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SIP Trunking using the EdgeMarc Network Services Gateway and the Digium Switchvox IP-PBX

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1 Overview

The purpose of this knowledgebase solution is to describe the steps needed to configure the Digium Switchvox AA65 IP-PBX for proper operation in a SIP trunking application. Please note that this solution documents the basic configuration needed in the PBX and that the requirements of your specific SIP trunking environment may require modifications to the configuration steps provided in this document

2 Prerequisites

SIP trunking information provided by the VoIP service provider:

- SIP proxy server IP address or DNS name.
- Trunking Direct Inward Dial (DID) phone numbers
 - Calls to the trunking DID(s) are forwarded from the service provider to the wide area network (WAN) IP address of the EdgeMarc. There may be a single "Pilot" phone number used for all inbound calls and/or multiple DIDs depending on the service ordered.
- SIP authentication credentials (optional)
 - Some SIP trunking service providers require a unique username and password to be supplied for IP PBX registrations and/or SIP signaling using P-Asserted Identity (RFC 3325). This knowledgebase solution provides the configuration steps for both PBX registration and static or non-registration modes of PBX operation.
- Digium Switchvox – v23695

3 Network Topology

Typical SIP Trunking Installation

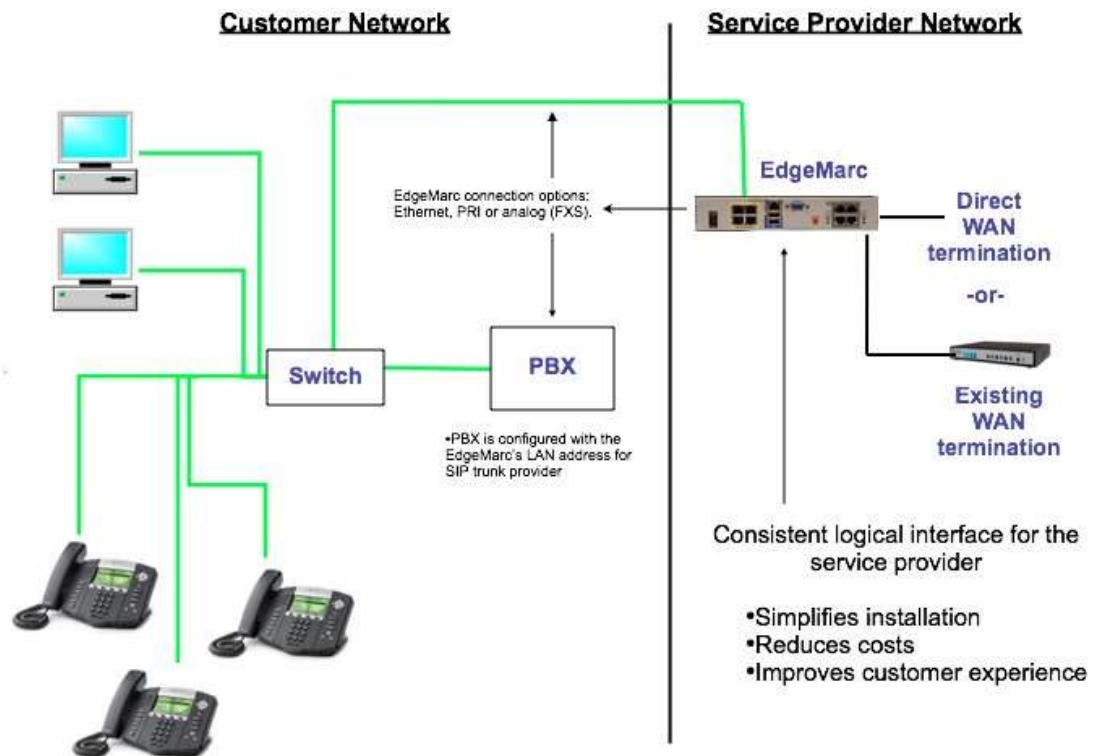


Figure 1 Test Set up

The PBX in the above network topology represents the Digium Switchvox PBX that is connected via its LAN port to the LAN port of the EdgeMarc Network Services gateway. The PBX used in our lab comprises of the following:

Table 1 – PBX Information

Manufacturer:	Asterisk
Model:	Digium Switchvox
Software Version:	23695
Does the PBX send SIP Registration messages (Yes/No)?	Yes
Vendor Contact:	support@netxusa.com

Table 2 – E-SBC Information

Manufacturer:	Edgewater Network, Inc.
Model:	4552
Software Version:	11.6.14

4 Description of Basic Operation and Call Flows

Basic Call Flow:

All phones connect to the Digium Switchvox AA65 PBX. The PBX will interface with the service provider using a SIP trunk.

Internal calls:

- Calls between phones on the LAN
- LAN phone > Digium Switchvox AA65 PBX > LAN phone

Outbound calls:

- Call is initiated by a LAN phone to a WAN phone.
- LAN phone > Digium Switchvox AA65 PBX [SIP trunk] > EM > SIP trunk service provider > WAN phone

Inbound call:

- Call is initiated by a WAN phone to a LAN phone.

WAN phone > SIP trunk service provider > EM > [SIP trunk] Digium Switchvox AA65 PBX > LAN phone

5 Digium Switchvox PBX Configuration

The steps below describe the minimum configuration required to enable the PBX to use a SIP trunk for inbound and outbound calling. Please refer to the Digium Switchvox AA65 product documentation for more information on SIP trunking or other advanced PBX features.

The configuration described here assumes that the PBX is already configured and operational with station side phones using assigned extensions or DIDs. This configuration is based on Digium Switchvox AA65 version 23695.

5.1 Default IP Address

The IP-PBX was shipped with a default IP address of 192.168.1.100/24 for 1 Ethernet port. To work with EM for SIP trunking service, this port should be in the same subnet as EM port 1 and use EM port 1's IP address as its SIP server. All the IP phones communicate with the PBX via this IP address as well, using the SIP VoIP protocol. The IP phones by default will need IP address assignment. For the test setup in the lab, the PBX's default IP address is changed to 10.10.108.11/24 and EM port 1 is set to 10/10/108.1/24, with DHCP server enabled.

5.2 Web GUI Access

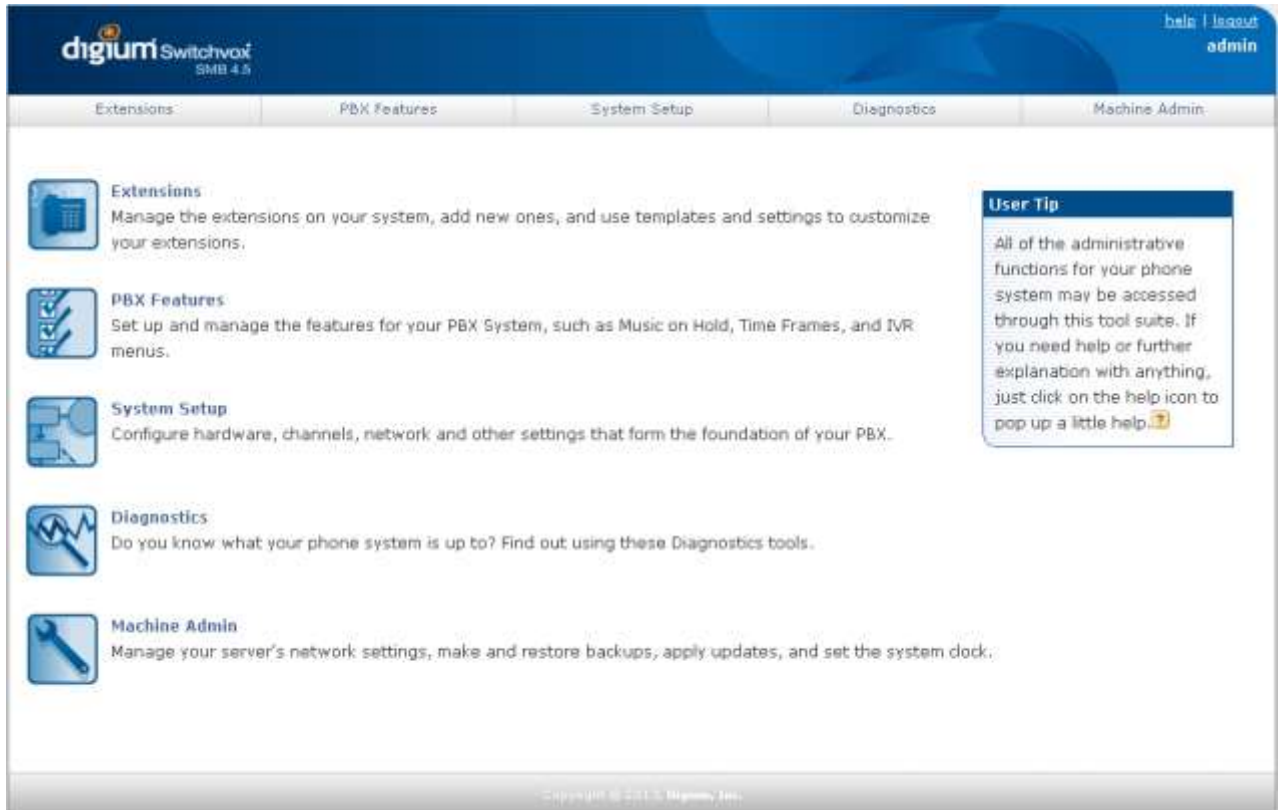
To configure the PBX, run <https://10.10.108.11/admin> on your PC and to access the configuration GUI's login screen.



The image shows the login screen for the Digium Switchvox SMB 4.5 web GUI. The header is blue with the Digium logo and 'Switchvox SMB 4.5' text. The main content area is white and contains the text 'Please log in to use the Tool Suite'. Below this are two input fields: 'User Name:' and 'Password:'. A blue 'Log In' button is positioned below the password field. At the bottom of the page, there is a small copyright notice: 'Copyright © 2015, Digium, Inc.'

5.3 Username and Password

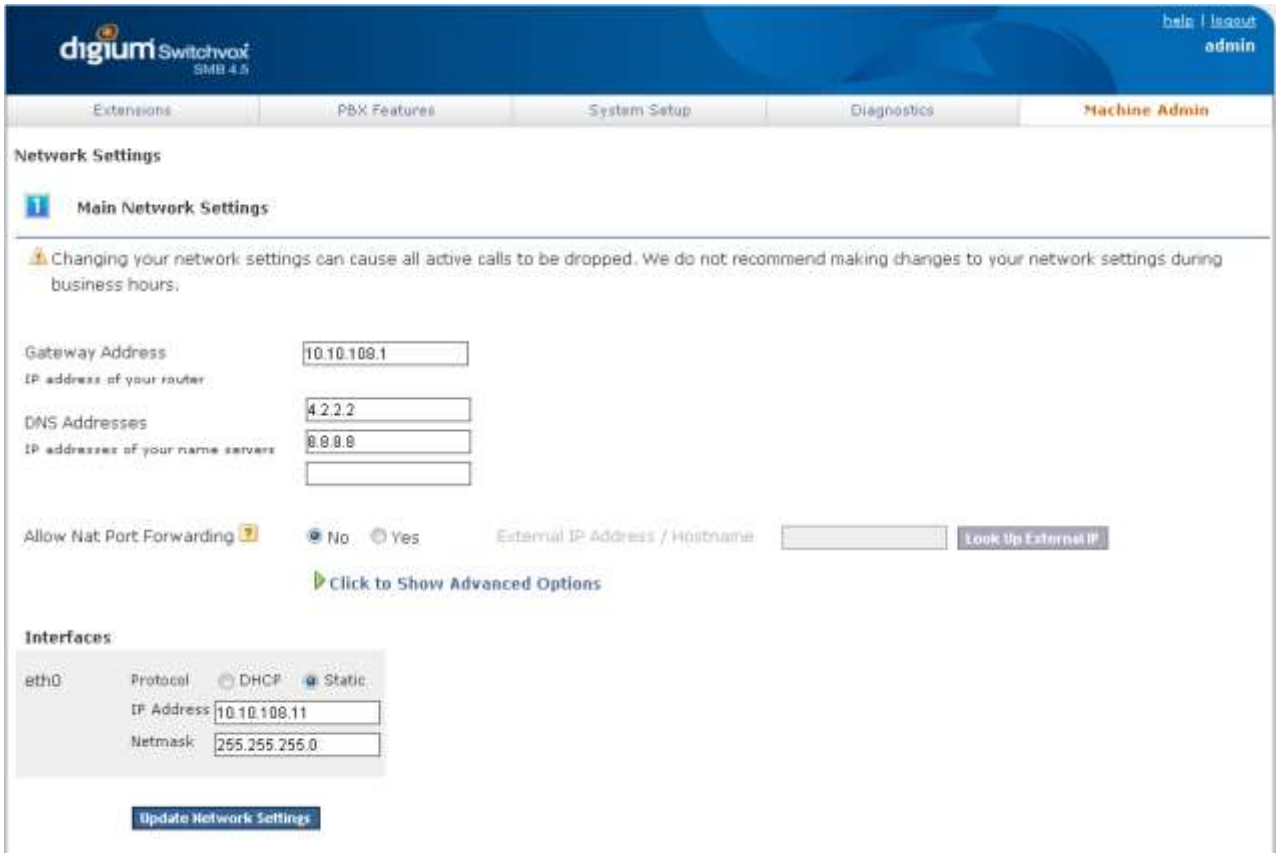
Enter the user name and password for the PBX and hit the “Login” button. The factory default is “admin” for both the user name and password.



5.4 Network Settings

Select “Machine Admin” and select “Network Settings” to set/verify network setting.

