



# Integración de Cisco Unified Communications Manager con el servidor de Paginación (Cisco Paging)

Cisco Support Community Expert Series Webcast

**Alejandra Gonzalez Romero**

Ingeniero de Soporte – Cisco TAC

Agosto 16 de 2016

# Pregunte al Experto con: Alejandra

## Integración de Cisco Unified Communications Manager (CUCM) con el servidor de Paginación (Cisco Paging)

Si tiene dudas adicionales Alejandra nos ayudará a responder sus preguntas a partir de hoy hasta el viernes 26 de Agosto del 2016 en:

<https://supportforums.cisco.com/es/discussion/13094836>



**Alejandra Gonzalez**  
Customer Support  
Engineer

# Cisco Support Community Webcast en Portugués

Protocolo de roteamento Border Gateway Protocol (BGP)

Miércoles, 24 de Agosto del 2016

<https://supportforums.cisco.com/pt/event/13094606>



**Juan Carlos Rangel**

Customer Support Engineer

# Cisco Support Community en Ingles – Pregunte al Experto

**How to configure and troubleshoot EIGRP, OSPF and BGP**

Disponible hasta el dia 19 de Agosto del 2016

<https://supportforums.cisco.com/discussion/13092801/ask-expert-how-configure-and-troubleshoot-eigrp-ospf-and-bgp>



**Hector Gustavo Serrano**

Customer Support Engineer



# Cisco Support Community Spanish – Pregunte al experto

**Troubleshooting en Catalyst 6000, 6500  
(Supervisoras 32, 720, y 2T)**

Disponible hasta el día 26 de Agosto del 2016

<https://supportforums.cisco.com/es/discussion/13095326>



**Eduardo Cruz**

Technical Support Engineer

# Cisco Support Community Portuguese – Pergunte al experto

**Quintas Quinze:Protegendo a Rede Contra Ameaças com o Cisco AMP**

Disponível hasta el 26 de Agosto del 2016

<https://supportforums.cisco.com/pt/discussion/13093601>



**Flávio Correa Da Costa**

Technical Support Engineer

# Califique el contenido de la Comunidad de Soporte en Español.

Ahora puede calificar discusiones, documentos, blogs y videos!!...



Esto es con el fin de que nos ayude a distinguir contenido de calidad y también para reconocer los esfuerzos de los integrantes de la Comunidad de Soporte de Cisco en español.

# Reconocimientos en la Comunidad

El reconocimiento al **“Participante Destacado de la Comunidad”** está diseñado para reconocer y agradecer a aquellas personas que colaboran con contenido técnico de calidad y ayudan a posicionar nuestra comunidad como el sitio número uno para las personas interesadas en tecnología Cisco.

 **Participantes Destacados**  
Premios de la Comunidad

	Premio "El Favorito" Marzo del 2015. Adrian Saavedra
	Premio "Mejor Publicación" Enero 2015. Fernando Téllez
	Premio "El Favorito" Noviembre 2014. Daniel Ordonez
	Premio "El Favorito" Mayo 2014. Leo Salciedo
	Premio "El Favorito" Febrero 2014. Luis Ramirez
	Premio "El Novato" Enero 2014. Nacho Martin
	Premio "Mejor Publicación" Diciembre del 2013. Julio Carvajal
	Premio "El Favorito" Noviembre del 2013. Adrian Saavedra
	Premio "El Novato" Octubre del 2013. Oscar Quevedo

# Gracias por su asistencia el día de hoy

La presentación incluirá algunas preguntas a la audiencia.

Le invitamos cordialmente a participar activamente en las preguntas que le haremos durante la sesión



# Expert Series Webcast

## Integración de Cisco Unified Communications Manager (CUCM) con el servidor de Paginación (Cisco Paging)

**Alejandra Gonzalez** es una ingeniera de soporte en el equipo de CUCM (Cisco Unified Communications Manager) en el centro RTP, NC, USA. Ha colaborado en Cisco durante 8 años, inicio su carrera en el TAC de México brindando soporte en voz, CUCM y UCCX. Posteriormente se integró al equipo e CUCM en el centro de RTP donde ha colaborado en los últimos 4 años. Alejandra es una ingeniera en sistemas graduada del Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM), realizo una maestría referente a tecnologías de internet en Australia. Cuenta con las certificaciones de CCIE de voz y colaboración.



**Alejandra Gonzalez**

## Tema: Integración de Cisco Unified Communications Manager (CUCM) con el Servidor de Paginación (Cisco Paging)

### Participación del experto



**Luis Yanes**  
Customer Support Engineer

# Gracias por estar con nosotros hoy día!



Si desea obtener la presentación de este evento diríjase a:

[https://supportforums.cisco.com/es/document/13096331?utm\\_medium=referral&utm\\_source=Webcast&utm\\_campaign=AugustSlides](https://supportforums.cisco.com/es/document/13096331?utm_medium=referral&utm_source=Webcast&utm_campaign=AugustSlides)







# ¡Ahora puede realizar sus preguntas al panel de expertos!

Use el panel de preguntas y respuestas (Q&A) para preguntar a los expertos ahora. Ellos empezarán a responder.



# Integración de Cisco Unified Communications Manager con el servidor de Paginación

Alejandra Gonzalez Romero

Agosto 2016

# Agenda

- Introducción
- Infraestructura
- Requerimientos
- Versiones de informacast
- Instalación del servidor de Paginación
- Configuración del servidor de Paginación
- Configuración de Cisco Unified Communications Manager
- Diagnostico y resolución de problemas

# Encuesta Pregunta 1

¿Qué versión de CUCM tienes instalada?

1. 4.x/5.x/6.x
2. 7.x
3. 8.x
4. 9.x/10.x
5. 11.x

# Introducción





# Introducción

- El servidor de Paginación de Cisco (Cisco Paging/informacast/singlewire) permite mandar notificaciones masivas a diferentes dispositivos de telefonía
- Este servidor de informacast/singlewire se incluye al adquirir Cisco Unified Communications Manager 9.0 o versiones posteriores
- Cisco TAC proporciona soporte al servidor de Informacast/Singlewire bajo las siguientes condiciones:
  - El servidor de Informacast debe ser una nueva instalación con una versión 8.3 o posterior
  - La mínima versión de CUCM soportada con informacast es 8.5 (excepto informacast 11.5+)
  - El servidor de Informacast debe correr en modo “básico”





# Introducción

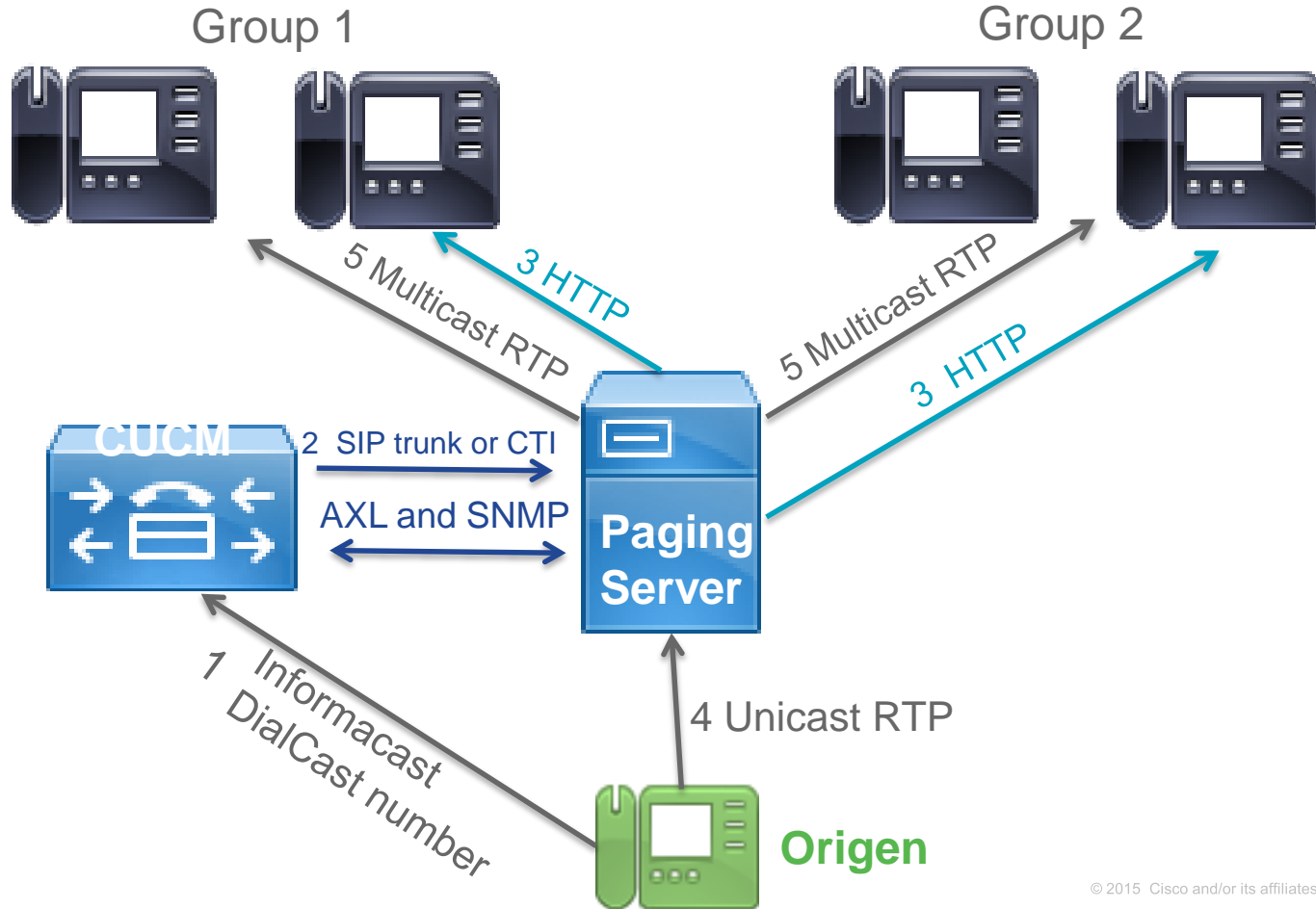
- El modo básico de informacast permite enviar audio en tiempo real con un límite de 50 teléfonos IP al mismo tiempo.
- Cisco TAC soporta solamente teléfonos IP. Teléfonos análogos , bocinas no están soportadas en el modo básico.
- Notificaciones en texto o notificación como servicios en los teléfonos no están soportadas en el modo básico.

