PureConnect®

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Interaction Web Tools

Technical Reference

Abstract

This document contains information about Interaction Web Tools for Customer Interaction Center (CIC). It includes the instructions necessary to install, configure, and use Interaction Web Tools. It includes a list of Interaction Web Tools handlers and their parameters. This document contains code and HTML samples throughout.

For the latest version of this document, see the PureConnect Documentation Library at: http://help.genesys.com/pureconnect.

Table of Contents

Introduction to Interaction Web Tools

Interaction Web Tools enables Customer Interaction Center (CIC) agents to interact with visitors to your company's website or use chat functionality to communicate with other CIC agents. These tools enable handlers to send and receive information from webpages and make it possible to register and authenticate website visitors against the Interaction Tracker database.

Interaction Web Tools supports the following CIC client features:

- **Web Chat:** An agent can engage in text-based, one-on-one communication online with a website visitor or create a chat conference between multiple agents and a website visitor.
- **Intercom Chat:** An agent can chat online with fellow employees or a group of fellow employees.
- **Callback:** Individuals can visit your website and request that an agent or member of a workgroup call them back. CIC routes the request to the appropriate agent or workgroup.
- **Response Management:** Agents can use Response Management during a chat to send pre-defined messages, URLs, or files to a website visitor. An agent can also use Response Management for guidance in answering a website visitor's questions during a call made as a result of a callback request.
- **e-FAQ:** e-FAQ is a centrally managed database of Frequently Asked Questions and responses. If your company has the e-FAQ knowledge management program and your agents have the appropriate user rights, agents can use e-FAQ to chat to respond to requests for information.

> **Note:**
> To use web chat or callback, Interaction Web Tools requires a web server. Intercom chat, Response Management, and e-FAQ do not require a web server.

Audience

The audience for the *Interaction Web Tools Technical Reference* includes:

- CIC Administrators who want to connect the CIC server to a web server and to install and configure Interaction Web Tools.
- Webmasters who want to display custom webpages from CIC or implement CIC Chat.
- Handler authors who want to write handlers that interact with people browsing a website.
- Anyone who wants to learn more about the Internet capabilities of CIC.

The technical reference reflects the Interaction Web Tools functionality available in CIC. It includes the installation, configuration, and setup information necessary to use Interaction Web Tools.

CIC clients

CIC supports two interaction management client applications. This documentation uses the term CIC client to refer to Interaction Connect and Interaction Desktop. Some features are not available in both CIC clients. Specific versions are noted where applicable.

Licensing

Following are the licensing requirements for Interaction Web Tools.

Server licensing

All CIC products include Intercom Chat (CIC agent to CIC agent chat). The other Interaction Web Tools features require more licenses.

The full functionality of Interaction Web Tools requires the CIC Advanced Server license or the Interaction Web Services add-on license.

Client licensing

CIC client users need the Client Access license or ACD Access license.

Requirements

CIC server

Interaction Web Tools requires a CIC server.

Web Server

In a production environment, run the web server on a different machine than the CIC server. The Genesys Testlab site lists supported web servers. For more information, see http://testlab.genesys.com/ProductsPage.aspx?ProductType=14.

Browsers

The Genesys Testlab site also lists the browsers supported for your website visitors. For more information, see http://testlab.genesys.com/ProductsPage.aspx?ProductType=36.

Interaction Web Tools Features

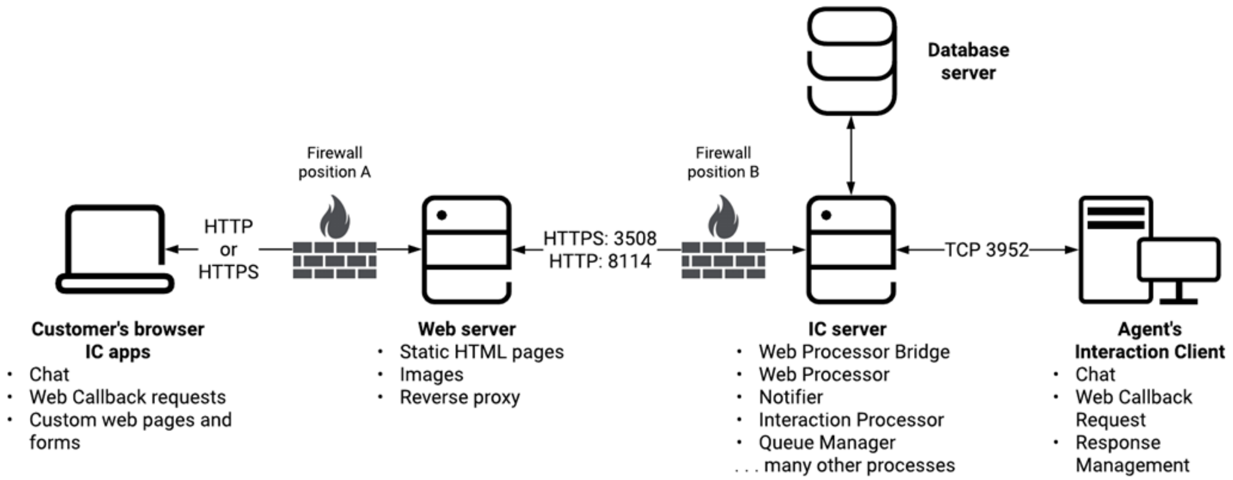
The following table lists the Web Tools features and their description.

Feature	Description
Web Chat	Using the web chat feature, an agent can engage in text-based, one-on-one communication online with a website visitor or create a chat conference between multiple agents and a website visitor. Chats between an agent using the CIC client and a website visitor are web chats. Agents can record web chats. If enabled by an administrator, visitors can choose to have a transcript of the chat emailed to themselves.
Intercom Chat	This basic variation of chat, available with all CIC installations, lets agents chat online with fellow employees or a group of fellow employees. Intercom chats enable agents to get an answer to a question from a fellow employee, or to pull remote agents together for a quick discussion, fostering team cooperation. Agents can record intercom chats. CIC client users can create an intercom chat only with other internal users that reside on the same server. The CIC administrator must also assign the **Intercom Chat** security rights to users who want to participate in intercom chats.
Callback	Using this feature, a website visitor can leave a message for an agent to call back. After CIC routes the callback request to a workgroup or specific agent queue, the callback request appears in the CIC client in a Workgroup queue or in the My Interactions view. When an agent picks up a callback request, a full-featured callback window appears. This window contains the name of the person requesting the callback and the number at which an agent can contact website visitor. The agent can then call directly from the callback window, interact with the website visitor if connected, and then mark whether the callback was a success or a failure.
Response Management	Agents can use Response Management during a chat to send pre-defined messages, URLs, or files to a website visitor. An agent can also use Response Management for guidance in answering a website visitor's questions during a call made as a result of a callback request. The CIC administrator can create standard responses in Interaction Administrator and make them available to CIC client users. In addition, CIC client users can create, organize, view, and use their own standardized responses. CIC client users can also maintain a list of favorite responses for quick access to frequently used responses. See the help for your version of the CIC client for more details.
e-FAQ	e-FAQ is a centrally managed database of Frequently Asked Questions and responses. If your company has the e-FAQ knowledge management program and your agents have the appropriate user rights, agents can use e-FAQ during a chat to respond to requests for information.

Note:
To use web chat or callback, Interaction Web Tools requires a web server. Intercom chat, Response Management, and e-FAQ do not require a web server.

Interaction Web Tools Network Architecture

The following information describes the Interaction Web Tools architecture and the roles of the different servers and of the visitor's browser. The illustration shows the architecture of the Interaction Web Tools network. It consists of the following computers:



Web server

The web server runs Microsoft IIS or other compatible web server software and connects to the CIC server over port 3508 (HTTPS) and 8114 (HTTP). The default port numbers are 3508 and 8114, but you can configure other port numbers. You can enable either HTTPS or HTTP or both.

CIC server

The CIC server runs various other subsystems including WebProcessorBridge, WebProcessor, Notifier, Interaction Processor, and Queue Manager. The visitor's browser tells Interaction Web Tools to send data, to create and manage chats and callback requests on agent and workgroup queues, and (optionally) to create visitor registration records. Interaction Web Tools is similar to Telephony Services. The difference is that it generates and controls web interactions instead of telephone interactions. The WebProcessorBridge communicates to the WebProcessor on the CIC server to create and manipulate objects and events.

WebProcessor

- Sends requests to other CIC components.
- Manages intercom chats between internal CIC Client users residing on the same CIC server.
- Creates and controls web chat sessions between website visitors users and your agents.
- Manages callback requests started by visitors to your website.

WebProcessorBridge

- Registers visitors by creating Interaction Tracker records.
- Authenticates website visitors by looking up their visitor name and password in the Interaction Tracker tables.
- Forwards callback requests to WebProcessor.

Web HTML plug-in

This plug-in resides on the CIC server. It processes requests and responses between the web server and the CIC server. For example, you can employ a custom handler to enable your website visitors to query a particular agent's availability before starting a chat or making a callback request.

1. The web server sends a request to the Web HTML plug-in on the CIC server.
2. The CIC server invokes a custom handler which processes the request.
3. The handler passes the result to the Web HTML plug-in which formulates a response and sends it to the web server.
4. The web server forwards the response to the visitor.

Database server

When visitors register on your website, Interaction Tracker tables store their registration information. The database configuration portion of the CIC installation creates these tables and prompts you to select a reporting package to create these tables.

Visitor's Browser

Visitors connect to your website and start web interactions. The interactions are queued and processed similarly to telephone calls, including ACD processing. You can enable access to one or more interaction types either through the default released version of handlers, or through custom pages that adopt your site's look and feel. You can create software to send the same types of messages that the visitor's browser sends in a standard installation and start web interactions. Your custom applications can include this functionality. For more information about customizing the Interaction Web Tools interface, see the *Interaction Web Tools Developer's Guide* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/web_tools_dg.pdf.

Agent's CIC client

Through the CIC client, agents can monitor and control the various web interaction types. These actions are achieved through the following features:

- Chat
- Web Callback request
- Response Management

Registration and authentication

Interaction Web Tools registers and authenticates visitor information it stores in Tracker tables on the CIC server. Setup Assistant creates these Tracker tables as part of the database configuration.

Installing and Configuring Interaction Web Tools

Installation Overview

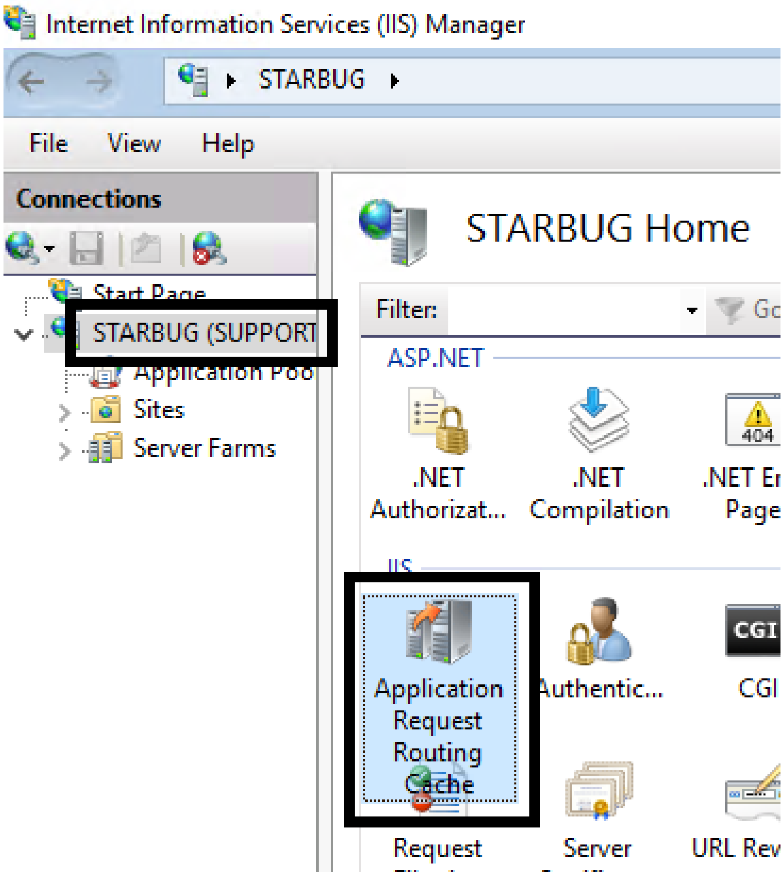
The following summarizes the installation process required on the web server to enable it to run Interaction Web Tools.

To install Interaction Web Tools on the web server

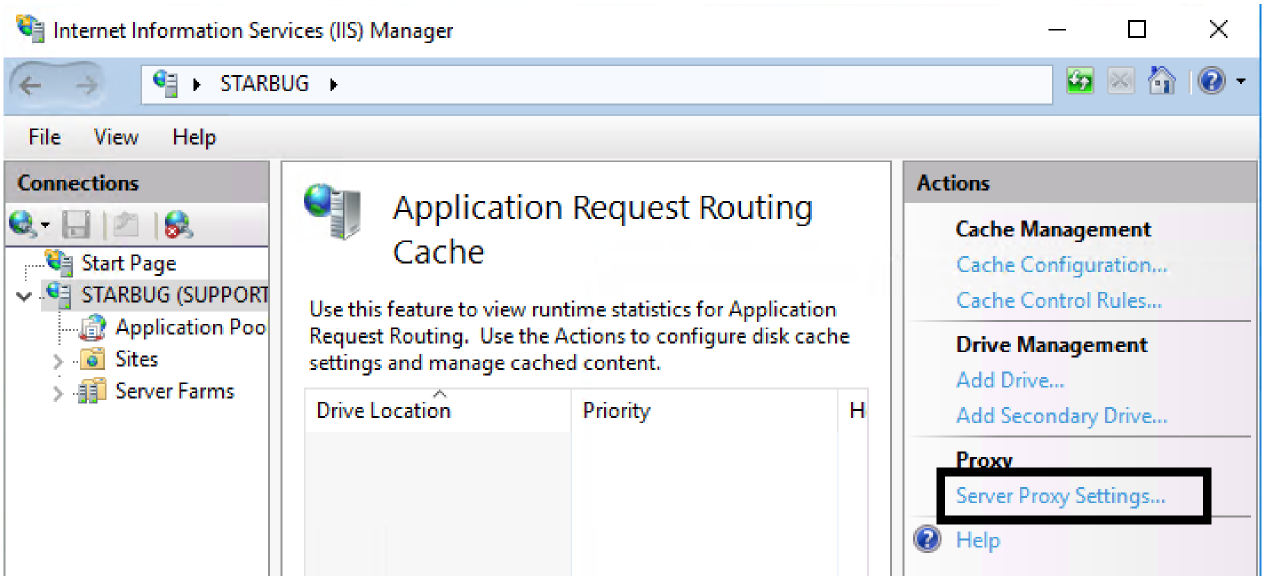
1. Perform the necessary configuration in Interaction Administrator.
2. Install Application Request Routing (IIS only).
3. Verify that the Application Request Routing proxy functionality is enabled:

> **Video:**
> https://player.vimeo.com/video/442276438

a. Open the IIS Manager navigation page and select the desired server. Double-click **Application Request Routing Cache**.

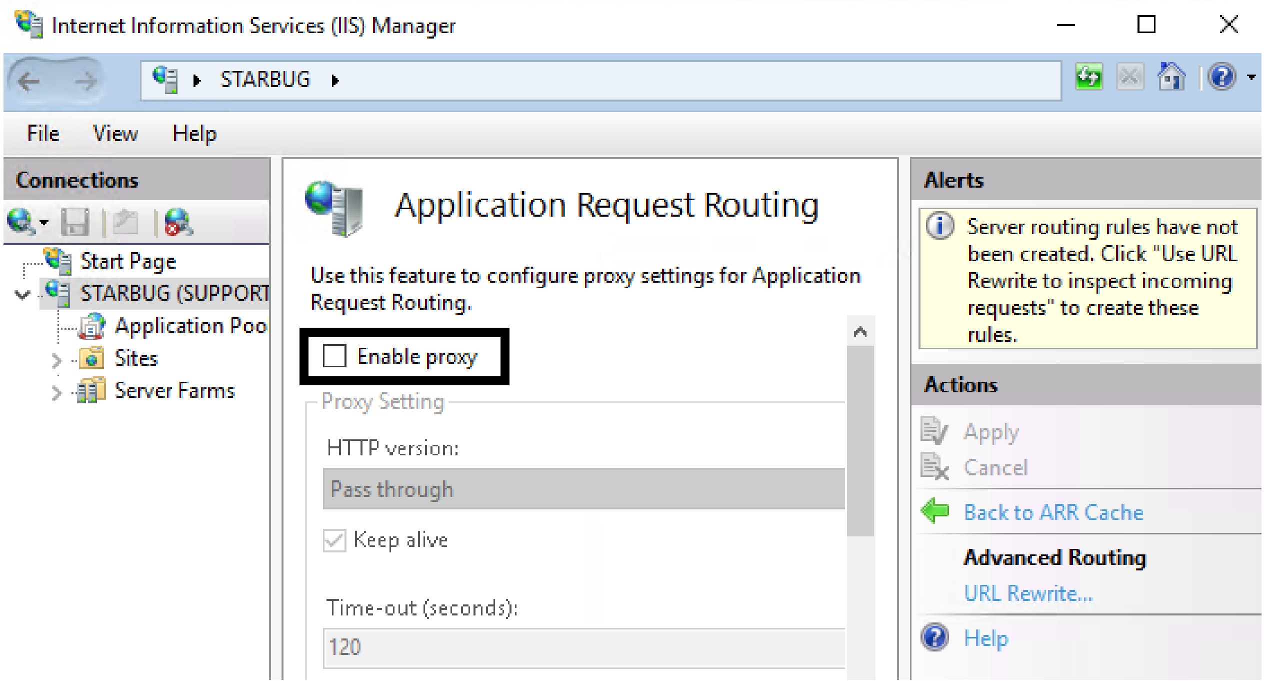


b. Under Actions, click **Server Proxy Settings**.



Use this feature to view runtime statistics for Application Request Routing. Use the Actions to configure disk cache settings and manage cached content.

c. Make sure **Enable proxy** is selected.



Use this feature to configure proxy settings for Application Request Routing.

□ Enable proxy

Proxy Setting

HTTP version: Pass through

☑ Keep alive

Time-out (seconds): 120

Server routing rules have not been created. Click "Use URL Rewrite to inspect incoming requests" to create these rules.

4. Unzip the Web Tools files from the CIC server shared directory, `IC_WebServicesChat`, to the web server.
5. Run the Interaction Web Tools Configuration utility to designate your website, select connection type, and choose the target queues for chats and callbacks.
6. Configure Interaction Web Tools.
7. Configure your web server as a reverse proxy.
8. Test your installation.

Web Tools Files

The CIC server installation places the required Web Tools files in a share on the CIC server. For information about installing the CIC server, see the *PureConnect Installation and Configuration Guide* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/Installation_Configuration_Guide.pdf.

The CIC server installation places these files in `\\icservername\IC_WebServicesChat`, where *X-X* is the version number.

- `IWT_Configuration-X-X.zip`
  This file contains the files necessary to run the Interaction Web Tools Configuration Utility.
- `IWT_Examples-X-X.zip`
  This file contains examples that walk you through the process of customizing the chat and callback controls and forms you can use on your website. These controls and forms enable your website visitors to request a chat or open a callback request. For more information, see Default Page and Customization Examples.
- `IWT_I3Root-X-X.zip`
  This file contains HTML, JavaScript, and PNG files in various subdirectories that make chats and callbacks work *out of the box* with a standard look and feel. Place these files in the `I3Root` directory underneath your website's root directory.

You can place the files in another directory. Adjust the reverse proxy configuration accordingly.

Interaction Web Tools Installation Prerequisites

Meet these prerequisites before installing Interaction Web Tools on a web server that meets the requirements listed on the Genesys Testlab site. For more information, see http://testlab.genesys.com/ProductsPage.aspx?ProductType=14.

- TCP/IP
- (optional)SNMP service.
- A dedicated and configured communications port.
  By default, Interaction Web Tools uses SSL on port 3508. You can change the port to whatever number you want. You can even run with SSL on one port and without SSL on another port simultaneously.

> **Tip:**
> To ensure that a specific port is not already in use, at the command prompt, type `netstat -a`. The system lists all the ports in use, including the listening ports.

- The Interaction Web Tools Configuration Utility requires Microsoft .NET Framework 4.0.

> **Note:**
> Alternatively, you can edit the configuration file in an ASCII editor like Notepad.

Tested Configurations

The basic requirement for the web server is to manage a reverse proxy of the AJAX calls from the JavaScript client. If you use a web server that we have not tested, it is your responsibility to ensure that your configuration supports this functionality.

For information about the latest tested web servers for CIC, see the Genesys Testlab site at http://testlab.genesys.com/ProductsPage.aspx?ProductType=14.

Operating System	Web Server
Microsoft Windows 2019 (CIC 2020R1 and higher)	Microsoft IIS 10
Microsoft Windows 2016 (CIC 2018R2 and higher)	Microsoft IIS 10

HTML Configuration Utility

If you are using an operating system not based on Windows, you can use `configuration.html` in place of `IWT_ConfigUtility.exe`.

To use the HTML Configuration Utility:

1. In a browser, open `configuration.html`.

   > **Tip:**
   > The file is in the directory where you unzipped `IWT_Configuration-X-X.zip`.

2. If necessary, click the **Allow blocked content** button to enable the webpage to run scripts and ActiveX controls.
3. In the Site's webroot text box, type the webroot directory path.

   Example: `C:/inetpub/wwwroot`.
4. Click **Load**.
5. Make the selections described in Run Interaction Web Tools Configuration Utility.
6. Click **Generate Configuration**.

CIC configuration for all web server types

Complete the following tasks on your CIC server.

Configure workgroup as ACD

On the CIC server, in Interaction Administrator:

1. Click **Workgroups**.
2. Select or create a workgroup.
3. In the **Workgroup Configuration** dialog box, on the **Configuration** tab, select the **Workgroup has Queue** check box, then select **ACD** from the drop-down list.
4. In the **Workgroup Configuration** dialog box, select the **ACD** tab and ensure that **Max Assign** is >= 1 for Chats and Callbacks.

This configuration creates a queue that is able to receive ACD chats and callbacks.

To create chats or callback requests to more than one queue, repeat steps 2-4 in Interaction Administrator for the additional queues. For more information, see the extra instructions in the `readme.html` file in the `Directory` folder in `IWT_Examples-X-X.zip`.

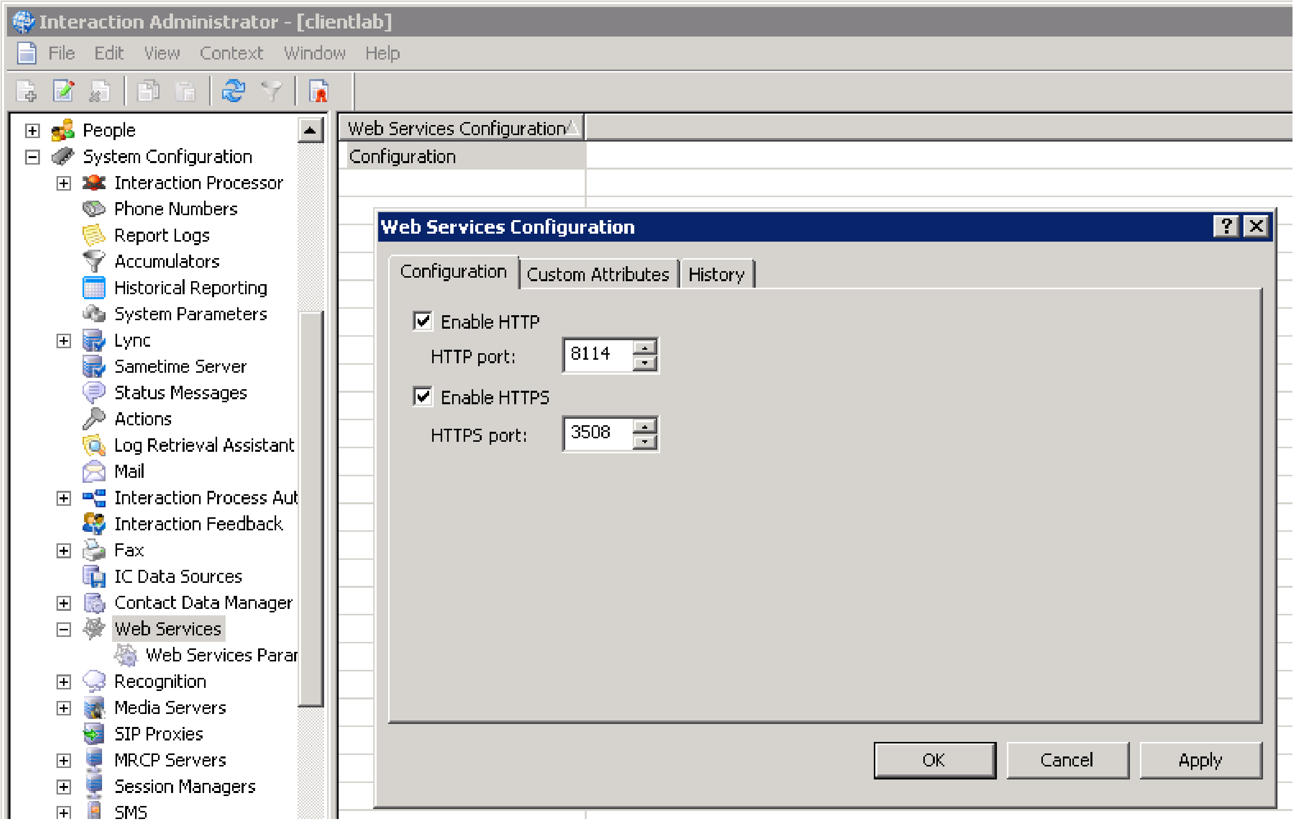
Configure Web Services

On the CIC server, in Interaction Administrator:

1. Click **System Configuration**, then **Web Services**.
2. Double-click **Configuration**.

   The **Web Services Configuration** dialog box appears.

   > **Note:**
   > This setting specifies the port numbers used by the WebProcessorBridge running on the CIC server. If you do not specify port numbers, they default to 8114 (HTTP) and 3508 (HTTPS).



☑ Enable HTTP

HTTP port: 8114

☑ Enable HTTPS

HTTPS port: 3508

3. Do either or both of the following:
   - Check **Enable HTTP** and select a port number.
   - Check **Enable HTTPS** and select a port number.

Restart WebProcessorBridge

1. On the CIC server, in IC System Manager, stop and restart WebProcessorBridge.
2. If using Switchover, stop and restart WebProcessorBridge on the backup CIC server.

> **Note:**
> If you are configuring for Apache, skip the rest of the steps in this procedure and go to Installation and Configuration for Apache.

Installation and Configuration for Windows and IIS

> **Note:**
> The installation and configuration instructions are for IIS 8.5. There are many possible combinations of operating system and web server software. If you need assistance for other platforms, contact Customer Care.

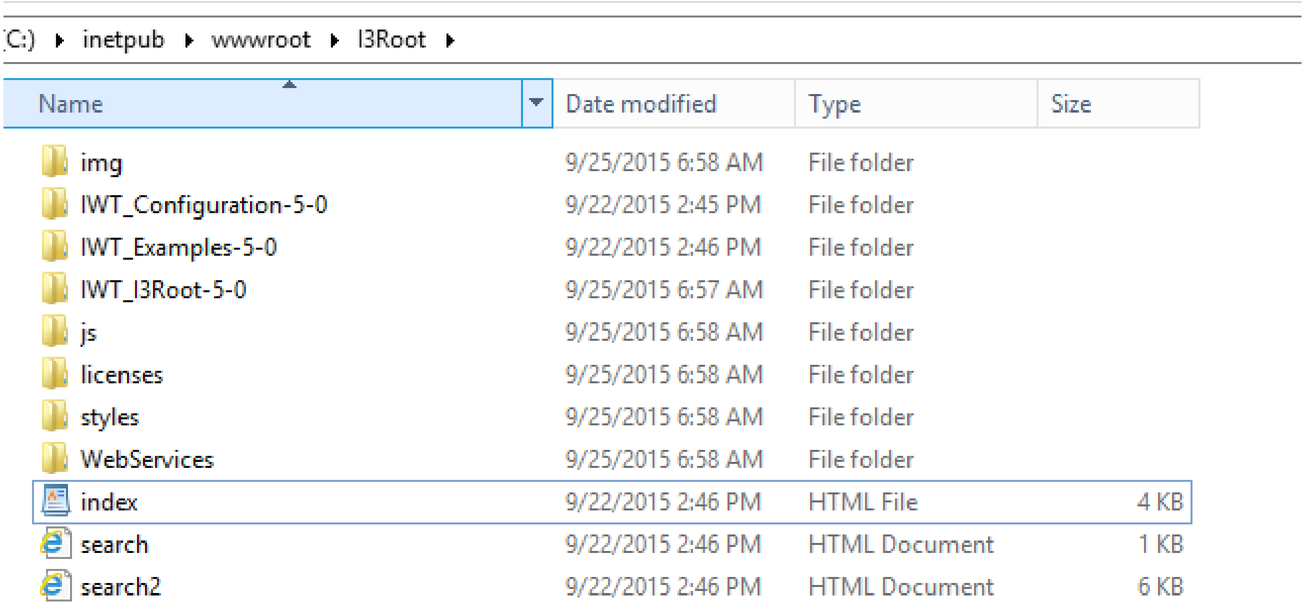
Complete the following tasks to install and configure Interaction Web Tools for Windows and IIS:

1. On the web server, install Application Request Routing from http://www.iis.net/downloads/microsoft/application-request-routing.
2. Unzip Interaction Web Tools files
3. Run Interaction Web Tools Configuration Utility
4. Use Relative URLs
5. Configure IIS

Unzip Interaction Web Tools files

1. Locate the following zip files, where *X-X* is the version number, at \\ICServer\IC_WebServicesChat:
   - IWT_Configuration-*X-X*.zip
   - IWT_I3Root-*X-X*.zip
   - IWT_Examples-*X-X*.zip
2. Create a folder named I3Root in the web root directory of your web server (most likely C:\inetpub\wwwroot).
3. Extract the contents of the three zip folders listed previously into the I3Root directory.
4. Copy the contents of IWT_I3Root-*X-X* into the I3Root directory.

