



IBM Software Group

WebSphere Telecom Toolkit V6.2

Telecom Web services

Telecom samples deployment and testing



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This presentation provides an overview and explains how to deploy and test the telecom samples available in the Telecom Web Services feature of the IBM WebSphere® Telecom Toolkit V 6.2. To get a better understanding on the content of this presentation listen to the overview and configuration presentations of this feature.

Goals

- Provide an overview of the Telecom samples provided
- Explain the deployment and testing process of Telecom samples

The goals of this presentation are:

- To provide an overview of the Telecom samples available in the toolkit.
- To explain the deployment and testing of the Telecom samples.

The Telecom Samples are Parlay X client applications developed using the tools available by the Telecom Web Services feature of the WebSphere Telecom Toolkit for various Parlay X 2.1 web services. These samples are a valuable reference when developing new Parlay X client applications. Deploying and testing these samples will help you in understanding the complete process of developing Parlay X client applications.

Agenda

- Testing Telecom samples
- Endpoint configuration
- Simulator service policies
- Simulator error messages
- Tracing



The agenda of this presentation covers the steps to deploy and test all of the telecom samples and the various aspects involved in this process such as:

- The endpoint configuration
- The simulator services policies
- Simulator Error messages
- Tracing the toolkit logs in WebSphere Application Server to detect errors

Testing Telecom samples

- Demonstrate the use of various Parlay X 2.1 Web services and API around these services
- When deployed are emulated in the simulator
- Steps involved in testing Telecom samples
 1. Enabling and running simulator
 2. Loading Telecom samples
 3. Deploying Telecom samples
 4. Testing



The Telecom Samples demonstrate the use of Parlay X 2.1 Web services and the API's for these services. The Web Services client simulator, provided by the toolkit, emulates Parlay X web services for the telecom samples. The steps for testing the Telecom Samples are:

1. Enabling and running the Web Services client simulator on WebSphere Application Server version 6.1 included with Rational® Application Developer 7.0
2. Importing the telecom samples into your workspace from the samples gallery
3. Deploying the telecom samples to the WebSphere Application Server version 6.1 included with Rational Application Developer 7.0
4. Testing various Parlay X 2.1 web services using the telecom samples.

Enabling and running the simulator

- Steps to deploy simulator on application server in Application Developer
 1. Select server in servers view, right click, select Start
 2. Right click on server and select “Deploy Telecom Web Services Simulator”
 3. Right click on server and select “Run Telecom Web Services Simulator Client”
 - ▶ Simulator runtime views are opened and connected to simulator
 - ▶ Runtime views show the simulator configuration data

The simulator is now ready for emulation.



The following steps are required to deploy and run the Web services client simulator on the WebSphere Application Server version 6.1 in Rational Application Developer version 7.0:

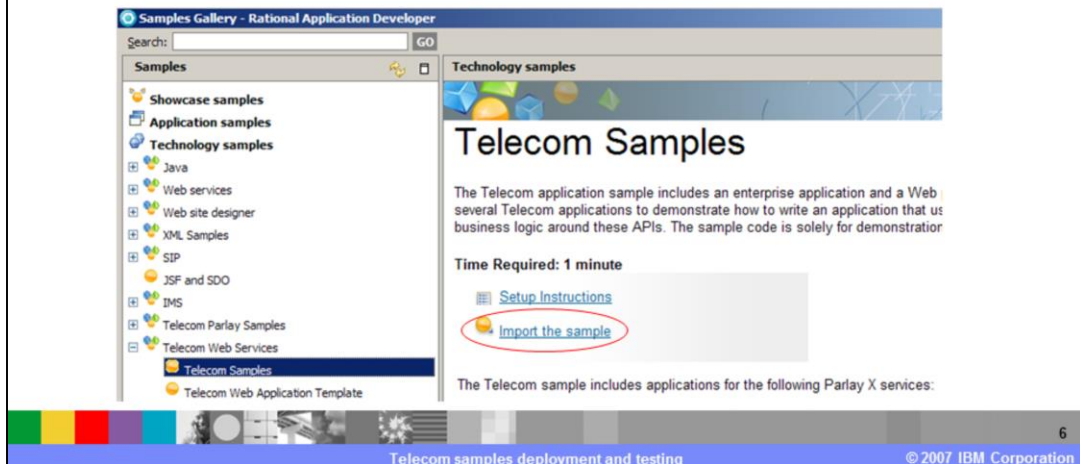
1. Switch to the J2EE perspective and select the servers view. Rational Application Developer creates an instance of the application server when you start with a new workspace. Select the server from the Servers view, right click and, from the context menu, select Start.
2. Once the server is started and shows the “Started” status, right click on the server and select “Deploy Telecom Web Services Simulator” from the context menu. This step deploys, and starts, the simulator on the test server.
3. Right click on the server and select “Run Telecom Web Services Simulator Client” from the context menu. This step launches all of the simulator runtime views. Once connected to the simulator, the simulator configuration data populates in the views. If the runtime views are already open, this step connects the runtime views to the simulator.

