Software Development Kit (SDK)
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Quick Start Guide for Polycom UC Software Software Development Kit

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About This Guide

This partner solution guide uses a number of conventions that help you understand information and perform tasks.

Conventions Used in this Guide

This user guide contains terms, graphical elements, and a few typographic conventions. Familiarizing yourself with these terms, elements, and conventions will help you perform phone tasks.

Typographic Conventions

A few typographic conventions, listed next, are used in this guide to distinguish types of in-text information.

<table>
<thead>
<tr>
<th>Typographic Conventions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bold</strong></td>
<td>Highlights interface items such as menus, soft keys, file names, and directories. Also used to represent menu selections and text entry to the phone.</td>
</tr>
<tr>
<td><strong>Italics</strong></td>
<td>Used to emphasize text, to show example values or inputs, and to show titles of reference documents available from the Polycom Support Web site and other reference sites.</td>
</tr>
<tr>
<td><strong>Blue Text</strong></td>
<td>Used for cross references to other sections within this document. If you click on text in this style, you will be taken to another part of this document.</td>
</tr>
<tr>
<td>Fixed-width-font</td>
<td>Used for code fragments and parameter names.</td>
</tr>
</tbody>
</table>
What’s in This Guide?

This partner solution guide is organized into 8 chapters. The first chapter, Getting Started, introduces Polycom and X Unified Communication solutions. The chapters following show you how to configure and deploy specific Polycom products and systems. The final chapters show you where to get help and outline known issues and workarounds.

**Chapter 1: Getting Started**  The first chapter gives you a quick overview of knowledge, hardware, and software you require before you begin and provides frequently asked questions (FAQs) and resources for further help.

**Chapter 2: Installing the Software Development Kit (SDK)**  This chapter explains what you need to begin installing the SDK and shows you how to install the SDK.

**Chapter 3: Launching the Simulator Phones**  This chapter shows you how to launch the SDK simulator phones and describes basic functionality of the simulator phones.

**Chapter 4: Setting Up the Development Environment**  You can set up a development environment using the Polycom Web Configuration Utility, a Web-based configuration tool. This chapter shows you how to use the Web Configuration Utility to set up your Application Programming Interface (API) tools, including a home page for the idle browser and interactive main browser of the simulator phone. This chapter also shows you how to configure several features.

**Chapter 5: Using the XML API Web Testing Tool**  Once you have set up the development environment for Application Programming Interface (API) tools in the Web Configuration Utility, you can use the XML Web Testing Tool to test the XML API feature capabilities. This chapter outlines several key API tools that are fundamental to your application.

**Chapter 6: Getting Help**  In this chapter, you will find links to support documents and websites from Polycom, Polycom partners, and others. You will also find links to the Polycom Community, which contains a number of discussion forums you can use to share your ideas with colleagues.

**Chapter 7: Troubleshooting**  This chapter lists known issues with the solution and workarounds if available.

**Chapter 8: References**  This chapter lists further information mentioned in this guide that will help you use the SDK.
1: Get Started

The Polycom Software Development Kit enables you to test and run the XML API and XHTML applications on the main interactive browser and idle browser of Polycom simulator phones. The main and idle browsers on the simulator phones have the same functionality as on actual Polycom phones.

Polycom provides the following phones as simulator phones available with the SDK:

- Polycom® VVX® 1500, 600, 500, 400 and 300

The first chapter gives you a quick overview of knowledge, hardware, and software you require before you begin and provides frequently asked questions (FAQs) and resources for further help.

Before You Begin

Note that you will need to fulfill the following before you begin using the SDK:

- By default, Polycom SDK is set to install under Windows® Program Files. If you do not have system administrative privileges, then specify a different installation folder path while installing the SDK.

- Ensure that port 80 on your computer is free to use. The Web Configuration Utility you use to provision the simulator phones can use only port 80. Many publicly available applications, for example Skype, also use port 80 and you may need to disable the applications running on your computer that use port 80. See the References section for more details on making port 80 available to the SDK.

- If you have already installed an older version of Polycom SDK, uninstall it before proceeding with the installation of new one.

- By default, Polycom phones come with the Generic profile enabled. If you want the phones to operate with Microsoft Lync, change the Base Profile to Lync by going to Settings > Advanced > Enter the default ‘456’ as password > Administration Settings > Network Configuration > Base Profile.

- With Lync as Base Profile, web UI cannot be accessed and you can change this setting by going to Settings > Advanced > Enter the default ‘456’ as password > Administration Settings > Web Server Configuration.

- By default, the web UI for Polycom’s phones can be accessed using https protocol which is more secure than http. To access the Web UI of phone simulator over http, you can change it by going to Settings > Advanced > Enter the default ‘456’ as password > Administration Settings > Web Server Configuration.

Frequently Asked Questions

Refer to the frequently asked questions (FAQs) to help answer the questions you may have about the solution before you begin.