# Infraestructura

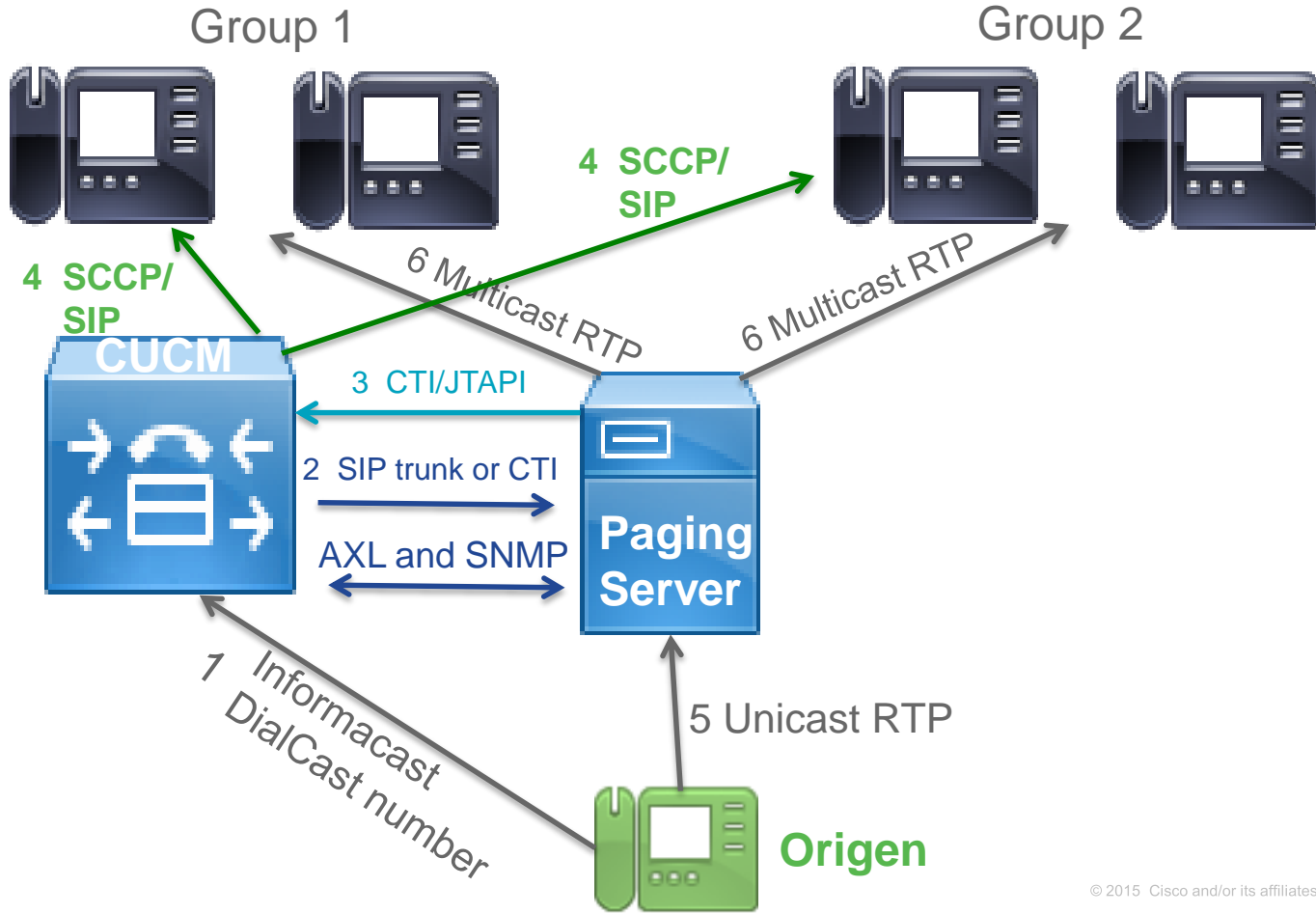




# Infraestructura - HTTP



# Infraestructura - CTI



# Requerimientos





# Requerimientos

- Vmware ESXi 4.0 o posterior (80 GB disco, 4 GB RAM, 1 CPU)
- InformaCast 8.5+
- Exploradores soportados: Firefox 15, Chrome 18, IE 9
- Red habilitada con multicast entre el servidor de Informacast y los teléfonos
- CUCM 8.5, 8.6, 9.x, 10.x, 11.x
- Teléfonos soportados (<http://www.singlewire.com/compatibility-matrix.html>)
- “Web Access” o “CTI allow” en los teléfonos
- Habilitar SNMP en todos los servidores de CUCM
- Habilitar el servicio de AXL y el servicio de CTI manager
- Informacast soporta solamente g711.

# Versiones de Informacast





# Versiones de informacast

- **8.5**
  - CUCM 8.5, 8.6, 9.x, 10.0
  - Nuevos teléfonos soportados: 7821, 7841, 7861, 8831. 3905 (sw. 9.4.1+)
- **9.0.x**
  - CUCM 8.5, 8.6, 9.x, 10.0, 10.5
  - JTAPI (Send commands to Phones by JTAPI)
  - Vmware esxi 5.5
  - Nuevos telefonos: 88xx
  - Log Help > Support > Log tool





# Versiones de informacast

- **9.1.x**
  - Nuevo teléfono soportado 8811
- **10.0**
  - CUCM 8.5, 8.6, 9.x, 10.x, 11.0.1



# Versiones de informacast

- **11.0.5**
  - CUCM 8.5, 8.6, 9.x, 10.x, 11.0.1
  - Nueva contraseña de seguridad. Cuentas de OS/App
  - Por defecto el usuario es “admin”
  - changeMe se elimina
  - Se agrega opción de E.164
  - Vmware ESXi 6.0
  - Nueva versión de SNMP (v3)





# Versiones de informacast

- **11.5.1**
  - Soporta CUCM 11.5.1
  - Soporta teléfonos 8851
  - Ya no soporta CUCM 8.5, 8.6
  - Soporta SIP sobre TLS + SRTP (CUCM 10.x+)
  - SRTP teléfono > Informacast RTP (multicast) informacast > teléfono

# Encuesta

## Pregunta 2

¿Actualmente tienes instalado el servidor de Paginación de Cisco?

1. SI
2. NO

# Instalación



# Instalación



- Importar el archivo OVA en la aplicación de vmware ESXi

172.16.2.5 - vSphere Client

File Edit View Inventory Administration Plug-ins Help

New  
Deploy OVF Template...  
Export  
Report  
Browse VA Marketplace...  
Print Maps  
Exit

js-ic82  
js-ic-win-br  
js-ic-win-hq  
Nick-Singlewire-InfomaCas  
pl-hq-sw-exva-01-172.16.3  
pl-hq-sw-ms-01-172.16.3.2  
shared-CUCM80  
shared-CUP  
shared-Windows 2008 Don

Inventory Inventory

js-ic-win-br

Getting Started Summary Resource Allocation Performance

### What is a Virtual Machine?

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtual machine is called a guest operating system.

