Lone Worker Demo Guide

SONIM CONFIDENTIAL

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REVISION HISTORY

Revision	Date	Author	Reviewers	Comments
PA1	11-10-2009	Gomu	Adithya, Biswajit, Harish	
PA2	11-12-2009	Gomu		Configuration using Java client instead of demo server
PA3	11-12-2009	Harish		Added screen shots and improved the text
PB1	11-13-2009	Gomu		Added Remote Configuration Demo
PB2	12-22-2009	Gomu		Added plain SMS mode, updated Java clients
PB3	01-29-2010	Gomu		Set date and time before installing Java app
PB4	5-28-2010	Gomu		Update for new version

CONTENTS

1 Introduction

The Sonim XP3 Sentinel is designed for Lone Worker market with features such as, periodic sending of GPS location and other phone health status to the server, detection of tilt and non-movement of the phone and sending multiple alert levels to the server, over the air configuration and control of the client from the server and much more. Furthermore, it has the same highly rugged design as the XP3 Quest to sustain even the toughest work environments. It conforms to IP67, MIL-810F standards and Sonim's RPS test specification confirming to tests such as conform to 2m (6ft) drop on hard concrete from any angle and high capacity battery for long operations.

The native Lone Worker Client application (client) can be integrated with a Lone Worker Server application (server). It is designed to support a variety of lone worker solutions offered by existing lone worker service providers, monitoring centers, system integrators and value added resellers. Besides the lone worker service provider channel, Sonim XP3 Sentinel is also expected to find application with enterprises and government organizations that deploy commercial lone worker system software and operate their own monitoring capabilities.

Sonim provides technical support to partners to understand the Lone Worker client and its interface with the server. Sonim has a reference implementation of the server, which can be made available to partners to understand the protocol better.

This demo guide is for Sonim sales, marketing and partners to give a demo of the system or to try the basic features of the system.

2 Acronyms

Acronym	Definition
client	Lone worker client
server	Lone worker server
ERC	Emergency response center
LW Phone	The Sonim XP3.20 Sentinel phone that is being demonstrated
ERC Phones	Phones used to demonstrate the ERC receiving calls

3 Demo Highlights

In this demo suite, we try to highlight these features:

1. Manual alarm (red risk event) trying to connect to the ERC in stealth mode
2. Tracking
3. Free fall alarm trying to connect to the ERC

4. Remote configuration

Note: Demo server is hosted at IDC (Sonim India Development Center). OTA configurations of LW application parameter are sent to the handset via SMS. It has been observed that each international SMS takes about 5 minutes to reach the handset, which is very inconvenient to use for a demo. Hence it is suggested that, for the demo the Java app frontend on the LW handset is used to modify the configurations. The Remote Configuration demo can be shown if there is time to wait for SMS to come from the server to the LW phone.

The demo portal can be used to monitor reports from the LW handset.

4 Demo Setup

Here are the steps to set up the demo.