After these steps are performed the simulator is ready to emulate Parlay X 2.1 services

and test applications.

Importing Telecom samples

- Steps to load Telecom samples for deployment
 1. Click on "Import the Sample" link from right hand pane
 2. Click Finish button in the Telecom samples wizard



The Telecom Samples can be imported from the samples gallery in Rational Application Developer. To import the samples into your workspace, complete these steps:

1. Launch the samples gallery by selecting the Help menu and then selecting the Samples Gallery menu item.
2. To view the telecom samples in the samples gallery, click on "Technology samples" followed by "Telecom Web Services". The Telecom Samples are in the Telecom Web Services sub category. This figure shows a screen capture of the top portion of the samples gallery window.
3. To import the telecom samples into the current workspace, select the Import Sample link from the right hand pane of the samples gallery window. This action launches the Telecom Samples import wizard. Select finish on this wizard and the samples are imported into the current workspace.

Deploying Telecom sample

- Assumes the application server is started, Simulator deployed and running
- Steps to deploy Telecom samples for testing
 1. Right click on the **TelecomSamples** project -> select **Run As** -> **Run on Server**
 2. In Run on Server wizard, select **WebSphere Application Server 6.1 server** -> click **Next**.
 3. Verify TelecomSamplesEAR project is added to **Configured projects** list -> click **Finish**.
 - Home page of samples is launched in the browser with address:
<http://localhost:9080/TelecomSamples/samples/main/index.jsp>



To test the telecom samples, first they need to be deployed to the WebSphere Application Server version 6.1 test environment. The application server should be started for deployment.

To deploy the sample complete these steps:

1. Right click on the Telecom Sample project in the Project Explorer view and from the context menu select the "Run As" -> "Run on Server" menu option. This action launches the "Run on Server" wizard.
2. In the Run on Server wizard select WebSphere Application Server V6.1 under local host and click on the Next button to navigate to the Add and Remove Projects page of the wizard.
3. In the Add and Remove Projects page, verify the "TelecomSamplesEAR" project is added to the configured projects list and click on the Finish button. This action deploys the samples on the server and launches a browser to the sample index page using the URL shown at the bottom of this slide.

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http://localhost:9080/TelecomSamples/samples/main/index.jsp

Testing

- View of sample index page
- Samples column provides links to various samples
- Description column provides sample description.

Web Services Toolkit Samples

Sample	Description
Address List	Create, delete and query operations for a group or member.
Audio Call	Play a text, audio, or voice XML message to a given address and request status of the message.
Call Handling	Handling a call for a particular address.
Combined MMS, Account, and Payment	Send an MMS message to up to two addresses, billing the transaction to a specified address. The ability to view the history of transactions billed to the address is also possible, as well as to query the message delivery status and account balance. Administer notifications of MMS messages.
Get Location	Retrieve terminal location information for a particular address.
Get Location For Group	Retrieve terminal location information for a group.
Get Status	Retrieve terminal status for a particular address.
Call Notification	Administer notifications for call events.
Presence	Retrieve presence information for a particular address.
SMS	Send an SMS message to up to two addresses. Administer notifications of SMS messages.
SMS For Group	Send an SMS message to a group.
Terminal Location Notification	Administer notifications for terminal location (Geographical & Periodic) changes.
Terminal Status Notification	Administer notifications for terminal status changes.
Third Party Call	Make a call between two addresses and request the status of the call.
WAP Push	Send a WAP Push message to up to two addresses.

Endpoint Configuration

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The figure in this slide shows the screen capture of the samples index page that loads in the browser. The Sample column provides the links to various samples that demonstrate the use of Parlay X 2.1 Web Services. The names used for the links convey the Parlay X web services showcased by that link. The Description column gives a brief description of that particular sample's functionality.

Address list management sample

- Address list link
- Demonstrates
 - ▶ Adding, deleting and querying
 - members of a group
 - Attributes of groups and members of a group

The screenshot shows the 'Address List' management interface. It features a header with the title 'Address List' and a satellite dish icon. The main content area is divided into several sections:

- Form Section:** Contains input fields for 'Group' (pre-filled with 'group:golf@freinds.yourtelecom.com'), 'Address' (pre-filled with 'Anguilla (1)' and '(country code)'), and a text field for the address (pre-filled with '2225552002'). Below these are 'Add Member' and 'Delete Member' buttons.
- Query Section:** Contains a 'Group' input field (pre-filled with the same URI), a 'Resolve Groups' dropdown menu (set to 'true'), and a 'Query Members' button.
- Members Table:** A table with a blue header 'Members' and two rows of data:

Members
Tel:+1-2225552000
Tel:+1-2225552001
- Navigation:** At the bottom, there are 'Group Management' and 'Attribute Management' buttons, and a 'Home' link.

