communications without compromise

Allworx / Clearfly Setup Application Notes

Version 1.1

March 2013

Phone system

Network server

Message center

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Introduction

This document provides setup instructions to authorized Allworx Resellers for configuring Clearfly services on Allworx servers.

Prerequisites

It is assumed that the Reseller has:

- Completed Allworx Technical training and their main technician is certified as either *Allworx Certified Administrator (ACA) or Allworx Certified Professional (ACP)*
- Set up all other functions within the Allworx system prior to connecting Clearfly services (e.g. DHCP settings, installed latest software version)
- Ordered Clearfly services and received the associated configuration information for SIP Trunking

Key Notes

A. The Allworx server must be running software release 7.4.12.5 or higher. To obtain the latest software, visit the Allworx Authorized Reseller Portal (www.allworxportal.com).

B. Allworx Customer Support has verified the interoperability of Allworx and Clearfly under controlled conditions. The following items were tested:

- RTP frame rate of 20 for codecs G.711 and G.729a
- Support of Early Media -183 Session Progress messages
- Call Hold & Retrieve functionality
- Call Transfer methods with and without REFER support
- SIP Diversion and Redirect
- Direct Inward Dial (DID)
- Handling of E.164 format for phone numbers
- Performance of the service with remote Allworx phones

Allworx testing was successful during the time period in which the testing took place. Subsequent changes to the provider's network or differences in local internet connectivity could alter the performance of the product in the field. It is the Reseller's responsibility to properly place and route to the Allworx server on the local network.

C. Limitations

The following limitations were observed during Allworx testing:

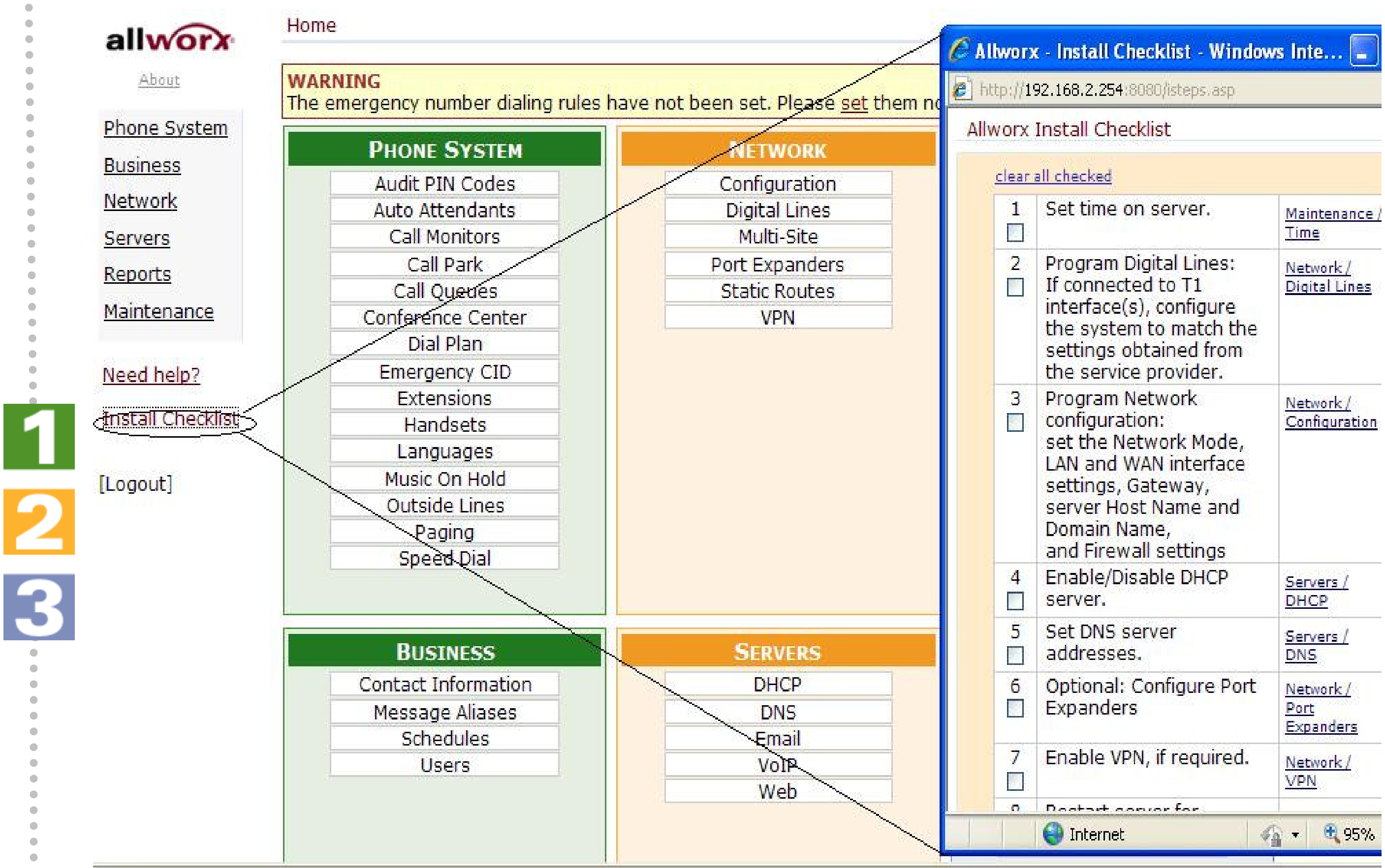
- The Caller ID Name (if populated in the SIP Proxy settings page) will be overridden by the value set in the trunk by Clearfly
- Calls not established when Caller ID number (other than the registered DID number) is populated in the SIP Proxy settings page

Setting up the Allworx System:

