BEA WebLogic Collaborate

C-Enabler Administration Guide

BEA WebLogic Collaborate 1.0.1
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BEA WebLogic Collaborate C-Enabler Administration Guide

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About This Document

This document describes how to configure and monitor the BEA WebLogic Collaborate™ c-enabler.

The document is organized as follows:

- Chapter 1, “Introducing C-Enablers,” provides information for system administrators and trading-partner operators. It introduces c-enablers and the key concepts needed to configure and monitor them.
- Chapter 2, “Configuring C-Enablers,” provides information for system administrators. It describes how to configure c-enablers using the c-enabler XML configuration file and the `config.xml` file.
- Chapter 3, “Working with C-Enablers,” provides information for trading-partner operators. It describes how to start and monitor the C-Enabler Administration Console.

What You Need to Know

This document is intended primarily for:

- System administrators who will set up and configure c-enablers
- Trading-partner operators who will monitor c-enabler statistics

For an overview of the BEA WebLogic Collaborate architecture, see Overview in BEA WebLogic Collaborate *Getting Started*.

How to Print This Document

You can print a copy of this document from a Web browser, one file at a time, by using the File—>Print option on your Web browser.

A PDF version of this document is available on the BEA WebLogic Collaborate documentation CD. You can open the PDF in Adobe Acrobat Reader and print the entire document (or a portion of it) in book format.

If you do not have the Adobe Acrobat Reader installed, you can download it for free from the Adobe Web site at `http://www.adobe.com`.

Related Information

The following BEA WebLogic Collaborate documents contain information that is relevant to using this product:

- *BEA WebLogic Collaborate Getting Started*
- *BEA WebLogic Collaborate Installation Guide*
- *BEA WebLogic Collaborate Release Notes*

- *BEA WebLogic Collaborate C-Hub Administration Guide*
- *BEA WebLogic Collaborate Developer Guide*
- *BEA WebLogic Collaborate Javadoc*
- *BEA WebLogic Collaborate Glossary*

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In your e-mail message, please indicate that you are using the documentation for the BEA WebLogic Collaborate 1.0.1 release.

When contacting Customer Support, be prepared to provide the following information:

- Your name, e-mail address, phone number, and fax number
- Your company name and company address
- Your machine type and authorization codes
- The name and version of the product you are using
- A description of the problem and the content of pertinent error messages

Documentation Conventions

The following documentation conventions are used throughout this document.

Convention	Item
Ctrl+Tab	Indicates that you must press two or more keys simultaneously.
italics	Indicates emphasis or book titles.

`monospace text`	Indicates code samples, commands and their options, data structures and their members, data types, directories, and filenames and their extensions. Monospace text also indicates text that you must enter from the keyboard.
	Examples:
	`#include <iostream.h> void main ( ) the pointer psz`
	`chmod u+w *`
	`\tux\data\ap`
	`.doc`
	`tux.doc`
	`BITMAP`
	`float`

`monospace italic text`	Identifies variables in code. *Example*: `String` *`expr`*
UPPERCASE TEXT	Indicates device names, environment variables, and logical operators. *Example*s: LPT1 SIGNON OR
`{ }`	Indicates a set of choices in a syntax line. The braces themselves should never be typed.

Convention	Item

[ ]	Indicates optional items in a syntax line. The brackets themselves should never be typed.
	Example:
	`buildobjclient [-v] [-o name] [-f file-list]...`
	`[-l file-list]...`

|	Separates mutually exclusive choices in a syntax line. The symbol itself should never be typed.

. . .	Indicates one of the following in a command line:
	■ That an argument can be repeated several times in a command line
	■ That the statement omits additional optional arguments
	■ That you can enter additional parameters, values, or other information
	The ellipsis itself should never be typed.
	Example:
	`buildobjclient [-v] [-o name] [-f file-list]...`
	`[-l file-list]...`

. . .	Indicates the omission of items from a code example or from a syntax line. The vertical ellipsis itself should never be typed.

CHAPTER

1 Introducing C-Enablers

The following sections provide an introduction to c-enablers:

- Overview
- Conversations
- Transport Messages
- Message Routing and Filtering

Overview

An electronic marketplace, or e-market, is an environment through which companies conduct B2B e-commerce. E-markets offer a set of services to conduct and manage conversations between various trading partners.

WebLogic Collaborate offers a flexible, extendable, and scalable solution to successfully implement e-markets. A WebLogic Collaborate system consists of two main parts:

- A c-hub
- A number of c-enablers that are deployed at participant trading partners' sites

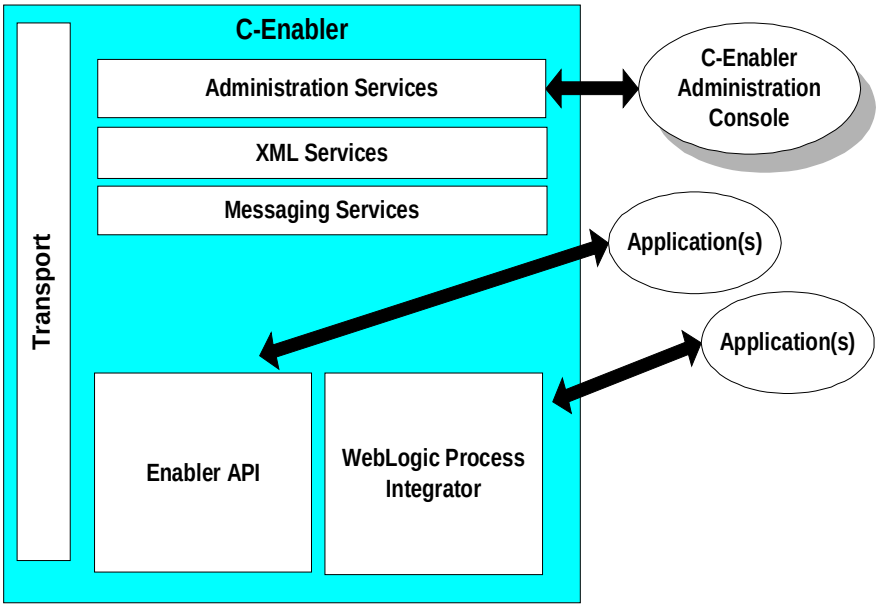
A c-hub is the central point of control for an e-market. A single c-hub, representing one e-market owner, can host multiple collaboration spaces (c-spaces) in which trading partners use c-enablers to exchange data with the c-hub. For more information about c-hubs, see the *BEA WebLogic Collaborate C-Hub Administration Guide*.

The c-enabler is a 100-percent Java class library that is deployed at each participant node to allow access to collaboration spaces hosted on a c-hub.

The c-enabler is typically downloaded with authorization from the e-market administrator. To configure the software, a trading partner ID is needed from the e-market owner, who is operating the c-hub. Trading partners that successfully deploy c-enablers can communicate with each other through the c-hub, which is the central point of control. The c-hub provides shared services to c-enabler nodes such as conversation coordinator, subscription management, security, administration, routing, local logging, and XML services.

The following figure shows the c-enabler architecture with its key components.

Figure 1-1 C-Enabler Architecture



Conversations

A conversation is a series of predefined message exchanges between trading partners that take place in a c-space in the context of a predefined business model. Each message in the conversation can cause any number of back-end transactions.

The following table describes the states of a conversation at run time.

Table 1-1 Run-time Conversation States

State	Description
`INITIATED`	A trading partner has initiated a conversation.
`TERMINATED`	The trading partner who initiated the conversation has terminated it.

A conversation definition is a set of roles and document definitions pertaining to one conversation:

- A role is the subscription unit in a conversation. To participate in a conversation, a trading partner subscribes to a specific role that is defined in the conversation definition associated with the conversation.