- Enter EdgeMarc’s IP address in the “Gateway Address” field.
- Enter the Primary and Secondary DNS IP address in the “DNS Addresses” fields.
- Select “No” for the “Allow Nat Port Forwarding” setting.
- In the Interface section, select “Static” for eth0’s “Protocol” field and make sure the IP address and network mask of the PBX are correct in the “IP Address” and the “Netmask” fields.
- Hit the “Update Network Settings” button.



The screenshot shows the 'Machine Admin' interface for Digium Switchvox SMB 4.5. The top navigation bar includes 'Extensions', 'PBX Features', 'System Setup', 'Diagnostics', and 'Machine Admin'. The 'Network Settings' section is active, showing 'Main Network Settings'. A warning message states: 'Changing your network settings can cause all active calls to be dropped. We do not recommend making changes to your network settings during business hours.' The settings include: Gateway Address (10.10.108.1), DNS Addresses (4.2.2.2), and Allow Nat Port Forwarding (No). The 'Interfaces' section shows the 'eth0' interface configured with a Static protocol, IP Address 10.10.108.11, and Netmask 255.255.255.0. An 'Update Network Settings' button is at the bottom.

5.5 System Setup

Select "System Setup", select "VoIP Providers", select "SIP Provider" in the "Add New" field and hit the "Go" button to configure EM as the SIP provider, expecting SIP registration from the PBX.

- Enter a descriptive name in the "SIP Provider Name" field.
- Enter Account ID in the "Your Account ID" field. Note that by default this ID is used for PBX registration and it must match the "User ID" configured on EdgeMarc. In this example, the pilot DID is used.
- Enter password in the "Your Password" field.
- Enter EdgeMarc's IP address in the "Hostname/IP Address" field.
- Enter "800" in the "Callback Extension" field.
- Select "RFC2833" in the "DTMF Mode" field.
- Leave other fields as default and hit the "Add SIP Provider" button.

[help](#) | [logout](#)
admin

[Extensions](#)
[PBX Features](#)
[System Setup](#)
[Diagnostics](#)
[Machine Admin](#)

VOIP Providers

Add a New SIP Provider

SIP Provider Name

What is this used for?

Your Account ID

What's an Account ID?

Your Password

Hostname/IP Address

What does this mean?

Callback Extension

What's the Callback Extension?

Default Fax Extension

What is this used for?

DTMF Mode

RFC2833
RFC6033
Info
Inband
Auto

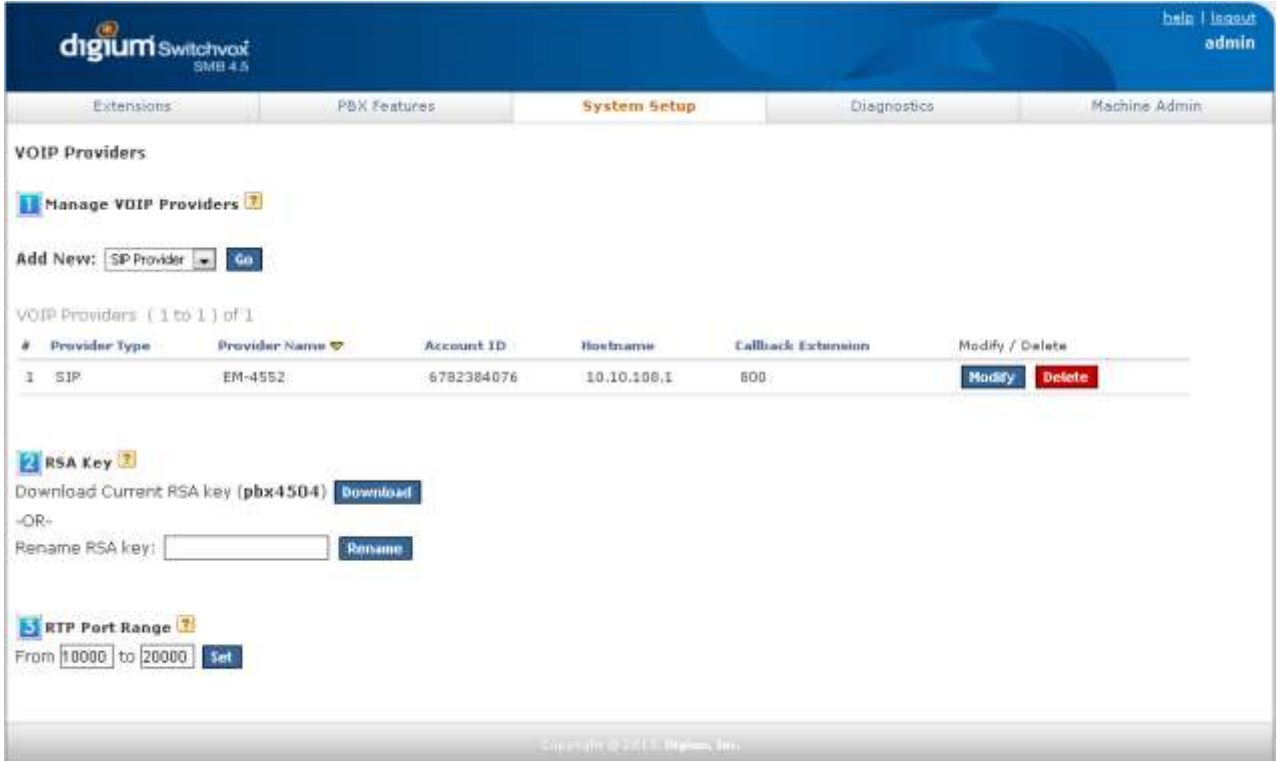
What is DTMF Mode?

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5.6 Static IP Mode

If you need to configure the PBX for static IP mode, select "System Setup" and select "VoIP Providers".

- a) Hit the "Modify" button to modify the VoIP Provider account set up for EdgeMarc.



digium Switchvox SMB 4.5 [help](#) [logout](#) [admin](#)

Extensions PBX Features **System Setup** Diagnostics Machine Admin

VOIP Providers

[Manage VOIP Providers](#)

Add New: [Go](#)

VOIP Providers (1 to 1) of 1

#	Provider Type	Provider Name	Account ID	Hostname	Callback Extension	Modify / Delete
1	SIP	EM-4552	6782384076	10.10.108.1	600	Modify Delete

2 RSA Key

Download Current RSA key (pbx4504) [Download](#)

-OR-

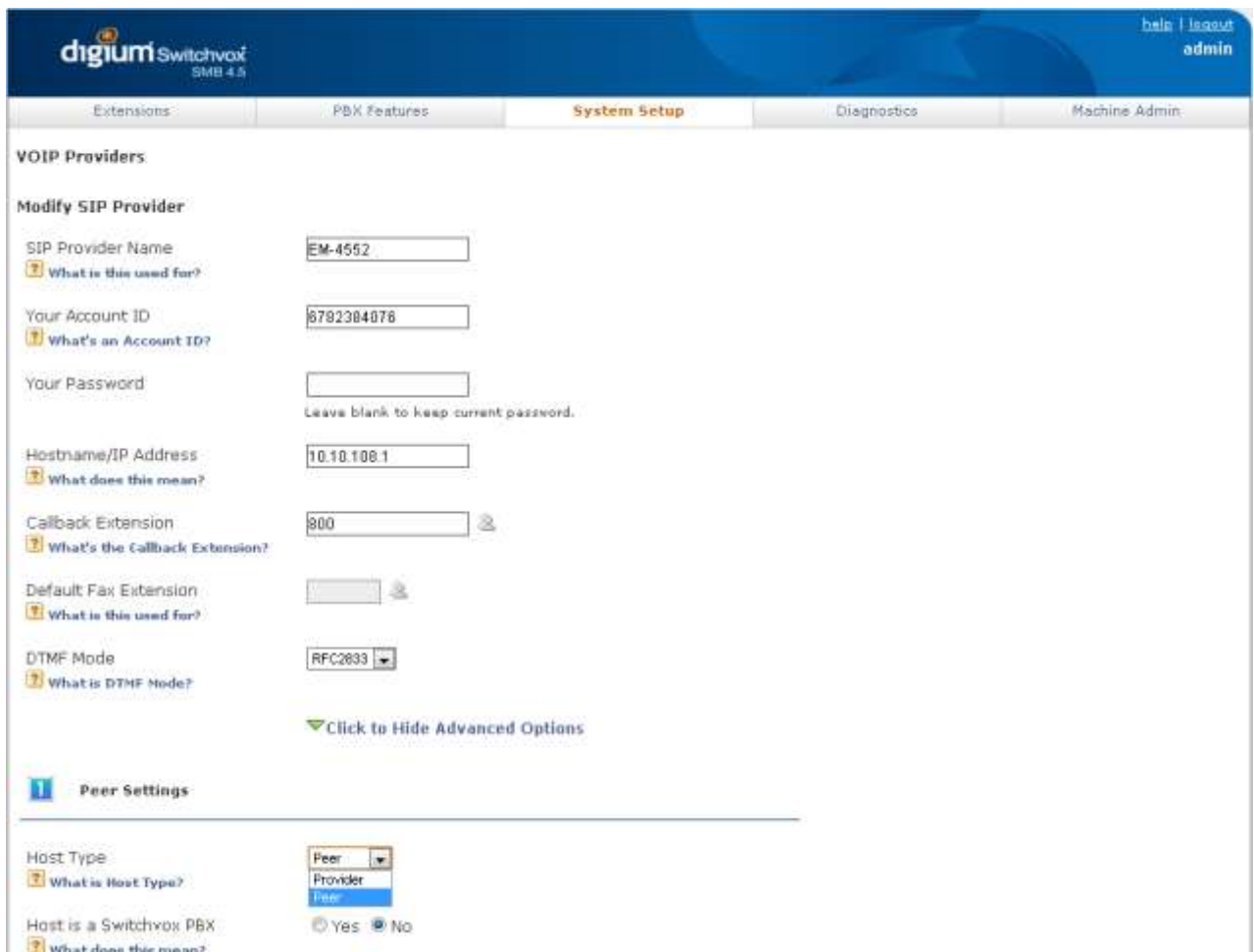
Rename RSA key: [Rename](#)

3 RTP Port Range

From to [Set](#)

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- b) Click the "Click to Show Advanced Options".
- c) In the Peer Settings section, change "Host Type" field from "Provider" to "Peer". This will change the PBX from default of SIP registration mode to static IP mode.
- d) Leave all other fields as default and hit the "Modify SIP Provider" button at the end of the screen.



digium Switchvox SMB 4.5

help | logout admin

Extensions PBX Features **System Setup** Diagnostics Machine Admin

VOIP Providers

Modify SIP Provider

SIP Provider Name
What is this used for?

Your Account ID
What's an Account ID?

Your Password
Leave blank to keep current password.

Hostname/IP Address
What does this mean?

Callback Extension
What's the Callback Extension?

Default Fax Extension
What is this used for?

DTMF Mode
What is DTMF Mode?

[Click to Hide Advanced Options](#)

Peer Settings

Host Type
What is Host Type?

Host is a Switchvox PBX ☐ Yes ☒ No
What does this mean?

5.7 Extension Length

Select "Extensions", select "Extension Settings", select "3" for the "Extension Length" field and hit the "Save Extension Settings" button.



digium Switchvox SMB 4.5

help | logout admin

Extensions PBX Features System Setup Diagnostics Machine Admin

Extension Settings

Extension Length digits

☐ Beep after an assisted transfer
What is this used for?

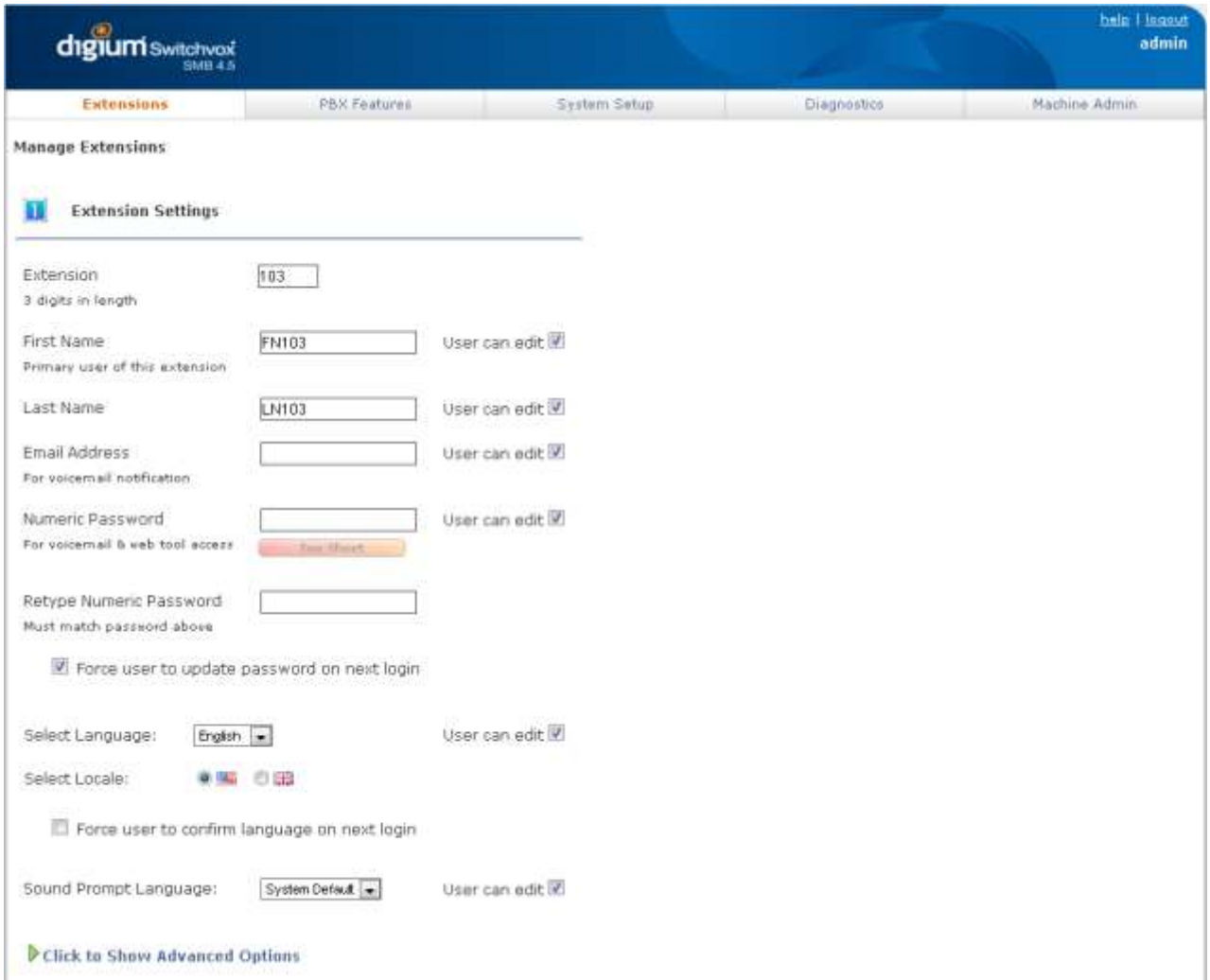
[Save Extension Settings](#)

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5.8 Create A New Extension

Select "Extensions", select "Manage Extensions" and click on the "Create A New Extension" button to create SIP extensions for the SIP phones.