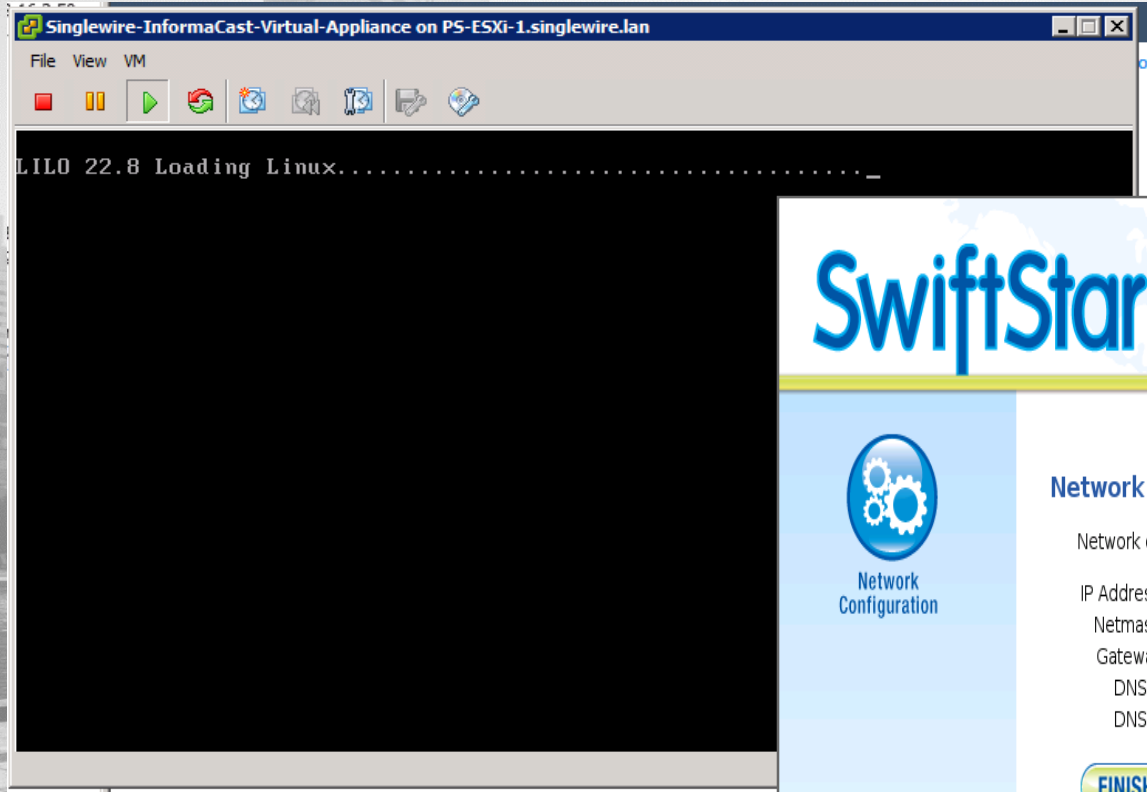
Because every virtual machine is an isolated computing environment, you can use virtual machines as desktop workstation environments, as testing environments, or to consolidate server applications.

Virtual machines run on hosts. The same host can run many virtual machines.

### Basic Tasks

- ▶ Power on the virtual machine
- 📄 Edit virtual machine settings

# Instalación



## SwiftStart



Network  
Configuration

### Network Configuration

Network configuration was successful.

IP Address: 172.16.3.100  
Netmask: 255.255.255.0  
Gateway: 172.16.3.1  
DNS 1: 172.16.2.50  
DNS 2:



# Configuración en CUCM







# Configuración en CUCM

- Activar servicios
- Configurar “authentication URL”
- Configurar SNMP
- Crear Region/Device Pool con 64kbps
- Particiones y CSS (opcional)
- Definir el numero (DN) a asignar para informacast
- Usuario de aplicación
- Configuración del teléfono (web access/cti, speaker)

# Configuración en CUCM



**Cisco Unified Serviceability**  
For Cisco Unified Communications Solutions

Alarm ▾ Trace ▾ Tools ▾ Snmp ▾ CallHome ▾ Help ▾

### Service Activation

Save Set to Default Refresh

**Status:**  
 Ready

**Select Server**

Server\*

Check All Services

#### CM Services

	Service Name	Activation Status
<input checked="" type="checkbox"/>	Cisco CallManager	Activated
<input checked="" type="checkbox"/>	Cisco CTIManager	Activated

#### Performance and Monitoring Services

	Service Name	Activation Status
<input checked="" type="checkbox"/>	Cisco CallManager SNMP Service	Activated

#### Database and Admin Services

	Service Name	Activation Status
<input checked="" type="checkbox"/>	Cisco AXL Web Service	Activated

- Activar servicios







# Configuración en CUCM

- Configurar “URL authentication” y “Secured authentication URL”

System > Enterprise Parameters

The screenshot shows the Cisco Unified CM Administration web interface. At the top, there is a navigation menu with items: System, Call Routing, Media Resources, Advanced Features, Device, Application, User Management, Bulk Administration, and Help. Below the navigation menu is the "Enterprise Parameters Configuration" section. This section contains several action buttons: Save, Set to Default, Reset, and Apply Config. Underneath, there are two configuration sections:

- Phone URL Parameters**: Includes a link for "URL Authentication" and a text input field containing the URL: `http://14.48.35.20:8081/InformaCast/phone/auth`.
- Secured Phone URL Parameters**: Includes a link for "Secured Authentication URL" and a text input field containing the URL: `http://14.48.35.20:8081/InformaCast/phone/auth`.



# Configuración en CUCM

- Configurar SNMP
  - En todos los servidores con el servicio de CCM activo
  - V2c community string, read-only
  - DNS (opcional)

# Configuración en CUCM



- Configurar SNMP

Cisco Unified Serviceability > SNMP > V1/V2 > Community String

➤ Seleccionar un servidor, “Find”

The screenshot shows the Cisco Unified Serviceability web interface. At the top, the Cisco logo and 'Cisco Unified Serviceability For Cisco Unified Communications Solutions' are on the left. On the right, there is a navigation bar with 'Navigation', a dropdown menu set to 'Cisco Unified Serviceability', and a 'Go' button. Below this, the user is logged in as 'administrator' with links for 'About' and 'Logout'. A secondary navigation bar contains links for 'Alarm', 'Trace', 'Tools', 'Snmp', 'CallHome', and 'Help'. The main heading is 'SNMP Community String Configuration'. Under 'Search Options', there is a search form with the text 'Find Community Strings where Name' followed by a dropdown menu set to 'begins with', an empty text input field, the text 'Server\*' followed by a dropdown menu set to '14.48.35.10--CUCM Voice/Video', and a 'Find' button. Below the search form, the 'Search Results' section displays the message: 'No active query. Please enter your search criteria using the options above.' At the bottom left, there is an information icon followed by the text '\* - indicates required item.'



# Configuración en CUCM



- Configurar SNMP

- “Add New”

- Community String

- Read Only

- Apply to all Nodes

- Save

The screenshot shows the Cisco Unified Serviceability interface for configuring an SNMP Community String. The page title is "SNMP Community String Configuration". At the top, there are navigation menus for Alarm, Trace, Tools, Snmp, CallHome, and Help. Below the title bar, there are buttons for Save, Clear All, and Cancel. The configuration is organized into several sections:

- Status:** Shows "Status : Ready".
- Server\*:** A dropdown menu set to "172.18.172.218--CUCM Voice/Video".
- Community String Information:** A text input field for "Community String Name\*" containing "informacast".
- Host IP Addresses Information:** Two radio buttons: "Accept SNMP Packets from any host" (selected) and "Accept SNMP Packets only from these hosts". The second option includes a "Host IP Address" input field with an "Insert" button and a "Host IP Addresses" list with a "Remove" button.
- Access Privileges:** A dropdown menu for "Access Privileges\*" set to "ReadOnly". A note states: "Notify access privilege is required in order to configure Notification Destinations."
- Apply To All Nodes:** A checked checkbox.
- Buttons:** Save, Clear All, and Cancel buttons at the bottom.
- Legend:** An information icon followed by "\* - indicates required item."

# Configuración en CUCM



- Configuración de regiones (64 kbps con todas las regiones)  
System > Region

## Region Configuration

Related Links: [Back To Find/List](#)

Save Delete Reset Apply Config Add New

### Status

- Update successful
- Click on the Reset button to have the changes take effect.

