



Configuration Guide

Configuring Shared Call Appearances

This configuration guide describes the use and configuration of shared call appearances (SCAs) for NetVanta 7000 Series products. This guide is structured to aid the system administrator in configuring SCAs using the web-based graphical user interface (GUI) and assumes a working knowledge of shared line account (SLA) configuration. For more information regarding the configuration and use of SLAs, refer to *Configuring Shared Line Appearances over Analog Trunks* available online at <https://supportforums.adtran.com>. This guide provides an overview of SCAs, a description of how SCAs operate, and includes configuration descriptions and examples. The following topics are covered in this guide:

- *SCA Overview on page 2*
- *Hardware and Software Requirements and Limitations on page 2*
- *Configuring SCAs on page 2*
- *Creating Ring Options (Optional) on page 8*
- *Assigning an SCA to a Polycom Phone Line Key(s) on page 10*
- *Assigning an SCA to an ADTRAN Phone Line Key(s) on page 13*
- *Confirming Shared Line Key Configuration on page 16*
- *Additional Resources on page 16*

SCA Overview

SCAs are shared line appearances (SLAs) that can appear on multiple IP phones for small office environments. They operate in the same way as SLAs, but unlike SLAs, they are not tied to a trunk for operation and can be dialed like any other user extension. An understanding of SLAs is necessary to correctly use and understand SCAs. For more information regarding the configuration and use of SLAs, refer to *Configuring Shared Line Appearances over Analog Trunks* available online at <https://supportforums.adtran.com>.

SCAs are configured the same as SLAs, but not associated with an analog trunk. SCAs enhance SLA configuration by allowing dialable extensions that can be called from any other endpoint, and by providing the ability to transfer calls and to have calls transferred to them. SCAs are configured by the system administrator responsible for adding, removing, and modifying the SCA configurations for IP phone system users.

Support for special prefix (SPRE) codes on an SCA were added with the release of AOS R10.6.0. All network SPRE codes are supported and sent to the network if the system is configured to allow network SPRE codes. The local SPRE code *86 (send user to voice mail) is the only local SPRE code supported. For more information on configuring network and local SPRE codes (using the **voice spre-mode** command) on the NetVanta 7000 series product, refer to the *AOS Command Reference Guide* available online at <https://supportforums.adtran.com>.

Hardware and Software Requirements and Limitations

The SCA feature is available on AOS voice products with the following limitations:

- Aliases cannot be configured on shared lines. In order to avoid problems with aliases, the shared line must be a dialable number.
- Session Initiation Protocol (SIP) identities are not supported with SCAs.
- Shared lines have call coverage to a voice mailbox, but do not have voice mailboxes of their own.
- Call forwarding, do not disturb (DND), and call waiting are not supported with SCAs.
- If a private extension exists, call permissions and restrictions are based on the private extension of the IP phone, not the SCA. If no private extension exists for the SCA, then the call permissions are based on the SCA configuration.
- SCAs do not include personal phone manager support.
- SCAs can be selected for a line key option using the GUI phone configuration menus.

Support for SLA primary line seizure is only supported on the following IP phone models and the firmware version noted in parenthesis:

- Polycom SoundPoint IP 450 (version 4.0.x)
- ADTRAN/Polycom IP 550 (version 4.0.x)
- ADTRAN/Polycom IP 650 (version 4.0.x)
- Polycom SoundPoint IP 670 (version 4.0.x)
- ADTRAN IP 706 (version 2.3.0)
- ADTRAN IP 712 (version 2.3.0)

The configurable ring options, such as silent ring, delay ring, or ring immediate, are only supported on Polycom IP phone models.

Configuring SCAs

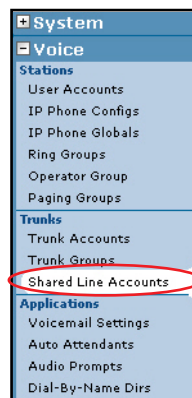
AOS products ship with a user-friendly GUI that can be used to perform many basic management and configuration functions on the AOS product. To access the GUI and begin configuring this feature, follow these steps:

1. Open a new web page in your Internet browser.
2. Enter your AOS product's IPv4 address in the browser's address field in the format **http://<ip address>/admin**, for example:
http://10.10.10.1/admin
3. At the prompt, enter your user name and password and select **OK**.

