is case-sensitive.

CEM Inst: ICM Description

Enter the description of the E-Mail Manager instance, up to 255 characters.

Media Routing Domain ID

The Media Routing Domain that is to be used to route e-mail messages for this instance must be established in the ICM Configuration Manager. You must get Media Routing Domain's ID from the ICM Configuration Manager and enter it in this field.

MR PIM Listen Port

An ICM connect port that listens for the MR PIM assigned to E-Mail Manager to connect with ICM.

ConApi Connections

ConApi Connections are required to configure E-Mail Manager and ICM Integrated Setup.

> **New** - This tab creates a new row in the table. Use New to create a new ConApi Connection.
>
> **Delete -** This deletes the rows in the table. Use Delete to delete an existing ConApi Connection.
>
> **Test -** This validates ICM parameters of selected ConApi connection. It attempts to open a ConApi connection to the ICM AW. If successful, it gives a message "ICM parameters validated for <selectedConApi connection>". On failure, an error message "Error in ConApi check: unable to establish connections within last 60 seconds" is displayed.

Note: Make sure that CEM service is not running when you are testing ConApi connection.

Enter information in the rows of the table as follows:

ICM Administration Connection Name: Enter a name for the remote connection this E-Mail Manager instance makes to ICM. There are no restrictions on this name.

ICM Distributor AW Host Name: Enter the name or IP address of the server where the Admin Workstation/Distributor is located.

ICM Distributor AW Link: Enter the Link name of Admin Workstation to which this instance of E-Mail Manager is to connect.

Note: The Remote Service Name field is case-sensitive.

ICM Distributor AW RMI Registry Port: Enter the Registry Port of Admin Workstation to which this instance of E-Mail Manager is to connect.

Application Link: Enter the Application Link name of this E-Mail Manager instance, for the Admin Workstation to connect.

Note: This field is case-sensitive.

Application RMI Registry Port: Enter the Registry Port of this E-Mail Manager instance, for the Admin Workstation is to connect.

LocalPort: This is also known as Application RMI Connection Port. LocalPort is used when there is a firewall between CEM and ICM AW.

Enter the LocalPort over which the ICM AW connection must communicate to CEM. If you enter a port number, then a connection is initiated over the registry port and communication occurs over this port. Ensure that both the Application RMI registry port and LocalPort are opened on the firewall.

Note:

- By default, the LocalPort is zero meaning that the communications occur over any port that is open on both servers.
- The specified LocalPort number must be different from the registry port number.

Memory Tab

The memory tab displays the peak memory usage for components. The heap memory for Inbasket, TServer, Spell Server, LAMBDA and CIR can be configured.

Setting the heap memory depends on the load on the system. The factors to be considered when specifying heap memory settings and the suggested values are as follows:

Inbasket

Factors: The incoming message rate and number of POP mailboxes

Suggested value: Both min and max set to 16MB

TServer

Factors: The number of active messages and number of logged-in agents

Suggested value: Both min and max set to 512MB

Spell Server

Suggested value: Both min and max set to 16MB

LAMBDA

Factor: In a LAMBDA process, the number of messages to be moved

Suggested value: Both min and max set to 96MB

CIR

Factor: In a CIR process, the amount of messages to be processed

Suggested value: Both min and max set to 96MB

Other Configuration Tasks

Other Configuration Tasks

This topic contains information on the following other configuration tasks you may need to perform on the Cisco E-Mail Manager Server:

- Working with InBasket Folders
- Configuring Spell-Check
- Editing TServer Properties
- Configuring MailTrack
- Backing Up the System

Working with InBasket Folders

The following table lists and describes the contents of the folders in the Instances/Instance-name/InBasket folder:

Folder Name	Contents
failures	Copies of messages that was not successfully stored in the E-Mail Manager database. The contents of this folder may be useful for diagnosing problems. Normally, this folder must be empty.
inbox	Messages that are waiting to be processed. When messages are processed, they are deleted from this folder automatically.
oversized	This contains messages those are larger than allowed by the Global InBasket Settings. The maximum threshold level (size) for oversize folder is 2 GB. There would be performance degradation if the oversize folder size is exceeded. The user will get a message when the oversize folder size is exceeded. The user has to take appropriate action and remove messages from the oversized folder.
recover	This folder contains copies of all messages that enter E-Mail Manager. Messages in this folder are managed according to the Global InBasket Settings. The optimal size of the recovery folder is dependent on the incoming mail rate. It is suggested that the CEM

	administrator sets an archive delay of 1 day and a purging delay of 14 days. That is, the messages in the recovery folder will be archived (zipped) after 1 day and the archived files will be deleted from the recovery folder after 14 days. The CEM administrator can increase or decrease the frequency depending on the incoming e-mail rate.
temp	Files generated by message processing. You can safely delete these files.

Configuring Spell-Check

Modify spell-check properties for each instance of E-Mail Manager in the `SpellingServer.properties` file, a sample of which is shown at the end of this topic.

Note: The properties in the SpellingServer.properties file affect each user of the E-Mail Manager instance. You cannot set different spell-check options for different users in a single instance.

To modify spell-check options:

1. Open the SpellingServer.properties file in `\email_folder\instances\instance_name\spell`.
2. Modify the settings for the properties, which are described in the tables below.
3. Save the file.
4. Restart the E-Mail instance.

Spell-Check Properties

The following table lists the spell-check properties that are part of the default SpellingServer.properties file:

Property	Possible Values
UserLexLocation	The folder where user dictionaries are stored. The default is "dictionaries".

MainLexFiles	The main dictionary files. The default is "ssceam.utlx , ssceam2.clx".
Suggestions	typographical (default) - Suggested words are spelled like the misspelled word. phonetic - Suggested words are pronounced like the misspelled word.
MinSuggestDepth	From 1 to 100, the depth with which spell-check searches for suggestions. Spell-check can supply up to eight suggestions for a misspelled word. Each suggestion is given a ranking from 1 to 100, and the higher the ranking the more likely the word is the correct replacement. The MinSuggestDepth number is the suggestion ranking with which spell-check is satisfied and stops searching for additional suggestions. The higher the number for MinSuggestDepth, the more likely that a suggestion will be the correct replacement, but the longer spell-check will take to generate suggestions. The lower the number, the faster suggestions are generated, but the less likely suggestions will be the correct replacement. The default is 30.

Additional Properties

The following table lists additional properties that you can add to the SpellingServer.properties file. When these properties are not listed, spell-check automatically uses the default values. Therefore, you only need to add these properties and indicate their values if you do not want to use the default values.

Caution: Do not add properties other than those listed to the `SpellingServer.properties` file.

