

FortiVoice™ Integration with Singlewire's InformaCast Paging and Notification Solution

VERSION 1.0.0

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FortiVoice™ Enterprise Technical Notes for InformaCast Integration

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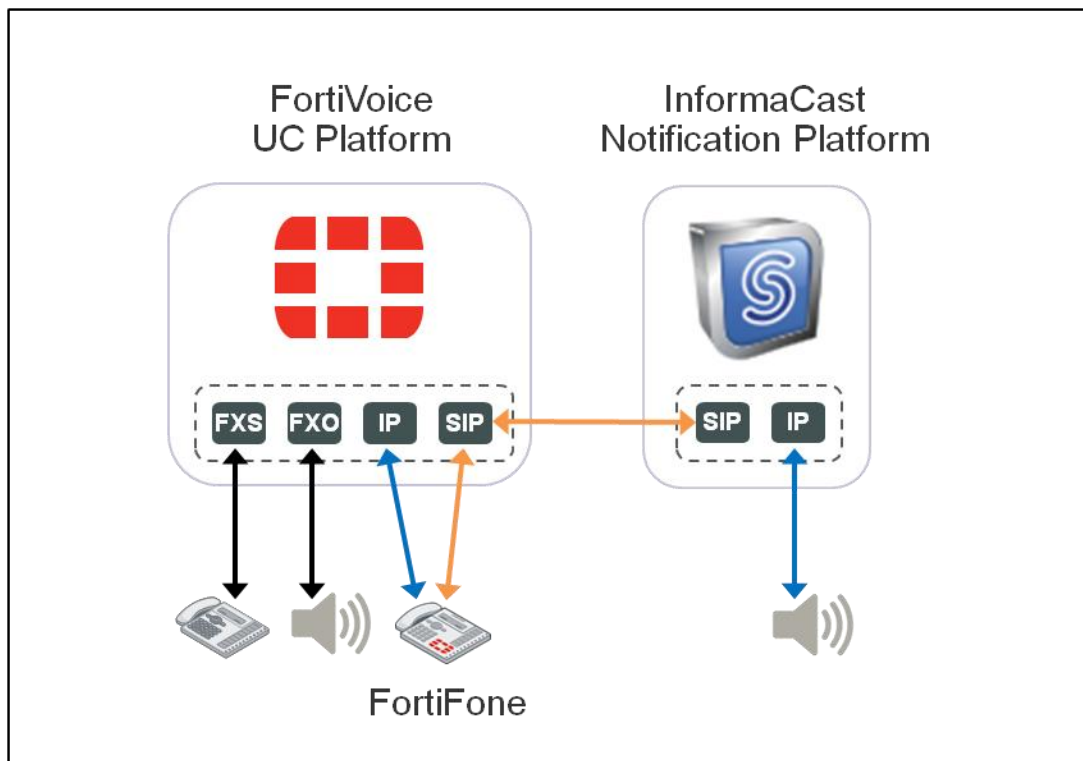
Introduction

This document provides a functional overview of the FortiVoice-InformaCast Message Notification solution for delivering real-time text and audio message notification to FortiFones - Fortinet IP desktop phones.

FortiVoice is a unified voice-over-IP communications platform that is designed to deliver business-class PBX features and services to enterprise and SMB customers. FortiVoice offers a full range of communications products and solutions, comprised of core communications servers, gateways and end-point devices such as IP desktop phones and softphones.

Singlewire's InformaCast notification software is an advanced notification application that is designed to deliver mass notification services to on-site and off-site devices. The integration of a notification centric platform with a telephony centric platform provides a powerful notification solution that extends device coverage across both data and voice networks.