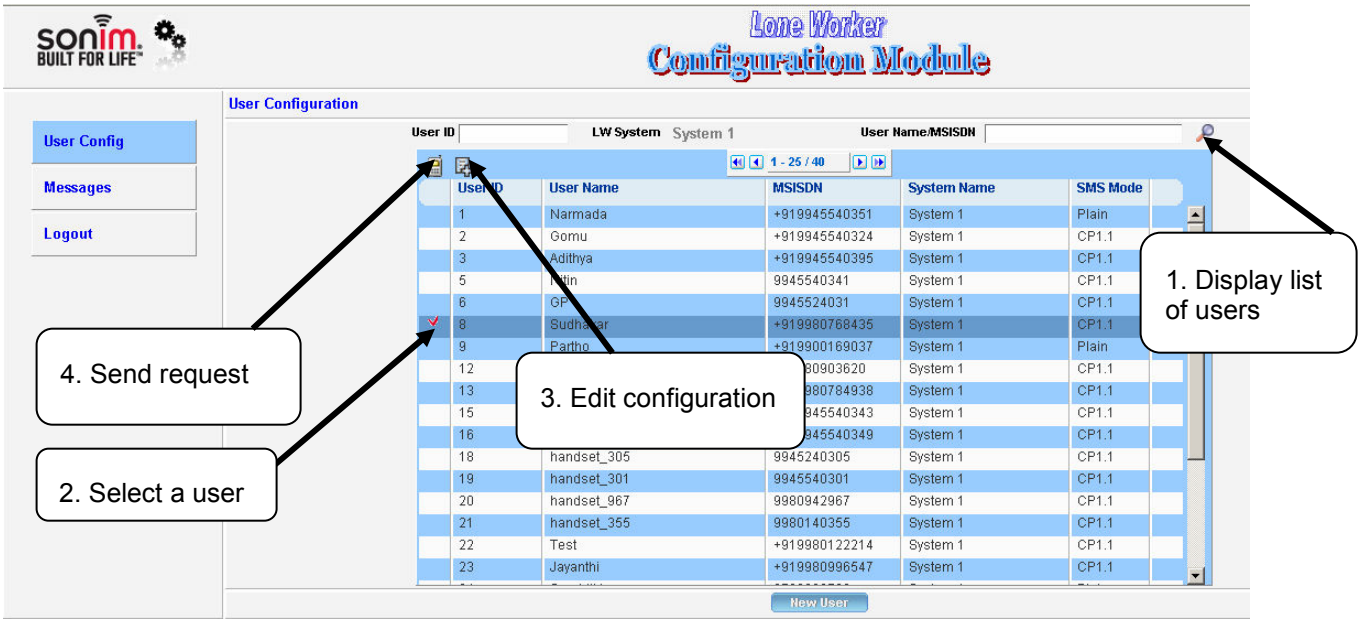
4.1 Demo Server Portal

Note: Make sure to use Mozilla Firefox web browser to access the portal.

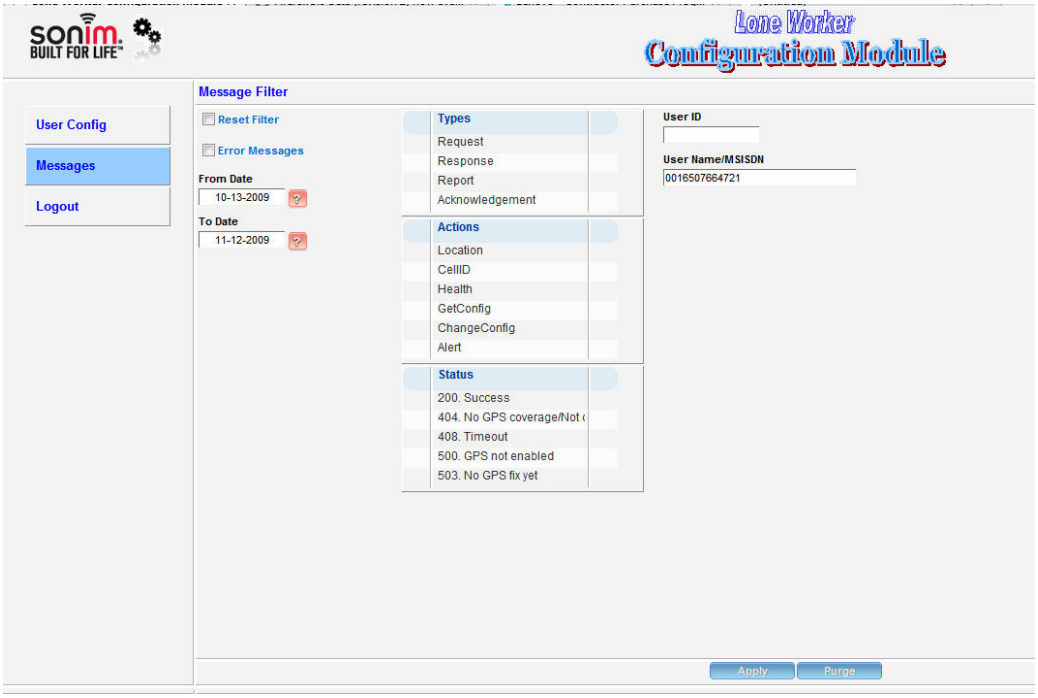
4.1.1 Login details

- Demo server URL: http://125.63.77.148/LWS/
- User id: sonimdemo
- Password: d3m0

