Provision of Additional Subsystems

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About Additional Subsystems

Your Unified CCX system may include some or all of the following additional subsystems:

- The HTTP subsystem—The Unified CCX system uses the HTTP subsystem to enable Unified CCX applications to respond to requests from a variety of web clients, including computers and IP phones.
- The Database subsystem—The Unified CCX system uses the Database subsystem to enable Unified CCX applications to interact with customer-provided enterprise database servers to make database information accessible to contacts.
- The eMail subsystem—The Unified CCX system uses the eMail subsystem to communicate with your email server and enable your applications to create and send email.

If you plan to run applications that use any of the additional Unified CCX subsystems included in your Unified CCX package, you should now provision those subsystems. The Unified CCX system uses these additional subsystems to communicate with supporting systems such as web servers, database servers, and email servers.

Note You need to provision a particular subsystem only if you are using Unified CCX applications that require it.

Provision of HTTP Subsystem

Note The HTTP subsystem is available if your system has a license installed for one of the following Cisco product packages: Unified IP IVR or Unified CCX Premium.

The Unified CCX system uses the HTTP subsystem to enable Unified CCX applications to respond to requests from a variety of web clients, including computers and IP phones.

Note If you are not using HTTP applications, you do not need to provision the HTTP subsystem.

The Unified CCX system uses subdirectories in the Unified CCX installation directory to store text substitution, eXtensible Style Language (xsl) templates, static and dynamic web pages, and Java Servlet Pages (JSPs).

Note Use the Document Management page to upload these documents.

To provision the HTTP subsystem, you need to provision HTTP triggers. HTTP applications use triggers to activate the application in response to an incoming HTTP message.

Note You cannot change the TCP/IP port numbers used by the HTTP subsystems or triggers in Unified CCX.

Configure HTTP Triggers

You need to create an application using **Applications** > **Application Management** menu from the Unified CCX Administration menu bar. After you create an application, you can configure HTTP triggers for the application using the following procedure.

Procedure

Step 1 From the Unified CCXAdministration menu bar, choose **Subsystems** > **HTTP**.

The HTTP Trigger Configuration web page opens.

Step 2 Specify the following fields:

Field	Description
URL	The relative URL. For example: `/hello`
Application Name	Select an application for which you want to add a HTTP trigger from this list box.
Sessions	The maximum amount of simultaneous sessions (instances) that the application can handle.

Field	Description
Enabled	Click the required radio button to accept - **Yes** (the default). **Note** If you disable the trigger, the user receives an error message when browsing to the defined trigger URL.

Step 3 Click **Add New**.

The HTTP Trigger Configuration web page closes, and the trigger information appears on the HTTP Trigger Configuration summary web page.

You are now ready to provision any additional subsystems your Unified CCX applications require or to begin configuring Unified CCX applications.

Provision of Database Subsystem

Note The Database subsystem is available if your system has a license installed for either the Unified IP IVR or Unified CCX Premium product packages. If you are not using Unified CCX applications that require access to databases, you do not need to provision the Database subsystem.

The Unified CCX system uses the Database subsystem to enable Unified CCX applications to interact with database servers to make database information accessible to contacts.

Caution The Database subsystem does not support database views or running the store procedures.

Database Subsystem Configuration

The Database subsystem enables the Unified CCX applications to obtain information from data sources, which are databases configured to communicate with the Unified CCX system. You can connect the Unified CCX system with enterprise databases such as Microsoft SQL Server, Sybase, Oracle, or IBM DB2.

You can upload JDBC driver files using **Subsystems** > **Database** > **Drivers** menu option.

Note To determine a list of enterprise databases supported for the Database subsystem, see the Unified CCX Compatibility related information, located at: https://www.cisco.com/c/en/us/support/customer-collaboration/unified-contact-center-express/products-device-support-tables-list.html.

Add New Datasource

After uploading the JDBC driver, you need to use this to create the datasource in the Database subsystem.

To add a new data source, complete the following steps.

Procedure

Step 1 From the Unified CCXAdministration menu bar, choose **Subsystems** > **Database** > **DataSource**. Click **Add New** icon that displays in the tool bar in the upper, left corner of the window or the **Add New** button that displays at the bottom of the page.

The Datasource Configuration web page opens. For more information on the web page fields, see **Datasource Configuration Web Page**.