- Leave both the "Extension Type" and the "Extension Template" fields as default and hit the "Create A New Extension" button to create a new extension.
- In the Extension Settings section, enter the extension number in the "Extension" field
- Enter the first name of the user in the "First Name" field and enter the last name of the user in the "Last Name" field.
- Leave other fields as default and hit the "Click to Show Advanced Options" link.



The screenshot shows the 'Manage Extensions' page in the Digium Switchvox SMB 4.5 interface. The 'Extension Settings' tab is active. The extension number is 103. The form includes fields for First Name (FN103), Last Name (LN103), Email Address, Numeric Password, and Retype Numeric Password. There are checkboxes for 'Force user to update password on next login' and 'Force user to confirm language on next login'. The 'Select Language' dropdown is set to English, and the 'Sound Prompt Language' dropdown is set to System Default. A 'Click to Show Advanced Options' link is at the bottom.

digium Switchvox
SMB 4.5

help | logout
admin

Extensions PBX Features System Setup Diagnostics Machine Admin

Manage Extensions

1 Extension Settings

Extension 103
3 digits in length

First Name FN103 User can edit ✓
Primary user of this extension

Last Name LN103 User can edit ✓




Email Address User can edit ✓
For voicemail notification

Numeric Password User can edit ✓
For voicemail & web tool access

Retype Numeric Password
Must match password above

☒ Force user to update password on next login

Select Language: English User can edit ✓

Select Locale:   

☐ Force user to confirm language on next login

Sound Prompt Language: System Default User can edit ✓

Click to Show Advanced Options

- e) Select "rfc2833 (Default)" in the "DTMF Mode" field.
- f) Enter the same phone password in both the "Phone Password" field and the "Retype Phone Password" field. Note that this password must match the "Authentication Password" setting of the Polycom phone. Also note that "456" has been commonly used as the Polycom phone's password.

▼ Click to Hide Advanced Options

General Settings

Voicemail/Fax Mailbox Quota (MB)

? [What does this mean?](#)

(A megabyte is approximately equal to 1 minute of voicemail)

☒ This extension can be dialed from an IVR.

? [What does this mean?](#)

Phone Settings

DTMF Mode

rfc2833 (Default) ▼

? [What is DTMF Mode?](#)

rfc2833 (Default)

Inband

Info

Phone Password

? [What is Phone Password?](#)

Strong

Retype Phone Password

Must match password above

Supported Codecs

? [Help with codecs](#)

Audio ☒ ULAW (Default) ☒ ALAW (Default) ☒ G722 (Default)

☐ G726

☐ SPEEX

☐ GSM

☐ ADPCM

☐ LPC10

Video ☒ H263 (Default) ☐ H263+ ☒ H264 (Default)

Phone NAT Traversal

Always ▼

? [What does this mean?](#)

Call API Settings ?

☒ Prepend a 1 if number is 10 digits in length

Digits to prepend if number is not an extension

- g) Leave all other fields as default and hit the “Save Extension Settings” button at the end of the screen.

4

Outgoing Call Rules

Help with outgoing call rules

Rule Name	Allow	Deny
International	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1-900 Numbers	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Toll Free	<input checked="" type="checkbox"/>	<input type="checkbox"/>
911	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Local	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Internal	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Long Distance91	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Long distance9	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5

Extension Groups

Help with extension groups

Groups this extension belongs to:

Default Group

Create New Group

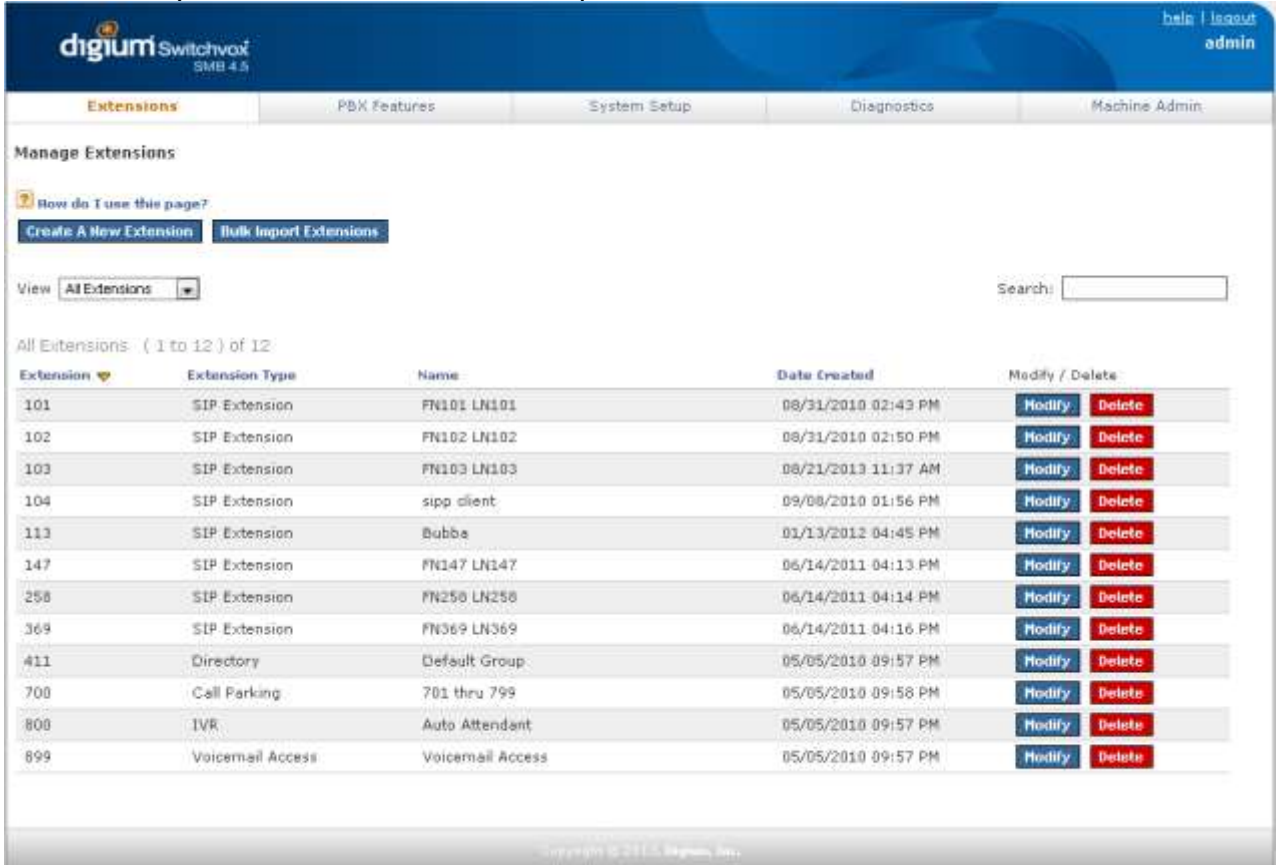
Hold down CTRL to select multiple groups

Save Extension Settings

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5.9 Manage Extensions

Select "Extension", select "Manage Extensions" to see all the default extensions and all the newly added extensions for the phones.



digium Switchvox SMB 4.5

help | logout admin

Extensions PBX Features System Setup Diagnostics Machine Admin

Manage Extensions

How do I use this page?
[Create A New Extension](#) [Bulk Import Extensions](#)

View: Search:

All Extensions: (1 to 12) of 12

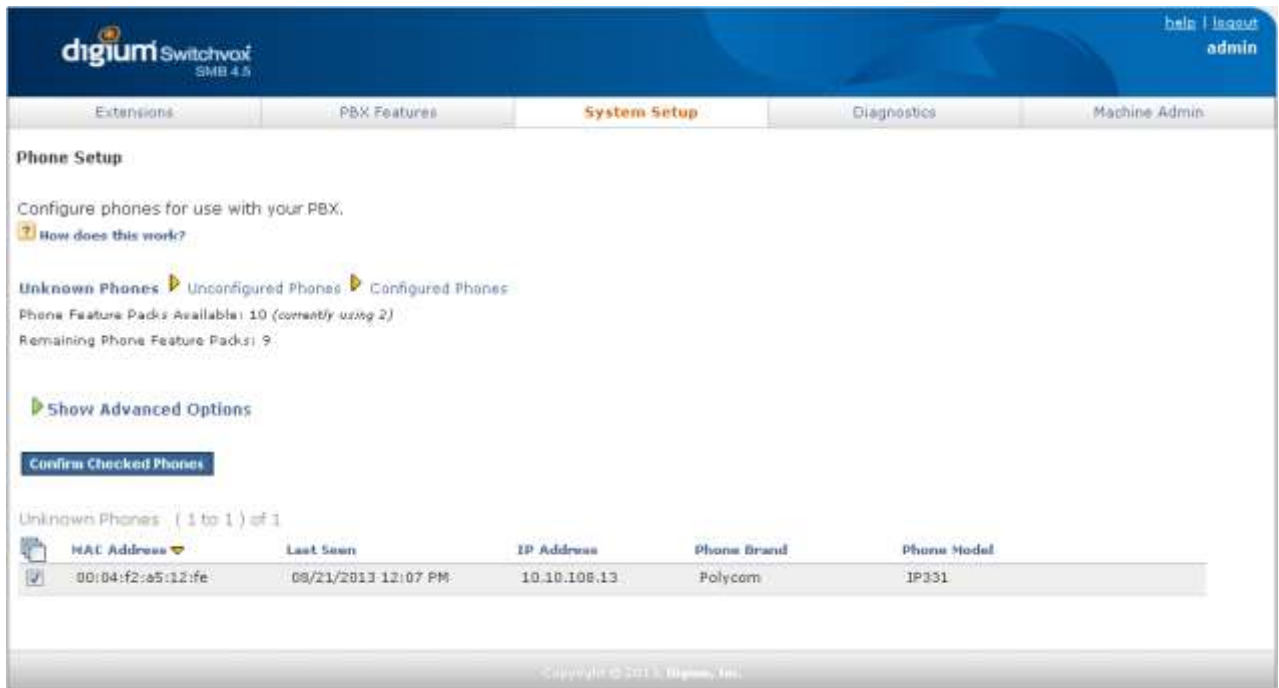
Extension	Extension Type	Name	Date Created	Modify / Delete
101	SIP Extension	FN101 LN101	08/31/2010 02:43 PM	Modify Delete
102	SIP Extension	FN102 LN102	08/31/2010 02:50 PM	Modify Delete
103	SIP Extension	FN103 LN103	08/21/2013 11:37 AM	Modify Delete
104	SIP Extension	sipp client	09/08/2010 01:56 PM	Modify Delete
113	SIP Extension	Bubba	01/13/2012 04:45 PM	Modify Delete
147	SIP Extension	FN147 LN147	06/14/2011 04:13 PM	Modify Delete
258	SIP Extension	FN258 LN258	06/14/2011 04:14 PM	Modify Delete
369	SIP Extension	FN369 LN369	06/14/2011 04:16 PM	Modify Delete
411	Directory	Default Group	05/05/2010 09:57 PM	Modify Delete
700	Call Parking	701 thru 799	05/05/2010 09:58 PM	Modify Delete
800	IVR	Auto Attendant	05/05/2010 09:57 PM	Modify Delete
899	Voicemail Access	Voicemail Access	05/05/2010 09:57 PM	Modify Delete

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5.10 Phone Setup

Select "System Setup", select "Phone Setup" to assign SIP extensions to the SIP phones. In this example, the PBX has detected a Polycom phone and has added it to the "Unknown Phones" list. If a phone does not show up here, try rebooting the phone. Click on the "How does this work?" link if you need help on configuring the phones for use with your PBX.

- To configure the Polycom phone, check the box next to it and click the "Confirm Checked Phones" button. This should move the Polycom phone to the "Unconfigured Phones" list.



digium Switchvox SMB 4.5

help | logout admin

Extensions PBX Features **System Setup** Diagnostics Machine Admin

Phone Setup

Configure phones for use with your PBX.