Property	Possible Values
ALLOW_ACCENTED_CAPS_OPT	true (default) - Words containing capital letters with accents (for example, Á), are not flagged when you spell-check a response, if the word is spelled correctly. false - Words containing capital letters with accents are flagged as misspelled, regardless of the word's spelling. **Note:** Setting this property to false can slow spell-check.
CASE_SENSITIVE_OPT	true (default) - Words with the same spelling but different capitalization are treated as different words. false - Words with the same spelling but different capitalization are treated as the same word.
IGNORE_ALL_CAPS_WORD_OPT	false (default) - Words with all uppercase letters are spell-checked. true - Words with all capital letters are not spell-checked.
IGNORE_CAPPED_WORD_OPT	false (default) - Words with an initial capital letter are spell-checked. true - Words with an initial capital letter are not spell-checked.
IGNORE_DOMAIN_NAMES_OPT	false (default) - Words that look like Internet Domain names, such as software.com, are spell-checked. true - Words that look like Internet Domain names are not spell-checked.
IGNORE_MIXED_DIGITS_OPT	false (default) - Words with a mix of letters and numbers are reported as misspellings. true - Words with a mix of letters and numbers are not spell-checked.
IGNORE_NON_ALPHA_WORD_OPT	true (default) - Words that contain no alphabetic characters, such as a phone number, are not spell-checked.

	false - Words that contain no alphabetic characters are spell-checked.
REPORT_UNCAPPED_OPT	false (default) - Spell-check does not check for proper capitalization. For example, "canada" is not flagged. true - Spell-check does check for proper capitalization.
SPLIT_HYPHENATED_WORDS_OPT	true (default) - Hyphens are treated as word separators during spell-check. That is, if a hyphenated word is not in the dictionary, spell-check checks the spelling of the two words separated by the hyphen. false - Hyphens are not treated as word separators. If a hyphenated word is not in the dictionary, it is flagged as misspelled, even if the two separated words are spelled correctly.
SUGGEST_SPLIT_WORDS_OPT	false (default) - Spell-check does not attempt to suggest split words. true - Spell-check attempts to suggest two words for a single misspelled words. For example, spell-check would suggest "the boy" for "theboy".

Sample SpellingServer.properties file

Following is a sample SpellingServer.properties file that has been modified to include additional properties set to the non-default value:

```
SpellingServer.properties

UserLexLocation=dictionaries

MainLexFiles=ssceam.utlx , ssceam2.clx

Suggestions=typographical

MinSuggestDepth=30

REPORT_UNCAPPED_OPT=true

SUGGEST_SPLIT_WORDS_OPT=true
```

Editing TServer Properties

Edit certain properties in the `tserver.properties` file, which is in the Instance/transact folder.

Note: After modifying the `tserver.properties` file, restart the service for the instance.

The following table lists and describes the properties you may need to edit:

Property	Description	Default
TRACE_MEMORY	If TRUE, TServer writes memory and thread information to the logs, regardless of the setting of LOG_EVENTS.	FALSE
TRACE_MEMORY_TICKER	The number of 5-second intervals between when TServer writes memory traces to the logs. For example: `TRACE_MEMORY_TICKER=1` would cause TServer to write memory traces every 5 seconds.	120
MAX_SENDER_ROWS	The maximum number of messages displayed for the Sender History. If there are more messages in the Sender History than allowed to be displayed by this property, the most recent messages are displayed.	100 **Note:** If you entirely remove the MAX_SENDER_ROWS property from the tserver.properties file, the value used by TServer is 500.
MAX_TRACKING_ROWS	The maximum number of messages displayed for the Tracking Number History. If there are more messages in the Tracking History than allowed to be displayed by this property, the most recent messages are displayed.	100 **Note:** If you entirely remove the MAX_TRACKING_ROWS property from the tserver.properties file, the value used by TServer is 500.
MAX_SEARCH_ROWS	The maximum number of messages	100

	displayed for message search results. If there are more messages that meet the search criteria than allowed to be displayed by this property, the most recent messages are displayed.	Note: If you entirely remove the MAX_SEARCH_ROWS property from the tserver.properties file, the value used by TServer is 500.
ARM_HEARTBEAT	The number of seconds between CTI Server Heartbeats. **Note:** Reset this property if E-Mail Manager is connected to the ICM CTI Server over a WAN.	10
ARM_REQUEST_TIMEOUT	How long to wait for a response from the CTI server before failing.	10
ARM_RECONNECT_TIMEOUT	How long to wait between attempts to open an ARM connection.	30
ARM_WAIT_FOR_APPLICATION	How long to wait from when the CTI Server connection goes up to when message sending/receiving is allowed.	3
ARM_SOCKET_READ_TIMEOUT	How long to wait for ARM connection traffic before reconnecting.	60
connectionsToStore	The number of database connections to open. **Note:** Set this number higher if E-Mail Manager is using a high-end database and there is a large load on the server. See the UI Server Problems section in the Troubleshooting section in this guide for more information.	7
EVENT_RECONNECT_TIMEOUT	How long to wait between attempts to open a CEMEVENT connection.	30
EVENT_WAIT_FOR_APPLICATION	How long to wait from when the CEMEVENT connection goes up to when message sending/receiving is allowed.	3
LOGS_CUSTID	The name of the customer, used when	[customer name]

	sending logs to the Cisco Technical Assistance Center Set this value to the name of your company.	
MAX_DELETES	The maximum number of e-mail message deletions that can be performed at one time	250
MAX_MAIL_RETRY_COUNT	The number of times E-Mail Manager will attempt to send an outgoing message that fails to be sent properly.	1200
MAX_ROWS	The maximum number of rows to return from various queries,such as retrieving messages in a queue.	250

Note: To prevent the tracking number from appearing in the subject line, add the following line in the `tserver.properties` file:

NOTNSUBJ=true

Note: When using a third-party mail server or when there is a mail server overload, you might encounter performance issues like delay in outgoing mails, etc. In that case, set the TServer properties in the tserver.properties file as follows:

- Reduce the MAX_MAIL_RETRY_COUNT from 1200 times to 25 times
- Reduce the EVENT_RECONNECT_TIMEOUT from 30 minutes to 5 minutes

Configuring MailTrack

MailTrack has the tracking number, suggested response templates, comments, and other system information associated with the message.

When an agent responds to a MailTrack message from the default notification email address, the response is sent through and tracked by E-Mail Manager. The original message is then archived automatically.

The configuration for MailTrack messages is controlled by the mailtrack.cfg file, which is located in the *instance-name*/engine folder on the E-Mail Manager server.

Caution: This file applies to all MailTrack messages processed by the instance; you cannot configure MailTrack differently for individual agents or groups.

Note: MailTrack has been tested with the following e-mail client applications:

- Outlook Express
- Outlook 2000
- Netscape Messenger
- Eudora 4.3

The following example shows the beginning of the mailtrack.cfg file as delivered:

```
# very important! must match internally!
VERSION: 4.1
# even this is a comment
#
# CeM MailTrack headerfile: alter cautiously
# lines not starting with MT> or MTH> are TEXTID tags,
# # are comments,
# MT> lines are data.
# blank lines indicate the end of a text block.
#
# try to be shorter than 65 chars although about 126 will do.
#
# certain patterns can have automatic internal substitions
# these are marked with %name%
# - to let a real % in, use %%
# - to put in a non-stopping blank line,use % %
#
#
# 1 2 3 4 5 6
#234567890123456789012345678901234567890123456789012345678901234567890123456789012345
```

Agents responding to MailTrack messages will read the text in the lines in the mailtrack.cfg file that begin with "MT>" and "MTH>". You may want to alter the text in these lines to provide agents with more specific instructions.