Figure 1 Reference FortiVoice-InformaCast Solution Diagram



Message Notification Overview

The FortiVoice-InformaCast message notification solution is implemented using the following features and applications on each platform:

Feature / Application	Platform	
	FortiVoice	InformaCast
Transport	IP SIP Trunk	IP SIP Interface (LPI)
Call Routing	Dial Plan	DialCast
Message Group	Page/Message Group	Recipient Group
Message(s)	Audio and/or text*	Audio and/or text
Recipient	Extensions	IP Speaker

Transport - A SIP trunking interface on the FortiVoice UC platform is configured to connect with Informacast's Legacy Paging Interface (LPI) using a standard SIP protocol. A SIP trunk and server group is defined on each of the respective platforms to provide a logical voice-over-IP connection for the delivery and receiving of calls and notification events.

Call Routing - A Dial Plan on the FortiVoice UC platform is configured to route calls to and from the InformaCast platform. Similarly, InformaCast uses a DialCast feature to configure a dialed pattern match to trigger a message broadcast.

Message Group - A group of endpoints configured to receive message(s).

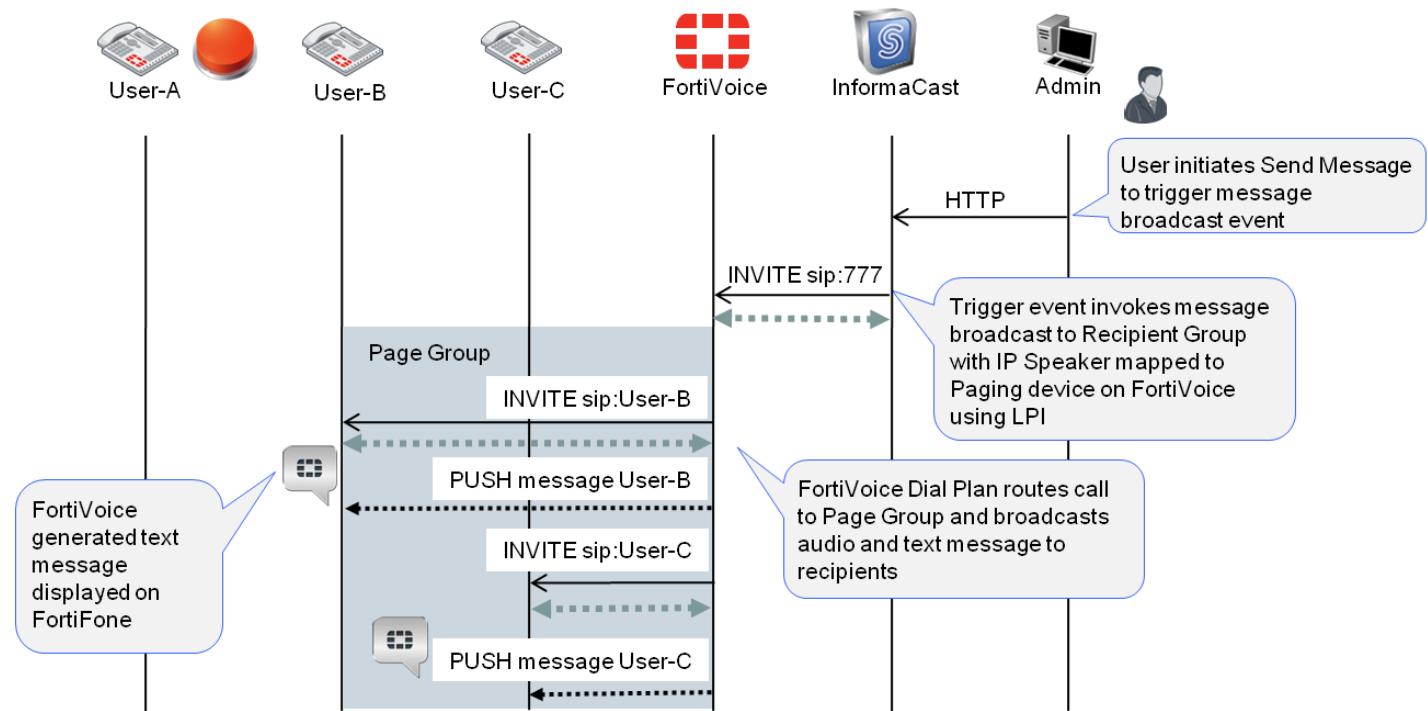
Message(s) - Custom text and audio (pre-recorded or live) message types for broadcasting. * Note: Text message broadcast to FortiFones is a feature provided by the FortiVoice platform.