How does this work?

Unknown Phones Unconfigured Phones Configured Phones

Phone Feature Packs Available: 10 (currently using 2)

Remaining Phone Feature Packs: 9

Show Advanced Options

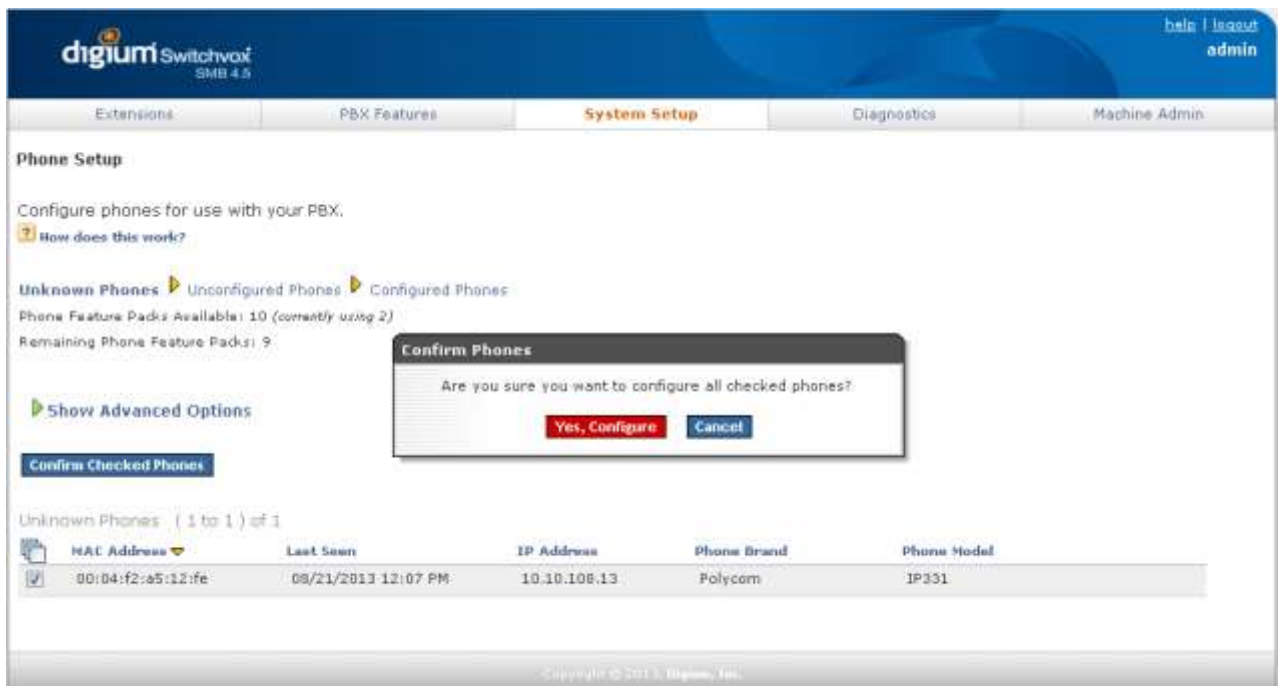
Confirm Checked Phones

Unknown Phones (1 to 1) of 1

MAC Address	Last Seen	IP Address	Phone Brand	Phone Model
<input checked="" type="checkbox"/> 00:04:f2:a5:12:fe	08/21/2013 12:07 PM	10.10.108.13	Polycom	IP331

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b) Click the “Yes, Configure” button.



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Extensions PBX Features **System Setup** Diagnostics Machine Admin

Phone Setup

Configure phones for use with your PBX.

How does this work?

Unknown Phones Unconfigured Phones Configured Phones

Phone Feature Packs Available: 10 (currently using 2)

Remaining Phone Feature Packs: 9

Show Advanced Options

Confirm Checked Phones

Unknown Phones (1 to 1) of 1

MAC Address	Last Seen	IP Address	Phone Brand	Phone Model
<input checked="" type="checkbox"/> 00:04:f2:a5:12:fe	08/21/2013 12:07 PM	10.10.108.13	Polycom	IP331

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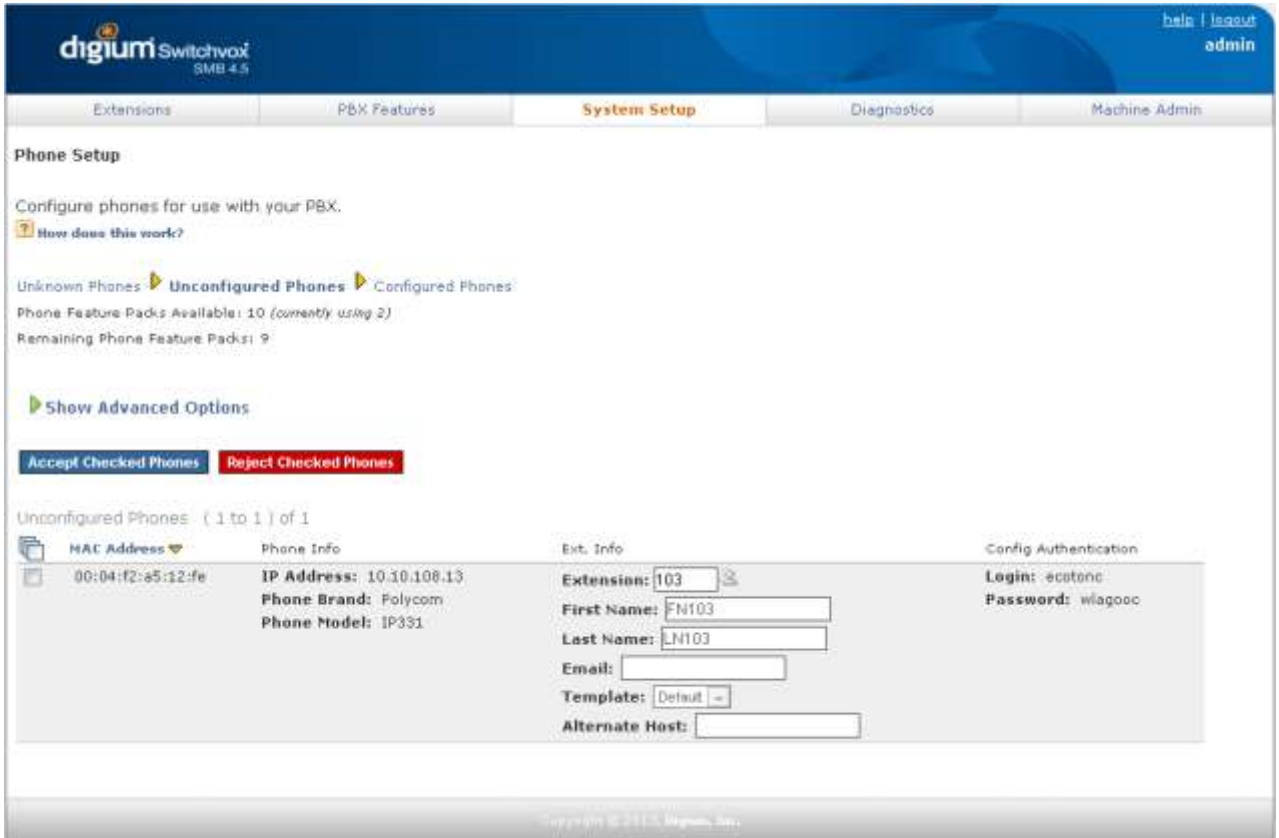
Confirm Phones

Are you sure you want to configure all checked phones?

Yes, Configure Cancel

c) The phone is now in the “Unconfigured Phones” list. Check the box next to the phone, enter the assigned extension number for the phone in the “Extension”

field, enter the first name of the user in the "First Name" field, enter the last name of the user in the "Last Name" field, leave other fields as default and hit the "Accept Checked Phones" button.



digium Switchvox 8MB 4.5 help | logout admin

Extensions PBX Features **System Setup** Diagnostics Machine Admin

Phone Setup

Configure phones for use with your PBX.
[How does this work?](#)

Unknown Phones **Unconfigured Phones** Configured Phones

Phone Feature Packs Available: 10 (currently using 2)
 Remaining Phone Feature Packs: 9

[Show Advanced Options](#)

Accept Checked Phones **Reject Checked Phones**

Unconfigured Phones: (1 to 1) of 1

MAC Address	Phone Info	Ext. Info	Config Authentication
00:04:f2:a5:12:fe	IP Address: 10.10.108.13 Phone Brand: Polycom Phone Model: IP331	Extension: 103 First Name: FN103 Last Name: LN103 Email: Template: Default Alternate Host:	Login: ecotone Password: wlaqooc

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- d) Select "System Setup", select "Phone Setup" and click on "Configured Phones" and you should see the phones you just configured are now in the "Configured Phones" list.

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SMB 4.5

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admin

Extensions PBX Features **System Setup** Diagnostics Machine Admin

Phone Setup

Configure phones for use with your PBX.

How does this work?

Unknown Phones Unconfigured Phones **Configured Phones**

Phone Feature Packs Available: 10 (*currently using 2*)
Remaining Phone Feature Packs: 8

Show Advanced Options

Unconfigure Checked Phones **Reboot Checked Phones**

Configured Phones (1 to 2) of 2

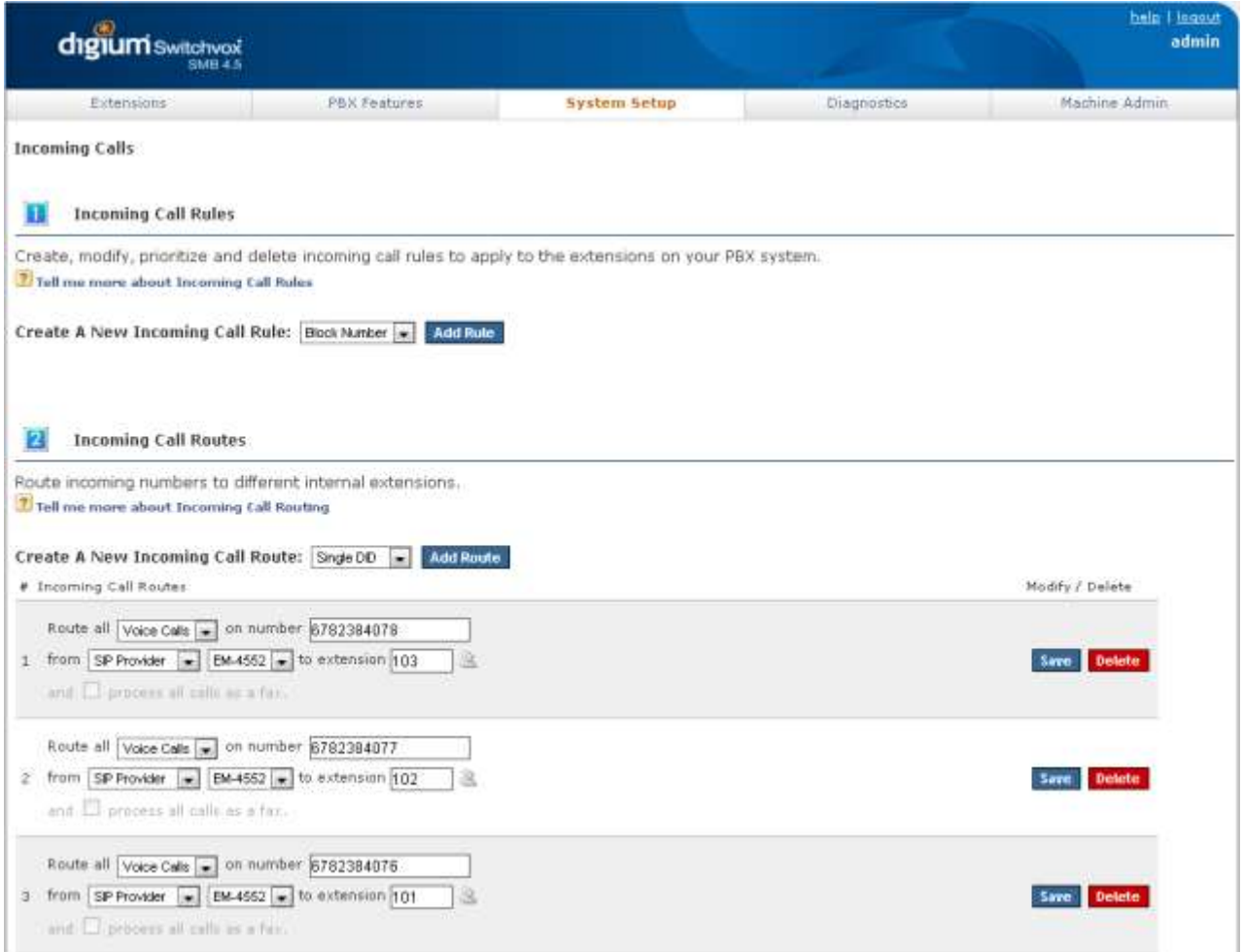
MAC Address	Phone Info	Ext. Info	Config Authentication
00:04:f2:a5:12:fe	IP Address: 10.10.108.13 Phone Brand: Polycom Phone Model: IP331	Extension: 103 First Name: FN103 Last Name: LN103 Email: Alternate Host:	Login: ecotone Password: wlagood
Show Additional Lines			
00:04:f2:a5:14:7f	IP Address: 10.10.108.12 Phone Brand: Polycom Phone Model: IP331	Extension: 147 First Name: FN147 Last Name: LN147 Email: Alternate Host:	Login: cdzmhrng Password: jstcton
Show Additional Lines			

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5.11 Incoming Calls

Select "System Setup" and select "Incoming Calls" to map incoming numbers to different internal extensions.