   The following image shows the directory structure:



(C:) ▸ inetpub ▸ wwwroot ▸ I3Root ▸

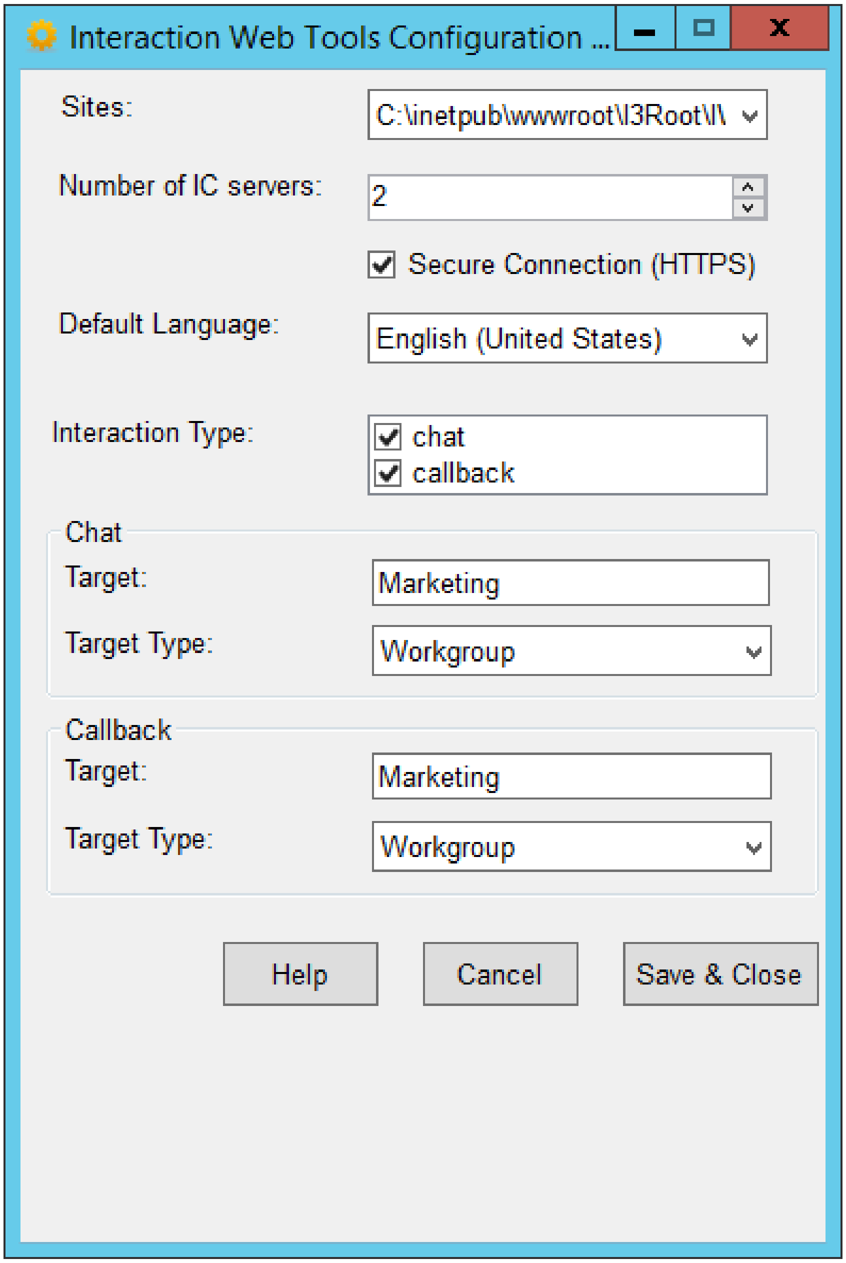
Name	Date modified	Type	Size
img	9/25/2015 6:58 AM	File folder	
IWT_Configuration-5-0	9/22/2015 2:45 PM	File folder	
IWT_Examples-5-0	9/22/2015 2:46 PM	File folder	
IWT_I3Root-5-0	9/25/2015 6:57 AM	File folder	
js	9/25/2015 6:58 AM	File folder	
licenses	9/25/2015 6:58 AM	File folder	
styles	9/25/2015 6:58 AM	File folder	
WebServices	9/25/2015 6:58 AM	File folder	
index	9/22/2015 2:46 PM	HTML File	4 KB
search	9/22/2015 2:46 PM	HTML Document	1 KB
search2	9/22/2015 2:46 PM	HTML Document	6 KB

Run Interaction Web Tools Configuration Utility

1. Run IWT_Configuration_-*X-X*\IWT_ConfigUtility.exe.

   Note:
   If you are using an operating system not based on Windows, hand-edit config.js in any text editor or use configuration.html in place of IWT_ConfigUtility.exe. For more information, see HTML Configuration Utility.

2. Select I3Root/js/config.js and click **Open**.



Sites: C:\inetpub\wwwroot\I3Root\I\

Number of IC servers: 2

☑ Secure Connection (HTTPS)

Default Language: English (United States)

Interaction Type: ☑ chat ☑ callback

Chat
Target: Marketing
Target Type: Workgroup

Callback
Target: Marketing
Target Type: Workgroup

3. Make the following selections:
   a. **Sites:** Do not change this setting. It defaults to the full path and file name of the configuration file selected in the previous step.
   b. **Number of CIC servers**: select 2 if you are using Switchover, otherwise 1.
   c. **Secure Connection**: Select this option if web users access Interaction Web Tools using HTTPS. If they access it using HTTP, clear this check box.
   d. **Default Language**: Select the language of last resort in which the login, chat, and callback forms appear to your website visitors.

      > **Note:**
      > Interaction Web Tools uses this setting only if there is no match between other language settings and the languages in which pages are available on the web server. For more information about the settings that can affect the language in which these forms appear, see Language.

      > **Tip:**
      > This setting does not affect the language in which Handler text appears (that is, "Welcome to CIC" and "Alerting John Doe") without Handler customization. Also, it doesn't affect anything the agent sees (other than system text provided by customized handlers.) Finally, this language setting causes a chat interaction to route to an agent with a particular language skill only if you customize a Handler.

   e. **Interaction Type**: Select the interaction types you want Interaction Web Tools to support.

4. In the **Chat** and **Callback** sections:
   a. **Target**: Select the Workgroup or User queue for this interaction type. You can specify the same queue for both interaction types.

      > **Note:**
      > If you don't want to use ACD, specify a User queue as the target.

   b. **Target Type:** Select the appropriate queue type.
   c. Click **Save & Close**.

Use Relative URLs

By default, Interaction Web Tools prepends URLs for Web Tools functionality with http://server:port/ using the server information set in `config.js`. You can change this default behavior by setting the **UrlsAreRelative** parameter to **true**.

Using relative URLs instead allows the reverse proxies to be set up somewhere other than `I3Root/Server1` and `I3Root/Server2`.

To use relative URLs, add the following parameter to the `setInteractionWebToolsParams` function in `index.html`:

```
"urlsAreRelative": true
```

Configure IIS

The following steps create a new inbound rule.

1. On the web server, use Windows Explorer to create *webroot directory*`\I3Root\Server1`.

   Example: `C:\inetpub\wwwroot\I3Root\Server1`

   > **Note:**
   > The following steps create the `web.config` file in this directory. Use `Server1` and `Server2` (if using switchover) as the subdirectory names. You can unzip the `IWT_I3Root-`*X*`-`*X*`.zip` files to a location other than the `I3Root` directory underneath your website's root directory. However, if the reverse proxy points to a directory other than *<webroot>*`\I3Root\Server1` (and *<webroot>*`\I3Root\Server2`, if using switchover), hand-edit `index.html` to make the reverse proxy work. For more information, see Reverse Proxy Directory.

2. On the web server, open **IIS Manager** (in **Administrative Tools**).
3. In the **Connections** navigation pane, under **Sites**, locate *(webroot directory)*`/I3Root/Server1`.

   > **Note:**
   > If you have multiple websites on your web server, "webroot directory" is the root directory for the website where you install Interaction Web Tools.

4. In the middle pane, under **IIS**, double-click **URL Rewrite**.
5. Click **Add Rule(s)** in the **Actions** pane on the right.
6. In the **Add Rules** dialog box, under **Inbound and Outbound Rules**, select **Reverse Proxy** and click **OK**.
7. In the **Add Reverse Proxy Rules** dialog box, type the name of your CIC server in the **Enter the server name or the IP address where HTTP requests will be forwarded** text box.

   > **Note:**
   > If using SSL, use the fully qualified domain name (for example, abc-ic1.company.com) and not the host name (abc-ic1) or the IP address.

8. Do one of the following:
   - If the visitor's web browser to web server connection is SSL, but the web server to CIC server connection is not SSL, *select* the **Enable SSL OffLoading** check box.
   - If the visitor's web browser to web server connection is SSL and the web server to CIC server connection is also SSL, *clear* the **Enable SSL OffLoading** check box.
   - If the visitor's web browser to web server connection is not SSL, this check box does not apply. Its setting makes no difference as there is no SSL to offload (decrypt at the web server and send to the CIC server as plain text).

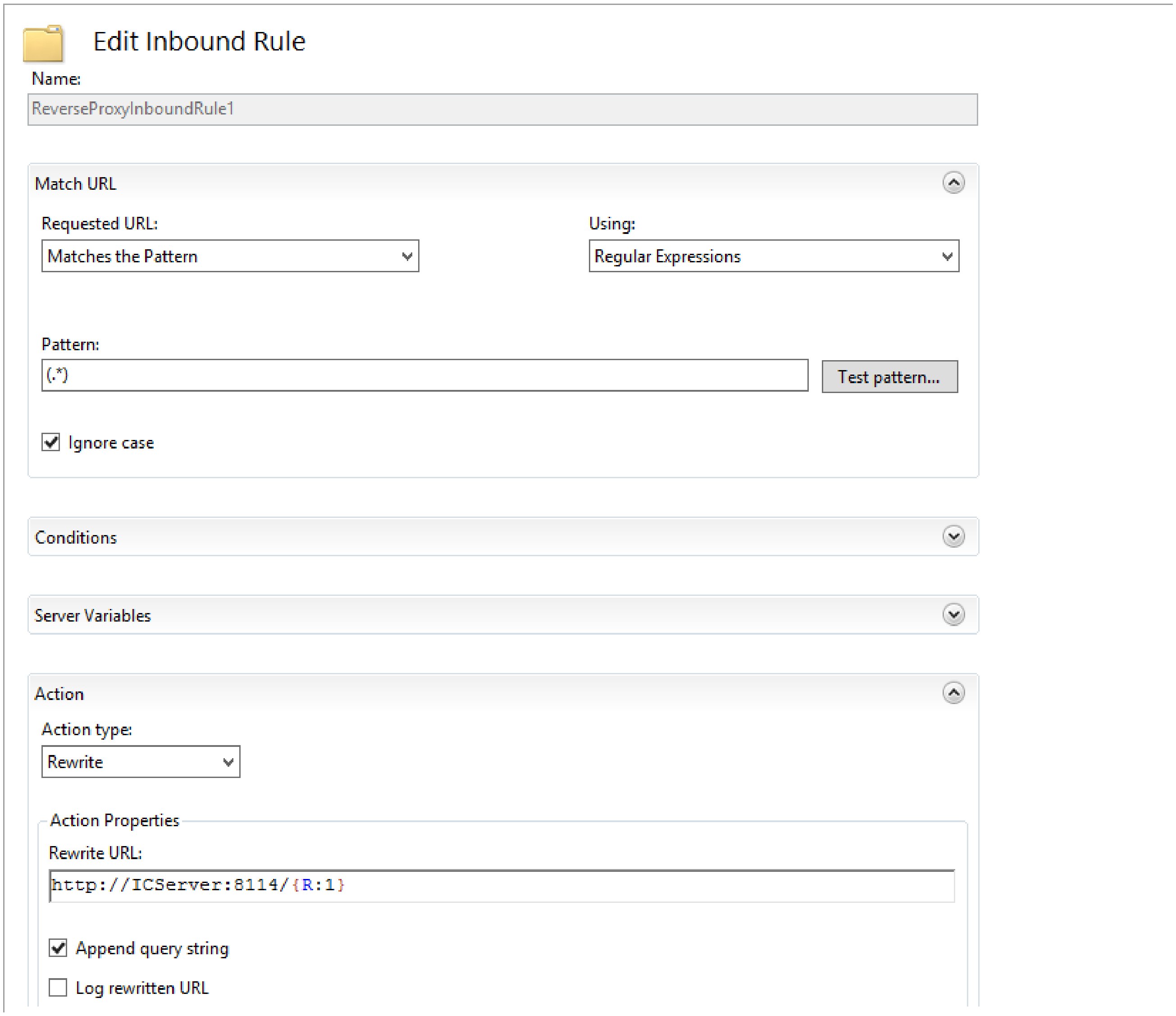
   > **Note:**
   > For more information about this check box and SSL offloading, see the description in step 1.6 at http://www.iis.net/learn/extensions/configuring-application-request-routing-(arr)/http-load-balancing-using-application-request-routing.

9. Click **OK**.

10. In the center section of the **Internet Information Services (IIS) Manager** window, double-click the rule you just created.
11. In the **Action Properties** section of the **Edit Inbound Rule** pane, in the **Rewrite URL** text box, you see **http://ICServer/{R:1}**. Add the appropriate port number by doing one of the following:
    - Change the property to `http://ICServer:8114/{R:1}`.
    - If using SSL, change the property to `https://ICServer:3508/{R:1}`.

> **Note:**
> For more information, see Setting up SSL.

12. In the **Actions** pane, click **Apply**.



Edit Inbound Rule

Name:
ReverseProxyInboundRule1

Match URL

Requested URL:
Matches the Pattern

Using:
Regular Expressions

Pattern:
(.*)

☑ Ignore case

Conditions

Server Variables

Action

Action type:
Rewrite

Action Properties

Rewrite URL:
`http://ICServer:8114/{R:1}`

☑ Append query string

☐ Log rewritten URL

13. Optionally, if you have both an HTTP port (8114) and an HTTPS port (3508) open on the CIC server, you can create 2 URL Rewrite rules. Add a condition to each that directs selected traffic from the web server to a specific port on the CIC server.

> **Note:**
> Without conditions, traffic is directed to the port specified in the rule. With conditions, the applicable condition redirects the traffic. Here is an example that redirects web server traffic based on the URL used by your website visitor.

a. Create two URL Rewrite rules by following the instructions in Configure IIS twice. Create one rule for the CIC server's HTTP port and a second for the HTTPS port.

b. Edit the rule that directs traffic to the HTTP port (8114). The following steps direct HTTP traffic to the port specified in the rule.

   i. Expand the **Conditions** section of the **Edit Inbound Rule** pane.

   ii. Click **Add**.

   iii. In the **Add Condition** dialog box, in the **Condition Input** text box, type **{HTTPS}**.

   iv. In the **Pattern** text box, type **Off**.

   v. Click **OK**.

c. Edit the rule that directs traffic to the HTTPS port (3508). The following steps direct HTTPS traffic to the port specified in the rule.
   i. Expand the **Conditions** section of the **Edit Inbound Rule** pane.
   ii. Click **Add**.
   iii. In the **Add Condition** dialog box, in the **Condition Input** text box, type **{HTTPS}**.
   iv. In the **Pattern** text box, type **On**.
   v. Click **OK**.

14. If using Switchover, do the following:
    a. Create a directory called *(webroot directory)*\I3Root\Server2.
    b. In IIS Manager, repeat steps 3-12. Create a Reverse Proxy rule or rules for that directory, but specify the host name or IP address of the other CIC server.
15. Configure IIS to treat `index.html` as an acceptable name for the default document or rename `index.html` to `default.htm`.

    To set `index.html` as the default document:
    a. In IIS Manager, still under **Sites** in the `I3Root\Server1` Home view, under **IIS**, double-click **Default Document**.
    b. In the **Actions** pane on the right, click **Add**.
    c. In the **Add Default Document** dialog box, in the **Name** text box, type `index.html` and click **OK**.
16. Exit IIS Manager.
17. Open a browser and go to http://webserver/I3Root and create a chat or callback.

Installation and Configuration for Apache

> **Note:** The steps documented below assume a default installation of Apache on Microsoft Windows. Configuration steps for newer versions of Apache or for alternative operating systems may differ.

1. Locate the following zip files, where *X-X* is the version number, at `\\ICServer\IC_WebServicesChat`:
   - `IWT_Configuration-`*X-X*`.zip`
   - `IWT_Examples-`*X-X*`.zip`
   - `IWT_I3Root-`*X-X*`.zip`
2. Extract the contents of the three zip folders listed previously into *<apache install dir>*`\htdocs\I3Root\`
3. Copy the contents of `IWT_I3Root-X-X` into `I3Root`.
4. Edit config.js
5. Do one of the following:
   a. Non-SSL both for browser and CIC connection
   b. Non-SSL for browser but SSL for CIC connection
   c. SSL both for browser and CIC connection

Edit config.js

Edit `htdocs\I3Root\js\config.js` for your environment. For a description of the options, see Run Interaction Web Tools Configuration Utility.

An example `config.js`:

```
/*global ININ: true */

// Register namespaces
ININ.Web.Common.Type.registerNamespace("ININ.Web.Chat");

// Config class
ININ.Web.Chat.Config =
{
  "ConfigVersion": 0,
  "ChatTarget": "Marketing",
  "CallbackTarget": "Marketing",
  "ChatTargetType": "Workgroup",
  "CallbackTargetType": "Workgroup",
  "InteractionTypes": [ "Chat", "Callback"
 ],
  "UseEncryption": true,
  "ICServerCount": 2,
  "DefaultLanguageCode": "en-us"
};
```

Non-SSL both for browser and CIC connection

1. Edit the `config.js` file located in the `\htdocs\I3Root\js` folder.

   Locate the `ININ.Web.Chat.Config` section and then find the part that says `"UseEncryption":true`. Set the value to `false`.
2. Edit the *`<apache install dir>`*`\conf\httpd.conf` file.

   Uncomment the following lines:

   ```
   LoadModule proxy_module modules/mod_proxy.so
   LoadModule proxy_http_module modules/mod_proxy_http.so
   LoadModule proxy_connect_module modules/mod_proxy_connect.so
   ```

   Add the following lines at the end of the file:

   ```
   <Proxy *>
   Order deny,allow
   Allow from all
   </Proxy>
   ProxyPass /I3Root/Server1/ http://icserver:8114/
   ProxyPassReverse /I3Root/Server1/ http://icserver:8114/
   ```

3. Restart Apache to implement the changes.

If it does not start, then check the app event log. It is easy to make a mistake editing these configuration files. If everything is correct and the page still loads with an error, try clearing the browser cache.

Non-SSL for browser but SSL for CIC connection

1. Edit the `config.js` file located in the `\htdocs\I3Root\js` folder.
   Locate the `ININ.Web.Chat.Config` section and then find the part that says `"UseEncryption":true`. Set the value to `false`.
2. Edit the *<apache install dir>*`\conf\httpd.conf` file.
   Uncomment the following lines:

   ```
   LoadModule proxy_module modules/mod_proxy.so
   LoadModule proxy_http_module modules/mod_proxy_http.so
   LoadModule proxy_connect_module modules/mod_proxy_connect.so
   LoadModule ssl_module modules/mod_ssl.so
   ```

   Add the following lines at the end of the file:

   ```
   <Proxy *>
   Order deny,allow
   Allow from all
   </Proxy>
   ProxyPass /I3Root/Server1/ https://icserver:3508/
   ProxyPassReverse /I3Root/Server1/ https://icserver:3508/
   include conf/extra/httpd-ssl.conf
   ```

3. Copy the Server Group Certificate from the CIC server to the web server.
   The certificate is here:
   `\I3\IC\Certificates\ServerGroup\ServerGroupCertificate.cer`
4. Create the certificate and key for Apache
   - Open a command prompt and navigate to the bin directory:
     InstallPath`\Apache Software Foundation\Apache2.2\bin`
   - Modify the following command to match your configuration and run it. It will prompt for a number of pieces of information. Your answers do not affect the functionality at issue:

     ```
       openssl req -new -x509 -days 365 -sha1 -newkey rsa:1024 -nodes -in ServerGroupCertificate.cer -keyout
     testserver.key -out testserver.crt -config "\InstallPath\Apache Software
     Foundation\Apache2.2\conf\openssl.cnf"
     ```

   - Edit `httpd-ssl.conf` and find the lines below and modify them to point to the key and crt files:

     ```
       SSLCertificateFile "C:/Program Files/Apache Software Foundation/Apache2.2/bin/cert/ICServer-
     Certificate.crt"
       SSLCertificateKeyFile "C:/Program Files/Apache Software Foundation/Apache2.2/bin/cert/ICServer-
     Server.key"
     ```

   - Edit the following lines in the same httpd-ssl.conf file to add SSLProxyEngine and match the following values:

     ```
     <VirtualHost _default_:80>
     ServerName webserver.domain.com:80
     SSLEngine off
     SSLProxyEngine on
     ```

5. Restart Apache to implement the changes.
   If it does not start, then check the app event log. It is easy to make a mistake editing these configuration files. If everything is correct and the page still loads with an error, try clearing the browser cache.

SSL both for browser and CIC connection

1. Edit the `config.js` file located in the `\htdocs\I3Root\js` folder.
   Locate the `ININ.Web.Chat.Config` section and find the part that says `"UseEncryption":false`. Set the value to `true`.
2. Edit the *`<apache install dir>`*`\conf\httpd.conf` file.
   - Uncomment the following lines:

   ```
    LoadModule proxy_module modules/mod_proxy.so
    LoadModule proxy_http_module modules/mod_proxy_http.so
    LoadModule proxy_connect_module modules/mod_proxy_connect.so
    LoadModule ssl_module modules/mod_ssl.so
   ```

   - Add the following lines at the end of the file:

   ```
    <Proxy *>
    Order deny,allow
    Allow from all
    </Proxy>
    ProxyPass /I3Root/Server1/ https://icserver:3508/
    ProxyPassReverse /I3Root/Server1/ https://icserver:3508/
    include conf/extra/httpd-ssl.conf
   ```

3. Copy the Server Group Certificate from the CIC server to the web server. The file is here:
   `\I3\IC\Certificates\ServerGroup\ServerGroupCertificate.cer`
4. Create the certificate and key for Apache.
   - Open a command prompt and navigate to the bin directory:
     `InstallPath``\Apache Software Foundation\Apache2.2\bin`
   - Modify the following command to match your configuration and run it. It will prompt for a number of pieces of information. Your answers do not affect the functionality at issue.

   ```
    openssl req -new -x509 -days 365 -sha1 -newkey rsa:1024 -nodes -in ServerGroupCertificate.cer -keyout
   testserver.key -out testserver.crt -config "\InstallPath\Apache Software
   Foundation\Apache2.2\conf\openssl.cnf"
   ```

   - Edit `httpd-ssl.conf`. Find the following lines and modify them to point to the key and crt files.

   ```
    SSLCertificateFile "C:/Program Files/Apache Software Foundation/Apache2.2/bin/cert/ICServer-
   Certificate.crt"
    SSLCertificateKeyFile "C:/Program Files/Apache Software Foundation/Apache2.2/bin/cert/ICServer-
   Server.key"
   ```

   - Modify the following lines in the same `httpd-ssl.conf` file:

   ```
    <VirtualHost _default_:443>
    ServerName webserver.domain.com:443
    SSLEngine on
    SSLProxyEngine on
   ```

5. Restart Apache to implement the changes.
   If it does not start, then check the app event log. It is easy to make a mistake editing these configuration files. If everything is correct and the page still loads with an error, try clearing the browser cache.

Reverse Proxy Directory

Modify the configuration parameters in `index.html` if you used different installation and proxy directories than the defaults described in this document (*<webroot>*`/I3Root` and *<webroot>*`\I3Root\Server1` and *<webroot>*`\I3Root\Server2`, if using switchover).

To edit the Interaction Web Tools parameters in `index.html` to make the reverse proxy work:

1. Locate the function `setInteractionWebToolsParams` in `index.html`.
2. Change the values of `currentUriFragement` and `uriFragment` to the correct values for your configuration. See the examples that follow.

Example 1:

If instead of setting up the reverse proxy at *<webroot>*`/I3Root/Server1`, you put it at *<webroot>*`/SomeDirectory/ICProxy`, and are not using switchover, use the values listed in the non-Switchover example.

Example 2:

If you are using switchover, and the reverse proxy to the primary CIC server is at *<webroot>*`/SomeDirectory/ICProxy`, and the reverse proxy to the second CIC server is at *<webroot>*`/SomeDirectory/ICProxy_B`, use the values listed in the switchover example column.

non-switchover example
`"currentUriFragment" : "/SomeDirectory/ICProxy",`
`"uriFragments" : ["/SomeDirectory/ICProxy" ],`

switchover example
`"currentUriFragment" : "/SomeDirectory/ICProxy",`
`"uriFragments" : ["/SomeDirectory/ICProxy", "/SomeDirectory/ICProxy_B" ],`

Setting up SSL

The following table lists the possible SSL configurations. The configuration settings for these connections are independent of each other.

browser to web server	web server to CIC server
SSL	non-SSL
non-SSL	SSL
non-SSL	non-SSL
SSL	SSL

You can use SSL for the front-end connection from the web browser to the web server or for the back-end connection from the web server to the CIC server. Alternatively, you can use SSL for both the front and back-end connections or for neither.

To use SSL between the web user and the web server

Enable this according to your web server software's instructions. Pay particular attention to these points:

- In the Interaction Web Tools Configuration Utility, Secure Connection refers to this front-end connection between the web browser and the web server. If web users access Interaction Web Tools using HTTPS, select **Secure Connection**. If they access it using HTTP, clear the **Secure Connection** check box.
- If you changed settings in `config.js` and deployed examples, recopy `C:\inetpub\wwwroot\i3root\js\config.js` into each example's `js` directory.

To use SSL between the web server and the CIC server, if the web server is IIS

1. In Interaction Administrator, select **System Configuration**, then select Web Services. Double-click Configuration. Select the Enable HTTPS check box. When using HTTPS, it is usually desirable to clear the Enable HTTP check box.
2. Ensure that, by means of DNS or the web server's hosts file (`C:\windows\system32\drivers\etc\hosts`), the web server can refer to the CIC server using the CIC server's host name.
3. Ensure that you used the CIC server's host name, not its IP address, in the Reverse Proxy configuration.
4. Find the CA certificate on the CIC Server. It is in `D:\I3\IC\Certificates\ServerGroup\ServerGroupCertificate.cer`.

   > **Note:**
   > If the CIC Server's host name has changed since you generated the certificate, regenerate the certificate before following the remaining steps in this procedure.

5. Copy `ServerGroupCertificate.cer` to the web server's file system. Do not place it in a location that is visible on the web.
6. Import the certificate to the web server.
   a. On the web server, from the Windows **Start** menu, select **Run**. In the **Run** dialog box, type `mmc`, and click **OK**.
   b. In the Console window, from the **File** menu, select **Add/Remove Snap-in**.
   c. In the **Add or Remove Snap-Ins** dialog box, from the **Available** snap-ins list, select **Certificates** and click **Add Certificates** and click **Add**.
   d. In the **Certificate snap-in** dialog box, select **Computer Account** and click **Next**.
   e. In the **Select Computer** dialog box, select **Local computer** and click **Next**.
   In the **Certificate snap-in** dialog box, click **Finish**.
   f. In the **Add or Remove Snap-Ins** dialog box, click **OK**.
   g. In the Console window, in the left pane, expand **Certificates**, expand **Trusted Root Certification Authorities**, and then click the Certificates node that is a child of Trusted Root Certification Authorities.
   h. Right-click this lower Certificates node and select **All Tasks**, then select **Import**.
   i. In the **Certificate Import Wizard**, click **Next**.
   j. In the **File to Import** page, browse to the CA certificate on the CIC Server and click **Open**.
   k. Back in the **Certificate Import Wizard**, in the **File to Import** page, click **Next**.
   l. In the **Certificate Store** page, click **Next**.
   m. In the **Completing the Certificate Import Wizard** page, click **Finish**.
   n. In the **Import was successful** dialog box, click **OK**.
   o. Close the Microsoft Management Console. There is no need to save console settings.

To use SSL between the web server and the CIC server, if the web server is Apache

1. In Interaction Administrator, select **System Configuration**, then select **Web Services**. Double-click **Configuration**. Select the **Enable HTTPS** check box. When using HTTPS, it is usually desirable to clear the **Enable HTTP** check box.
2. Ensure that, by means of DNS or the web server's hosts file, the web server can refer to the CIC server's host name.

   > **Tip:**
   > A Windows hosts file is `C:\windows\system32\drivers\etc\hosts`. A Unix hosts file is `/etc/hosts`.

3. Edit *`<apache install dir>`*`\conf\httpd.conf`:
   - Uncomment the following lines. They are near each other, but not necessarily consecutive:

     ```
     LoadModule proxy_module modules/mod_proxy.so
     LoadModule proxy_http_module modules/mod_proxy_http.so
     LoadModule proxy_connect_module modules/mod_proxy_connect.so
     LoadModule ssl_module modules/mod_ssl.so
     ```

   - Add the following (if in doubt, add to either the bottom of the file, or within the applicable <VirtualHost> directive):

     ```
     ProxyPass /I3Root/Server1/ https://ICServer:3508/
     ProxyPassReverse /I3Root/Server1/ https://ICServer:3508/
     SSLProxyEngine on
     ```

4. If using Switchover, also add `ProxyPass` and `ProxyPassReverse` directives mapping `/I3Root/Server2` to the other CIC server.

5. Restart Apache.

Language

One of the following settings determines the language in which the login, chat, and callback forms appear to your visitors.

> **Note:**
> Interaction Web Tools supports IME for the entry of Asian characters on a Latin keyboard.

Language settings

The JavaScript code executing in the visitor's web browser evaluates these settings in the following order from highest to lowest priority:

1. An override value. For example, a visitor clicking an image of the French flag on your company's website can determine this value.