Q: How do I configure my simulator phone?
A: Polycom makes available several ways to configure Polycom phones and simulator phones:
Centralized provisioning requires you to set up a centralized provisioning boot server. Configurations you make from the central server apply to all phones. Polycom recommends this method when using multiple phones.

Web Configuration Utility Polycom provides a web interface which you can use to configure Polycom phones and simulator phones. The Web Configuration Utility enables you to configure single phone. Polycom recommends this method when configuring the SDK simulator phones.

The phone’s user interface Many phone features are available using the interface and menu system of a phone or simulator phone.

For details on each of these provisioning methods, refer to Configuration Methods in the Polycom UC Software 5.3.0 Administrator Guide.

Required Hardware

To operate the SDK correctly, the following minimum specifications are required:

- 2GHz CPU
- 512 MB RAM
- 500 MB of free disk space

Software Requirements

All software packages that you require to run and operate the SDK are included in this package.

Note: Turn Off the User Access Control

If you are using Microsoft Windows Vista, you will need to turn off the User Access Control (UAC) feature.

Supported Platforms

SDK is compatible with the following operating system platforms:

- Windows XP Professional with SP3
- Windows Vista with SP2
- Windows 7

Get Help and Support Resources

This quick start guide includes a Getting Help section where you can find links to Polycom product and support sites and partner sites. You can also find information about The Polycom Community, which provides access to discussion forums where you can discuss hardware, software, and partner solution.
topics with your colleagues. To register with the Polycom Community, you will need to create a Polycom online account.

The Polycom Community includes access to Polycom support personnel, as well as user-generated hardware, software, and partner solutions topics. You can view top blog posts and participate in threads on any number of recent topics.
2: Install the Software Development Kit

The Polycom Software Development Kit (SDK) enables you to test and run XML API and XHTML applications on the Polycom VVX Simulator phones. The simulator phones enable you to develop and test Web applications on the main interactive browser and idle browser that are available on actual Polycom phones. These simulator interfaces have the same functionality as your Polycom phones and will be referred to throughout this document as simulator phones. After describing SDK compatibility requirements, this chapter shows you how to download and install SDK on your computer and provision the simulator phone interface.

Web Info: Web Application Developer’s Kit
A Web Application Developers Guide is also available to help developers to create and run applications.

What’s Included?
The following components are included with the SDK download and will be installed on your computer:

- VVX 1500 simulator phone
- VVX 600 simulator phone
- VVX 500 simulator phone
- VVX 400 simulator phone
- VVX 300 simulator phone
- XML API Web Testing Tool

In addition, the following software packages are bundled with the SDK:

- **JRE1.6.0_14**  Runtime environment for XML API Web Testing tools
- **Apache Tomcat 6.0.14**  An Apache Web server used to deploy and run the XML API Web Testing Tool application.

Features and Limitations
Each simulator phone supports a majority of functions available on the Polycom VVX phones but is designed to be used primarily for Web applications development. In particular, the simulator phones enable you to develop and test Web applications on the main interactive browser and idle browser that are available on the actual Polycom phones. The following is a known exclusion:

- The simulator phones do not support audio and video
Install the SDK

This section shows you how to download and install the SDK package on your computer.

To install the SDK:

1. Go to the Web Applications Software Development Toolkit (SDK) registration page, fill in the fields and click Submit.
   The SDK software download link displays, as shown next.

![SDK Download Link](image)

2. Click on the link and save the SDK executable file to your computer. The file will be saved in ZIP file format.

3. Go to the ZIP folder and extract (un-compress) the application file to a separate location on your PC.
   A Polycom SDK Installer .exe file icon will display.

4. Double-click on the SDK Installer .exe icon and follow the install instructions in the dialogs. The .exe file installs the SDK and any other dependency programs that are needed to run the simulator phones.

After you have installed SDK to your computer, you can configure the simulator phones.
You can use the Polycom VVX simulator phones on a compatible Windows platform. The simulator phones enable you to run and test a number of XML API and XHTTP applications. The application uses an on-board WebKit browser (Apple WebKit 532.4) to render HTML pages and simulate the two browsers available on the actual phones: an interactive main browser and an idle browser.

You can use the simulator phone with SIP signaling to establish calls, test push features, call functionality, and retrieve phone state polling information. The following figure illustrates how the simulator phones handle data flow using internet and SIP signaling.

**Figure 1: Internet and SIP Signaling on the Simulator Phones**

This section shows you how to launch and stop the VVX 500 simulator phone.

**To launch the simulator phone:**

1. On your computer, go to **Start > Programs > Polycom > SDK > Start Simulator.**
The *Profile Options* window, shown next, is displayed.
2 Choose the phone simulator you want to start and click on **Load** button. The selected simulator phone interface displays.