Recipient - Endpoint configured to receive and display/play message(s).

The converged message notification solution provides an integrated access for public-address announcements, emergency broadcasts, and text notifications over multi-channel communications technologies, including IP speakers, IP phones, legacy paging systems, cellular SMS/text messaging, and other supported channels. The following section provides some general use cases to illustrate FortiFone as a recipient device.

Use Case 1: Message Notification Triggered from InformaCast

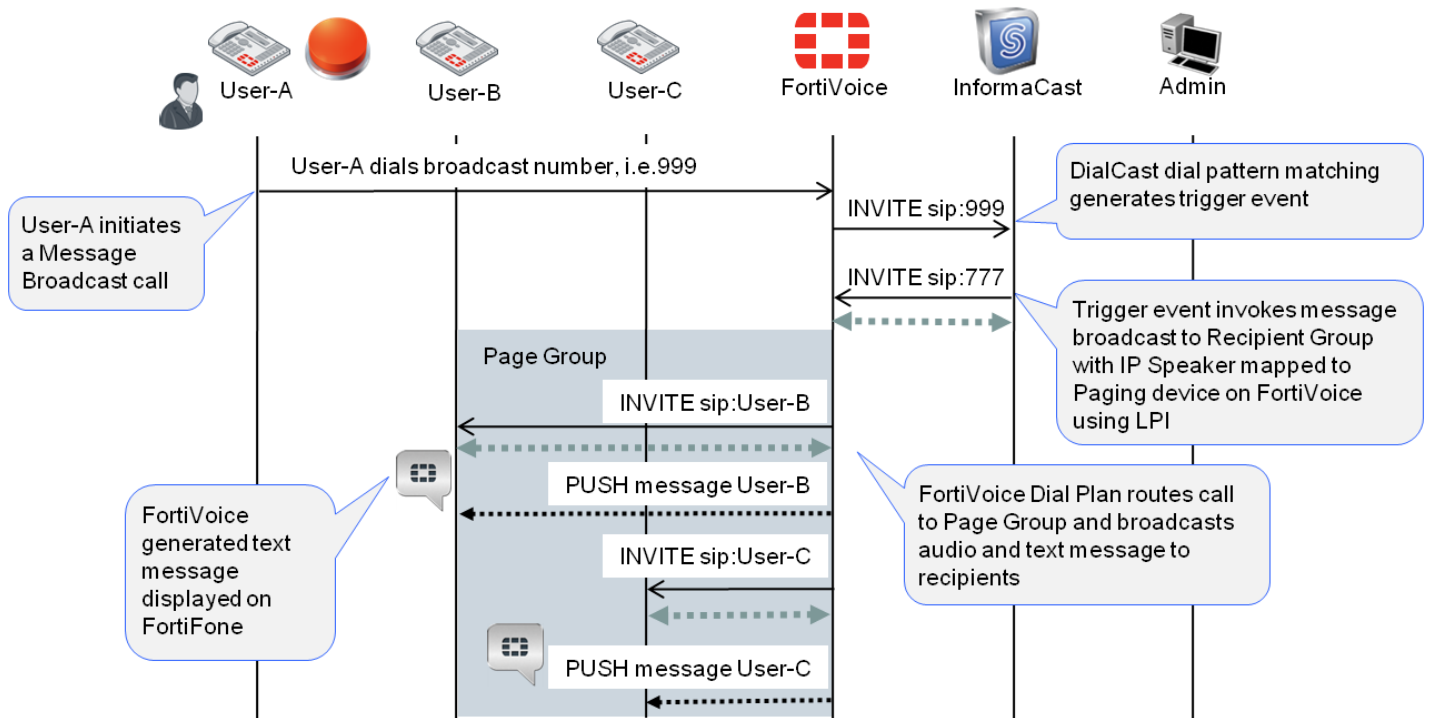
Figure 2 Message Notification Call-Flow Triggered from InformaCast