   > **Tip:**
   > See the `ClickOnFlagsForDifferentLanguages` JavaScript example provided in `IWT_Examples-`*`X`*`-`*`X`*`.zip`.

2. The visitor's browser language setting.
3. The visitor's operating system language settings.
4. The default language specified in the Interaction Web Tools Configuration Utility during the installation and configuration process.

> **Note:**
> If you modify `config.js` manually, be aware that language code tags are all lower case. For example, if you replace `en-us` with the more commonly accepted `de-CH` rather than `de-ch`, the Language Code Converter compares it to `de-ch`. The comparison fails and the language defaults to English.

Using language settings

Handler text

If you want to use languages in addition to the default, you need to modify handlers. If a matching language pack is on the CIC server and you have modified the appropriate handlers, the first valid setting for which CIC can locate a resource file becomes the language in which Handler text appears. The CIC server selects the language and then WebProcessorBridge passes the handler text in the selected language to the client.

Chat request routing

If Handler customization is done, CIC routes the chat to an agent with a language skill matching the first valid language setting for which CIC can locate a resource file. (A matching language pack is not necessary for chat request routing.)

Webpages only

If no Handler customization is done, language settings affect only the language on the visitor's webpage (the text on the **Send** button, for example). These settings do not affect Handler text and the actual content of the chat.

Example: A visitor sees the webpage in French, but "Welcome to CIC!" in English. An agent then types "Hello, may I help you? "in English, and then the visitor has to type "Parlez-vous Français?" in order to indicate to the agent that they would like to proceed in French.

Web Services Parameters on the CIC Server

To minimize network impact and memory use, CIC has two web services parameters that control how the server compresses chat logs. Set the parameters in the **Web Services Parameters** container of Interaction Administrator:

EnableChatHistoryCompression

Values are 1 (on, by default) and 0 (off).

ChatHistoryCompressionStartSize

Controls the file size at and over which the CIC server compresses chat logs. The default is 5K (5,120 bytes).

Restart WebProcessor for these parameters to take effect.

Troubleshooting Chats and Callbacks

These troubleshooting steps check typical configuration problems with the CIC server, web server, or your firewall that prevent chats or callbacks from working correctly.

1. In Interaction Administrator, in the **Web Services Configuration** dialog box, do one of the following or both:
   - Verify that you checked **Enable HTTP** and the HTTP port is 8114.

     > **Note:**
     > If you want to use a different port for HTTP, change the URL in the step 3 to use that port.

     And/or
   - If you prefer to use HTTPS, verify that you checked **Enable HTTPS** and the HTTPS port is 3508.

     > **Note:**
     > If you want to use a different port for HTTPS, change the URL to use that port.
2. On the CIC server, in IC System Manager, stop and restart WebProcessorBridge.
3. Open your web browser on the web server. Do one or both of the following, depending on whether you selected HTTP or HTTPS or both in Interaction Administrator. Open:
   - http://*icservername*:8114/websvcs/serverConfiguration

     or
   - https://*icservername*:3508/websvcs/serverConfiguration

     > **Note:**
     > If you are using HTTPS and see a certificate warning, ignore it. If you are using different port numbers, change the URL to use that port.

   Result: If you see some XML, go to the next step. If not, there is a problem with either CIC or the firewall. Repeat this step using your browser on the CIC server.
   - If you still do not see any XML, verify that WebProcessorBridge and WebProcessor are running. Verify your settings in Interaction Administrator. Restart WebProcessorBridge and WebProcessor. Repeat this step.
   - If XML appears when running your browser on the CIC server, but not when running it on the web server, it is most likely a firewall problem. Change the firewall so that it allows traffic through on port 8114 or 3508, depending on whether you are using HTTP or HTTPS. Allow traffic only from the web server, not from everywhere.
4. If you verified in step 3 that the CIC server and firewall are working correctly, the problem is most likely something to do with the reverse proxy configuration. Or, if using HTTPS, the problem could be with certificates. Go to one of the following:
   - http://*webserver*/I3Root/Server1/websvcs/serverConfiguration

     Or
   - https://*webserver*/I3Root/Server1/websvcs/serverConfiguration

   Result: You see the same XML. If not, you could see "error 502" or "error 502.3". Verify everything that you did to configure the reverse proxy. Check the following:
   - Apply the reverse proxy to "Server1" and "Server2", if using switchover, instead of some other directory like "Default Web Site".
   - Check encryption settings by verifying the value of "UseEncryption" in `*i3root*/js/config.js`.

   > **Important!**
   > This value is independent of whether the back-end connection (web server to CIC) uses HTTP or HTTPS.

Visitor accesses website via	Encryption setting in config.js
HTTP	"UseEncryption" set to **false**.
HTTPS	"UseEncryption" set to **true**.

- If you are using IIS, be sure to add an empty `Server1` folder in your `C:/inetpub/wwwroot/I3Root` directory. Add `Server2` also, if using switchover.

  > **Note:**
  > This folder allows the reverse proxy instructions to be completed successfully.

- If you installed the web server on the same machine as your CIC server, for the reverse proxy setup, use "localhost" instead of the machine's name or IP address.

5. If the previous steps have not resolved the problem:

   a. Open the web developer tools in your web browser.

   b. Enable the **Net** and **Console** tabs, and reload one of the following:

      - http://*webserver*/I3Root/Server1/websvcs/serverConfiguration

        Or

      - https://*webserver*/I3Root/Server1/websvcs/serverConfiguration

   c. If the attempt to load serverConfiguration uses HTTPS and everything else uses HTTP (or the reverse), or if you see "OPTIONS serverConfiguration" rather than "GET serverConfiguration", then re-examine `*i3root*/js/config.js`.

   d. Check the **Console** tab for anything printed in red, especially if you have customized the JavaScript. JavaScript errors appear in red text.

6. If using HTTPS on the back-end connection (web server to CIC server) and none of the previous steps fixed the problem, it's probably a certificate issue. Ensure that the web server trusts the CIC server.

   a. Revisit the installation steps concerning importing the certificate in SSL both for browser and CIC connection. The easiest way is to make the web server trust the Certificate Authority that issued the CIC server's certificate.

   b. Ensure that the web server is referencing the CIC server via its fully qualified domain name, not just by its hostname or its IP address.

7. Examine log message for any text in red or the word "Exception".

   To obtain log messages from the chat software running in the visitor's browser:

   a. If you are using Firefox and have not already installed the Firebug plugin, install it from http://getfirebug.com.

   b. Press `F12` to make the Firebug plugin or the Chrome built-in Developer Tools console visible.

   c. Modify `customizations.js`. Just before the following line:

      `var customizations = common.Type.registerLocalNamespace("customizations");`

      add this line:

      `common.Debug.setTraceLevel(common.TraceLevels.ALL);`

   d. Point your browser to http://webserver/I3Root and then open the developer console.

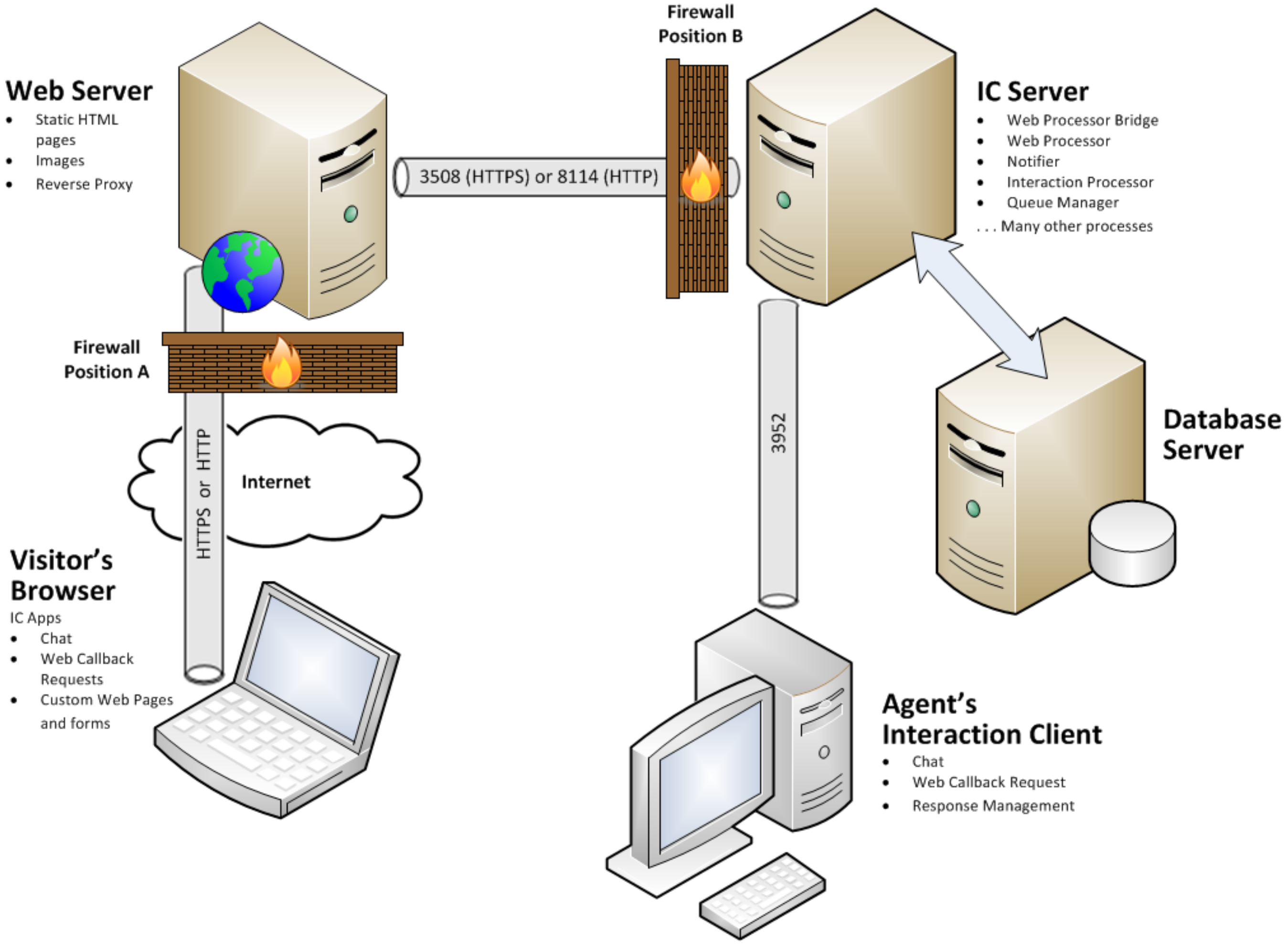
   As an alternative to modifying index.html, begin a chat and have any party type one of the following:

```
set tracelevel all
set tracelevel verbose
set tracelevel note
set tracelevel status
set tracelevel warning
set tracelevel error
set tracelevel critical
```

> **Note:**
> The downside here is that these tracelevel settings do not display the log messages pertaining to creating or connecting the chat.

Troubleshooting Gateway Communications

This diagram of network architecture presents a simplified view of an Interaction Web Tools production environment. In a typical environment, the CIC server is in a secure internal network. The web server is in an area that is at least partially secure. Also, multiple web servers could share communications load, which introduces proxy servers and load balancers into the mix.



Sometimes, a proxy server, load balancer (F5), or firewall discards or changes HTTP header information in the messages sent from a website visitor's browser to the CIC server. If anything changes this HTTP header information, website visitors cannot submit a chat request.

It is critical that you do not set up a proxy server, load balancer, firewall or any other network element in such a way that makes it appear that all communications originate from a network IP address and not the visitor's IP address. Hundreds of communications coming from the same IP address look like a Denial of Service attempt to the CIC server.

By default, Interaction Web Tools expects this header information to contain the CIC server name (as host) and its proper port number. It does not expect the header to contain the web server name and its outside world port number.

> **Note:**
> The *Interaction Web Tools Developer's Guide* describes the other elements of this message header: `Content_Range`, `Accept`, `Accept-CharSet`, and `Content-type`.

The critical elements in this header are:

X-FORWARDED-FOR

This HTTP header field identifies the originating IP address of a client connecting to a web server through an HTTP proxy or load balancer.

Interaction Web Tools uses the information in X-FORWARDED-FOR to get the website visitor's IP address, as multiple proxies and load-balancers might have been used. Interaction Web Tools uses this address to identify the website visitor's IP address and to perform DoS protection based on IP-specific DoS settings.

Example: client, proxy1, proxy2

Host

The Host HTTP header field specifies the Internet host and port number of the requested resource, as obtained from the original URI given by the user or referring resource.

Interaction Web Tools expects this Host field to contain the CIC server name or IP address and its proper port number. Interaction Web Tools never uses default port 80 in place of the information expected in this field.

Problem Reports

You can enable problem reporting for errors that occur in a website visitor's browser during chat sessions. These problem reports are stored in the WebProcessorBridge logs. Support can use these logs to diagnose the reason for failure when a website visitor's browser loses connection, then recovers and sends a problem report.

You enable problem reporting by setting the Web Services parameter **AllowClientProblemReport** to **1**. Optionally, you can include only selected problem reports in the WebProcessorBridge logs by configuring the Web Services parameter ProblemReportControlExpression.

> **Note:**
> Enabling problem reporting helps diagnose problems, but increases CPU load. Do not enable it as a routine practice.

```
  {
    "version": 1,
    "attemptedWork": "https://xyzcorp/I3Root/Server1/websvcs/serverConfiguration",
    "userAgent": "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.31 (KHTML, like Gecko)
Chrome/26.0.1410.43 Safari/537.31",
    "failedRequestHistory":
    [
      {"status": 0, "url": "https://xyzcorp/I3Root/Server1/websvcs/serverConfiguration", "sendTimestamp":
"2013-04-12T15:16:50Z", "duration": 12001}
    ],
    "timedOutRequestHistory":
    [
      {"status": 0, "url": "https://xyzcorp/I3Root/Server1/websvcs/chat/poll/f3e5af5b-9140-4ec5-a8f0-
e5a269e26207", "sendTimestamp": "2013-04-12T15:16:46Z", "duration": 12005}
    ],
    "connectivityFailureHistory":
    [
      {"activity": "failover", "timestamp": "2013-04-12T15:16:50Z"}
    ],
    "exceptions": "Failed request"
  }
```

In this example, `"status": 0` means that the website visitor received a timeout error when the visitor tried to access the given URL. `"Duration"` is the time in milliseconds it took to get that response.

Configuring Default Web Functionality

Included Interaction Types

CIC ships with several handlers that enable out-of-the-box web functionality. The out-of-the-box functionality is available as described. Configuration procedures are for web administrators familiar with web features and handler management for CIC.

Without handler modification or HTML authoring, if you don't want to alter the appearance of the CIC default web pages, you can offer these interaction types to website visitors.

Interaction Type	Description
Web Chat	Using the web chat feature, an agent can engage in text-based, one-on-one communication online with a website visitor or create a chat conference between multiple agents and a website visitor. Chats between an agent using the CIC client and a website visitor are classified as web chats. Agents can record web chats. If enabled by an administrator, visitors can choose to have a transcript of the chat emailed to themselves.
Callback	Using this feature, a website visitor can leave a message for an agent to call back. After the callback request is appropriately routed to a workgroup or specific agent queue, the callback request appears in the CIC client in a Workgroup queue or in My Interactions view. When an agent picks up a callback request, a full-featured callback window appears. This window contains the name of the person requesting the callback and the number at which an agent can contact website visitor. The agent can then call directly from the callback window, interact with the website visitor if connected, and then mark whether the callback was a success or a failure.

Automatic Web Pages

Interaction Web Tools provides commonly used CIC-based web functionality that requires no handler authoring and little HTML authoring. Handlers automatically parse a set of hidden command-line arguments passed in with the web event. Automatic Web Handlers explains how to pass command-line arguments with events.

Handlers

The handler that generates each webpage described in the *Interaction Web Tools Technical Reference* registers it. You cannot open these webpages with an HTML editor, nor can you store them on your web server. Rather, a handler displays these webpages for visitors browsing your website. The handler uses hidden command-line arguments to generate a customized webpage. These customizations limit both the types of interactions available to visitors and the look and feel of the pages.

Automatic Web Handlers

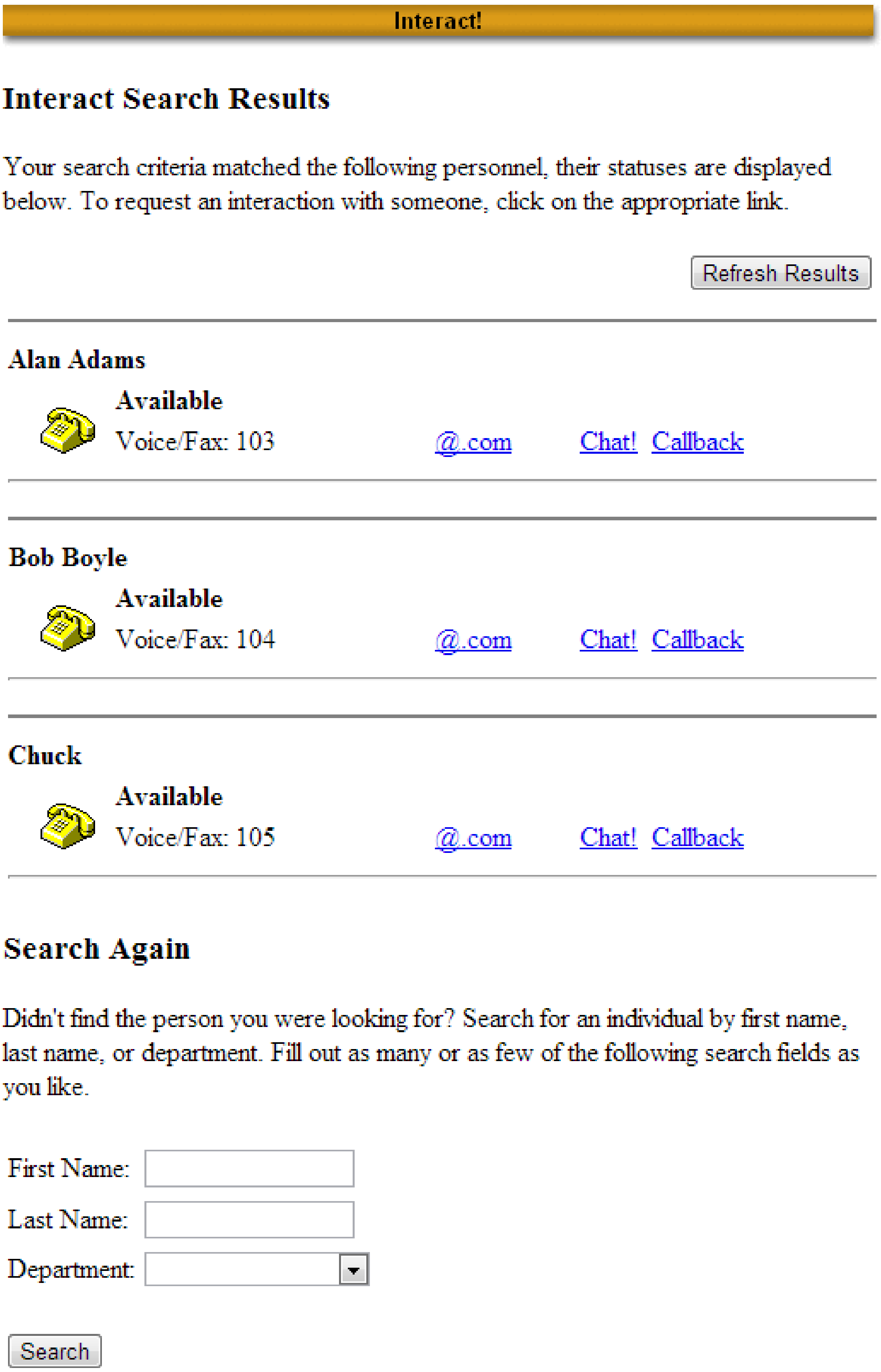
CIC includes the following handlers that enable the automatic web functionality.

Automatic Web Handler	Description
`System_WebSearch.ihd`	Queries the status of a specified agent based on the input arguments passed to it. This handler also displays the results of a search, including the agent's status, contact information, and links to initiate chat or callback sessions.
`ConvertDateTimeToString.ihd`	Converts a DateTime value to a formatted string value.

System_WebSearch.ihd

System_WebSearch queries the status of a specified agent based on the input arguments passed to it. CIC calls this handler when the visitor performs a search from the System_WebInteract screen, or if a handler author calls directly to it, passing the correct input arguments.

System_WebSearch displays the agent's status, contact information, and links to initiate Chat or Callback sessions. `IWT_I3Root-X-X.zip` includes the code required to produce this page.



Interact Search Results

Your search criteria matched the following personnel, their statuses are displayed below. To request an interaction with someone, click on the appropriate link.

Alan Adams

☎ Available
Voice/Fax: 103 @.com Chat! Callback

Bob Boyle

☎ Available
Voice/Fax: 104 @.com Chat! Callback

Chuck

☎ Available
Voice/Fax: 105 @.com Chat! Callback

Search Again

Didn't find the person you were looking for? Search for an individual by first name, last name, or department. Fill out as many or as few of the following search fields as you like.

First Name:
Last Name:
Department:

Note:
For more information about the code and input arguments used to produce the Web Search page, see the *Interaction Web Tools Developer's Guide* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/web_tools_dg.pdf.

Enabling Queries to Work with a Switchover Pair

You can add switchover functionality to your search form by using the configureFormsForSwitchover function in the page containing the search form. This function enables the search form to work with a switchover pair of CIC servers.

Install and Configure Automatic Web Pages

To insert CIC web functionality anywhere within your web site, use all or some of the automatic web handlers.

To activate automatic web pages:

1. Install and configure Interaction Web Tools using this document as a guide.
2. To enable the optional web search feature:
   a. Create one or two folders (in the case of a switchover setup) in the `I3Root/WebServices/` directory, named `Server1` and `Server2`.

      > **Note:**
      > These folders are for reverse proxies for web search. Do not use the same server folders that you created previously as part of the Interaction Web Tools installation and configuration. Those folders are for reverse proxies for chats and callbacks.

   b. In IIS Manager, set up a URL Rewrite rule for the new folders.

      > **Note:** This rule corresponds to the CIC server location, subdirectory WebHTMLService, and port number. For the search feature, set the property of the new Inbound Rule to one of the following:

      - If not using SSL, set the property to http://*ICServer*:8018/WebHTMLService/{R:1}
      - If using SSL and HTTPS, set the property to https://*ICServer*:8019/WebHTMLService/{R:1}

   c. If you are using a non-standard server setup, verify that the `c_sPath` variables in the `System_WebSearch.ihd` handler correspond with the correct paths for your server configuration.
3. If you are using HTTPS for the Interaction Web Tools search page, use the certificate specified during the CIC Install, instead of `ServerGroupCertificate.cer`. For more information, see "To use SSL between the web server and the CIC server, if the web server is IIS" in Setting up SSL.

   The CIC server and SessionManager server installs create this certificate. The person who installs these applications chooses the root install directory. The path to this certificate is relative to the root install directory: `<Root>\Certificates\HTTPS`.
4. Installing CIC publishes the ConvertDateTimeToString.ihd handler. Verify that it is active on your CIC server from Interaction Administrator. Activate it if it is not.

   > **Note**: These handlers are source code for the automatic webpages. If you modify these handlers, the automatic webpages may not function. In particular, the Generate HTML steps contain registered HTML pages that are encoded and stored on the CIC server in a format that only the handlers can use. If you attempt to modify the Generate HTML steps, these handlers do not function correctly. The original HTML pages used to create these handlers are contained in `IWT_I3Root-X-X.zip`. The CIC server installation places this file `\\IC_WebServicesChat` on the CIC server.
5. To display the images correctly in the web pages, in Interaction Administrator, set the **Web Event Image Path** parameter.

   > **Note:**
   > This value is relative to http://server/I3Root/WebServices. It defaults to `../img/` which is http://server/I3Root/img.

   The webpages require these GIF files. Capitalization of actual file names may differ.

AtHome.gif	Followup.gif	OutTown.gif
Avail.gif	InteractBanner.gif	Phone.gif
Available.gif	Lunch.gif	SendMail.gif
Callback.gif	Meeting.gif	Train.gif
Chat.gif	Nav2Banner.gif	Vacation.gif
DND.gif	Nav2Logo.gif	Von.gif
Email.gif	OnPhone.gif	
Fax.gif	Outoff.gif	

6. Insert the HTML code examples from earlier in this document into your web site where you would like to activate the automatic web pages. You could place this code behind a button or within your page so that the automatic pages appear when the page loads. When a visitor views and activates the page containing the new code, the handlers generate the automatic web pages.

Designating which Agents Appear on the Agent Search Page

In order to include an agent on the Agent Search page, you must specify the agent's display name.

> **Note:**
> The Agent Search page shows only agents with display names.

To specify the agents who appear on the Agent Search page:

1. In Interaction Administrator, in the menu tree, expand **People** and then click **Users**.
2. In the table, click the user name of the agent you want to include in the Agent Search page.
   The **User Configuration** dialog box appears.
3. Click the **Personal Info** tab.
4. In the **Display Name** box, type the name that should appear for the agent in the Agent Search page.
5. Click **Apply** and then click **OK**.

Troubleshooting the Search page

If your website visitors cannot use the search page, you may have configured the port incorrectly or used the wrong certificate.

1. To check that the CIC server is listening on the correct port:
   a. Open your web browser on the web server.
   b. Do one of the following:
      - If not using SSL, type:
        http://icservername:8018/WebHTMLService/doHTMLRequest?event=CgiTest
      - If using SSL and HTTPS, type
        https://icservername:8019/WebHTMLService/doHTMLRequest?event=CgiTest

   Result: If you see some or any data like the key:values shown here, proceed to the next step. If you see nothing or an error message, then the CIC server isn't actually listening on that port.

```
Gateway Interface:
Request Method:GET
Script Name:doHTMLRequest
Query String:event=CgiTest
Server Software:
Server Name:momus
Server Protocol:HTTP/1.1
Server Port:8019
HTTP User agent:Mozilla/5.0 (Windows NT 6.1; WOW64; rv:16.0) Gecko/20100101 Firefox/16.0
HTTP Accept:text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Path Info:
Path Translated:
Remote Host:172.19.33.211
Remote Address:172.19.33.211
Remote User:
Remote Identifier:
Authentication Type:
Content Type:
Content Length:
Arg 1:
Arg 2:
Arg 3:
Command Line parameters

    event=CgiTest
```

2. To verify that the web server forwards the request to the CIC server, use a network sniffer to verify there is traffic from the web server to the CIC server on the correct port (8018 or 8019).
   a. Open your web browser on the web server
   b. Go to:
      http://*webserver*/I3Root/WebServices/WebHTMLService/doHTMLRequest?event=CgiTest
   c. Check to see if the web server sends the request to the CIC server.

> **Note:**
> The request should occur within a few tens of milliseconds of the request.

Result: If you see the same result as in step 1 (which did not go through the proxy), then the proxy is functioning properly.

3. If the web server forwards the request to the CIC server, then verify that the handler generates the search request, by making a search request on the search page.

   Result: You should see the search results page.

4. If you are using HTTPS for the Interaction Web Tools search page, verify that you are using the certificate specified during the CIC install, instead of `ServerGroupCertificate.cer`.

   > **Tip:**
   > If you are not sure, try switching from port 8019 to 8018. If that works, it suggests there may be a certificate problem. Or, it may indicate that the firewall allows traffic on port 8018, but not 8019.

   > **Note:**
   > The CIC server and SessionManager server installs create this certificate. The person who installs these applications chooses the root install directory. The path to this certificate is relative to the root install directory: `<Root>\Certificates\HTTPS`.

5. Completing steps 1-4 successfully indicates the problem may lie in the handler. Please contact Support.

Skill-based Routing

You can use routing contexts to send interactions to workgroups or agents with particular skills. For example, you could route chats to agents who speak French. You can either set the routing context for all chats and callbacks, or write code that allows website visitors to choose skills that determine the routing context. The ACD server then routes interactions to agents with the appropriate skills.

Overview of using skill-based routing

To use skill-based routing

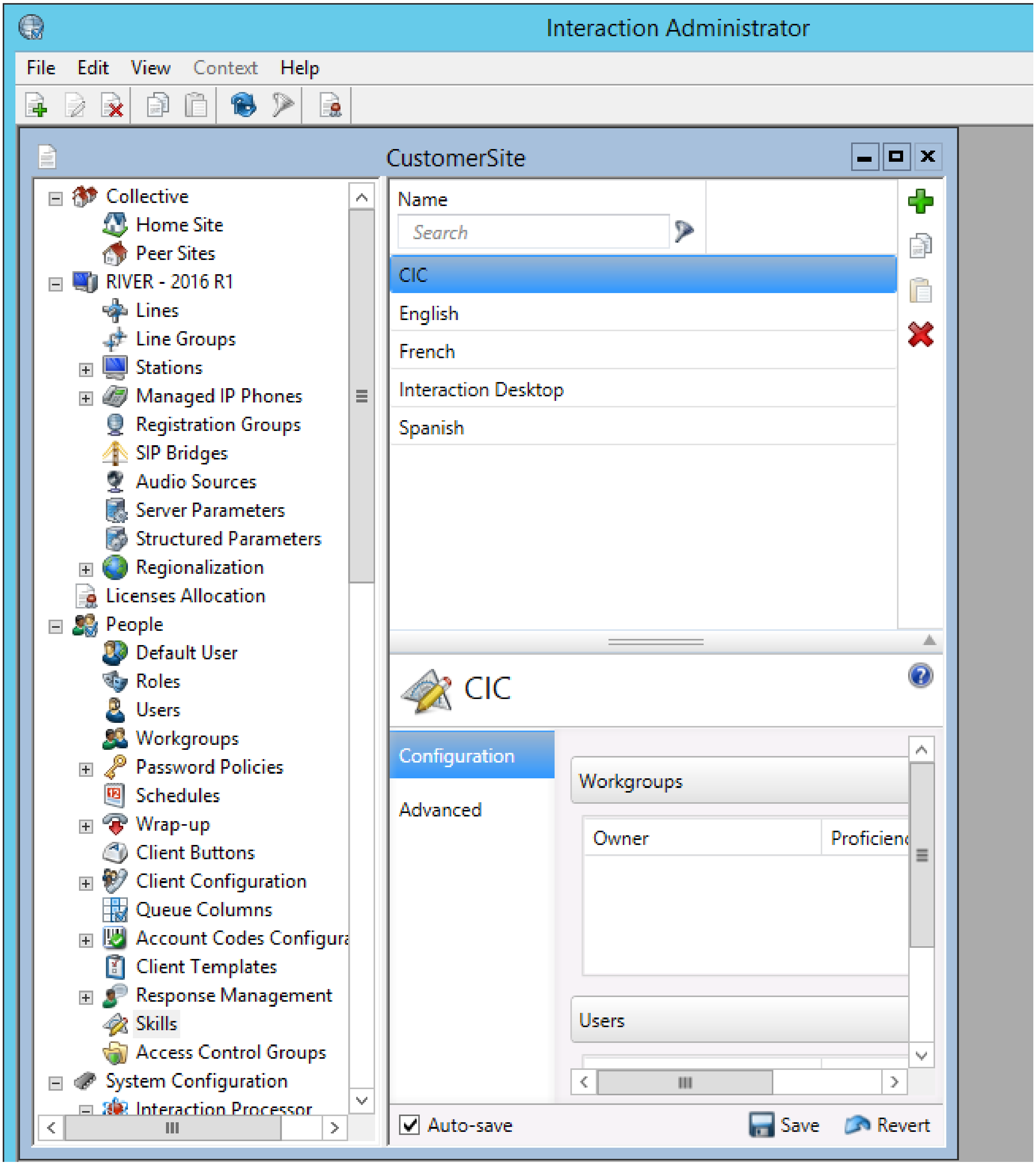
1. Create and assign agent or workgroup skills.
2. Map internal skill names to external skill names in an Interaction Processor table.
3. Set the routing context for Interaction Web Tools with the chatRoutingContext and callBackRoutingContext parameters in index.html.