The footer of the application includes a decorative bar with colored squares and the text 'Telecom samples deployment and testing' and '© 2007 IBM Corporation'.

The Address List Management sample is accessed by selecting the “Address list” link from the samples index page. This sample demonstrates all of the functions related to management of groups and its members. The functions showcased by this sample include:

- Creating, Deleting and querying groups
- Adding, Deleting and querying members of a group
- Adding and querying the attributes of groups and its members

To add, or delete, a member for a group complete these steps:

1. Enter the group URI in the Group text field.
2. Enter the Address for the device by selecting the country code and entering its TEL URI.
3. Click either the Add Member or Delete Member button.

You can also query the members of a group by entering a group URI and clicking the “Query Members” button. The Group Management button takes you to a page where you can create, delete and query groups. The Attribute Management button takes you to a page where you can Add and Query group, or member, attributes.

Audio call sample

- Audio call link
- Demonstrates:
 - ▶ Placing calls:
 - Text
 - Audio
 - Voice XML
 - ▶ Getting call status

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The Audio Call Sample is accessed by clicking the “Audio Call” link on the samples index page. The Audio call sample demonstrates the use of the Audio Call Parlay X Web service for placing calls with the message types: Text, Audio and Voice XML. To test this sample complete these steps:

1. Enter a Destination Address by selecting a country code.
2. Enter an existing device number for example 2225552000.
3. For the "Message Type" select “Text” then enter any text for the “Message”
4. Click the Call button.

Clicking the Get Status button will display the Status of the Message. To test an Audio call for the Message Type of “Audio”, follow the same steps but for the Message Type select Audio. For the URI, which is mandatory, enter any wav file URI.

For example:

`http://localhost:9080/TelecomSamples/samples/mms/attachments/goodbye.wav`

The Activity view is then updated with the call for the device. Switch to the Activity view and you will see an entry for the call along with the timestamp, call type and message.

Call handling

- Call handling link
- Demonstrates
 - ▶ Call blocking
 - ▶ Call forwarding

Call Handling

Called Address: (country code)
 * (address)

Incoming Address: (country code)
 * (address)

Addresses To Accept	Addresses To Block
<input type="checkbox"/> tel:+1-2225552002	<input type="checkbox"/> tel:+1-2225552003

Unconditional Forwarding Option:
 Forward Address: (country code)
 * (address)

Forwarding Address	On Busy Address	On No Answer Address
tel:+1-2225552004	No Data Available	No Data Available

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The Call Handling Sample is accessed by clicking the “Call Handling” link on the samples index page. The call handling sample demonstrates setting rules for call forwarding, call blocking, and interaction for calls that can be accepted for a device. The Web service client simulator does not have simulation services for the call handling Parlay X Web service; hence this sample cannot be tested on the simulator. If this sample is tested on the simulator you will receive a service exception. This sample is provided in the toolkit to show how to implement the Call Handling Parlay X web service in a client application.

Combines MMS, account and payment sample

- Combined MMS, account and payment link service
- Demonstrates :
 - ▶ Account management
 - ▶ MMS and notification management

MMS, Account, and Payment Sample

Notification Management

Billing Address: (country code)

* (address)

Continue

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The Combined MMS, Account and Payment sample is accessed by clicking the “Combined MMS, Account and Payment” link on the samples index page. This sample demonstrates the use of Account Management, Multimedia Message Service (MMS), and MMS Notification for the MMS Parlay X Web service. To test this sample complete these steps:

1. For the Billing Address select a country code
2. For the address enter an existing device number for example 2225552001.
3. Clicking “Continue” loads the account management page which has functions to get the balance, increment the balance and view the Account History of the device.

The Notification Management button launches the Current Notifications page where you can register to receive notifications when an MMS message is sent to a device. Many of the actions performed on the device are also listed in the Activity view.

Get location

- Get location link
- Demonstrates
 - ▶ Geographic location of a terminal

Location Information	
Latitude:	0.096604764
Longitude:	0.010761821
Accuracy:	150
Time at Location:	Aug 9, 2007 7:08:41 PM GMT

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The Get Location sample is accessed by clicking the “Get Location” link on the samples index page. This sample demonstrates the Parlay X 2.1 Terminal Location Web service. To test this sample complete these steps:

1. For the Address select a country code then enter an existing device number. For example 2225552002
2. For Requested Accuracy enter any integer greater than 50 as the minimum value defined in the Service Policy is 50
3. For Acceptable Accuracy enter any integer greater than 500 as the minimum value defined in the Service Policy is 500
4. Click the Submit button, this action retrieves the Terminal Location of the device represented by Latitude and Longitude values. The Terminal Location results display in the Location Information section of the page.

Get location for group

- Get location for group link
- Demonstrates
 - ▶ Terminal location for devices in a group.

