



Guide to New Features Release 4.5

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Defining Resources

Adding an Outside Line

Outside lines carry the calls back and forth between the Allworx server and the public telephone network. Prior to Release 4.5, all incoming calls were mapped to an outside line for one or more telephone sets. In Release 4.5, you can now direct incoming calls to specific users, voice mailboxes, or any system extension. The routing plan for each extension defines where and how the call is delivered.

Incoming calls are routed to the Auto Attendant as a default. To answer incoming calls, set up a call route for each extension. The call route specifies which handsets should ring, the order in which they ring, the number of rings per handset, and the ring cadence for each handset. In addition, you can define a call route for each user and system extension.



You'll need this much time

Adding an outside line will take less than **30** minutes.



Gather This Information

You'll need the following information from your *current set-up (version 4.4 or earlier)*:

- **Extensions:** The numbers in Allworx which are assigned to employee or system phones
- **Ports:** Where the trunk line will be plugged in.



Before You Begin

- Plug in the trunks.

How to Add an Outside Line

1. Expand **Phone System** and click **Outside Lines**.

| Analog Outside (CO) Lines | | | |
|---------------------------|------|------|-----------------------------------------------------------|
| Outside (CO) Line | Type | Port | Action |
| --- | 01 | | New FXO Line |
| --- | 02 | | New FXO Line |
| --- | 03 | | New FXO Line |
| --- | 04 | | New FXO Line New DID Line |
| --- | 05 | | New FXO Line New DID Line |
| --- | 06 | | New FXO Line New DID Line |
| --- | 07 | | New FXO Line New DID Line |
| --- | 08 | | New FXO Line New DID Line |
| --- | 09 | | New FXO Line New DID Line |
| --- | 10 | | New DID Line |
| --- | 11 | | New DID Line |
| --- | 12 | | New DID Line |
| --- | 13 | | New DID Line |
| --- | 14 | | New DID Line |
| --- | 15 | | New DID Line |
| --- | 16 | | New DID Line |

Outside Lines page

All sixteen ports are visible and available for configuration.

- Ports 1 through 3 can only be used for loop start business lines.
 - Ports 4 through 9 can be used for either business lines or DID lines.
 - Ports 10 through 16 may only be used for DID lines.
2. To scan for new lines, click **Scan For New Outside (CO) FXO Lines**. Any new lines will appear on the list on the Outside Lines page.

3. Click **New FXO Line** to add a new outside line.

Program New Outside (CO) FXO Line page

4. Enter a Description and select the port. Click **Program**. The new line appears on the Outside Lines page.
5. Click **Modify** for the line you just created.

Call Route page

6. Select the extension where incoming calls should be routed.
7. Click **Update**.
8. Repeat steps 3 – 7 for each outside line.

Adding Direct Inward Dialing

Prior to Direct Inward Dialing, there were only two ways that a caller could reach their party: one outside line per employee or one central line with an operator (live or later, an auto attendant) to answer and direct calls. Direct Inward Dialing (DID) is a new feature that provides employees with their own, unique phone number without the expense of a dedicated phone line.

Each business phone line has a discrete phone number assigned to the physical circuit. In order to have individual numbers assigned to employees, the phone company would have to assign a discrete phone number to each employee. Because numbers are recycled when assigned to customers and recovered when service cancelled, it is highly unlikely that the numbers provided by the phone company for multiple lines would be sequential. This means that one employee could have a drastically different number from another.

When a call comes in on a normal business line, the PBX sees it in the form of ring voltage and can only route it to a predefined station or extension. Without additional signaling (such as the extension digits), the receiving system can only route the call to one place.

In contrast, a DID trunk does not have a discrete phone number for the circuit. Instead of ring voltage, the PBX sees the call coming in the form of digits dialed. This means that a single trunk can deliver calls to many extensions because it passes along the extension as an address. Taken a step further, multiple trunks can be configured in a group to service a block of extensions for a primary number.



You'll need this much time

Setting up Direct Inward Dialing will take about **15** minutes.



Gather This Information

To set up Direct Inward Dialing, you'll need the following information from the *phone company*:

- **Number of Trunk Lines:** The quantity of DID trunks you ordered.
- **Starting Phone Number:** The first number within a block of extensions, often used as a general office contact number.
- **Block Size:** The quantity of sequential numbers that were reserved for the primary number.

You'll need the following information from your *current set-up (version 4.4 or earlier)*:

- **Extensions:** The numbers in Allworx which are assigned to employee or system phones
- **Ports:** Where the trunk line will be plugged in. For DID, use ports 4-16.