  A role is defined in terms of the documents that can be sent or received by a trading partner in the conversation. The role defines what a trading partner can do, such as buy or sell. Each conversation has two or more roles.

- A document definition is a schema that defines a valid document (such as a DTD).

Each conversation is associated with one conversation definition.

Conversation definitions, document definitions, and roles are configured on the c-hub for a specific c-space. For more information, see the *BEA WebLogic Collaborate C-Hub Administration Guide*.

Transport Messages

A transport message is a data entity that is used to communicate between c-enabler nodes and c-hubs. There are two types of transport messages:

- A system transport message is a type of transport message exchanged between the c-hub and c-enablers that changes system activity, such as the notification of a conversation termination.
- A business message is the basic unit of communication exchanged between trading partners in a conversation. A business message is a multi-part MIME message that consists of business documents, attachments, and message header information.

The c-hub provides a messaging service to handle the routing of messages among c-enablers.

Message Routing and Filtering

Message routing and filtering are used to:

- Restrict the list of target trading partners
- Restrict the kind of messages a specific trading partner receives
- Restrict messages to a specified set of trading partners
- Implement matching algorithms so information flows to the correct trading partners

WebLogic Collaborate supports send-side filters to select target trading partners. A send-side filter is used by an application when sending a document to determine the list of trading partners that should receive the document.

CHAPTER

2 Configuring C-Enablers

The following sections are intended for system administrators. These sections contain information about modifying the c-enabler XML configuration file, the C-Enabler Administration Console, and c-enabler security:

- Modifying the C-Enabler Configuration File
- Configuring the C-Enabler Administration Console
- Configuring C-Enabler Security

Modifying the C-Enabler Configuration File

To participate in c-hub conversations, a trading partner creates c-enabler sessions between a c-enabler node and the c-hub. Each c-enabler session allows the trading partner to collaborate with other trading partners in a single c-space. Configuration information about c-enabler sessions is read at run time from a c-enabler configuration file.

To create a new c-enabler XML configuration file:

1. Using your preferred text editor, create a new XML file that specified `EnablerConfig.dtd` as the DTD for that document.
2. Specify values for the DTD elements (see “Specifying Values for the DTD Elements” on page 2-2 for additional information).
3. Validate the XML file structure (see “Validating the XML File Structure” on page 2-6 for additional information).

Specifying Values for the DTD Elements

The following listing shows `EnablerConfig.dtd`, the DTD for the c-enabler XML file. This file is located in the *`wlc_home`*`\dtd` subdirectory of your WebLogic Collaborate installation directory for both Windows and UNIX.

Listing 2-1 EnablerConfig.dtd

```
<!--   Copyright (c) 2000 BEA Systems, Inc. -->
<!--   All rights reserved                  -->
<!--   THIS IS UNPUBLISHED PROPRIETARY      -->
<!--   SOURCE CODE OF BEA Systems, Inc.     -->
<!--   The copyright notice above does not -->
<!--   evidence any actual or intended      -->
<!--   publication of such source code.        -->

<!-- $Id: //depot/dev/src/com/bea/b2b/dtd/EnablerConfig.dtd#6 $-->

<!-- This DTD describes enabler configuration files -->

<!-- Digital certificate information of trading partner -->
<!ELEMENT certificate EMPTY >

<!-- Location of digital certificate key of trading partner on the
enabler node -->
<!ATTLIST certificate location CDATA #REQUIRED >

<!ELEMENT enabler (session*) >
<!ATTLIST enabler name CDATA #REQUIRED >

<!-- URL of the enabler session where incoming business documents
are received -->
<!ELEMENT enabler-url EMPTY >
<!ATTLIST enabler-url ref CDATA #REQUIRED >

<!-- URL of the Hub -->
<!ELEMENT hub-url EMPTY >
<!ATTLIST hub-url
        ref CDATA #REQUIRED
        certificate-field-name CDATA #IMPLIED
        certificate-field-value CDATA #IMPLIED
        server-certificate-field-name CDATA #IMPLIED
        server-certificate-field-value CDATA #IMPLIED
        hub-user CDATA #IMPLIED
        proxy-host CDATA #IMPLIED
        proxy-port CDATA #IMPLIED >
```

```
<!ELEMENT private-key EMPTY >

<!-- Location of private-key of trading partner on the enabler node
-->
<!ATTLIST private-key location CDATA #REQUIRED >
<!ELEMENT trading-partner EMPTY >

<!-- Name of the trading partner as per subscription in C-Space -->
<!ATTLIST trading-partner name CDATA #REQUIRED >

<!-- Security information is required if https is used -->
<!ELEMENT security-info ( (certificate, private-key) |
trading-partner) >
<!ELEMENT session (hub-url, enabler-url, security-info) >

<!-- Name of the c-space on hub where trading partner has subscribed
to conversations -->
<!ATTLIST session c-space-name CDATA #REQUIRED >

<!-- Name of individual enabler session with which it is identified
locally on enabler node -->
<!ATTLIST session name CDATA #REQUIRED >

<!-- Thread pool size for the session -->
<!ATTLIST session thread-pool-size CDATA #IMPLIED >
```

The following table describes the elements used in `EnablerConfig.dtd`.

Table 2-1 Elements Used in EnablerConfig.dtd

Element	Description
enabler	Root element of the document. The `name` attribute uniquely identifies the c-enabler inside a WebLogic Server instance.
session	Defines a c-enabler session.This element can have `hub-url`, `enabler-url`, and `security-info` subelements (in that order). Element attributes include: ■ `c-space-name`—Name of the c-space that the trading partner wants to join. ■ `name`— Name of the session that hosts the conversation between the c-hub and c-enabler. ■ `thread-pool-size`—Thread-pool size for the session.

Table 2-1 Elements Used in EnablerConfig.dtd (Continued)

Element	Description
hub-url	Defines characteristics of the c-hub. Element attributes include: ■ `ref`—URL of the c-hub that participates in the conversation. ■ `certificate-field-name`—Type of certificate used for client-side security. This element is related to SSL and is used to map trading-partner certificates to WebLogic Server users. ■ `certificate-field-value`—Value for client-side security. ■ `server-certificate-field-name`— Type of certificate used for server-side security. This element is related to SSL and is used to map trading-partner certificates to WebLogic Server users. ■ `server-certificate-field-value`—Value for server-side security. ■ `hub-user`—WebLogic Server user name under which the c-enabler will be running when processing messages received from the c-hub. ■ `proxy-host`—Address of the proxy server used for the c-hub, if any. ■ `proxy-port`—Port number for the proxy server used for the c-hub, if any.
enabler-url	Defines characteristics of the c-enabler. The `ref` attribute specifies the URL of the c-enabler that participates in the conversation. As WebLogic Collaborate assigns this URL to a servlet, it must be reserved for exclusive use of WebLogic Collaborate only. Such a URL must not be used by applications for any other purpose. Each c-space/business protocol combination has a unique URL. A trading partner uses this URL to access a particular c-space using a particular business protocol.
security-info	Defines security information for the conversation between the c-hub and c-enabler. This element can have `certificate` and `private-key` subelements (in that order) or `trading-partner` subelements.

Table 2-1 Elements Used in EnablerConfig.dtd (Continued)

Element	Description
trading-partner	Defines characteristics of a trading partner. The `name` attribute specifies the name of the trading partner on whose behalf the c-enabler session is established.
certificate	Defines digital certificate information for the trading partner. The `location` attribute specifies the location of the digital certificate key.
private-key	Defines characteristics of the private key for the trading partner. The `location` attribute specifies the location of the private key.

The following listing is a sample c-enabler XML file with all elements defined.