### Region Information

Name\*

### Region Relationships

Region	Audio Codec Preference List	Maximum Audio Bit Rate	Maximum Session Bit Rate for Video Calls
Default	Use System Default (Factory Default low loss)	G.711	384
informacast	Use System Default (Factory Default low loss)	G.711	384

NOTE: Regions not displayed                      Use System Default                      Use System Default                      Use System Default

### Modify Relationship to other Regions

Regions	Audio Codec Preference List	Maximum Audio Bit Rate	Maximum Session Bit Rate for Video Calls
<input type="text" value="Default"/> <input type="text" value="informacast"/>	<input type="text" value="Keep Current Setting"/>	<input type="text" value="64 kbps (G.722, G.711)"/>	<input checked="" type="radio"/> Keep Current Setting <input type="radio"/> Use System Default <input type="radio"/> None <input type="text" value=""/> kbps

# Configuración en CUCM



- Configuración de Device Pool

System > Device Pool

The screenshot shows the Cisco Unified CM Administration interface for Device Pool Configuration. The page title is "Cisco Unified CM Administration For Cisco Unified Communications Solutions". The navigation menu includes System, Call Routing, Media Resources, Advanced Features, Device, Application, and User Management. The main content area is titled "Device Pool Configuration" and includes a toolbar with Save, Delete, Copy, Reset, Apply Config, and Add New buttons. The "Status" section shows a message: "Add successful" and a note: "Click on the Reset button to have the changes take effect." The "Device Pool Information" section shows "Device Pool: Informacast (0 members\*\*)". The "Device Pool Settings" section includes fields for Device Pool Name\* (Informacast), Cisco Unified Communications Manager Group\* (Default), Calling Search Space for Auto-registration (< None >), Adjunct CSS (< None >), Reverted Call Focus Priority (Default), Local Route Group (< None >), and Intercompany Media Services Enrolled Group (< None >). The "Roaming Sensitive Settings" section includes Date/Time Group\* (CMLocal) and Region\* (Informacast).

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

System > Call Routing > Media Resources > Advanced Features > Device > Application > User Management

### Device Pool Configuration

Save Delete Copy Reset Apply Config Add New

**Status**

- Add successful
- Click on the Reset button to have the changes take effect.

**Device Pool Information**

Device Pool: Informacast (0 members\*\*)

**Device Pool Settings**

Device Pool Name\* Informacast

Cisco Unified Communications Manager Group\* Default

Calling Search Space for Auto-registration < None >

Adjunct CSS < None >

Reverted Call Focus Priority Default

Local Route Group < None >

Intercompany Media Services Enrolled Group < None >

**Roaming Sensitive Settings**

Date/Time Group\* CMLocal

Region\* Informacast





# Configuración en CUCM

- Configuración del numero asignado a informacast
  - CTI Route Point o
  - SIP trunk

# Configuración en CUCM



- Configuración del número de informacast por CTI Route Point

Device > CTI Route Point  
Add New

➤ (Region/DP “g711”)

The screenshot shows the Cisco Unified CM Administration interface for configuring a CTI Route Point. The page title is "Cisco Unified CM Administration For Cisco Unified Communications Solutions". The navigation menu includes System, Call Routing, Media Resources, Advanced Features, Device, Application, and User Management. The current page is "CTI Route Point Configuration".

At the top of the configuration page, there are several action buttons: Save, Delete, Copy, Reset, Apply Config, and Add New. Below these buttons is the "Device Information" section, which contains the following fields:

Registration:	Registered with Cisco Unified Communications Manager 14.48.35.10
IPv4 Address:	14.48.35.20
<input checked="" type="checkbox"/> Device is trusted	
Device Name*	Paging
Description	Paging
Device Pool*	g711 <a href="#">View Details</a>
Common Device Configuration	< None > <a href="#">View Details</a>
Calling Search Space	< None >
Location*	Hub_None
User Locale	< None >
Media Resource Group List	< None >
Network Hold MOH Audio Source	< None >
User Hold MOH Audio Source	< None >
Use Trusted Relay Point*	Default
Calling Party Transformation CSS	< None >
Geolocation	< None >

At the bottom of the "Device Information" section, there is a checkbox labeled "Use Device Pool Calling Party Transformation CSS" which is checked.

Below the "Device Information" section is the "Association" section, which shows a list of lines:

- 7718 Line [1] - 5555 (no partition)
- 7719





# Configuración en CUCM

- Configuración del numero de informacast por SIP trunk  
Device > SIP trunk Add New

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

administrato

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾

### Trunk Configuration

Save

**Status**  
 Status: Ready

**Device Information**

Product: SIP Trunk  
Device Protocol: SIP  
Trunk Service Type: None(Default)  
Device Name\*:   
Description:   
Device Pool\*:

**SIP Information**

**Destination**

Destination Address is an SRV

	Destination Address	Destination Address IPv6	Destination Port
1*	<input type="text" value="14.48.35.20"/>	<input type="text"/>	<input type="text" value="5060"/>

# Configuración en CUCM



- Configuración del numero de informacast por SIP trunk

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾

### Route Pattern Configuration

Save

---

**Status**

Status: Ready

---

**Pattern Definition**

Route Pattern*	<input type="text" value="5555"/>
Route Partition	<input style="border: none;" type="text" value=" &lt; None &gt; "/>
Description	<input type="text"/>
Numbering Plan	<input style="border: none;" type="text" value=" -- Not Selected -- "/>
Route Filter	<input style="border: none;" type="text" value=" &lt; None &gt; "/>
MLPP Precedence*	<input style="border: none;" type="text" value=" Default "/>
<input type="checkbox"/> Apply Call Blocking Percentage	<input type="text"/>
Resource Priority Namespace Network Domain	<input style="border: none;" type="text" value=" &lt; None &gt; "/>
Route Class*	<input style="border: none;" type="text" value=" Default "/>
Gateway/Route List*	<input style="border: none;" type="text" value=" PagingTrunk "/>
Route Option	<input checked="" type="radio"/> Route this pattern

[\(Edit\)](#)

Call Routing >  
Route/Hunt >  
Route Pattern

# Configuración en CUCM



- Control de Acceso del Grupo
- Crear un grupo con rol "Standard AXL API access"  
User management > User settings > Access control group

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

Navigation: Cisco Unified CM Administration

administrator | Search Documentation | About | Logout

System | Call Routing | Media Resources | Advanced Features | Device | Application | User Management | Bulk Administration | Help

### Access Control Group Configuration

Related Links: Back To Find/List, Back To Find/List, **Assign Role to Access Control Group**, Roles

Save Delete Copy Add New

**Status**  
Status: Ready

**Access Control Group Information**  
Name\* ForPaging

**Role (1 - 46 of 46)** Rows per Page 50

Find Role where Name begins with Find Clear Filter

Select item or enter search text

<input type="checkbox"/>	Name ^	Application	Description	Copy
<input type="checkbox"/>	<a href="#">Standard Admin Rep Tool Admin</a>		Administer CAR	
<input type="checkbox"/>	<a href="#">Standard CCM Admin Users</a>		All users with access to CCM web site	
<input type="checkbox"/>	<a href="#">Standard CCM End Users</a>		Access to CCM User Option Pages	
<input type="checkbox"/>	<a href="#">Standard SSO Config Admin</a>		Administers SAML SSO configuration	
<input checked="" type="checkbox"/>	<a href="#">Standard AXL API Access</a>	Cisco Call Manager AXL Database	Access the AXL APIs	

# Configuración en CUCM



- Usuario de Aplicación  
User management > Application user

Controlled devices: CTI RP\*\*

Role: Standard AXL API Access

Permissions:

“Standard CTI Allow control of phones supporting connected Xfer and Conf”

“Standard CTI Allow control of phones supporting rollover”

“Standard CTI enable”

“Standard CTI Allow Control of All Devices”

**Cisco Unified CM Administration**  
For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾

### Application User Configuration

Save

---

**Status**

Status: Ready

---

**Application User Information**

User ID\*

Password

Confirm Password

---

**Device Information**

Available Devices

Controlled Devices





# Configuración en CUCM

- Configuración del teléfono
  - Device > Phone
  - Bulk Device > Device Settings > Common Phone Profile

“Web access: enabled” “Speakerphone: enabled”

Product Specific Configuration Layout		Parameter Value	Override Common Settings
<input checked="" type="checkbox"/>	Allow Control of Device from CTI		
<input type="checkbox"/>	Disable Speakerphone		
Web Access*		Enabled	<input checked="" type="checkbox"/>

# Configuración en Informacast







# Configuración en Informacast

- Configurar información del cluster de CUCM
- Definir la ip de multicast
- Descubrir teléfonos y configurar grupos de Recipientes
- Configurar el numero asignado a Informacast