3 Click the **Home** icon to display the main menu screen on the simulator phone.
Use your mouse to point and click on icons and navigate through the menu system.

- To return to the main menu interface at any time, press **Menu**.
- To close the simulator at any time, click **Close**.
4: Set Up the Development Environment

This chapter shows you how to use the Web Configuration Utility to set up a home page for the idle browser and the interactive main browser of the simulator phone. This chapter also shows you how to configure the Push, Phone State Polling, and Telephony Event Notification features.

Configure the Main and Idle Browsers

You can use the Web Configuration Utility to configure a home page for a main browser and an idle browser of a simulator phone.

To configure a home page for simulator phone:

1. From your computer’s Start menu, launch the simulator phone.

2. Open the Web Configuration Utility by entering the default IP address https://127.0.0.1, or the URL https://localhost/, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.

   The browser loads the Web Configuration Utility for the simulator phone you launched, as below.

3. Choose to log in as Admin, enter the password (default 456), and press Submit.

   The Web Configuration Utility Home page displays.
4 In the main menu bar, choose **Settings > Microbrowser**.
The **Microbrowser** page displays, shown next.

![Microbrowser page](image)

5 Set the following fields:

- In **Main Browser Home**, enter the URL of the home page you want the main browser to display. The URL must use the following format: `http://www.examplewebpage.com`.
- In **Idle Display Home**, enter the URL of the home page you want the idle display browser to display. The URL must use the following format: `http://www.examplewebpage.com`.
- In **Idle Display Refresh Period**, enter the time interval—in seconds—that you want the idle display content to refresh.

6 Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read No configuration updates. You have successfully configured a home page for the main and idle browsers.

### Configure Application Features

The Web Configuration Utility enables you to configure the Push, Phone State Polling, and Telephony Event Notification features.

**To configure application features on a simulator phone:**

1 Open the Web Configuration Utility for the simulator phone by entering the IP address of the server provisioning the simulator phone (https://<IP_ADDRESS>) or enter `https://127.0.0.1` in the address bar of your Web browser.

2 In **Enter Login Information**, login as **Admin**, enter the password (default 456), and press **Submit**. The Web Configuration Utility **Home** page displays.
3 In the main menu bar, choose **Settings >Applications**. The **Applications** page displays, shown next.

The next sections show you how to configure the telephony event notification, phone state polling, and push features using the Web Configuration Utility.

**Understand Telephony Event Notifications**

This feature enables you to generate a notification in XML format of several telephony events. You can choose which telephony events to report on and event information will be sent automatically to one or more notification URLs that you specify in the Web Configuration Utility. In the Web Configuration Utility, navigate to **Settings > Applications** and under **Telephony Event Notifications**, choose the telephony events you want a notification for. The following list describes each of the available telephony events:

- **Configured Telephony Notification URL**  
  You can specify up to 10 notification URLs. Click the Add or Remove button to add or remove URLs. Specify the root URL using the following format: `http://<server_IP_address>:<port>/xmlapi/EventReceiver`.

- **Line Registration**  
  Check to receive SIP line registration events

- **Incoming Call**  
  Check to receive incoming call events

- **Outgoing Call**  
  Check to receive outgoing call events
- **Onhook** Check to receive onhook events
- **Offhook** Check to receive offhook events
- **User Login and Logout** Check to receive user login/logout events
- **Call State Change** Check to receive all call state change events

Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read **No configuration updates**.

### Understand Phone State Polling

This feature enables you to retrieve the phone’s call state information, device information, and network configuration. Information you retrieve will be sent to the polling URL you specify. The following list describes each of the available Phone State Polling fields:

- **Response Mode** Specify if you want a poll response to go to the requestor of the Poll or the Poll URL you configure.
- **Poll URL** Specify the root Web server path of the polling application using the following format: https://<server_IP_address>:<port>/xmlapi/Poller
- **User Name** Enter the poll request authentication user name
- **Password** Enter the poll request authentication password

Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read **No configuration updates**.

### Understand Push Messages

This feature enables developers to push a URL or data to the main browser of the simulator phone. There are two types of Push messages available: a URL push that sends the relative URL to the phone, and a data push that sends the content directly. You can configure the following fields to send Push messages to the simulator phone:

- **Allow Push Messages** Choose from four Push message priorities available in the drop-down menu: All, Critical, High, Important, Normal, and None. Select All to allow Critical and Normal push messages.
- **Application Server Root URL** If you want to push a URL, you will need to specify the root Web server path of the application content files using the following format: http://<server_IP_address>:<port>/xmlapi. You do not need to specify a URL to send push data; you can send push data directly.
- **User Name** Enter the Push request authentication user name
- **Password** Enter the Push request authentication password

Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read **No configuration updates**.
5: Use the XML API Web Testing Tool

Once you have set up the development environment for the Application Programming Interface (API) tools in the Web Configuration Utility, you can use the XML Web Testing Tool to test the XML API feature capabilities. This chapter outlines several key API tools that are fundamental to your application.