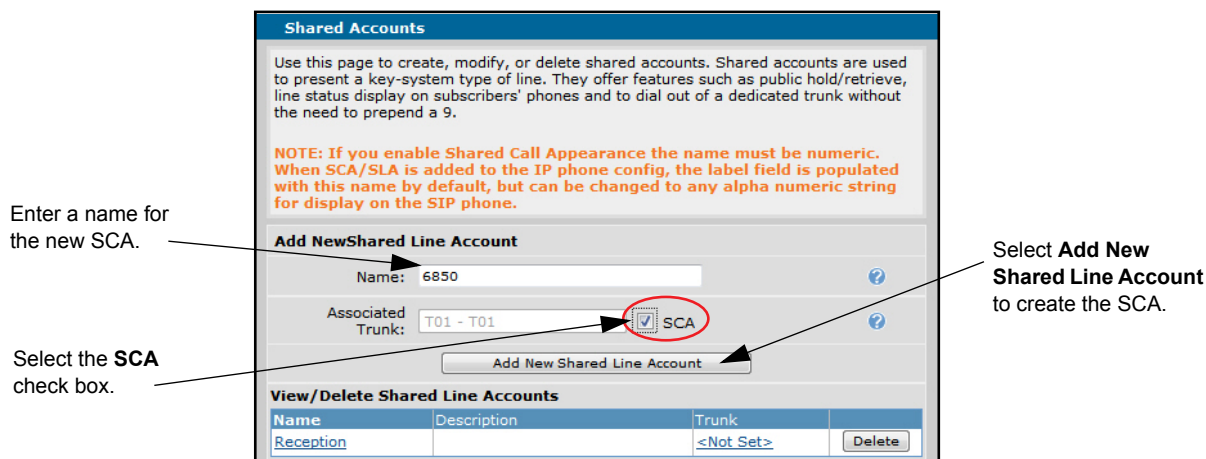


The default user name is **admin** and the default password is **password**.

4. Once connected, navigate to **Voice > Trunks > Shared Line Accounts** using the menu on the left of the GUI.



5. Enter the name of the SLA in the **Name** field and select the **SCA** option. Selecting **SCA** allows you to create an SLA that is not tied to a trunk and indicates that the **Name** must be numeric. The name of this SCA cannot be changed once the it is created. To change the name, the SCA must be deleted and recreated. Select **Add New Shared Line Account** to create the SCA.

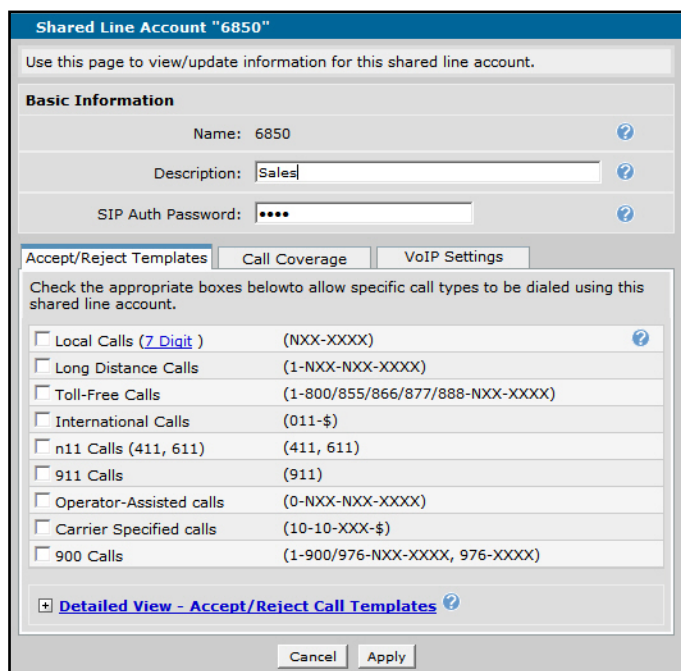


Settings and Descriptions

Name specifies a name for this SCA and indicates that the **Name** must be numeric. The **Name** cannot be changed once the line is created. The SCA must be deleted and recreated to change the **Name**.

Associated Trunk specifies the trunk to be associated with this line. Since this is an SCA and not associated with a trunk, selecting the **SCA** check box will deselect any trunk selection.

- Once you have selected **Add New Shared Line Account**, you can configure the basic information for the SCA from the **Shared Line Account** menu. The **Name** field includes the information entered in the previous menu. In this menu, you can enter a text description for the SCA and specify the **SIP Auth Password**.



Settings and Descriptions

Description optionally specifies a short text description for this SCA. Limited to 80 characters.

SIP Auth Password specifies the four-digit password used to authenticate SIP phone registrations. If this password is changed after the phone configuration files have been created, those phones will not be able to register until they are updated with the new password value. By default, the SIP authentication password is **1234**.



*If the **SIP Auth Password** is changed after phone configuration files have been created, those phones will not be able to register until they are updated with the new password value.*

- After specifying the basic SCA information, you can optionally specify the permitted call types for this shared line using the **Accept/Reject Templates** tab at the bottom of the **Shared Line Account** menu. Select the permitted call types for this shared line by selecting the check box next to the specific call type.