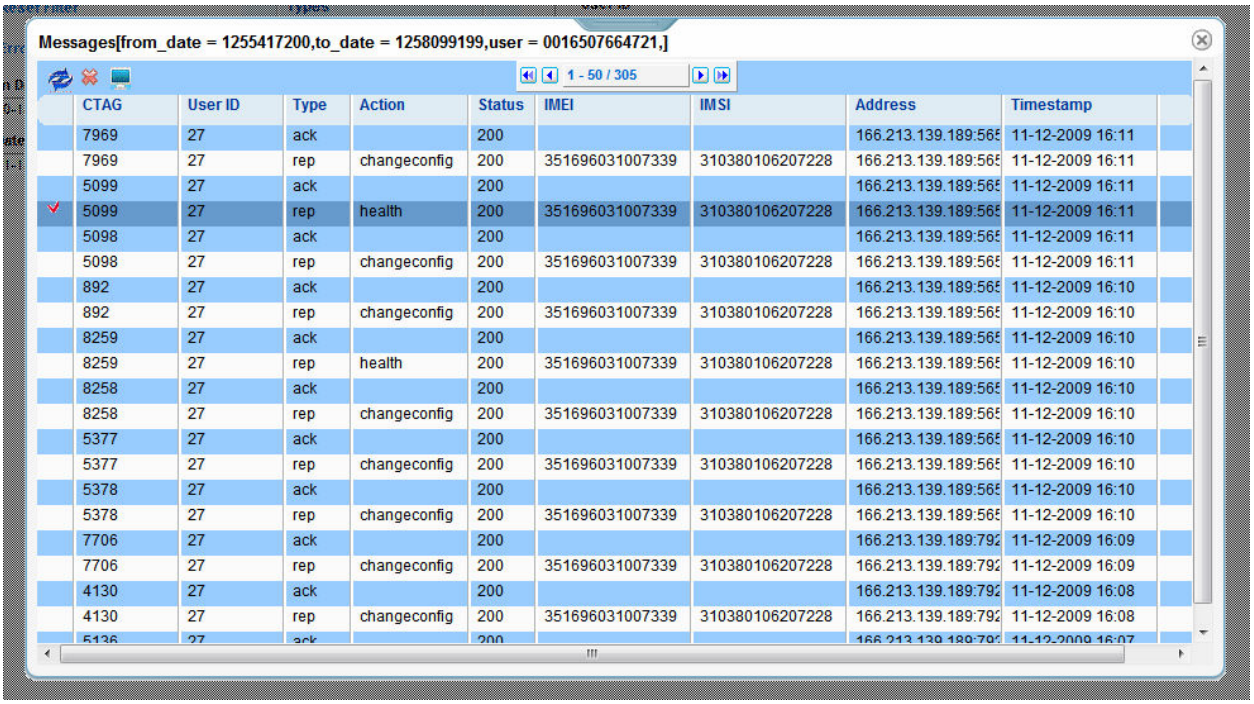
4.1.2 User listing & configuration page



4.1.3 Messages page



4.1.4 Messages pop-up window



CTAG	User ID	Type	Action	Status	IMEI	IMSI	Address	Timestamp
7969	27	ack		200			166.213.139.189:565	11-12-2009 16:11
7969	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:11
5099	27	ack		200			166.213.139.189:565	11-12-2009 16:11
5099	27	rep	health	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:11
5098	27	ack		200			166.213.139.189:565	11-12-2009 16:11
5098	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:11
892	27	ack		200			166.213.139.189:565	11-12-2009 16:10
892	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:10
8259	27	ack		200			166.213.139.189:565	11-12-2009 16:10
8259	27	rep	health	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:10
8258	27	ack		200			166.213.139.189:565	11-12-2009 16:10
8258	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:10
5377	27	ack		200			166.213.139.189:565	11-12-2009 16:10
5377	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:10
5378	27	ack		200			166.213.139.189:565	11-12-2009 16:10
5378	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:565	11-12-2009 16:10
7706	27	ack		200			166.213.139.189:792	11-12-2009 16:09
7706	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:792	11-12-2009 16:09
4130	27	ack		200			166.213.139.189:792	11-12-2009 16:08
4130	27	rep	changeconfig	200	351696031007339	310380106207228	166.213.139.189:792	11-12-2009 16:08