- a) In the Incoming Call Routes section, select "Single DID" in the "Create A New Incoming Call Route" field and hit the "Add Route" button.



The screenshot shows the digium Switchvox SMB 4.5 System Setup interface. The top navigation bar includes links for help, logout, and admin. The main menu has tabs for Extensions, PBX Features, System Setup (highlighted), Diagnostics, and Machine Admin. The System Setup page is divided into two sections: Incoming Call Rules and Incoming Call Routes. The Incoming Call Rules section allows creating, modifying, prioritizing, and deleting rules. The Incoming Call Routes section allows routing incoming numbers to different internal extensions. It features a table with three entries, each with a 'Route all' field, a 'number' field, a 'from' field, and an 'extension' field. The first entry is highlighted.

#	Incoming Call Routes	Modify / Delete
1	Route all <input type="text" value="Voice Calls"/> on number <input type="text" value="5782384078"/> from <input type="text" value="SIP Provider"/> <input type="text" value="EM-4552"/> to extension <input type="text" value="103"/> and <input type="checkbox"/> process all calls as a fax.	<input type="button" value="Save"/> <input type="button" value="Delete"/>
2	Route all <input type="text" value="Voice Calls"/> on number <input type="text" value="5782384077"/> from <input type="text" value="SIP Provider"/> <input type="text" value="EM-4552"/> to extension <input type="text" value="102"/> and <input type="checkbox"/> process all calls as a fax.	<input type="button" value="Save"/> <input type="button" value="Delete"/>
3	Route all <input type="text" value="Voice Calls"/> on number <input type="text" value="5782384076"/> from <input type="text" value="SIP Provider"/> <input type="text" value="EM-4552"/> to extension <input type="text" value="101"/> and <input type="checkbox"/> process all calls as a fax.	<input type="button" value="Save"/> <input type="button" value="Delete"/>

- b) From the new entry (high-lighted), select "Voice Calls" in the "Route all" field, enter the assigned DID for the "number" field, select "SIP Provider" in the "from" field, enter the phone extension in the "extension" field and hit the "Save" button.



[help](#) | [logout](#)
[admin](#)

Extensions
PBX Features
System Setup
Diagnostics
Machine Admin

Incoming Calls
✓ Successfully updated rule.

1

Incoming Call Rules

Create, modify, prioritize and delete incoming call rules to apply to the extensions on your PBX system.
[Tell me more about Incoming Call Rules](#)

Create A New Incoming Call Rule: Block Number Add Rule

2

Incoming Call Routes

Route incoming numbers to different internal extensions.
[Tell me more about Incoming Call Routing](#)

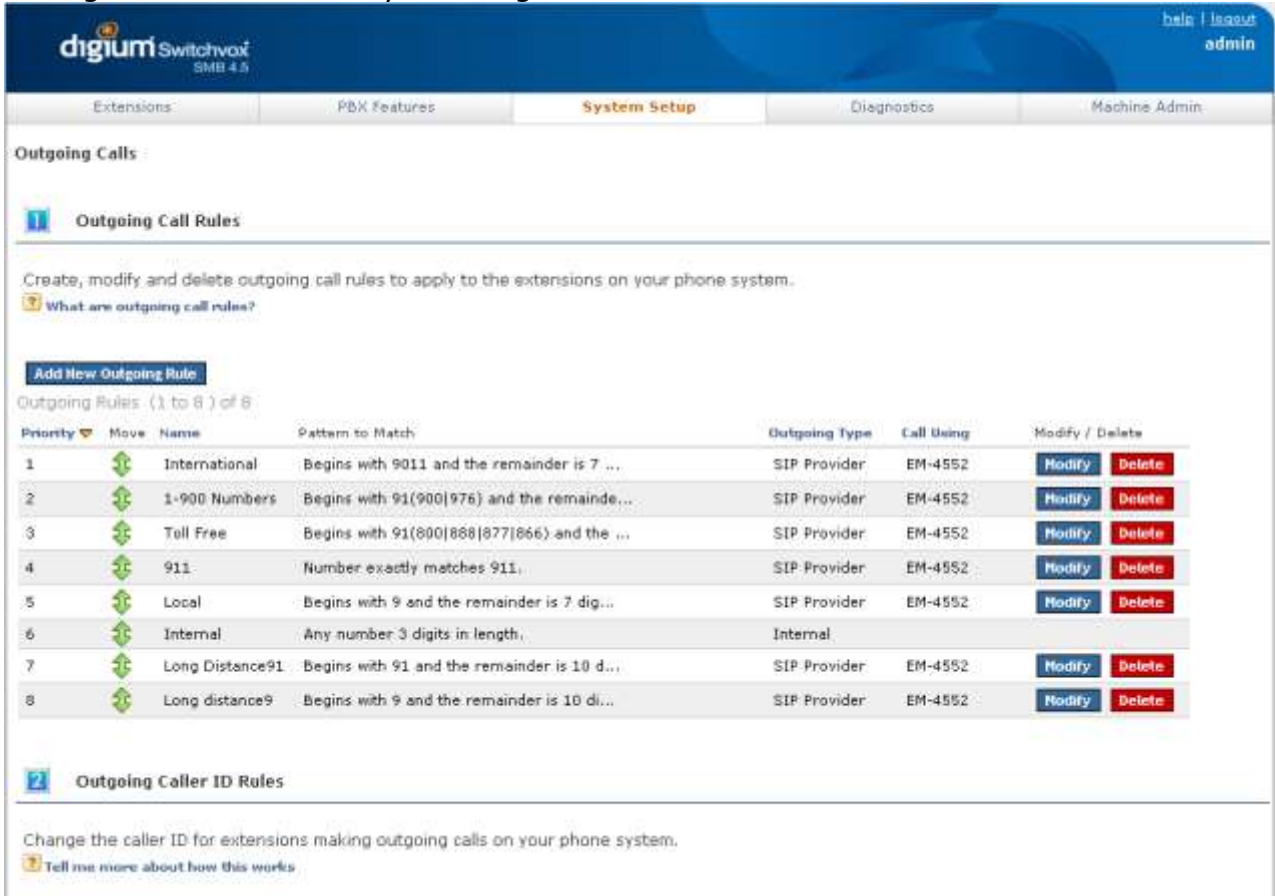
Create A New Incoming Call Route: Single DID Add Route

Incoming Call Routes
Modify / Delete

Route all Voice Calls on number 6782384080	
1. from SP Provider EM-4552 to extension 104	Save Delete
and <input type="checkbox"/> process all calls as a fax.	
Route all Voice Calls on number 6782384078	
2. from SP Provider EM-4552 to extension 103	Save Delete
and <input type="checkbox"/> process all calls as a fax.	
Route all Voice Calls on number 6782384077	
3. from SP Provider EM-4552 to extension 102	Save Delete
and <input type="checkbox"/> process all calls as a fax.	

5.12 Outgoing Call Rules

Select "System Setup" and select "Outgoing Calls" to see all the default Outgoing Call Rules from the Outgoing Call Rules section and add new ones if needed. Note that all the default rules had been modified to access SIP trunks via EdgeMarc. Hit the "Add New Outgoing Call Rules" button to create a new rule for accessing the SIP trunks by dialing "9" and followed by a 10-digit number.



digium Switchvox SMB 4.5 help | logout admin

Extensions PBX Features **System Setup** Diagnostics Machine Admin

Outgoing Calls

1 Outgoing Call Rules

Create, modify and delete outgoing call rules to apply to the extensions on your phone system.

What are outgoing call rules?

Add New Outgoing Rule

Outgoing Rules (1 to 8) of 8

Priority	Move	Name	Pattern to Match	Outgoing Type	Call Using	Modify / Delete
1	↑ ↓	International	Begins with 9011 and the remainder is 7 ...	SIP Provider	EM-4552	Modify Delete
2	↑ ↓	1-900 Numbers	Begins with 91(900 976) and the remainder is 7 ...	SIP Provider	EM-4552	Modify Delete
3	↑ ↓	Toll Free	Begins with 91(800 888 877 866) and the remainder is 7 ...	SIP Provider	EM-4552	Modify Delete
4	↑ ↓	911	Number exactly matches 911...	SIP Provider	EM-4552	Modify Delete
5	↑ ↓	Local	Begins with 9 and the remainder is 7 digits in length...	SIP Provider	EM-4552	Modify Delete
6	↑ ↓	Internal	Any number 3 digits in length...	Internal		
7	↑ ↓	Long Distance 91	Begins with 91 and the remainder is 10 digits in length...	SIP Provider	EM-4552	Modify Delete
8	↑ ↓	Long distance 9	Begins with 9 and the remainder is 10 digits in length...	SIP Provider	EM-4552	Modify Delete

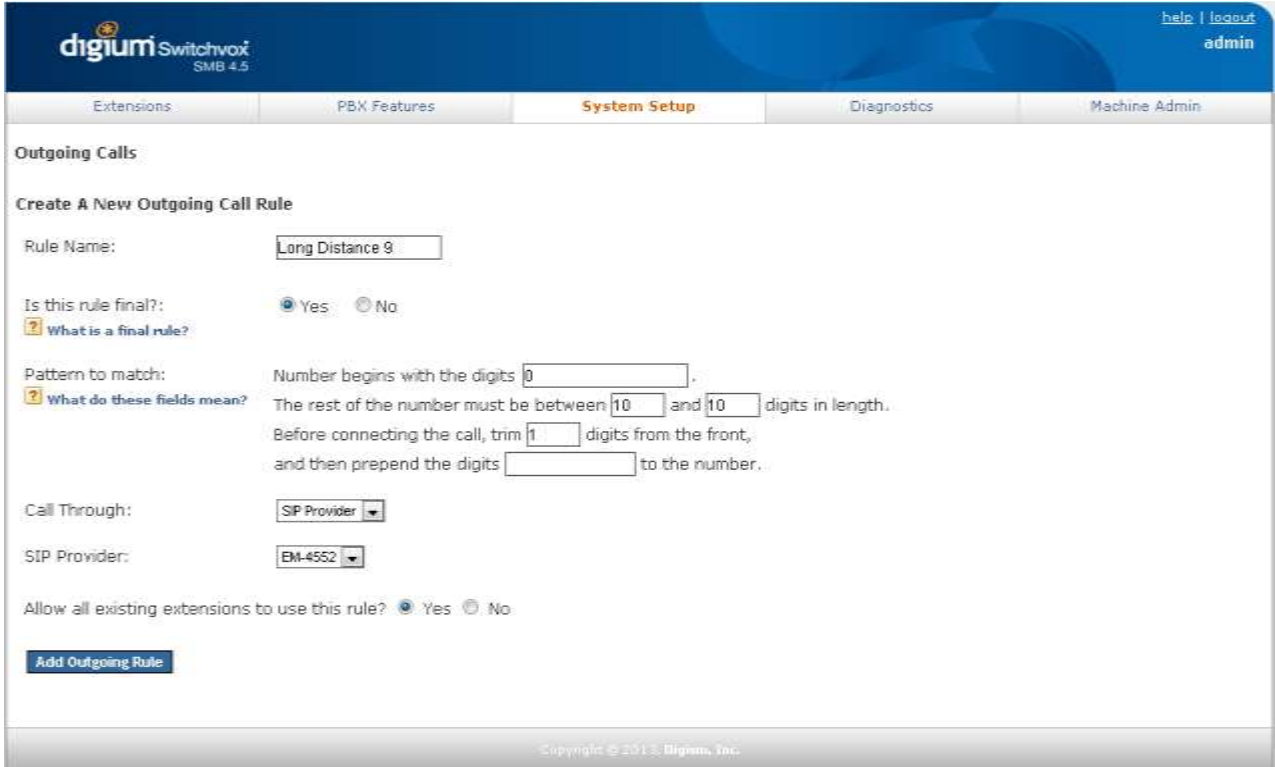
2 Outgoing Caller ID Rules

Change the caller ID for extensions making outgoing calls on your phone system.

Tell me more about how this works

- Enter a descriptive name in "Rule Name" field.
- Select "Yes" for the "Is this rule final?" question.
- For the "Pattern to match" fields, enter "9" as the beginning digit, enter "10" as the exact length of the phone number, enter "1" as the number of digits to trim.
- Select "SIP Provider" in the "Call Through" field.
- Select the provider name of EdgeMarc in the "SIP Provider" field.
- Select "Yes" for the "Allow all existing extensions to use this rule?" question.

g) Hit the "Add Outgoing Rule" button.



digium Switchvox SMB 4.5 [help](#) | [logout](#)
admin

Extensions PBX Features **System Setup** Diagnostics Machine Admin

Outgoing Calls

Create A New Outgoing Call Rule

Rule Name:

Is this rule final?: ☒ Yes ☐ No
[? What is a final rule?](#)

Pattern to match: .
[? What do these fields mean?](#) The rest of the number must be between and digits in length.
Before connecting the call, trim digits from the front,
and then prepend the digits to the number.