# Configuración en Informacast



**InformaCast**<sup>®</sup>  
basic paging  
Provided by OEM Agreement with Cisco

Advanced Notification



Buy



Try



Learn



Home



Messages



Recipients



Speakers



Bells



Admin



Plugins



Help

Log Out Temporary Administrator



Admin | Telephony | CUCM Cluster | **Edit Telephony Configuration**

## Telephony Configuration

Unified Communications Manager Cluster Description:  (required)

Unified Communications Manager Application User:  (required)

Unified Communications Manager Application Password:

Confirm Application Password:

Use Application User for AXL

AXL IP Address(es):

Unified Communications Manager IP Address(es):  (required)

Choose SNMP version:  
 SNMP v2 (required)  
 SNMP v3

SNMP v2 Community Name:

Confirm SNMP v2 Community Name:

## XML Push Authentication

If you are not using JTAPI to activate phones during broadcasts or if this is not your primary cluster, make sure the URL Authentication parameter for the Unified Communications Manager in this cluster (found in the Phone URL Parameters section of the System | Enterprise Parameters page) is set to the following value:

`http://14.48.35.20:8081/InformaCast/phone/auth`

• Información de CUCM

Admin >  
Telephony >  
CUCM cluster

Edit





# Configuración en Informacast

- Multicast IP      Admin > Broadcast Parameters



**InformaCast**<sup>®</sup>  
basic paging  
*Provided by OEM Agreement with Cisco*

Advanced Notification



Buy



Try



Learn



Home



Messages



Recipients



Speakers



Bells



Admin



Plugins



Help

Log Overview **Administrator**

Manage License Key

Telephony >

Voice Menus >

Network Parameters >

**Broadcast Parameters**

System >

DialCast >

SIP >

User Administration >

Change Password

## Admin | Broadcast Parameters

Send Commands to Phones by JTAPI:

Create Telephony Terminals for all Phones:

Starting Multicast IP Address:  (required)

Ending Multicast IP Address:  (required)

See <http://www.iana.org/assignments/multicast-addresses>.

Multicast TTL:  (required)

CANCEL ✕


UPDATE ✓














# Configuración en Informacast



- Descubrir teléfonos Recipients > Edit Recipient Groups “Update”

 **InformaCast**<sup>®</sup>  
basic paging  
*Provided by OEM Agreement with Cisco*

Advanced Notification

 Buy  Try  Learn  Home  Messages  Recipients  Speakers  Bells  Admin  Plugins  Help

Log Out Temporary Administrator

## Recipients | Edit Recipient Groups | Discover Recipient Groups



Do you want to discover current IP phone information from Cisco Unified Communications Manager?

This command will query the Cisco Unified Communications Manager server to learn the IP addresses of all the phones that belong in the recipient groups you've set up. You only need to do this if you know you've just made changes to the Cisco Unified Communications Manager configuration that affect your phones and want those changes to be immediately detected by InformaCast.

When you run this command, it may take many seconds or even several minutes to complete. While it is running, you will not see any response in your web browser (you'll just see that the page is loading). This is normal; do not click **Cancel** or try to reload the page. Once the command has completed, you will see a confirmation message.

If you do actually want to run this command, click **Update** again now. Otherwise, you may click **Cancel** to return to the previous screen.

CANCEL 

UPDATE 

# Configuración en Informacast



- Descubrir teléfonos Recipients > Edit Recipient Groups “Update”
- Crear grupos Recipients > Edit Recipient Groups “Add”

**InformaCast®**  
basic paging  
Provided by OEM Agreement with Cisco

Advanced Notification

Buy Try Learn Home Messages Recipients Speakers Bells Admin Plugins Help

Log Out Temporary Administrator

## Recipients | Edit Recipient Groups



**UPDATE** Discover current IP phone information from Cisco Unified Communications Manager (may be time consuming).

**SHOW ALL** Show Defunct Phones

**PREVIOUS** Page 1 of 1 **NEXT** Jump to page:  **GO** Show 50 results per page Filter:

**ADD**

Name	Phones	Action
(All Recipients)	4	<b>EDIT</b> <b>COPY</b> <b>DELETE</b>
Group1	2	<b>EDIT</b> <b>COPY</b> <b>DELETE</b>
Group2	2	<b>EDIT</b> <b>COPY</b> <b>DELETE</b>

**PREVIOUS** Page 1 of 1 **NEXT** Jump to page:  **GO** Show 50 results per page



# Configuración en Informacast

- Configurar el numero asignado a Informacast  
Admin > DialCast > Dialing Configurations “Edit”



Advanced Notification

Buy Try Learn Home Messages Recipients Speakers Bells Admin Plugins Help

Log Out Temporary Administrator



Admin | DialCast | Dialing Configurations

InformaCast uses these dialing configurations to trigger broadcasts by matching the called DN to a dialing pattern and then initiating a broadcast that uses the configuration's recipients.

ADD +

Dialing Pattern	Recipient Groups	Action
5555	(All Recipients)	EDIT DELETE





# Configuración en Informacast

- Dialing Configurations

 **Informacast®**  
basic paging  
Provided by OEM Agreement with Cisco

Advanced Notification

 Buy  Try  Learn  Home  Messages  Recipients  Speakers  Bells  Admin  Plugins  Help

Log Out Temporary Administrator



Admin | DialCast | Dialing Configurations | **Edit Broadcast Dialing Configuration**

Dialing Pattern:

**Broadcast Recipients**

Recipient Groups:

**CANCEL** 

**UPDATE** 



# Configuración en Informacast

- Configurar diferentes números asignado a los diferentes grupos  
Admin > DialCast > Dialing Configurations “Add”



**InformaCast**<sup>®</sup>  
basic paging  
Provided by OEM Agreement with Cisco

Advanced Notification



Buy



Try



Learn



Home



Messages



Recipients



Speakers



Bells



Admin



Plugins



Help

Log Out Temporary Administrator



Admin | DialCast | Dialing Configurations | **Add Broadcast Dialing Configuration**

Dialing Pattern:

**Broadcast Recipients**

Recipient Groups:

Select One or More  
(All Recipients)  
**Group1**  
Group2

CANCEL ✕

ADD ➕



# Configuración en Informacast



**InformaCast®**  
basic paging  
Provided by OEM Agreement with Cisco

Advanced Notification

- Buy
- Try
- Learn
- Home
- Messages
- Recipients
- Speakers
- Bells
- Admin
- Plugins
- Help

Log Out Temporary Administrator

## Admin | DialCast | Dialing Configurations



Broadcast dialing configuration added.

InformaCast uses these dialing configurations to trigger broadcasts by matching the called DN to a dialing pattern and then initiating a broadcast that uses the configuration's recipients.

PREVIOUS Page 1 of 1 NEXT Jump to page: GO Show 50 results per page Filter: ADD

Dialing Pattern	Recipient Groups	Action
5555	(All Recipients)	EDIT DELETE
5556	Group1	EDIT DELETE
5557	Group2	EDIT DELETE

PREVIOUS Page 1 of 1 NEXT Jump to page: GO Show 50 results per page





# Configuración en Informacast

- Si se usa SIP trunk Admin > SIP > SIP Access “Allow”

The screenshot shows the InformaCast web interface. At the top, there is a navigation bar with the InformaCast logo and the text "basic paging Provided by OEM Agreement with Cisco". To the right of the logo are several navigation icons: Buy, Try, Learn, Home, Messages, Recipients, Speakers, Bells, Admin, Plugins, and Help. The "Admin" icon is highlighted, and a dropdown menu is open, showing a list of administrative options: Overview, Manage License Key, Telephony, Voice Menus, Network Parameters, Broadcast Parameters, System, DialCast, SIP, User Administration, and Change Password. The "SIP" option is selected, and a sub-menu is open, showing: SIP Access, SIP Authentication, SIP User Credentials, SIP Certificates, SIP Stack, and Restart SIP. The main content area shows the "SIP Access" configuration page. The breadcrumb navigation is "Admin | SIP | SIP Access". The page title is "Admin | SIP | SIP Access". Below the title, there is a "RESTORE" button. The main heading is "Controls access of inbound SIP calls to InformaCast." Below this heading, there are two radio buttons: "Allow" (selected) and "Deny incoming SIP calls". Below the radio buttons, there is an "ADD" button followed by the text "a host exception". At the bottom of the page, there are "CANCEL" and "UPDATE" buttons.

# Diagnostico y solución de problemas



# Estado del servidor de informacast



**InformaCast®**  
basic paging  
Provided by OEM Agreement with Cisco

Advanced Notification



Buy



Try



Learn



Home



Messages



Recipients



Speakers



Bells



Admin



Plugins



Help

Log Out Temporary Administrator



## Admin | Overview

Welcome to the InformaCast configuration overview page. For specific configuration tasks, please use the "Admin" menu.