For example, you may want to change the line:

```
MT> Prepare your response here:
```

To:

```
MT> Prepare your response here. Do not forget to (1) delete these
MT> lines,(2) Use one of the suggested templates shown below for your
MT> response, and (3) Add one of the signatures shown below.
```

Caution: If you want to modify MailTrack configuration beyond this simple text substitution, contact Cisco Technical Support.

For more information about responding to MailTrack messages, see the *Cisco E-Mail Manager Agent Guide*.

Backing up the System

After you have installed E-Mail Manager and created one or more instances, you must implement a backup plan for the E-Mail Manager installation folder and the database instances.

Backing up CEM Configuration

You can backup the CEM configuration in both standalone and integrated setup.

Before taking the backup, make note of the following:

1. CEM Instance name
2. IP addresses and port numbers
3. Database login details and settings
4. The ESs and SRs applied on the CEM system
5. Certain parameters specified in the configuration files are stored in the database while configuring CEM. If you are changing any parameters, it is necessary to create a backup of database as well as the configuration and property files.

Now, take a backup of the following folders:

- Folder <Install Drive>:\Program files\Cisco
- If the UIserver is on different machine, the back up <Install Drive>:\Cisco\
- For WebView, the backup of <Install Drive>:\cem\ and <Install Drive>:\ Sybase\ EAserver

If necessary, contact Cisco Technical Support for help.

Backing up CEM Database

Perform the following before taking backup of the databases:

1. From the Cisco E-Mail Configuration Manager, note the following:
   - Primary, LAMBDA and CIR DB settings
   - Advance Settings (TServer Listen Port, TServer RMI Listen Port, TServer Events Port, RServer Inbound Mail Port, InBasket Listen Port, InBasket RMI Listen Port and Spell Engine Port)

2. Stop the following Services:
   - ALL CEM Services (CEM Core service and Instance Services)
   - IIS and WWW Services
   - Jaguar Services

Now, the Database Administrator can take back up of the Primary, LAMBDA and CIR databases.

Dr. Watson Information

Dr. Watson

It is recommended that you set up Dr. Watson on the Windows 2000 Server running the E-Mail Manager Core Server.

Dr. Watson records application exceptions in E-Mail Manager. You can send the files that Dr. Watson generates to Cisco technical support for help in analyzing problems.

For more information on Dr. Watson, see the Windows 2000 online help.

How Use Dr. Watson

There are three parts to setting up Dr. Watson for E-Mail Manager:

- Setting Dr. Watson Options
- Setting the Windows NT Registry
- Setting up an E-Mail Manager Instance to use Dr. Watson

Setting Dr. Watson Options

To set Dr. Watson Options:

1. Open Dr. Watson from the command line:

    a. From the **Start** menu, select **Run**.

    b. Enter **drwtsn32** and click **OK**.

2. Select a Log File Path and Crash Dump location.

    Note: The generated log file will be about 100 Kb, and the crash dump file will be about 6 Mb. Be sure to select locations on the server with enough free disk space.

3. If selected by default, clear the checkboxes for Visual Notification and Sound Notification to prevent the notifications from occurring.

Setting the Windows NT Registry

Settings for Dr. Watson are stored in the registry in the following location:

`\\HKEY_LOCAL_MACHINE\Software\Microsoft\Windows NT\CurrentVersion\AeDebug`

To view the registry settings:

1. From the **Start** menu, select **Run**.
2. Enter **regedit** and click **OK**.
3. Navigate to the location above.

In the registry:

- The Auto setting must have a value of "1".
- The Debugger setting must begin with "drwtsn32".

If these settings are not correct:

1. From the **Start** menu, select **Run**.
2. Enter **drwtsn32 -i** and click **OK**.

Setting Up an E-Mail Manager Instance to Use Dr. Watson

To set up an E-Mail Manager instance to use Dr. Watson:

1. Open the rserver.cfg file for the instance, located in the *E-Mail_Manager_core_installation_folder*\core\Instances\doc\engine folder.
2. Find the line RUN_OPT=CACHE_AR.
3. Following this line, add , NOHANDLER, so the line reads:
   `RUN_OPT=CACHE_AR, NOHANDLER`
4. Save the change.
5. Restart the E-Mail Manager instance.

CEMWatcher

CEMWatcher

- This topic contains the following information:
  - What is CEMWatcher
  - CEMWatcher Requirements and Limitations
  - CEMWatcher Files
  - What CEMWatcher Monitors and Includes in Reporting
  - What CEMWatcher Can Do
  - How to Install CEMWatcher and Configure CEMWatcher
  - How to Run CEMWatcher
  - CEMWatcher Troubleshooting

What is CEMWatcher?

CEMWatcher is a tool for monitoring E-Mail Manager from other Windows computers. CEMWatcher is designed to monitor Cisco E-Mail Manager operations and report conditions that cause system downtime. If CEMWatcher detects a situation where E-Mail Managers conditions or mail response time deviate beyond the parameters you set, it sends an e-mail message or NT message to specified contacts.

CEMWatcher Requirements and Limitations

You can install CEMWatcher on any Windows 2000 or Windows NT computer with the Java Runtime Environment (JRE) version 1.3 (or later) installed. Note the following CEMWatcher limitations:

- One installation of CEMWatcher can monitor only one E-Mail Manager Instance.
- One installation of CEMWatcher can monitor only one Agent Desktop (UI Server) even when multiple Agent Desktops are used for the E-Mail Manager instance.
- CEMWatcher does not monitor E-Mail Manager thresholds or system statistics related to ICM integration.

CEMWatcher Files

CEMWatcher consists of a collection of files that you can install anywhere on the network.

These files must be in the same folder, which must be writable. The following table lists and describes the files that are part of CEMWatcher:

File	Description
baseline.cfg	Defines the baseline values to test against. You must not modify this file.
deviation.cfg	Defines values for the E-Mail Manager system and its queues that if exceeded set off an alarm condition.
gw.cfg	Sets configuration parameters for CEMWatcher.
cemwatcher.jar	The collection of Java classes that is CEMWatcher. Do not modify the contents of this file.
run-cemwatcher.bat	The file to run to start CEMWatcher.
cwlisten.bat	Tests whether NT Messaging is working by sending a test message to localhost. Run-cemwatcher.bat calls this file. You can also manually run cwlisten.bat.
alarm.bat	A file you can optionally create and define that executes when CEMWatcher detects an alarm condition.
quiet.bat	A file you can optionally create and define that executes when CEMWatcher determines that there is not an alarm condition
always.bat	A file you can optionally create and define that executes on every CEMWatcher iteration, regardless of whether or not there is an alarm condition.

What CEMWatcher Monitors and Includes in Reporting

CEMWatcher monitors both queue and system statistics.

Specifically, CEMWatcher monitors the ability of E-Mail Manager to receive, process, store, and send e-mail.