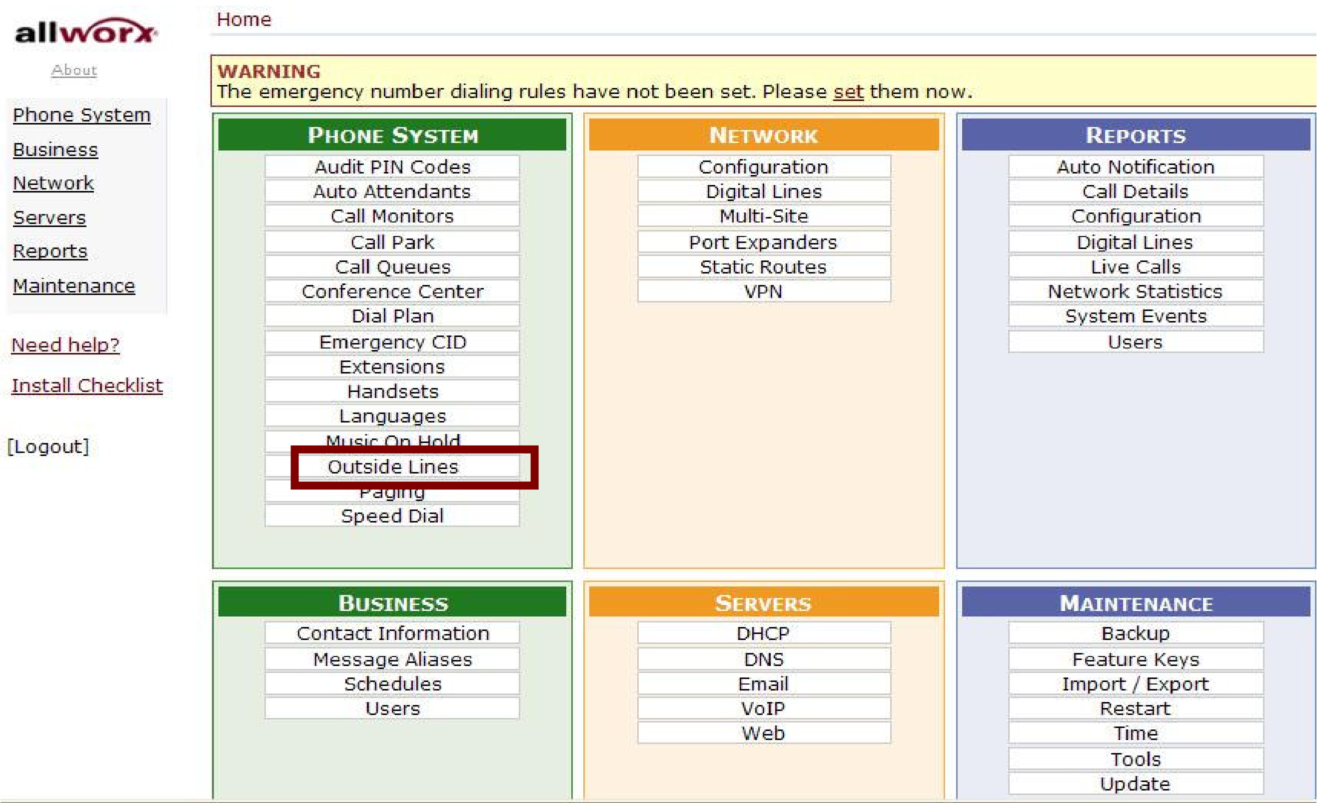
The following steps must be performed on the Allworx server:

1. Perform steps 1 through 16 of the Allworx Install Checklist including updating the Allworx server software to the latest release (7.4.12.5 or higher).
2. Configure the SIP proxy connection.
3. Configure the VoIP server settings.
4. Create a Dial Plan Service Group for Clearfly.
5. Configure Dialing Rules for routing calls through Clearfly.
6. If using DID numbers, configure a Routing Plan for the DID numbers.
7. Reboot all phones to download new settings.
8. Verify the connection and its usability.

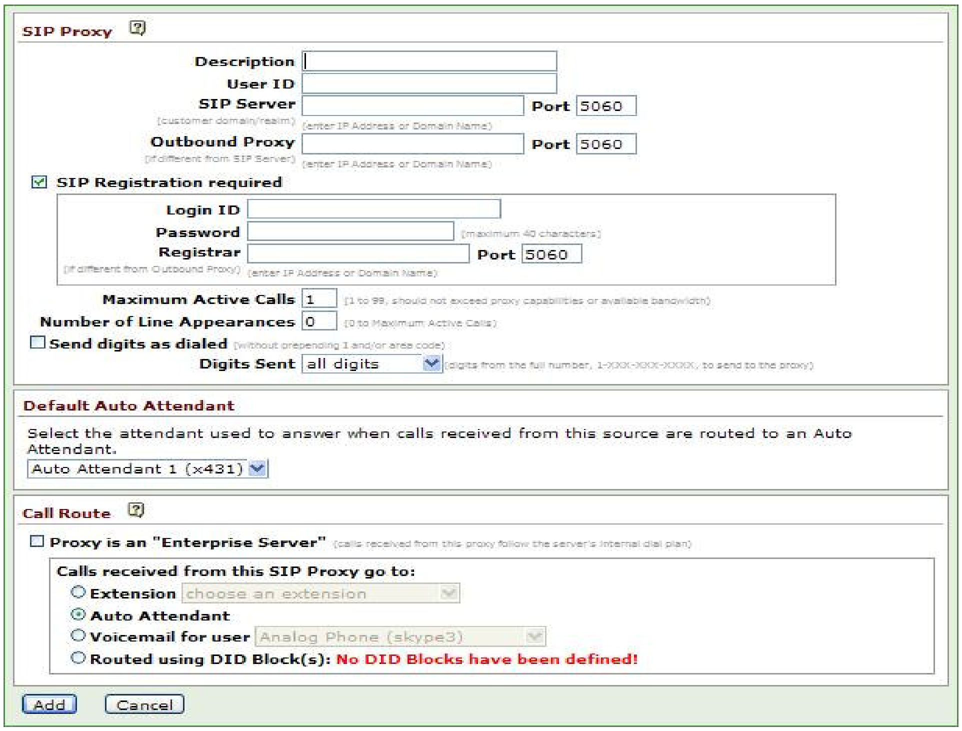
#1. Prior to setting up the connection to Clearfly, other basic PBX settings must be configured. Complete steps 1 through 16 of the Allworx Install Checklist including loading software release 7.4.12.5 or higher, if the server is running an earlier version. The checklist is located within the Allworx System Administration Tool.



#2. To set up the SIP proxy, log into the Allworx System Administration Tool and go to Phone System > Outside Lines > SIP Proxies. Select "Add New SIP Proxy".