For additional information about configuring the **Accept/Reject Templates**, refer to *Configuring Shared Line Appearances over Analog Trunks* available online at <https://supportforums.adtran.com>.

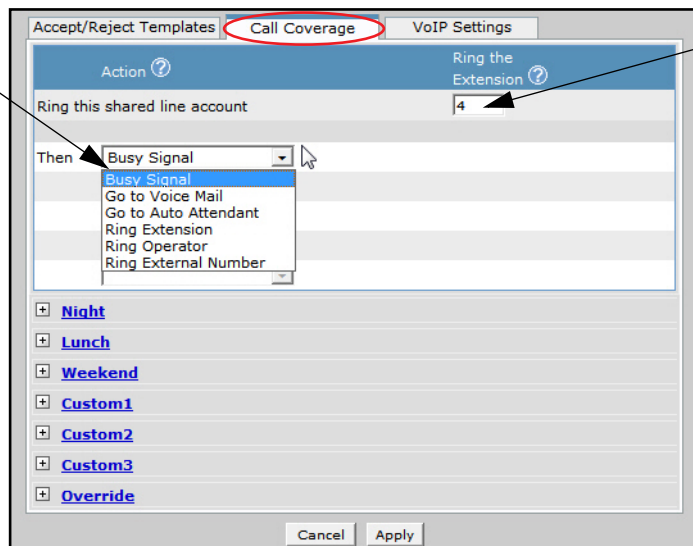
Call Type	Description
<input checked="" type="checkbox"/> Local Calls (7 Digit)	(NXX-XXXX)
<input type="checkbox"/> Long Distance Calls	(1-NXX-NXX-XXXX)
<input checked="" type="checkbox"/> Toll-Free Calls	(1-800/855/866/877/888-NXX-XXXX)
<input type="checkbox"/> International Calls	(011-#)
<input type="checkbox"/> n11 Calls (411, 611)	(411, 611)
<input checked="" type="checkbox"/> 911 Calls	(911)
<input type="checkbox"/> Operator-Assisted calls	(0-NXX-NXX-XXXX)
<input type="checkbox"/> Carrier Specified calls	(10-10-XXX-#)
<input type="checkbox"/> 900 Calls	(1-900/976-NXX-XXXX, 976-XXXX)



*To allow local calls on this SCA account, the local dialing type must be specified in the dial plan settings. When the local dialing type has been defined, it is displayed next to the **Local Calls** option as either 7 or 10 digits. For more information about defining the local dialing type and configuring dial plans, refer to the *Configuring the Switchboard and Dial Plan in AOS* available online at <https://supportforums.adtran.com>.*

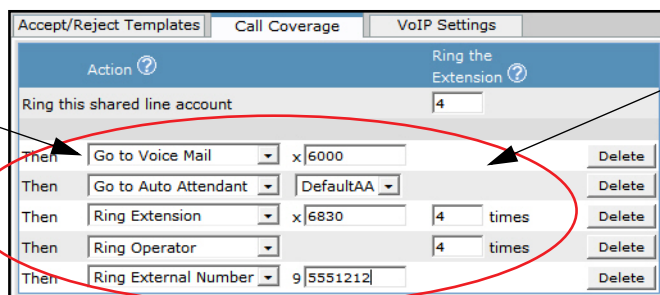
- After you have configured the accept and reject templates for the SCA, you can configure the call coverage for the SCA. The call coverage specifies how calls are handled when they go unanswered after a specified number of rings. To configure the call coverage, select the **Call Coverage** tab at the bottom of the **Shared Line Account** menu.

Select an Action from the drop down list.



Enter the number of times to ring the extension before the first action is taken.

Once an action is selected, define the parameters that appear to the right of it, on the same line.



Enter the necessary parameters for the specified action. Such as, extension numbers, auto attendant, number of times to ring the extension, and external phone numbers.

Settings and Descriptions

Action specifies the coverage for calls. The action items are evaluated in the order selected and displayed on the **Call Coverage** tab. The following actions are available to define the call coverage:

- **Busy Signal** sends a busy signal to the calling party after ringing the SCA.
- **Go to Auto Attendant** routes calling party to the auto attendant. A list box will appear to the right of this selection displaying the available auto attendants.
- **Ring Extension** rings the extension of your choice. Enter the extension in the text box that appears to the right of this selection. Specify the number of times to ring the extension in the **Ring the Extension** column.
- **Ring Operator** rings the operator. Specify the number of times to ring the operator in the **Ring the Extension** column.
- **Ring External Number** rings the external number of your choice. Enter the external number in the text box that appears to the right of this selection.