To begin using the XML API Web Testing Tool, you will need to set up the URLs in the Web Configuration Utility for the simulator phone as shown in Launch the Simulator Phones. If you want to set up a home page for the idle and interactive or the Push, Phone State Polling, and Telephony Event Notification features, see Set Up the Development Environment.

Web Info: Web Application Developer’s Guide
You can find detailed descriptions and syntax, and additional API functions in the Web Application Developer’s Guide.

The XML API Web Testing Tool has a built-in Apache Web server and a Web application which you can use to test the following XML API features on the Polycom simulator phones:

- **URL Push**  The URL push enables an application to push a URL to a phone and display a Web page.
- **Data Push**  A data push sends data content, for example Web page content, directly to a phone without having to fetch the content.
- **Internal URIs** Uniform Resource Identifiers (URIs) provide the interface to execute actions, similar to manual key presses, on the phone. For example, you create a soft key that performs a specific action.
- **Phone State Polling**  The phone can send line, device, and network information to a specific URI or to the requester upon receipt of an HTTP request.
- **Telephony Notifications**  Applications can detect a number of events that occur on a phone such as an incoming call, a sign in, or the phone state, and the phone can post these events as data to a Web server.

The Web Testing Tool contains example files you can use to test the URL push feature. You can push the example files or host your own files. When you push a file, the simulator phone appends the pushed URL to the server root URL you entered in the Web Configuration Utility and downloads the URL from the server to display the content. You can also use this tool to send data push message directly to the simulator to display the content instead of fetching the data. You can also register for telephony notification events and phone’s polling event.
The following figure shows the XML API Web Testing Tool Flow.

Figure 2: XML API Web Testing Tool Flow

Launch the XML API Web Testing Tool

This section shows you how to start and stop the XML API Web Testing Tool.

To start the XML API Web Testing Tool:

1. From your PC’s Start menu, go to Programs > Polycom > SDK > XML API Web Testing Tool > Start.

   A command window displays, shown next.

   Minimize the command window (do not close it).

2. From your PC’s Start menu, go to Programs > Polycom > SDK > XML API Web Testing Tool > Client.
The Web testing tool page displays, shown next.

You can now use the Web Testing Tool.

To stop the Web Testing Tool:

- From your PC Start menu, go to Programs > Polycom > SDK > XML API Web Testing Tool > Stop. Note that closing the Web browser window will not close the Web Testing Tool.

Create Files on the Server

In order to be able to use URL PUSH to the simulator phones, you need to create the files on the server.

This section shows how you to create files on the server.

There are two types of files you can create on the server, HTML files and URI files.

To create an HTML file on the server:

1. Start the XML API Web Testing Tool client.
2 In the navigation bar at the top of the home page of the Web Testing Tool, click **My Test Files** to display a form you can use to create files, as shown next.

3 Select the File Type HTML

4 Enter the HTML file content into the text field.

5 In the Save File To field, enter a file name. Do not add an extension to the file name. When you create the file, .html file extension is automatically added to the file.

6 Click on **Save** button to save the content to the file.

**To create a Polycom URI file on the server:**

1 Start the XML API Web Testing Tool client.
2 In the navigation bar at the top of the home page of the Web Testing Tool, click My Test Files to display a form, you can use to create files, as shown next.

3 Select the File Type URI.

4 Select the URI actions that you want to execute and add them to the right-side list by clicking the right-pointing arrow.

You can rearrange the sequence you want the actions to be performed in actions sequence by selecting a URI in the right-side list and clicking on the up or down arrow icons. You can also delete a URI from the right-side list by selecting the URI and clicking the red X.

5 In the Save File To field, enter a file name. Do not add an extension to the file name. When you create a URI file, a .plcm file extension is automatically added to the file.

6 Click on Save button to save the content to the file.

Remove Files from the Server

This section shows you how to remove files from the server.

To remove a file from the server:

1 Start the XML API Web Testing Tool client.
2 In the navigation bar at the top of the home page of the Web Testing Tool, click My Test Files to display a form you can use to create files, as shown next.

3 Click on the MY Files drop-down menu to display a list of files you have created and choose a file from the list that you want to remove from the server.

4 Click the red X icon to remove the file.

Use the XML API Features

This section explains how each of the following XML API features work, and provides an example.

- URL Push
- Data Push
- Internal URIs
- Phone State Polling
- Notification Events
- Call Line Information
- Device Information
- Network Configuration
- Telephony Notifications

Note that the simulator phone browsers can display the following three types of content:

- `application/xhtml+xml` Displays content on the phone’s main browser
- `text/html` Displays content on the phone’s main browser
- `application/x-com-polycom-spipx` Executes the specified URI actions on the phone

URL Push

The Push URI function enables you to send a Push URL message to a target phone simulator. You can use the Push URL mechanism to create an application-generated message, alarm, or alert that the customer Web server will send as a URL address to the main browser of the simulator phone.