### InformaCast Server

Version	11.5.1 - 570 Basic Paging license
Start Time	2016-07-18 21:05:25
Current Time	2016-07-21 09:35:03
Application Mode	Stand-alone

### Backup

Backup Activated	false
Next Scheduled Backup	
Backup Location	/usr/local/singlewire/InformaCast/backup

### Cisco Unified Communications Manager

Cluster Description	Version	CTI Provider
ToCCM1052	10.5.2.10000-5	14.48.35.10
JTAPI Version	Cisco Jtapi version 10.5(2.10000)-1 Release	
Send Commands to Phones by JTAPI	true	

### Phone Updates

Last Attempted Phone Rebuild	2016-07-21 09:10:00
Last Successful Phone Rebuild	2016-07-21 09:10:01
Last Attempted Phone Refresh	never
Last Successful Phone Refresh	never
Number of Phones Retrieved	4
Number of Phones Used / Licensed	0 / 50
Next Phone Rebuild	2016-07-21 10:10:00
Phone Refresh Interval (minutes)	disabled

### CTI Route Points

Name	DN	State
Paging	5555	IN_SERVICE
Paging2	5556	IN_SERVICE
Paging3	5557	IN_SERVICE

### SIP User Agent Status

User Agent is running
-----------------------

### SIP Calls

There are no SIP calls.
-------------------------

### Multicast Ports

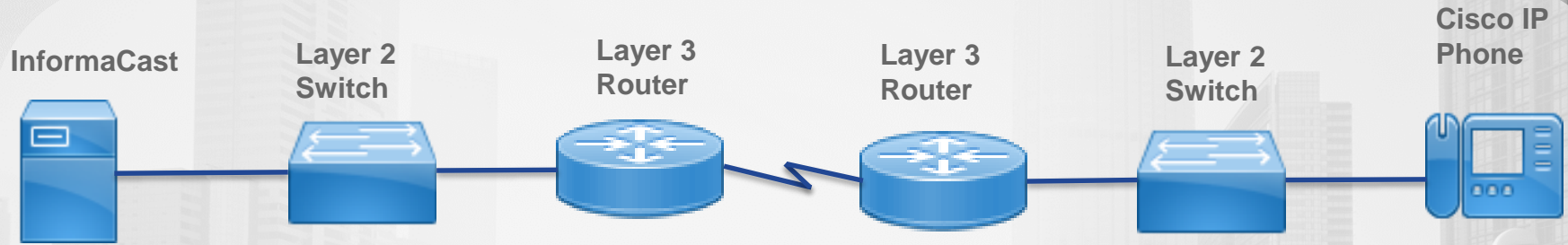
Number of Multicast Ports Configured	301
Number of Multicast Ports Used by Audio Broadcasts	0
Number of Multicast Ports Used by Talk and Listen Messages	0
Number of Multicast Ports Unused	301

Admin >  
Overview





# Flujo de mensajes XSI (HTTP)



Unicast HTTP Signaling Push (listen to audio and get text)

Unicast HTTP Authentication Request

Unicast HTTP Authentication Reply

Unicast HTTP GET For Text Content

Unicast HTTP XML Text Content

Unicast HTTP Signaling Push (stop listening to audio)

# Flujo de mensajes XSI



- “StreamingStatisticsX”

The image shows a Wireshark capture of an HTTP GET request. The packet list pane shows a packet at time 1742.2016-07-21 15:00:14.48.35.20 from source 14.48.35.136 to destination 14.48.35.136, protocol HTTP, length 205 bytes. The packet details pane shows the following structure:

- GET /StreamingStatisticsX?1 HTTP/1.1
- Authorization: Basic [redacted]
- User-Agent: Jakarta Commons-HttpClient/3.1
- Host: 14.48.35.136
- HTTP/1.1 200 OK
- Content-Type: text/xml; charset="utf-8"
- Date: Thu, 21 Jul 2016 19:00:34 GMT
- Cache-Control: no-cache
- Expires: Thu, 26 Oct 1995 00:00:00 GMT
- Transfer-Encoding: chunked
- Server: Allegro-Software-RomPager/4.34
- 59e
- <?xml version="1.0" encoding="utf-8"?>
- <StreamingStatistics><RemoteAddr>0.0.0.0</RemoteAddr><LocalAddr>14.48.35.136/27314</LocalAddr><StartTime>00:00:00</StartTime><StreamStatus>Not\_Ready</StreamStatus><Name>SEP0024C4FE1C84</Name><SenderPackets>0</SenderPackets><SenderOctets>0</SenderOctets><SenderCodec>None</SenderCodec><SenderReportsSent>0</SenderReportsSent><SenderReportTimeSent>00:00:00</SenderReportTimeSent><RcvrLostPackets>0</RcvrLostPackets><AvgJitter>9</AvgJitter><RcvrCodec>G.711u</RcvrCodec><RcvrReportsSent>0</RcvrReportsSent><RcvrReportTimeSent>00:00:00</RcvrReportTimeSent><RcvrPackets>469</RcvrPackets><RcvrOctets>08668</RcvrOctets><MOSLQK>4.0888</MOSLQK><AvgMOSLQK>4.0888</AvgMOSLQK><MinMOSLQK>4.0888</MinMOSLQK><MaxMOSLQK>4.0888</MaxMOSLQK><MOSLQKVersion>0.95</MOSLQKVersion><CmltveConcealRatio>0.0112</CmltveConcealRatio><IntervalConcealRatio>0.0000</IntervalConcealRatio><MaxConcealRatio>0.0335</MaxConcealRatio><ConcealSecs>2</ConcealSecs><SeverelyConcealSecs>1</SeverelyConcealSecs><Latency>0</Latency><MaxJitter>113</MaxJitter><SenderSize>0 ms</SenderSize><SenderReportsReceived>0</SenderReportsReceived><SenderReportTimeReceived>00:00:00</SenderReportTimeReceived><RcvrSize>20 ms</RcvrSize><RcvrDiscarded>1</RcvrDiscarded><RcvrReportsReceived>0</RcvrReportsReceived><RcvrReportTimeReceived>00:00:00</RcvrReportTimeReceived><Domain>snmpUDPDomain</Domain><SenderJoins>1</SenderJoins><ReceiverJoins>0</ReceiverJoins>
- 188
- <Byes>1</Byes><RowStatus>Not\_Ready</RowStatus><SenderTool>None</SenderTool><SenderReports>1</SenderReports><SenderReportTime>19:00:34</SenderReportTime><SenderStartTime>00:00:00</SenderStartTime><RcvrJitter>113</RcvrJitter><ReceiverTool>G.711u</ReceiverTool><RcvrReports>1</RcvrReports><RcvrReportTime>19:00:34</RcvrReportTime><RcvrStartTime>18:59:56</RcvrStartTime></StreamingStatistics>

Annotations:

- Red arrow pointing to the Authorization header: HTTP basic authentication for informacast user Base64 encoded password
- Red arrow pointing to the StreamStatus: Not\_Ready: IP Phone not ready

Entire conversation (2942 bytes)

Find Save As Print ASCII EBCDIC Hex Dump C Arrays Raw



# Flujo de mensajes XSI



- “Push & Response”

InformacastCapture.pcapng [Wireshark 1.12.6 (v1.12.6-0-gee1fce6 from master-1.12)]

File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help

Filter: tcp.stream eq 5 Expression... Clear Apply Save

No.	Time	Source	Destination	Protocol	Length	Info
1756	2016-07-21 15:00:14.48.35.20	14.48.35.136	14.48.35.136	TCP	60	60105-80 [ACK] Seq=152 Ack=1676 Win=33670 Len=0
1864	2016-07-21 15:00:14.48.35.136	14.48.35.136	14.48.35.20	HTTP/XML	458	HTTP/1.1 200 OK
1866	2016-07-21 15:00:14.48.35.20	14.48.35.136	14.48.35.136	TCP	60	60105-80 [ACK] Seq=152 Ack=2080 Win=35490 Len=0
1868	2016-07-21 15:00:14.48.35.20	14.48.35.20	14.48.35.136	HTTP	381	POST /CGI/Execute HTTP/1.1 (application/x-www-form-urlencoded)
1870	2016-07-21 15:00:14.48.35.136	14.48.35.136	14.48.35.136	TCP	60	60105-80 [ACK] Seq=152 Ack=2080 Win=35490 Len=0
1991	2016-07-21 15:00:14.48.35.136	14.48.35.136	14.48.35.136	TCP	60	60105-80 [ACK] Seq=152 Ack=2080 Win=35490 Len=0
1994	2016-07-21 15:00:14.48.35.136	14.48.35.136	14.48.35.136	TCP	60	60105-80 [ACK] Seq=152 Ack=2080 Win=35490 Len=0
1996	2016-07-21 15:00:14.48.35.20	14.48.35.20	14.48.35.136	HTTP	381	POST /CGI/Execute HTTP/1.1 (application/x-www-form-urlencoded)
3996	2016-07-21 15:00:14.48.35.20	14.48.35.20	14.48.35.136	HTTP	381	POST /CGI/Execute HTTP/1.1 (application/x-www-form-urlencoded)
3997	2016-07-21 15:00:14.48.35.136	14.48.35.136	14.48.35.136	TCP	60	60105-80 [ACK] Seq=152 Ack=2080 Win=35490 Len=0
3999	2016-07-21 15:00:14.48.35.136	14.48.35.136	14.48.35.136	TCP	60	60105-80 [ACK] Seq=152 Ack=2080 Win=35490 Len=0
4000	2016-07-21 15:00:14.48.35.20	14.48.35.20	14.48.35.136	HTTP	381	POST /CGI/Execute HTTP/1.1 (application/x-www-form-urlencoded)