Listing 2-2 Sample C-Enabler XML File

```
<?xml version=”1.0”?>
<!DOCTYPE enabler SYSTEM “EnablerConfig.dtd”>
<enabler name=”SecurityPartner1Enabler”>
    <session name=”Session1” c-space-name=”SecurityCSpace”>
        <hub-url ref=”https://localhost:7002/Hub/SecurityCSpace”
            certificate-field-name=”email”
            certificate-field-value=”hub@bea.com”
            server-certificate-field-name=”email”
            server-certificate-field-value=”hub@bea.com”
            hub-user=”hub” />
        <enabler-url ref=”https://localhost:7502/Enabler1”/>
        <security-info>
            <certificate location=”<WLC_HOME>\examples\security
                \certificates\partner1_cert.pem”/>
            <private-key location=”<WLC_HOME>\examples\security
                \certificates\partner1_key.pem”/>
        </security-info>
    </session>
</enabler>
```

Validating the XML File Structure

WebLogic Collaborate provides the Reader utility to validate c-enabler XML files.To use Reader, you must include the `wlc.jar` and `xerces.jar` files in your CLASSPATH variable. You must also include the *`wlc_home`*`\bin` subdirectory of your WebLogic Collaborate installation in your PATH variable.

To run Reader, enter the following command at the Windows command prompt:

`enablerreader [-?] | `*`configFilename`*

The arguments to this command are defined as follows:

- *`configFilename`* is the name of the c-enabler XML file that you want to validate.
- `-?` displays help about Reader.

You can also validate a c-enabler XML file with a Java interpreter by entering the following command at the Windows command prompt:

```
java -classpath %classpath% com.bea.b2b.hub.EnablerConfigReader
[-?] | configFilename
```

The arguments for this command are identical to the arguments for `enablerreader`.

Configuring the C-Enabler Administration Console

To configure the C-Enabler Administration Console, define the C-Enabler Administration Console Web application.

The C-Enabler Administration Console is a J2EE Web application. The file for this Web application is `enableradmin.war`, which is located in the *`wlc_home`*`\lib` subdirectory of your WebLogic Collaborate installation directory.

To define the C-Enabler Administration Console Web application, configure the web application in the Web Logic Server Administration Console. For more information, see "Deploying Applications" in the *BEA WebLogic Server Administration Guide*.

Configuring C-Enabler Security

The security model in WebLogic Collaborate is based on the one used in Weblogic Server (that is, authentication and authorization are used to protect resources). For general information about the WebLogic Collaborate security model, see Configuring Security in the *BEA WebLogic Collaborate C-Hub Administration Guide*.

C-enabler security consists of configuring SSL protocol and mutual authentication properties, defining c-enabler users, and defining c-enabler access control lists (ACLs).

Configuring SSL Protocol and Mutual Authentication

To configure SSL protocol and mutual authentication properties:

1. Obtain a digital certificate for the c-enabler. WebLogic Collaborate ships four digital certificates and four private keys (one certificate and one private key for a c-hub, a c-enabler, and two trading partners) in the *wlc_home*`/examples/security/certificates` directory. The directory also contains a digital certificate for the root certificate authority.

   Note: The digital certificates and private keys shipped with WebLogic Collaborate are for demonstration purposes only. Before using WebLogic Collaborate in a deployed, production environment, obtain digital certificates and private keys from a security vendor or an in-house certificate authority.

2. Use the Weblogic Server Administration Console to modify the SSL protocol and mutual authentication properties as shown in the following listing. When you are finished, the completed code from the Console should look like the following example.

Listing 2-3 SSL Protocol and Mutual Authentication Properties

```
< SSL CertAuthenticator="com.bea.b2b.security.WLCCertAuthenticator"
        CertificateCacheSize="5"
        ClientCertificateEnforced="true"
        Enabled="true"
        HandlerEnabled="true"
        ListenPort="SSL Port"
        Name="myserver"
        ServerCertificateFileName="Trading Partner Certificate file"
        ServerKeyFileName="Trading Partner private key file"
        ServerCertificateChainFileName="rest of the digital certificates for
Trading Partner"
        TrustedCAFileName="Certificate for root CA"
/>
```

"Trading partner certificate file" specifies the name of the digital certificate for a trading partner.

"Trading partner private key file" specifies the name of the file containing the trading partner's private key.

"SSL port" specifies the dedicated port on which the c-enabler listens for Secure Socket Layer connections. The `config.xml` file for the c-enabler sets the SSL port to 7502.

"ServerCertificateChainFileName" is the file holding any remaining digital certificates held by the trading partner.

"Certificate for root CA" specifies the name of the digital certificate for the certificate authority that issued the digital certificate for the c-enabler. The `config.xml` configuration file for the c-enabler sets the root certificate authority to `CA_cert.pem`.

Note: When using mutual authentication, you can use the digital certificate for the certificate authority for both the c-hub and the c-enabler.

Configuring SSL Security

To configure SSL security:

1. Set the following attributes for the `hub-url` XML element in the c-enabler XML configuration file:
   - `certificate-field-name`
   - `certificate-field-value`
   - `server-certificate-field-name`
   - `server-certificate-field-value`
   - `hub-user`
2. Set the `certificate` attribute and private-key attribute for the `security-info` XML element in the c-enabler XML configuration file.

For a description of these attributes, see Table 2-1.

Configuring a Proxy Server

To configure a proxy server:

1. Set the `proxy-host` and `proxy-port` attributes for the `hub-url` XML element in the c-enabler XML configuration file. For a description of these attributes, see Table 2-1.
2. Configure a proxy server as described in the Configuring Security chapter in the *BEA WebLogic Collaborate C-Hub Administration Guide*.

For complete information on defining users, see "Managing Security" in the *BEA WebLogic Server Administration Guide*.

Defining Users on the C-Enabler

You define the following types of users for a c-enabler:

- C-hub user
- C-enabler administrator user

For complete information on defining users, see "Managing Security" in the *BEA Weblogic Server Administration Guide*.

Defining Access Control Lists for the C-Enabler

Whether a user or a group can access a resource in WebLogic Collaborate is determined by the access control lists (ACLs) for that resource. To define ACLs, create an ACL for a resource, specify the permission for that resource, and then grant permission to a specified set of users and groups.

Each WebLogic Collaborate resource has one or more permissions that you can grant. The ACLs (resources and permissions) are defined as follows:

- Transport servlet resource for a c-hub user only has `execute` permission
- C-Enabler Administration Console resource for a c-enabler administrator has `enablermonitor` permission

For more information about defining ACLs, see "Defining ACLs" in "Managing Security" in the *BEA Weblogic Server Administration Guide*.