   > **Note:**
   > You can optionally make the skill selection available to visitors on your website. This step requires you to write code that passes the visitor’s choice to Interaction Web Tools. If you do not make a selection available, CIC routes all interactions according to the context you set in the parameters.

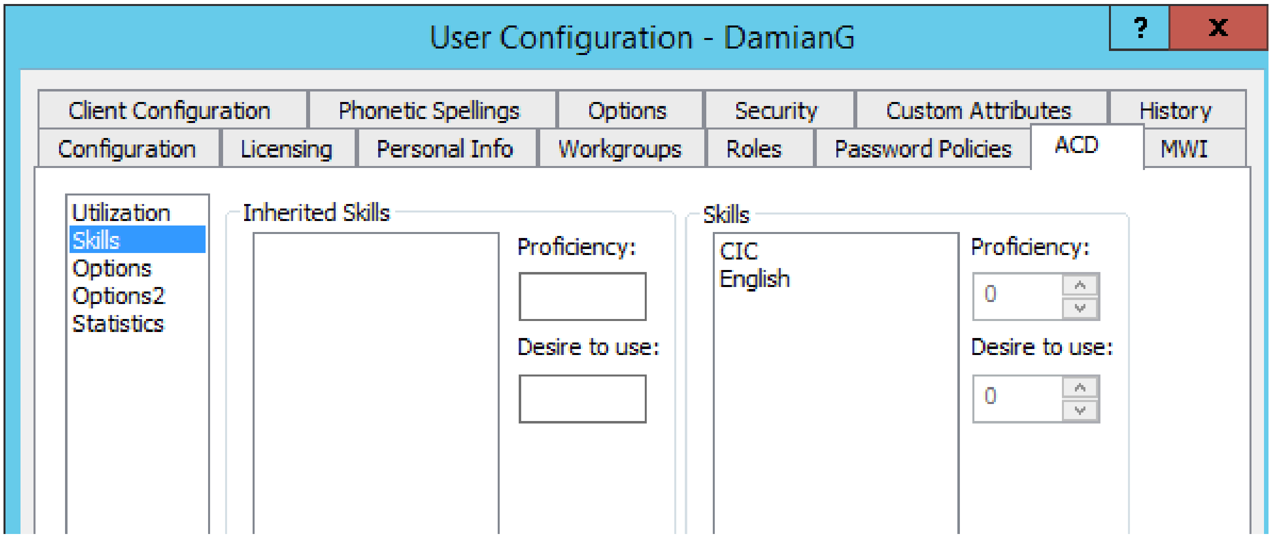
4. (Optional) If not using the built-in **Language** and **Product** categories, customize the appropriate handlers to route the interaction.

Create and assign skills

You can create and assign skills to agents or workgroups in the Interaction Administrator **Skills** container under **People**. You can also assign values for **Proficiency** and **Desire to use**.



Alternatively, you can assign skills to agents or workgroups in the **Skills** view of the **ACD** tab of the **User Configuration** dialog box or the **Workgroup Configuration** dialog box.

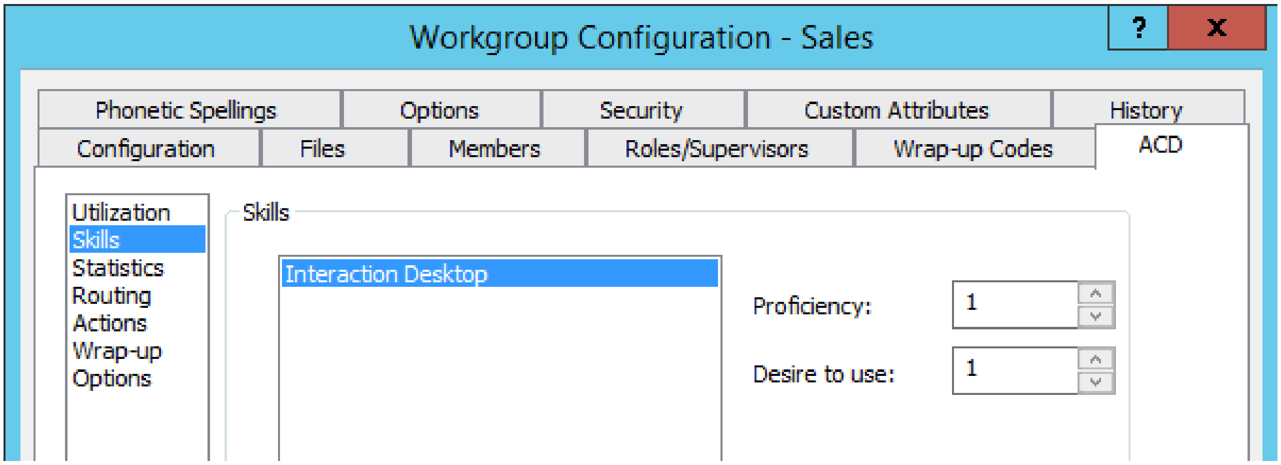


Inherited Skills: Proficiency: (blank); Desire to use: (blank)

Skills: CIC, English

Proficiency: 0

Desire to use: 0



Skills: Interaction Desktop

Proficiency: 1

Desire to use: 1

Map internal skill names to external names

Website visitors do not see internal skill names. Map external skills to internal skills in the **Interaction Processor Tables** container. This mapping prevents the exposure of internal skill names.

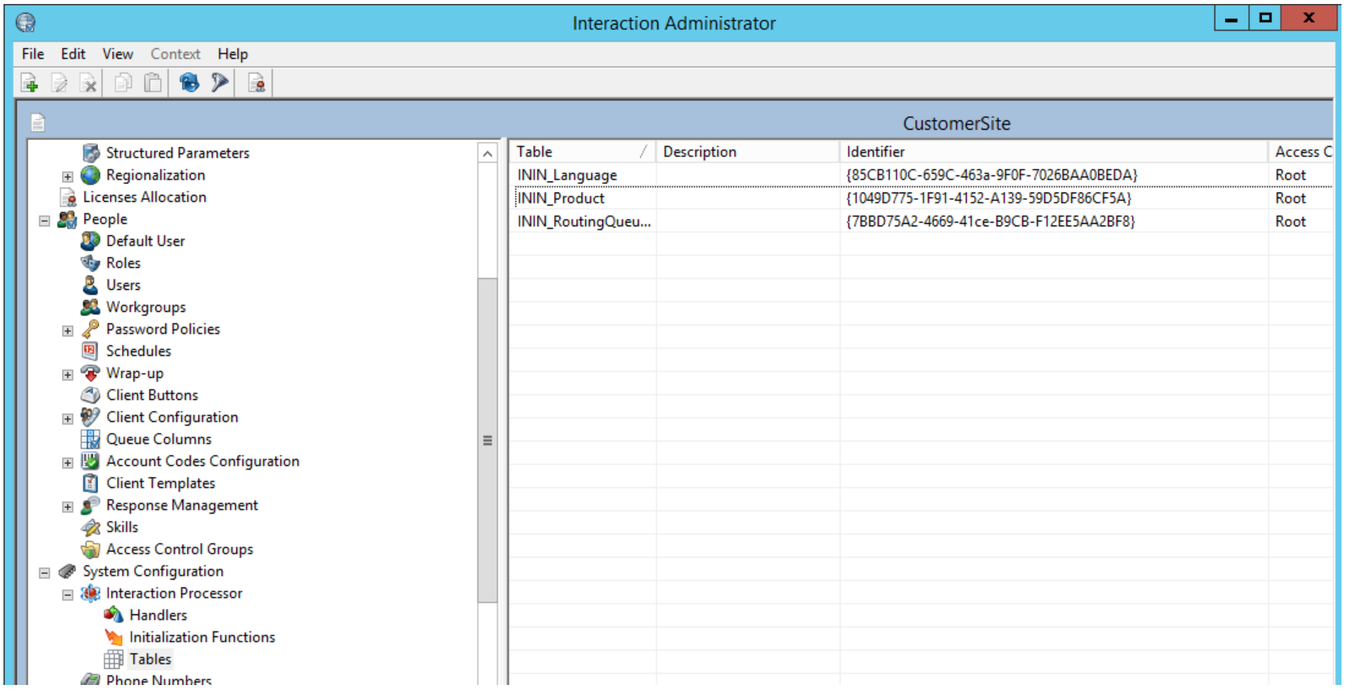
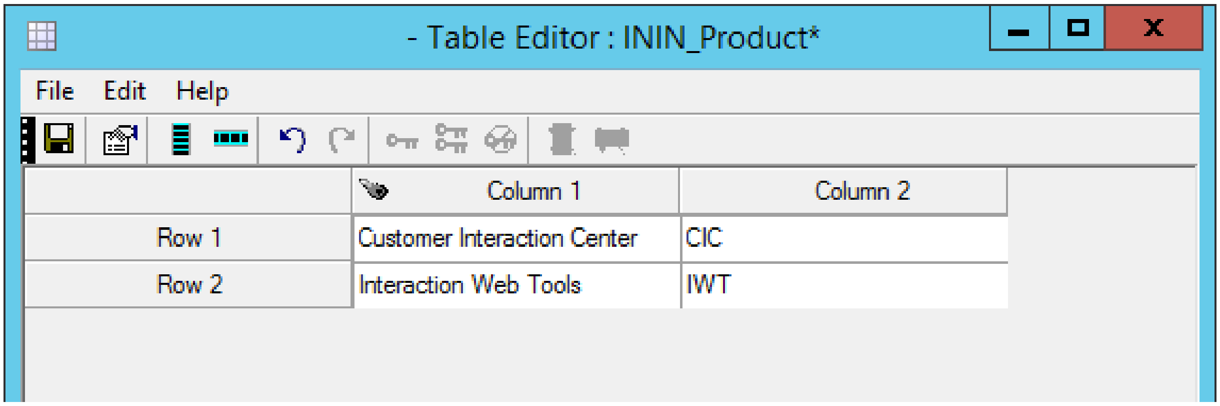


Table	Description	Identifier	Access C
ININ_Language		{85CB110C-659C-463a-9F0F-7026BAA0BEDA}	Root
ININ_Product		{1049D775-1F91-4152-A139-59D5DF86CF5A}	Root
ININ_RoutingQueu...		{7BBD75A2-4669-41ce-B9CB-F12EE5AA2BF8}	Root



	Column 1	Column 2
Row 1	Customer Interaction Center	CIC
Row 2	Interaction Web Tools	IWT

The first column is the external name, and the second column is the internal name. The internal name must match the name of a skill you previously created. Use the external name when setting routing contexts in Interaction Web Tools.

Default skill categories

There are two default skill mapping tables: language and product. You can add skill mapping values to the default **ININ_Product** and **ININ_Language** tables in Interaction Administrator. See the **Tables** container under Interaction Processor. You do not need to modify any handlers to parse routing context for the default skill categories of language and product.

For example, if a website visitor wants to talk to an agent who has CIC knowledge and who speaks English, the routing context sent in the request is:

```
"routingContexts" :
  [
    { "context" : "Customer Interaction Center", "category" : "Product"},
    { "context" : "English", "category" : "Language" }
  ]
```

In this example, the internal name for the "Customer Interaction Center" skill is "CIC" and for "English" is "en." The **ININ_Product** table contains an entry mapping "Customer Interaction Center" to "CIC" and the **ININ_Language** table has an entry mapping "English" to "en."

You can create other tables to define custom sets of skills. Doing so requires handler customization to correctly route interactions.

Set routing contexts in index.html

To set routing contexts, use the `chatRoutingContext` and `callBackRoutingContext` parameters in `index.html`. The following code fragment gives an example:

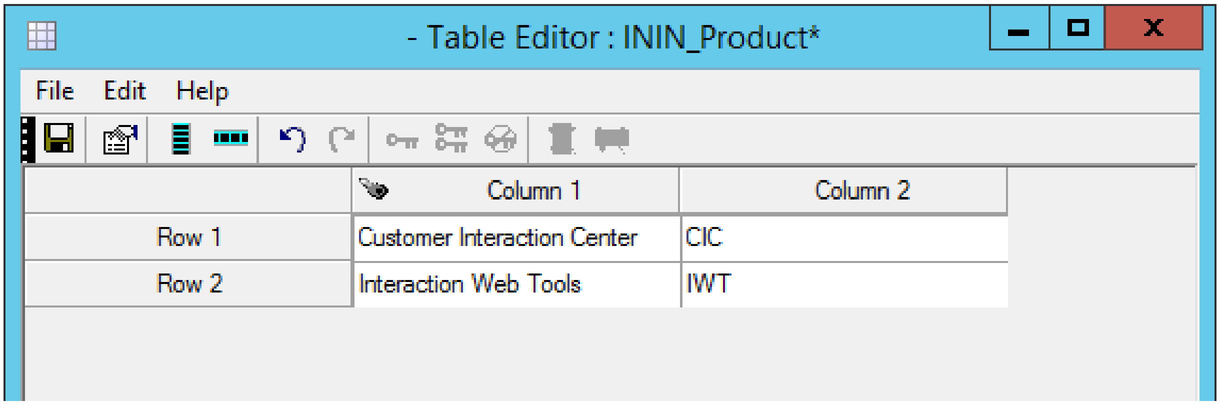
```
function setInteractionWebToolsParams(config, ui, WebServices) {
  //Must initialize with one category/context pair.
  var routingExample = new WebServices.RoutingContexts("Product","Customer Interaction Center");

  //can add additional category/context pairs using add(). Uncomment for routing context.
  routingExample.add("Language","English");

  return {
  //additional parameters here
  "callbackRoutingContext": routingExample,
  "chatRoutingContext": routingExample
  };
}
```

Routing contexts set by callbackRoutingContext and chatRoutingContext become attributes of the interaction.

In this example, all chats and callbacks are routed to workgroups or agents with the "Customer Interaction Center" and "English" skills. The Interaction Processor **ININ_Language** and **ININ_Product** tables for this example map "Customer Interaction Center" and "English" to internal skill names. Routing will not work if no skill mapping exists.



	Column 1	Column 2
Row 1	Customer Interaction Center	CIC
Row 2	Interaction Web Tools	IWT

Example skill mapping in the built-in **ININ_Product** table.

Because the example uses the built-in language and product categories, no handler customization is required.

You can further control routing by adding a form or other input that allows users to choose skills.

This routing context is available to handlers in XML:

```
  <?xml version="1.0" encoding="UTF-8"









 ?/>
  <RoutingContexts>
    <RoutingContext>
      <Context>Customer Interaction
```

```
Center</Context>
     <Category>Product</Category>
   </RoutingContext>
   <RoutingContext>
     <Context>English</Context>
     <Category>Language</Category>
   </RoutingContext>
 </routingContexts>
```

In this example, Product and Language are the categories, and CIC and English are the contexts.

Modify handler to parse the routing context

The `SystemParseRoutingContexts.ihd` handler parses the routing context where the `CustomParseRoutingContexts` custom hook is exposed for customization.

If you add your own Interaction Processor category table and skill mapping in that table, the Create Chat API and Create Callback API can supply context for custom interaction values. To look up context in custom category IP tables, use the `CustomACDGetSkills` customization point in the `ACDGetSkills` handler. For more information about modifying handlers, see the *Interaction Designer Help* at https://help.genesys.com/cic/mergedProjects/wh_id/desktop/hid_introduction.htm.

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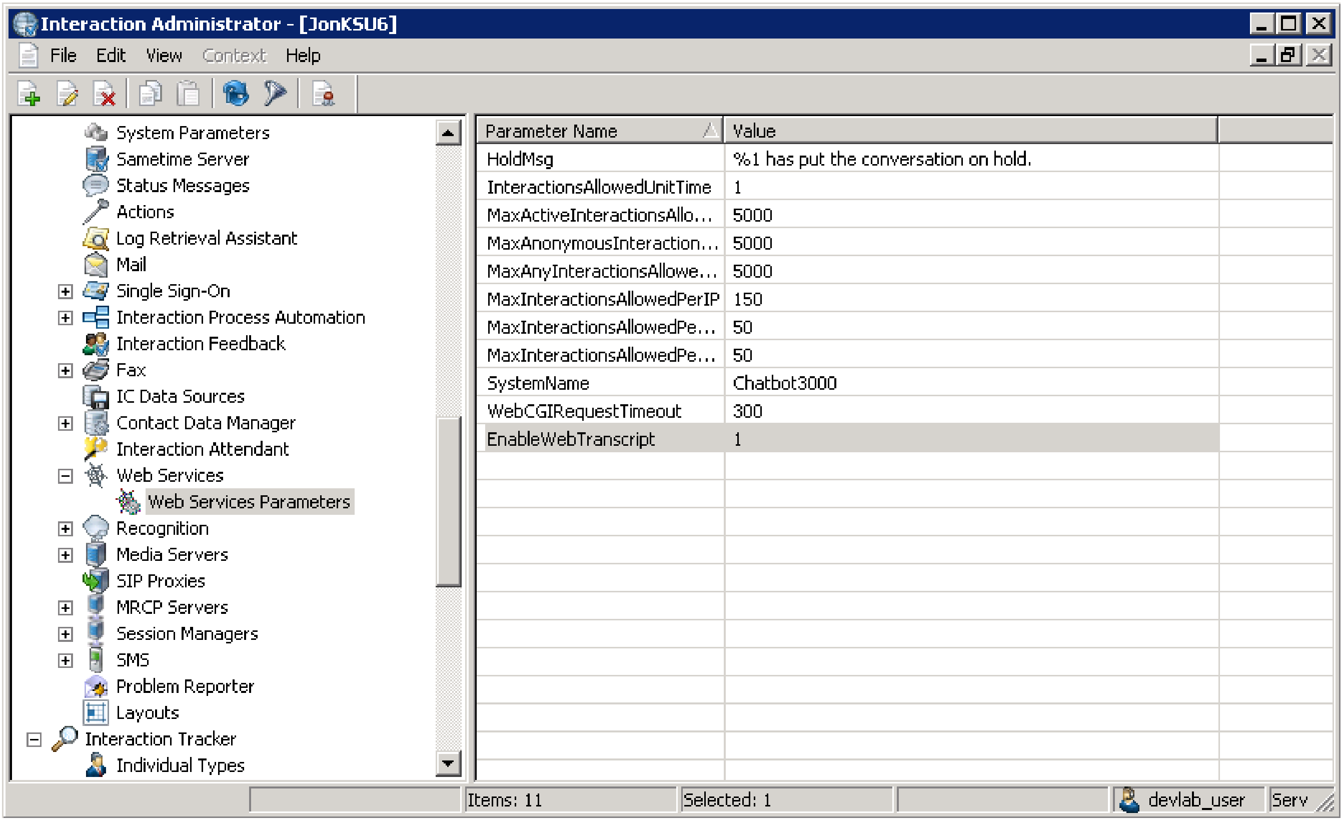
Configuring Web Services Parameters

If you have the license for Interaction Web Tools, the **Web Services Parameters** container appears under **Web Services** in Interaction Administrator. You can configure chat and callback parameters in that container. The CIC server installation automatically sets some of the Interaction Web Tools parameters.

> **Note:** PureConnect widgets use the same WebProcessor as Interaction Web Tools chats. This means you can use some of the same Web Services parameters to configure Widget Chats. For a list of the Web Services parameters that work with PureConnect widgets, see Widgets and Web Services parameters.

To change a preset value, right-click the parameter name and select **Properties**. Set a new value in the **Parameter Configuration** dialog box.

> **Note:** If you change parameter values, you do not need to restart WebProcessor or WebProcessorBridge. WebProcessor dynamically monitors parameter values.



Parameter Name	Value
HoldMsg	%1 has put the conversation on hold.
InteractionsAllowedUnitTime	1
MaxActiveInteractionsAllo...	5000
MaxAnonymousInteraction...	5000
MaxAnyInteractionsAllowe...	5000
MaxInteractionsAllowedPerIP	150
MaxInteractionsAllowedPe...	50
MaxInteractionsAllowedPe...	50
SystemName	Chatbot3000
WebCGIRequestTimeout	300
EnableWebTranscript	1

For more information about the parameters, see the following:

- Web Processor Parameters
- Web Processor Bridge Parameters
- Denial of Service Parameters
- Idle/Timeout Parameters

Web Processor Parameters

These parameters affect the behavior of the Web Processor (WebProcessorU.exe).

Web Processor Parameter	Description	Available
Messages		
AgentConnectedMsg	Sets the default message that appears in the chat dialog when an agent joins a chat. The message text also gets set in the `SystemIVRUserQueueInteraction` and `AcdProcessEventInteraction` handlers within the Set Attribute tool. If both the `AgentConnectMsg` and Interaction Web Tools parameters are defined, the Interaction Web Tools parameter is used. Preset to: "%1 has joined the conversation." Agent name replaces the %1 delimiter. If this parameter is not set, the text in the Set Attribute tool is used. **Note:** Multilingual support is provided when setting this text in the Set Attribute tool of the Interaction Web Tools handlers.	4.0 GA to present
AgentDisconnectedMsg	Sets the default message that appears in the chat dialog when an agent leaves a chat. Preset to: "%1 has left the conversation." Agent name replaces the %1 delimiter.	4.0 GA to present
HoldMsg	Preset to: "%1 has put the conversation on hold." Agent name replaces the %1 delimiter.	4.0 GA to present
VisitorConnectedMsg	Sets the default message that appears in the chat dialog when a visitor joins a chat. Preset to: "%1 has joined the conversation." Visitor name replaces the %1 delimiter. A visitor to the website who has not registered would appear as the name they entered. Names appear for registered visitors. For example, if registered user was William Smith, you would see "William Smith has joined the conversation." To change the preset value, right-click the parameter name and select **Properties**. You see the **Parameter Configuration** dialog where you can enter a new parameter value. If this parameter is not set, the text in the Set Attribute tool is used.	4.0 GA to present
VisitorDisconnectedMsg	Sets the default message that appears in the chat dialog when a visitor leaves a chat. Preset to: "%1 has joined the conversation." Visitor name replaces the %1 delimiter. A visitor to the website who has not registered would appear the name they entered. Names appear for registered visitors. To change the preset value, right-click the parameter name and select **Properties**. You see the **Parameter Configuration** dialog where you can enter a new parameter value. If this parameter is not set, the text in the Set Attribute tool is used.	4.0 GA to present
Other Parameters		
PerformCleanRestart	During a subsystem restart of WebProcessor on the primary CIC server, WebProcessor connects to existing chats and callbacks. The interactions remain available. If you want to clean up (disconnect) all the existing chats and callbacks during a WebProcessor restart, set this parameter to 1.	4.0 SU 3 to present
SystemName	Identifies the server name displayed as a prefix for server messages. Preset to: CIC. For example, if you changed CIC to WebAdmin you would see "WebAdmin: JohnS has joined the conversation."	4.0 GA to present

Web Processor Bridge Parameters

These parameters affect the behavior of the WebProcessor Bridge.

Web Processor Bridge Parameter	Description	Available
Access Control		
CallbackAccessControl	In 4.0 SU 3 or later, this controls whether WPB allows visitors to create callback requests. In 4.0 SU 4 or later, this also determines whether the radio buttons for both anonymous and authenticated access appear in the webpage where a visitor requests a callback. See the "I have an account" and "I don't have an account" radio buttons on the Interaction Web Tools default page in "Default Page and Customization Examples" 0=block all 1=allow all 2=authenticated only 3=anonymous only **Example:** If CallbackAccessControl=2 and your custom web interface ignores the presence or absence of supportAuthenticationAnonymous, WPB prevents website visitors from creating anonymous callback requests. **Example 2:** If CallbackAccessControl=1 (allow all) and MaxAnonymousInteractions=0 (anonymous users cannot start a chat or create a callback request), supportAuthenticationAnonymous is sent from WebProcessor Bridge to the visitor's browser.	4.0 SU 3 to present
ChatAccessControl	In 4.0 SU 3 or later, this controls whether WPB allows visitors to create chat requests. In 4.0 SU 4 or later, this also determines whether the radio buttons for both anonymous and authenticated access appear in the webpage where a visitor starts a chat interaction. See the "I have an account" and "I don't have an account" radio buttons on the Interaction Web Tools default page in "Default Page and Customization Examples." 0=block all 1=allow all 2=authenticated only 3=anonymous only **Example:** If ChatAccessControl=2 and your custom web interface ignores the presence or absence of supportAuthenticationAnonymous, WPB prevents website visitors from creating anonymous callback requests. **Example 2:** If ChatAccessControl=1 (allow all) and MaxAnonymousInteractions=0 (anonymous users cannot start a chat or create a callback request), supportAuthenticationAnonymous is sent from WebProcessor Bridge to the visitor's browser.	4.0 SU 3 to present

Web Processor Bridge Parameter	Description	Available
QueryQueueAccessControl	Controls whether the radio buttons for both anonymous and authenticated access to the chat and callback links appear to website visitors when the appropriate queue is not busy. This parameter only applies if you have created a handler customization. 0=block all 1=allow all 2=authenticated only 3=anonymous only The query queue tool enables you to find out programmatically how many agents are available and what the wait time is. You can write your own code to do something with that information. Your code could implement certain rules that control the display of the chat and callback links. For example: Display the chat link if wait time is less than 3 minutes. Display the chat link if agents are free or the wait time is less than 1 minute. Otherwise, show the callback link. Display the link to everyone if agents are free. If not, and the wait time is less than 8 minutes, display the link to every third visitor. Otherwise don't display the link.	4.0 SU 3 to present
Polling		
MaxPollFrequency	Sets the interval after which the Javascript client polls during a chat. Defaults to: 2000 ms (2 seconds). **Note:** Setting this value lower can seem to speed up the pace of a chat conversation, but it increases the CIC server's workload. Setting it to a higher value eases the CIC server's workload but can make chats seem sluggish. Recommended values are 1000 - 5000 ms.	4.0 SU 2 to present
Ports		
AdditionalHTTPPorts	You can supply additional HTTP port numbers for the web server to CIC server connection. Use a semi-colon (;) to separate multiple port numbers. This is not a dynamic parameter; it requires a WebProcessor Bridge restart. **Note:** As part of the Installation and Configuration procedure, you can configure a single HTTP port number in the **Web Services Configuration** container in Interaction Administrator. The default port number is 8114 for HTTP.	4.0 SU 3 to present
AdditionalHTTPSPorts	You can supply additional HTTPS port numbers for the web server to CIC server connection. Use a semi-colon (;) to separate multiple port numbers. This is not a dynamic parameter; it requires a WebProcessor Bridge restart. **Note:** As part of the Installation and Configuration procedure, you can configure a single HTTPS port number in the **Web Services Configuration** container in Interaction Administrator. The default port number is 3508 for HTTPS.	4.0 SU 3 to present
Problem Reports		

Web Processor Bridge Parameter	Description	Available
AllowClientProblemReport	Allow visitor browsers to generate a problem report if something goes wrong during a chat session. 0 = Do not allow problem reports 1 = Allow problem reports **Note:** For more information, see the description of the **ProblemReportControlExpression** parameter and also "Problem Reports."	4.0 SU 3 to present
ProblemReportControlExpression	This parameter works in tandem with **AllowClientProblemReport**. The content of this parameter is matched against the content of a problem report to determine which problem reports are sent to the Web Processor Bridge. The content of this parameter can be any regular expression. Do not enclose this regular expression in slashes. **Note:** For more information, see the description of the **AllowClientProblemReport** parameter and also "Problem Reports." Example settings: AllowClientProblemReport = 1 ProblemReportControlExpression = Chrome In this example, all browsers generate problem reports if something goes wrong internally during a chat session. However, only reports containing the word "Chrome" are sent to the WPB. In practice, the WPB logs would contain problem reports only from chat participants using Chrome browsers, as there is no other reason for the report to contain that word. **Note:** If **ProblemReportControlExpression** is missing or empty but **AllowClientProblemReport** is 1, then all problem reports are sent to the WPB.	4.0 SU 3 to present
Queue Query		
QueueQueryIdleAbortTime	This parameter works in tandem with **QueueQueryTime**. **QueueQueryTime** determines how often a value in the cache is updated, and **QueuQueryIdleAbortTime** determines when the value is removed from the cache. The unit of time for this parameter is seconds.	4.0 SU 3 to present
QueueQueryTime	Queue status queries are sent to the ACD server. This parameter determines how frequently the ACD server can be queried. To avoid processing overload, subsequent queries about the status of the same queue are sent to a cache. After the time limit set by this parameter is reached, any subsequent queue status query is sent to the ACD server. The unit of time for this parameter is seconds.	4.0 SU 3 to present

Denial of Service Parameters

These parameters help protect against Denial of Service attacks.