Queue Monitoring

CEMWatcher monitors the following outbound queues:

- outError--Over Retry Count
- outError--Internal
- outMailTrack Sent
- outWaiting
- outMailTrack Waiting
- outSent
- outMailTrack Error--Internal
- outMailTrack Error--Over Retry Count

CEMWatcher monitors the following inbound queues:

- unassigned
- externalRoutingError
- diagnostic
- admins
- overdue
- overload
- rejected

System Monitoring

CEMWatcher monitors the following:

- Total records in system including incoming, outgoing, templates, and other files
- Mail send fails, will be retried
- Orphan messages given to unassigned
- Mail send failures, permanent SMTP error
- Mail send failures, over max retry count
- Active database connections
- Message assign successes
- Mail sent successfully
- Mail sent with default FROM
- External message store successes
- Message assign failures
- Database Connections
- Thread waited for db conn
- Mail send failures, missing required field
- Mail send failures, missing To field
- Mail send failures, fatal error
- Message store failures
- The list of email addresses used as active inboxes by the Cisco E-Mail Manager instance.
- The list of email addresses used as inactive active inboxes by the Cisco E-Mail Manager instance.
- The URL of the Cisco E-Mail Manager Agent UI.

- All the active POP3 mailboxes of the Cisco E-Mail Manager instance, making sure that Cisco E-Mail Manager can receive and respond to mail sent to any of the instance's active mailboxes.

What CEMWatcher Can Do?

This section contains the following information:

- Overview
- What is an Alarm Condition
- What Conditions Can Trigger an Alarm
- Actions for Alarm Conditions
- Actions for Non-Alarm Conditions
- Constant Actions

Overview

CEMWatcher can perform actions you define every time it loops. When CEMWatcher loops, it determines if there are alarm conditions.

What is an Alarm Condition?

An alarm condition is the situation in which one or more conditions of the E-Mail Manager instance being monitored surpass the deviation thresholds you define for CEMWatcher. The alarm condition signifies that there are problems with the instance of which you need to be aware.

What Conditions Can Trigger an Alarm

The following conditions can trigger an alarm:

- When the Agent Desktop is not available.
- When E-Mail Manager does not respond to a message sent to a POP3 mailbox it monitors within a specified time limit.
- When the number of messages in any of the following monitored outbound queues falls outside a set range:

  - outError--Over Retry Count
  - outErrorInternal
  - outMailTrack Sent
  - outWaiting
  - outMailTrack Waiting
  - outSent
  - outMailTrack ErrorInternal
  - outMailTrack Error--Over Retry Count

- When the number of messages in any of the monitored inbound queues falls outside a set range:
  - Unassigned
  - ExternalRoutingError
  - Diagnostic
  - Admins
  - Overdue
  - Overload
  - rejected

- When the values of any of these monitored system values is lower or higher than a set range.

  Note: Some of these values can be reset from System Information screen in the Administration Desktop.

- Total Records in System including incoming, outgoing, templates, and other files
- Mail send fails, will be retried
- Orphan messages given to unassigned
- Mail send failures, permanent SMTP error
- Mail send failures, over max retry count

- Active database connections
- Message assign successes
- Mail sent successfully
- Mail sent with default FROM
- External message store successes
- Message assign failures
- Database Connections
- Thread waited for db conn
- Mail send failures, missing required field
- Mail send failures, missing To field
- Mail send failures, fatal error
- Message store failures

Actions for Alarm Conditions

When CEMWatcher detects an alarm condition, it can do one or more of the following:

- Run an alarm.bat file. You must create the alarm.bat file in the same folder as CEMWatcher and define it to take specific actions.
- Send a short e-mail notification, which includes the time of the notification and the specific conditions that triggered the notification.
- Send a long e-mail notification, which is a short e-mail notification with the snapshot appended. The snapshot contins system information and data.
- Send an NT notification, which is the same as using the Windows NT/2000 "net send" command.

  Note: The default configuration for CEMWatcher sets the target of the NT notifications to "localhost." This sends the NT notification to the machine running CEMWatcher. Messages can be sent to other Windows NT, Windows 2000 and WindowsXP machines and domains by changing the "localhost" in "NT_notifyWho=localhost" to the desired address. See Microsoft's NET SEND documentation for additional information.

You determine the actions for alarm conditions when configuring the gw.cfg file.

Actions for Non-Alarm Conditions

When there is no alarm condition, CEMWatcher can run a quiet.bat file. You must create the quiet.bat file in the same folder as CEMWatcher and define it to take specific actions.

Constant Actions

Regardless of the presence or absence of an alarm condition, CEMWatcher can run an always.bat file. You must create the **always.bat** file in the same folder as CEMWatcher and define it to take specific actions.

How to Install CEMWatcher?

To install CEMWatcher, simply copy the CEMwatcher directory and its contents from the CD to a folder on the computers from which you want to run CEMWatcher.

Note:

- Ensure to write-enable the directory.
- All computers running CEMWatcher must have JRE 1.3 (or later) installed.

  You can install multiple instances of CEMWatcher in different folders on the same computer and configure each to monitor the same or different E-Mail Manager instances. You can also install CEMWatcher on multiple computers and configure each to monitor the same or different E-Mail Manager instances.

  Typically, you would install CEMWatcher on its own computer, not on a computer running any component of the E-Mail Manager system. You would not install CEMWatcher on the computers running the CEM Server, the UI Server, the POP3 Server, the SMTP Server, or the Database Server, because if one of these computers failed, causing E-Mail Manager to fail, CEMWatcher would fail as well and you would not receive notification.

How to Configure CEMWatcher?

After you install CEMWatcher, you must configure it to perform as you want.

Configuring CEMWatcher involves the following tasks:

- Setting Up an E-Mail Account for CEMWatcher
- Configuring CEMWatcher Poperties in the gw.cfg File
- Configuring Deviation Properties in the deviation.cfg File
- Configuring Baseline Values
- Creating Your Own Batch Files

Setting up an E-Mail Account for CEMWatcher

Each CEMWatcher must have its own dedicated e-mail account on a POP3 Server. You specify the e-mail account host server, name, and password in the gw.cfg file.

Configuring CEMWatcher Properties in the gw.cfg File

You configure CEMWatcher by editing the property values in the gw.cfg file. The following table lists and describes the properties in the gw.cfg file.

Note: Properties are described as well in comments in the gw.cfg file.

