

**SCOPSERV**  
INTERNATIONAL INC.

Paging Features in ScopTEL



## ScopTEL Paging Features:

- ScopTEL supports multicast paging with supported SIP devices. Multicast paging is extremely efficient and puts minimal stress on the host CPU
  - Most Yealink, Snom, Aastra, Algo, Panasonic, Linksys, Vtech, and Cyberdata devices support open standard multicast paging and multiple multicast listen addresses.
  - Polycom, SpectraLink, and Algo devices support Polycom proprietary multicast paging since firmware version 3.X
  - Algo and Cyberdata SIP paging devices support Multicast Relay forwarding and register as SIP extensions. These paging devices also supply 600 ohm external paging connections for external paging amplifiers and loud bell extensions.
  - Because Polycom and other vendors do not use interoperable multicast paging protocols it is not recommended to mix device types on the same LAN.
- ScopTEL also supports scheduled paging tasks to automate lockdown procedures or other implementations.
- Pre-recorded announcements can be scheduled for playback using scheduled automated tasks or played back by dialing a feature code.
- ScopTEL supports paging using Meet-me in Asterisk but this method is not scalable. It is suitable for usage in small environments where either the SIP phone or network does not support multicasting.
  - The recommendation is not to configure more than 15 concurrent extensions and use multicast paging whenever possible
- ScopTEL supports 1 to 1 two way hands-free paging which is referred to as Intercom. In this mode both parties can communicate directly with each other.





## Multicasting:

- For more information regarding multicasting please visit <https://www.iana.org/assignments/multicast-addresses/multicast-addresses.xhtml>
- The number of extensions which can subscribe and receive pages from the multicast group is only limited by network performance.
- Phone can subscribe to any valid multicast address and port and thereby create multiple paging zones.
- Multicast paging uses minimal CPU resources on the ScopTEL CPU
- Hosted customers require some SIP device which can forward multicast pages onto the customer LAN since multicasts are not normally forwarded across VLAN's or routers. One such device which is very flexible is available from Algo Solutions.  
<http://www.algosolutions.com/products/audible-and-visual-alerting/8180.html>
  - The Algo 8180 SIP Alerter can forward the multicast page to any SIP device which supports industry standard multicast paging, or Polycom, SpectraLink proprietary paging.



## Preparing ScopTEL to support multicasting:

- Go to the Network IP Routing tab and build this route for multicasting paging support.
- Commit your changes on the network module when done

**Network:**

Configuration Interfaces **IP Routing** Static Hosts

**IP Routing:** [1 to 1 of 1] [+ Add a new IP Routing](#)

Search:  [Search](#)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Interface</b>	<b>IP Address</b>	<b>Subnet</b>	<b>Gateway</b>	<b>VLAN</b>	<b>Virtual IP</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAN (eth1)	224.0.0.0	240.0.0.0				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



## Preparing a Yealink Phone using the APS:

- Edit the Multicast Paging tab and set at least one Multicast Page Group with a Listen IP/Address. Make sure all MAC addresses use the same Listen IP/Address or use a template to assign the Multicast Paging Groups to all your phones
- Save your changes and commit and reboot all the phones to download the new settings
- Other vendors use similar settings and tabs so edit as necessary.

**Phone Provisioning**

General	Provisioning	Server	Network	Date and Time	Phone Options	DSS Keys	Expansion Keys
Power Saving	Security	Internal Ringer	<b>Multicast Paging</b>	PBX Services	LDAP	Custom Settings	

**Multicast Page Group #1**

Label :

Listen IPAddress :  .  .  .  Port

**Multicast Page Group #2**

Label :

Listen IPAddress :  .  .  .  Port

**Multicast Page Group #3**

Label :

Listen IPAddress :  .  .  .  Port

**Multicast Page Group #4**



## Preparing a Yealink Phone for SIP-Alert:

- Edit the Yealink Extension>Phone Options tab
- SIP Alert (Auto Answer/Distinctive Ring)
- Device :Yealink
- Check the option for Pager and Intercom
- Save your changes
- This will prepare the Yealink phone to receive 'Intercom' two way hands-free calls
- Intercom Usage:
  - Go to the Features Code section and define a feature code for the Intercom feature
  - Edit your Class of Service and ensure that Intercom is allowed in the Service list
  - Dial the Intercom code and the target extension number to activate two way hands-free Intercom

**Phone Provisioning**

General	Provisioning	Server	Network	Date and Time	Phone Options	DSS Keys	Expansion Keys
Power Saving	Security	Internal Ringer	<b>Multicast Paging</b>	PBX Services	LDAP	Custom Settings	