Call Through:

SIP Provider:

Allow all existing extensions to use this rule? ☒ Yes ☐ No

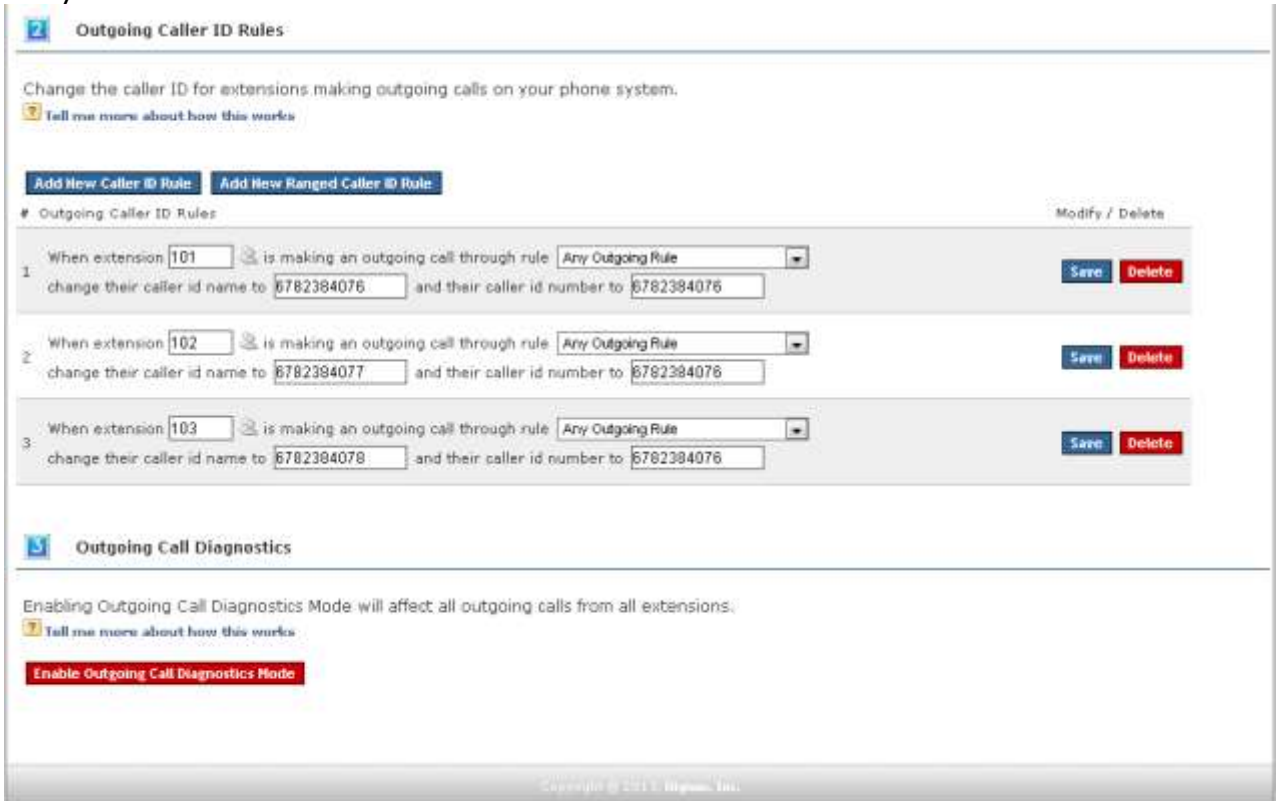
Add Outgoing Rule

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Note: For the Polycom Phones to take advantage of these outgoing call rules, the phones should have the same outgoing call rules defined in its digitmap in the SIP section of the web page. For example, the Polycom phones can make "91+ 10-digit number" call but not the "9+ 10-digit number calls. This is because the phones have a "91xxxxxxxxxx" dialing rule but do not have one for "9xxxxxxxxxx".

5.13 Outgoing Caller ID

Select "System Setup" and select "Outgoing Calls" to set Caller ID for outbound calls in the Outgoing Caller ID Rules section. Note that the Caller ID for any outbound calls must be the same as the Account ID used for PBX registration with EdgeMarc. For each DID assigned to an extension, set the Caller ID number to the same as the Account ID. In this example, the Account ID is the same as the pilot DID. For PBX registration mode, only the pilot DID can be used as the caller ID when EdgeMarc relays the outbound calls to the SIP server.



2 Outgoing Caller ID Rules

Change the caller ID for extensions making outgoing calls on your phone system.
[Tell me more about how this works](#)

[Add New Caller ID Rule](#) [Add New Ranged Caller ID Rule](#)

Outgoing Caller ID Rules Modify / Delete

1	When extension <input type="text" value="101"/> is making an outgoing call through rule <input type="text" value="Any Outgoing Rule"/>	Save Delete
	change their caller id name to <input type="text" value="6782384076"/> and their caller id number to <input type="text" value="6782384076"/>	
2	When extension <input type="text" value="102"/> is making an outgoing call through rule <input type="text" value="Any Outgoing Rule"/>	Save Delete
	change their caller id name to <input type="text" value="6782384077"/> and their caller id number to <input type="text" value="6782384076"/>	
3	When extension <input type="text" value="103"/> is making an outgoing call through rule <input type="text" value="Any Outgoing Rule"/>	Save Delete
	change their caller id name to <input type="text" value="6782384078"/> and their caller id number to <input type="text" value="6782384076"/>	

3 Outgoing Call Diagnostics

Enabling Outgoing Call Diagnostics Mode will affect all outgoing calls from all extensions.
[Tell me more about how this works](#)

[Enable Outgoing Call Diagnostics Mode](#)

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5.14 Static IP Outgoing Caller ID

If you have configured the PBX for static IP mode, you may opt to have either the pilot DID or non-pilot DID as the caller ID of the outbound call:

- Select "System Setup", select "VoIP Providers" and hit the "Modify" button to modify the VoIP Provider account set up for EdgeMarc.
- Click the "Click to Show Advanced Options" link.
- In the Caller ID Settings section, select "Yes" for the "Supports Changing Caller ID" setting. Note that the subsequent changes will work only when "Host

Type" is set to "Peer" (configuration for static IP mode) in the Peer Settings section.

1
Peer Settings

Host Type
Provider
What is Host Type?

Host is a Switchvox PBX
Yes No
What does this mean?

Treat system's users like local users
Yes No
What does this mean?

Jabber Hostname
What does this mean?

Apply Incoming Call Rules to Provider
Yes No
What is this for?

Outgoing Call Rules
What is this for?

Rule Name	Allow	Deny
International	<input type="checkbox"/>	<input type="checkbox"/>
1-900 Numbers	<input type="checkbox"/>	<input type="checkbox"/>
Toll Free	<input type="checkbox"/>	<input type="checkbox"/>
911	<input type="checkbox"/>	<input type="checkbox"/>
Local	<input type="checkbox"/>	<input type="checkbox"/>
Internal	<input type="checkbox"/>	<input type="checkbox"/>
Long Distance911	<input type="checkbox"/>	<input type="checkbox"/>
Long distance9	<input type="checkbox"/>	<input type="checkbox"/>

2
Caller ID Settings

Supports Changing Caller ID
Yes No

- d) Select "System Setup" and select "Outgoing Calls" to set Caller ID for outbound calls in the Outgoing Caller ID Rules section. For each DID assigned to an extension, set the Caller ID number to the same as the assigned DID.

2
Outgoing Caller ID Rules

Change the caller ID for extensions making outgoing calls on your phone system.

Tell me more about how this works

Add New Caller ID Rule
Add New Ranged Caller ID Rule

Outgoing Caller ID Rules
Modify / Delete

1
When extension is making an outgoing call through rule change their caller id name to and their caller id number to
Save Delete

2
When extension is making an outgoing call through rule change their caller id name to and their caller id number to
Save Delete

3
When extension is making an outgoing call through rule change their caller id name to and their caller id number to
Save Delete

4
Outgoing Call Diagnostics

Enabling Outgoing Call Diagnostics Mode will affect all outgoing calls from all extensions.


Tell me more about how this works

Enable Outgoing Call Diagnostics Mode

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5.15 Auto Attendant

Auto Attendant: Auto Attendant in this PBX is labeled under 'IVR', to setup the PBX for Auto Attendant go to PBX Features > IVR Editor and select "Example IVR (800)".


help | logout
admin

Extensions
PBX Features
System Setup
Diagnostics
Machine Admin

IVR Editor

✓ Successfully deleted IVR Menu.

Select Starting IVR Menu
IVR Menu Name (Extension)

Create New IVR Menu
Create New IVR Menu
Example IVR (800)
Customer Support
Hangup
Sales

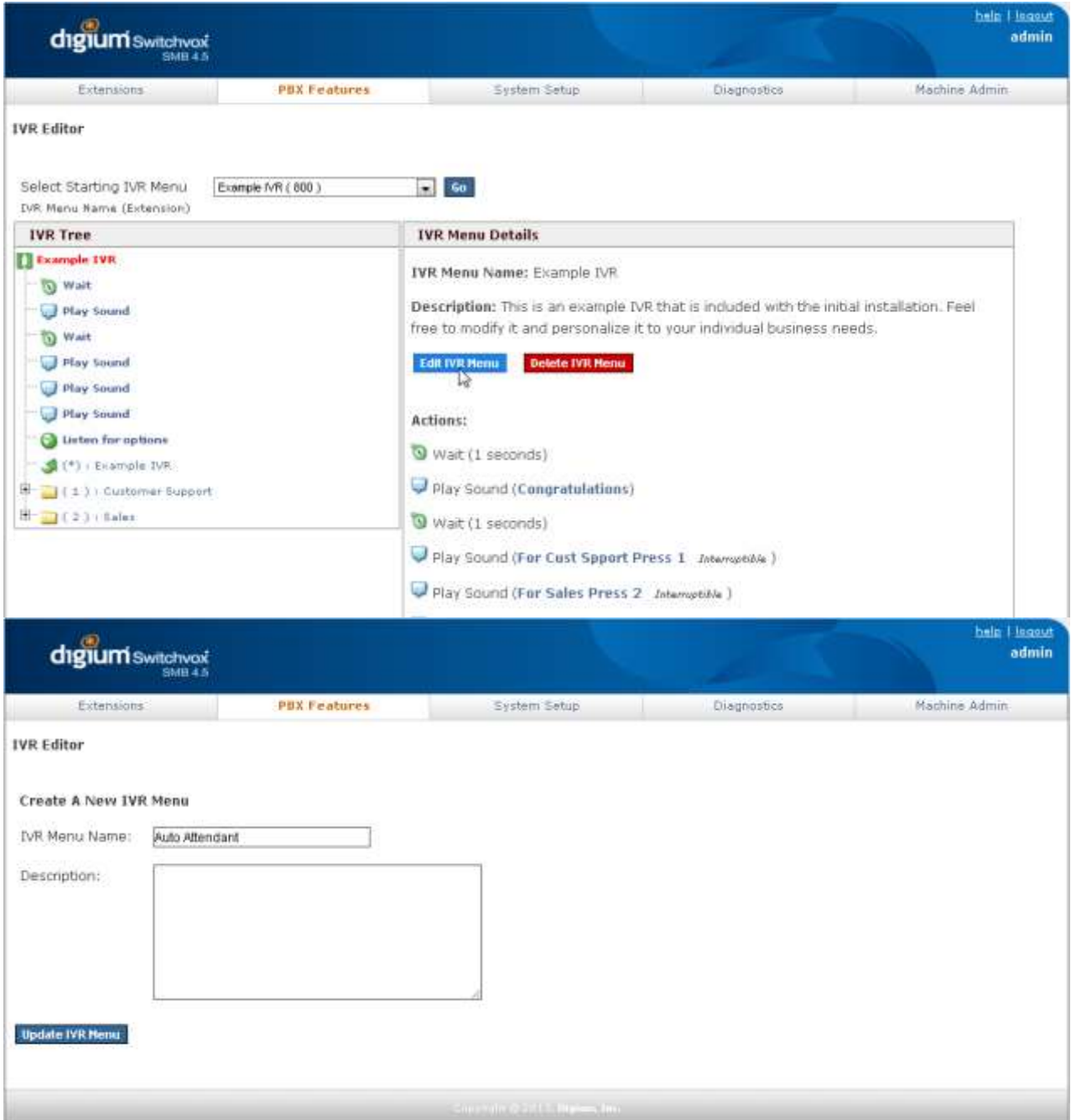
Go

IVR Tree

IVR Menu Details

Copyright © 2013, Wigwag, Inc.

- a) Click on "Edit IVR Menu" and change the IVR Menu name to "Auto Attendant" and clear out the Description, then click "Update IVR Menu"



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Extensions PBX Features System Setup Diagnostics Machine Admin

IVR Editor

Select Starting IVR Menu: Example IVR (800) [Go](#)

IVR Menu Name (Extension):

IVR Tree

- Example IVR
 - Wait
 - Play Sound
 - Wait
 - Play Sound
 - Play Sound
 - Play Sound
 - Listen for options
 - (*) : Example IVR:
 - (1) : Customer Support
 - (2) : Sales

IVR Menu Details

IVR Menu Name: Example IVR

Description: This is an example IVR that is included with the initial installation. Feel free to modify it and personalize it to your individual business needs.