Note:
"WPB" or "WP" indicates whether the parameter is used by the Web ProcessorBridge or the WebProcessor.

Denial of Service Parameter	Description	WPB or WP	Available
Callbacks			
CallbacksAllowedUnitTime	See the description in **MaxCallbacksAllowedPerUnitTime**. Unit of time is seconds. Default: 1	WPB	4.0 SU 3 to present
CallbackStatusQueryDuration	A website visitor can query the status of a callback request. The initial status query is sent to the ACD server. To avoid processing overload, subsequent queries from the same website visitor are sent to a cache. After the time limit set by this parameter is reached, the cache is cleared and any subsequent query is sent to the ACD server. The unit of time for this parameter is seconds.	WP	4.0 SU 3 to present
CallbackStatusQueryIdleAbortDuration	This parameter works in tandem with **CallbackStatusQueryDuration**. If no callback status queries are received during the interval specified in this parameter, the cache is cleared. The unit of time for this parameter is seconds.	WP	4.0 SU 3 to present
MaxActiveCallbacksAllowed	The maximum total number of active callback requests allowed through WebProcessorBridge at any time. For example, if its value is 2500. WPB can create 2500 active callback requests. If 10 callback requests are disconnected, WPB can create another 10 callback requests.	WPB	4.0 SU 3 to present
MaxCallbacksAllowedPerUnitTime	**MaxCallbacksAllowedPerUnitTime** and **CallbacksAllowedUnitTime** together define the callback burst time. For example, if **MaxCallbacksAllowedPerUnitTime = 5** and **CallbacksAllowedUnitTime = 1**, then no more than a burst of 5 callback requests per 1 second is allowed. Default: 5	WPB	4.0 SU 3 to present
Web Chats			
ChatsAllowedUnitTime	See the description in **MaxChatsAllowedPerUnitTime**. Unit of time is seconds. Default: 1	WPB	4.0 SU 3 to present
MaxActiveChatsAllowed	The maximum total number of active web chats allowed through WebProcessorBridge at any point in time. For example, if its value is 2500. WPB can create 2500 active web chats. If 10 chats are disconnected, WPB can create another 10 web chats. This limitation doesn't apply to intercom chats.	WPB	4.0 SU 3 to present
MaxChatsAllowedPerUnitTime	**MaxChatsAllowedPerUnitTime** and **ChatsAllowedUnitTime** together define the chat burst time. For example, if **MaxChatsAllowedPerUnitTime = 5** and **ChatsAllowedUnitTime = 1**, then no more than a burst of 5 chat requests per 1 second is allowed. Default: 5	WPB	4.0 SU 3 to present
Web Chats and Callbacks			
InteractionsAllowedUnitTime	See the description in **MaxInteractionsAllowedPerUnitTime**. Unit of time is seconds. Default: 1	WPB	4.0 SU 3 to present

Denial of Service Parameter	Description	WPB or WP	Available
MaxActiveInteractionsAllowed	The maximum total number of active web chats or callbacks allowed through WebProcessorBridge at any time. The number applies independently to web chats and callbacks. This limitation doesn't apply to intercom chats. For example, if its value is 5000, WPB can create 5000 active web chats and 5000 callbacks. If 10 chats or callbacks are disconnected, WPB can create another 10 web chats or callbacks. Default: 1500 See also **MaxActiveChatsAllowed** and **MaxActiveCallbacksAllowed**.	WPB	4.0 GA to present
MaxAnonymousInteractionsAllowed	The maximum total number of active web chats or callback requests that anonymous users can create at any time. Default: 1500	WPB	4.0 GA to present
MaxAnyInteractionsAllowedPerQueue	The maximum total number of active chats and callback requests allowed on an ACD queue at any time. Note: WebProcessor adheres to this setting. This setting does not affect the number of active calls, emails, and faxes allowed on an ACD queue at any point in time. Default: 1500	WP	4.0 GA to present
MaxInteractionsAllowedPerUnitTime	**MaxInteractionsAllowedPerUnitTime** and **InteractionsAllowedUnitTime** together define the combined web chat and callback request burst time. For example, if **MaxInteractionsAllowedPerUnitTime = 5** and **InteractionAllowedUnitTime = 1**, then no more than a burst of a total of 5 web chats and callback requests per 1 second is allowed. Default: 5 See also **ChatsAllowedUnitTime** and **CallbacksAllowedUnitTime**.	WPB	4.0 GA to present
MaxInteractionsAllowedPerUser	The maximum total number of active web interactions (chats or callbacks) an Interaction Tracker registered user can create at any time. Default: 5	WPB	4.0 GA to present
MaxInteractionsAllowedPerIP	The maximum total number of active web chats/callbacks website visitors can create from one IP address at any time. Default: 15	WPB	4.0 GA to present
TrustedHosts	You can supply the IP addresses or host names of trusted hosts. Website visitors can create unlimited chats or callbacks from these trusted IPs or hosts. The **MaxInteractionsAllowedPerIP** limit does not apply to trusted hosts. However, other limits on interactions still apply. Use commas to delimit multiple IP addresses or hosts.	WPB	4.0 SU 3 to present

Idle/Timeout Parameters

These parameters control whether a chat times out and disconnects after a configurable amount of time. A chat can time out after the chat software running in the visitor's browser stops polling. Or a chat can time out after a visitor stops typing, even if the visitor's browser continues to poll.

After a configurable amount of time, a warning is displayed. After a second, separately configurable amount of time, another message is displayed, indicating the chat is being disconnected. As this second message is displayed, the chat is disconnected.

> **Note:**
> "WPB" or "WP" indicates whether the parameter is used by the Web Processor Bridge or the Web Processor.

> **Note:**
> The idle timeout and disconnect parameters documented here are global settings. To configure these settings for individual workgroups—for example, with localized warning or disconnect messages—create custom handlers, as discussed in the PureConnect Customer Care KB article at https://genesyspartner.force.com/customercare/kA01T000000kHkU?name=How-to-customise-web-chat-idle-warning-and-idle-disconnect-messages-per-workgroup.

Idle/Timeout Parameter	Description	WPB or WP	Available
EnableIdleTimeout	0 = Disable timeout.(Default value) 1 = Enable timeout.	WP	4.0 GA to present
IdleDisconnectMessage	Specifies the message sent to all parties after the chat is disconnected due to idleness. You can customize this default message: "%1 has been disconnected from chat since being idle for %4." %1 = Visitor name %2 = Idle Time %3 = Grace time %4 = Idle Time + Grace Time All time displays are localized so they appear in the manner in which the Visitor is accustomed to seeing them.	WP	4.0 GA to present
IdleWarningMessage	Specifies the warning message sent to all parties after the visitor is idle for the time defined in **PartyIdleTime**. You can customize this default message: "%1 has been idle for %2. The party has to type something within next %3 to remain active in chat." %1 = Visitor name %2 = Idle Time %3 = Grace time %4 = Idle Time + Grace Time Curly brackets, {}, are not used. All time displays are localized so they appear in the manner in which the Visitor is accustomed to seeing them. **Note**: You can set custom attributes for the **Settings: SMS** Web Services Parameter which override IdleWarningMessage, PartyIdleGraceTime, and PartyIdleTime parameters values. For more information, see Set Web Services Parameters to Disconnect Chats in the Short Message Services Technical Reference.	WP	4.0 GA to present
PartyIdleGraceTime	Set the maximum number of seconds the web user can remain idle after the warning message is sent. Default = 120 seconds	WP	4.0 GA to present
PartyIdleTime	Set the time (in seconds) the visitor can be idle before the warning is displayed. Default = 300 seconds	WP	4.0 GA to present

Administering Chat

The chat feature enables one or more CIC agents to engage in a text-based communication with a visitor to your website. Some of the highlights of the chat feature include:

- The JavaScript chat interface.
- Customization to the visitor side of the chat interface. See *Interaction Web Tools Developer's Guide* for information about customizing the Interaction Web Tools user interface and its features.
- File transfer capabilities. During a chat session, the agent can send a link to a file which the visitor can save to their system. See the appropriate CIC client help for more details.
- Chat Transcript, if the CIC server has an Interaction Recorder license.

Website visitor requirements

The website visitor needs only a web browser. See the latest supported web browsers for CIC on the Genesys Testlab site: http://testlab.genesys.com/ProductsPage.aspx?ProductType=36.

How a chat session works

Customer Interaction Center can send external chats, just like telephone calls, to CIC client agents. The program can route, transfer, and report on external chats. If an agent is not available for a chat, visitors can leave a message.

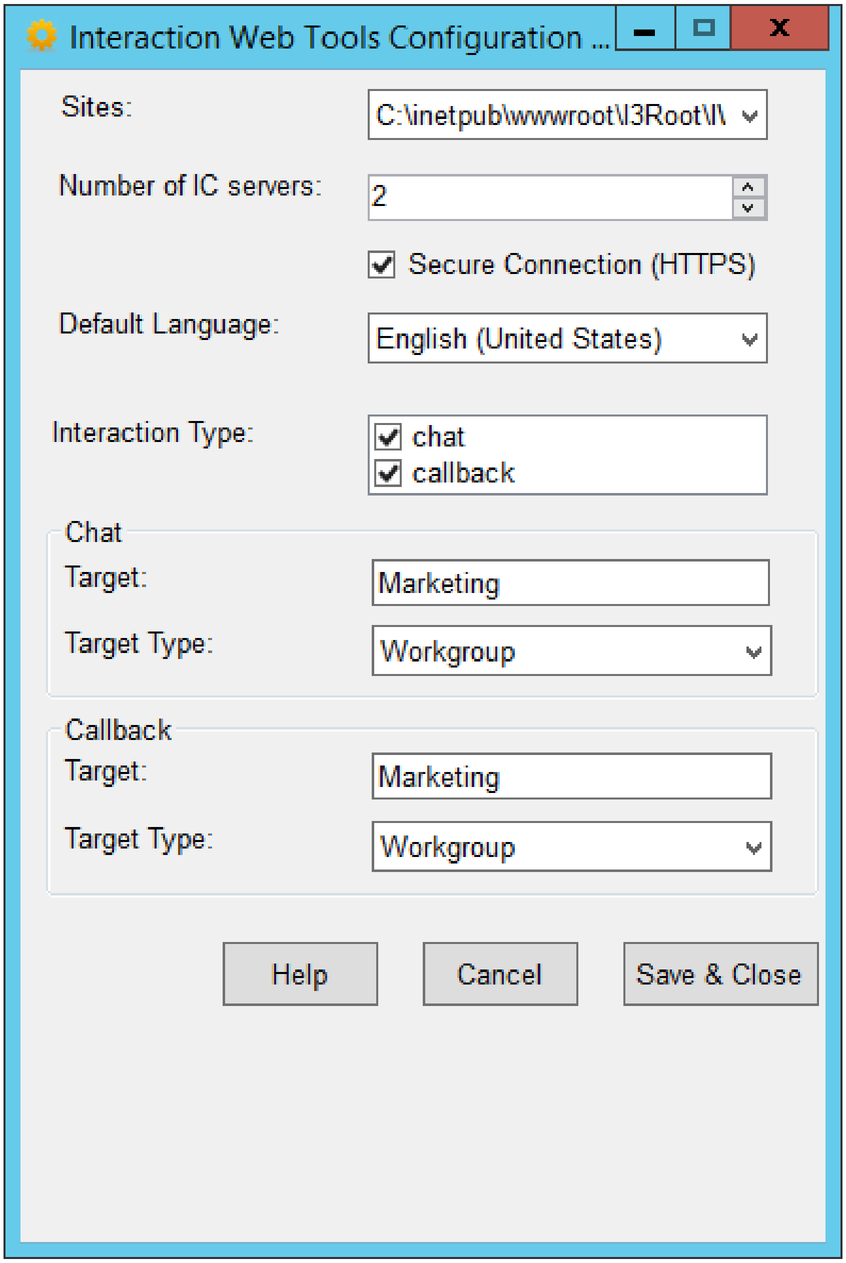
Interaction Web Tools provides a chat interface (webpage) for visitors. In the simplest case, the administrator puts links to that page somewhere on the company website. The administrator can embed the chat functionality in other pages (covered in an example) or distribute the link to the chat via email.

Configuration Settings

The chat functionality is implemented in JavaScript. This JavaScript communicates with `WebProcessorBridgeU.exe` (on the CIC server) using AJAX over HTTP (or HTTPS for a secured connection) and requests a chat.

Important!
The **Secure Connection** setting applies to the web browser to web server connection (front-end). It must correspond to whether the web server serves the page via HTTP or HTTPS.

Visitor accesses website via	Encryption setting in Interaction Web Tools Configuration Utility
HTTP	Clear the Secure Connection (HTTPS) check box in the Interaction Web Tools Configuration Utility. Alternatively, manually edit `config.js` and set "UseEncryption" to false.
HTTPS	Select the Secure Connection (HTTPS) check box in the Interaction Web Tools Configuration Utility. Alternatively, manually edit `config.js` and set "UseEncryption" to true.



Interaction Web Tools Configuration ...

Sites: C:\inetpub\wwwroot\I3Root\I\

Number of IC servers: 2

☑ Secure Connection (HTTPS)

Default Language: English (United States)

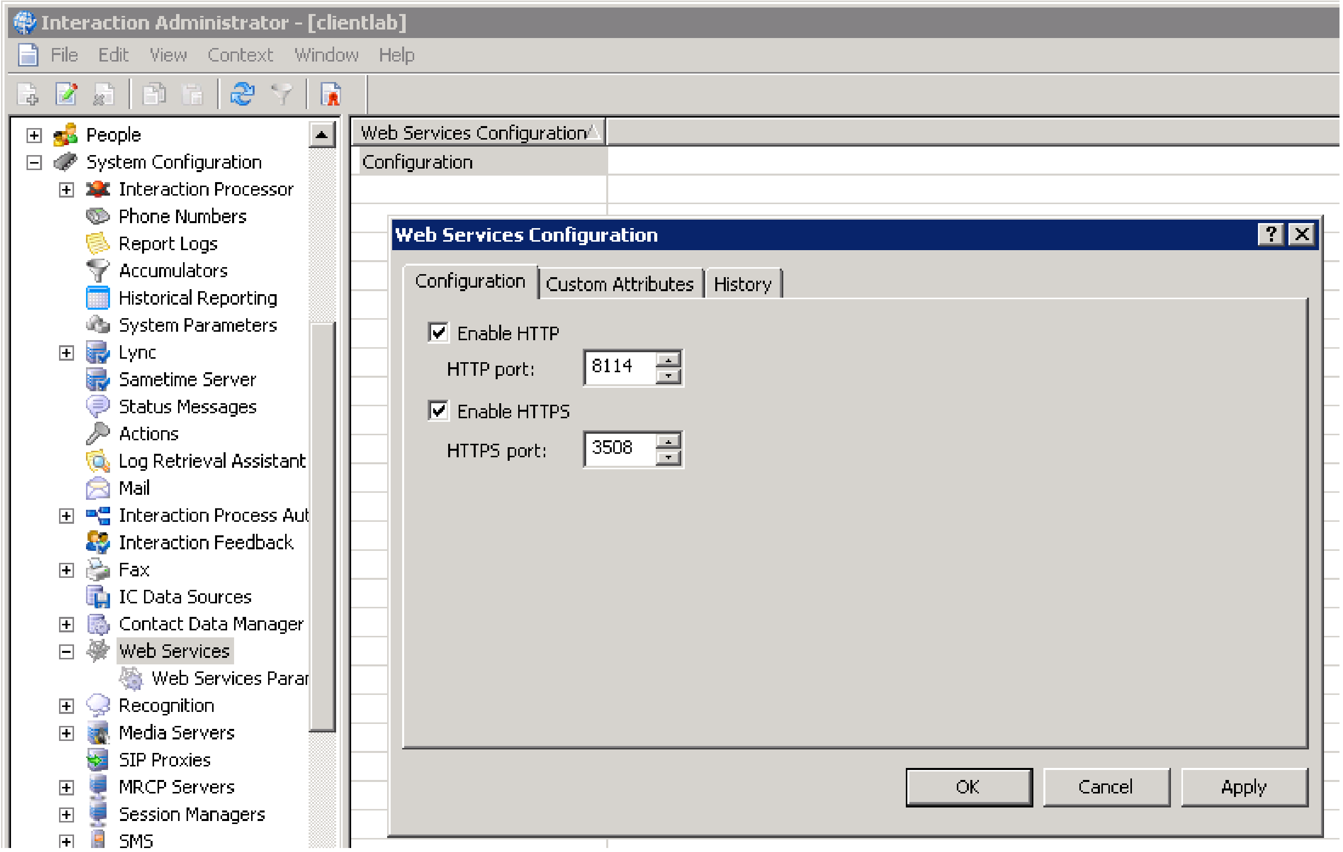
Interaction Type:
☑ chat
☑ callback

Chat
Target: Marketing
Target Type: Workgroup

Callback
Target: Marketing
Target Type: Workgroup

Important!
The Enable HTTP and Enable HTTPS setting in Interaction Administrator applies to the web server to CIC server connection (back-end).

You can enable one, both, or neither of these options.



☑ Enable HTTP

HTTP port: 8114

☑ Enable HTTPS

HTTPS port: 3508

Enable Chat Transcripts

Emailing transcripts requires an Interaction Recorder license.

To enable chat transcripts, complete two general steps:

- add a Web Services parameter in Interaction Administrator to enable web transcripts
- add an Interaction Recorder policy that records chats.

Mailboxes

- The **sender email address** is the IC Administrator mailbox. Select this mailbox in Interaction Administrator under System Configuration > Configuration > Mailboxes.
- Use a server parameter to configure the **reply to email address**. Create the **ChatTranscriptReplyToAddress** parameter in Interaction Administrator under System Configuration > Web Services > Web Services Parameters.

To add the web transcripts parameter:

1. In Interaction Administrator, click **System Configuration**, then **Web Services**, then **Web Services Parameters**.
2. In the right panel, right-click and select **New**.
   Enter `EnableWebTranscript` for the name of the parameter.
   Click **Ok**.
3. Enter `1` for the parameter value.
4. Click **Ok**.

WebProcessor and WebProcessorBridge must be restarted for this parameter to take effect.

To add a policy for recording chats:

1. Navigate to **Interaction Recorder** -> **Policy Editor**
2. Double-click **Configuration**.
3. Click **New Policy**.
4. Create a policy with the following settings:

Step 1: Applies to the following entities	Select applies to all entities
Step 2: Restrict to these event(s)	Select Inbound chat connected
Step 3: Select criteria	No criteria selected
Step 4: Select actions	Select record the chat transcript

5. Click **Finished**.
6. Click **Apply** in the bottom right corner of Policy Editor.

For more information about creating policies, see *Interaction Recorder help* and *Interaction Recorder and Interaction Quality Manager Technical Reference* in the PureConnect Documentation Library.

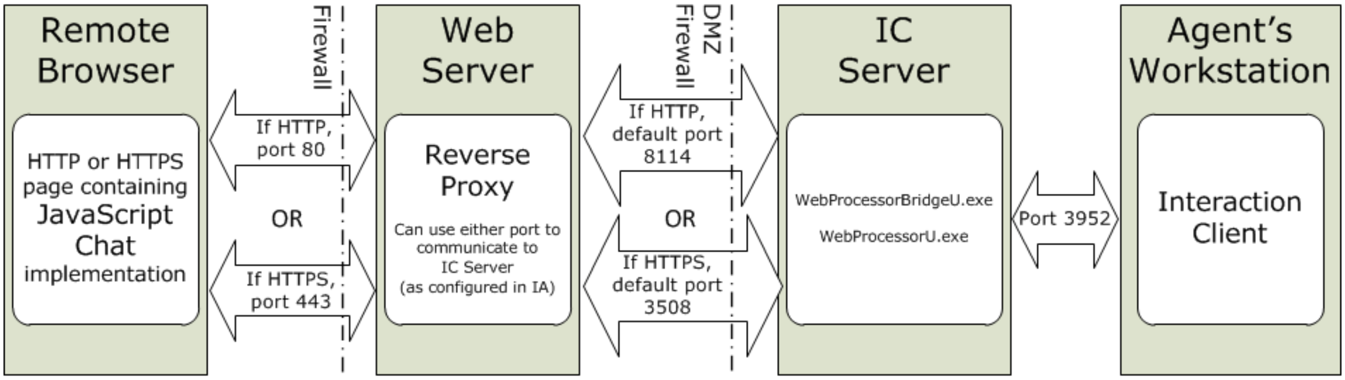
Chat Session Flow

Any time a webpage uses AJAX, it can only make AJAX requests to the webserver+port where it originated. HTTP and HTTPS use different ports, so http://www.company.com/page.html cannot make an AJAX request to https://www.company.com/page2.html (unless the website visitor grants special permissions on their browser which is impractical.)

1. `WebProcessorBridgeU.exe` creates a chat event, sends it to `WebProcessorU.exe`, and asks it to place a chat object on the agent's queue.
2. `WebProcessorU.exe` generates the web chat interaction.
3. The CIC server passes the chat interaction to the agent's CIC client using chat handlers to format the information.
4. The chat interaction object alerts on the agent's queue.
5. When the agent picks up the interaction, a chat dialog opens in the agent's CIC client. The CIC client sends the action back to `WebProcessorBridgeU.exe`.
6. `WebProcessorBridgeU.exe` waits for the JavaScript running in the visitor's browser to poll for waiting information and passes the information back to that JavaScript.

This basic flow continues until one of the parties disconnects.

The following illustration shows, in simplified form, the flow of typical unsecured and secured chat sessions between a visitor and an agent. (The same flow would apply in the case of an ACD queue for a workgroup.)



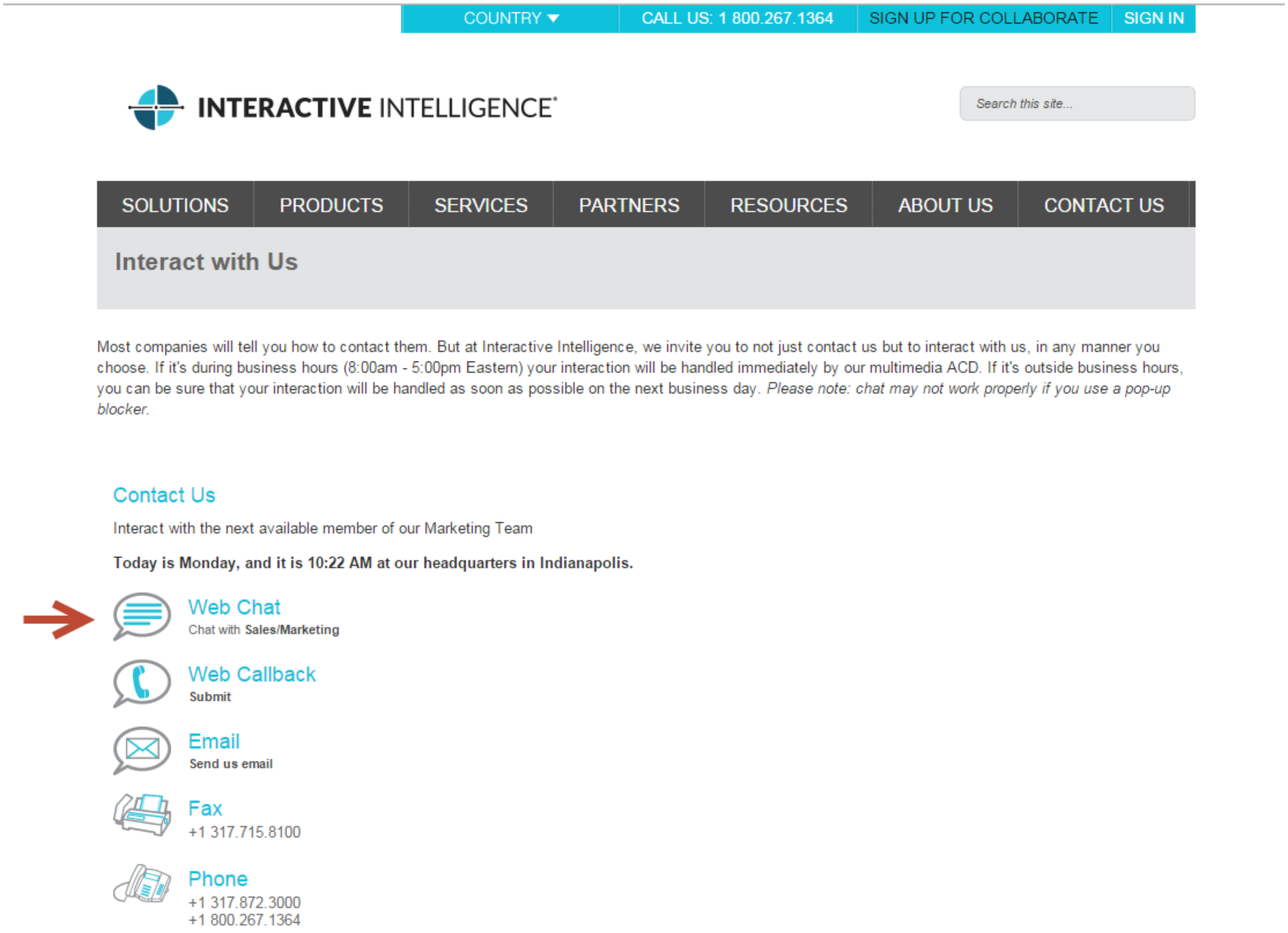
Chat Session via HTTP or HTTPS

What the Visitor Sees

In all the releases of the JavaScript Chat dialog, the visitor types a message in text area and then clicks Send or presses Enter to send the text to the agent.

Chat Link

The visitor clicks a chat link on your organization's webpage as shown in this example:



Interact with Us

Most companies will tell you how to contact them. But at Interactive Intelligence, we invite you to not just contact us but to interact with us, in any manner you choose. If it's during business hours (8:00am - 5:00pm Eastern) your interaction will be handled immediately by our multimedia ACD. If it's outside business hours, you can be sure that your interaction will be handled as soon as possible on the next business day. *Please note: chat may not work properly if you use a pop-up blocker.*

Contact Us

Interact with the next available member of our Marketing Team

Today is Monday, and it is 10:22 AM at our headquarters in Indianapolis.

Web Chat
Chat with **Sales/Marketing**

Web Callback
Submit

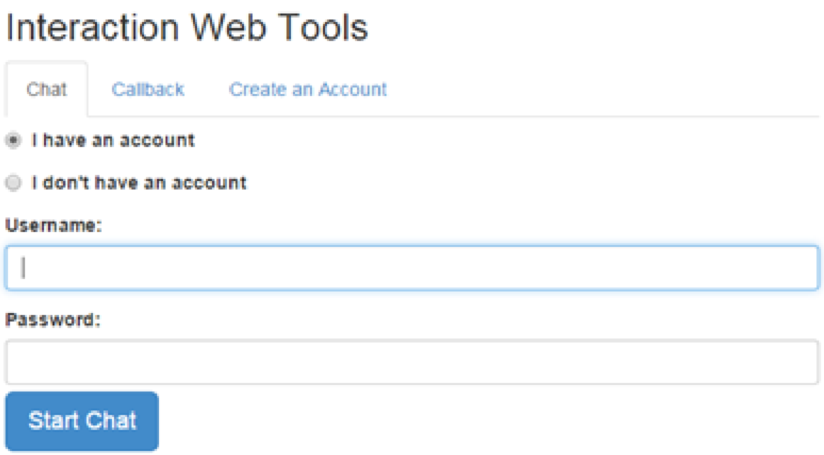
Email
Send us email

Fax
+1 317.715.8100

Phone
+1 317.872.3000
+1 800.267.1364

Chat Form

A chat form appears in the visitor's browser. After completing the relevant information, the visitor presses **Start Chat**.