Get Location For Group Sample

Group: *group.contacts@sales.yourtelecom.com

Requested Accuracy: *50

Acceptable Accuracy: *500

Submit

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Get Location For Group Sample

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Location Information

Address:	Latitude:	Longitude:	Returned Accuracy:	Location Time:	Retrieval Status:
Tel:+1-2225552000	0.10660476	-0.08685765	150	Aug 9, 2007 7:42:41 PM GMT	Retrieved
Tel:+1-2225552001	0.096604764	0.095829636	150	Aug 9, 2007 7:42:41 PM GMT	Retrieved
Tel:+1-2225552002	0.096604764	0.010761821	150	Aug 9, 2007 7:42:41 PM GMT	Retrieved
Tel:+1-2225552003	0.10605527	0.08860438	150	Aug 9, 2007 7:42:41 PM GMT	Retrieved

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The Get Location for Group sample is accessed by clicking the “Get Location for Group” link on the samples index page. This sample demonstrates the Parlay X 2.1 Terminal Location Web service. This sample works the same as the Get Location sample but retrieves the terminal location of all devices in a group. To test this sample complete these steps:

1. For Group enter an existing group URI. Make sure the group has at least one device.
2. For Requested Accuracy enter any integer greater than 50 as the minimum value defined in the Service Policy is 50
3. For Acceptable Accuracy enter any integer greater than 500 as the minimum value defined in the Service Policy is 500
4. Click the Submit button, this action retrieves the Terminal Locations of all devices in the group represented by Latitude and Longitude values. The Terminal Location results for the devices show up in the Location Information section of the page.

Get status

- Get status link
- Demonstrates
 - ▶ Retrieving device status

The screenshot shows a web application titled "Get Status Sample". It features a form with the following elements:

- Address:** A dropdown menu showing "United States of America (1)" with "(country code)" to its right.
- * 2225552001** (address): A text input field containing the device number.
- Submit:** A button to submit the form.
- Status Information:** A section containing a text box displaying "Reachable".
- Home:** A link at the bottom left of the form area.

At the bottom of the page, there is a footer with the text "Telecom samples deployment and testing" and "© 2007 IBM Corporation". The number "15" is also visible in the bottom right corner of the page.

The Get Status sample is accessed by clicking the "Get Status" link on the samples index page. This sample demonstrates the status retrieval of a device using the Parlay X 2.1 Terminal Status Web service. The status of a device can be one of four states: Reachable, Unreachable, Busy, And Available. To test this sample complete these steps:

1. For Address select a country code then enter an existing device number. For example 2225552001.
2. Click the Submit button. This action retrieves the device status and displays it in the Status Information section of the page.

Call notification

- Call notification link
- Demonstrates call notifications

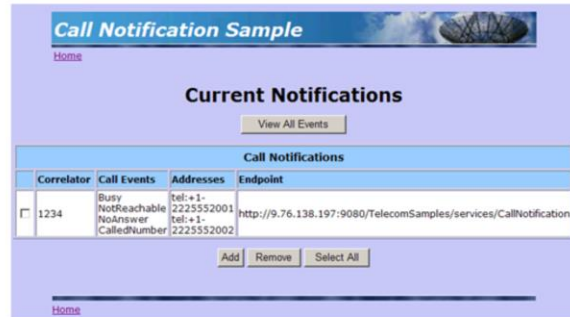


Figure 1

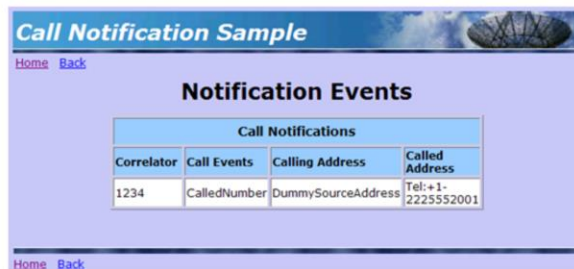


Figure 2

The Call Notification sample is accessed by clicking the “Call Notification” link on the samples index page. This sample demonstrates the use of the Parlay X 2.1 Call notification web service. You can add notifications on one or more devices. To test this sample complete these steps:

1. Click the Add button in the Current Notifications page shown in Figure 1, this action launches the Add Notification page.

2. In the Add Notification page enter these values:

- For Correlator, enter “1234”.

- For Address select a country code then enter an existing device number. For example 2225552002.

- Select the criteria for which you would like to receive notifications.

- Click Submit to register the notification.

3. Place an Audio Text call to the device for which a notification was added using the steps mentioned in slide 10. After the call is placed, come back to the Call Notification sample and select the check box for the notification and click “View All Events”. This action will display the Notification Events page, as shown in Figure 2, which shows the call placed on the device.