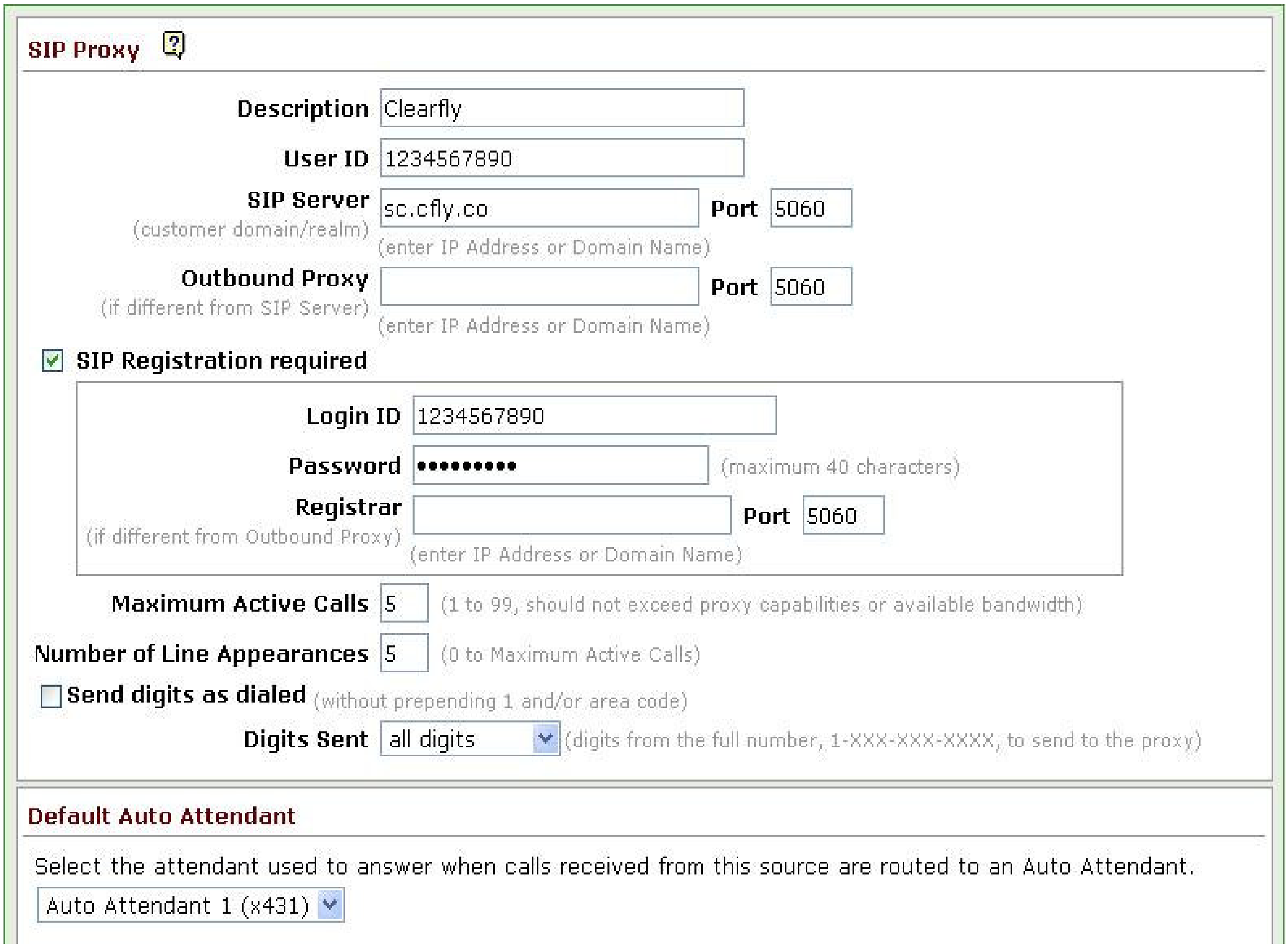


The New SIP Proxy page is displayed:



SIP Registration

Configure the settings as listed in the table below then select "Add".


SIP Proxy

Description: Clearfly

User ID: 1234567890

SIP Server (customer domain/realm): sc.cfly.co Port: 5060
(enter IP Address or Domain Name)

Outbound Proxy (if different from SIP Server): Port: 5060
(enter IP Address or Domain Name)

☑ SIP Registration required

Login ID: 1234567890

Password: ••••••••• (maximum 40 characters)

Registrar (if different from Outbound Proxy): Port: 5060
(enter IP Address or Domain Name)

Maximum Active Calls: 5 (1 to 99, should not exceed proxy capabilities or available bandwidth)

Number of Line Appearances: 5 (0 to Maximum Active Calls)

☐ Send digits as dialed (without prepending 1 and/or area code)

Digits Sent: all digits (digits from the full number, 1-XXX-XXX-XXXX, to send to the proxy)

Default Auto Attendant

Select the attendant used to answer when calls received from this source are routed to an Auto Attendant.

Auto Attendant 1 (x431)

Description	Recommended Setting
Description	User-assigned label. e.g. "Clearfly" (without the quotes)
User ID	Provided by Clearfly.
SIP Server	Provided by Clearfly.
SIP Server Port	Provided by Clearfly. Default value is 5060.
Outbound Proxy	Provided by Clearfly
Outbound Proxy Port	Leave Blank
SIP Registration Required	Checked
Login ID	Obtained from Clearfly
Password	Obtained from Clearfly
Registrar	Leave Blank
Registrar Port	Leave Blank
Maximum Active Calls	Enter the number of SIP trunks purchased from Clearfly
Number of Line Appearances	Should be set to a value no greater than the number of sip trunks purchased
Send Digits as dialed	NOT checked
Digits Sent	Select all digits
Default Auto Attendant	This is a customer-specific setting and defines which automated attendant is to be played for each incoming call that ends up at the AA.
Proxy is an Enterprise Server	NOT checked
Calls from this SIP Proxy go to:	Default value is Auto Attendant. Change to suit customer's environment.