**Multicast Page Group #1**

Label :

Listen IPAddress :  .  .  .  Port

**Multicast Page Group #2**

Label :

Listen IPAddress :  .  .  .  Port

**Multicast Page Group #3**

Label :

Listen IPAddress :  .  .  .  Port

**Multicast Page Group #4**



## Creating a Multicast Paging Application:

- Go to Applications and create a new Application.
- Assign an extension number to this application which does not conflict with any other extensions on the server.
- Click on Destination

The screenshot displays the 'Application Manager: Applications' interface. At the top, there is a blue header bar with the text 'Application Manager: Applications'. Below this, a navigation bar contains several tabs: 'Applications' (which is highlighted in blue), 'Auto Attendants', 'Conferences', 'Custom Scripts', and 'Scheduled Tasks'. Underneath the navigation bar, another blue header bar reads 'Applications'. Below this, there are three sub-tabs: 'General' (highlighted in blue), 'Destination', and 'Paging and Intercom'. The main content area shows the configuration for a new application. It includes a dropdown menu for 'Tenant' set to 'default', a text input field for 'Extension' containing '\*830', and a text area for 'Description' containing the word 'paging'.



## Creating a Multicast Paging Application:

- In the Destination drop list choose Paging and Intercom and then click on the Paging and Intercom tab
- OPTIONAL:
  - You can check the Allow Extensions to use this application as destination if you want Ring Groups to access this feature. This can be useful if you want the application to be available in an IVR menu.

**Applications**

General Destination **Paging and Intercom**

\* Destination : Paging and Intercom

**Options**

Language : Default

Allow Extensions to use this application as destination :

Prefix to add to CallerID Number :

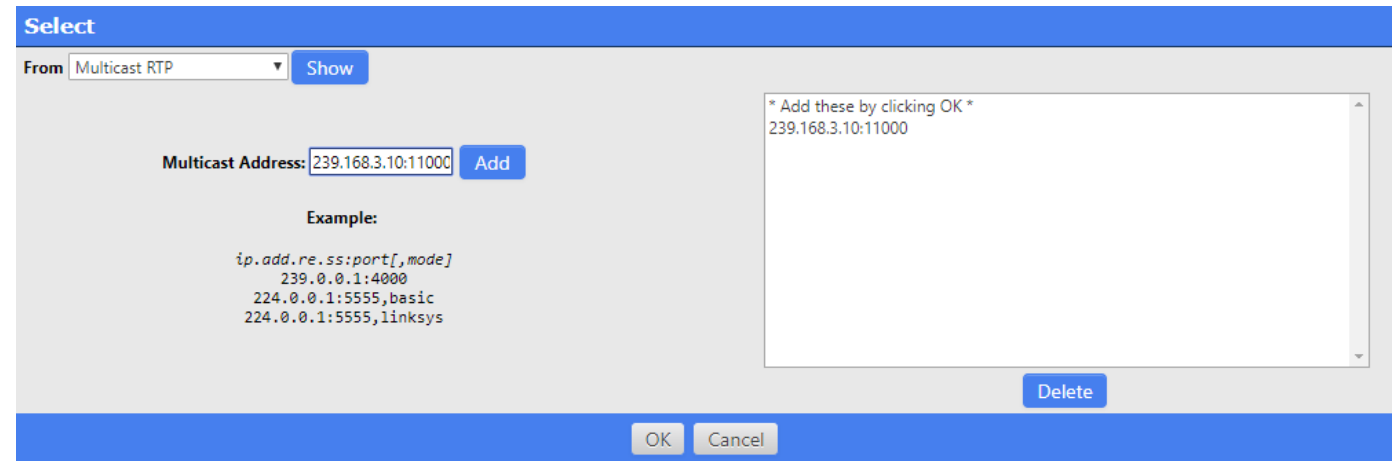
Include current CallerID :  Default: True





## Creating a Multicast Paging Application:

- Use the Select button to add your Paging Members.
- Choose Multicast RTP in the From list drop down menu
- Enter a multicast address and port which matches what you define in the APS and click Add
- Click OK and finish adding your changes.
- Once you have added the Application make sure you Edit your Class of Service permissions so your extensions can dial the new Application code.



The screenshot shows a 'Select' dialog box with a blue header. At the top left, there is a 'From' dropdown menu set to 'Multicast RTP' and a 'Show' button. Below this, there is a 'Multicast Address:' label followed by a text input field containing '239.168.3.10:11000' and an 'Add' button. Underneath, an 'Example:' section lists three IP address formats: 'ip.add.re.ss:port[,mode]', '239.0.0.1:4000', '224.0.0.1:5555,basic', and '224.0.0.1:5555,linksys'. On the right side, there is a scrollable text area containing the text '\* Add these by clicking OK \*' and '239.168.3.10:11000'. At the bottom right of the dialog is a 'Delete' button. At the very bottom of the dialog are 'OK' and 'Cancel' buttons.