Ring the Extension column specifies the number of times to ring the extension for the specified action. If there is no response after the specified number of rings (or the extension is busy), the next action in the call coverage list is attempted. If a value of **0** is used, the call coverage list is only processed if the extension is busy. Otherwise, the phone will ring indefinitely.



For additional information about configuring call coverage and understanding how call coverage works with system modes, refer to *Configuring User Accounts on the NetVanta 7000 Series* available online at <https://supportforums.adtran.com>.

- After specifying the call coverage for the SCA, you can optionally configure the VoIP settings for the SCA. To configure VoIP settings, select the **VoIP Settings** tab at the bottom of the **Shared Line Account** menu.

Settings and Descriptions

Codec Group specifies the coder-decoder (CODEC) group to use for the SCA.

VAD enables voice activity detection (VAD). VAD transmits only audible speech over the network (not silence). VAD slightly degrades the sound quality, but the connection uses much less bandwidth.

PLC enables packet loss concealment (PLC). When enabled, the unit will try to reconstruct sound lost from dropped packets.

NLS enables the echo canceller's non-linear suppression (NLS). When enabled, acoustic echo should be reduced.

ALC enables the automatic leveling control (ALC). When enabled, ALC reduces received RTP signals to a predefined level.

Echo Cancellation cancels reflected noise from the transmitted voice signal. Normally, echo cancellation should only be disabled if the voice station is connected to a fax machine or modem.

Frame Packetization selects the number of audio samples in milliseconds (1 frame/sample is 10 ms) included in a single RTP packet. Select the frame packetization rate from the drop-down menu, choosing either **10**, **20**, or **30** ms.

Packet Delay Mode configures the operation mode of the jitter buffer for VoIP calls on this SCA. You can set the packet delay mode by choosing either **Adaptive** or **Fixed** from the drop-down menu.

- **Adaptive** starts the buffer's delay at the **Nominal** delay setting and will increase it up to the **Maximum** delay setting if an unacceptable number of packets are being discarded due to jitter. The buffer decreases the amount of delay when possible.
- **Fixed** causes the buffer's delay to remain at the **Nominal** setting at all times.

Packet Delay specifies the **Nominal**, **Maximum**, and **Fax** packet delay.

- **Nominal** specifies the packet delay mode. For voice calls, the nominal delay value represents the desired amount of packet delay. In **Adaptive** mode, the buffer may increase this value up to the maximum delay. In **Fixed** mode, the delay is constantly set at this value. By default, the **Nominal** packet delay is set to **50** ms. The **Nominal** delay range is **10** to **240** ms, in increments of **10** ms.
- **Maximum** specifies the maximum packet delay mode. For voice calls, the maximum delay value represents the maximum delay to which the adaptive jitter buffer can increase. By default, the **Maximum** packet delay is set to **100** ms. The **Maximum** delay range is **40** to **320** ms, in increments of **10** ms.
- **Fax** specifies the fax packet delay mode. If **Modem Passthrough** is enabled and modem/fax tones are detected, the packet delay setting will be switched to this value. By default, the **Fax** packet delay is set to **50** ms. The **Fax** delay range is **0** to **500** ms.

DTMF Relay specifies how dual-tone multi frequency (DTMF) tones are to be transmitted over RTP. Select either **Inband** or out-of-band (**NTE Value**). The **NTE Value** range is **96** to **127**.

RTP DSCP Value specifies the differentiated services (DiffServ) code point (DSCP) for this station's RTP packets. Either use the global default (which is subject to change as the global default setting changes) or specify a static value for this station only. The valid range for the static value is **0** to **63**.

10. After all the information for the SCA is entered, select **Apply** at the bottom of the menu. The SCA is created and can be applied to the IP phone line key.

Creating Ring Options (Optional)

(Polycom IP Phones Only)

Ring options can be configured and applied to Polycom phones to ring with a different behavior depending upon the system mode.

1. From the main menu, navigate to **Voice > System Setup > Ring Options**.
2. Enter a name for the ring option and a description. Select **Add** to create the ring option.

3. Select a ring type next to a **System Mode** using the drop-down menu. When the system mode is entered (either manually or by the schedule), the ring type becomes active. The default ring type is **immediate**. If no other ring type is selected, the default is used. Select **Apply** to accept the changes.

Menu Settings and Descriptions

same as default uses the default setting.

immediate rings immediately.

silence provides visual ring indication only, no sound.

delay-12-second rings after a 12 second delay.

delay-24-second rings after a 24 second delay.

- The newly created ring option appears in the **Add / Modify / Delete Ring Options** menu. It can now be applied to an SLA on a Polycom phone using the instructions below.