The Push URL function supports the following two types of content URLs:

- **XHTML content URL** This type of content is displayed on the browser. If you do not have the browser open, this content will automatically open the browser and display on the simulator phone.
URI actions content URL  The URI actions specified in the file are executed on the simulator phone.

The following illustration shows the XML API Push URL message flow.

**Figure 3: XML API Message Flow**

![XML API Message Flow Diagram](image)

**Example: Push an HTML Page**

The following example shows contact directory entries with linked phone numbers.

Create and save your HTML page. The following example shows linked phone numbers in a corporate directory.

**Code Snippet 1: HTML Page with Linked Phone Numbers**

```html
<html>
<body>
Corporate Directory<br/>
<Table>
<tr>
<td>Anil</td>
<td><a href="tel://9885202315">9885202315</a></td>
</tr>
<tr>
<td>Shekhar</td>
</tr>
</Table>
</body>
</html>
```
To push this HTML content to the simulator phone, you will need to enter the application root URL path of the Push feature in the Web Configuration Utility and the relative URL path to your HTML page in the Web Testing Tool. The relative URL path you enter to the Web Testing Tool will append to the root URL to create a final URL.

**To enter the root URL in the Web Configuration Utility:**

1. Open the Web Configuration Utility by entering the default IP address https://127.0.0.1, or the URL https://localhost/, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.

2. Login as an Administrator, enter the password (default 456), and press **Submit**.

3. Navigate to **Settings > Applications**.

4. Expand **Push** and enter the following values:
   - **Allow Push Messages**  All
   - **Application Server Root URL**  http://127.0.0.1:8080/xmlapi/examples
   - **User Name**  Polycom
   - **Password**  456

5. Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read **No configuration updates**.

Next, push your HTML page to the simulator phone by entering the following information in the Web Testing tool.

**To push a HTML page to the browser:**

1. Start the XML API Web Testing Tool client.
2 Click the **Push** link in the navigation bar to display the *Push* form, as shown next.

![XML API Web Testing Tool](image)

3 Specify the following fields:
   - **Phone IP Address** 127.0.0.1
   - **Username** Polycom
   - **Password** 456
   - **Priority** Critical (Critical priority indicates that the HTML content will display immediately on the phone.)
   - **Push Type** URL
   - **Select File** Select a file from the list, for example, HTML_INTERNAL_URI. For more information on adding files, refer to the section *Create Files on the Server*.

4 Press **Send** icon when you are finished.
The push message is sent to the target phone, and the content specified in your HTML file will be displayed in the main browser, as shown in the following example.

![Key URI execution](image)

### Data Push

This feature enables you to push a small amount of HTML data directly from the XML Web Testing Tool to the main browser on the target simulator phone. You can push a maximum of 1 Kb of data. This feature does not allow you to specify URI actions in the message, but you can specify URI actions as anchors. The Data Push tool can be useful for broadcasting messages to a large group of users.
The following illustration shows the Data Push message flow.

Figure 4: Data Push Message Flow

Example: Data Push Content

The following example shows you how to push data content to the simulator phone. Before you can push HTML data to the simulator, set up data push in the Web Configuration Utility.

To set up data push in the Web Configuration Utility:

1. Open the Web Configuration Utility by entering the default IP address `https://127.0.0.1`, or the URL `https://localhost`, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.

2. Login as an Administrator, enter the password (default 456), and press `Submit`.

3. Navigate to `Settings > Applications`.

4. Expand `Push` and enter the following values:
   - Allow Push Messages:
   - Application Server Root URL: `http://127.0.0.1:8080/xmlapi/examples`
   - User Name: Polycom
   - Password: 456

5. Click `Save` to save your configuration and in the confirmation dialog, click `Yes`. Note that if no changes to the existing configuration were made, the dialog will read `No configuration updates.`
Next, push your HTML page directly to the simulator phone by entering the following information in the Web Testing tool.

**To push HTML data to the simulator phone:**

1. Start the XML API Web Testing Tool client.
2. Click the **Push** link in the navigation bar to display the *Enter Push Information* window.
3. Select the Push Type as **Data** to display the HTML Data Push form, as shown next.

![XML API Web Testing Tool](image)

Specify the following fields:

- **Phone IP Address** 127.0.0.1
- **Username** Polycom
- **Password** 456
- **Priority** Critical. Critical priority indicates that the HTML content displays immediately on the phone.
- **Push Type** Data
- **Push Data** HTML
- **Enter Push Information** Enter the HTML content that you want to display on the simulator phone’s interactive browser.
- **Select File** Select the file from the list, for example HTML_Tel_URI. The content of the selected file will be displayed in the text area where you can modify the content further before sending

4. Click **Send** when you are finished.
The content you specified in the Push form is sent to the target simulator phone and displayed in the browser, as in the following example.