[Edit IVR Menu](#) [Delete IVR Menu](#)

Actions:

- Wait (1 seconds)
- Play Sound (Congratulations)
- Wait (1 seconds)
- Play Sound (For Cust Support Press 1 - Interruptible)
- Play Sound (For Sales Press 2 - Interruptible)

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Extensions PBX Features System Setup Diagnostics Machine Admin

IVR Editor

Create A New IVR Menu

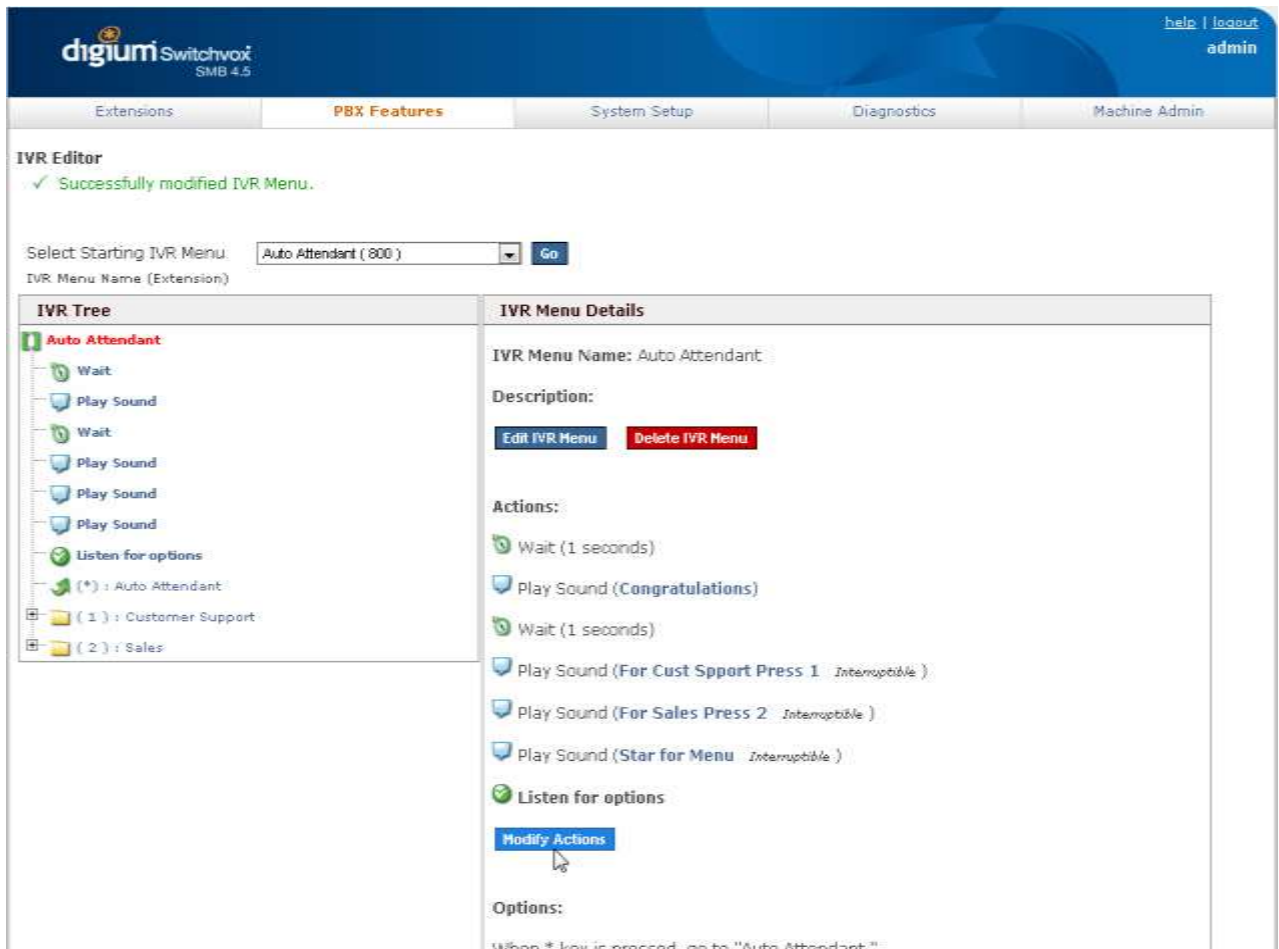
IVR Menu Name: Auto Attendant

Description:

[Update IVR Menu](#)

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- b) Now click on "Modify Actions" to change the Actions layout for extension dialing.



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Extensions PBX Features System Setup Diagnostics Machine Admin

IVR Editor
✓ Successfully modified IVR Menu.

Select Starting IVR Menu: Auto Attendant (800) Go

IVR Menu Name (Extension):

IVR Tree

- Auto Attendant
 - Wait
 - Play Sound
 - Wait
 - Play Sound
 - Play Sound
 - Play Sound
 - Listen for options
 - (*) : Auto Attendant
 - (1) : Customer Support
 - (2) : Sales

IVR Menu Details

IVR Menu Name: Auto Attendant

Description:

Edit IVR Menu Delete IVR Menu

Actions:

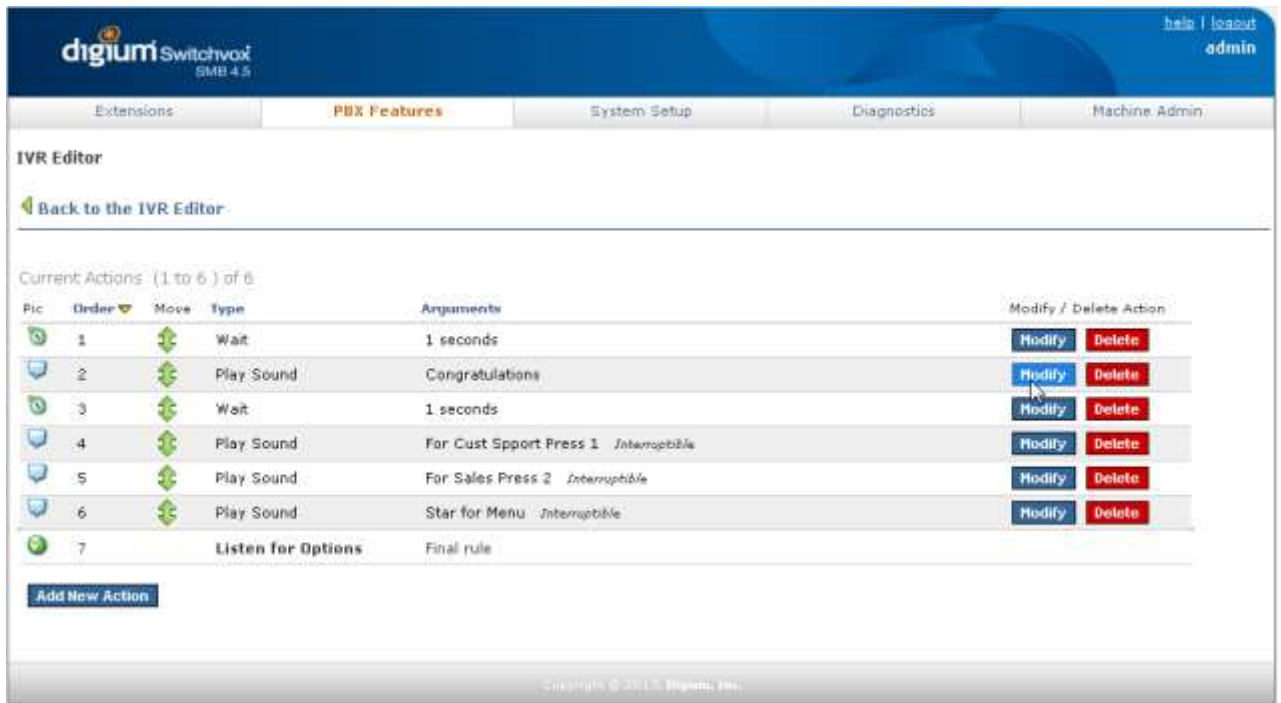
- Wait (1 seconds)
- Play Sound (Congratulations)
- Wait (1 seconds)
- Play Sound (For Cust Support Press 1 Interruptible)
- Play Sound (For Sales Press 2 Interruptible)
- Play Sound (Star for Menu Interruptible)
- Listen for options

Modify Actions

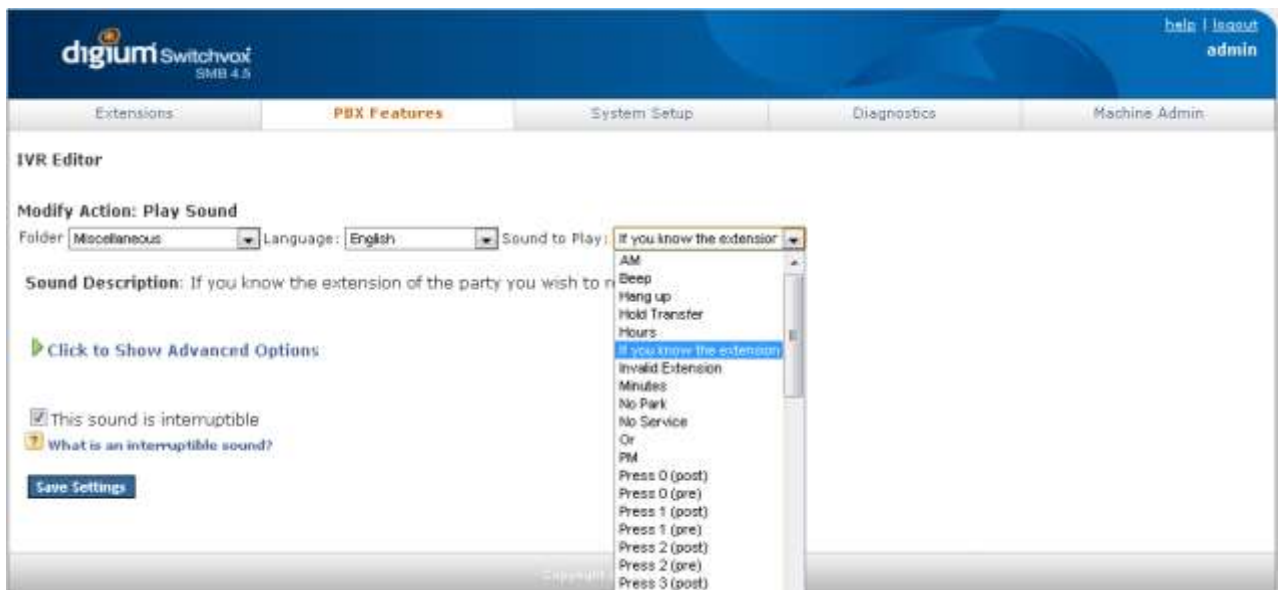
Options:

When * key is pressed, go to "Auto Attendant"

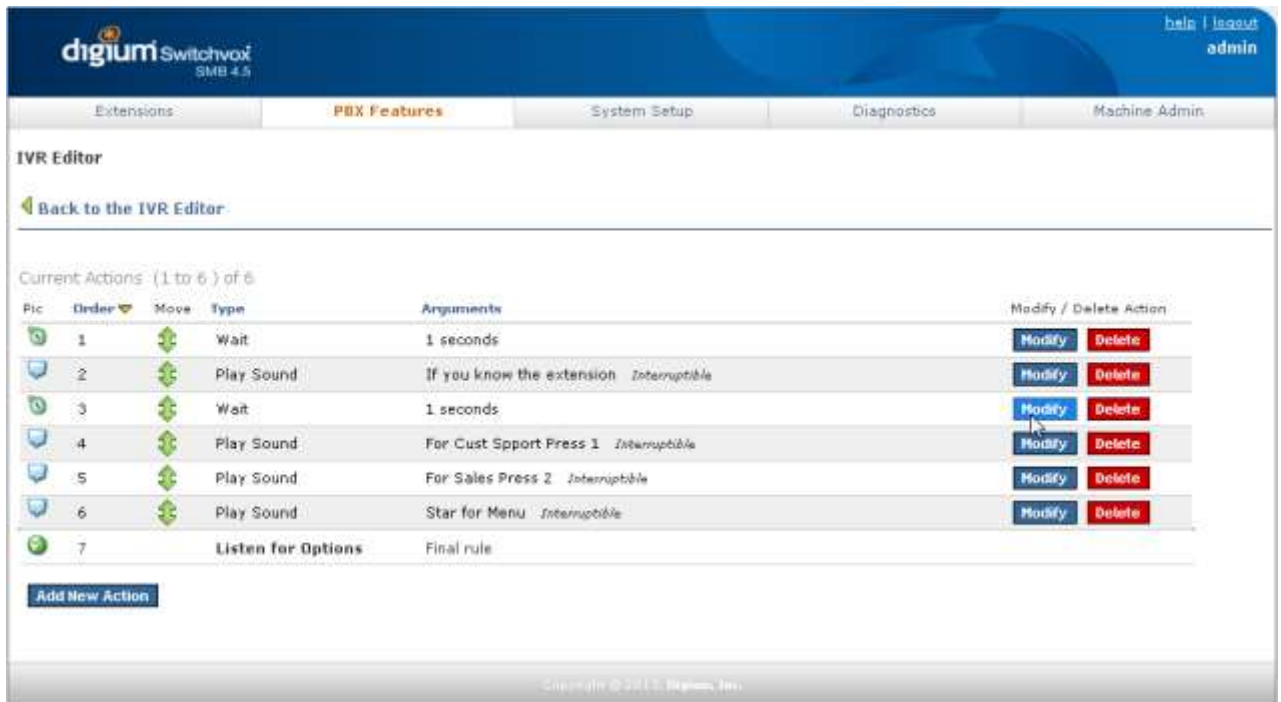
c) Click "Modify" on the second action in the order



- d) Change the Folder to "Miscellaneous" and set the Language to "English" and set the Sound to Play to "If you know the extension". Make sure "This sound is interruptible" is checked then click "Save Settings"



- e) Click "Modify" on the second Action in the order to change the wait time to 10 seconds.