Before You Begin

- In order to set up DID, the phone company must first upgrade or install the DID trunks. Make sure the new lines have a two-wire wink start.
- Check that everyone to whom you want to assign a DID number is currently set up on Allworx with an extension.

How to Set Up Direct Inward Dialing

1. Expand Phone System and click **Outside Lines**.



Outside Lines page

All sixteen ports are visible and available for configuration.

- Ports 1 through 3 can only be used for loop start business lines.
 - Ports 4 through 9 can be used for either business lines or DID lines.
 - Ports 10 through 16 may only be used for DID lines.
2. First, you'll need to set up the phone number and quantity of numbers in the block. Click **New DID Block**.

Add Direct Inward Dial Block page

3. Using the information you gathered from the phone company, enter:
 - **Starting Phone Number** (including the area code)
 - **Total number of phone numbers in the DID Block**
4. Select **make new Routing Plan** as the Routing Plan. This will automatically set up a Routing Plan for you. You can make changes to it later.
5. Click **Add**. The *Outside Lines* page reappears. You'll see the block listed that you just added.
If you need to make a change, click **Modify**, update the information, and click **Update**.
6. After you've set up the block, you'll need to establish a DID line for each one you ordered from the phone company. Click **New DID Line** next to the port (4 through 16) you want to set up.

Program New Outside (CO) DID Line page.

7. Enter a **Description**. This description you enter here appears on a phone's screen.
8. Select:
 - **Select Port**: Make sure this corresponds to the port you originally selected.
 - **Number of digits sent by CO to identify DID number**: This information should match your request to the telephone company.
 - **DID Block**: Select the routing plan you just established.
9. Click **Program**.
10. Repeat steps 6 – 9 for each DID line.

11. Now that you've established the lines, you're ready to program where each DID call should be routed. On the *Outside Lines* page, click **Details** next to the routing plan you just established.

| Direct Inward Dial Blocks | |
|--------------------------------------------------------|-----------------------------------------------|
| Block | Action |
| | New DID Block |
| (585) 421-4300 Numbers: 100 Plan: Routing Plan 1 | Modify Delete |
| (585) 421-4301 Numbers: 3 Plan: Routing Plan 2 | Modify Delete |

| Direct Inward Dial Routing Plans | |
|----------------------------------|------------------------------------------------|
| Routing Plan | Action |
| Routing Plan 1 | Details Delete |
| Routing Plan 2 | Details Delete |

Routing Plans section of the Outside Lines page

12. The details for the routing plan you selected appears.

Direct Inward Dial (DID) Routing Plan - Routing Plan 1

| Routing Plan Information | | |
|-----------------------------------|-----------------------------|------------------------|
| Description | Routing Plan 1 | |
| Default Extension | 0 - Operator | Modify |
| DID Blocks using this plan | (585) 425-1000 / 50 numbers | |

| Phone Number to Extension Mapping | | |
|-----------------------------------|-----------|-------------------------------|
| Phone Number | Extension | Action |
| | | Add New Entry |

TIP

Phone Numbers that do not appear in the table to the left use the Default Extension for this DID Block as defined above.

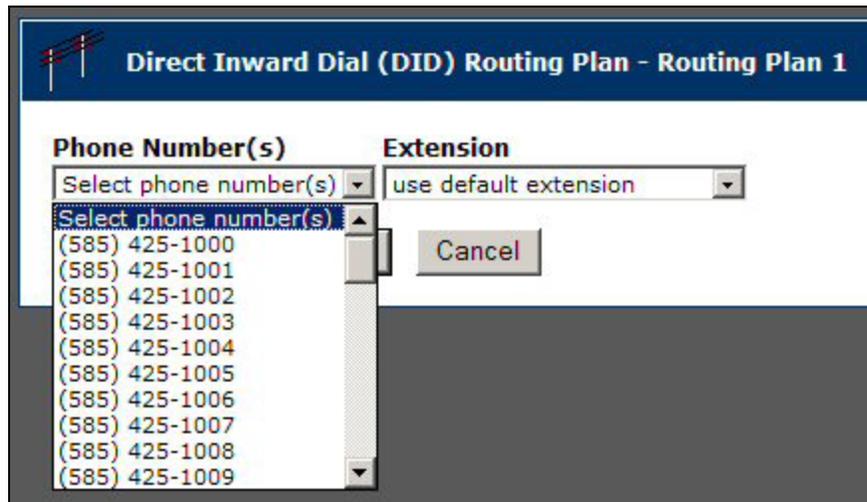
To remove a phone number from the table, select **Modify**, then change the number to use the default extension.