Follow TCP Stream (tcp.stream eq 5)

Stream Content

```
POST /CGI/Execute HTTP/1.1
Authorization: Basic aW5mb3JtYWVhc3Q6Y2lyZ28=
User-Agent: Jakarta Commons-HttpClient/3.1
Host: 14.48.35.136
Content-Length: 116
Content-Type: application/x-www-form-urlencoded

XML=%3C%3CiscoIPPhoneExecute%3E%3CExecuteItem+URL%3D%22RTPMRx%3A239.0.1.2%3A20488%22%2F%3E%3C%2FCiscoIPPhoneExecute%3EHTTP/1.1 200 OK
Content-Type: text/xml; charset="utf-8"
Date: Thu, 21 Jul 2016 19:00:34 GMT
Cache-Control: no-cache
Expires: Thu, 26 Oct 1995 00:00:00 GMT
Content-Length: 162
Server: Allegro-Software-RomPager/4.34

<?xml version="1.0" encoding="utf-8"?>
<CiscoIPPhoneResponse>
<ResponseItem URL="RTPMRx:239.0.1.2:20488" Data="Success" Status="0" />
</CiscoIPPhoneResponse>
```

Entire conversation (2942 bytes)

0000 00 24 c4 fe 1c b4 00 50 56 a1  
0010 01 6f 85 1f 40 00 40 06 51 6e  
0020 23 88 ea c9 00 50 f6 3f 3f c8  
0030 8a a2 63 24 00 00 50 4f 53 54  
0040 45 78 65 63 75 74 65 20 48 54





# Flujo de mensajes XSI

The image shows a Wireshark capture of an XSI authentication process. The filter is set to `eth.addr == 00:24:c4:fe:1c:b4`. The selected packet is a GET request from 14.48.35.136 to 14.48.35.20. The 'Stream Content' pane shows the raw HTTP data, including headers and the response body.

Filter: `eth.addr == 00:24:c4:fe:1c:b4` Expression... Clear Apply Save

Source	Destination	Protocol	Length	Info
14.48.35.136	14.48.35.20	HTTP	441	GET /InformaCast/phone/auth?UserID=informacast&Password=cisco&devicename=SEP0024C4FE1CB4

Follow TCP Stream (tcp.stream eq 7)

Stream Content

```
GET /InformaCast/phone/auth?UserID=informacast&Password=cisco&devicename=SEP0024C4FE1CB4
HTTP/1.1
Host: 14.48.35.20:8081
User-Agent: Allegro-Software-WebClient/4.34
Accept: x-CiscoIPPhone/*, text/*, image/png, */*
Accept-Language: en_US
Accept-Charset: utf-8, iso-8859-1; q=0.8
x-CiscoIPPhoneModelName: CP-7975G
x-CiscoIPPhoneSDKVersion: 8.5.1
x-CiscoIPPhoneDisplay: 298,168,16,C

HTTP/1.1 200 OK
Server: Apache-Coyote/1.1
X-Frame-Options: SAMEORIGIN
Strict-Transport-Security: max-age=31536000
Set-Cookie: JSESSIONID=9CDE637D9009A2FB89BAA7CB2FEFC9CE; Path=/InformaCast/; HttpOnly
Content-Type: text/html; charset=ISO-8859-1
Content-Length: 10
Date: Thu, 21 Jul 2016 19:00:29 GMT

AUTHORIZED
```

# Flujo de mensajes XSI



InformacastCapture.pcapng [Wireshark 1.12.6 (v1.12.6-0-gee1fce6 from master-1.12)]

File Edit View Go Capture Analyze Statistics Telephony Tools Internals Help



Filter: eth.addr == 00:24:c4:fe:1c:b4 Expression... Clear Apply Save

No.	Time	Source	Destination	Protocol	Length	Info
5876	2016-0	14.48.35.20	14.48.35.136	HTTP	386	POST /CGI/Execute HTTP/1.1 (application/x-www-form-urlencoded)

5994 2016-0 14.48

Follow TCP Stream (tcp.stream eq 14)

## Stream Content

```
POST /CGI/Execute HTTP/1.1
Authorization: Basic aW5mb3JtYWVhcnQ6Y2lzY28=
User-Agent: Jakarta Commons-HttpClient/3.1
Host: 14.48.35.136
Content-Length: 121
Content-Type: application/x-www-form-urlencoded

XML=%3C%3CisCiscoIPPhoneExecute%3E%3CExecuteItem+Priority%3D%220%22+URL%3D%22RTPRx%3AStop%22%2F%3E%3C%2FCisCiscoIPPhoneExecute%3EHTTP/1.1 200 OK
Content-Type: text/xml; charset="utf-8"
Date: Thu, 21 Jul 2016 19:00:42 GMT
Cache-Control: no-cache
Expires: Thu, 26 Oct 1995 00:00:00 GMT
Content-Length: 150
Server: Allegro-Software-RomPager/4.34

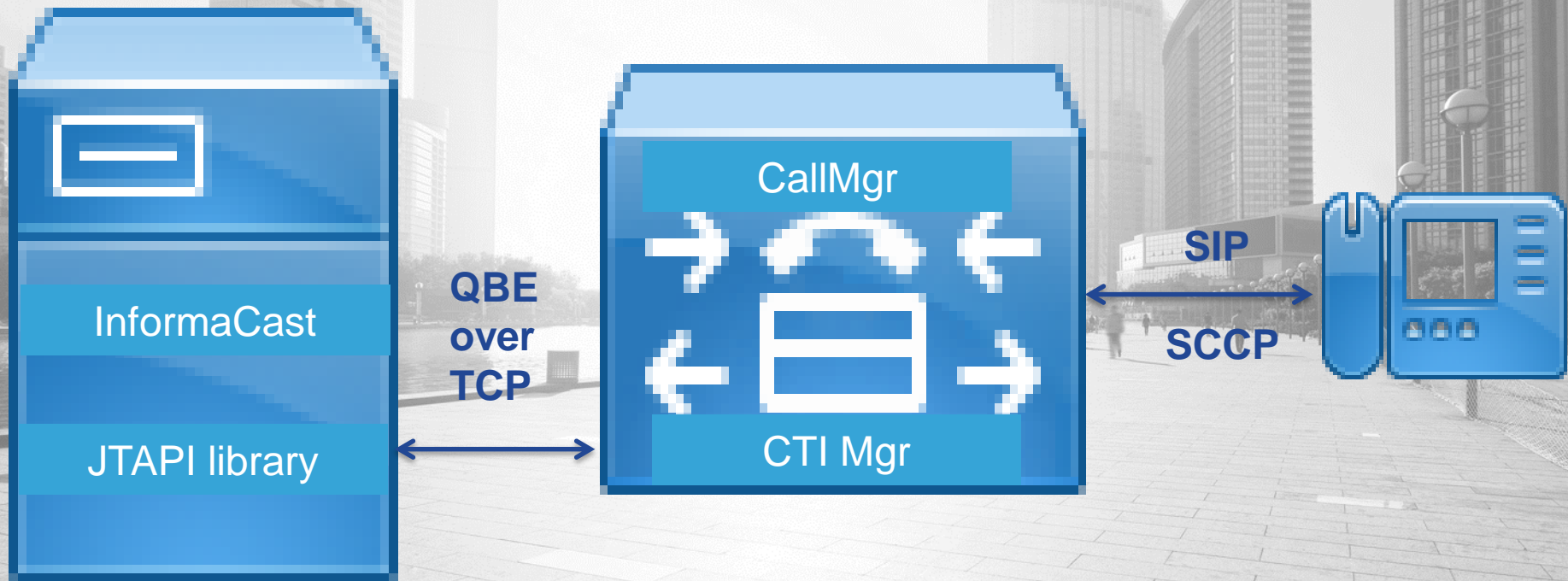
<?xml version="1.0" encoding="utf-8"?>
<CiscoIPPhoneResponse>
<ResponseItem URL="RTPRx:Stop" Data="Success" Status="0" />
</CiscoIPPhoneResponse>
```