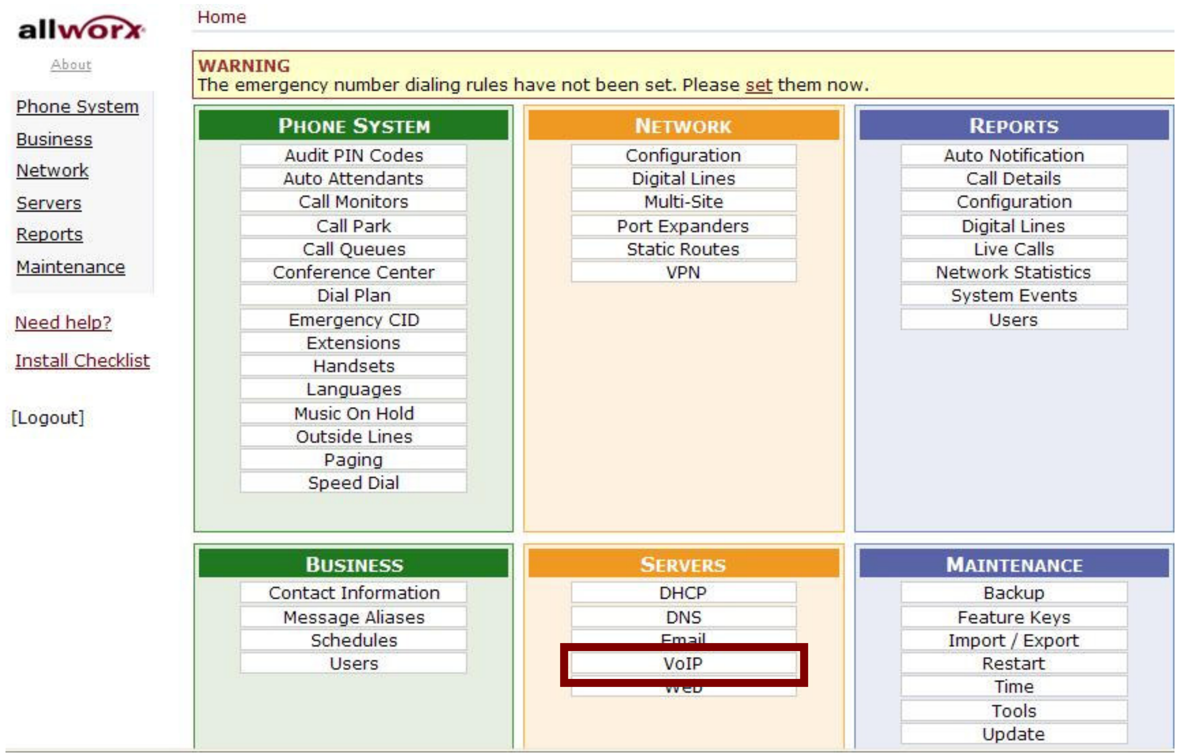
After creating the SIP proxy, the Outside Lines page will be displayed. There are additional settings to configure on the Modify screen. Select “Modify SIP Proxy”. The Modify screen which now includes Advanced Settings is displayed.

Configure the Advanced Settings as listed in the table below then select “Update”

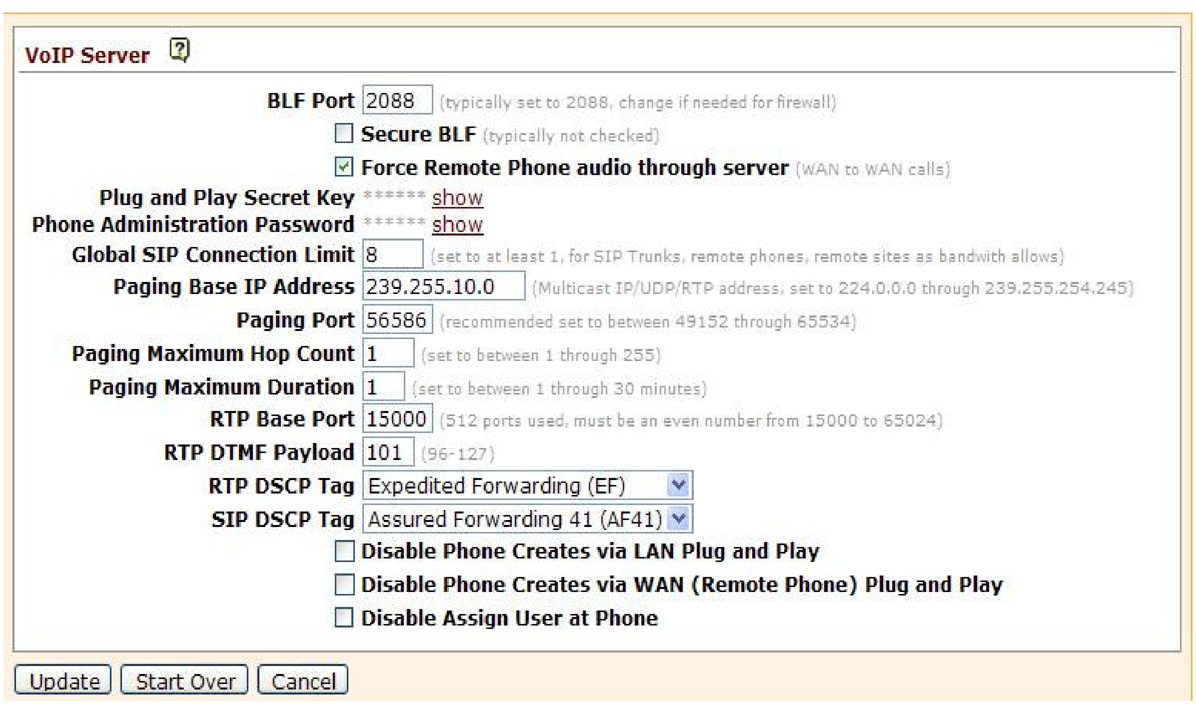
Description	**Recommended Setting**
Pad DTMF RTP Packets	NOT checked
Enable Early Media	Checked
Supports Symmetric Response Routing	NOT checked
Use SIP Diversion for deflected calls	NOT checked
Supports SIP REFER	NOT checked
Supports SIP Redirect	NOT checked
Use E.164 format for phone numbers	NOT checked
Offer ‘100rel’ support	Checked Note: This setting is available in Release 6.8 or higher
Obtain DID/DNIS number from:	SIP Request URI
Use in Request URI of outbound calls	Dialed number

Note: The appropriate advanced features can be checked according to features required and supported.