The new ring option appears in the **Add / Modify / Delete Ring Options** menu.

Name	DefaultNight	Lunch	Wkend	Custom1	Custom2	Custom3	Override	
SALES	immed	silence 12sec	silence	dflt	dflt	dflt	dflt	Delete
System Default	immed	dflt	dflt	dflt	dflt	dflt	dflt	

Assigning an SCA to a Polycom Phone Line Key(s)

The following instructions pertain only to Polycom or ADTRAN/Polycom phones. If you are assigning an SCA to an ADTRAN IP 700 Series phone, refer to the instructions in *Assigning an SCA to an ADTRAN Phone Line Key(s)* on page 13.

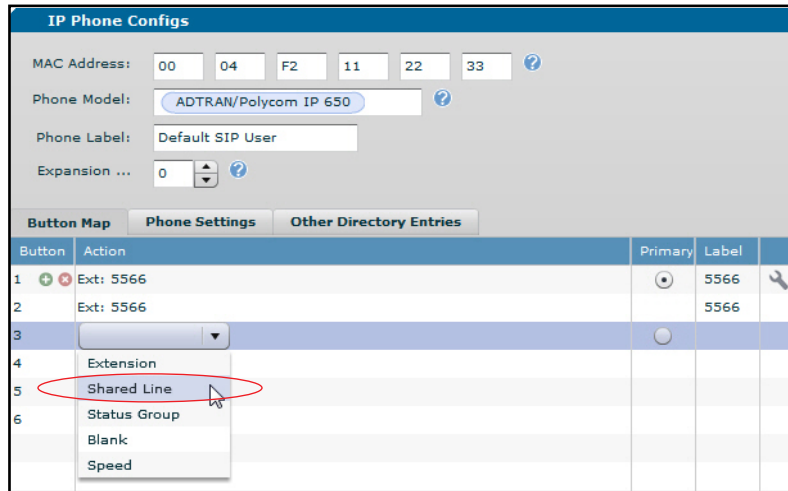
- From the main menu, navigate to **Voice > IP Phone Configs**. Select the configuration you want to edit by selecting the check box next to the phone in the list and selecting **Edit** or by double-clicking on the appropriate row in the table.

	MAC Address	Associated Account	Registered IP	Phone Model
<input checked="" type="checkbox"/>	00:04:F2:11:22:33	5566 6850	<Not Registered>	ADTRAN/Polycom IP 650
<input type="checkbox"/>	00:A0:C8:00:99:A5	2031 6850	<Not Registered>	ADTRAN IP 706
<input type="checkbox"/>	00:A0:C8:00:99:A9	2003 6850	<Not Registered>	ADTRAN IP 706

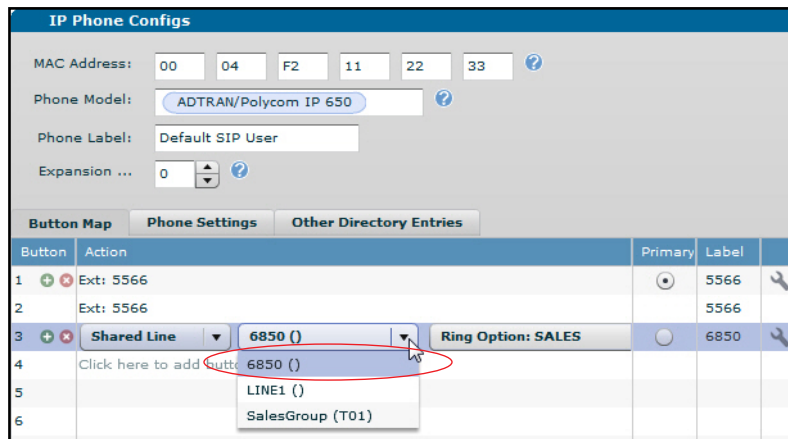
- Highlight the **Click here to add button** row, and double-click in the **Action** column.

Button	Action	Primary	Label
1	Ext: 5566	<input checked="" type="radio"/>	5566
2	Ext: 5566	<input type="radio"/>	5566
3	Click here to add button	<input type="radio"/>	
4		<input type="radio"/>	
5		<input type="radio"/>	