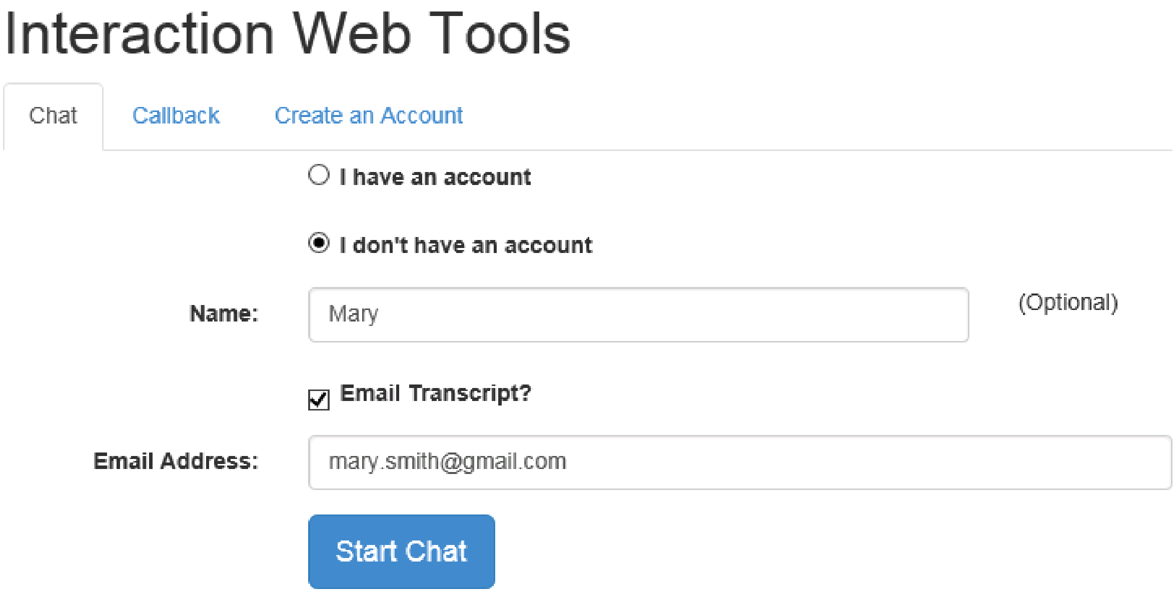


● I have an account

○ I don't have an account

Username:

Password:



○ I have an account

● I don't have an account

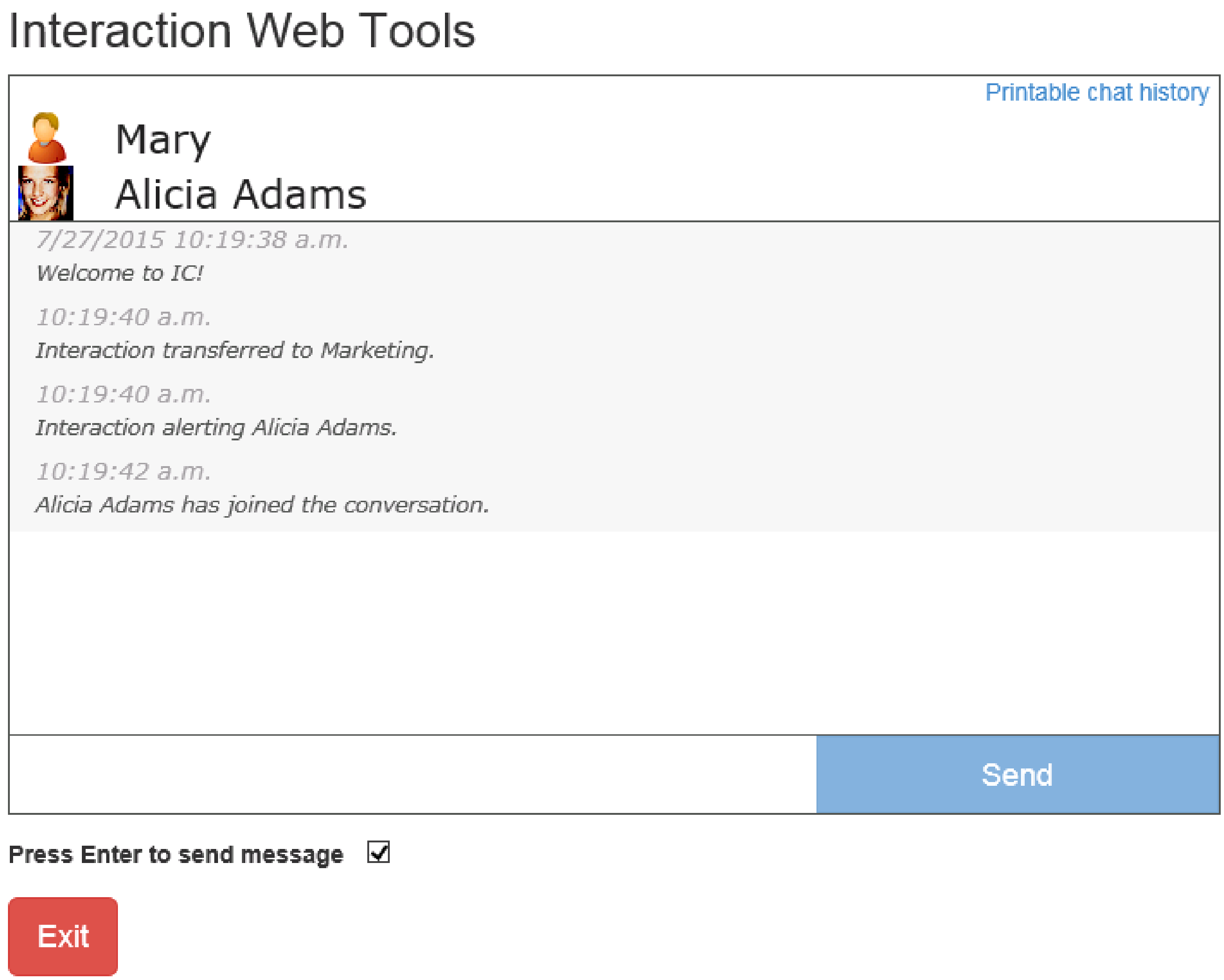
Name: Mary (Optional)

☑ Email Transcript?

Email Address: mary.smith@gmail.com

Web Chat Interface

The web chat interface appears in the visitor's browser. It notifies the visitor when the agent has picked up the incoming chat interaction.



7/27/2015 10:19:38 a.m.
Welcome to IC!

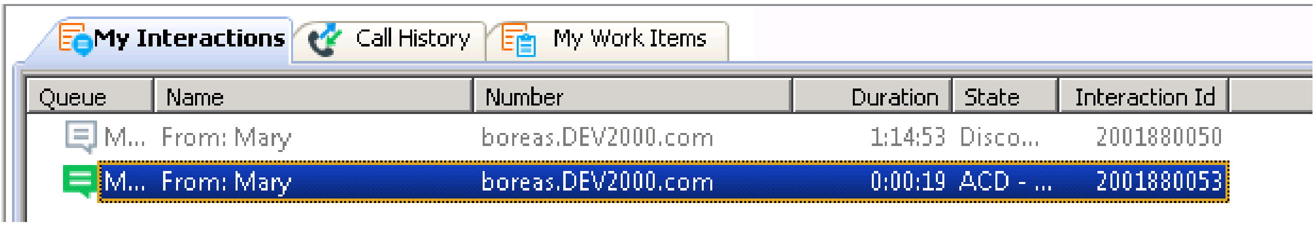
10:19:40 a.m.
Interaction transferred to Marketing.

10:19:40 a.m.
Interaction alerting Alicia Adams.

10:19:42 a.m.
Alicia Adams has joined the conversation.

What the Agent Sees

The visitor's chat interaction appears in the appropriate view in the agent's CIC client. All the usual interaction-handling functions are available for chat interactions (Pickup, Hold, Transfer, Disconnect, and so on).



Queue	Name	Number	Duration	State	Interaction Id
M...	From: Mary	boreas.DEV2000.com	1:14:53	Disco...	2001880050
M...	From: Mary	boreas.DEV2000.com	0:00:19	ACD - ...	2001880053

The agent clicks Pickup or double–clicks the chat interaction to connect. The chat is connected and the following chat window appears.

The chat window in the CIC client contains a running record of the chat session. Several functions are available to the agent for managing the chat session. These functions include recording the session, sending files to the visitor, placing the chat on Hold, requesting assistance from a supervisor, and incorporating stored information from Response Management in a response. For more information, see Response Management. For more information about using the chat window, see the CIC client help.

> **Tip:**
> Configuration options are also available to each agent from the chat window Options menu. These options enable the agent to restore a minimized chat window automatically when there is new activity. These options also control whether a sound signals new activity, or if a time stamp (based on local time) appears in the chat window. This time stamp shows the agent when the CIC client was notified that new text was added to the chat.

Testing the Chat Feature

To test the feature:

1. Start the CIC client for an agent belonging to a workgroup configured to accept ACD chat interactions. Ensure the agent's status is an Available type.
2. On the Interaction Web Tools default page, (http://*webservername*/i3root/), click the **Chat** tab.

   > **Note:**
   > If you are not using the web server to access the Interaction Web Tools default page, then supply the name of the web server by typing an appropriate address for this default page. (The `/i3root` directory is no longer required as it was in previous releases of Interaction Web Tools. You can name this directory anything you want or choose not to have a directory at this level.) For more information about this page, see Default Page and Customization Examples.

3. Select **I don't have an account**.
4. Click **Start Chat**.
5. As the visitor, type a message in the text entry box and click **Send**.
6. As the agent, monitor the My Interactions or appropriate workgroup queue view in the CIC client.

   Result: The chat object appears in the appropriate queue view in the CIC client.
7. Select the object and click **Pickup**.

   Result: The agent's chat window appears.
8. As the agent, type an answer in the text box next to the **Send** button.

   > **Note:**
   > If you have defined Personal Responses in the CIC client on the test system, you can also select from the list of responses, URLs, and files in the **Responses** tab. You can drag any of the response types from **Response Management** area to the text box next to the **Send** button.

9. Click **Send**.

   Result: The agent's response appears in the visitor's chat dialog.
10. Continue the conversation as required. Either participant can click **Exit** to end the session.

Chat Configuration and Administration

ACD configuration

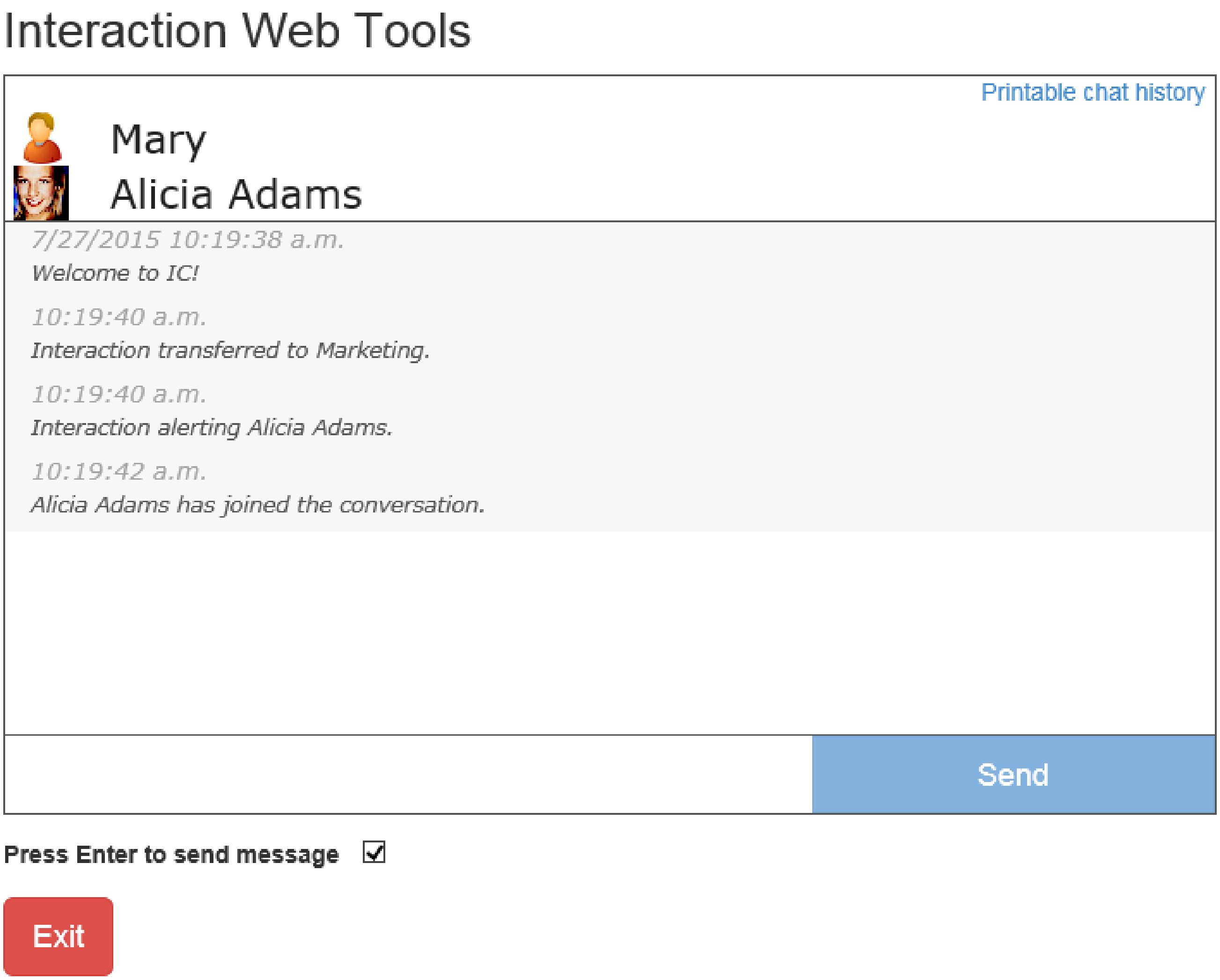
You can configure chat for ACD by selecting an ACD queue as described in "Configure workgroup as ACD" in CIC configuration for all web server types.

Agent photo

The chat interface and callback status page for your visitors can contain an agent photo. These photos show the agent participating in the chat or the agent assigned the callback request. If the visitor hovers over the agent photo, it displays a larger image.

To enable this feature, you associate a PNG image with each agent who handles chats or callback requests.

> **Note:**
> To display correctly, the photo must be 300x300 pixels. Photos in JPG or GIF format may also work, but have not been tested.



7/27/2015 10:19:38 a.m.
Welcome to IC!

10:19:40 a.m.
Interaction transferred to Marketing.

10:19:40 a.m.
Interaction alerting Alicia Adams.

10:19:42 a.m.
Alicia Adams has joined the conversation.

Photo location

You can store agent photos anywhere on the CIC server (or a network path visible from the CIC server).

In the case of a switchover pair, both CIC servers should be able to *see* agent photos at the same location. In other words, place agent photos on both CIC servers in the same directory and use the same filenames. If an agent photo changes, you must change the agent photo in both locations. For these reasons, using a network path might be easier.

To display agent photos in the visitor's chat window or callback status page:

> **Note:**
> Repeat this procedure for each agent.

1. In Interaction Administrator, select **People** >**Users**, and then double-click the appropriate agent.
2. In the **User Configuration** dialog box, click the **Custom Attributes** tab.
3. Click **Add**.
4. In the **Add Custom Attribute** dialog box, add a photo attribute with these settings:

Name	photo
Value	Fully qualified path to the image file.

   Example: `C:\AgentPics\4185_Cropped.png`
5. Click **OK**.
6. In the **Custom Attributes** tab, click **Add** again.
7. In the **Add Custom Attribute** dialog box, add another photo attribute with these settings:

Name	aliasPhoto
Value	Fully qualified path to the image file.

Example: `C:\AgentPics\4185_Alias_Cropped.png`

8. In the **User Configuration** dialog box, click **Apply**.

Administering Callback

A callback is an ACD-queued interaction that, when answered, pops the callback window on the agent's CIC client. When a registered visitor requests a callback, the callback window displays the visitor's name, phone number, and the subject/description of the callback request. The agent can click the **Make Call** button to dial the provided phone number.

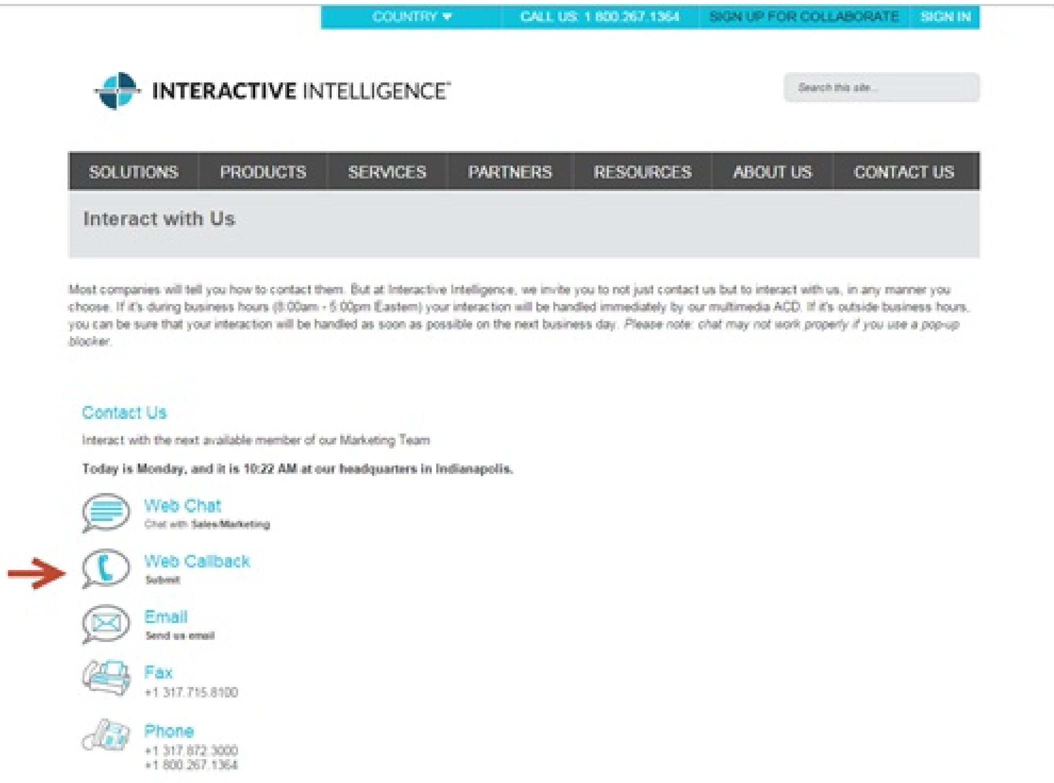
For more information, see the following:

- What the Visitor Sees
- Callback Retry
- Testing the Callback Feature

What the Visitor Sees

Callback link

The visitor clicks a Callback link or button on your organization's webpage as shown in this example.



Interact with Us

Most companies will tell you how to contact them. But at Interactive Intelligence, we invite you to not just contact us but to interact with us, in any manner you choose. If it's during business hours (8:00am - 5:00pm Eastern) your interaction will be handled immediately by our multimedia ACD. If it's outside business hours, you can be sure that your interaction will be handled as soon as possible on the next business day. *Please note: chat may not work properly if you use a pop-up blocker.*

Contact Us

Interact with the next available member of our Marketing Team

Today is Monday, and it is 10:22 AM at our headquarters in Indianapolis.

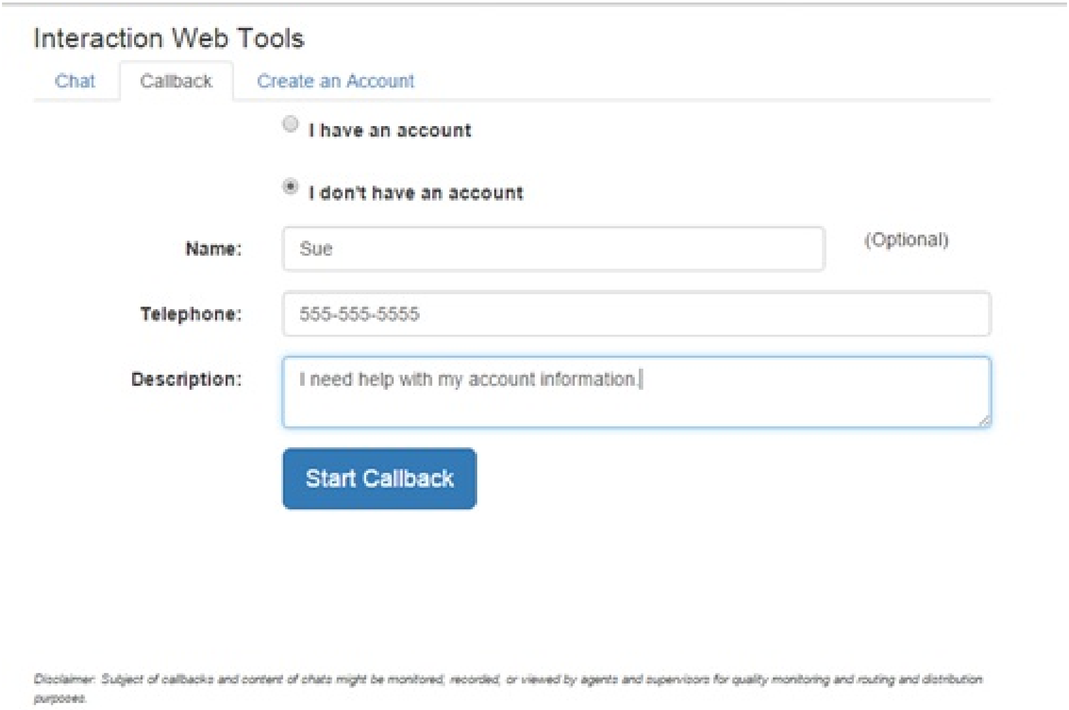
Chat with **Sales/Marketing**

+1 317.715.8100

+1 317.872.3000
+1 800.267.1364

Callback form

A callback form appears in the visitor's browser. After completing the relevant information, the visitor presses **Start Callback**.



○ I have an account

● I don't have an account

Name: Sue (Optional)

Telephone: 555-555-5555

Description: I need help with my account information.

Disclaimer: Subject of callbacks and content of chats might be monitored, recorded, or viewed by agents and supervisors for quality monitoring and routing and distribution purposes.

> **Note:**
> The visitor's Callback form **Description** field becomes the Subject in the agent Callback window. This field has a maximum size of 2,000 characters.

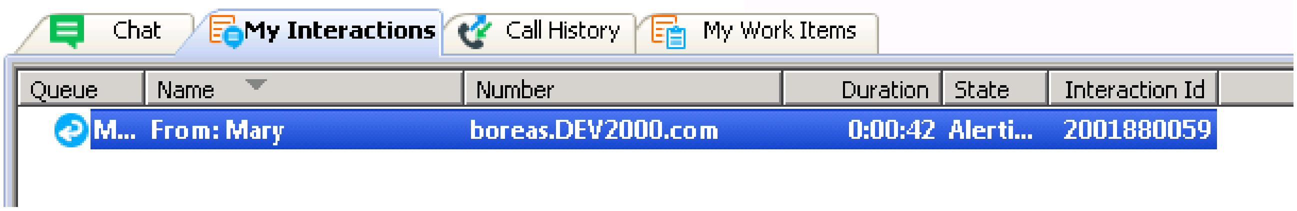
Callback Status page

After visitor submits the callback request, a **Callback Status** page appears. The **Callback Status** page includes such details as the callback request status, the assigned agent, and estimated wait time. It includes a button to cancel the callback request. If you perform the necessary configuration, this page can also display a photo of the assigned agent.

> **Note:**
> If the visitor hovers over the agent photo, it displays a larger image. For more information, see "Agent photo" in Chat Configuration and Administration.

What the agent sees

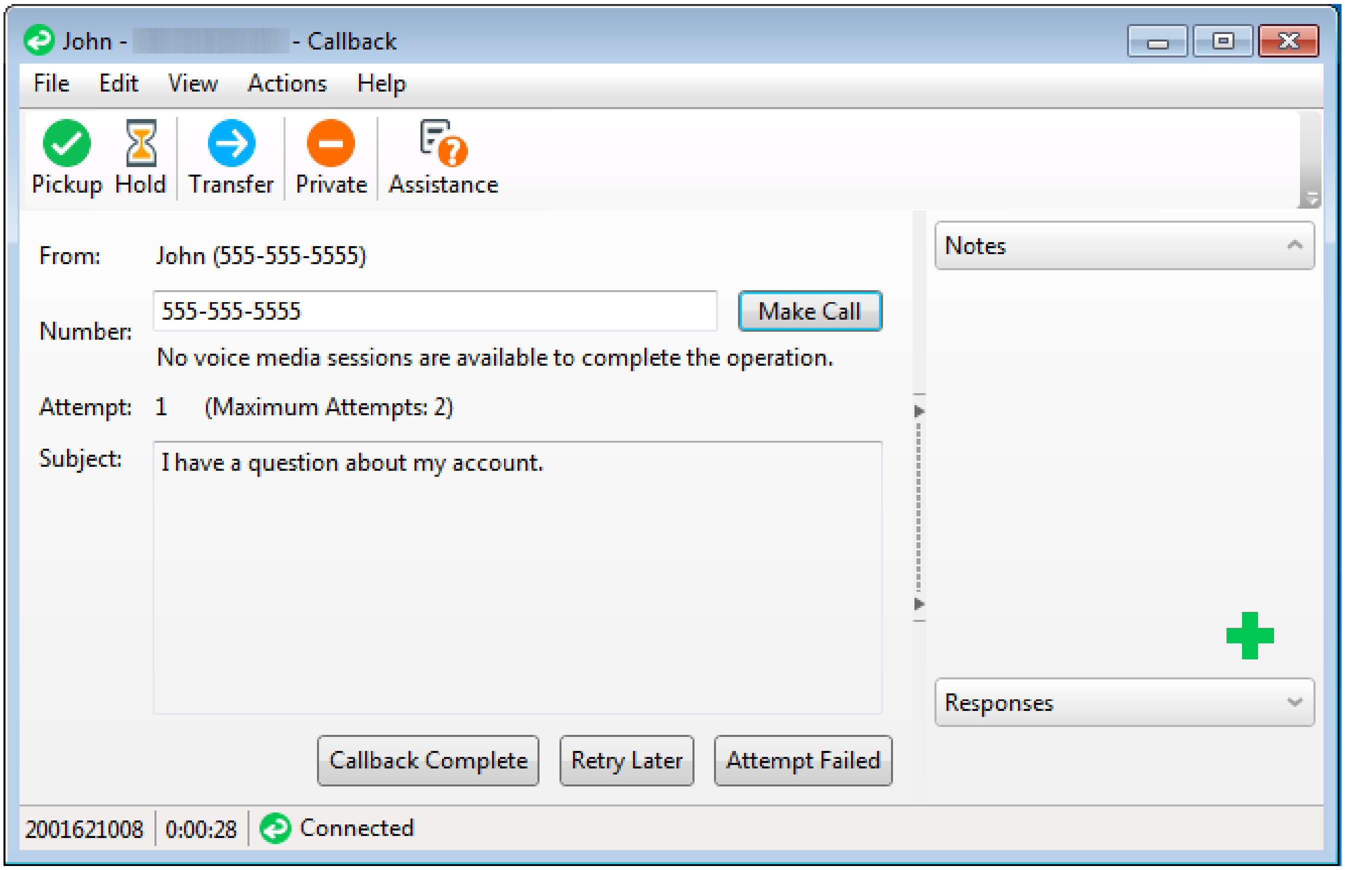
The agent sees the callback interaction appear on the appropriate queue.



Queue	Name	Number	Duration	State	Interaction Id
M...	From: Mary	boreas.DEV2000.com	0:00:42	Alerti...	2001880059

Callback interaction on workgroup queue

After the agent double-clicks the interaction or clicks **Pickup**, the callback window opens.



From: John (555-555-5555)

Number: 555-555-5555

No voice media sessions are available to complete the operation.

Attempt: 1 (Maximum Attempts: 2)

Subject: I have a question about my account.

2001621008 | 0:00:28 | Connected

After the agent clicks the **Make Call** button which dials the visitor's number, the agent has several options for managing the callback request:

- The agent can click the **Callback Complete** or **Attempt Failed** buttons to indicate the callback disposition for reporting purposes.
- Also, depending on the rights granted to the agent in Interaction Administrator, fields enabling the agent to assign account and wrap-up codes also appear in the callback window. See the CIC client help for further details.
- If the number is busy or there is no answer, the agent can click the **Retry Later** button which puts the interaction into a *Snoozed* state.

Callback Retry

If an agent is unable to reach a website visitor who requested a callback, the agent can retry the callback later. Rather than putting the callback request on hold, the agent clicks the Retry Later button. This action removes the callback request from the agent's queue and places it back on the workgroup queue in a *Snoozed* state. After a configured interval, normal ACD processing resumes on the callback request. It is routed to the first available agent in the workgroup. Configuration settings determine how long an interaction remains *snoozed* and limits the number of times agents can retry a callback request.

Licensing

An agent needs the **Call/Callback** media license to receive ACD-routed callback requests. After you grant this license to an agent, any waiting interactions begin routing to that agent. If you revoke the license, callback interactions currently in the agent's queue are not removed, but no additional callback interactions are routed to the agent. The agent does not need additional licensing for the *Callback Snooze* feature.

Callback retry configuration

You enable callbacks for selected Workgroups. You can then configure workgroup-specific settings for the Callback Retry feature.

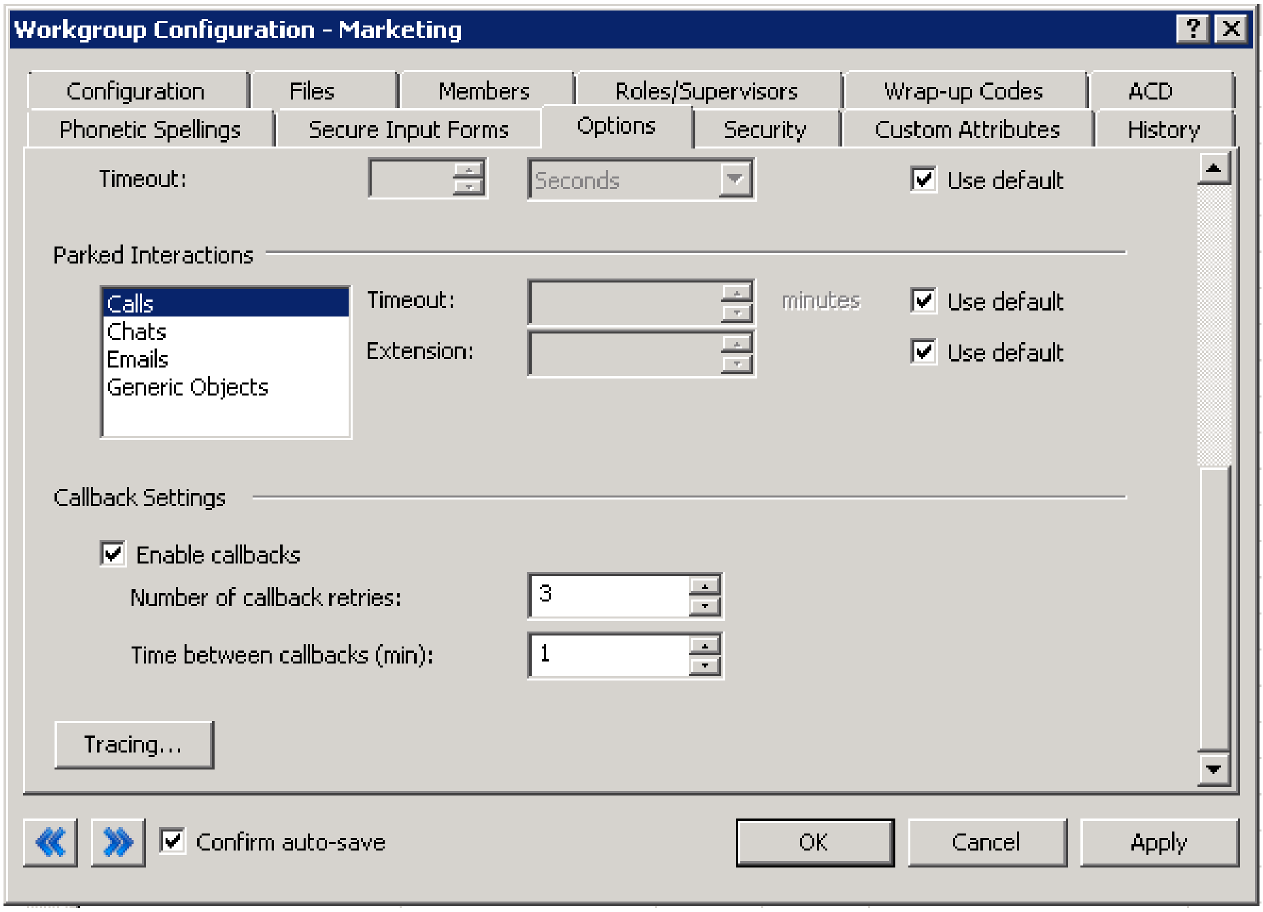
To configure the Callback Retry feature

1. In Interaction Administrator, select **People** > **Workgroups**, and then double-click the appropriate workgroup.

2. In the **Workgroup Configuration** dialog box, select the **Options** tab.
3. To enable the callback feature, select the **Enable callbacks** checkbox.
4. To enable and configure the Callback Retry feature:
   a. Set **Number of callback retries** to the maximum number of times you want a callback request to enter a *Snoozed* state.
   b. Set **Time between callbacks (min)** to the number of minutes you want a callback to remain in a *Snoozed* state before ACD-routing sends it to an available agent.