CHAPTER

3 Working with C-Enablers

The following sections explain how to start and monitor the C-Enabler Administration Console:

- Starting the C-Enabler Administration Console
- Monitoring Active C-Enablers
- Monitoring Active Sessions
- Monitoring Active Conversations
- Monitoring Messages
- Shortcuts

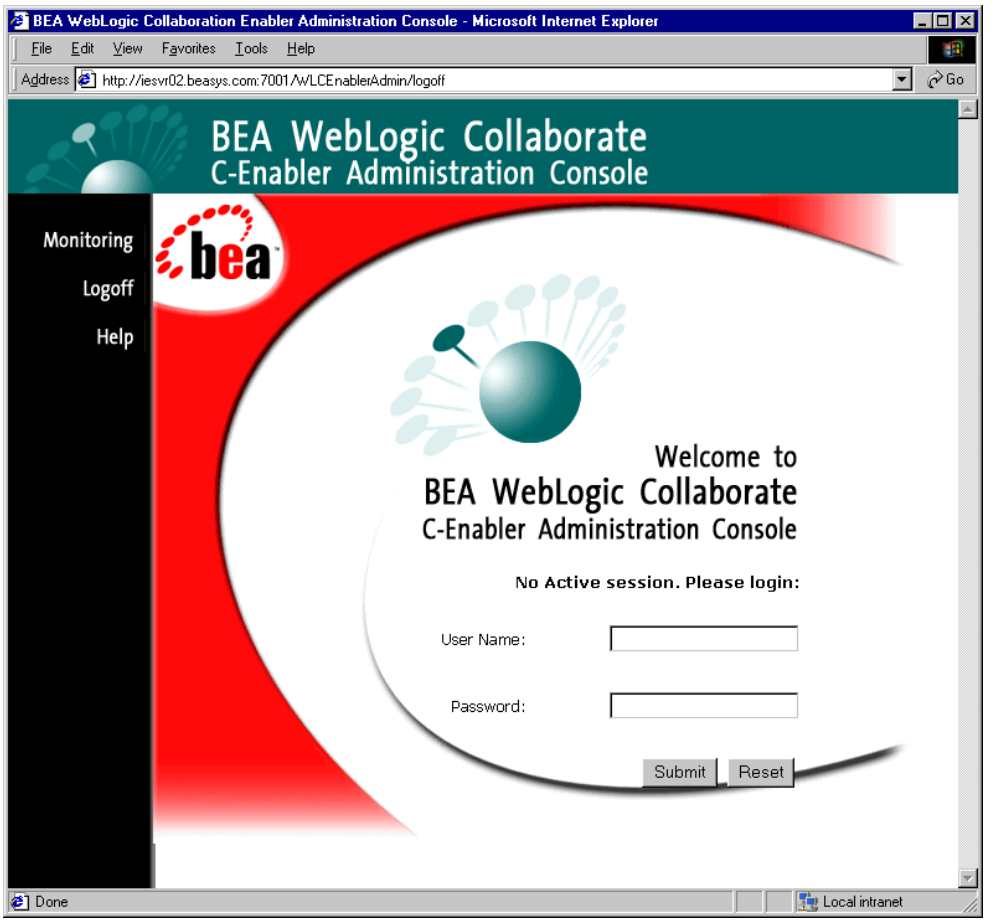
Starting the C-Enabler Administration Console

To start the C-Enabler Administration Console, open a Web browser and go to `http://host:port/WLCEnablerAdmin`. In this URL, *`host:port`* specifies the location of the WebLogic Server that is hosting the c-enabler.

Logging On to the C-Enabler Administration Console

When you start the C-Enabler Administration Console, you get a logon screen.

Figure 3-1 C-Enabler Administration Console Logon Screen



1. Before you can do any c-enabler administration tasks, you must log on to the system.

   The following table explains the fields available on the Logon window in which you must enter information.

Table 3-1 Logon Fields

Field	Description
User Name	Enter your user name as defined in the security section of the WebLogic Server Administration Console.
User Password	Enter your user password.

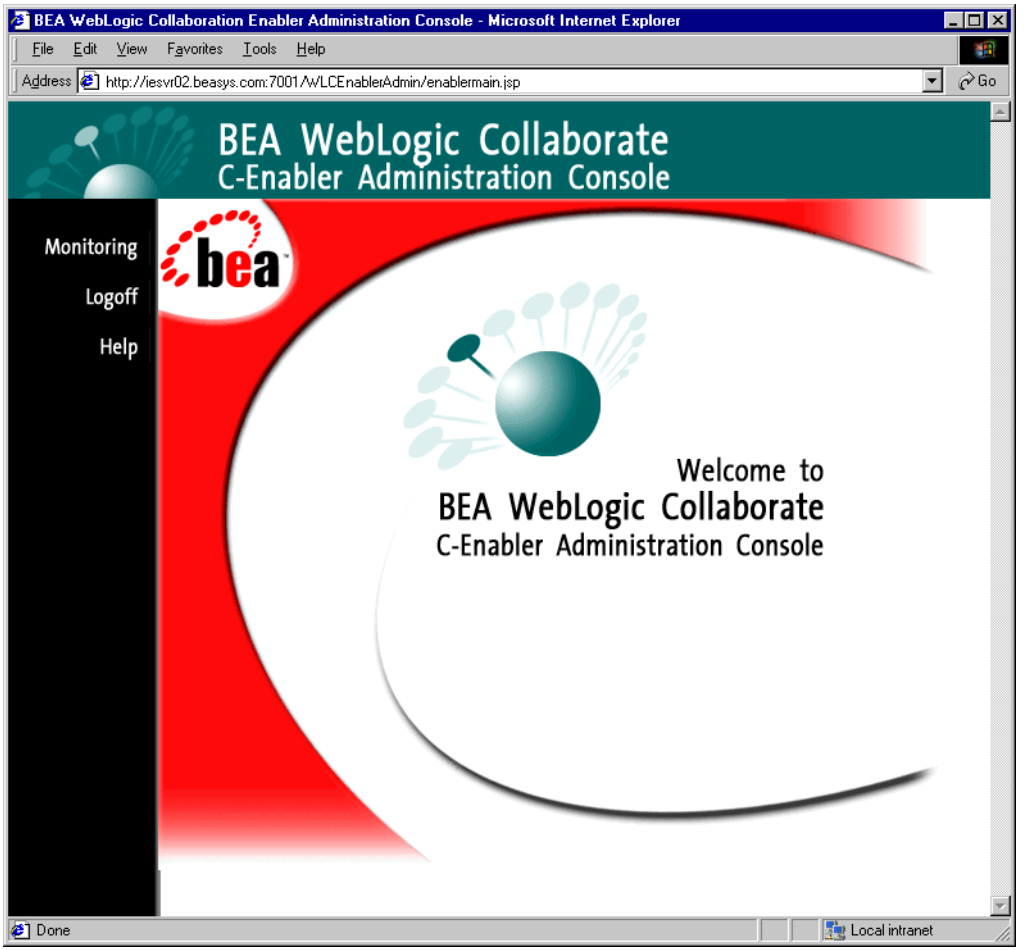
2. When you have filled in the fields, click **Submit** to log on (or **Reset** to start over).

   Submit checks your user credentials against the current WebLogic Server realm and if the user is valid, a check is made on what administration facility (configuration and/or monitoring) the user is allowed access to.

   If you are denied access, the same screen is displayed and a message informs you that access is denied.

If you are allowed access, then a similar screen is displayed without the login fields, as shown in the following figure.

Figure 3-2 C-Enabler Administration Console Starting Screen after Login



After you are logged in, you can do any of the following:

- Click on **Monitoring** to begin viewing reports on a running c-enabler.
- Click on **Help** to get help information on the C-Enabler Administration Console.
- Click on **Logoff** to log off and exit the C-Enabler Administration Console.

Logging Off the C-Enabler Administration Console

To log off from the C-Enabler Administration Console, click on **Logoff** in the left navigation bar.