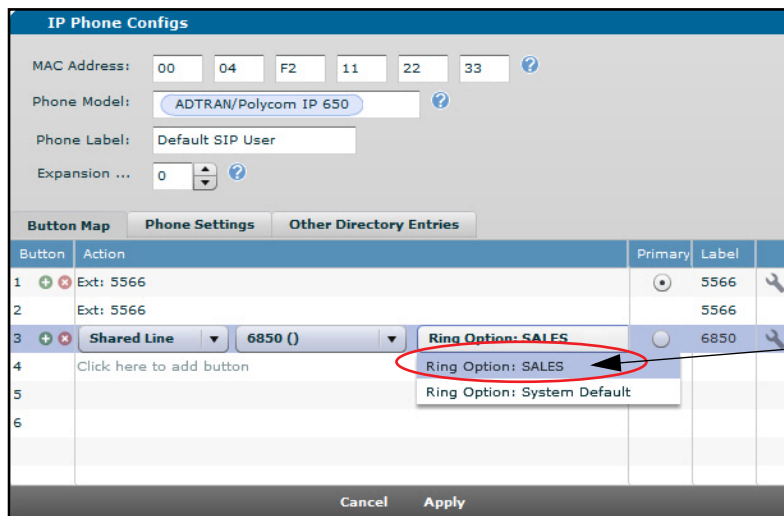
- From the drop-down menu, select **Shared Line**.



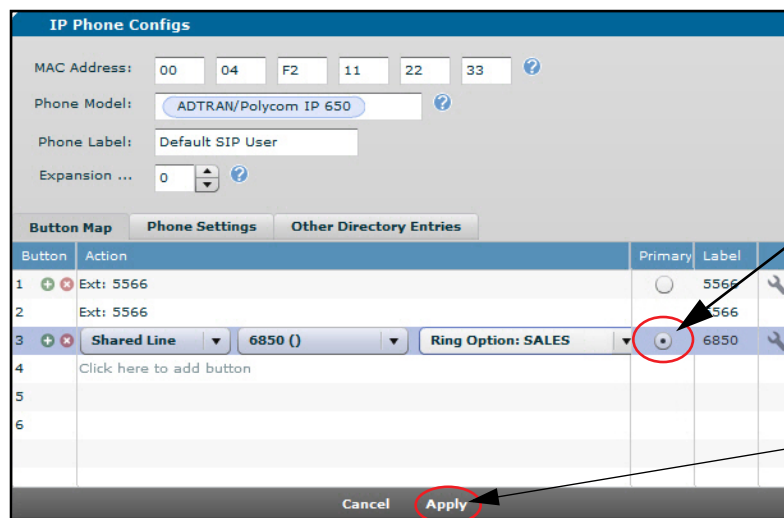
- Select the SCA from the drop-down menu.



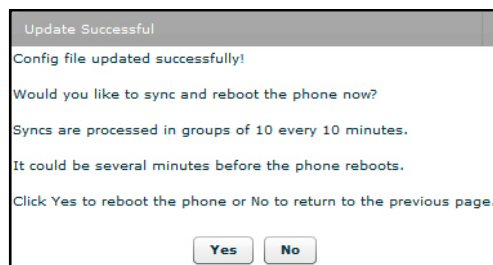
- Select the ring option from the final drop-down menu to apply to the SCA. The available choices depend on the ring options configured and are only available on Polycom phones. Refer to *Hardware and Software Requirements and Limitations on page 4* for a complete list of supported phone models.



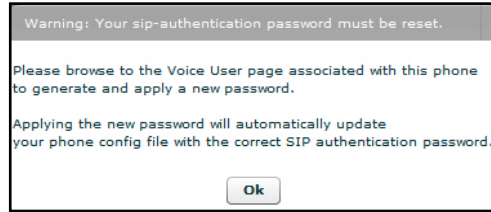
- After assigning an SCA to a line key, select one of the line keys as **Primary**. Designating an SCA line as **Primary** will seize the SCA first (if available) when the phone goes off hook. The default is for the private line to be **Primary**. Select the **Primary** radio button on the appropriate line. Select **Apply** when finished. (For IP phone firmware versions that support this feature, refer to *Hardware and Software Requirements and Limitations on page 4*.)



- Once you have selected **Apply**, the system will prompt you to reboot the phone. Select **Yes** to reboot the phone. The new SCAs will appear on the phone after the reboot process.



You may receive a warning from the system instead, advising you to reset the SIP authentication password. This occurs if you changed the SIP authentication password and requires you to follow the instructions. Select **OK** to continue. Then the prompt to reboot the phone is displayed. Select **Yes** to reboot the phone.



- Repeat *Assigning an SCA to a Polycom Phone Line Key(s) on page 10* to add additional SCAs to a phone. Most phone models allow multiple line registrations on a single phone. The maximum number of line registrations depends upon the phone model.