Property	Description
testmode	The mode CEMWatcher runs in. Possible value is 0, for normal use. **Note:** You must not change this value unless advised by Cisco technicians.
loops	The number of loops CEMWatcher makes on execution. A value of 0 means CEMWatcher runs continuously.
agentURL	The URL of the Agent Desktop for the E-Mail Manager instance. The format is: *server-name/instance-name*.

url_adr	The URL of the Administration Desktop. The format is: *server-name:port#*.
loop_seconds	The delay between iterations of the diagnostic loop.
overdue_seconds	The number of seconds CEMWatcher waits for an e-mail message response from E-Mail Manager before considering it overdue.
m_pop_host	The name of the POP3 Server on which CEMWatcher has a dedicated e-mail account.
m_pop_account	The name of the POP3 e-mail account used by CEMWatcher.
m_pop_pswd	The password of the POP3 e-mail account used by CEMWatcher.
SMTP_HOST	The name of the SMTP gateway that CEMWatcher uses to send e-mail messages.
doMailLoop	Whether CEMWatcher must test the POP3 Server (1), or not (0). **Note**: If the value of doMailLoop is 1, the value of doRserverLoop must be 1.
doRserverLoop	Whether CEMWatcher must retrieve the system snapsnot (1), or not (0).
doUILoop	Whether CEMWatcher must test the Agent Desktop (1), or not (0).
NT_notify	If NT notification must be sent. Possible values are: • off - to not send N notification • on - to send NT notification
NT_notifyWho	Where to send NT notification.
alarm_batch	How the alarm.bat file needs to be run in the event of an alarm condition. Possible values are: • yes- to run • no - to not run
quiet_batch	How the quiet.bat file needs to be run in the event that there is

	no alarm condition. Possible values are: • yes- to run • no - to not run
always_batch	How the always.bat file must be run on every CEMWatcher iteration. Possible values are: • yes- to run • no - to not run
shortmail	If short e-mail notification has to be sent. Possible values are: • off - to not send short e-mail notification • on - to send short e-mail notification
longmail	If e-mail notification with the snapshot appended has to be sent. Possible values are: • off - to not send e-mail notification • on - to send e-mail notification
longmailaddr	The e-mail address to which to send notification with the snapshot appeneded.
shortmailaddr	The e-mail address to which to send short notification.
ShortNotifyEmailHeader	The beginning line of the header for short e-mail notifications. The To: line is displayed in the message, but does not affect where the message is sent. **Caution**: Do not delete or comment-out this line.
Subject	The subject of the short e-mail notification.
X-Priority	The priority of the short e-mail notification.
ShortNotifyEmailHeader ends here	An indication that the short e-mail notification header ends. **Caution**: Do not delete or comment-out this line.
LongNotifyEmailHeader	The beginning line of the header for long e-mail notifications. To: line is displayed in the message, but does not affect where the message is sent.

	Caution: Do not delete or comment-out this line.
Subject	The subject of the long e-mail notification.
X-Priority	The priority of the long e-mail notification.
LongNotifyEmailHeader ends here	An indication that the long e-mail notification header ends. **Caution**: Do not delete or comment-out this line.

Configuring Deviation Properties in the deviation.cfg File

You determine what values for certain E-Mail Manager queues and system properties trigger an alarm condition by configuring deviation properties in the deviation.cfg file.

Each line of the deviation.cfg files lists a monitored value name, a string describing the monitored value that is used in CEMWatcher reports and messages, and a deviation value, for example:

```
monitored_value_name - a string as it appears in cemwatcher reports and
messages = -1
```

You set deviation values as follows:

- A deviation value of 0 means that any value other than the baseline value triggers an alarm condition.
- A deviation value of an positive integer means that any value that differs, greater or less, from the baseline value by more than that integer value triggers an alarm condition. For example, the baseline for the rejected skill group is 0, so if the deviation value for rejected skill group is 4, an alarm condition is triggered when the rejected skill group owns 5 or more messages.
- A deviation value of -1 means that the queue or system property is not monitored and never triggers an alarm condition.

See the deviation.cfg file for the queue and system properties for which you can set deviation values.

Note: By default, the deviation value for all queues and system properties is -1, meaning that none are monitored. You must edit this file to have any queues or system properties monitored.

Configuring Baseline Values

Do not modify the baseline values set in the baseline.cfg file on your own. For assistance, please contact the Cisco Technical Assistance Center.

Creating Your Own Batch Files

You can optionally create your own batch files to run in different situations as follows:

- always.bat, to run on every CEMWatcher loop.
- quiet.bat, to run when there is no alarm condition.
- alarm.bat, to run when there is an alarm condition.

You can define these batch files to perform any actions supported by your business systems and environment.

You set whether these batch files are used in the gw.cfg file.

Note: These batch files must be in the same folder as CEMWatcher.

How to Run CEMWatcher?

To run CEMWatcher, simply double-click the runcemwatcher.bat file. A command console opens while CEMWatcher is running.

To stop CEMWatcher either:

- Simultaneously hit the "Control" and "C" keys in the command console, or
- Close the command console.

If you accidentally start CEMWatcher without a command console (for example, by invoking it from another batch file that runs it in the background, or by double-clicking the **cemwatcher.jar** file), you can stop it by changing the "loops" value in **gw.cfg** to "loops=1." CEMWatcher then quits after the next loop.

Caution: If you close the command console, CEMWatcher stops running.

CEMWatcher Troubleshooting

If CEMWatcher is not performing as expected, check that:

- JRE 1.3 is installed on the computer running CEMWatcher.
- All CEMWatcher files are in the same folder.
- The folder containing CEMWatcher is writable.
- You have created an e-mail account for CEMWatcher on a POP3 server and correctly entered the account information in the gw.cfg file.
- The computer running CEMWatcher has network access to the E-Mail Manager Administration Desktop, the Agent Desktop, and the POP3 Server hosting the CEMWatcher e-mail account.
- NT Messaging is turned on, if you are using this feature. To test whether NT Messaging is turned on, in a command prompt, enter: net send localhost test. If you receive an error message, try starting NT Messaging by entering: net start messenger. Then test NT Messaging again.
- If you are sending a notification to another computer or domain using NT messaging, try sending a message from a command console by using the value in NT_notifyWho. For instance, if NT_notifyWho=machineA, type:

  ```
  net send machineA <sample message text>
  ```

  A pop up message appears on the machine to which you sent the message. If it does not, you need to resolve the issues preventing the messaging service from working.

Windows Services Information

Windows Services Information

This topic contains the following sections:

- Windows Services
- How to Work with Windows Services

Windows Services

On the E-Mail Manager server, you need to know about the following services:

- Core Server Service
- Instance Services
- IIS Services

Core Server Service

The service Cisco E-Mail Manager Core Server must be running for any instances of E-Mail Manager that are part of the installation to work.

Instance Services

There is one Windows service for each instance of E-Mail Manager that is part of the installation, with the name Cisco E-Mail Manager instance-name. The instance service must be running in order for users to access either the Administration Desktop or Agent Desktop for the instance.

IIS Services

The UI Server relies on the IIS Services. When IIS is installed, by default, the following Windows 2000 services begin automatically on startup:

- IIS Admin
- World Wide Web Publishing
- Simple Mail Transport Protocol (SMTP)

The IIS Admin and World Wide Web Publishing services must be running in order for agents to connect to the Agent Desktop and for applications using the E-Mail Manager API to function.

How to Work with Windows Services

This section contains information on the following tasks:

- Using the Windows Services Manager
- Using the Configuration Utility
- Disabling the IIS SMTP Service
- Starting the IIS Admin Service

Using the Windows Services Manager

To open the Windows Component Services window, from the Start menu, select **Settings** > **Control Panel** > **Administrative Tools** > **Component Services**. The Component Services window opens, enabling you to start, stop, or disable services.

Using the Configuration Utility

You can work with the Windows service for a specific instance through the Configuration Utility.