Mapping phone numbers to extensions page

13. Verify the **Description**, **Default Extension**, and **DID Blocks using this plan**.

If you need to make a change, click **Modify**, update the information, and click **Update**.

14. To map an extension, click **Add New Entry**.



Adding a new entry

15. Select:

- **Phone Number:** Select the number you want to assign.
- **Extension:** Select the extension of the person who will receive the new number.

16. Click **Program**.

17. Repeat steps 14 – 16 for each number you want to assign. Any numbers that you don't assign will go automatically to the default extension.

Creating a SIP Gateway

The Allworx 10X server has a total of 16 analog telephony ports of which 9 can be configured for loop start telephone lines. If you need more lines than the Allworx can support, you can add an AudioCodes expansion device as a gateway. The models supported are MP104 FXO or MP108 FXO VoIP.

The lines can be set up as follows:

- The lines are set up using a trunk which creates a common pool. When a line is needed (either for an incoming or outgoing call), the next available line from the pool is used.
- The lines are set up for specific users. Each line is designated for calls coming and being made from an extension and cannot be shared with other users.



You'll need this much time

Setting up the business line expansion will take about 1 hour.



Gather This Information

To set up a business line expansion, you will need:

- AudioCodes gateway device
- IP address for the AudioCodes gateway



Before You Begin

Unpack the AudioCodes gateway device provided by your Allworx distributor.

- If the Allworx server is your network DHCP server, connect the AudioCodes gateway device to any LAN port on Allworx.
- If not, contact Allworx Support.

How to Set Up a Common Pool Using a SIP Gateway

1. Expand **Phone System** and click **Outside Lines**.



Outside Lines page

2. First, create the new SIP Gateway. Click **New SIP Gateway**.

Program New Gateway

SIP Gateway

Description

SIP Registration

Login ID

Password

Program New Gateway page

3. Enter a **Description**, **Login ID**, and **Password**.
4. Click **Program**.

- The *Outside Lines* page reappears with information about the gateway you just created.

| SIP Gateways | |
|--------------------------------------------------------------|-----------------------------------------------|
| Gateway | Action |
| | New SIP Gateway |
| fxo User ID: 5103 Login ID: test (never registered) | Modify Delete |

SIP Gateways section of the Outline Lines page

- Make a note of the User ID (starting with 5) because you will need this later.
- Now you're ready to set up how incoming calls are handled via the gateway. Click **Modify**.

Modify SIP Gateway

Identification

Description

SIP Registration

Login ID

Password

Features

Prefix String (digits/characters sent by Allworx to gateway before sending number dialed)

Call Route

Calls received from this SIP Gateway go to:

Extension

Auto Attendant

Voicemail for user

Modify SIP Gateway page

- Select where you want incoming calls to go (**Extension**, **Auto Attendant**, or **Voicemail for user**). Click **Update**.

9. After you've set up the gateway on Allworx, you must configure the AudioCodes device to register the gateway for Allworx.
10. Open a browser window. Enter the IP address of the AudioCodes gateway.

To find the IP address:

- If Allworx is your network DHCP server, start the Allworx program, expand **Servers** and click **DHCP Server** to locate the IP address.
- If Allworx is not your DHCP server, contact Customer Support.



AudioCodes Login page

11. Enter **Admin** as your User Name. Enter **Admin** as your password.
If you have a Realm1 User Name and password, use that instead.

12. The AudioCodes Quick Setup page appears.

| QUICK SETUP | |
|--------------------------------------|----------------------------------------------------------------------------------|
| IP Configuration | |
| IP Address : | 192.168.6.1 |
| NAT IP Address : | 0.0.0.0 |
| Subnet Mask : | 255.255.255.0 |
| Default Gateway IP Address : | 192.168.6.254 |
| SIP Parameters | |
| Gateway Name : | |
| Working with Proxy : | Yes <input type="button" value="v"/> |
| Proxy IP address : | 192.168.6.254 |
| Proxy Name : | |
| Enable Registration: | Yes <input type="button" value="v"/> |
| * Coder Name (msec) | |
| <input type="checkbox"/> * 1st Coder | g711Ulaw64k <input type="button" value="v"/> 20 <input type="button" value="v"/> |
| Tables | |
| Tel to IP Routing Table: | <input type="button" value="OPEN"/> |
| Endpoints' Phone Numbers Table: | <input type="button" value="OPEN"/> |

AudioCodes Quick Setup page

13. Verify that the **Default Gateway IP Address** is the LAN TCP/IP Address of Allworx.

Make sure that **Yes** is selected for **Working with Proxy**.