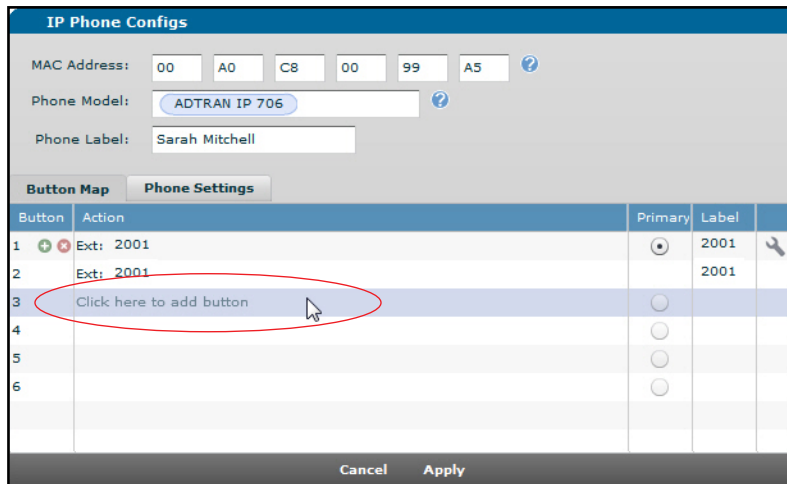
Assigning an SCA to an ADTRAN Phone Line Key(s)

The following instructions pertain only to ADTRAN IP 700 Series phones. They do not support the ring option feature. If you are assigning an SCA to a Polycom or ADTRAN/Polycom model phone, refer to the instructions in *Assigning an SCA to a Polycom Phone Line Key(s) on page 10*.

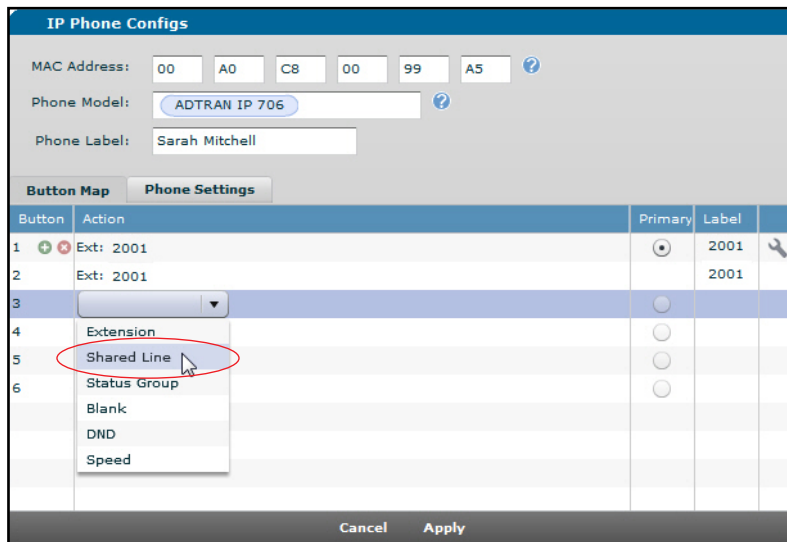
- From the main menu, navigate to **Voice > IP Phone Configs**. Select the configuration you want to edit by selecting the check box next to the phone in the list and selecting **Edit** or by double-clicking on the appropriate row in the table.

System		IP Phone Configs				
Voice		New	Edit	Delete	Refresh	Other Actions
Stations		<input type="checkbox"/>	MAC Address	Associated Accounts	Registered IP	Phone Model
User Accounts		<input type="checkbox"/>	00:A0:C8:25:53:28	2002	<Not Registered>	ADTRAN IP 706
IP Phone Configs		<input checked="" type="checkbox"/>	00:A0:C8:31:58:27	2001	10.10.20.5	ADTRAN IP 706
IP Phone Globals		<input type="checkbox"/>	00:A0:C8:4A:5A:70	2000	10.10.20.4	ADTRAN IP 706
Ring Groups						
Operator Group						
Paging Groups						
Pickup Groups						
Trunks						
Trunk Accounts						
Trunk Groups						
Shared Line Accounts						
3 phone configs						Columns

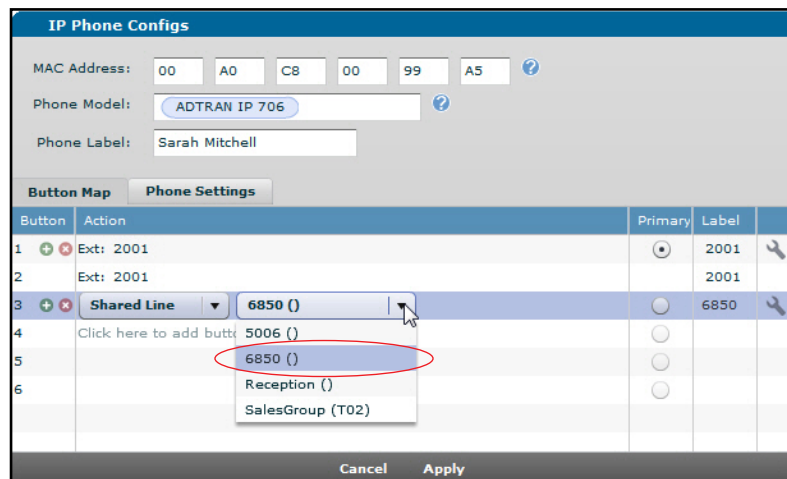
- Highlight the **Click here to add button** row, and double-click in the **Action** column.