# Diagnostico de problemas



- Flujo de mensajes CTI



# Flujo de mensajes CTI



InformaCast

CUCM

InformaCast

JTAPI Library

CTI Mgr

CallMgr

sendData

CtiDeviceDataPassThroughReq

StationDeviceToUser  
DataRequestVersion1

SIP REFER

**HTTP GET:/InformaCast/somepage.xml**

Multicast Join

**HTTP GET response:<CiscoIPPhoneText>...<CiscoIPPhoneText>**

SIP NOTIFY

StationDeviceToUser  
DataResponseVersion1

CtiDeviceDataPassThroughResp

Response



# Sniffer

## ➤ IP Phone

CM Admin Device > Phone “Span to PC port” o  
Capturar trafico del switch (monitor session)

## ➤ Servidor de informacast

SSH  
sudo capturePackets snifferName.cap  
sftp user@IP put snifferName.cap







# Informacast logs

- Log Collection Tool      Help > support    Tools > Log tool

```
Administrator: Singlewire Software: Log Tool - 20130730

Singlewire Software

[1] Gather Logs From Virtual Appliance <EX/UA>
[2] Uncompress Gathered Logs
[3] Parse Logs For Errors and Solutions
[4] Turn JTAPI Debugging On/Off
[9] Exit

Menu Choice.....:
```





# Problemas comunes

- Problemas para descubrir teléfonos (recipients groups)
  - Web access
  - SNMP (todos los servidores)
  - Firewall (SNMP 161 UDP)
  - Problemas de DNS\*\*\* (utils diagnose test)



# Problemas comunes

- Teléfonos que no usan el lenguaje (locale) en inglés no pueden recibir la notificación
  - XSI/Web access no se soporta
  - Usar CTI/JTAPI





# Problemas comunes

- El altavoz y botón de silencio se activan pero no hay audio
- Problemas de multicast (sniffer)

78xx Bug

CSCuo95583 78xx phone does not play out of sequence rtp packets

88xx Bug

CSCuy56088 8851 is failing to add multicast stream for audio output



# Problemas comunes

- La llamada no se conecta con el numero de Informacast y se escucha tono de ocupado
  - Particiones/CSS
  - Codec (regiones)
  - SIP no esta habilitado (si se creo un sip trunk)
  - Trazas de CUCM





# Problemas comunes

- IVR “No devices could be activated”
  - “Authentication URL”
  - “Web access” disabled
  - CTI disabled

78xx Bug

**CSCun60728** - 78xx series phones not formatting special characters for http get.

Workaround: no special characters in the application user/pwd



# Referencias

- CUCM Integration with Cisco Paging Server  
<http://www.cisco.com/c/en/us/support/docs/unified-communications/paging-server/117059-configure-informacast-00.html>
- Cisco Paging Server Installation and User Guide  
[http://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/cucm/singlewire/InformaCastBasicPaging.pdf](http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/singlewire/InformaCastBasicPaging.pdf)
- Cisco Paging Server Quick start guide  
[http://www.cisco.com/c/dam/en/us/td/docs/voice\\_ip\\_comm/cucm/singlewire/InformaCastBasicPagingQSG.pdf](http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/cucm/singlewire/InformaCastBasicPagingQSG.pdf)
- Informacast Logs Tool  
<http://www.singlewire.com/thank-you-logtool-t.html>

# Encuesta Pregunta 3

¿Qué tipo de usuario se define en CUCM para la integración con informacast?

1. Application user
2. End user
3. 1 y 2
4. Ninguna de las anteriores





**GRACIAS!!!**





# Haga sus preguntas ahora

Utilice el panel de Q&R para realizar sus preguntas

# Pregunte al Experto con: Alejandra

## Integración de Cisco Unified Communications Manager (CUCM) con el servidor de Paginación (Cisco Paging)

Si tiene dudas adicionales Alejandra nos ayudará a responder sus preguntas a partir de hoy hasta el viernes 26 de Agosto del 2016 en:

<https://supportforums.cisco.com/es/discussion/13094836>



**Alejandra Gonzalez**  
Customer Support  
Engineer

# La comunidad de Soporte tiene otros idiomas!

Si habla Portugués, Japonés, Ruso, Chino o Inglés lo invitamos a que participe en otro idioma.



## **Español**

<https://supportforums.cisco.com/community/spanish>

## **Portugués**

<https://supportforums.cisco.com/community/portuguese>

## **Japonés**

<https://supportforums.cisco.com/community/csc-japan>

## **Ruso**

<https://supportforums.cisco.com/community/russian>

## **Chino**

<http://www.csc-china.com.cn>

## **Inglés**

<https://supportforums.cisco.com/community/5411/cisco-support-community>

# Lo invitamos a nuestros próximos eventos en redes sociales



Cisco TS- Latam

Cisco Mexico

Cisco España



@CiscoTSLatam

@CiscoMexico

@cisco\_spain

Cisco Latinoamérica

Cisco Cono Sur

Comunidad Cisco Cansac

CiscoSupportCommunity

@ciscocansacsm

@ciscoconosur

@cisco\_support



# Lo invitamos a nuestros próximos eventos en redes sociales



CiscoLatam  
ciscosupportchannel



Cisco Technical Support



CSC-Cisco-Support-Community

# ¡Únete a la Comunidad de Soporte de Cisco!

Aquí puedes resolver dudas técnicas, encontrar información en documentos, blogs y videos con contenidos técnicos totalmente en español, además de poder colaborar e interactuar en tiempo real con los expertos en tecnología.



Documentos



Discusiones



Blogs



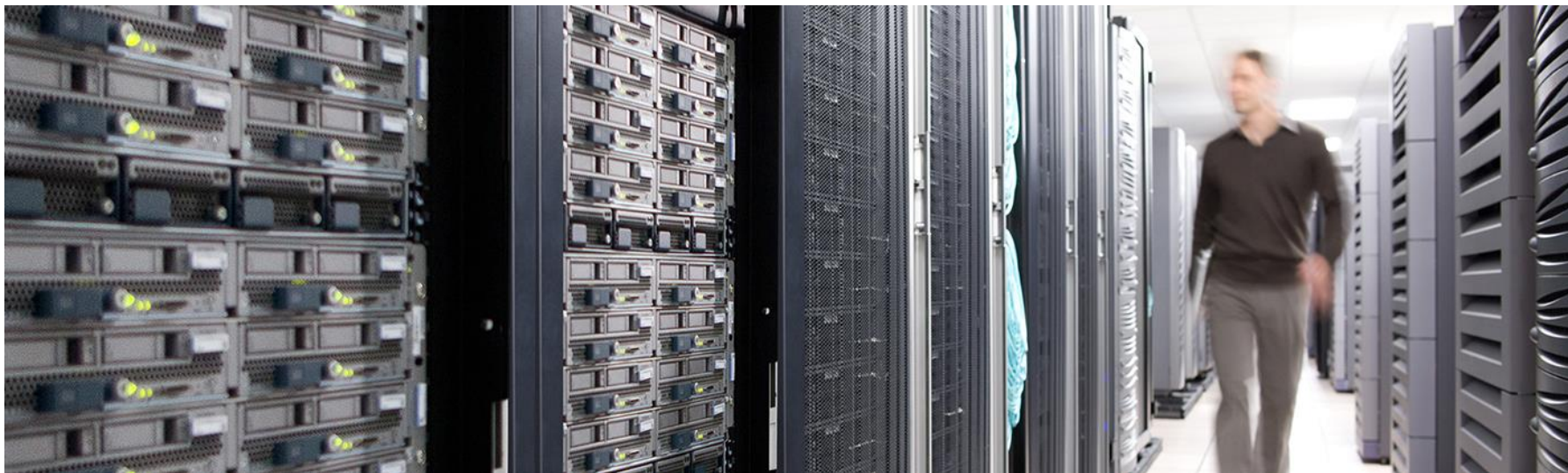
Móvil



Video



Pregunte al Experto



## ¡Nos interesa su opinión!

Para completar la evaluación espere un momento y aparecerá automáticamente al cerrar el browser de la sesión



# Gracias por su tiempo

Por favor tome un momento para contestar la evaluación





**CISCO**

*TOMORROW starts here.*