4.2 New User Account Setup

1. Click on “New User” button at the bottom of the screen.
2. Enter a username and the full MSISDN of the phone that will be used for the demo. E.g. +919844198441. The username is used only on the server. Choose “Plain” as the SMS mode.
3. Click “Save”

4.3 ERC Phones Setup

1. Any GSM phone number can be used as ERC number. There can be up to 5 ERC numbers.
2. Make sure the ERC phone(s) are switched on.
3. For the demo just one ERC number can be used.
    a. In order to demo the additional feature that LW handset dialing all the ERC numbers in a round-robin fashion, we have to simulate “No response” from ERC phone, by making sure that ERC phone is capable of **not answering** the call (i.e. disable automatic Voicemail response).

4.4 LW Phone Setup

1. Make sure the s/w version on the LW phone is proper
    a. Enter #2639# and press the “Call” button.
    b. It should display a number starting with “**05.1.2-56.3-1**” or “**05.1.2-56.3-2**”
    c. Clear flash the phone by entering #20070114# followed by the “Call” key
2. Set the right APN details at Menu > Settings > Connectivity > Connections > Network account > Network A/c 5.
3. Create a text file LWConfig.txt with the following content
   DataVersionPublic=1
   UserId=<replace with the userid that was created on the server>
   LoneWorkerMode=1
   LoneWorkerMinMode=0
4. Delete any file with the same name at “Menu > My files > Others” on the phone. Transfer this text file to the LW phone via Bluetooth. If you transfer it through SD card, please make sure to move the file to the phone memory’s Others folder.
5. Restart the LW phone
6. On the phone, you should see an icon on the status bar of the phone in the shape of a red circle with a yellow ring around it 
7. If you don’t see the icon, time for troubleshoot!

4.5 Verify Messages on the Server

1. Log into the demo server
2. Click “Messages” on the left menu list
3. Enter MSISDN number under “User Name/MSISDN” field
4. Click Apply
5. You can see the list of messages exchanged between the LW handset and the server
    a. Only 50 messages are displayed in one screen; next screen buttons are on top of the pop-up window
6. For health reports, you can see the values for emg and src. “emg” indicates the level of emergency and “src” indicates the source of emergency.
    a. Emergency level
        0 => all OK
        1 => Attention needed but not urgent
        2 => Attention needed immediately
        3 => Full alert situation
    b. Emergency situation bit mask
        0 => Red key pressed
        1 => Phone problem
        2 => Network problem
        3 => GPS problem
        4 => Phone idle
        5 => High impact
        6 => Free fall
        7 => Phone tilt
        8 => End to end disconnect
        9 => Not awake
        10 => Server request
        11 => Shutdown
        12 => Mode change
        13 => Amber key (number key 2) pressed
        14 => Green key (number key 3) pressed
        15 => Number key 0 pressed
        16 => Number key 1 pressed (not used)
        17 => Number key 4 pressed
        18 => Number key 5 pressed
        19 => Number key 6 pressed
        20 => Number key 7 pressed
        21 => Number key 8 pressed
        22 => Number key 9 pressed

    For example, a src value of 9 (binary 1001) indicates “3 – GPS problem” and “0 – User request”.

4.6 Install Java Client on the Phone

You can find the Java client at the FTP server in the *"binaries"* folder.

If you have Bluetooth, enable Bluetooth on the phone at Menu > Tools > Bluetooth, pair it with a PC and follow this procedure.

1. Make sure that the correct date and time are set on the phone
2. Transfer the files LWC_1_5.jar and LWC_1_5.jad using Bluetooth to the LW phone. Once the jar file is transferred, choose "No" at the prompt for installation
3. Open LW phone Menu > My Files > Others
4. Open LWC_1_5.jad to install the application
5. The "Lone Worker Configuration" Java Client can be launched under Menu > Applications > JAVA > Lone Worker Configuration
6. Choose the first option whenever the app prompts for permission

If you do not have Bluetooth, you can put an SD card into the phone, set Menu > Tools > USB function to USB drive, restart the phone and then connect the phone to a PC using a standard USB cable. The SD card will appear on the PC as a drive. Then follow this procedure.