- From the drop-down menu, select **Shared Line**.



- Select the SCA from the drop-down menu.



5. After assigning an SCA to a line key, select one of the line keys as **Primary**. Designating an SCA line as **Primary** will seize the SCA first (if available) when the phone goes off hook. The default is for the private line to be **Primary**. Select the **Primary** radio button on the appropriate line. Select **Apply** when finished. (For IP phone firmware versions that support this feature, refer to *Hardware and Software Requirements and Limitations on page 4*.)

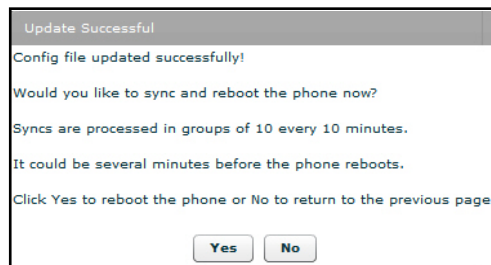
The screenshot shows the 'IP Phone Configs' interface. At the top, there are fields for MAC Address (00 A0 C8 00 99 A5), Phone Model (ADTRAN IP 706), and Phone Label (Sarah Mitchell). Below these is a 'Button Map' section with a table:

Button	Action	Primary	Label
1	Ext: 2001	<input type="radio"/>	2001
2	Ext: 2001	<input type="radio"/>	2001
3	Shared: 6850	<input checked="" type="radio"/>	6850
4	Click here to add button	<input type="radio"/>	
5		<input type="radio"/>	
6		<input type="radio"/>	

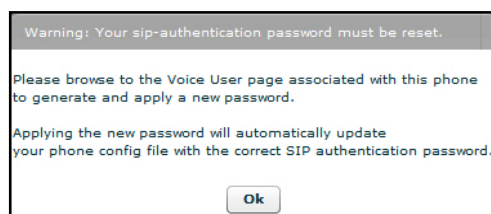
At the bottom of the interface, there are 'Cancel' and 'Apply' buttons. The 'Apply' button is circled in red. Annotations with arrows point to the Primary radio button for button 3 and the Apply button, with the following text:

- Select the **Primary** radio button to seize the associated line when the phone goes off hook.
- Select **Apply** to accept the changes.

6. Once you have selected **Apply**, the system will prompt you to reboot the phone. Select **Yes** to reboot the phone. The new SCAs will appear on the phone after the reboot process.



You may receive a warning from the system instead, advising you to reset the SIP authentication password. This occurs if you changed the SIP authentication password and requires you to follow the instructions. Select **OK** to continue. Then the prompt to reboot the phone is displayed. Select **Yes** to reboot the phone.



7. Repeat *Assigning an SCA to an ADTRAN Phone Line Key(s) on page 13* to add additional SCAs to a phone. Most phone models allow multiple line registrations on a single phone. The maximum number of line registrations depends upon the phone model.

Confirming Shared Line Key Configuration

From the main menu, navigate to **Voice > Reports > Phone Registrations** to view a list of registered IP phones. If your SCA is configured properly and has registered with the specified SIP phone(s) on the system, it will appear in this list. There should be an SCA registration for each phone that is configured to use the SCA.

SIP Registrations				
This page displays all of the SIP phones and trunks registered with the system.				
Extension	Phone Type	IP Address	Port	Expires
2000	Adtran-SIP-IP706/v1.3.15	10.10.20.4	5060	2 mins 50 secs
2001	Adtran-SIP-IP706/v1.3.16	10.10.20.5	5060	6 mins 17 secs
Trunk	Identity	Type	Status	
No SIP trunks currently registered				
Refresh in 5 seconds...				

Additional Resources

There are additional resources available to aid in configuring your ADTRAN unit. The documents listed below are available online at ADTRAN's Support Forum at <https://supportforums.adtran.com>.

- *Configuring Shared Line Appearances over Analog Trunks*
- *Enhanced ANI and DNIS Substitution in AOS Voice Products*
- *Configuring User Accounts on the NetVanta 7000 Series*