   > **Note:**
   > If the **Time between callbacks** interval is **0**, the **Default Snooze Duration** server parameter defines the snooze duration. If **Default Snooze Duration** is set to **0** or doesn't exist, the time between callbacks is 5 minutes.

5. In the **Workgroup Configuration** dialog box, click **Apply**.



Timeout: Seconds ☑ Use default

Parked Interactions

Calls
Chats
Emails
Generic Objects

Timeout: minutes ☑ Use default

Extension: ☑ Use default

Callback Settings

☑ Enable callbacks

Number of callback retries: 3

Time between callbacks (min): 1

Callback retry handlers

When an agent is unable to reach a website visitor who requested a callback, the agent can have the option of retrying the callback later.

When an agent clicks the **Retry Later** button, this action starts the `System_RetryInteractionLater` handler. This handler identifies the appropriate **Number of Callback retries** limit and the **Time between callbacks**. If the retry limit has not been exceeded, the handler removes the callback interaction from the agent's queue and places it back in the workgroup ACD queue.

The interaction *snoozes* for the **Time between callbacks** interval. The time a callback interaction has spent in a *Snoozed* state appears in the Workgroup queue view in the **Details** column, before the callback subject.

When the **Time between callbacks** interval times out (the snooze period ends), the `System_RetryInteractionTimeout` handler initiates normal ACD processing of the callback interaction. ACD processing routes the callback interaction to the first available agent in the workgroup.

> **Note:**
> You can modify the `CustomRetryInteractionLater` and `CustomRetryInteractionTimeout` handlers to customize the behavior of the Callback Snooze feature.

Callback retry and statistics

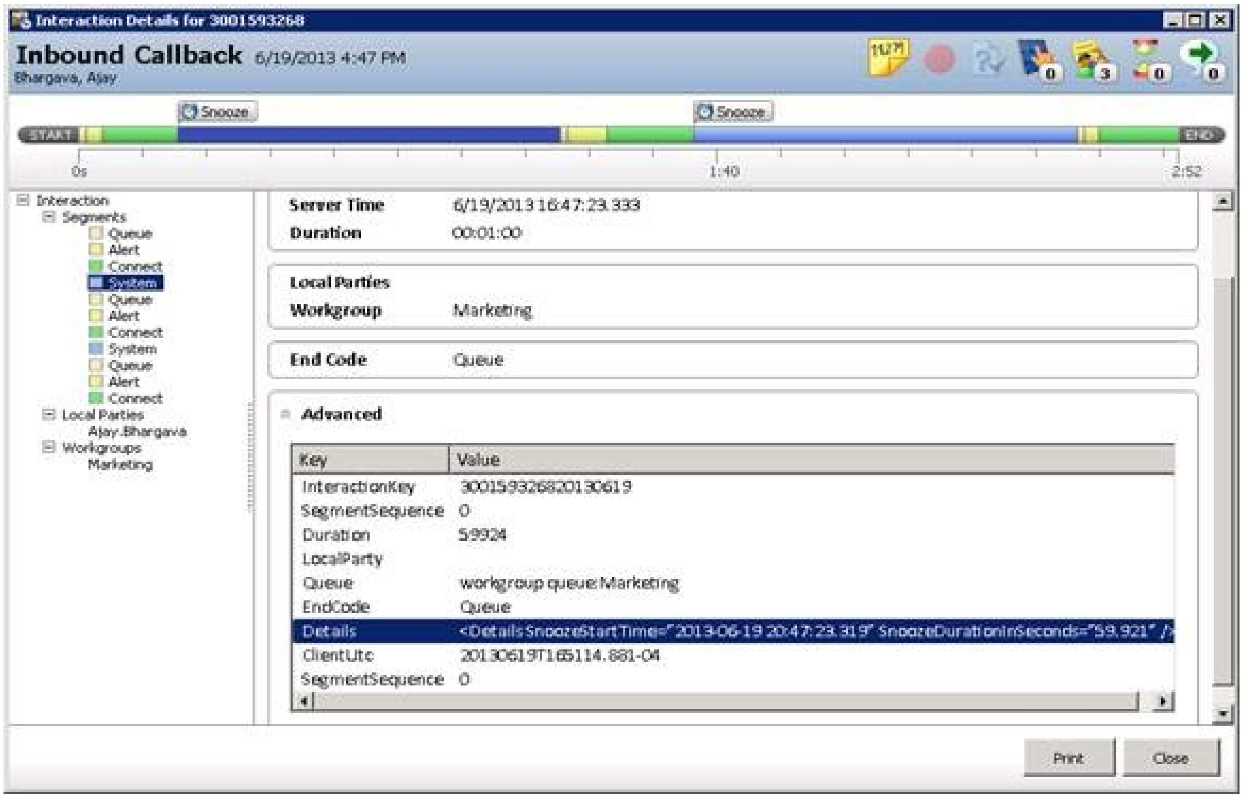
Statserver does not include the time a callback interaction spends in the *Snoozed* state when calculating service levels. This interval does not count as part of the callback processing time.

Callback retry and the Tracker database

Interaction Tracker captures the duration of a snoozed state as part of the additional detail in the system segment when the snoozed operation occurs. The duration of that segment includes snoozed time.

When an agent clicks the **Retry Later** button, Tracker server ends the callback interaction's pre-snooze segment as *Snoozed*. Interaction Detail viewer displays a **Snooze** bubble at the end of that segment. Interaction Tracker records the time an interaction spends in the *snoozed* state in a system segment, not a snooze segment type. The details of this system segment include the snooze start time and snooze duration. If agents place a callback interaction in a snoozed state multiple times, the Interaction Detail viewer displays multiple snooze bubbles followed by system segments. It also shows the prior segment endings as **snoozed**.

In the example below, the first connect segment ends in **snoozed** and shows a snooze bubble at its end. The next system segment provides the snooze activity details: **SnoozeStartTime** and **SnoozeDurationInSeconds**. Agents placed the callback in a snoozed state twice, so there are two snooze bubbles, each followed by a system segment. Each system segment displays snooze details.



Inbound Callback 6/19/2013 4:47 PM
Bhargava, Ajay

Server Time 6/19/2013 16:47:23.333
Duration 00:01:00

Local Parties
Workgroup Marketing

End Code Queue

Advanced

Key	Value
InteractionKey	300159326820130619
SegmentSequence	0
Duration	59924
LocalParty	
Queue	workgroup queue:Marketing
EndCode	Queue
Details	<Details SnoozeStartTime="2013-06-19 20:47:23.319" SnoozeDurationInSeconds="59.921" />
ClientUtc	20130619T165114.881-04
SegmentSequence	0

Callback retry and Switchover

CIC supports an automated switchover system. If a CIC server ever fails, in less than 30 seconds the server can switch control to another mirror image CIC server with minimal disruption. In addition, the switchover scheme enables administrators to manually switch the *active* CIC server with no phone disruption. Switchover maintains the continuity of *Snoozed* callback requests if you have Callback Recovery enabled. These *Snoozed* callback requests do not persist, however, if both CIC servers in the Switchover pair shut down.

Testing the Callback Feature

To test the Callback feature:

1. Start the CIC client for an agent belonging to the workgroup configured to accept ACD Callback interactions. Ensure the agent's status is an Available type.
2. On the Interaction Web Tools default page, (http://*webservername*/i3root/), select the **Callback** tab.

   > **Note:**
   > The `/i3root` directory is no longer required as it was in previous releases of Interaction Web Tools (formerly called Interaction Web Services). You can name this directory anything you want or choose not to have a directory at this level.

3. Select **I don't have an account**. Type a name, phone number, and description.
4. Click **Start Callback**.

   Result: A **Callback** object appears in the appropriate queue view in the CIC client.
5. As the agent, monitor the My Interactions or appropriate workgroup queue view in the CIC client.

   Result: The **Callback** object appears in the appropriate queue view in the CIC client.
6. Select the object and click **Pickup**.

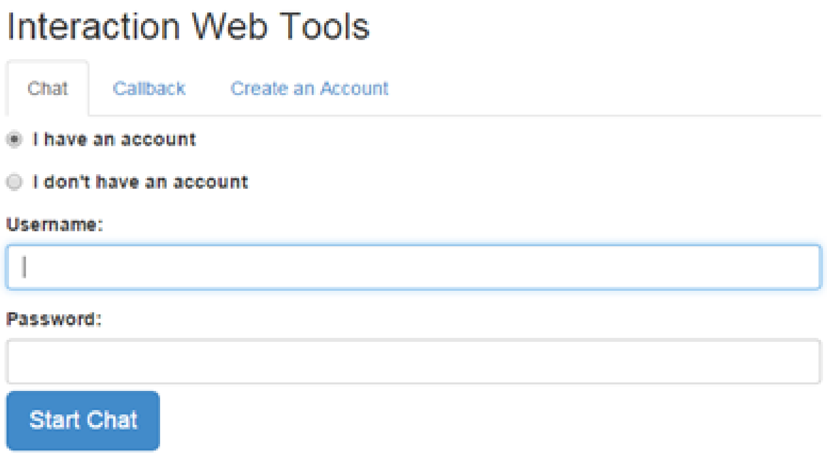
   Result: The agent's callback window appears.
7. Optionally, continue the test by clicking the **Make Call** button.
8. Mark the callback "Call Succeeded" or "Call Failed", by clicking the appropriate button.

Default Page and Customization Examples

This section discusses how to use the Interaction Web Tools default page and the examples provided with Interaction Web Tools.

Interaction Web Tools default page

The default page included with Interaction Web Tools enables you to test your installation. You access the page at: http://*webservername*/i3root/.



Interaction Web Tools

Chat Callback Create an Account

● I have an account

○ I don't have an account

Username:

Password:

Start Chat

Using the Interaction Web Tools default page

This page enables website visitors to start chat interactions, create an account, or submit a callback request.

Chat: Start a chat interaction with an agent.

Callback: Submit a callback request.

Create an Account: This tab contains a sample registration form. The program stores the registration information in the Individuals tables in the Interaction Tracker database. A registration function is required if you want visitors to your website to log on before starting an interaction. Authentication can optionally be handled by a different party than the CIC Interaction Web Tools implementation.

Setting up the examples

The Web Tool files placed in `\\IC_WebServicesChat` on the CIC server during the CIC server installation include `IWT_Examples-X-X.zip`. This file contains examples for controls and forms you can use on your website for your visitor to request a chat or start a callback request. For information about customizing the Interaction Web Tools interface, see the *Interaction Web Tools Developer's Guide* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/web_tools_dg.pdf.

1. Install and configure Web Tools.
2. Unzip `IWT_Examples-X-X.zip` to any directory accessible to the web server.

   > **Note:**
   > The Web Tools installation and configuration process can unzip this file to the web root directory of your web server (most likely `C:\inetpub\wwwroot`).

   > **Tip:**
   > If you are exploring the examples in a testing environment, put the examples on the web server used for testing. On both the test and production systems, take steps to prevent unauthorized access to the examples and consider removing the examples when you're done.

3. Copy `i3root/js/config.js` into `examples/<every subdirectory>/js`
4. Access each of the examples in a web browser: http://*<server name>*/*<directory where you unzipped the examples>*/*<example subdirectory name>*

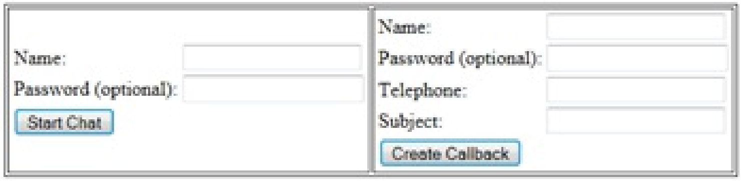
Exploring the examples

Each example directory contains a `readme.html` file that contains:

- A short description of what the example does.
- A list of files which are different from the default install and an explanation of the changes in these files.
- A reminder to copy `config.js` to the example directory before attempting to use the example.

BypassLoginForm

To obtain the information necessary to start a chat or create a callback from an external source and bypass the default logon page, use this example.



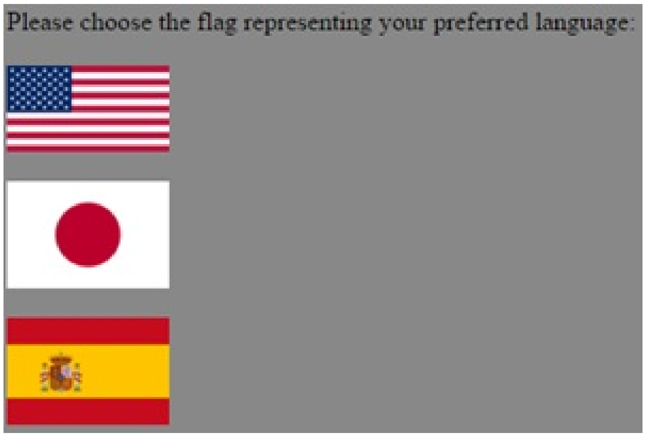
Name:
Password (optional):

Name:
Password (optional):
Telephone:
Subject:

CallbackStatusField

In this example, a few of the fields on the callback status page are hidden. This includes such details as the callback request status, the assigned agent, and estimated wait time.

ClickOnFlagsForDifferentLanguages



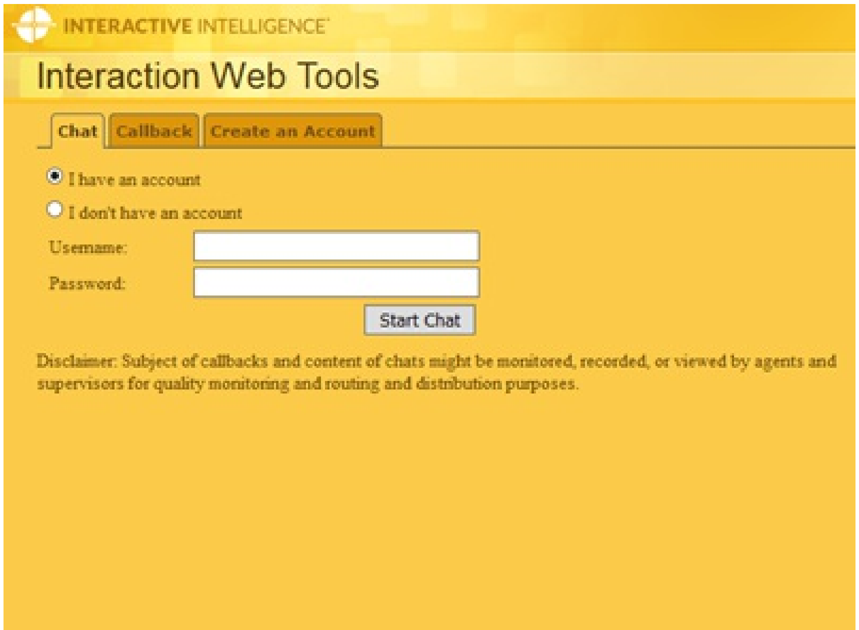
Please choose the flag representing your preferred language:

To present the appropriate language release of the logon, chat, and callback forms, use the language a website visitor selects for viewing your website.

> **Note:**
> The necessary language files for this example to function properly are supplied in 4.0 SU 1 and later releases.

DifferentLayout

This example is an alternative version of the Interaction Web Tools form installed by default in http://*webservename*/i3root/.



● I have an account

○ I don't have an account

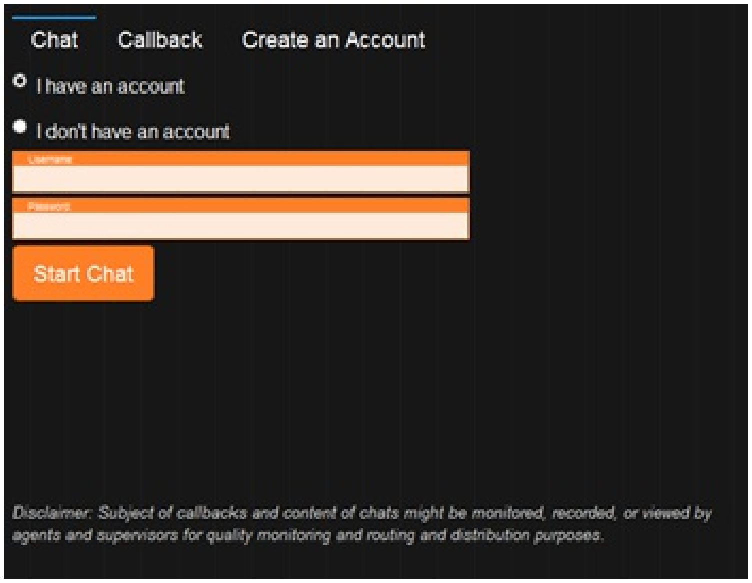
Username:

Password:

Disclaimer: Subject of callbacks and content of chats might be monitored, recorded, or viewed by agents and supervisors for quality monitoring and routing and distribution purposes.

DifferentLayout2

This example is another version of the Interaction Web Tools form installed by default in http://*webservename*/i3root/.



○ I have an account

● I don't have an account

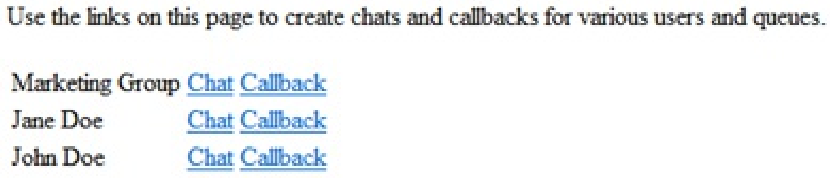
Username

Password

Disclaimer: Subject of callbacks and content of chats might be monitored, recorded, or viewed by agents and supervisors for quality monitoring and routing and distribution purposes.

Directory

To create chat and callback links visitors can use to contact specific queues or CIC client users, use this example.

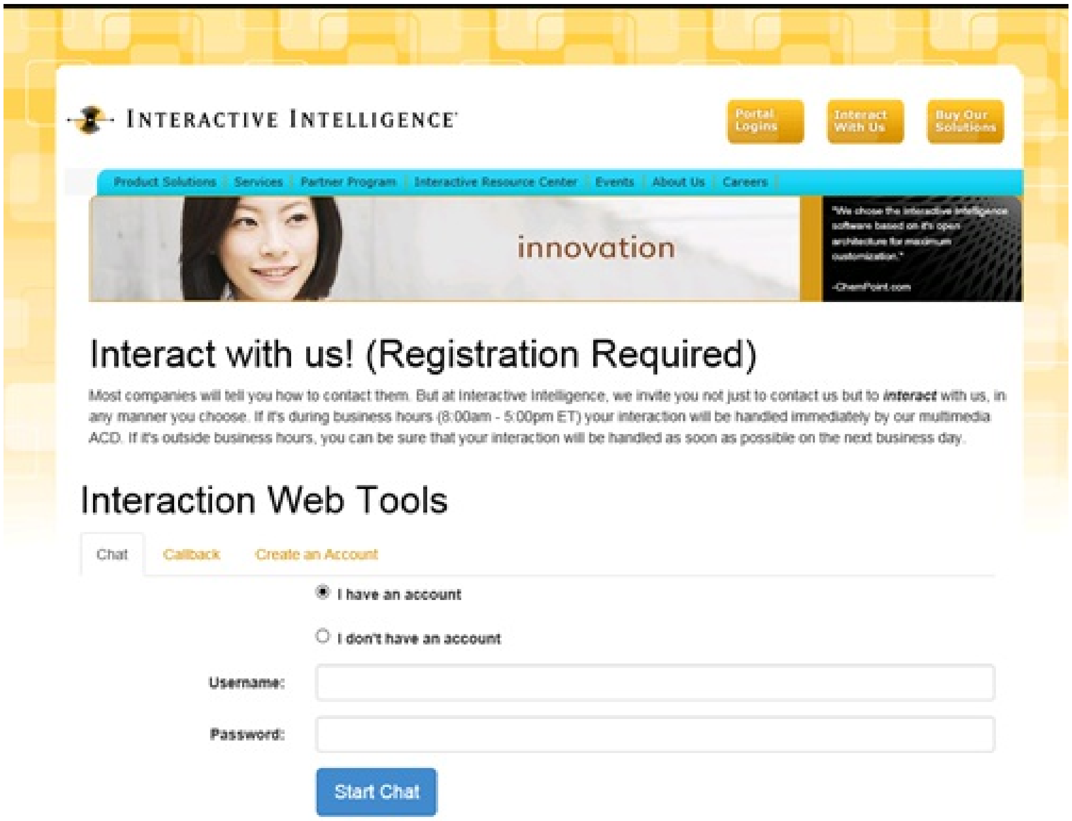


Use the links on this page to create chats and callbacks for various users and queues.

Marketing Group	Chat Callback
Jane Doe	Chat Callback
John Doe	Chat Callback

EmbeddedWithinOtherPage

To embed the Interaction Web Tools form directly in a website page, use this example.


INTERACTIVE INTELLIGENCE
Portal Logins
Interact With Us
Buy Our Solutions
Product Solutions | Services | Partner Program | Interactive Resource Center | Events | About Us | Careers
innovation
"We chose the interactive intelligence software based on it's open architecture for maximum customization."
-ChemPoint.com

Interact with us! (Registration Required)

Most companies will tell you how to contact them. But at Interactive Intelligence, we invite you not just to contact us but to ***interact*** with us, in any manner you choose. If it's during business hours (8:00am - 5:00pm ET) your interaction will be handled immediately by our multimedia ACD. If it's outside business hours, you can be sure that your interaction will be handled as soon as possible on the next business day.

Interaction Web Tools

● I have an account

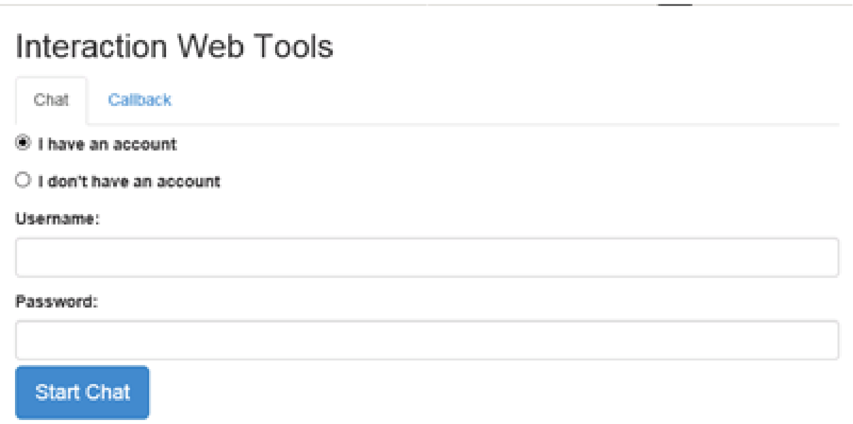
○ I don't have an account

Username:

Password:

NoRegistrationTab

This version of the Interaction Web Tools form does not contain the **Create an Account** tab.


Interaction Web Tools

● I have an account

○ I don't have an account

Username:

Password:

Notifications

If you are interested in creating more extensive customizations, you can use this example to familiarize yourself with the variety of Notifications for which your code can listen. This example listens for every possible Notification. In each case, the listening code just displays a JavaScript alert dialog box.

RegistrationFormPanelFields

To add required and non-required fields to the **Create an Account** form, use this example.

Response Management

Response Management enables Interaction Desktop and Interaction Connect users to define, centrally manage, and use stored text, files, and URLs in certain interactions.

For more information about using Response Management, see the help for your version of the CIC client.

There are three response types:

- **Messages:** Stored text messages which can contain greetings, closings, and standard responses to common questions.
- **URLs:** Internet addresses.
- **Files:** You can attach these identified files to an email message or send them to chat participants.

These pre-defined responses are contained in a library. This library is organized into custom categories and displayed in a tree view. The agent uses these stored responses to avoid typing the same information over and over again. The agent can drag a response from a list and drop it in a chat, or attach it to an email reply. The agent can read the response to a website visitor when responding to a callback request.

Agents can:

- View, select, and use a pre-defined response during a chat session or while responding to an ACD-routed email message or a callback request.
- Create their own pre-defined responses for the information that they need most often.
- Designate selected responses as favorites.

Response libraries

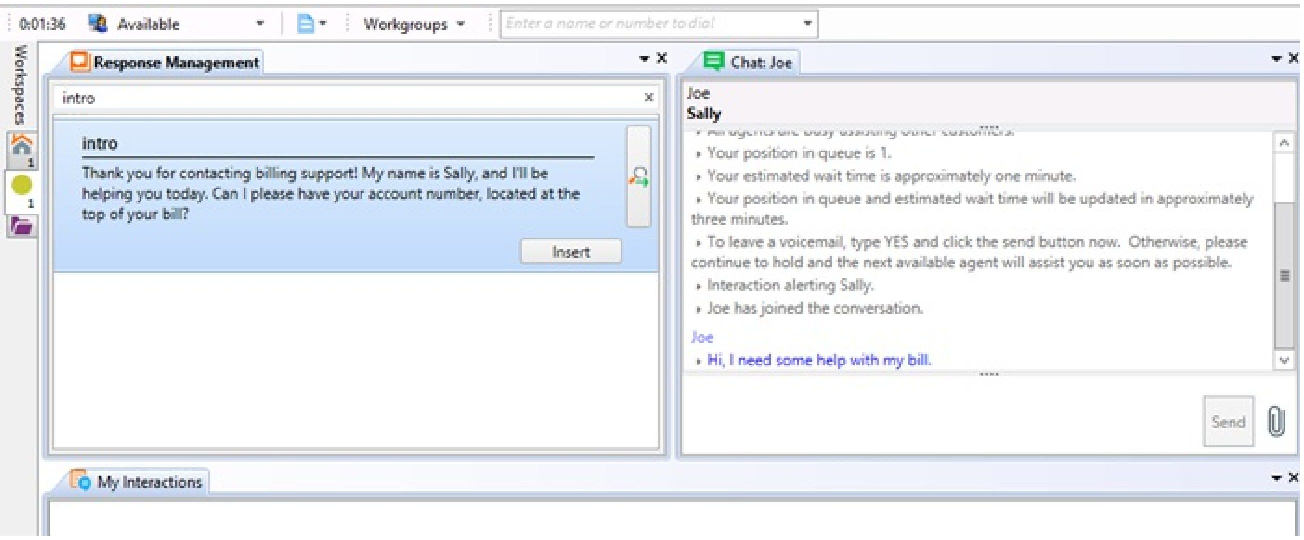
Pre-defined responses are organized into libraries. These libraries appear as folders in the Response Management window. There are two types of Response Management libraries:

- **System-wide**
  The Customer Interaction Center administrator creates and organizes pre-defined responses that are available to CIC client users with the appropriate Response Management View Access Control Right. These responses are available under administrator-defined folders in the **Response Management** window.

  > **Note:**
  > These system-wide response libraries (also called server documents) are configured in the **Response Management** container in Interaction Administrator. See *Interaction Administrator help* for more details. A system-wide Response Management library named "Interactions" can appear in Interaction Desktop in systems updated from previous releases.

- **Personal**
  Agents can also create a library of responses for the information that they use most often in their job. These responses are listed under the **My Responses** folder in the **Response Management** window. Also, agents can also maintain a list of most-often used responses. This Favorites Reponses List contains links to personal responses.

  > **Note:**
  > Instructions for creating personal response libraries and managing favorite responses are in the CIC client help.



intro

Thank you for contacting billing support! My name is Sally, and I'll be helping you today. Can I please have your account number, located at the top of your bill?

Joe
Sally

- Your position in queue is 1.
- Your estimated wait time is approximately one minute.
- Your position in queue and estimated wait time will be updated in approximately three minutes.
- To leave a voicemail, type YES and click the send button now. Otherwise, please continue to hold and the next available agent will assist you as soon as possible.
- Interaction alerting Sally.
- Joe has joined the conversation.

Joe

- Hi, I need some help with my bill.

Requirements

Master Administrators can create system-wide Response Management libraries in Interaction Administrator.

An agent needs:

- The Response Management Security Right to use Response Management. This right enables the agent to drag a response from a list and drop it in a chat or attach it to an email reply.
- The appropriate Response Management View Access Control Right to see and use any of the System-wide Response Libraries created by the CIC administrator.
- The Substitute Queue Columns Access Control right to use an interaction attribute in a Response Macro.
- If your Customer Interaction Center system was updated from previous releases, a system-wide Response Library named "Interactions" may appear in the CIC client. Seeing and using responses from this older library requires the View Interaction Files, View Interaction Messages, and View Interaction URLs Access Control Rights.

Note: Agents do not need an additional license to use Response Management.

What the agent sees

The agent can view pre-defined responses in the **Responses** sidebar of the chat window or email window. The agent can also add the dockable **Response Management** view window to the CIC client.

To complete a reply to a visitor, the agent can search for and insert stored responses in a chat or email interaction. Or the agent can consult a stored response during a call.

Testing the Response Management feature

To test the operation of Response Management, refer to the test procedures for chat or callback.