Make sure that **Yes** is selected for **Enable Registration**.

14. Click **Protocol Management**.

15. Click **Protocol Definition**.

16. Locate the Proxy Server and Authentication section of the page.

| | |
|---------------------|-------------------------------------------------------------|
| * Password | **** |
| * Cnonce | 0a123bcf |
| * User Name | test |
| Authentication Mode | Authentication Per Gateway <input type="button" value="v"/> |

AudioCodes setup page

- Enter **1234** as the Password.
- Enter the **Login ID** as the User Name.
- Select **Authentication Per Gateway** as the Authentication Mode.
- Click **Submit** (at the bottom of the page).

17. If you changed the Authentication Mode, the device will automatically reset itself.

18. Click **End Point's Phone Number**.

| * End Points' Phone Numbers | | | |
|-----------------------------|------------|--------------|---------------|
| | Channel(s) | Phone Number | Hunt Group Id |
| 1 | 1 | 5103 | |
| 2 | 2 | 5103 | |
| 3 | 3 | 5103 | |
| 4 | 4 | 5103 | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

End Points' Phone Numbers page

19. Enter the User ID (starting with 5) you noted earlier as the Phone Number for each Channel. Click **Submit**.

20. Click **Automatic Dialing**.

* Automatic Dialing

| GW Port | Destination Phone Number |
|---------|--------------------------|
| Port 1 | 795103 |
| Port 2 | 795103 |
| Port 3 | 795103 |
| Port 4 | 795103 |

Automatic Dialing page

21. For each port, enter **79**, then the User ID (starting with 5) you noted earlier. Click **Submit**.
22. Click **Reset**. Click **Reset** to confirm that you want to reset the AudioCodes device. It may take a few minutes for the device to reset itself. When the “The system is resetting” message disappears, you may continue.
23. On the Allworx Outside Lines page, verify that Login ID for the Gateway has an expiration date (this indicates that the Login ID was registered on the AudioCodes device).

| SIP Gateways | |
|------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Gateway | Action |
| | New SIP Gateway |
| fxo User ID: 5103 Login ID: test (expires: APR 30, 2004 12:06 PM) 192.168.6.1:5060 | Modify Delete |

SIP Gateways portion of the Outside Lines page

How to Set Up Specific Users Using a SIP Gateway

1. Expand **Phone System** and click **Outside Lines**.



Outside Lines page

2. First, create the new SIP Gateway. Click **New SIP Gateway**.

Program New Gateway

SIP Gateway

Description

SIP Registration

Login ID

Password

Program New Gateway page

3. Enter a **Description**, **Login ID**, and **Password**.
4. Click **Program**.

- The *Outside Lines* page reappears with information about the gateway you just created.

| SIP Gateways | |
|--------------------------------------------------------------|-----------------------------------------------|
| Gateway | Action |
| | New SIP Gateway |
| fxo User ID: 5103 Login ID: test (never registered) | Modify Delete |

SIP Gateways section of the Outline Lines page

- Repeat steps 2 – 5 for each user. Make a note of each User ID (starting with 5) because you will need this later. This example shows 4 users set up.

| SIP Gateways | |
|----------------------------------------------------------------|-----------------------------------------------|
| Gateway | Action |
| | New SIP Gateway |
| fxo-1 User ID: 5103 Login ID: test (never registered) | Modify Delete |
| fxo-2 User ID: 5104 Login ID: test (never registered) | Modify Delete |
| fxo-3 User ID: 5105 Login ID: test (never registered) | Modify Delete |
| fxo-4 User ID: 5106 Login ID: test (never registered) | Modify Delete |

Multiple User in the SIP Gateways section of the Outline Lines page

- Now you're ready to set up how incoming calls are handled for each user via the gateway. Click **Modify** next to the first user.

Modify SIP Gateway

Identification

Description

SIP Registration

Login ID

Password

Features

Prefix String (digits/characters sent by Allworx to gateway before sending number dialed)

Call Route

Calls received from this SIP Gateway go to:

Extension

Auto Attendant

Voicemail for user

Modify SIP Gateway page

8. Select where you want incoming calls to go (**Extension**, **Auto Attendant**, or **Voicemail for user**). Click **Update**.