- ❖ An authorized User initiates a message broadcast event using the InformaCast Web Send Message feature.
 - The Send Message trigger invokes a message broadcast to the selected Recipient Group of IP Speaker mapped to a FortiVoice service number defined as a LPI Paging device.
 - InformaCast sends a SIP INVITE request message to FortiVoice for call processing. Once the call is successfully established with the recipient Page/Message Group, a pre-recorded audio message is streamed from InformaCast to FortiVoice and then broadcast to the FortiFones. If the text messaging option is configured as part of the FortiVoice Page/Message Group feature, the page will send a simultaneous text message broadcast to the FortiFones.

Use Case 2: Message Notification Triggered from FortiFone

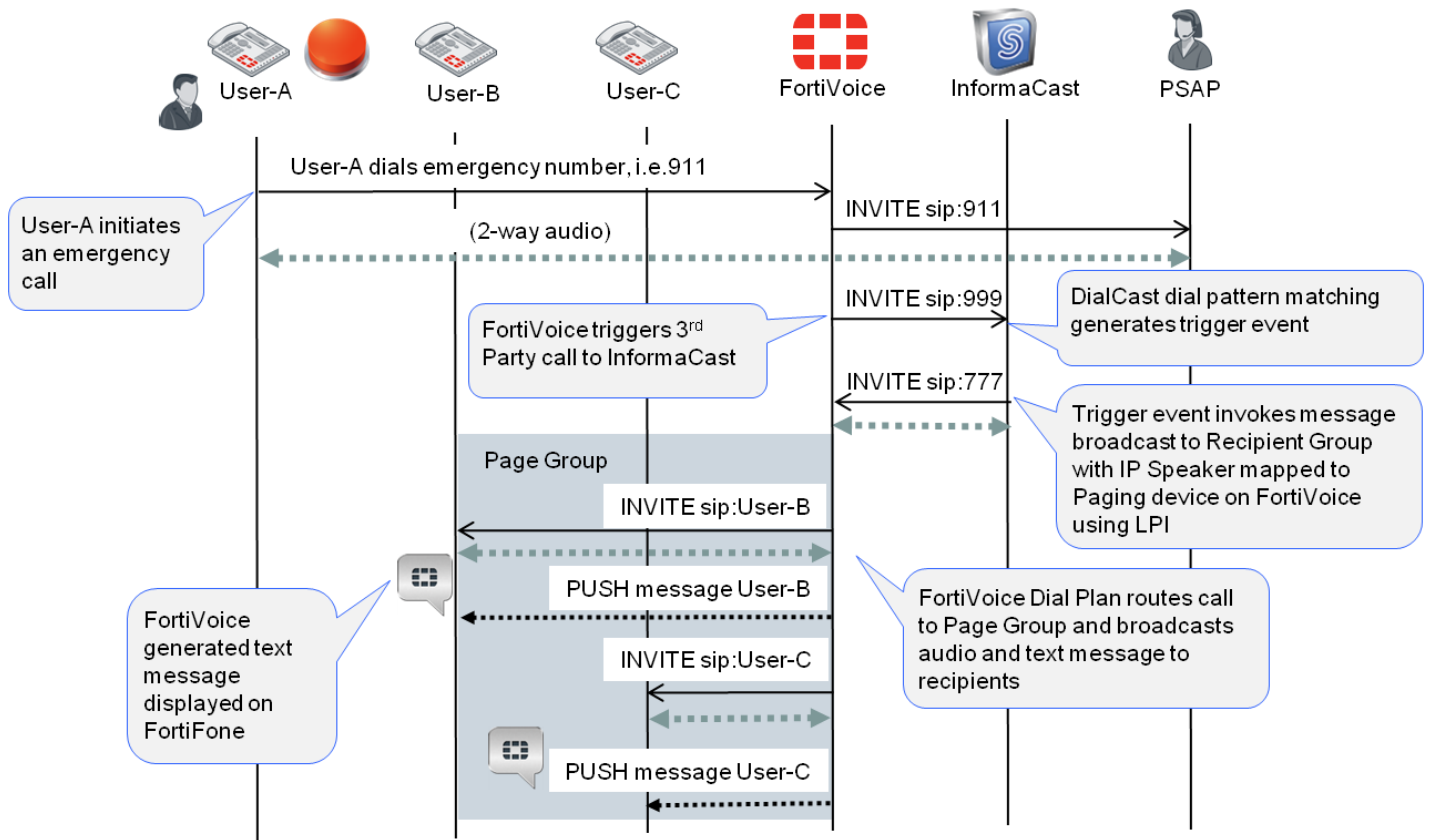
Figure 3 Message Notification Call-Flow Triggered from FortiFone