Monitoring Active C-Enablers

From the Enablers monitoring tab you can view information on active c-enablers, start new c-enablers, and shut down currently active c-enablers. These tasks are described in the following sections:

- Viewing Active C-Enablers
- Starting a New C-Enabler
- Shutting Down an Active C-Enabler

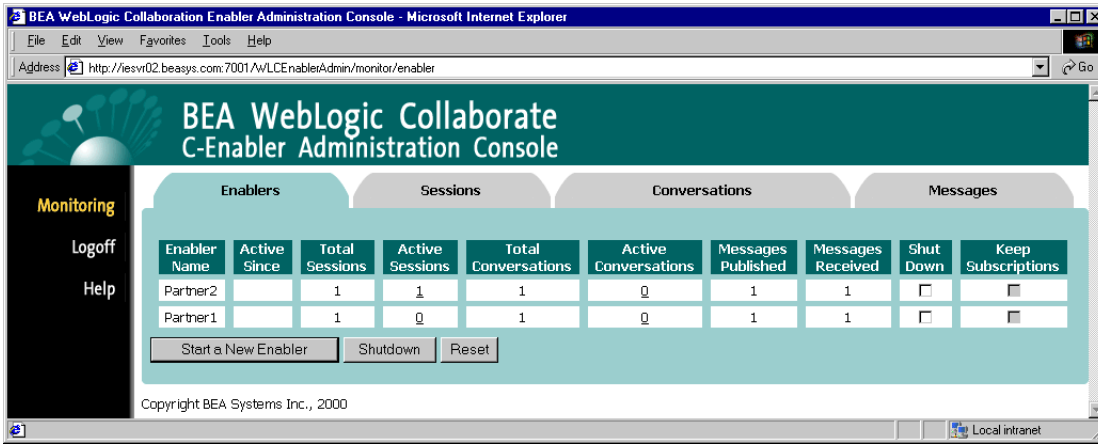
Viewing Active C-Enablers

To view active c-enablers, click the **Enablers** tab.

This shows all the active c-enablers that are running off of the same WebLogic Server (WLS) instance. Each row in the table on the Enablers screen represents an *active c-enabler*—for each one, the enabler name and runtime statistics are shown.

For example, in the following figure there are two active c-enablers (Partner1 and Partner2).

Figure 3-3 Monitoring Active Enablers



The following table explains the information reported on the active Enablers monitoring screen.

Table 3-2 Active Enabler Fields

Field	Description
Enabler Name	Name of the active c-enabler.
Active Since	Date and time the c-enabler was last activated.
Total Sessions	Total number of sessions started by the c-enabler since the c-enabler was activated. (This includes any sessions started by this c-enabler that have ended, in addition to all active sessions.)
Active Sessions	Number of active sessions for the c-enabler. You can click on the value in this field to view the active sessions for this c-enabler. For example, you can click on the value in the Active Sessions field for Partner 2 to view the active sessions for Partner 2. (See “Monitoring Active Sessions for a Single C-Enabler” on page 3-21.)
Total Conversations	Total number of conversations in which this c-enabler has participated.

Table 3-2 Active Enabler Fields

Field	Description
Active Conversations	Number of conversations in which this c-enabler is currently participating. You can click on the value in this field to view the active conversations for this c-enabler. For example, you can click on the value in the Active Conversations field for Partner 2 to view the active conversations for Partner 2. (See "Monitoring Active Conversations for a Single C-Enabler" on page 3-22.)
Messages Published	Total number of messages this c-enabler has published.
Messages Received	Total number of messages this c-enabler has received.
Shut Down	A checkmark in this box indicates this c-enabler is selected for shutdown. To shut down active c-enablers, select Shut Down checkboxes for all c-enablers you want to shut down, then click the **Shutdown** button. (For more information, see "Shutting Down an Active C-Enabler" on page 3-9.)
Keep Subscriptions	Not supported for this release.

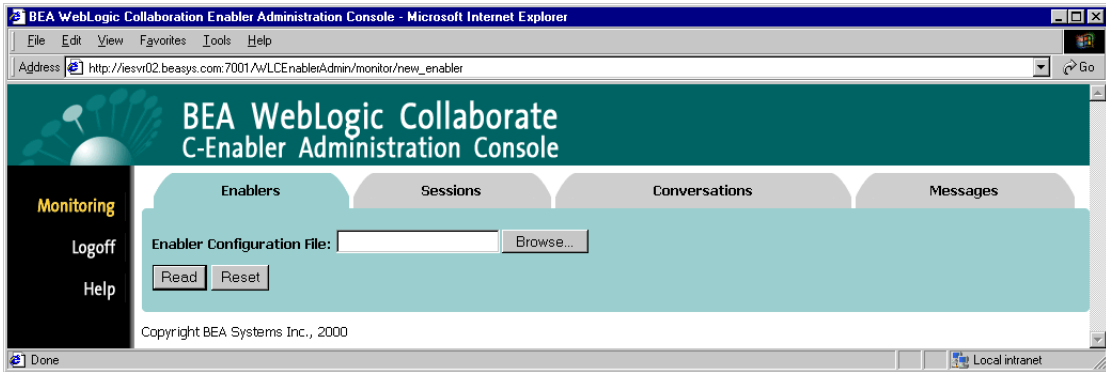
Starting a New C-Enabler

To start a new c-enabler:

1. Make sure you are on the Enablers monitoring tab.
2. Click the **Start a New Enabler** button.

   This brings up a screen where you can point to a c-enabler configuration file that you want read in to the C-Enabler Administration Console.

Figure 3-4 Reading in a New C-Enabler Configuration File



3. Click on the **Browse** button to bring up a file browser. Use the file browser to navigate to and select the configuration file for the c-enabler you want to start up and monitor. When you have selected the appropriate configuration file in the file browser, click **Open** on the file browser window. The pathname of the file you selected should now show up in the Enabler Configuration File field on the C-Enabler Administration Console.
4. Click **Read** to read in the selected c-enabler configuration file and start the c-enabler.

   Once the c-enabler starts, the Enablers tab is displayed. The c-enabler you just started should be included now in the table of active c-enablers shown on this tab.

Shutting Down an Active C-Enabler

To *shut down* or stop a c-enabler that is currently running:

1. Make sure you are on the Enablers monitoring tab.
2. Click on the Shut Down box for the c-enabler you want to shut down so that a checkmark is displayed. (You can select more than one c-enabler to shut down.)
3. Click the **Shutdown** button.

   A confirmation dialog is displayed that asks whether you want to end all active sessions and conversations for the selected c-enabler(s).

   Click **OK** to confirm and shut down the selected c-enabler(s), or click **Cancel** if you decide not to perform the shutdown.

Monitoring Active Sessions

From the Sessions monitoring tab you can view information on active sessions, start new sessions, and shut down currently active sessions. These tasks are described in the following sections:

- Viewing Active Sessions
- Starting a New Session
- Shutting Down an Active Session
- Viewing Details for a Particular Session

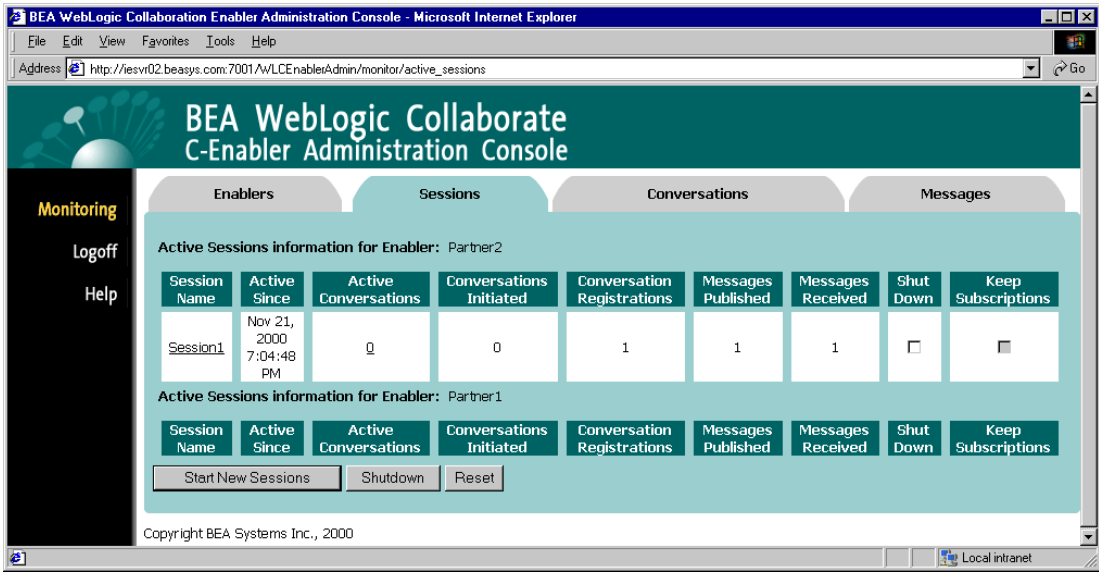
Viewing Active Sessions

To view active sessions, click on the **Sessions** tab.