1. Transfer the files LWC_1_5.jar and LWC_1_5.jad to the Others folder. Once the jar file is transferred, choose "No" at the prompt for installation
2. Open LW phone Menu > My Files. Switch to the second tab which shows the files in the SD memory card. Open the Others folder.
3. Open LWC_1_5.jad to install the application
4. The "Lone Worker Configuration" Java Client can be launched under Menu > Applications > JAVA > Lone Worker Configuration
5. Choose the first option whenever the app prompts for permission

4.7 LW Application Icons

These are the icons displayed on the status bar of the LW phone. If none of these icons are displayed, LW Application is disabled.

-  Normal mode icon
-  Tracking mode icon
-  Mandown mode icon
-  Alarm mode icon

4.8 Changing the LW mode on the Handset

The mode of the LW Application can be changed using the "**Lone Worker Configuration**" Java Client. For example, to set to Tracking mode, follow these steps.

1. Launch the "Lone Worker Configuration" Java Client
2. Choose Menu (Left soft key) and choose "Set Mode". Choose "Tracking" and press OK.
3. Exit the application.

4.9 Configuring the ERC number(s) using Java Client

1. Launch the "Lone Worker Configuration" Java Client
2. Scroll down and open the menu item "Reporting"
3. Scroll down and edit the "ERC Numbers". Enter the phone number of the ERC phone. (additional numbers can be entered separated by a comma, without any space in between or around)
    a. Eg. +919844198441,+919844198442
    b. To enter +, click * to get the symbols grid
4. Scroll down until the Left Soft Key (LSK) display OK. Click OK and then go to Menu > Save
5. After it is saved, you can exit the application

5 Demo Red Risk Event - Manual Alarm

Demonstrate usage of Red Risk Button.

5.1 Pre-requisites

Before starting this demo, please ensure the following.

1. The phones and the account are setup correctly as per the Demo Setup section
2. ERC phones should be ready as described in the Demo Setup section
3. The LW phone is in "Simple mode"

5.2 Demo Steps

Here are the demo steps

1. The LW phone should be on the idle screen. The keypad can be locked

2. Press and hold the red button on the left side of the phone for 2 seconds

3. The icon on the status bar to switch to the “Alarm mode icon”  . This icon indicates that the phone has switched to Alarm mode

4. The LW phone will automatically place an outgoing GSM call to the first ERC number. There is no playback of dial tone or ringing tone

5. If there is no answer for 30 seconds, the LW phone will disconnect the ongoing call attempt and place an outgoing GSM call to the second ERC phone number

6. If there is no answer for 30 seconds, the LW phone will disconnect the ongoing call attempt and place an outgoing GSM call to the first ERC phone number again!

7. Accept the call on the ERC phone. The call will be on the loud speaker

8. On the portal, monitor the messages exchanged between the LW phone and server

9. Notice a health report message from the phone to the server. This is the alarm message that the sent by the phone upon “Red button” press

10. Disable the Alarm mode by changing the mode to “Simple” using the Java Client

5.3 Conclusion

This demonstrates how the manual alarm (red risk event) works. The phone switches to the alarm mode, places an outgoing call to the ERC, sends alarm to the server.

6 Tracking

In this demo, we demonstrate the tracking the LW handset

6.1 Pre-requisites

Before starting this demo, please ensure the following.

1. The phone and the account are setup correctly as per the Demo Setup section.

2. You should have access to a PC that has Firefox installed and which can connect to internet.

3. The LW phone is in “Simple mode”.

6.2 Demo Steps

Here are the steps to be executed to give this demo.