Presence

- Presence link
- Demonstrates
 - ▶ Subscribe to presence
 - ▶ Get presence status
 - ▶ Add, remove, view presence notifications

The screenshot shows a web application interface for 'Presence Sample'. It features a blue header with the title and a 'Home' link. Below the header is a 'Current Notifications' section with three buttons: 'Subscribe', 'View Events', and 'Get Presence'. A table titled 'Notifications' is displayed, with columns for 'Correlator', 'Presentity', and 'Attribute'. The table contains one row with the following data: Correlator: 1234, Presentity: tel:+1-2225552000, Attribute: Activity, Place, Privacy. Below the table are three buttons: 'Add', 'Remove', and 'Select All'. The footer of the page includes a color bar, the text 'Telecom samples deployment and testing', and the copyright notice '© 2007 IBM Corporation'.

The Presence sample is accessed by clicking the "Presence" link on the samples index page. This sample demonstrates the use of the Parlay X 2.1 Presence web service. The Presence API's used in this sample include viewing the presence information of a presentity and subscribing to a presentity for receiving presence attribute changes like Activity, Place, etc... To test this sample complete these steps:

1. Click Add to add a notification for changes in presence information of a presentity. For example, enter the device "2225552000" as the presentity.
2. Change any of the presence attributes registered for the notification of device 2225552000 using the presence view. Click the "View Events" button which will display a list presence information changes for device 2225552000.
3. Click Subscribe and add a subscription for a device that exists in the device view. When presence attributes for the device are changed from within the presence view you will receive a notification in the Activity view for that device. To view all of the subscriptions, click the "View Events" button.
4. To retrieve the current presence information for a device, click Get Presence which displays the "Get Presence" page. Enter the device address for which you want to see the current presence information and click the "Get Presence" button. This action will display the results of the current presence information on the page.

The screenshot shows the IBM SMS Sample web application. On the left, there is a navigation menu with 'SMS' and a list of items: 'SMS link', 'Demonstrates', 'Sending SMS', and 'SMS notifications'. The main content area is titled 'SMS Sample' and contains a 'Notification Management' section. This section has four main input areas: 'Send to Address' (with a dropdown for 'United States of America (1)' and a text field for '2225552001'), 'Additional Address' (with a dropdown for 'United States of America (1)' and a text field for '2225552001'), 'Message' (with a text area containing 'Hello!'), and 'From' (with a text field containing 'John'). There are 'Send' and 'Clear' buttons below these fields. Below the input area is a 'Query' button and a 'Message Status' table. The table has two columns and one row of data: '+1-2225552001' and 'DeliveredToTerminal'. At the bottom of the page, there is a 'Home' link, a footer with 'Telecom samples deployment and testing', and '© 2007 IBM Corporation'.

The SMS sample is accessed by clicking the “SMS” link on the samples index page. This sample demonstrates the use of the Parlay X 2.1 Short Message Service (SMS) web service. To test this sample complete these steps:

1. Enter an existing device address for the "Send to Address". You can also enter an address for the "Additional Address" if you want to send an SMS to multiple devices.
2. Enter a message.
3. Enter text to represent who sent the SMS message in the "From" field.
4. Click the Send button to send the SMS.
5. Click the Query button to view the status of the SMS message sent. The status will display in the Message Status table.

The Activity view shows the SMS activities performed for these devices. Clicking the Notification Management button launches the SMS Notification page where notifications

can be added and events can be viewed.

SMS for group

- SMS for group link
- Demonstrates
 - ▶ Sending SMS to all devices in a group

The screenshot displays two views of the 'SMS for Group Sample' application. The top view is the message sending interface, and the bottom view is the query status results page.

SMS for Group Sample (Message Sending Interface)

Group: *group:contacts@sales.yourtelecom.com

Message: What are the sales figures for this month ?

From: John

Buttons: Send, Clear, Query

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SMS for Group Sample (Query Status)

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Query Status

Message Status	
Tel:+1-2225552000	DeliveredToTerminal
Tel:+1-2225552001	DeliveredToTerminal
Tel:+1-2225552002	DeliveredToTerminal
Tel:+1-2225552003	DeliveredToTerminal

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The SMS for group sample is accessed by clicking the “SMS for Group” link on the samples index page. This sample demonstrates the use of the Parlay X 2.1 Short Message Service (SMS) web service. To test this sample complete these steps:

1. Enter an existing group URI, which can be found in the Group view.
2. Enter a message you want to send to all members of the group.
3. Enter text to represent who sent the SMS message in the "From" field.
4. Click the Send button to send the SMS to the group members.
5. Click the Query button to view the status of the SMS message sent. The status for each group member is displayed in the Message Status table.

The Activity view shows the SMS activities performed for these devices.