This shows all the active sessions for all active c-enablers. Each table on the Sessions screen represents the active sessions for an active c-enabler. If you have more than one c-enabler running, you will see an active sessions table for each enabler on the Sessions screen.

For example, in the following figure there are two active c-enablers (Partner 1 and Partner2). Partner 1 has no active sessions. Partner 2 has one active session.

Figure 3-5 Monitoring Active Sessions on the C-Enabler



The following table explains the information reported on the active Sessions monitoring screen.

Table 3-3 Active Sessions Fields

Field	Description
Session Name	Name of the active session.
Active Since	Date and time the session was last activated.
Active Conversations	Number of conversations in which this c-enabler is currently participating. You can click on the value in this field to view the active conversations for this session. For example, you can click on the value in the Active Conversations field for Session1 to view the active conversations for Session1. (See “Monitoring Active Conversations for a Single Session in a C-Enabler” on page 3-23.)

Table 3-3 Active Sessions Fields

Field	Description
Conversation Initiated	Total number of conversations started by this session since this session was activated. (This includes any conversations initiated by this session that have ended in addition to all active conversations initiated by this session.)
Conversation Registrations	Total number of conversations this session has registered.
Messages Published	Total number of messages this session has published.
Messages Received	Total number of messages this session has received.
Shut Down	A check mark in this box indicates this session is selected for shutdown. To shut down an active session, select Shut Down check boxes for all sessions you want to shut down, then click the **Shutdown** button. (For more information, see "Shutting Down an Active Session" on page 3-14.)
Keep Subscriptions	Not supported for this release.

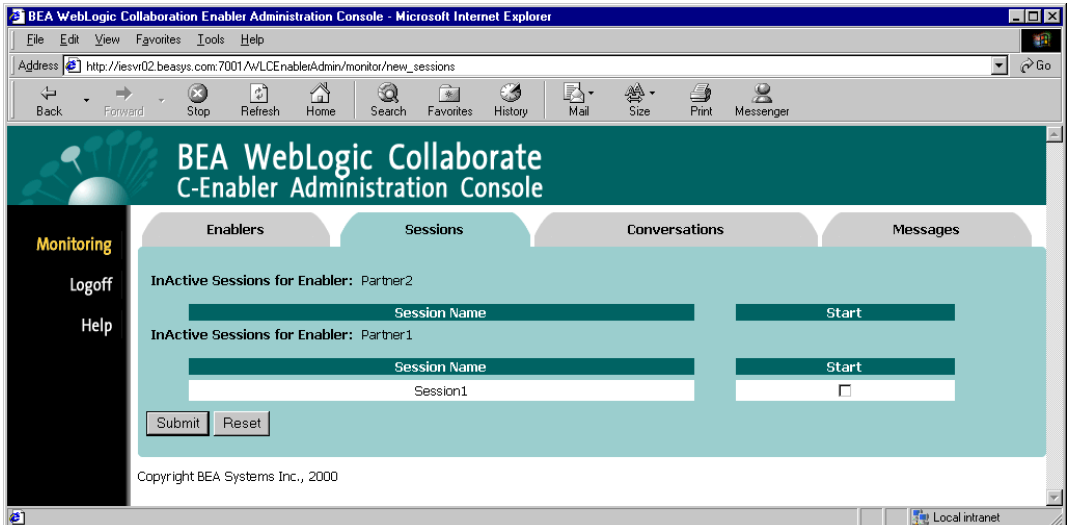
Starting a New Session

To start a new session:

1. Make sure you are on the Sessions monitoring tab.
2. Click on the **Start New Sessions** button.

   This brings up a screen where you can select the inactive sessions for all active enablers that you want to start.

Figure 3-6 Starting Inactive Sessions



3. Select the checkboxes for the inactive sessions you want to start.
4. Click **Submit**.

   If the Submit operation is successful, the active Sessions main screen is re-displayed with the newly activated sessions showing.

Shutting Down an Active Session

To *shut down* or stop an active session:

1. Make sure you are on the Sessions monitoring tab.
2. Click on the Shut Down box for the session you want to shut down so that a checkmark is displayed. (You can select more than one session to shut down.)
3. Click the **Shutdown** button.

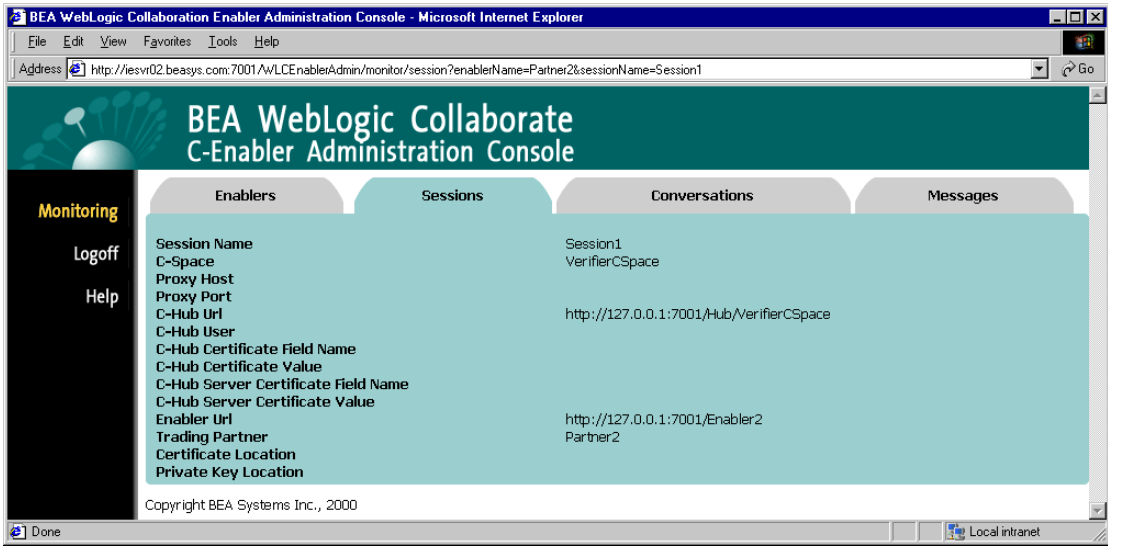
   A confirmation dialog is displayed to ask if you want to end all active conversations for the selected session(s).

   Click **OK** to confirm and shut down the selected sessions, or click **Cancel** if you decide not to perform the shutdown.

Viewing Details for a Particular Session

To view the details for a session, click on the **Sessions** tab, then in the Session Name column click on the session you want to view. (You can also get to details on a session by clicking on a session wherever it appears on the other screens.) This brings up a detail screen on the selected session.

Figure 3-7 Viewing Details on a Particular Session



The following table explains the information reported on the details of a particular session.

Table 3-4 Details on a Session as Defined in the C-Enabler Configuration File

Field	Description
Session Name	Name of the session.
C-Space	C-space (collaboration space) in which this session participates.
Proxy Host	Address of the proxy server used for the c-hub, if any. (Optional c-hub security setting.)