1. Launch the “Lone Worker Configuration” Java Client

2. Scroll down and open the menu item “Send Location”
3. Ensure that Enable is set to “Yes”
4. Change the “Send Interval” to 60 for our demo; Unit is seconds
5. Press the down navigation key to the next editable field. Now choose OK (Left soft key)
6. Choose Menu (Left soft key) and choose Save
4. Choose Menu (Left soft key) and choose “Set Mode”. Choose “Tracking” and press OK.
7. Exit the application
8. Notice the LW app icon changed to “Tracking mode icon”  . This indicates that the Lone Worker client is in “Tracking mode”
9. On the portal, monitor the messages exchanged between the LW phone and server
10. You should be able to see location report messages from the phone to the server. Refresh after a minute to observe the subsequent messages
11. Set the LW app mode back to “Simple mode” by using the Java Client
12. Set the interval back to 600 secs by launching the “Lone Worker Configuration” Java Client
    a. Scroll down and open the menu item “Send Location”
    b. Change the “Send Interval” back to 600
    c. Press the down navigation key to the next editable field. Now choose OK (Left soft key)
    d. Choose Menu (Left soft key) and choose Save
    e. Exit the application
13. The LW phone is in “Simple mode”

6.3 Conclusion

This demonstrates how the tracking works.

7 Man Down Alarm

In this demo, we demonstrate the usage of the man down alarm.

7.1 Pre-requisites

Before starting this demo, please ensure the following

1. The phones and the account are setup correctly as per the Demo Setup section
2. You should have access to a PC that has Firefox installed and which can connect to internet
3. ERC phones should be ready as described in the Demo Setup section
4. The LW phone is in “Simple mode”

7.2 Demo Steps

Here are the steps to be executed to give this demo.

1. Change the mode to “Mandown” using the Java Client
2. Make sure the LW app icon has switched to “Mandown mode icon”  . This indicates that the Lone Worker client is in Man Down mode
3. Keep the phone face up, flat on your palm, toss the phone up without spinning in the air for about a foot and catch it on its way down
4. The phone will start ringing an alarm. The display indicates that the phone fell, with a prompt “Do you need help?” with count down timer
5. Press cancel (right soft key) to cancel the alarm
6. Repeat the steps, from step 5 and let the timer expire
7. The LW app icon on the status bar should switch to “Alarm mode icon”. This is an indication that the phone has got into Alarm mode.
8. The phone will automatically call the first ERC phone number
9. Accept the call from the ERC phone. The call will be on the loud speaker
10. On the portal, monitor the messages exchanged between the LW phone and server
11. Notice a health report message from the phone to the server. This is the alarm message that the sent by the phone upon “Mandown event” press
12. Disable the Alarm mode by changing the mode to “Simple” using the Java Client

7.3 Conclusion

This demonstrates how the free fall monitoring of man down works. The phone gets into alarm mode. It calls to the ERC. It sends alarm to the server. The alarm can be cancelled from the “Lone Worker Configuration” Java client.

8 Remote Configuration

In this demo, we will show that the system can be configured from the server. We will change the phone's mode from the server to show this.

8.1 Pre-requisites

Before starting this demo, please ensure the following.

1. The phone and the account are setup correctly as per the Demo Setup section.
2. You should have access to a PC that has Firefox installed and which can connect to internet.
3. The LW phone is in "Simple mode".

8.2 Demo Steps

Here are the steps to be executed to give this demo.

1. On the portal, choose "User Config" in the left menu list
2. Enter the MSISDN in top right search box and click on the magnifier icon to filter
3. Click on the "Utilities" icon to the right of the mobile phone icon
4. Choose "View/Edit Config". Click on Edit button. Scroll down to "LoneWorkerMode". Choose "Tracking". Click Save
5. Click on the "Send Request" icon in the shape of a mobile phone
6. Choose "ChangeConfig Request". Check the checkbox under "Change Config" against "LoneWorkerMode". Click Send
7. It should display the success popup screen
8. Notice the LW app icon changed to "Tracking mode icon". This indicates that the Lone Worker client is in "Tracking mode"
9. On the portal, monitor the messages exchanged between the LW phone and server
10. You can see the changeconfig messages which are used to change the mode
11. Change the mode back to "Simple" using the Java Client

8.3 Conclusion

This demonstrates that the mode of the Lone Worker client can be changed from the server by sending an SMS to the phone. The phone sends reports to the server through HTTP.