Disabling the IIS SMTP Service

The E-mail Manager UI Server requires only the World Wide Web Publishing and IIS Admin services. If you do not need IIS to provide SMTP service, disable the SMTP service or set the service to Manual on startup.

Starting the IIS Admin Service

In order for the Agent Desktop to run, the IIS Admin and World Wide Web Publishing services must be started.

Note: The IIS Admin service starts automatically if any subordinate services are set to automatic.

Removing E-Mail Manager

Removing Cisco E-Mail Manager

This topic contains the following sections:

- How to Remove the CEM Server
- How to Remove the UI Server
- How to Remove the WebView Server

How to Remove the CEM Server

Removing the E-Mail Manager Core Server involves the following steps:

1. Removing the E-Mail Manager services
2. Removing the CEM Server
3. Deleting CEM Server folders

Removing the E-Mail Manager Services

Remove the E-Mail Manager service for a specific instance, or for the entire program.

To remove an E-Mail Manager Service:

1. Start the MS-DOS command prompt.
2. Change folders to *E-Mail_Manager_core_installation_folder*/bin.
3. Enter the wlservice command to remove the service:
   `wlservice -u "`*`service-name`*`"`

For example, to remove the service for an instance:

```
wlservice -u "Cisco eMail Manager Instance_1"
```

You can also remove the service for the Core Server:

```
wlservice -u "Cisco eMail Manager Core Server"
```

Removing the CEM Server

Remove the E-Mail Manager CEM Server using the Add/Remove Programs option in the Windows 2000 Control Panel.

Caution: Do not complete these steps if you only want to remove an E-Mail Manager instance. These steps remove the entire program.

1. In the Add/Remove Programs dialog box, select **Cisco E-Mail Manager**.

2. Click **Add/Remove**. You are prompted to confirm that you want to remove the program.

3. Click **Yes** to remove E-Mail Manager.

Deleting CEM Server Folders

Delete the folder for an E-Mail Manager instance, or for the entire E-Mail Manager application. Folders for E-Mail Manager instances are in the *E-Mail_Manager_CEM_installation_folder/*
`instances` folder.

Caution: Before deleting any folders, you may want to save a backup copy of the `rules.cfg` file for each instance you are deleting. This file islocated in the *E-Mail_Manager_core_installation_folder*/`Instances/Instance-name/engine` folder.

How to Remove the UI Server

Removing the UI Server requires the following steps:

1. Uninstalling the UI Server

2. Removing the UI Server Web application from ServletExec

3. Removing UI Server files

4. Removing the CiscoGUID.DLL file

Uninstalling the UI Server

Remove the E-Mail Manager UI Server by instance. If you are removing the entire E-Mail Manage program, you can remove each installation of the UI Server. If you are removing an instance, you can remove just the UI Server for that instance.

Remove the UI Server using the Add/Remove Programs option in the Windows 2000 Control Panel.

1. In the Add/Remove Programs dialog box, select the UI Server for the instance you want to remove.

2. Click **Add/Remove**. You are prompted to confirm that you want to remove the program.

3. Click **Yes** to remove the UI Server.

Removing the UI Server Web Application from ServletExec

If you are not planning on removing ServletExec, you must remove the UI Server from the list of ServletExec Web Applications.

If you are removing ServletExec as well as the UI Server, you can skip this step.

1. Open the ServletExec Administration application in a browser.

2. From the **Web Applications** menu, select **configure**.

3. Select the **Remove** checkbox in the row(s) of the UIServer(s) to remove, and click **Remove**.

Removing UI Server files

After you have removed the UI Server from ServletExec, delete the UI Server installation directory.

Removing the CiscoGUID.DLL file

The CiscoGUID.DLL file is installed in the Windows System directory. Remove this file.

How to Remove the WebView Server

You remove the WebView Server using the Add/Remove Programs option in the Windows 2000 Control Panel.

1. In the Add/Remove Programs dialog box, select the **WebView Server**.
2. Click **Add/Remove**. The WebView Install Shield dialog box opens.
3. Check the **Remove** radio button.
4. Click **Next**>. You are prompted to confirm the removal.
5. Click **OK**.
6. When the removal is complete, click **Finish**.

Configuration Troubleshooting

Configuration Troubleshooting

This topic contains the following sections:

- Database Connection Problems
- UI Server Problems
- ICM Integration Problems
- WebView Installation Problems

Database Connection Problems

If E-Mail Manager is experiencing problems with its database connections, review the following questions:

Question	Action
Did you make any recent changes to the databases?	If yes, restart the E-Mail Manager services.
Did you move the databases?	If yes, use the Configuration Utility's database tabs to ensure that E-Mail Manager is pointing to the correct databases.
Did you move the E-Mail Manager instance?	If yes, ensure that the registry entries on the new E-Mail Manager server are correct.
Is the database using a non-standard port?	If yes, and if your database administrator requires this, use the Configuration Utility's database tabs to enter the correct port.

Note: The system time in the CEM Server and the Database servers must be same for the CEM processes (that is, LAMBDA process and CIR process) to function as desired.If you continue having database connection problems, before calling the Cisco TAC, ensure you have the following information:

- Database type
- Database version
- JDBC driver information

UI Server and Agent Desktop Problems

The following table lists potential problems and recommended actions related to the UI Server and the Agent Desktop:

Problem	Recommended Action
Under heavy load, agents cannot log in to the Agent Desktop. The UI Server Error Log shows and unexpected TServer error, with Result Code 211. This error means that there are no more available database connections.	Increase the number of database connections that TServer can use: 1. Open the `tserver.properties` file located in `install-folder/instances/instance-name/transact`. 2. Edit the value of the `connectionsToStore` property. The default value is 7; it is recommended that you increase the value to 12. 3. Save the file. 4. Restart the service for the instance.

When trying to connect to the Agent Desktop, you receive a message that E-Mail Manager is not currently available, even though all E-Mail Manager and IIS services are running. In addition, you cannot open the ServletExec Administration page.	Start the Default Web Site: 1. From the **Start** menu, select **Programs\Administrative Tools\Internet Services Manager**. The Internet Services Manager window opens. 2. Expand the directory tree. 3. The first item listed is **Default Web Site (stopped)**. 4. Select the **Default Web Site**. 5. Start the Default Web Site using either the Start toolbar button on the right mouse button pop-up menu. 6. Close the Internet Services Manager when the Default Web Site starts. 7. Restart the IIS and World Wide Web Publishing services. 8. Verify that the ServletExec Administration page now opens.