Terminal Location Notification

- Terminal location notification link
- Demonstrates
 - ▶ Notifications of terminal location changes
 - Geographic
 - Periodic

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The “Terminal Location Notification” sample is accessed by clicking the “Terminal Location Notification” link on the samples index page. This sample demonstrates the use of the Parlay X 2.1 Terminal Location Notification web service and API’s for Geographic and Periodic notifications. To test this sample complete the following steps:

1. Click the Add button in the Geographic Notification section. This action launches the Add Notification page.
2. Enter the following values in the Add Notification page as shown in this figure:
 - For Correlator enter a unique string which identifies this notification.
 - For Address enter the country code and then the device address, for example 2225552000.
 - For Frequency enter 10. This value determines the rate, measured in seconds, at which notifications occur.
 - For Duration enter 500. This value determines the amount of time, measured in seconds, the notifications occur.
 - For Latitude and Longitude, enter values of locations from the Map view. You will receive notifications when the device enters or leaves the vicinity of that area.
 - For Radius enter a value of 100. This value is the maximum distance that the device can be from the Latitude and Longitude location specified for generating a notification.
 - Trigger has 2 possible values which are entering and leaving. If the Trigger is set to entering, a notification is generated when the device enters the location. When the trigger is set to leaving, a notification is generated when the device is leaving the location.
- Click the Submit button to add the Geographic Notification for the device.
- Switch to the Map view and move the device, that you have added the notification for, by dragging the device with your mouse.
- Click the View All Events button to view the notifications for the device.

Periodic notifications are very similar to geographic notifications with the difference that the periodic notifications are generated continuously for the notification period.

Terminal status notification

- Terminal status notification link
- Demonstrates
 - ▶ Notification of changes in terminal status

Status Notification Sample

Add Notification

Correlator * 1234

Address * United States of America (1) (country code)
* 2225552001 (address)

Additional Address: United States of America (1) (country code)
2225552002 (address)

Status Notifications * Reachable Unreachable Busy

Check Immediate * True

Duration * 500 Seconds

Frequency * 10 Seconds

Count * 50

Submit

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The "Terminal Status" sample is accessed by clicking the "Terminal Location Notification" link on the samples index page. This sample demonstrates the use of the Parlay X 2.1 Terminal Status Notification web service and API's for receiving notifications of changes in the status of a device. The status of a device can change to 3 different states, which include: Reachable, Unreachable and Busy. To test this sample complete the following steps:

1. Click the Add button in the Current Notifications section. This action launches the Add Notification page.
2. Enter the following values in the Add Notification page as shown in this figure:
 - For Correlator enter a unique string which identifies this notification.
 - For Address enter the country code and then the device address, for example 2225552001.
 - For the Additional Address enter the country code and then the device address, for example 2225552002.
 - For Status Notifications select all the states for which you would like get notifications.
 - For Duration enter 500 seconds.
 - For Frequency enter 10 seconds.
 - For Count enter 50.
3. Click Submit to add the Notification.
4. Switch to the Device view and change the status for the devices by using the Status column.
5. Click "View All Events" on the Current Notifications page to see the list of notifications for the devices whose status changed.

Third party call

- Third party call link
- Demonstrates
 - ▶ Call setup between two devices

The “Third Party Call” sample is accessed by clicking the “Third Party Call” link on the samples index page. This sample demonstrates the use of the Parlay X 2.1 Third Party Call web service. To test this sample complete these steps:

1. Enter the following values in the Third Party Call Sample page as shown in this figure.

- For the Originating Address, select the country code and enter an existing device address. For example, 2225552001.

- For the Destination Address, select the country code and enter an existing device address. For example, 2225552002.

2. Click the Call button to place a third party call between the Originating and Destination Addresses. The call is placed and the status of the call can be viewed by clicking the "Get Status" button. When the call is placed it is not connected and therefore needs to be connected using the Device view.

3. Switch to the Device view. Notice that the originating and destination devices display a Ringing status. Click the Ringing button to pick up the call on the originating device then repeat for the destination device. At this point the call is now connected between the originating and destination devices. This call can now be viewed in the Call view which will show a status of Connected.

4. Click "End Call" to end the call.

WAP push

- WAP push link
- Demonstrates
 - ▶ Pushing data to wireless devices using wireless access protocol (WAP)

WAP Push

Push to Address: United States of America (1) (country code)
 * 2225552001 (address)

Content Location: * http://www.iETF.org/rfc/rfc3261.txt?number=; (url)

Action: * Push

Additional Address: (country code)
 (address)

WAP Message: SIP RFC

From: John

Push Clear

Query

WAP Message Delivery Status	
+1-2225552001	DeliveredToTerminal

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The Wireless Access Protocol (WAP) Push sample is accessed by clicking the “WAP Push” link on the samples index page. WAP is not a part of the Parlay X 2.1 web services, but is an open standard in the wireless industry that enables wireless devices to access the internet. The WAP Push function enables sending messages to a device similar to the Short Message Service (SMS). It also gives the device owner the ability to take action for the message by using a URI, which was sent in the message, with the device's WAP browser. Typical usage examples of WAP Push messages include sending or advertising new ring tones and wallpaper images to mobile devices where device owners can purchase and install them to their device. To test this sample complete these steps:

1. Enter the following values in the WAP Push Sample page as shown in this figure.
 - For "Push to Address", select the country code and enter an existing device address. For example, 2225552001.
 - For "Content Location", enter a URI that has some content.
 - For "Action" enter "signal-none".
 - For "WAP Message", enter a short description of the content being sent.
 - For the "From" field, enter a name.
2. Click the "Push" button to send the message using WAP Push.
3. Click the "Query" button to view the status of the message. The status will then be displayed in the WAP Message Delivery Status table.