Step 2 Click **Add** to save the changes.

The Enterprise Database Subsystem Configuration web page opens. You are now ready to provision any additional subsystems your Unified CCX applications require or to begin configuring Unified CCX applications.

Related Topics

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Datasource Configuration Web Page

Datasource Configuration web page.

Field	Description
Secure Connection	When enabled, encrypts the connections to enterprise database servers. By default, it is disabled.
Data Source Name	Data source name for referring to the datasource. This is a mandatory field.
User Name	Username defined for connecting to the enterprise database. This is a mandatory field.
Password	Password defined for connecting to the enterprise database.
Confirm Password	Re-enter the password that you provided in the Password field.
Maximum Number of Connections	Maximum number of connections allowed to connect to the database. This database is usually an external database to which the customer script can connect. While the limit is set by that database and governed by your license, if this number in this setting is exceeded, the corresponding workflow is aborted and the caller receives an error message. However, you can avoid this error by configuring the appropriate number of sessions in the corresponding script or application. Also, the script writer can provide information about how many connections are used per call (or instance of application). This is a mandatory field.

Field	Description
Driver	Displays the list of available drivers for the enterprise database. One or more datasources can use the same driver. Select a driver for this datasource from this list box. This is a mandatory field.
JDBC URL	JDBC URL that is used to obtain a connection to the enterprise database. This is a mandatory field. The JDBC URL provided will be used by Unified CCX to connect to the enterprise database using JDBC. The URL to be used is dependent on the database you are connecting. The examples provided in the Datasource Configuration web page can be used as a reference to define the URL. Refer to the driver documentation for more information. **Note** • If the test connection fails for Oracle JDBC drive connection, try the following connection url: jdbc:oracle:thin:[user/password]@[host][:port]:SID • Encrypted connections to enterprise database servers are supported.

Note If you enable FIPS, then the password length must be minimum 14 characters for Oracle users connecting to external datasource configuration.

Poll Database Connectivity

To poll connectivity to the database on a periodic basis, complete the following steps.

Procedure

Step 1 From the Unified CCXAdministration menu bar, choose **Subsystems** > **Database** > **Parameters**.

The Parameters web page opens to display the parameter-related fields.

Step 2 Specify the following fields:

Field	Description
RetryConnectInterval	Specifies the interval between two connection attempts when a data source is initialized. The default is 15,000 milliseconds.
NumAttempt	Specifies the number of attempts to establish connections to the database when a data source is initialized. The default is 3 attempts.
LoginTimeout	Sets the maximum time in seconds that a driver will wait while attempting to connect to a database. The default is 0 (disabled).

Step 3 Click **Update** to apply changes (or **Reset to Default** if you prefer to retain the default values).

The window refreshes and Unified CCX updates the parameters with your changes. You are now ready to provision any additional subsystems your Unified CCX applications require or to begin configuring Unified CCX applications.

Provision eMail Subsystem

Note The eMail subsystem is available if your system has a license installed for one of the following Cisco product packages: Unified IP IVR or Unified CCX Premium.

The Unified CCX system uses the eMail subsystem to communicate with your email server and enable your applications to create and send email. You must provision the eMail subsystem if you intend to create scripts that use messaging steps to create and send email.

Tip If your email system is configured to receive acknowledgments, you should process the mailbox you identify in your configuration to determine whether or not an email was successfully sent.

The email configuration process identifies the default email address and server to be used for sending email (including e-pages and faxes) and for receiving acknowledgments.

Note If you are not using email applications, you do not need to provision the eMail subsystem.

Complete the following steps.

Procedure

Step 1 Choose **Subsystems** > **eMail**.

The eMail Configuration web page opens.

Step 2 Specify the following fields:

Field	Description
Mail Server	A fully-qualified email server name. (Example: server.domain.com)
email Address	An existing fully qualified e-mail address for the administrative account. Example:administrator@domain.com **Note** Unified CCX supports alphanumeric IDs and special characters (only hyphen "-" , underscore "_", and dot ".").

Step 3 Click **Update**.

The Unified CCX system saves your changes and the Unified CCXAdministration web page opens.

Note
Cisco does not currently support multiple email configurations. To remove the email information, you must erase the fields and click **Update**.

You are now ready to provision any additional subsystems your Unified CCX applications require, or to begin configuring Unified CCX applications.