Table 3-4 Details on a Session as Defined in the C-Enabler Configuration File

Field	Description
Proxy Port	Port number for the proxy server on the c-hub, if any. (Optional c-hub security setting.)
C-Hub URL	URL for the c-hub to which this c-enabler is connected.
C-Hub User	WebLogic Server user name under which the c-enabler will be running when processing messages received from the c-hub.
C-Hub Certificate Field Name	Type of certificate used on c-hub (*email* or *fingerprint*) for client-side security. (Optional c-hub security setting related to SSL, used for mapping trading partner certificates to WebLogic Server (WLS) users.)
C-Hub Certificate Value	Certificate value for client-side security. (Optional c-hub security setting related to SSL, used for mapping trading partner certificates to WLS users.)
C-Hub Server Certificate Field Name	Type of certificate used on c-hub (*email* or *fingerprint*) for server-side security. (Optional c-hub security setting related to SSL, used for mapping trading partner certificates to WLS users.)
C-Hub Server Certificate Value	Certificate value for server-side security. (Optional c-hub security setting related to SSL, used for mapping trading partner certificates to WebLogic Server (WLS) users.)
Enabler URL	URL of this c-enabler.
Trading Partner	Name of the trading partner this session represents. (A session is defined with either a trading partner, or a certificate location and private key location.)
Certificate Location	Location of the certificate for this c-enabler. (A session is defined with either a trading partner, or a certificate location and private key location.)
Private Key Location	Location of the private key for this c-enabler. (A session is defined with either a trading partner, or a certificate location and private key location.)

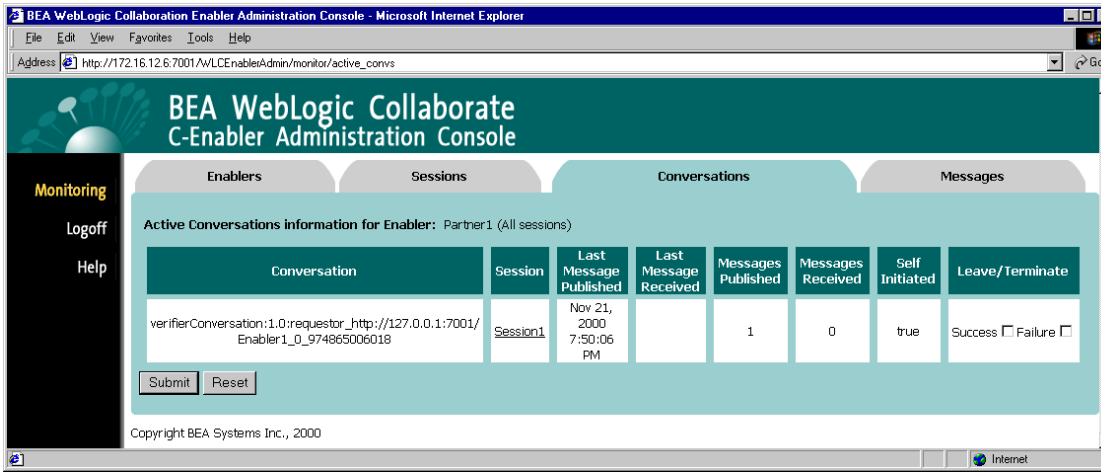
Monitoring Active Conversations

To view active conversations, click on the **Conversations** tab.

This shows all the active conversations for all active c-enablers. Each table on the Conversations screen represents the active conversations for an active c-enabler. If you have more than one c-enabler running, you will see an active conversations table for each c-enabler on the Conversations screen.

For example, in the following figure there is one active c-enabler (Partner1). Partner1 has one active conversation.

Figure 3-8 Monitoring Active Conversations on the C-Enabler



The following table explains the information reported on the active Conversations monitoring screen.

Table 3-5 Active Conversations Fields

Field	Description
Conversation	Conversation ID of the active conversation.
Session	Session in which this conversation is occurring.

Table 3-5 Active Conversations Fields

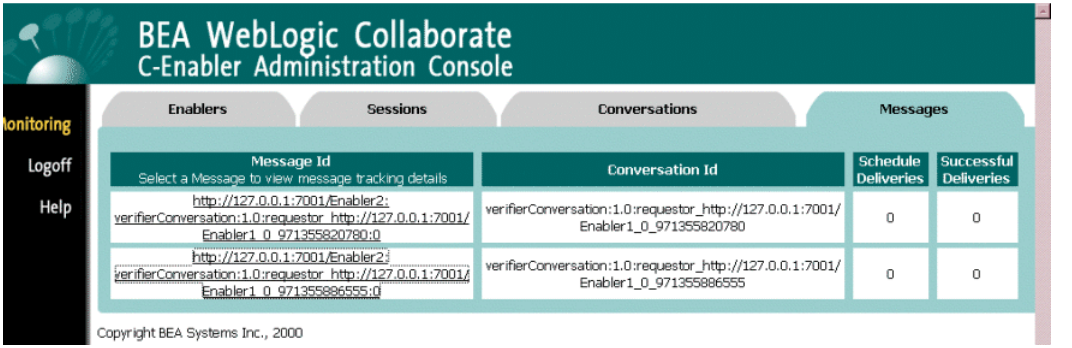
Field	Description
Last Message Published	Date and time of the last message published in this conversation.
Last Message Received	Date and time of the last message received in this conversation.
Messages Published	Total number of messages this c-enabler has published for this conversation.
Messages Received	Total number of messages this c-enabler has received for this conversation.
Self-Initiated	Shows whether the session to which the conversation belongs started this conversation or not. (For example, if this field shows `true`, that means the session this conversation belongs to started the conversation.)
Leave/Terminate	■ **Conversations that are Self-Initiated by the session(s) you are monitoring**. For a conversation where the Self-Initiated value is `true`, you can *Terminate* the conversation with a choice of either *Success* or *Failure*. Check Success to indicate that the conversation completed successfully. Check Failure to indicate that there was an error in the conversation, and that is why you are terminating it. ■ **Conversations that are not Self-Initiated by the session(s) you are monitoring**. For a conversation where the Self-Initiated value is `false`, you can select c-enabler(s) that can *Leave* that conversation *Permanently*. (For this release you cannot leave a conversation *Temporarily*.)

Monitoring Messages

To view messages, click on the **Messages** tab.

This shows all the messages for all active c-enablers.

Figure 3-9 Monitoring Messages on the C-Enabler



The following table explains the information reported on the Messages monitoring screen.

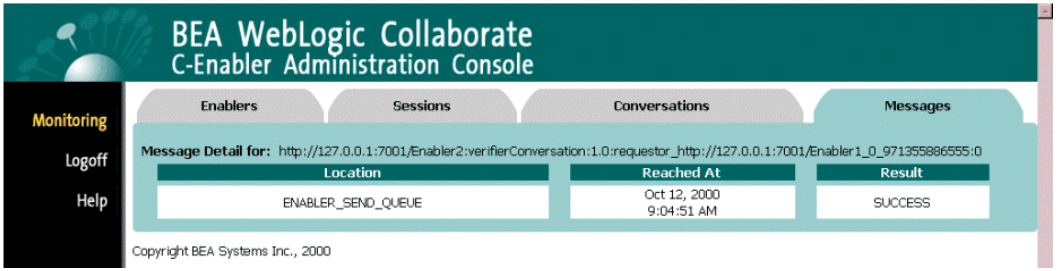
Table 3-6 Messages Fields

Field	Description
Message ID	Message ID generated by BEA WebLogic Collaborate.
Conversation ID	Conversation ID of the active conversation.
Scheduled Deliveries	Number of destinations to which this message is scheduled to be delivered.
Successful Deliveries	Number of destinations this message has already reached.