Endpoint configuration

- Defines endpoint of Parlay X Web services
- Local host by default
- Can be edited to point to remote hosts

Samples Configuration

[Home](#)

Service	Endpoint
Account Management	<input type="text" value="http://localhost:9080/ParlayX21Web/services/AccountManagement"/>
Audio Call	<input type="text" value="http://localhost:9080/ParlayX21Web/services/AudioCall"/>
Call Handling	<input type="text" value="http://localhost:9080/ParlayX21Web/services/CallHandling"/>
Call Notification Admin	<input type="text" value="http://localhost:9080/ParlayX21Web/services/CallNotificationManager"/>
Group	<input type="text" value="http://localhost:9080/ParlayX21Web/services/Group"/>
Group Management	<input type="text" value="http://localhost:9080/ParlayX21Web/services/GroupManagement"/>
Member	<input type="text" value="http://localhost:9080/ParlayX21Web/services/Member"/>
MMS	<input type="text" value="http://localhost:9080/ParlayX21Web/services/SendMessage"/>
MMS Notification Admin	<input type="text" value="http://localhost:9080/ParlayX21Web/services/MessageNotificationManager"/>
Presence	<input type="text" value="http://localhost:9080/ParlayX21Web/services/PresenceConsumer"/>
Presence Notification	<input type="text" value="http://localhost:9080/ParlayX21Web/services/PresenceNotification"/>
Reserve Volume Charging	<input type="text" value="http://localhost:9080/ParlayX21Web/services/ReserveVolumeCharging"/>
SMS	<input type="text" value="http://localhost:9080/ParlayX21Web/services/SendSms"/>

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The Endpoint configuration page is launched by clicking the "Endpoint Configuration" button at the bottom of the samples index page. This configuration page defines the Web Service endpoints for the Parlay X 2.1 and WAP Push Web services. You can change the endpoint configuration to point to an external server that provides the Parlay X 2.1 or WAP Push Web services. By default, the endpoints are set to localhost as all the Parlay X 2.1 and WAP Push services are available and emulated on the Web Service Client Simulator shipped by this toolkit. To restore the default endpoints click the "Default" button at the bottom of the Endpoint configuration page.

Simulator service policies

- Supports default service policies for
 - ▶ Terminal status
 - ▶ Terminal location
 - ▶ Audio call
 - ▶ Group management APIs.
- Should be used for testing the samples
- Appendix lists all service policies

The Web Services Client Simulator defines a set of service policies that help you in providing the right set of values for testing the telecom samples or your custom telecom applications. These policies are enforced by the simulator for the Terminal Status, Terminal Location, Audio Call and Group Management API's. If you use values that do not match with the enforced service policies, the simulator will throw a policy exception when you try to run that service. The Appendix section of this presentation lists all of the service policies defined by the simulator.

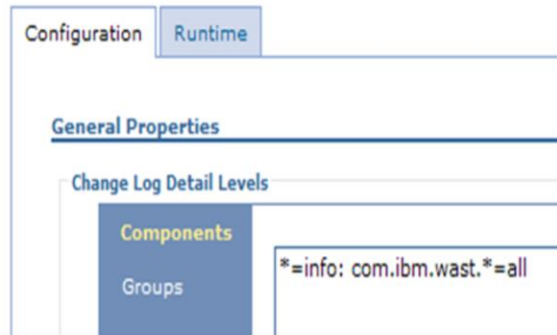
Simulator error messages from Parlay X

- Parlay X API's can return an exception due to an error
- Exception types
 - ▶ Service
 - ▶ Policy
 - ▶ Simulator
- Appendix lists all exceptions

The wrong usage or reference to Parlay X 2.1 or WAP Push API's can throw different kinds of exceptions. There are three kinds of exceptions which the simulator can throw, which include: Service, Policy and Simulator exceptions. Service exceptions are thrown when invalid values are used by a client application or when a service is not supported by the simulator. Policy exceptions are thrown when client applications do not adhere to policies set by the simulator. Simulator exceptions are thrown when invalid values, or scenarios, are not supported by this implementation of the simulator. The Appendix section of this presentation lists all of the exceptions and their messages, for your reference.