![Corporate Directory]

**Internal URIs**

An Internal URI is an execution event, similar to a manual key press that you can use to execute specific action on the simulator phone. Once the simulator phone receives an Internal URI, the phone will execute them in an orderly sequence they are received. You'll need to define the URIs in a sequence by separating each URI with a line feed (Press Shift+Enter on your keyboard). You should also ensure that you serve the file with content type `application/x-com-polycom-spipx` in the header of the HTTP request. You can send this file to the phone using a URL push message.

**Note: Audio and Video URIs Not Supported**

Note that simulator phones do not support audio and video URIs such as .wav files.

**Example: Send a URI Page that Reboots the Simulator**

The following example shows you how to create a URI page that reboots the simulator phone. To push this HTML content to the simulator phone, enter the root URL path in the Web Configuration Utility and the relative URL path in the Web Testing Tool. The relative URL path you enter to the Web Testing Tool will append to the application sever root URL.

**To set up the root URL in the Web Configuration Utility:**

1. Open the Web Configuration Utility by entering the default IP address `https://127.0.0.1`, or the URL `https://localhost/`, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.
2. Login as an Administrator, enter the password (default 456), and press Submit.
3 Navigate to **Settings > Applications**.

4 Expand **Push** and enter the following values:

   - **Allow Push Messages**: Both
   - **Application Server Root URL**: http://127.0.0.1:8080/xmlapi/examples
   - **User Name**: Polycom
   - **Password**: 456

5 Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read **No configuration updates**.

Next, push your internal URI to the simulator phone by entering the following information in the Web Testing tool.

**To push a URI to the simulator phone:**

1 Start the XML API Web Testing Tool client.

2 Click the **Push** link in the navigation bar to display the **Enter Push Information** dialog.

3 Select **Data** as the **Push Type** and select **URI** as the **Push Data** type to display the URI Data Push form.

Specify the following fields:

- **Phone IP Address**: 127.0.0.1
- **Username**: Polycom
- **Password**: 456
Quick Start Guide for Polycom UC Software Development Kit

- **Priority** Critical (Critical priority indicates that the HTML content will displayed immediately on the phone.)
- **Push Type** Data
- **Push Data** URI

  Select a file from the list, for example Internal_URI_Reboot to reboot the phone. The contents of the selected file will be displayed in the text area and can be pushed to the phone.

4. Press **Send** when you are finished.

After the push message is successfully sent to the target phone, the URIs specified in the file will be executed in sequence to reboot the simulator phone.

### Phone State Polling

Phone state polling enables you to fetch the following phone configuration and call state information:

- Call Processing State
- Device Information
- Network Configuration

When the device receives any of these polling requests, it prepares the information in XML format, and sends it to the configured polling URL.
The following illustration shows the XML API polling message flow.

**Figure 5: XML API Polling Message Flow**

---

**Notification Events**

Notification events can be any one of the following three event types:

- Telephony Events (incoming/outgoing call, on/off hook, line registration)
- Network Events
- User Login/Logout Events

The phone can initiate notifications based on a state change in the phone such as a network connection event or a bar code scan. You can use this mechanism to integrate endpoint events into host application intelligence.

When a Notification Event is triggered by the phone, it prepares the information in XML format, and sends it to the configured telephony notification URL.
The following illustration shows the XML API Post Notification Event flow.

**Figure 6: XML API Post Notification Event Flow**

The following illustration shows the XML API Post Notification Event flow.

**Call Line Information**

Call Line Information state polling enables you to view current call and line state information available on the phone.

You can retrieve the following call and line information:

- Line Key Number
- Line Directory Number
- Line State:

The following information is for each call on a line:

- Call State
- Call Type
- Calling Party Name
- Calling Party Number
- Called Party Name
- Called Party Number
- Call Reference
• Call Duration

Example: Retrieve Call Processing State Information

The following example shows you how to retrieve call state information. To push this HTML content to the simulator phone, enter the root URL path in the Web Configuration Utility and the relative URL path in the Web Testing Tool. The relative URL path you enter to the Web Testing Tool will append to the application server root URL.

To enter the root URL in the Web Configuration Utility:

1. Open the Web Configuration Utility by entering the default IP address https://127.0.0.1, or the URL https://localhost/, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.
2. Login as an Administrator, enter the password (default 456), and press Submit.
3. Navigate to Settings > Applications.
4. Expand the Phone State Polling menu.
5. Select Response mode as Requester
7. Enter user name and password as Polycom and 456 respectively.
8. Click Save to save your configuration and in the confirmation dialog, click Yes. Note that if no changes to the existing configuration were made, the dialog will read No configuration updates.

Next, push your HTML page to the simulator phone by entering the following information in the Web Testing tool.