#3. To set up the Allworx VoIP Server, go to Servers > VoIP and select “Modify”.



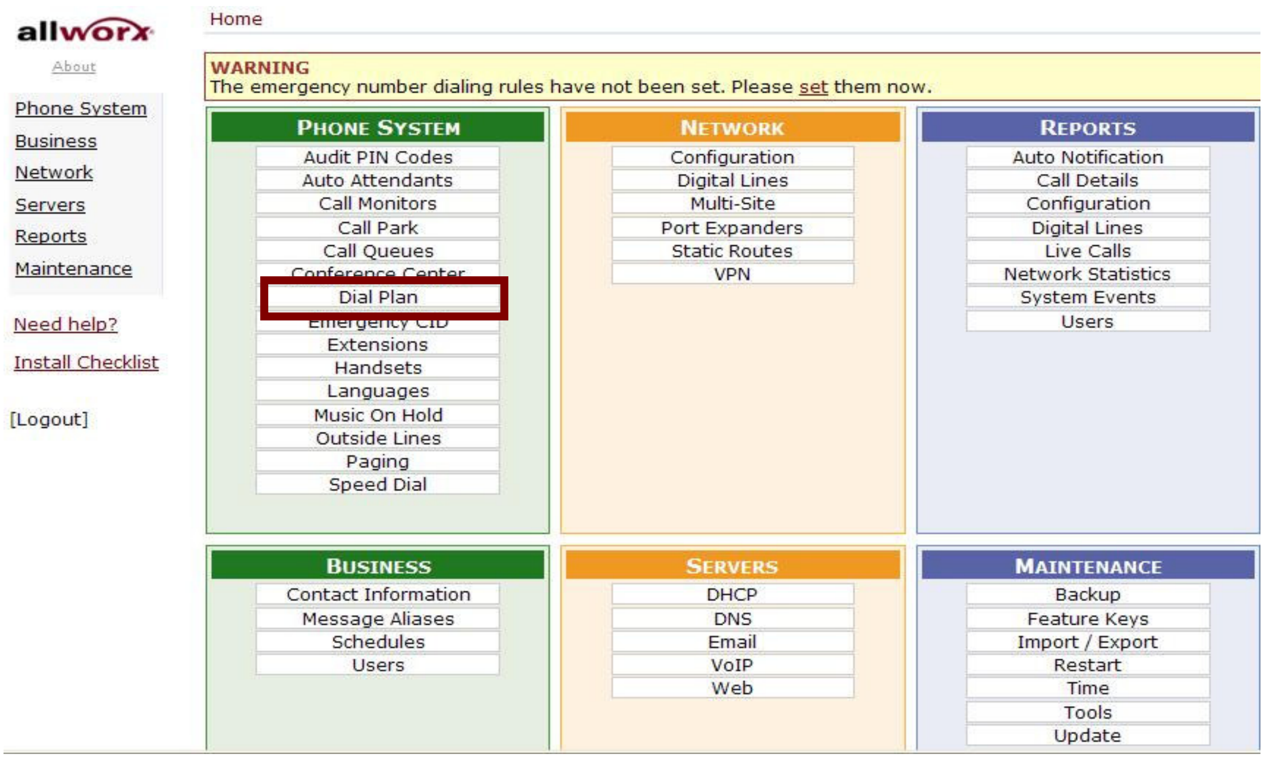
The Modify screen is displayed.



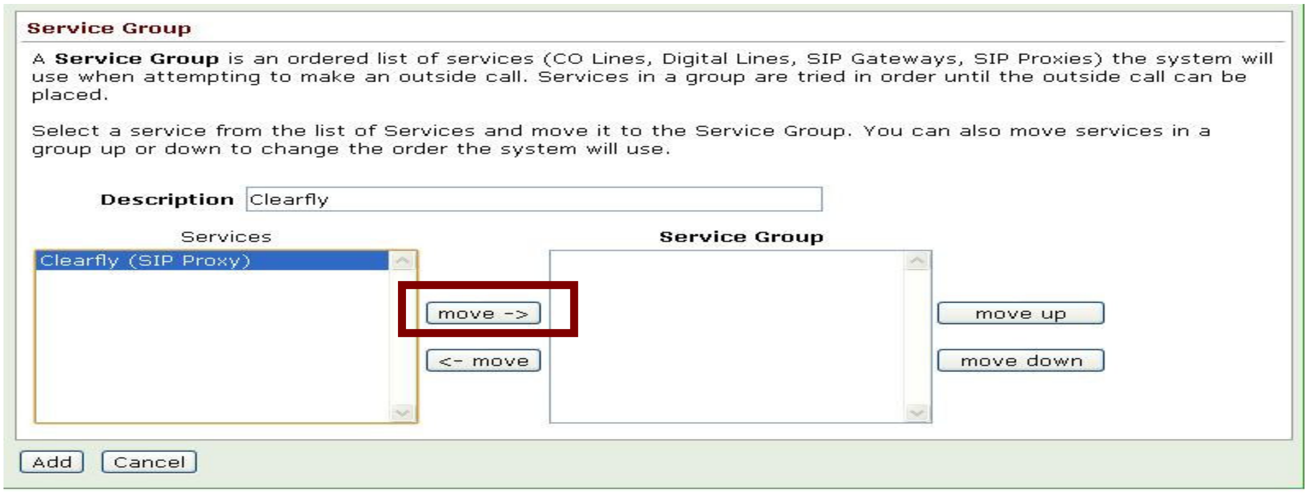
Configure the settings as listed in the table below then select “Update”.