Tracing

- Enabled through application server in Rational Application Developer
 - ▶ “com.ibm.wast.*=all” enables tracing for the telecom Web services



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You can enable tracing for this toolkit in the WebSphere Application Server version 6.1 test environment. Tracing is enabled using the Integrated Administrative Console in the server. To enable tracing, perform these steps:

1. Start the server and deploy the Telecom Web Services Simulator.
2. Right click on the server and select “Run Administrative Console”.
3. Expand "Troubleshooting" then select "Logs and Trace", and click "server 1".
4. Click “Change Log Detail Levels”, then select the "Runtime" tab.
5. Scroll down and find the "com.ibm.wast.*" package entry. Click it and select “All Messages and Traces”.
6. Check the "Save runtime changes to configuration as well" checkbox.
7. Click Apply and save the changes.
8. Restart the server from the servers view.

Section

Appendix

Simulator service policies

Status default values

```
statusBusyAvailable = false;  
statusMaximumNotificationAddresses = 100;  
statusMaximumAddresses = 100;  
statusMaximumNotificationFrequency = 2147483000;  
statusMaximumNotificationDuration = 86400000;  
statusMaximumCount = 100;  
statusUnlimitedCountAllowed = false;  
statusGroupSupport = false;  
statusNestedGroupSupport = false;
```

Simulator service policies

▪ Location Default Values

- locationMinimumAccuracy = 50;
- locationMinimumAcceptableAccuracy = 500;
- locationGeographicalNotificationAvailable = true;
- locationPeriodicNotificationAvailable = true;
- locationAltitudeAlwaysAvailable = false;
- locationAltitudeSometimesAvailable = false;
- locationMaximumNotificationAddresses = 100;
- locationMaximumAddresses = 10;
- locationMaximumNotificationFrequency = 1000;
- locationMaximumNotificationDuration = 86400000;
- locationMaximumCount = 100;
- locationUnlimitedCountAllowed = false;
- locationGroupSupport = false;
- locationNestedGroupSupport = false;



Simulator service policies

- **Audio Default Values**

```
audioTextToSpeechAvailable = true;  
audioContentAvailable = true;  
audioVoiceXMLAvailable = true;  
audioStatusRetainTime = 100;  
audioFormatsSupported = "WAV,MP3,AU";  
audioChargingSupported = true;
```

- **Group Default Values**

```
maxGroupLength = 100;  
maxGroupMembers = 100;  
SupportNestedGroups = false;
```



Simulator service exceptions

- SVC0001: Error code is *[code]*.
- SVC0002: Invalid input value for message part *[part]*.
- SVC0003: Invalid input value for message part *[part]*, valid values are *[valid values]*.
- SVC0004: No valid addresses provided in message part *[part]*.
- SVC0005: Correlator *[correlator]* specified in message part *[part]* is a duplicate.
- SVC0006: Group *[group]* in message part *[part]* is not a valid group.
- SVC0200: Accuracy of location is not within acceptable limit.
- SVC0250: End user authentication failed.
- SVC0251: Unknown Voucher.
- SVC0260: Call has already been connected. It cannot be cancelled.
- SVC0261: Call has already been terminated.
- SVC0270: Charging operation failed. The charge was not applied.
- SVC0280: Message too long. Maximum length is *[number]* characters

Simulator policy exceptions

POL0001A policy error occurred. Error code is [*code*]

POL0002 Privacy verification failed for address [*address*]. Request is refused.

POL0003 Too many addresses specified in message part [*part*].

POL0004 Unlimited notification request not supported.

POL0005 Too many notifications requested.

POL0006 Group specified in message part [*part*] not allowed.

POL0007 Nested group specified in message part [*part*] not allowed.

POL0008 Charging not supported.

POL0230 Requested accuracy is not supported.

POL0231 Geographic notification is not available.

POL0232 Periodic notification is not available.

Simulator error messages from Parlay X

- SIM0232: VoiceXmlUrl is null.
- SIM0233: Call control call terminated exception.
- SIM0234: Call control unknown call identifier exception.
- SIM0235: Call control remote exception.
- SIM0236: Call control unknown end user exception.
- SIM0237: Call control invalid argument exception.
- SIM0238: Call control service exception.
- SIM0239: The correlator is not valid or has expired.
- SIM0240: The service does not accept text as an input.
- SIM0241: The service does not accept audio content.
- SIM0242: The service does not accept VoiceXML as an input.
- SIM0243: The service does not support this audio format.
- SIM0244: The call termination cause is null or empty.
- SIM0245: The call identifier is not valid or has expired.

Simulator error messages from Parlay X

SIM0246: Privacy enforced. Access denied.

SIM0247: The requested charge exceeds available balance.

SIM0248: The reservation identifier is not valid or has expired.

SIM0249: The messageRefIdentifier cannot be found.

SIM0250: No attributes found in data model.

SIM0251: No groups found for requested domain.

SIM0252: No history found for requested account.

SIM0253: No messages found for registration identifier.

SIM0254: No members found for group.

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