Viewing Details for a Particular Message

To view the details for a message, click on the **Messages** tab, then in the Message ID column click on the message you want to view. This brings up a detail screen on the selected message.

Figure 3-10 Viewing Details for the Selected Message



The following table explains the information reported on the details of a particular message.

Table 3-7 Details on a Message

Field	Description
Location	Locations to which the message has been sent.
Reached At	■ If the message was successfully sent, this field indicates the date and time the message arrived at the location. ■ If the message failed to arrive, this field indicates the last date and time BEA WebLogic Collaborate *attempted* to send the message.
Result	The possible results are: ■ Success ■ Failure ■ Retries exhausted

Shortcuts

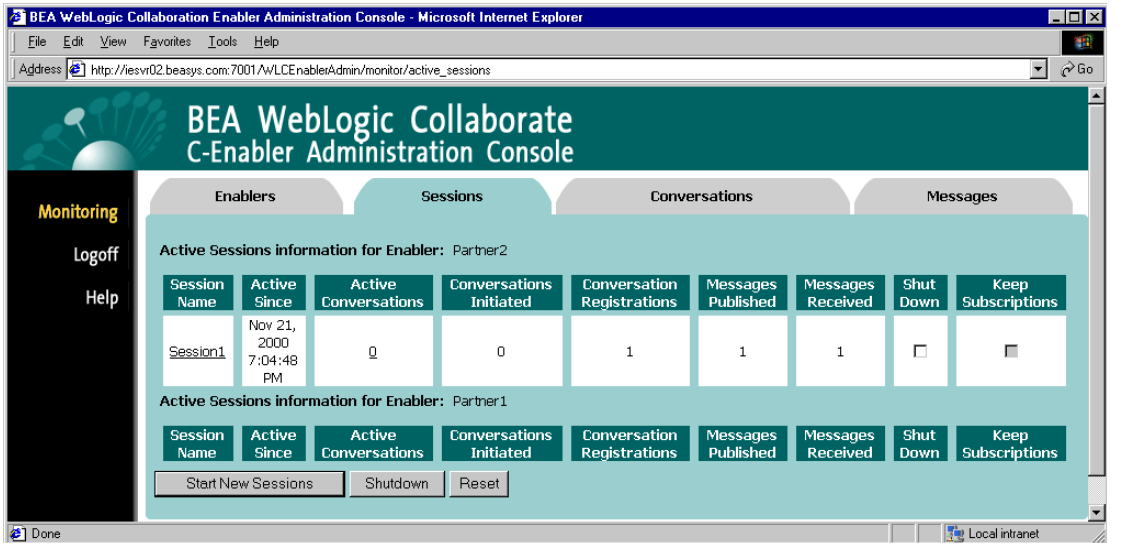
You can jump from one screen to another by clicking on the values in particular fields to get detail on a c-enabler session or conversation. The following sections describe shortcuts for:

- Monitoring Active Sessions for a Single C-Enabler
- Monitoring Active Conversations for a Single C-Enabler
- Monitoring Active Conversations for a Single Session in a C-Enabler

Monitoring Active Sessions for a Single C-Enabler

From the Enablers tab, you can click on the value in Active Sessions field to view the active sessions for this c-enabler. (For example, if you click on the value in the Active Sessions field for Partner 2, you get a view similar to the one shown in Figure 3-11.)

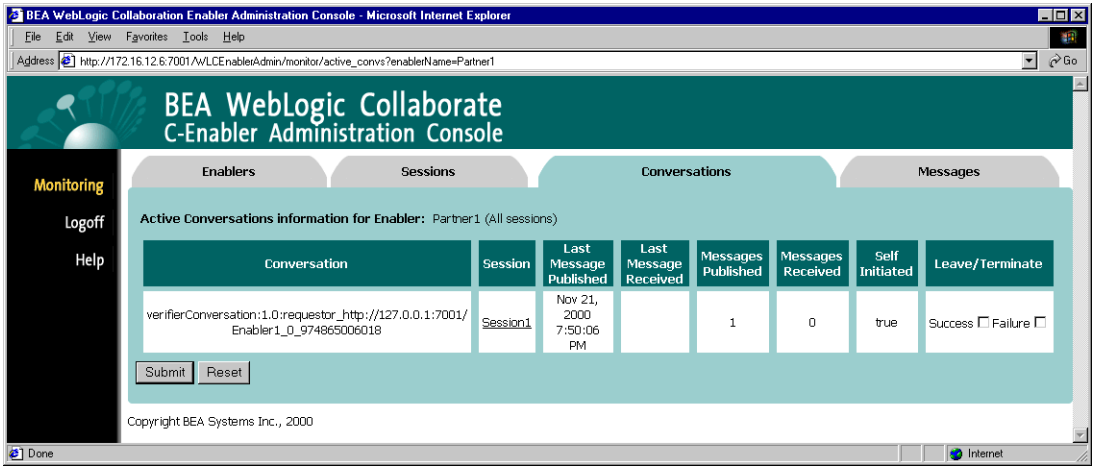
Figure 3-11 Active Sessions for a Single C-Enabler (Accessed by Shortcut from Active Sessions Field in the Enablers Tab)



Monitoring Active Conversations for a Single C-Enabler

From the Enablers tab, you can click on the value in Active Conversations field to view the active conversations for this c-enabler.

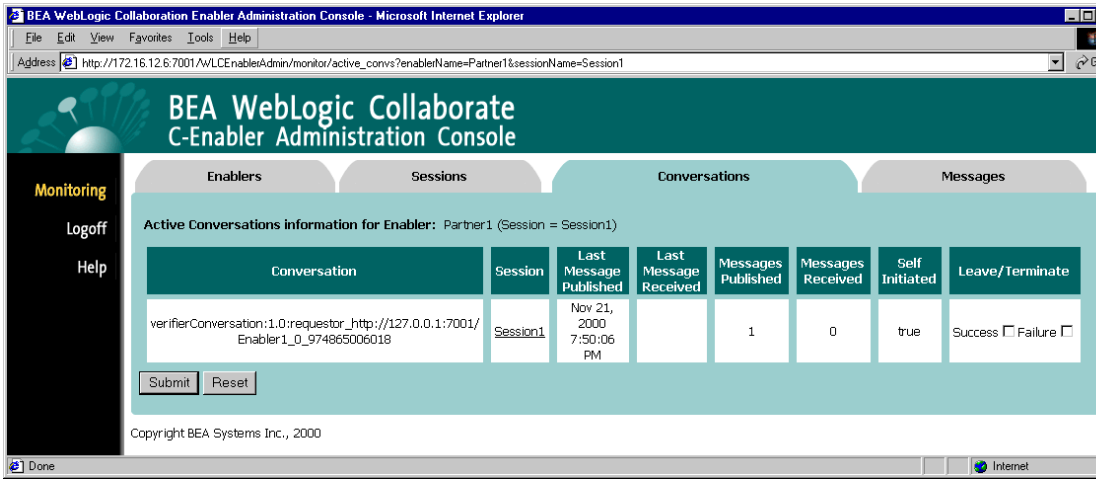
Figure 3-12 Active Conversations for a Single C-Enabler (Accessed by Shortcut from Active Conversations Field in the Enablers Tab)



Monitoring Active Conversations for a Single Session in a C-Enabler

From the Sessions tab, you can click on the value in the Active Conversations field to view the active conversations for the session.

Figure 3-13 Active Conversations for a Single Session in a C-Enabler (Accessed by Shortcut from Active Conversations Field in the Sessions Tab)



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