Description	Recommended Setting
BLF Port	Typically set to 2088, change if needed for firewall
Secure BLF	NOT checked
Force Remote Phone audio through server	Checked
Plug and Play Secret Key	6-64 characters use 0-9, and #. Keep this key closely guarded
Phone Administration Password	4-32 character password to access handset administration
Maximum Active Remote Calls	Should be set to 8. Check with Clearfly if more than 8 calls will be permitted.
Paging Base IP address	Use the default setting of “239.255.10.0”
Paging Port	Use the default setting of “56586”
Paging Maximum Hop Count	Use the default setting of “1”
Paging Maximum Duration	Use the default setting of “1”
RTP Base Port	Use the default setting of “15000”
RTP DTMF Payload	Use the setting of “101”

#4. To create a Dial Plan Service Group, go to Phone System > Dial Plan



Create a new service group for Clearfly or add it to a previously-defined service group. To create a new one, select "Add new Service Group" near the bottom of the page. The New Service Group screen is displayed.



Configure the settings as listed in the table below then select "Add".

Description	Recommended Setting
Description	Enter any descriptive name. It is common to use the name of the ITSP, i.e. Clearfly.
Service Group	Put Clearfly in the Service Group by choosing it and selecting "move ->".

#5. Once the Service Group is created, configure the dialing rules.

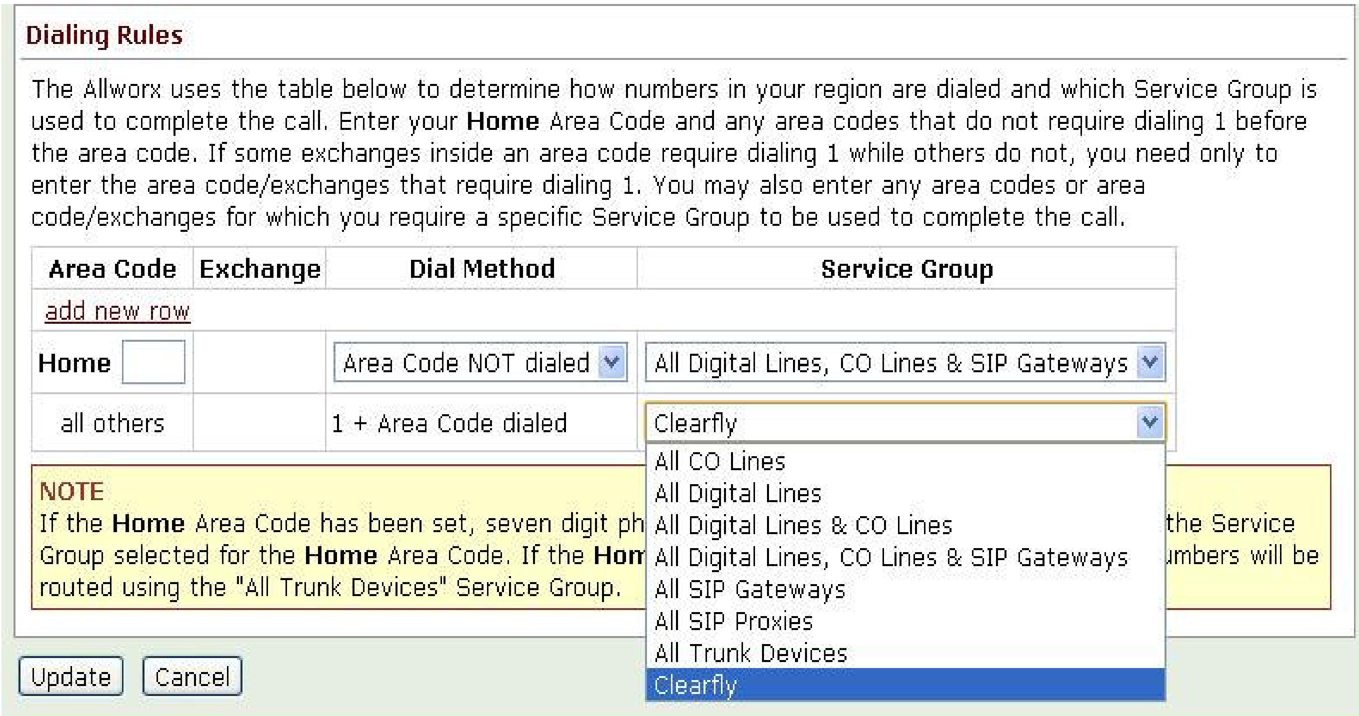
On the Dial Plan page in the External Dialing Rules section, the "North American numbering Plan Administration (NANPA)" should be set to "Enabled". If it is "Disabled", select "Modify", check the box labeled "Enable North American Number Plan Administration (NANPA)", then select "Update".

The next section of the Dial Plan screen lists Area Codes and Exchanges. Select “Modify” in this section to set up rules to route outgoing calls through Clearfly.

Area Code	Exchange	Number Dialed	Service Group	Action
any		9+1+aaa-xxx-nnnn	All CO Lines, SIP Gateways & SIP Proxies	Modify

aaa - area code   xxx - exchange   nnnn - number

The Modify screen is displayed.



Enter the home area code and exchanges to be serviced by Clearfly into the appropriate boxes. Under Service Group, select the Clearfly Service Group from the drop-down menus for all appropriate area codes and exchanges then select “Update”.

The next section of the Dial Plan screen lists special dialing cases including Emergency and Operator. Select "Modify" in this section to direct these calls to Clearfly as required.

Type	Number Dialed	Service Group	Action
Emergency	9+911	see Dialing Privileges Group for source of call	
Phone Services (211,311,411,511,611,711,811)	9+n11	All Trunk Devices	
Operator	9+0	All Trunk Devices	
Long Distance Services	9+1010...	All Trunk Devices	Modify
International Calls	9+011...	All Trunk Devices	
Public SIP Directory	8+nnnn (4 digits)	All SIP Proxies	
PIN Code	78+nnnnn (5 digits)	All Digital Lines & CO Lines	
Outside Line Seizure	9#	All Trunk Devices	

The Modify screen is displayed.