- ❖ An authorized phone User-A dials a broadcast number or presses a dedicated SIP Panic button.
 - FortiVoice routes call to InformaCast using a SIP INVITE request message for further call processing. InformaCast DialCast feature completes Request URI matching on the dialed pattern to generate a trigger event.
 - The DialCast trigger invokes a message broadcast to the selected Recipient Group of IP Speaker mapped to a FortiVoice service number defined as a LPI Paging device.
 - InformaCast sends a SIP INVITE request message to FortiVoice for call processing. Once the call is successfully established with the recipient Page/Message Group, a pre-recorded audio message is streamed from InformaCast to FortiVoice and then broadcast to the FortiFones. If text messaging option is configured as part of the FortiVoice Page/Message Group feature, the page will send a simultaneous text message broadcast to the FortiFones.

Use Case 3: Message Notification Triggered from 3rd Party Call

Figure 4 Message Notification Call-Flow Triggered from 3rd Party Call

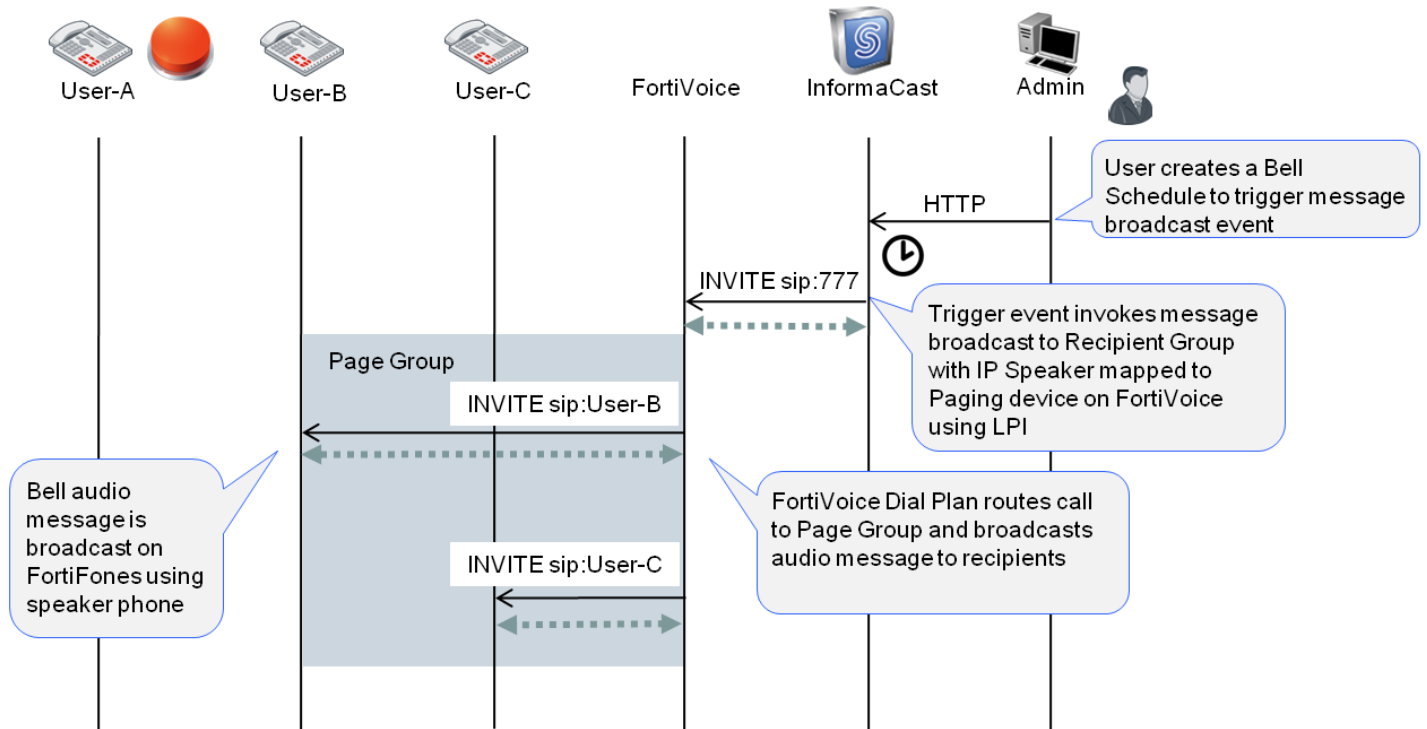


❖ Phone User-A dials emergency 9-1-1 call.

- FortiVoice routes call to Service Provider and connects to a Public Safety Answering Point (PSAP) and speaks with an emergency responder.
- FortiVoice triggers a 3rd Party Call to InformaCast using a SIP INVITE request message for further call processing. InformaCast DialCast feature completes Request URI matching on the dialed pattern to generate a trigger event.
- The DialCast trigger invokes a message broadcast to the selected Recipient Group of IP Speaker mapped to a FortiVoice service number defined as a LPI Paging device.