## Creating a Meetme Paging Application:

- If you don't want to use multicast paging there is the option of meetme paging. To configure this instead of choosing Multicast RTP in the Select context choose one or more SIP extensions to include in the paging zone. Keep this list small, less than 15 extensions. Meetme paging uses a lot of CPU on the host server.
- Another option is to have a multicast forwarding device or SIP device with a 600 ohm paging output selected ie. Algo or Cyberdata. This is the recommended solution to sending a pre-recorded announcement/scheduled task to an overhead Paging Amplifier.

The screenshot shows a 'Select' dialog box with a search bar at the top. Below the search bar is a list of SIP extensions. The extension '221: Cyberdata (SIP)' is highlighted. To the right of the list is a 'Delete' button. Below the list is a 'Delete' button. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

Extension	Device
201: Komutel	SIP
220: TV Room	SIP
221: Cyberdata	SIP
222: Office	SIP
223: TGP600	SIP
224: Nicole Brillert	SIP
225: Garage	SIP
226: Shop	SIP
227: voixphone	IAX2
228: fax	SIP
229: Jitsi	SIP





## Scheduling a Multicast Paging Application:

- Go to Application Manager>Scheduled Tasks
- Add a new task
- On the General tab give the Scheduled task a name
- Click on the Task tab

### Scheduled Tasks

- General
- Task
- Scheduler
- Notifications

\* Tenant  : default ▼

\* Name  : lockdown  
Name must contain only alphanumerical characters.

Description :





## Scheduling a Multicast Paging Announcement:

- Action select Play a Message(s) (Multicast RTP)
- Select a Message(s) to Play using the Select button and choose from any available announcement
- Enter the same Multicast Host/Port information used in the APS
- Click on Scheduler

### Scheduled Tasks

- General
- Task
- Scheduler
- Notifications

\* Tenant  : default ▼

\* Name  : lockdown  
Name must contain only alphanumerical characters.

Description :



## Scheduling a Multicast Paging Announcement:

- Configure your desired schedule and Add your changes when complete
- NOTE: A schedule is optional. If you choose not to configure a schedule then the Scheduled task can be chosen as a destination by an Application and the pre-recorded announcement(s) can be triggered by dialing the Application number.

### Scheduled Tasks

General Task Scheduler Notifications

Schedule Mode  : Run periodically on a given schedule ▼  
Default: Run periodically on a given schedule

Day of Month : Any ▼

Weekday(s) :  Sunday  
 Monday  
 Tuesday  
 Wednesday  
 Thursday  
 Friday  
 Saturday  
[Select all](#), [Select none](#), [Invert selection](#)

Month(s) :  January  
 February  
 March  
 April  
 May  
 June  
 July  
 August  
 September  
 October  
 November  
 December  
[Select all](#), [Select none](#), [Invert selection](#)

Start Time : 8 ▼ | 00 ▼

Enable Recurring Task ?  :




## Using an Application to execute a Scheduled Task:

- Create a new Application
- Choose a unique Extension number
- Click on Destination

### Applications

**General** | Destination

\* Tenant  : commzilla ▼

\* Extension : \*801

Description : Paging Announcement




## Using an Application to execute a Scheduled Task:

- Destination select Scheduled Task
- Task: choose the desired Task. In this example play the lockdown announcement
- Edit your Class of Service objects to allow this Application for required Extensions
- OPTIONAL: you can assign an Authentication (PIN) or Password list to restrict the application to authenticated users

### Applications

General Destination

\* Destination  : Scheduled Task ▼

\* Task : lockdown ▼

#### Options

Language : Default ▼

Allow Extensions to use this application as destination :  ?


Prefix to add to CallerID Number :

Include current CallerID ? :  Default: True

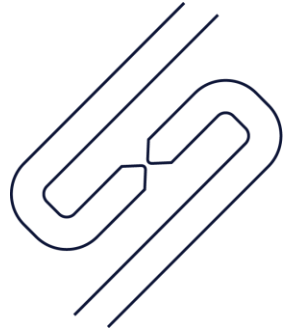
Prefix to add to CallerID Name :

Include current CallerID Name ? :  Default: True

#### Authentication/Password

Authentication (PIN) ?  : None ▼ Default: none





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Congratulations