After a new installation of ServletExec, agents cannot log in to the Agent Desktop.	Give certain Windows users write access to the ServletExec data folder, and every folder within it. This allows ServletExec to store its settings and to compile pages. By default, the ServletExec data folder is: `C:\Program Files\New Atlanta\ServletExec ISAPI` 1. Right click on the ServletExec data folder. 2. Select **Properties** and open the **Security** tab. 3. Click **Add**. 4. Select the computer you are using in the **Look in** field. 5. Double-click **Authenticated Users**. 6. Double-click the username that starts with **IUSR_**. The full name of this user is **Internet Guest Account**. 7. Select **Add** and click **OK**. You return to the Properties dialog box. The user's access rights are listed. You need to give these two user accounts full control. 8. Select the username that starts with **IUSR_** (the Internet Guest Account). 9. Check **Full Control**. 10. Select **Authenticated Users**. 11. Check **Full Control**. 12. Click **OK**. These two user accounts now have the read and write options (among others). Restart the IIS and World Wide Web Publishing services

The QuickEdit option is turned off.	By default, E-Mail Manager turns off QuickEdit during installation. This is because using QuickEdit from the RServer console can cause RServer to hang. You can turn on and turn off the QuickEdit option by accessing the **QuickEditOff.vbs** and **QuickEditOn.vbs** files in the **CEM\bin** directory. **Note**: Cisco recommends you leave QuickEdit off, unless absolutely necessary.

ICM Integration Problems

The following table lists potential problems and recommended actions related to configuration for ICM software integration:

Problem	Recommended Action

The service for the E-Mail Manager instance does not start successfully.
 	
(A) If the last line of the Tserver.log file is:
 	
`Initializing Conapi connections...`
`Date_and_time` `ERROR INFO CclErrors.302 CCL_ERR_INIT_CONAPI_CONN_SUCCESS com.cisco.ics.ccl.ICMConnect init main "" -`
 	
- then there is a problem with the connection parameters, the ConAPI host is down, or the Cms_Jserver/cmsnode are not functioning properly.
 	
(B) If the last line of the Tserver.log file is:
 	
`Conapi connections initialized successfully.`
`Date_and_time` `ERROR INFO CclErrors.304 CCL_ERR_APP_REGISTER com.cisco.ics.ccl.ICMConnect init main "" - Registering Application with ICM...`
 	
- Then there is a problem with application name or key. This usually is confirmed by looking at the cms_jserver window.
	Ensure that the E-Mail Manager and ICM connection data are consistent:
	
	• For **(A)**, ensure that the link and RMI registry port values for the application and ICM Distributor AW set in the ICM tab in the Configuration Utility match the values set in ICM configuration.
	
	• For **(B)**, ensure that the application instance name and key set in the ICM tab in the Configuration Utility match the values set in ICM configuration.
	
	If you change any of these configuration data, you must restart the service for the instance.
	
	For information on configuring these values in ICM software, see the *Cisco ICM Software Configuration Guide*.

Note: Conapi (the configuration API E-Mail Manager uses for ICM integration) exceptions are shown in the logs. If there is a network problem, there may be a delay before the exception is sent to E-Mail Manager because there is a timeout period before Conapi throws the exception.	
E-mail messages are not successfully routed by ICM software.	Ensure that script selector (dialed number) values are configured correctly in ICM software. The correct format is: E-Mail_Manager_Instance_Name.skil_group_name You must configure a script selector in this manner for each ICM Routing skill group. For information on configuring these values in ICM software, see the *Cisco ICM Software Configuration Guide*.

ICM not able to recognize of logged-in agents. Primary and/or Secondary CTI address not set.
 	
In tserver log:
 	
`java.lang.Object genericError main java.lang.Throwable - ERROR: Primary or Secondary addresses`
 	
`empty in ICM.`
 	
`03/22/2005 12:03:10.484 ERROR NOTICE TServerErrors.10000 genericError`
 	
`java.lang.Object stackTrace main java.lang.Throwable -`
 	
`java.util.NoSuchElementException`
	ICM will not recognize the logged-in agents if there is no connection to CTI.
	
	For both the primary and secondary CTI host the port needs to be filled in as part of the configuration for the PG where the agents are.
	
	Secondary CTI has to be filled in even if it is the same as primary.
	
	But in any event, the information has to be entered during ICM Configuration. Restart CEM. Verify the CTI server window or logs to make sure you see that this connection is made.

The RServer keeps Crashing and Restarting
 	
The TServer.log shows:
 	
`Initializing Conapi connections...`
 	
`After 5 minutes the TServer.log file shows`
 	
`Failure initializing Conapi connections.`
	This happens if:
	
	• The ConApi Connection endpoint was not configured on the ICM AW/Distributor.
	
	• The “ICM Distributor AW Link” field and/or the “Application Link” field values are not correctly set in the CEM Configuration Manager ICM settings Tab.
	
	• The “ICM Distributor AW Link” field and/or the “Application Link” field values in the CEM Configuration Manager ICM settings Tab, do not case-sensitively match that in AW/Dist CMS Control.
	
	• The “ICM Distributor AW host name” field in the CEM Configuration Manager ICM settings Tab does not point to the correct Dist/AW host.

CEM does not start. Symptoms: The RServer and TServer keep Crashing and Restarting. The TServer.log file has the following message: `Failure registering Application with ICM.` Cms_JServer console shows the ConApi connection going up and down repeatedly.	This happens if the Application Instance Name and/or Key mismatch is there between ICM and CEM. • Check if the “CEM Inst: ICM Enterprise Name” field in the CEM Configuration Manager, ICM Settings Tab, matches case-sensitively with the values for that instance in ICM, using List Tool, Application Instance List. • Retype Application Key fields for the Application Instance in both CEM and ICM since these values are not displayed. • Restart CEM services after saving settings.
No Configuration Operations can be performed. Symptoms: The RServer and TServer keep Crashing and Restarting. The TServer.log file has the following message: `Permission to access table (…) denied`	This happens if the Application Instance Permissions are set to “None” in the ICM that disallows all configuration operations including read operations. Solution: Using ICM Configuration Tool – List Tool, change the Application Instance Permissions to Read/Write.

Media Routing Problem. Symptoms: Mails not getting pushed to the agent's desktop	1. Check the Mail server configuration. Ensure that the mails can be sent and received by the E-mail id's configured on the E-Mail Manager admin. 2. After the mails are spammed into E-Mail Manager, ensure that the mail reaches the Skill Group. (Ensure that the rules are configured to route to the appropriate skill group.) 3. Check the Dialed Number configuration. Ensure that the E-Mail Manager application name created in the ICM Application instance explorer is used. Ensure that the correct skill group name is used. Check the call type added to the dialed number configured. Also ensure that the appropriate MR routing client is used. 4. Check the script configurations. Ensure that the appropriate skill group is added. 5. Check if the Primary and Secondary CTI server addresses are configured correctly. Note down the Peripherals enabled by the CEM instance using CEM administration. Check and fix the primary and secondary CTI server addresses using PG Explorer tool in the ICM for the problem peripherals 6. Ensure the configured MR PIM is active. Ensure the port number is correctly configured in the CEM configuration manager. 7. Check that the logged in CEM agents are 'available' in the real time status of AW's routing script.