After you've set up the gateway on Allworx, you must configure the AudioCodes device to register the gateway for Allworx.

9. Open a browser window. Enter the IP address of the AudioCodes gateway.

To find the IP address:

- If Allworx is your network DHCP server, start the Allworx program, expand **Servers** and click **DHCP Server** to locate the IP address.
- If Allworx is not your DHCP server, contact Customer Support.



AudioCodes Login page

10. Enter **Admin** as your User Name. Enter **Admin** as your password.

If you have a Realm1 User Name and password, use that instead.

11. The AudioCodes Quick Setup page appears.

| QUICK SETUP | |
|--------------------------------------|----------------------------------------------------------------------------------|
| IP Configuration | |
| IP Address : | 192.168.6.1 |
| NAT IP Address : | 0.0.0.0 |
| Subnet Mask : | 255.255.255.0 |
| Default Gateway IP Address : | 192.168.6.254 |
| SIP Parameters | |
| Gateway Name : | |
| Working with Proxy : | Yes <input type="button" value="v"/> |
| Proxy IP address : | 192.168.6.254 |
| Proxy Name : | |
| Enable Registration: | Yes <input type="button" value="v"/> |
| * Coder Name (msec) | |
| <input type="checkbox"/> * 1st Coder | g711Ulaw64k <input type="button" value="v"/> 20 <input type="button" value="v"/> |
| Tables | |
| Tel to IP Routing Table: | <input type="button" value="OPEN"/> |
| Endpoints' Phone Numbers Table: | <input type="button" value="OPEN"/> |

AudioCodes Quick Setup page

12. Verify that the **Default Gateway IP Address** is the LAN TCP/IP Address of Allworx.

Make sure that **Yes** is selected for **Working with Proxy**.

Make sure that **Yes** is selected for **Enable Registration**.

13. Click **Protocol Management**.

14. Click **Protocol Definition**.

15. Locate the Proxy Server and Authentication section of the page.

| | |
|---------------------|--------------------------------------------------------------|
| * Password | **** |
| * Cnonce | 0a123bcf |
| * User Name | test |
| Authentication Mode | Authentication Per Endpoint <input type="button" value="v"/> |

AudioCodes setup page

- Enter **1234** as the Password.
- Enter the **Login ID** as the User Name.
- Select **Authentication Per Endpoint** as the Authentication Mode.
- Click **Submit** (at the bottom of the page).

16. If you changed the Authentication Mode, the device will automatically reset itself.

17. Click **Authentication**.

* Authentication

| Gateway Port Number | User Name | Password |
|---------------------|-----------|----------|
| Port 1 | test | test |
| Port 2 | test | test |
| Port 3 | test | test |
| Port 4 | test | test |

Authentication page

18. Enter the Login ID as the User Name and the Password for each port. Click **Submit**.

19. Click **End Point's Phone Number**.

*** End Points' Phone Numbers**

| | Channel(s) | Phone Number | Hunt Group Id |
|---|------------|--------------|---------------|
| 1 | 1 | 5103 | |
| 2 | 2 | 5104 | |
| 3 | 3 | 5105 | |
| 4 | 4 | 5106 | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

SUBMIT

End Points' Phone Numbers page

20. Enter the User ID (starting with 5) you noted earlier as the Phone Number for each Channel. Click **Submit**.
21. Click **Automatic Dialing**.

*** Automatic Dialing**

| GW Port | Destination Phone Number |
|---------|--------------------------|
| Port 1 | 795103 |
| Port 2 | 795104 |
| Port 3 | 795105 |
| Port 4 | 795106 |

SUBMIT

Automatic Dialing page

22. For each port, enter **79**, then enter each User ID (starting with 5) you noted earlier. Click **Submit**.
23. Click **Reset**. Click **Reset** to confirm that you want to reset the AudioCodes device. It may take a few minutes for the device to reset itself. When the "The system is resetting" message disappears, you may continue.

24. On the Allworx Outside Lines page, verify that each Login ID for the Gateway has an expiration date (this indicates that the Login ID was registered on the AudioCodes device).