Enabling the Response Management feature

There are no special requirements for enabling the Response Management feature.

e-FAQ

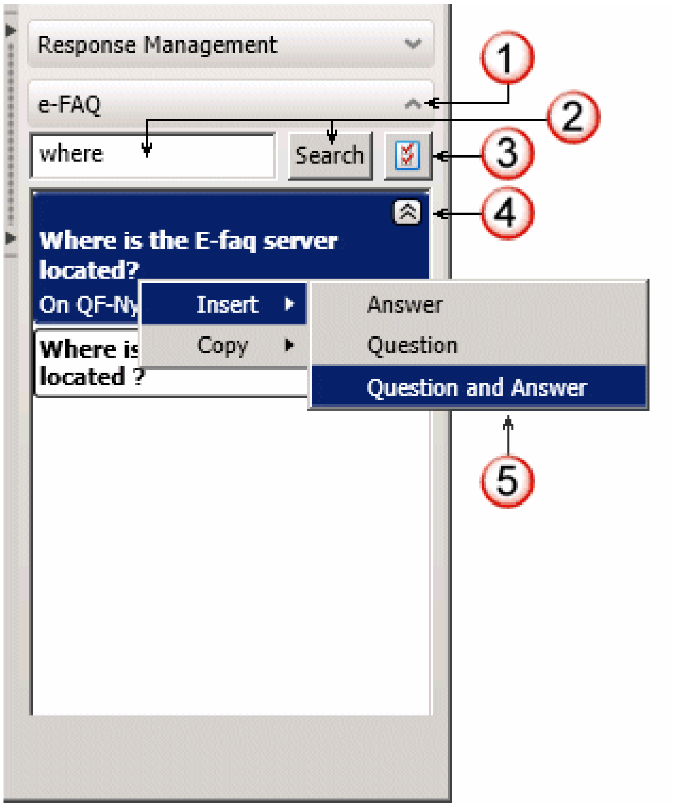
e-FAQ is a centrally managed database of Frequently Asked Questions and responses. If your company has purchased the e-FAQ knowledge management program and your agents have the appropriate user rights, they can use e-FAQ to respond to your customers' requests for information.

> **Note:**
> For more information about e-FAQ, see the *Third-Party Integration Technical Reference* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/third_party_integration_tr.pdf.

What the agent sees

The e-FAQ section appears in the sidebar area of the chat window and the E-mail window for Outgoing Messages. For more information about using e-FAQ, see one of the following:

- If you use Interaction Connect, see the *Interaction Connect Help* at https://help.genesys.com/cic/desktop/interaction_connect.htm.
- If you use Interaction Desktop, see the *Interaction Desktop Help* at https://help.genesys.com/cic/desktop/interaction_desktop_landing.htm.



1	e-FAQ section control	To expand or collapse the e-FAQ section, click the arrow on the section control.
2	Search text box and button	To start a search of the selected e-FAQ databases, enter search criteria in the text box and click **Search**.
3	Configuration button	To select the e-FAQ databases you want to search, click the **Configuration** button. **Tip:** To configure the level of restriction you want to place on your e-FAQ search results, click the **Advanced** button.
4	Search results	To display or hide the answer to a FAQ, click the arrow on a selected search result.
5	Shortcut menu	Right-click on a selected FAQ, then do one of the following: To insert the content in the selected location in the current interaction, Click **Insert** and then select **Question** or **Question and Answer**. To copy the content to the Clipboard, click **Copy** and then select **Question** or **Question and Answer**. You can then paste this information in a Windows application such as Notepad or Microsoft Word.

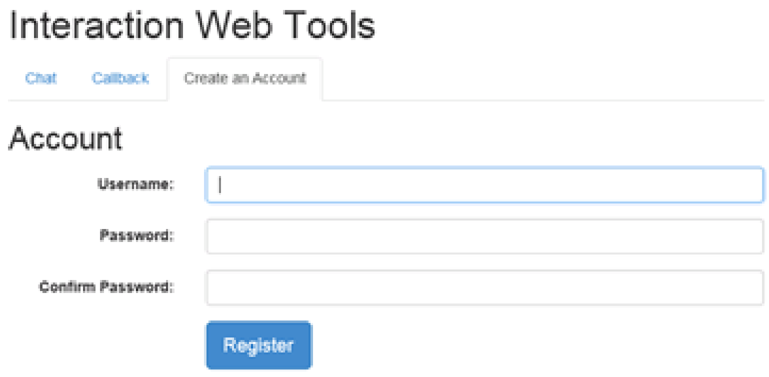
Requirements

An agent needs the View e-FAQ's Access Control right to use e-FAQ in a chat session or in an email reply.

Other Features

Registration

Registration is optional. The Interaction Web Tools default page includes a simple registration form.



Interaction Web Tools

Account

Username:

Password:

Confirm Password:

The RegistrationFormPanelFields example demonstrates how to add required and non-required fields to this form. For more information about customizing this form, see the *Interaction Web Tools Developer's Guide* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/web_tools_dg.pdf.

> **Note:**
> You can set the **MaxAnonymousInteractionsAllowed** parameter to prevent visitors who are not logged on from starting a chat or creating a callback request.

Switchover

Switchover refers to the process the web server uses to switch to a backup CIC server if the primary CIC server fails. If a switchover occurs and interaction recovery is enabled, callback requests are not lost; they remain in queue waiting for someone to pick up the interaction. Active chats continue seamlessly on the backup server. The website visitor is not aware a switchover has occurred.

> **Note:**
> By default, interaction recovery is not enabled on the CIC server. To enable interaction recovery, set the **Chat Interaction Recovery Enabled** and **Callback Interaction Recovery Enabled** server parameters to **1** in Interaction Administrator. A WebProcessor subsystem restart is required on both the primary and backup servers.

In the event of a catastrophic event in which both the primary CIC server and backup server fail, the website visitor sees a message that includes a link which starts a new chat request. This message reads: "Sorry for the inconvenience, but we have encountered a system failure that will require you to start a new chat."

> **Note:**
> If you use Switchover, set **Number of CIC servers** to 2 in the Interaction Web Tools Configuration Utility. Also, repeat the Interaction Administrator configuration process on the second server. For more information, see CIC configuration for all web server types. For information about CIC Switchover system processes and architecture, configurations, system requirements, installation, operation, and troubleshooting, see the *CIC Automated Switchover System Technical Reference* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/automated_switchover_system_tr.pdf.

Appendix A: Frequently Asked Questions (FAQ)

Following are FAQs and their answers:

- Security
- Web Servers
- Chat
- Port Numbers

Security

Following are FAQs related to web server security.

How can a web server be made secure?

This section answers questions about how CIC minimizes Internet security risks and describes how CIC creates and maintains chat sessions. Keep in mind that securing your web server independent of any CIC software can minimize most security risks. Security measures include securing passwords, implementing a firewall, and shutting down unnecessary network services on your web server. The introduction of Interaction Web Tools to your web server does not introduce any additional security risks.

None of the Interaction Web Tools code executes on the web server at run time. The Interaction Web Tools Configuration Utility does run during the installation and configuration process and reads/writes to `config.js`. However, you can edit `config.js` manually instead.

The communication between the web and CIC servers uses only socket connections; the web server does not need any access at all to the CIC server's actual files and directories.

You can use HTTPS for the connection between the visitor's browser and your web server. You can also use HTTPS for the connection between the web server and the CIC server. These choices are independent of each other.

Is SSL supported by Interaction Web Tools?

Interaction Web Tools incorporates SSL technology to provide secure communications between the web server and web browsers. SSL authentication and encryption for Interaction Web Tools components is enabled by default.

Where can I find out about security for Microsoft IIS users?

The Microsoft IIS Forum (http://forums.iis.net/) and the Microsoft TechNet website (http://technet.microsoft.com/en-us/default.aspx) contain information for improving the security of the web server and web applications.

The online release of the Microsoft Internet Information Server (MS IIS) *Installation and Planning Guide* has an excellent section on securing your web server. Consult this guide for information on how to protect your server. It details several issues discussed in this FAQ.

How exposed is CIC Internet functionality to Windows security holes?

To protect against known risks, follow these recommendations when setting up your web server.

1. Run your web server inside a DMZ firewall.

   > **Note:**
   > See the illustration in Interaction Web Tools Network Architecture. This arrangement provides a weak firewall between the visitor's browser and your web server with a strong firewall between your web server and the CIC server.

2. Do not run your web server as a member of the domain or maintain domain passwords on your web server.
3. Stop all unnecessary services and scripts on your web server.
4. Install the latest security software updates from Microsoft.

Are handler-generated webpages at risk?

One of the security aspects of web handlers is that once the HTML page is loaded into the handler, it is part of the handler. That page doesn't exist on the web server. Therefore, no one can use the literal URL to access the page. Therefore, access to pages that reside behind a logon handler occurs only if the logon is successful. The handler pushes the success page. Handlers can be set up to push all pages except the home page.

Web Servers

The following FAQs are related to web server configuration and setup.

What web servers are supported?

Supported web servers are listed on the Genesys Testlab site at http://testlab.genesys.com/ProductsPage.aspx?ProductType=14.

> **Note:**
> Interaction Web Tools is expected to run properly on many more platforms, but only the web servers listed on the Genesys Testlab site are officially supported.

Can the web server be on an ISP or does it have to be local to the CIC server?

Interaction Web Tools requires that the web server has a TCP/IP socket connection to the CIC server using the port specified in Interaction Administrator. The default ports for Interaction Web Tools on CIC are 8114(HTTP) or 3508(HTTPS).

This connection ensures that the WebProcessorBridge element sends and receives communication requests. The web server does not need to be on the same domain as the CIC server. It can also reside outside a firewall.

Since CIC requires only a TCP/IP connection, the web server could be on an ISP. Again, the web server can be at any physical [remote] location as long as the TCP/IP connection to the CIC server is present.

How do I configure Interaction Web Tools to run in a web server fault- tolerant/redundant mode?

Fault tolerance is virtually a non-issue, since the web server-side modules don't maintain any significant state information. Either the web browser or CIC maintains the State information. From the Web Tools point of view, each web hit is new and different, so it doesn't matter what web server it attaches to. CIC can receive web notifications from multiple sources.

Should the web server be in the same domain as the CIC server?

A domain is a logical grouping of computers on a network, so as long as you can have TCP/IP communications between the two there is no problem. The web server must be on a server on the network and have a TCP/IP socket connection back to the WebProcessorBridge component on the CIC server [using the right port]. The web server should run on a different MACHINE than the CIC server in a production environment.

Should the web server be inside or outside a firewall?

The only requirements are:

- Web server is registered with a name server outside computers can find.
- Port specified in Interaction Administrator is open from the web server to CIC server. This defaults to 8114 if HTTP or 3508 if HTTPS.
- Web server port (port 80 for standard HTTP, or port 443 for HTTPS) is open to machines outside the firewall.

Chat

The following contains FAQs related to chat functionality.

Does chat use an IRC or proprietary communication protocol?

Chat uses a proprietary, but documented, protocol. For more information, see the *Interaction Web Tools Developer's Guide* at https://help.genesys.com/cic/mergedProjects/wh_tr/desktop/pdfs/web_tools_dg.pdf.

From the web server perspective, what determines a visitor session?

The web server has no knowledge of visitor sessions, as it maintains no state information. `WebProcessorBridgeU.exe` maintains session information.

Why would a website visitor see agent chat messages in a different order than they were sent?

Agent chat messages typically appear in a website visitor's browser in the order in which the agent sent them. If, for any reason, one message in a sequence does not reach the website visitor's browser, the next agent message received is displayed. This action prevents a chat session from just stopping and waiting indefinitely for a message that did not arrive when there are subsequent messages that could be displayed. If the delayed message is finally received, it appears in the order in which it was received, not the order in which it was sent.

Port Numbers

What port numbers does Interaction Web Tools use?

The port numbers used by Interaction Web Tools are as follows.

- Communication between the agent's CIC client and the CIC server is through port 3952.
- Communication between the web server and the visitor's browser typically uses port 80 for HTTP or port 443 for HTTPS, but these settings are configurable by the server.
- Communication between the web server and the CIC server is configurable in Interaction Administrator. The defaults are port 3508 for HTTPS and 8114 for HTTP.

Appendix B: Upgrading from Interaction Web Services 3.0 to Interaction Web Tools 2015 R1 +

There is no migration path that preserves customizations made in 3.0. Interaction Web Tools 2015 R1+ replaces Interaction Web Services 3.0. Uninstall Interaction Web Services 3.0 and follow the installation and configuration instructions in this technical reference for Interaction Web Tools 2015 R1+.

Glossary

The following table lists the terms used throughout the *Interaction Web Tools Technical Reference*.

Term	Definition
Agent	A representative of your company who communicates with website visitors using Interaction Web Tools and a CIC client.
Binding	Binding is the process that matches string variables in a handler with substitution fields in an HTML template. You can bind string and list-of-string variables to a substitution field.
CGI (Common Gateway Interface)	CGI is a standard for external gateway programs to interface with information servers, such as web servers. A plain HTML document that the web server retrieves is static. A CGI program (or script), on the other hand, executes in real-time so that it can output dynamic information. It is the common gateway or door used by the server to interface – or communicate – with applications other than the browser. CGI scripts act as a link between a needed application and the server, while the server is responsible for receiving information from, and sending data back to, the browser.
Chat session	A web chat is a real-time typed conversation between two or more parties over the Internet. Chat sessions take place between a visitor browsing your website and a CIC agent. Intercom chats take place between CIC agents. Alerting chat sessions show up in My Interactions or in a workgroup queue like telephone calls.
CIC server	This CIC component runs handlers, and also manages and monitors all communications.
Command-line parameter	Any additional information sent with an event. The HTML initiator extracts the command-line parameter values from the event.
Custom webpage	An HTML document containing information processed within a handler.
Generate HTML tool	Sends a webpage to a person browsing your website over the web connection extracted by the HTML initiator.
Handlers	The flowchart-like programs, created and published in the Interaction Designer, that define how to manipulate communications.
HTML event initiator	The initiator is the first step in a handler. It waits for a specific type of event to occur. When that event occurs, Interaction Processor starts an instance of any handler with an initiator configured for that event. Their configuration causes HTML initiators to start Interaction Web Tools from within a webpage.
HTML template	HTML templates are HTML documents specified in a Generate HTML tool. HTML templates can contain substitution fields. Substitution fields in a template allow you to pass string values looked up in a handler into a webpage sent to a visitor browsing your website. The Windows registry stores these templates.
HTTP cookie	Information sent by a web server to a web browser and then sent back by the browser each time it accesses that server. Several handlers parse information from the cookie when a chat session starts. This information tells a CIC client chat participant about the other participant.
Interaction Web Tools	Web-based features that enable Customer Interaction Center agents to interact with visitors to your company's website, and the ability of handlers to send and receive information from webpages.
Static webpage	An HTML document that does not use a scripting language to present different content based on user or environment input.
Substitution field	This field is a placeholder within an HTML template into which you can pass string values from a handler. A substitution field starts with a `##I3` tag and ends with a `##` tag.
Visitor	A person from outside your company who visits your website and uses Interaction Web Tools to interact with your agents.
Web server	The web server is a server process that sends out webpages in response to HTTP requests from remote browsers. Interaction Web Tools enables communication between your web server and your CIC server. This communication includes sending webpages, receiving information submitted through a webpage, and implementing the Interaction Web Tools interactions.

Web HTML Plugin	When called from a webpage, the Web HTML plugin sends an HTML event that contains website visitor data to the Interaction Processor (IP) web handler. For more information, see "Capturing Visitor-entered Data from Your Web Site into Handlers" in *Interaction Web Tools Developer's Guide*.
WebProcessor	The executable program `WebProcessorU.exe` runs on the CIC server and passes information between the WebProcessorBridge and the other CIC components. This application *owns* the chats and callbacks. It creates the interactions, taking the text that party A types and sending it to party B, and so on. It makes no distinction between internal parties (CIC client users) and external parties (website visitors or other non-CIC users). It is indifferent to the technology employed by the interaction participants; it does not need to be web-based communication. In a chat between a website visitor and a CIC agent, JavaScript running in a visitor's browser sends data to the WebProcessorBridge. The WebProcessorBridge, in turn, sends it to the WebProcessor. The WebProcessor passes information to other Customer Interaction Center components which communicate with an agent's CIC client. In an intercom chat session between two or more CIC Client agents, an agent's CIC client passes information to Customer Interaction Center components. These components forward it to the WebProcessor. The WebProcessor, in turn, passes the information by means of other Customer Interaction Center components to another CIC client user.
WebProcessorBridge	The executable program `WebProcessorBridgeU.exe` runs on the CIC server and is the bridge between HTTP and the internal WebProcessor program. In a typical usage scenario, the client sends the messages to a web server in the customer's DMZ (demilitarized zone). This web server then functions as a reverse proxy to the WebProcessor process running on the CIC server which is inside the firewall. These requests can be in XML or JSON format. XML requests receive responses in XML; JSON requests receive responses in JSON. If an agent sends a file to a visitor, it is placed in a *sandbox* on the server which runs `WebProcessorBridgeU.exe`. A typical HTTP request can retrieve the file.

Change Log

The following table lists the changes to the *Interaction Web Tools Technical Reference* since its initial release.

Date	Changes
28-February-2013	• IC-76169 In "Installing and Configuring Interaction Web Tools", in the "Language settings" section, added this: Note: If you modify config.js manually, be aware that language code tags should be all lower case. For example, if you replace "en-us" with the more commonly accepted "de-CH" rather than "de-ch," the Language Code Converter compares it to "de-ch." The comparison fails and the language defaults to English. • IC-92617 Restored CGI Web Handler material withheld from 4.0 GA release of this document. This includes: ◦ The description of "CGI" in the "Terminology" section in "Introduction to Interaction Web Tools". ◦ "CGI Request/Response Feature" section in "Interaction Web Tools Network Architecture". ◦ All of "Configuring ICs Default Web Functionality". ◦ All of "Sending and Receiving Web Pages Using Handlers". ◦ The "Does the program execute a CGI for every input/response pair?" question in "Appendix A: Frequently Asked Questions (FAQ)". • IC-96155 ◦ In the "Internet Handler Tools" section, in the description for "Send To voicemail," added: Note: This feature is not supported for CIC client users with an Interaction Message Store (FBMC) mailbox. ◦ In the "Web-related Handlers" section, in the description for `System_InteractionVoicemail`, added the same note. • IC-97408 In the "Additional Features" section, revised the "Switchover" section. In the event of a switchover, callback requests are not lost. Chats continue on the backup server. • IC-97471 In "Administering Chat", added a "Chat Text Format" section under "Chat Configuration and Administration". • IC-97551 Added "Callback Status Page" section and screen capture to "Chapter 9: Administering Callback". • IC-97891 In "Installing and Configuring Interaction Web Tools", in the "Installation and Configuration" section, in the "To install Interaction Web Tools" procedure, changed "13. If using Switchover, repeat steps 10 and 11." to "13. If using Switchover, stop and restart WebProcessorBridge on the backup IC server." • IC-99931 ◦ Added "Agent Photo" section to "Administering Chat". ◦ Added Visitor Callback form example to "Administering Callback". ◦ Added index entries under "Chat", "Callback", and "Agent photo". • IC-104782 Displaying Search page images covered by the "Enabling the Web Search feature" section in "Configuring Default Web Functionality". • IC-105079 In "Support Web Servers", in the "Supported Configurations" section, changed "2003 Server" to "2008 Server" as the operating System for Apache 2.2. • IC-105351 ◦ Took the "Configuring Web Services Parameters in Interaction Administrator" section from "Configuring and Administering Chat" and made it standalone chapter as it applies to both "Chat" and "Callback". Placed it before the "Configuring and Administering Chat" and "Configuring and Administering Callback" chapters. ◦ Added `CallbackAccessControl`, `ChatAccessControl`, and `ChatAccessControl` parameters to "Other Optional Parameters" in this new standalone section.

09-May-2013	• In "Additional Features", in the "Switchover" section, added: Note: By default, interaction recovery is not enabled on the IC server. To enable interaction recovery, set the Chat Interaction Recovery Enabled and Callback Interaction Recovery Enabled server parameters to 1 in Interaction Administrator. • Added `PerformCleanRestart` parameter. • In "Installing and Configuring Interaction Web Tools", in the "Installation and Configuration" section, changed step 15 f to "f. Do one of the following:" • IC-103460 If using SSL for the connection between the web server and the IC server, select the Enable SSL OffLoading check box. If not using SSL, clear this check box. • IC-105438 In "Appendix A: Frequently Asked Questions (FAQ)", in the "Port Numbers" section, changed second bullet point to: Communication between the web server and the visitor's browser typically uses port 80 for HTTP or port 443 for HTTPS, but these settings are configurable by the server. • IC-105762 In "Installing and Configuring Interaction Web Tools", in the "Language" section, added note. Note: Interaction Web Tools supports IME for the entry of Asian characters on a Latin keyboard. Added language and IME index entries to this section. • IC-106272 In "Installing and Configuring Interaction Web Tools", in the "Installation and Configuration" section, rewrote step 7 to read: • IC-109220 In "Appendix A: Frequently-Asked Questions (FAQ)", in the "Chat" section, added a question and response: Why would a website visitor see agent chat messages in a different order than they were sent? • IC-109609 Added `AllowClientProblemReport` and `ProblemReportControlExpression` to "Other Optional Parameters" section in "Configuring Web Services Parameters". Added "Problem Reports" section to "Installing and Configuring Interaction Web Tools". • No SCR New section "Administering Chat". This was chapter 5 in the 4.0 GA version of this tech ref. In SU 2 it was chapter 7 and was titled "Configuring and Administering Chat". Created a new section "Configuring Chat and Callback" and moved the discussion of "Web Services Parameters" discussion to this new section.
10-May-2013	IC-103038 • Removed "In the current release, you use DSEdit to perform the necessary configuration for each agent." from introduction. • Removed DS edit version of "To display agent photos in the visitor's Chat window or Callback Status page" procedure, along with screen capture from DS edit. • Added new procedure.
28-May-2013	• Per developer comment, converted sections: "Required Parameters", "Optional Timeout Parameters" and "Other Options Parameters" into new section "Configuring Web Services Parameters". • Updated example in "Sending and Receiving Web Pages Using Handlers, Capturing Visitor-entered Data from Your Web Site into Handlers" section.
31-May-2013	IC-111490 • "Configuring Web Services Parameters", added "Available" column to tables in "Required Parameters", "Optional Timeout Parameters", and "Other Optional Parameters" sections. • Included only parameters available in 4.0 or later. • Researched availability, marking each 4.0 GA to present or 4.0 SU # to present.

25-June-2013	• "Introduction to Interaction Web Tools", in "Terminology" section, added "Web HTML Plugin". • "Configuring Default Web Functionality", in "Installing and Configuring Default Web Pages" section, combined the "Enabling the Web Search Feature" procedure with the "To use this optional search feature" procedure. • "Sending and Receiving Web Pages Using Handlers", in the "Capturing Visitor-entered Data from Your Web Site into Handlers" section, updated the example. • In the "Form Data" section, updated "Syntax for Form Data example". • In the "Creating Handlers that Send Information to a Webpage" section, updated the Example. • "Configuring Web Services Parameters", updated and reorganized parameters tables. Also removed deprecated `Encrypted` parameter. Added `ProblemReportControlExpression` parameter. • IC-97770 "Administering Chat", revised "Agent Photo" section. Use of custom attribute to show photo location.
01-July-2013	Added new section "Skill-based Routing via Extended Attributes".
12-July-2013	Reorganized parameter tables in "Configuring Web Services Parameters". Added new "Availability" column per customer request. Added new WP or WPB column where needed to indicate whether the Web Processor or the Web Processor Bridge uses a parameter.
08-October-2013	"Internet Tools, Initiators, and Handlers": • In the "Internet Handler Tools" table, in the "Alert Interaction" descriptions, changed "Alert Interaction notifies a station queue of a Web interaction (Chat, collaboration, etc.) available for pick up." to "Alert Interaction notifies a station queue of a Web interaction (Chat or Callback) available for pick up." • In the same table, changed the description for "Park Interaction" from "Parks a Web interaction (Chats, Callbacks, or Collaborations) on a user queue you specify." to "Parks a Web interaction (Chats or Callbacks) on a user queue you specify." • In the same table, changed the description of "Pickup Interaction", from "This tool picks up a Web interaction (e.g., Chat, Callback, or Collaboration)" to "This tool picks up a Web interaction (Chat or Callback) that is on hold." • In the "Interaction Web Tools Attributes" section, changed the descriptions of the `Eic_AssociatedClbld` and `Eic_AssociatedClbld` attributes from Collaboration Interaction to callback interactions.
22-November-2013	"Sending and Receiving Web Pages Using Handlers from IWT Tech Ref" Removed Chapter 6. This material is now in the *Interaction Web Tools Developer's Guide*.
05-February-2014	• "Installing and Configuring Interaction Web Tools": Added a "Troubleshooting Gateway Communications" section and documented the `X-FORWARD_FOR` and `Host` fields in the HTTP header information. Added a note to the "Installation and Configuration" section, before the installation procedure, that this procedure is written for a Windows and IIS environment, although other combinations are possible. • "Configuring Default Web Functionality, Install and Configure Default Web Pages": Added a note in step 2b: If you are also using HTTPS, specify port 8019 instead of 8018. And added a second example: http://ICServer:8019/WebHTMLService/ {R:1} Added step 3: If you are using HTTPS for the Interaction Web Tools search page, repeat step 15, "On the web server, open IIS Manager (in Administrative Tools)." Use https://ICServer:8019/WebHTMLService/ {R:1} to set the appropriate port number for the Inbound Rule. Added step 4: If you are using HTTPS for the Interaction Web Tools search page, use the certificate specified during the IC Install, instead of ServerGroupCertificate4.cer in the "To use SSL between the web server and the IC server, if the web server is IIS7.5" procedure. **Note:** The IC server, SessionManager and ICM server installs create this certificate. The person who installs these applications chooses the root install directory. The path to this certificate is relative to the root install directory: *<Root>*`\Certificates\HTTPS`.

	Renamed section from "Install and Configure Default Web Pages" to "Install and Configure Automatic Web Pages". • "Internet Tools, Initiators, and Handlers": Added description of `Snooze` tool to "Internet Handler Tools" table. Added description of `Snooze timed out initiator` to "Initiators" table. Added "This is not a dynamic parameter; it requires a Web Process Bridge restart." to the descriptions of `AdditionalHTTPPorts` and `AdditionalHTTPSPorts`. In the "Internet Handler Tools" table, added a description of the Receive Text Async tool: This tool receives text asynchronously from a remote Web interaction participant. The "Complete Asynch Receive Text from an Interaction" initiator processes the text. In the "Initiators" table, added a description of the Complete Asynch Receive Text from an Interaction initiator. • "Internet Tools, Initiators, and Handlers": In the "Alert Interaction" descriptions, changed "Alert Interaction notifies a station queue of a Web interaction (Chat, collaboration, etc.) available for pickup." to "Alert Interaction notifies a station queue of a Web interaction (Chat or Callback) available for pickup." In the same table, changed the description of "Pickup Interaction", from "This tool picks up a Web interaction (e.g., Chat, Callback, or Collaboration)" to "This tool picks up a Web interaction (Chat or Callback) that is on hold." In the "Interaction Web Tools Attributes" section, changed the descriptions of the `Eic_AssociatedClbld` and `Eic_AssociatedClbld` attributes from Collaboration Interaction to callback interactions. • "Configuring Web Services Parameters": Verified description of `CollaborationLaunchURL` and `Encrypted` no longer appear in any of the parameters tables. Replaced screen captures of "Interaction Administrator > Web Services > Web Services Parameters" table. New one does not show obsolete parameters. Added `MaxRequest` parameter to the "Web Chats and Callbacks" section of the "Denial of Service Parameters" table. • "Administering Callback": In the "Callback Form" section, added: Note: The visitor's Callback form Description field which becomes the Subject in the agent Callback window has a maximum size of 2,000 characters. • "Default Page and Customization Examples": Removed "LocalizationCustomization" section per developer comment.
30-July-2014	Added information about installing the IC Web Services SDK.
29-August-2014	Updated documentation to reflect changes required in the transition from version 4.0 SU# to CIC 2015 R1, such as updates to product version numbers, system requirements, installation procedures, references to Interactive Intelligence Product Information site URLs, and copyright and trademark information.
17-May-2015	Fixed the following errors: • "UseEncryption" was listed as being "false" by default, but the default is "true". • Fixed incorrect reference to location of web root location
28-July-2015	• Added instructions for enabling emailed chat transcripts. • Updated screenshots to reflect new interface. • Updated documentation with new filenames for examples and new filename for configuration utility.

03-December-2015	- Moved information in "Handlers" to *Interaction Web Tools Developer's Guide*. - Updated code examples throughout. - Changed out-of-date information. - Updated formatting.
29-December-2015	Moved "Designating which Agents Appear on the Agent Search Page" from Developer's Guide to this document.
21-June-2019	Reorganized the content only, which included combining some topics and deleting others that just had an introductory sentence such as, "In this section...".
23-September-2019	Added a Mailboxes section to the Enable Chat Transcripts topic. This explains how to configure the sender and reply to email addresses for chat transcripts.
24-September-2019	Added Note to Idle/Timeout Parameters topic explaining that some parameters can be overridden by custom attributes for the Settings: SMS Web Services parameter.
06-November-2019	Fixed formatting of sample code for Skill-based routing.
17-April-2020	Updated to reflect supported versions of Microsoft IIS.
29-May-2020	Clarified that Apache configuration instructions apply to default installation of Apache on Microsoft Windows.
26-June-2020	- Specified text to type when editing the rule that directs traffic to the HTTPS port (3508) while configuring IIS. - Added instructions for setting idle timeout and disconnect parameters for individual workgroups. - Added instructions on how to enable Application Request Routing proxy in IIS.
22-July-2020	Updated the description of AgentConnectMsg in the Web Processor Parameters topic.
23-July-2020	Added note that PureConnect widgets use some of the same Web Services Parameters as IWT chats. Referred to Interaction Connect Widgets and Web Services parameters topic. Updated Interaction Web Tools Network Architecture diagram in the new style.
28-July-2020	Fixed typo; added video instructions for enabling a proxy in IIS.
08-October-2020	Updated diagram in Interaction Web Tools Architecture.