Application Gateway

About Application Gateways

An application gateway is an optional Packaged CCE feature that allows you to invoke an external application from within a script (using a Gateway node). You can pass data to the application and receive data in return, which you can then examine and use for routing decisions.

Before you can use these nodes in a script, you must first configure the gateways.

The application gateway requires connection information to communicate with the external application. You perform this task using the Unified CCE Administration interface.

Configuring Application Gateways

Configure a application gateway for an application you want to access, from within the scripts.

Configuration information includes data such as:

- Type of application the gateway interacts with-a non-Packaged CCE application or an application on another Packaged CCE system

- Form of connection the gateway uses-duplex or simplex

- Fault tolerance strategy for the gateway-described in the following table.

Table 1: Application Gateway Fault Tolerance Strategies

Fault Tolerance Strategy	Description
Duplicate Request	Packaged CCE, both side A and B, connects to separate application gateway hosts. They send simultaneous requests. Each request is sent to both the sides of the gateway. The response that comes back first, is used by both the sides of A and B of ICM.

Fault Tolerance Strategy	Description
Alternate Request	Packaged CCE, Side A and Side B connects to separate application gateway hosts. All requests are sent alternatively to A and B.
Hot Standby	Each router manages a connection to a different host. All requests are directed to the designated primary host. If either host (or connection) fails then all requests are directed to the backup host. This results in the loss of some requests on failures.
None	The application gateway is not duplexed.

Once you specify the configuration information, you can define the connection information for the gateway. For example, the network address of the port, through which the system software communicates with the application.

If your Central Controller is duplexed, you can define separate connection information for each side of the Central Controller. This allows each side to communicate with a local copy of the external application.

Add and Maintain Application Gateways

You can create custom application gateways in Packaged CCE deployment.

Step 1 In Unified CCE Administration, choose **Overview** > **Infrastructure Settings** > **Application Gateways**.

Step 2 To add a new gateway, click **New**.
The **New Application Gateway** page displays.

Step 3 Enter a name for the new application gateway. Maximum length is 32 characters. Valid characters are alphanumeric, period (.), and underscore (_). The first character must be alphanumeric.

Step 4 Enter a description.

Step 5 Select one of the options from the **Encryption** drop-down list.

- **None**: Selected by default. Indicates that the requests are not encrypted.
- **Private Key**: Indicates that the requests are encrypted using a private key.
- **TLS**: Indicates that the requests are encrypted using the TLS protocol.

Step 6 Select one of the options from the **Connection Type** drop-down list.

a) If you select **Duplex**, you can enter data in all the subsequent fields.

b) If you select **Simplex A**, the **Preferred Side** is set to **Side A**, **Fault Tolerance** is set to **None**, and the **Side B** box is disabled.

c) If you select **Simplex B**, the **Preferred Side** is set to **Side B**, **Fault Tolerance** is set to **None**, and the **Side A** box is disabled.

Step 7 Select a side from the **Preferred Side** drop-down list.

Step 8 Select one of the options from the **Fault Tolerance** drop-down list.

- **Alternate Request**: Each router manages connections with different hosts. The routers take turns to send half the request to the host connected to Side A and the other half to the host connected to Side B. If one host fails, the entire load is directed to the surviving host.

- **Duplicate Request**: Each router manages connections with different hosts. Each time a script initiates a request, both the routers communicate with their corresponding hosts. The routers process the response from the host that responds first.
- **Hot Standby**: Each router manages connections with different hosts. All the requests are directed to the designated primary host. If the host or the connection fails, all the requests are directed to the backup host.

Step 9   Enter the following server details in the **Side A** and **Side B** boxes as applicable:

- **In Service**: This option is enabled by default. If you uncheck the **In Service** check box, the connection is no more in service and the router does not send application gateway requests to that connection.
- **Hostname/IP Address**: Enter the IP address, hostname of the server, or fully qualified domain name (FQDN).
- **Port**: Enter the port number.
- **Initialization Data**: This information passes to the Application Gateway host at the time of initialization.

Step 10   Click **Advanced Settings** on Side A or Side B to open the respective **Advanced Settings** dialog box. The following parameters with default values appear:

- **Max Errors**: Indicates the number of consecutive errors that cause the software to declare the host unavailable.
- **Timeouts**
  - **Request**: Indicates the number of milliseconds the Router waits before timing out a request.
  - **Abandon**: Indicates the number of milliseconds the Router waits for a response before considering it as late.
  - **Late**: An internal timeout in milliseconds to communicate between the Router and the Application Gateway interface process.

- **Heartbeats**
  - **Request Timeout**: Indicates the number of milliseconds the Router waits for a response to a heartbeat before considering it as a failure.
  - **Retry Timeout**: Indicates the number of milliseconds the Router waits before retrying a missed heartbeat.
  - **Retry Limit**: Indicates the number of consecutive unanswered heartbeats after which the Router ends the connection.
  - **Interval**: Indicates the number of milliseconds the Router waits between successful heartbeats.

- **Sessions**
  - **Retry Timeout**: Indicates the number of milliseconds the Router waits before trying to reconnect after a connection terminates or a connection attempt fails.
  - **Retry Limit**: Indicates the number of times the Router tries to establish the connection before it quits.
  - **Open Timeout**: Indicates the number of milliseconds the Router waits for a response to an open or close request. If it receives no response within this time, the Router assumes that the request failed.

Step 11   Edit the advanced settings parameters as applicable and click **OK**.

Note   Click the **Restore Defaults** button to restore the default values.

Step 12   Click **Save**.