To retrieve call state information:

1. Start the XML API Web Testing Tool client.
2. Click State Polling in the navigation bar to open up the State Polling Information page.
3. Click Call Processing State to display the Enter State Polling Information window.
4. Specify the following details:
   Phone IP Address 127.0.0.1
   User Name Polycom
   Password 456
5. Press Fetch to fetch the polling information.
The call processing state information displays in a table.

![XML API Web Testing Tool](image)

**Device Information**

Device Information state polling enables you to view device information. You can view the following information about a device:

- MAC Address
- Phone DN (registered directory numbers)
- Application Load ID
- Model Number
- Time Stamp

**Example: View Device Information**

The following example shows you how to view the device information. To view the device information, you will need to enter the root URL path in the Web Configuration Utility and the relative URL path in the Web Testing Tool. The relative URL path you enter to the Web Testing Tool will append to the application server root URL.

**To enter the root URL in the Web Configuration Utility:**

1. Open the Web Configuration Utility by entering the default IP address `https://127.0.0.1`, or the URL `https://localhost/`, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.
2. Login as an Administrator, enter the password (default 456), and press **Submit**.
3. Navigate to **Settings > Applications**.
4. Expand **Phone State Polling** and enter the following values:
   - **Response Mode**: Requester
To retrieve device information:

1. Start the XML API Web Testing Tool client.
2. Click **State Polling** in the navigation bar to open the **State Polling Information** page.
3. Click **Device Information** in the Web Testing Tool.
4. Enter the following details:
   - **IP address**: 127.0.0.1
   - **User Name**: Polycom
   - **Password**: 456
5. Click **Fetch**.

The device information displays, as shown next.

### Network Configuration

Network Configuration state polling enables you to view the phone network configuration information.

You can view the following network information:

- DHCP Enabled/Disable
- DHCP Server
- MAC Address
- DNS Suffix
- IP Address
- Subnet Mask
- Provisioning Server
- Default Router
- DNS Server1
- DNS Server2
- VLAN ID

**Example: View the Network Configuration Information**

The following example shows you how to view network configuration information. To view network configuration information, you will need to enter the root URL path in the Web Configuration Utility and the relative URL path in the Web Testing Tool. The relative URL path you enter to the Web Testing Tool will append to the application sever root URL.

**To enter the root URL in the Web Configuration Utility:**

1. Open the Web Configuration Utility by entering the default IP address `https://127.0.0.1`, or the URL `https://localhost/`, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.

2. Login as an Administrator, enter the password (default 456), and press **Submit**.

3. Navigate to **Settings > Applications**.

4. Expand **Phone State Polling** and enter the following values:
   - **Response Mode** Requester
   - **Poll URL** `https://127.0.0.1:8080/xmlapi/Poller`
   - **Username** Polycom
   - **Password** 456

5. Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read **No configuration updates**.

Next, enter the following information in the Web Testing Tool.

**To view network configuration information:**

1. Start the XML API Web Testing Tool client.

2. Click **State Polling** in the navigation bar to open the State Polling Information page.

3. Click Network Configuration in the Web Testing Tool.

4. Enter the following details:
   - **IP address** 127.0.0.1
   - **Username** Polycom
Password 456

5 Click Fetch to fetch Network information.

The network information displays, shown next.

![Network Information](image)

**Telephony Notifications**

You can get the Web Testing Tool to display the following telephony notification events, triggered when any call activity takes place on the simulator phone:

- Offhook Event
- Onhook Event
- Incoming Call Event
- Outgoing Call Event

You can send these notifications to the telephony notification URL and display them in XML format.

**Example: Display Telephony Notification Information**

The following example shows you how to display telephony notification information. To display telephony notification information, you will need to enter the root URL path in the Web Configuration Utility and the relative URL path in the Web Testing Tool. The relative URL path you enter to the Web Testing Tool will append to the application server root URL.

**To enter the root URL in the Web Configuration Utility:**

1. Open the Web Configuration Utility by entering the default IP address https://127.0.0.1, or the URL https://localhost/, or using the IP address of the computer you are running the simulator phone on. Enter one of these in the address bar of a Web browser.

2. Login as an Administrator, enter the password (default 456), and press Submit.

3. Navigate to Settings > Applications.
4. Expand **Telephony Event Notification** and enter **Telephony notification URL** as 
 http://127.0.0.1:8080/xmlapi/EventReceiver.

5. Select the notifications that you want to send to the server.

6. Click **Save** to save your configuration and in the confirmation dialog, click **Yes**. Note that if no changes to the existing configuration were made, the dialog will read **No configuration updates**.

Next, perform an event on your simulator phone and press the “Refresh” button on Web Testing Tool.

**To display telephony notification information:**

» Press the **New Call** soft key on the simulator phone to generate an offhook event and press **End Call** to generate an onhook event. These events will be displayed on your web testing tool as shown below.
6: Get Help

This section provides a list of Polycom documents referred to in this guide as well as partner resources you can use.