WebView Installation Problems

The following table lists potential problems and recommended actions related to installing WebView:

Problem	Recommended Action
During the installation of the 3rd Party Software for WebView, an error message says that the IIS Admin Service was configured incorrectly. This happens because some operations can cause the IWAM account, which is the identity under which out of process IIS applications run, to become out of sync with the COM+ data store and IIS or the SAM. When IIS Admin Service starts up, the account information stored in the IIS Metabase is synchronized with the local SAM, but the COM+ applications are not automatically updated. The result of this is that requests to out of process applications fail.	Running the synciwam.vbs admin script updates the IIS COM+ applications with the correct identity and solves this problem. 1. Go to the *IIS Install Drive*:/Inetpub/AdminScripts/ folder. 2. Right click **synciwan.vbs**. 3. Select **Open with Command Prompt**. A command window opens. Wait until it closes. This runs the synciwan.vbs script and fixes the problem.

Glossary

Glossary

A

access privileges: Access privileges define which functions users based on the role are able to perform. You set access privileges when defining a role.

Administration Desktop: The Web application for completing typical administration tasks such as defining rules and maintaining agents and skill groups.

agent: An individual - a customer-contact agent, manager, or administrator - who has a distinct ID with which to log in to E-Mail Manager. Each agent has an associated queue for assigned messages. Agents are specific to the E-Mail Manager instance and cannot be shared across instances.

Agent Desktop: The Web application for completing typical agent and manager tasks such as retrieving and responding to messages, working with templates, and viewing real-time reports.

alias: An e-mail address used for responses that make responses appear as if they came from a different e-mail address.

application programming interface (API): The programming interface that allows third-party applications to access E-Mail Manager functions.

archive: A holding place for messages after agents have completed working with them. Messages in the archive may still reside in the Primary Transaction Database until they have been moved to the LAMBDA database.

assign: The placement of a message in an agent or skill group queue.

attachment: A file that can be stored in E-Mail Manager for use in responses, or a file sent with an incoming message.

autoresponse: A response, using a template, that is sent automatically by a rule.

autosuggestion: A template that a rule determines may be an appropriate response to a message. Such templates are not sent automatically; agents view the suggestions and must manually choose to use them.

C

category: A word or phrase that can be associated with a message by an agent (at the Response screen) or by a rule.

CEMWatcher: A tool for monitoring E-Mail Manager from other Windows computers.

Cisco Independent Reporting (CIR) database: The database that stores replicated data for reporting purposes.

Configuration Utility: The application on the E-Mail Manager server used to configure instances.

D

default notification e-mail address: An Internet e-mail address used to alert a user to a message in E-Mail Manager, if specified by rules, and for MailTrack, which is used in distribution rules.

distribution rule: A rule that processes a message at the time the message is assigned to a user's or skill group's queue. A distribution rule executes when a message is assigned to a queue by rules or by manual reassignment from a different queue. A distribution rule does not execute when an agent claims a message from a group queue.

dynamic template: A template that contains variables that allow e-mail responses based on the template to pull data from a message, an external database, or both. Thus, responses based on the dynamic template are automatically customized for specific messages and customers.

E

escalate: The reassignment of a message while raising its priority one level.

external data access: The bringing of data in a non E-Mail Manager database into E-Mail Manager, either for display in the user interface or into rules for additional processing.

external data access (EDA): The bringing of data in a non E-Mail Manager database into E-Mail Manager, either for display in the user interface or into rules for additional processing.

I

InBasket: The component of E-Mail Manager that retrieves messages from one or more POP3 Mailboxes and Web forms and sends them to system rules for processing.

instance: An instance is a partition of E-Mail Manager that uses its own databases, has its own configuration, and processes e-mail messages separately. Data in one instance is not accessible to other instances. One E-Mail Manager installation can support multiple instances.

integration: For E-Mail Manager, the use of ICM software for routing messages to agents and for reporting across multiple channels.

J

JavaScript customization: The feature that allows you to use JavaScript to customize the Agent Desktop.

K

keyword: A word or phrase that can be associated with one or more templates.

L

LAMBDA: The acronym for Load Adaptive Message-Base Data Archiving. The E-Mail Manager component that moves older messages to a secondary database for storage.

library: A storage area for templates. Each template is saved in one (and only one) library, based on its content and intended use.

M

mailing list: A group of multiple e-mail addresses (list members) under one list name.

MailTrack: The forwarding of a message, as well as the tracking number, suggested response templates, comments, and other system information associated with the message.

matrix: A set of instances that can exchange messages through rules.

message access privileges: Role settings that determine which messages agents based on the role can work with, and what actions they can perform on messages.

O

opt-out list: A special list of e-mail addresses that is checked before a broadcast message is sent out. Opt-out list e-mail addresses do not receive broadcast messages, even if they are members of personal and public mailing lists.

overdue escalation: The reprocessing of messages after they have waited in a queue for longer than the time period you set.

Overdue rule tree: The rule tree that processes messages that are escalated because they have been in the queue longer than the default or queue-specific Overdue Escalation Time.

overload escalation: The reprocessing of the oldest messages in a queue after that queue contains more messages than the number allowed that you set.

Overload rule tree: The rule tree that processes messages that are escalated because the number of messages in the queue was greater than the default or queue-specific Overload Escalation Threshold.

P

pick mode: The workflow in which agents select messages from their personal queue and from skill group queues in which they are members.

POP3 Mailbox: An account on an e-mail server that E-Mail Manager polls for incoming messages destined for the InBasket.

Primary Transaction Database: The main database used by E-Mail Manager. This database stores such things as messages and agent and skill group settings.

priority: The importance of a message, which can be set automatically by rules or manually by an agent.

pull mode: The workflow in which agents retrieve messages from the Status screen by clicking Get Next for a single queue or for all queues in which the agent is a member.

push mode: The workflow in which agents do not select messages from their queue. Messages from the agent's personal queue, as well as queues in which the agent is a member, are automatically presented for reading and responding to.

Q

queue: A storage space for messages, associated with an agent or skill group.

R

real-time displays: Reports that show the current status of agents and queues.

reassign: The act of moving a message from one queue to another.

rebranding: The feature that allows you customize the interface to display your own company's information.

response: The reply to a message.

role: A collection of settings and access privileges associated with agents. Each agent is based on a role.

round-robin: The even distribution of messages to logged-in members of a skill group.

RServer: The E-Mail Manager component that processes incoming messages and serves the Administration Desktop.

rule: An object that tests a message for certain criteria and performs an action on the message if it meets that criteria. Rules are grouped into rule trees and subroutines.

rule tree: The complete series of rules that process a message.

S

service level management: A collection of several areas of functionality that enable you to manage messages so that you can ensure that: (1)agents in a skill group are working with an equal number of messages. (2) Messages that are not responded to in a set amount of time are escalated and re-processed according to rules you define. (3) Messages in queues with more messages than the number you set are escalated and reprocessed according to rules you define.

skill group: A collection of agents who work with messages assigned to the skill group's own queue.

SMTP Server: The server used by E-Mail Manager to send outgoing messages.

subroutine: A single rule, or a linked series of rules, that is not part of the main rule tree through which messages pass. Subroutines process messages when they are called by other rules.

T

team: A collection of agents grouped for reporting purposes.

template: A predefined response stored in a library for agents' use.

TServer: The E-Mail Manager component that controls database transactions.

W

WebView: The application used for reporting, accessible through the Agent Desktop.

wrap: The state agents go into when they are required to close a case after responding to a message.

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