1

2

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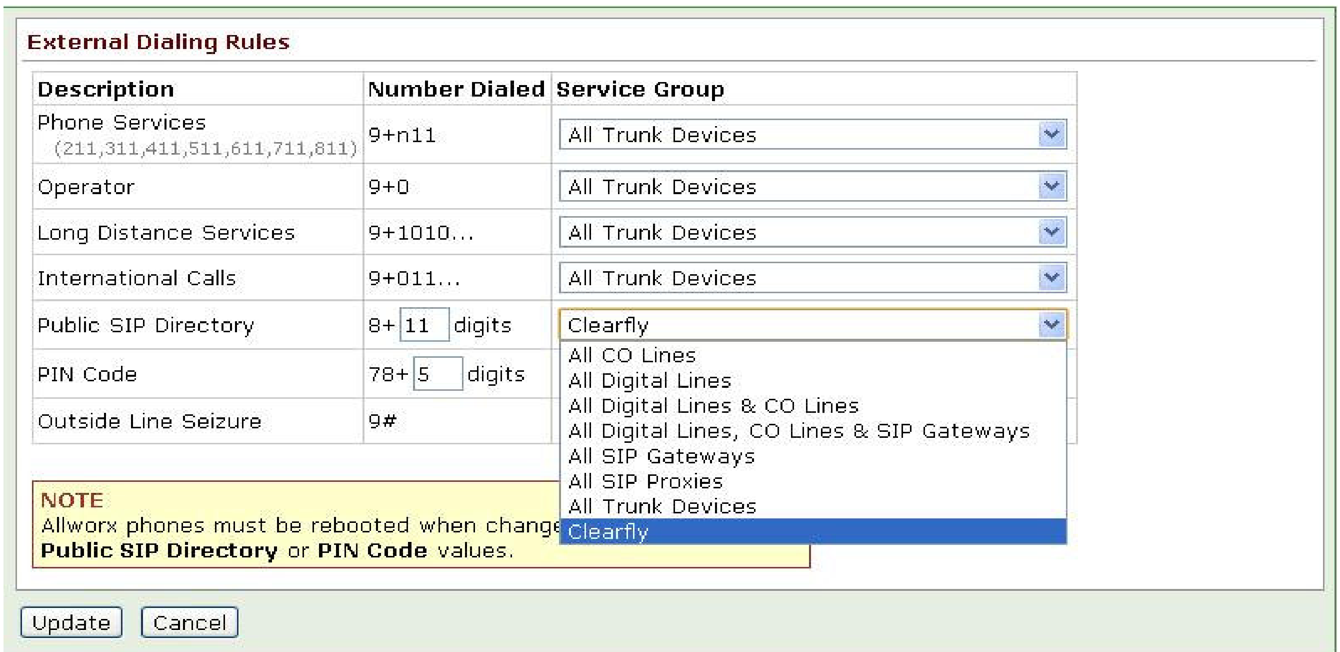
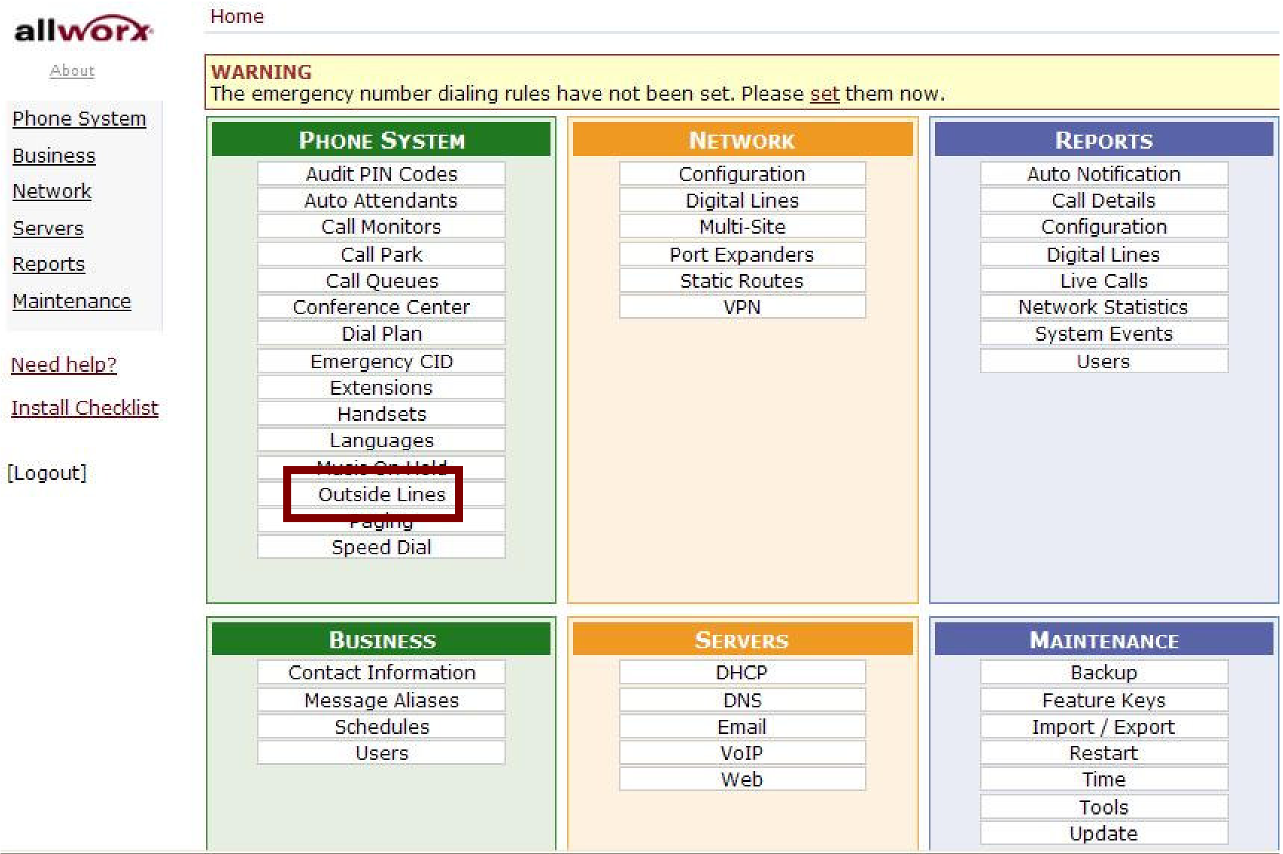


Under Service Group, select the Clearfly Service Group from the drop-down menus for all required special phone numbers then select "Update".