- InformaCast sends a SIP INVITE request message to FortiVoice for call processing. Once the call is successfully established with the recipient Page/Message Group, a pre-recorded audio message is streamed from InformaCast to FortiVoice and then broadcast to the FortiFones. If the text messaging option is configured as part of the FortiVoice Page/Message Group feature, the page will send a simultaneous text message broadcast to the FortiFones.

Use Case 4: InformaCast Bell Scheduler

Figure 5 Message Notification Call-Flow Triggered from InformaCast Bell Schedule



- ❖ An authorized User creates a scheduled message broadcast event using the InformaCast Bell Schedule feature.
 - At the scheduled time, a Bell Schedule Ring List triggers a message broadcast to the selected Recipient Group of IP Speaker mapped to a FortiVoice service number defined as a LPI Paging device.
 - InformaCast sends a SIP INVITE request message to FortiVoice for call processing. Once the call is successfully established with the recipient Page Group, a pre-recorded audio message is streamed from InformaCast to FortiVoice and then broadcast to the FortiPhones.


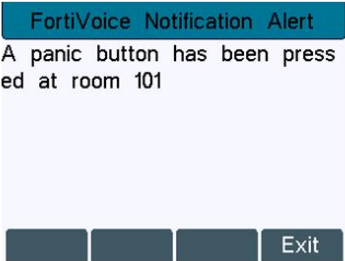
Summary

The FortiVoice-InformaCast message notification solution allows FortiFones to be a part of a recipient group of devices that is capable of receiving an audio and/or text message from a mass notification service.

Audio messages are delivered to FortiFones using FortiVoice's IP Paging protocols.

Text messages are delivered to FortiFones using FortiVoice's IP messaging protocol. Messages are displayed on the phone's LCD screen without user interaction or management and are automatically dismissed after timeout.

Figure 6 Example Text Message Pop-up Displayed on FortiFones

FortiFone Model	Example Display
 FON-375	
 FON-570	



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