Polycom and Partner Resources

For more information about installing, configuring, and administering Polycom products, refer to Documents and Downloads at Polycom Support.

The Polycom Community

The Polycom Community gives you access to the latest developer and support information. Participate in discussion forums to share ideas and solve problems with your colleagues. To register with the Polycom Community, simply create a Polycom online account. When logged in, you can access Polycom support personnel and participate in developer and support forums to find the latest information on hardware, software, and partner solutions topics.
7: Troubleshooting

Use the following list as a guide to resolve issues, problems, or common difficulties you may encounter while proceeding through this quick start guide.

I cannot access the Web Configuration Utility for my simulator phone.

- Several publicly available applications like Skype use port 80 for incoming connections and you may need to disable them, as shown next.

To disable Skype:

1. Open Skype and select the Tools Menu.
2. Select Options > Advanced Settings > Connection.
3. Uncheck the option Use port 80 and 443 for alternatives.
4. Restart Skype.
8: References

This section provides further details and information you may need as you proceed through this quick start guide.

Understand the Template Files

The following table lists the template files attached to this quick user guide and explain the contents of each template file. You can use these template files as they are displayed, or modify them for your own use.

Table 1: Contents of the HTML Template Files

<table>
<thead>
<tr>
<th>Example File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DirectoryExample.html</td>
<td>This page contains a list of user contacts and their phone numbers as anchor tags you can dial by clicking on the link.</td>
</tr>
<tr>
<td>PageClearExample.html</td>
<td>This page contains an XHTML form, input fields, and soft key element reset (labeled as MyClear) at position 3. Clicking this soft key clears the form input fields.</td>
</tr>
<tr>
<td>PlayList.html</td>
<td>This page contains a list of audio files you can play. Clicking the audio file link plays the selected audio file.</td>
</tr>
<tr>
<td>ProgSoftkeysExample.html</td>
<td>This page contains XHTML elements and soft key elements. The soft key elements are displayed at respective positions on the phone browser.</td>
</tr>
<tr>
<td>SoftkeyFetchExample.html</td>
<td>This page contains soft key elements you can use to fetch the XHTML content from a specified location. These soft keys are displayed at respective positions on the phone browser. Clicking a soft key fetches the XHTML content and displays it on the browser.</td>
</tr>
<tr>
<td>Softkeys_UriExample.html</td>
<td>This page contains soft key elements and URI actions specified inside anchor elements. The URI actions are specified with an href attribute value. Clicking the anchor executes the specified URI action on the phone.</td>
</tr>
<tr>
<td>SubmitSoftkeyExample.html</td>
<td>This page contains Submit and Reset soft keys you can use to submit and reset the XHTML form. The Submit and Reset soft key elements are specified inside the form element to work for that particular form. Clicking the Submit soft key submits the form with specified input values to the specified form action.</td>
</tr>
<tr>
<td>playUriExample_push.jsp</td>
<td>This page contains a play URI to play the audio file. Since this page contains a URI, you need to send it in a URL Push message to play the specified audio file. A content type header <code>application/x-com-polycom-spipx</code> is set in this file so the phone recognizes it as a URI file.</td>
</tr>
<tr>
<td>RebootPhone.jsp</td>
<td>This page contains key URIs that you can use to navigate menus and reboot the phone. Since this page contains URIs, you need to send it in a URL Push message to execute the specified URI actions. A content type header <code>application/x-com-polycom-spipx</code> is set in this file so that the phone recognizes it as a URI file.</td>
</tr>
</tbody>
</table>
Example File | Description
--- | ---
TelUriExForFreeLine_push.jsp | This page contains a tel URI to dial. Since this page contains a URI, you need to send it in a URL Push message in order to dial the specified number. A content type header (application/x-com-polycom-sipx) is set in this file so that the phone recognizes it as a URI file.

TelUriExOn2ndLine_push.jsp | This page contains a tel URI to dial on the specified line. Since this page contains a URI, you need to send it in a URL Push message in order to dial the specified number on the specified line. A content type header (application/x-com-polycom-sipx) is set in this file so that the phone recognizes it as a URI file.

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Get the IP Address of your Computer

You can use the IP address of your computer to open the Web Configuration Utility for a simulator phone.

To get the IP address of your computer:

1. Click Start on the Windows taskbar and choose Run….
   The Run dialog displays.
2. In the Run dialog, in the Open field, enter cmd and click OK.
   The command screen displays, shown next.

![Command screen displaying](image-url)
3. In the command screen, enter `ipconfig/all`, shown next, and press **Enter** on your keyboard.

![Command Screen](image)

Your computer’s IP address displays in the row labeled *IPv4 Address* shown next. In Windows XP, the row is labeled *IP Address*.