#6. To create new DID blocks and routing plans, go to Phone Systems > Outside Lines



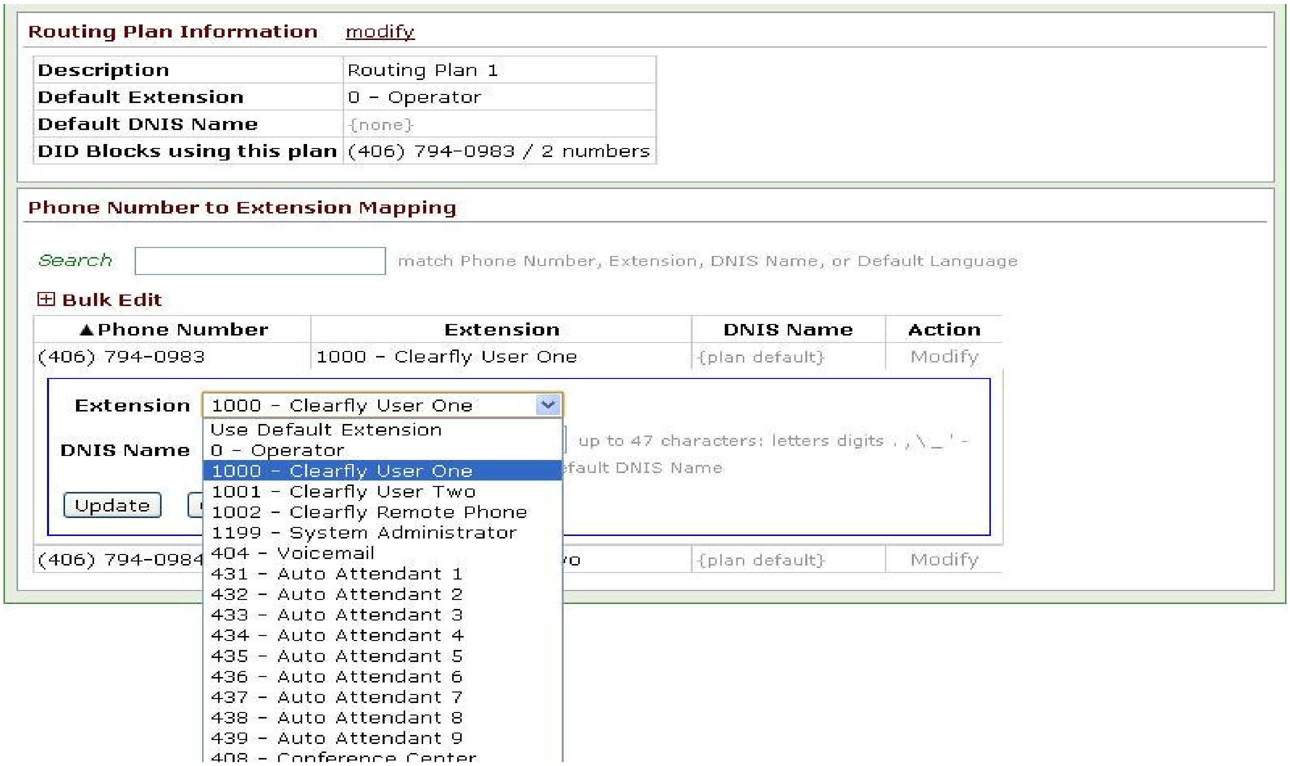
Select “add new DID block”.

The DID block page is displayed.

In this section, enter the DID information provided by Clearfly.

To map DID numbers to extensions, Select “Details” under the DID Routing Plans.

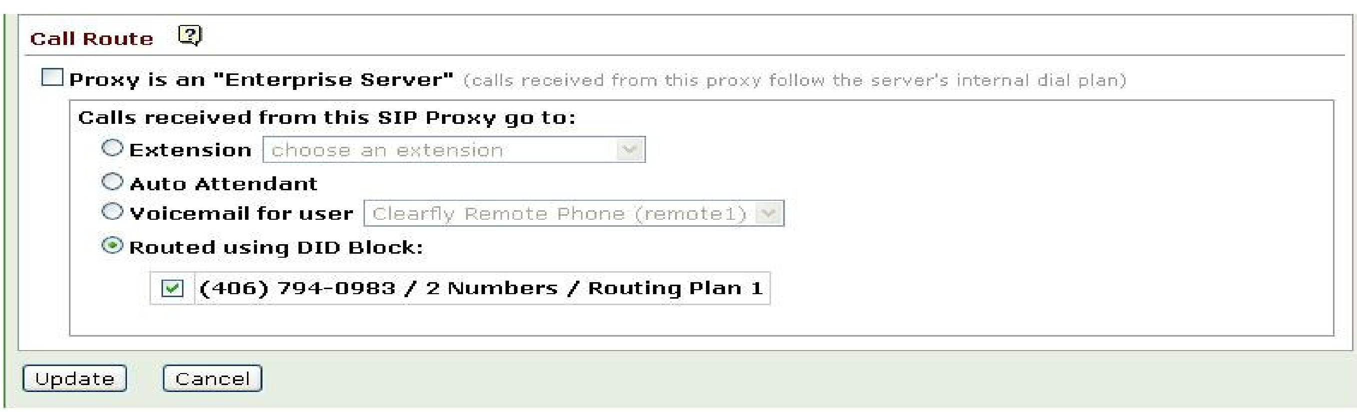
Select “add number to table” in this section.



The desired DID to extension mapping can be done as shown above.

The SIP proxy setup page also has to be modified to route the inbound calls to the DID block.

Under Outside Lines, select “Modify” to modify the SIP proxy settings. Check “Routed using DID Block (s)” and the corresponding DID blocks.



#7. All phones must be rebooted so that they acquire the new settings from the Allworx server. Reboot them either using each handset's on-phone menu (Config > Reboot phone) or the Allworx System Administration Tool (Phone System > Handsets).

#8. The Allworx system is now properly configured to receive and send calls via the Clearfly service. Verify that both Allworx and Clearfly are working properly by making test calls using a variety of dialing plans. If you have any questions or need additional technical support, please call:

Allworx:	866-Allworx (866-255-9679) Monday – Friday, 8:00am – 8:00pm Eastern Time support@allworx.com

For detailed configuration instructions, access the latest Allworx System Administration Guide by visiting the Allworx Authorized Reseller Portal (www.allworxportal.com).