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Extensions PBX Features System Setup Diagnostics Machine Admin

IVR Editor

[Back to the IVR Editor](#)

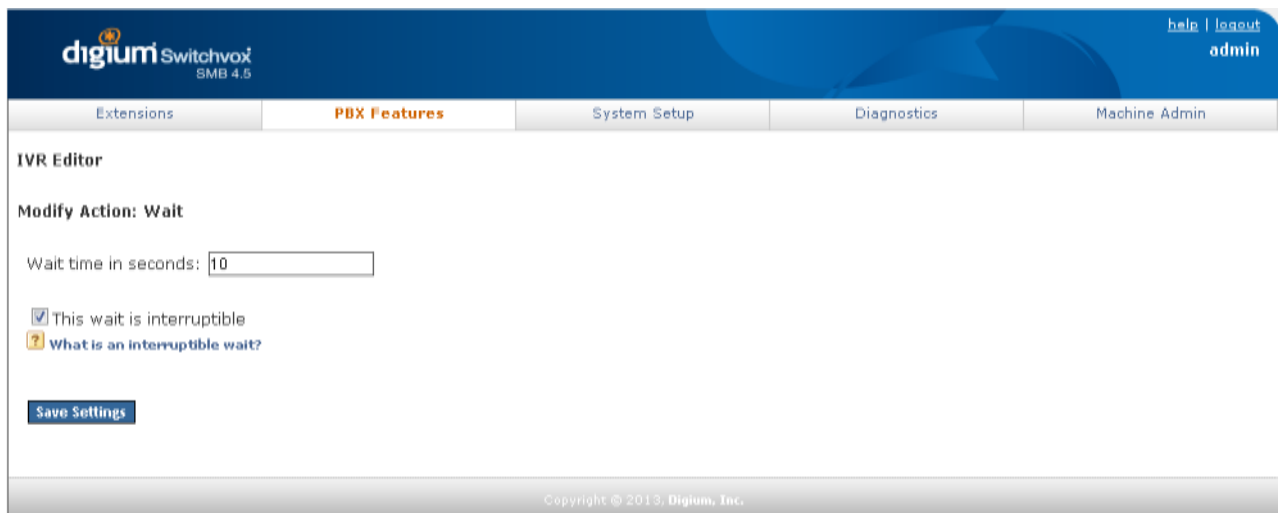
Current Actions: (1 to 6) of 6

Pic	Order	Move	Type	Arguments	Modify / Delete Action
	1		Wait	1 seconds	Modify Delete
	2		Play Sound	If you know the extension <i>Interruptible</i>	Modify Delete
	3		Wait	1 seconds	Modify Delete
	4		Play Sound	For Cust Support Press 1 <i>Interruptible</i>	Modify Delete
	5		Play Sound	For Sales Press 2 <i>Interruptible</i>	Modify Delete
	6		Play Sound	Star for Menu <i>Interruptible</i>	Modify Delete
	7		Listen for Options	Final rule	

[Add New Action](#)

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f) Check the box to enable "This wait is interruptible" then click "Save Settings"



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Extensions PBX Features System Setup Diagnostics Machine Admin

IVR Editor

Modify Action: Wait

Wait time in seconds:

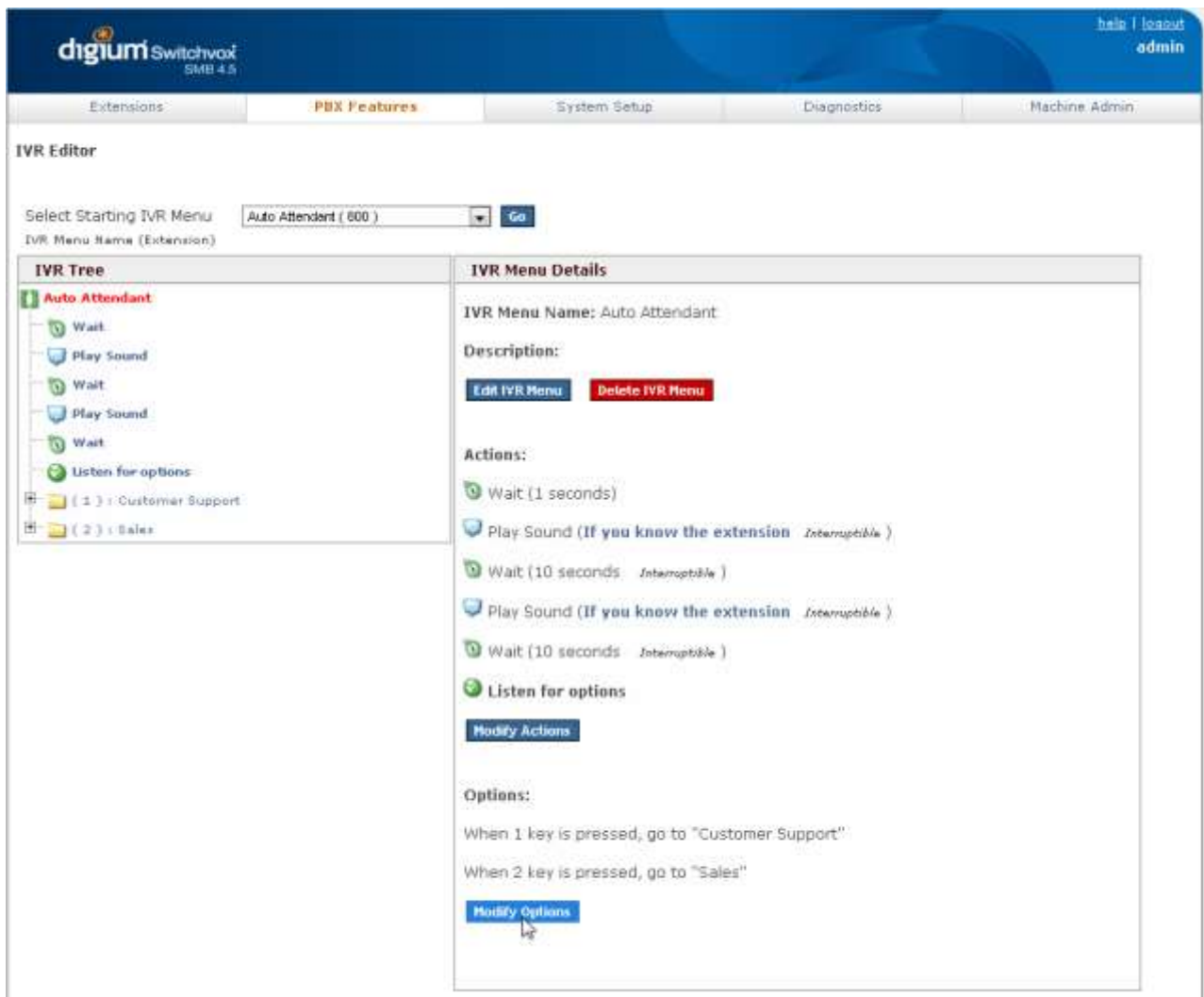
☒ This wait is interruptible

[What is an interruptible wait?](#)

[Save Settings](#)

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- g) Actions 4-6 can be modified to repeat the "Extension" message or they can be deleted
- h) Click "Back to the IVR Editor" to go back to the main page, then click "Modify Options"



- i) Delete the 2 current Options at the top, check the box for "Enable Extension Dialing" and click "Save Extension Dialing Settings"

The screenshot shows the Digium Switchvox SMB 4.5 web interface. The top navigation bar includes links for help, logout, and admin. Below the navigation bar are tabs for Extensions, PBX Features (selected), System Setup, Diagnostics, and Machine Admin.

IVR Editor

[Back to the IVR Editor](#)

Current Options: (1 to 2) of 2

Option #	New Context	Starting Action	Modify Option	
1	Customer Support	Beginning of Context	Modify	Delete
2	Sales	Beginning of Context	Modify	Delete

[Add A New Option](#)

Enable Extension Dialing

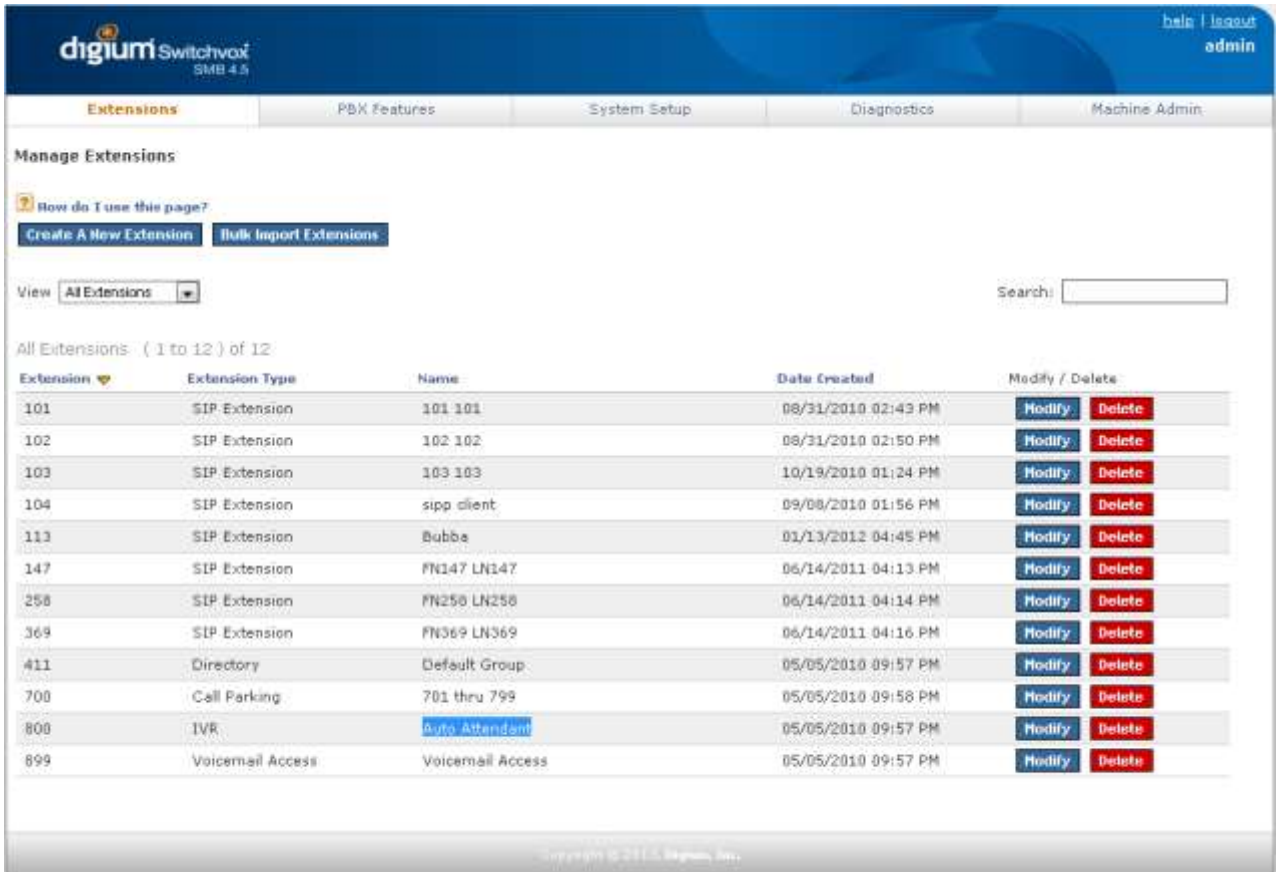
Would you like to allow callers to dial extensions when they are in this IVR Menu?

[Tell me more](#)

☒ Enable extension dialing

[Save Extension Dialing Setting](#)

- j) Go to Extensions > Manage Extensions to make sure that extension 800 is labeled "Auto Attendant"



Manage Extensions

How do I use this page?
[Create A New Extension](#) [Bulk Import Extensions](#)

View: All Extensions Search:

All Extensions (1 to 12) of 12

Extension	Extension Type	Name	Date Created	Modify / Delete
101	SIP Extension	101 101	08/31/2010 02:43 PM	Modify Delete
102	SIP Extension	102 102	08/31/2010 02:50 PM	Modify Delete
103	SIP Extension	103 103	10/19/2010 01:24 PM	Modify Delete
104	SIP Extension	sipp client	09/08/2010 01:56 PM	Modify Delete
113	SIP Extension	Bubba	01/13/2012 04:45 PM	Modify Delete
147	SIP Extension	PN147 LN147	06/14/2011 04:13 PM	Modify Delete
258	SIP Extension	PN258 LN258	06/14/2011 04:14 PM	Modify Delete
369	SIP Extension	PN369 LN369	06/14/2011 04:16 PM	Modify Delete
411	Directory	Default Group	05/05/2010 09:57 PM	Modify Delete
700	Call Parking	701 thru 799	05/05/2010 09:58 PM	Modify Delete
800	IVR	Auto Attendant	05/05/2010 09:57 PM	Modify Delete
899	Voicemail Access	Voicemail Access	05/05/2010 09:57 PM	Modify Delete

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- k) Go to System Setup > Incoming Calls and click "Add Route" to assign a DID to extension 800. In this example we used 6782384079.

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Extensions	PBX Features	System Setup	Diagnostics	Machine Admin
------------	--------------	---------------------	-------------	---------------

Incoming Calls

✓ Successfully added new rule.

- Incoming Call Rules**

Create, modify, prioritize and delete incoming call rules to apply to the extensions on your PBX system.

[Tell me more about Incoming Call Rules](#)

Create A New Incoming Call Rule: Block Number

- Incoming Call Routes**

Route incoming numbers to different internal extensions.

[Tell me more about Incoming Call Routing](#)

Create A New Incoming Call Route: Single DID

Incoming Call Routes [Modify / Delete](#)

Route all	Voice Calls	on number	
1 from	SP Provider	EM-4552	to extension 800

☐ groups all calls as a fax.

For advanced configurations and support please contact the Edgewater Technical Assistance Center support@edgewaternetworks.com or call 408.351.7255.