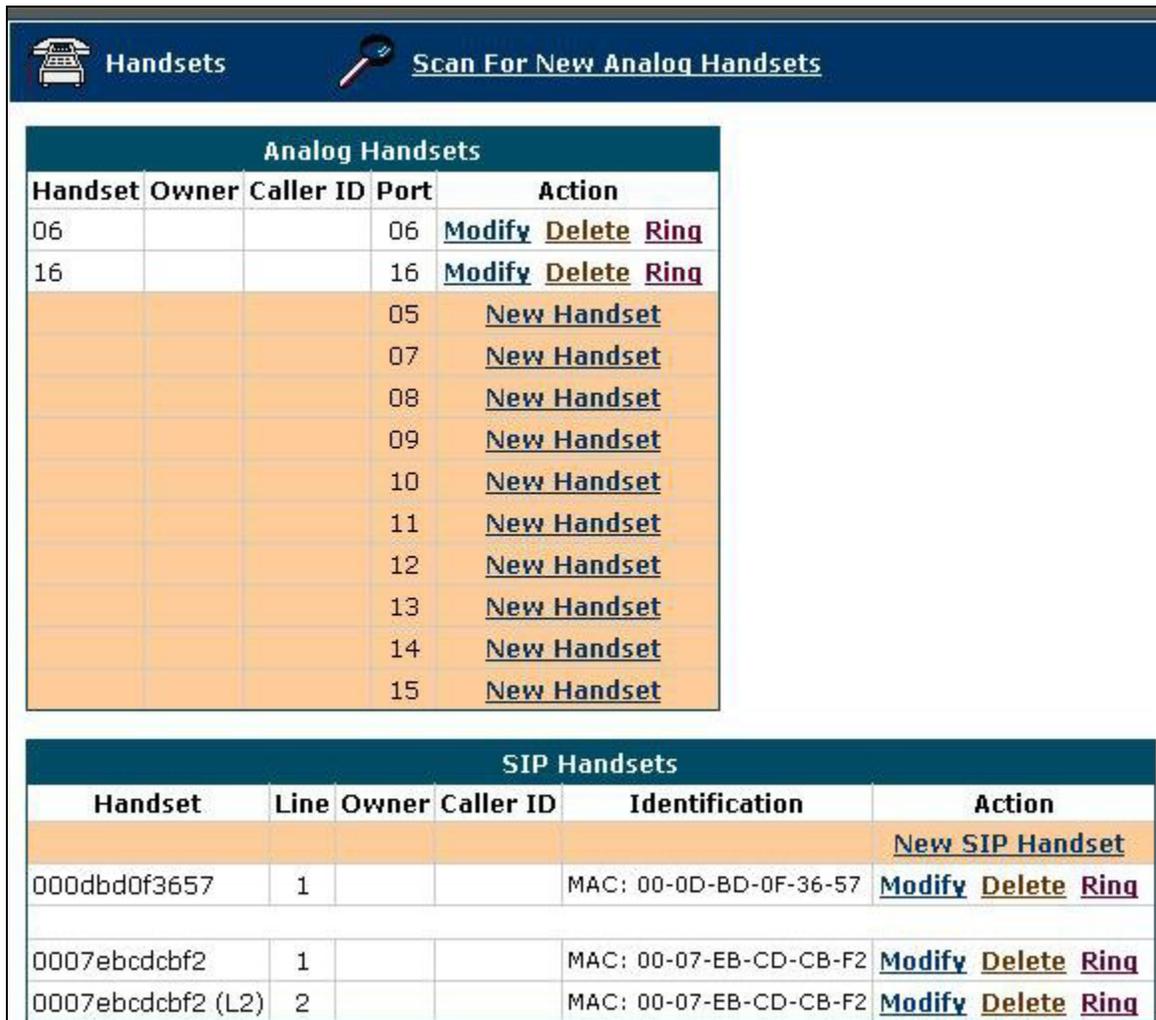
| SIP Gateways | |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Gateway | Action |
| | New SIP Gateway |
| fxo-1 User ID: 5103 Login ID: test (expires: APR 30, 2004 01:08 PM) 192.168.6.1:5060 | Modify Delete |
| fxo-2 User ID: 5104 Login ID: test (expires: APR 30, 2004 01:08 PM) 192.168.6.1:5060 | Modify Delete |
| fxo-3 User ID: 5105 Login ID: test (expires: APR 30, 2004 01:08 PM) 192.168.6.1:5060 | Modify Delete |
| fxo-4 User ID: 5106 Login ID: test (expires: APR 30, 2004 01:08 PM) 192.168.6.1:5060 | Modify Delete |

SIP Gateways portion of the Outside Lines page

Configuring Handsets

Configuring a Handset

1. Expand Phone System and click **Handsets**.



The screenshot shows the 'Handsets' configuration page. At the top, there is a header with a handset icon, the word 'Handsets', a magnifying glass icon, and a link 'Scan For New Analog Handsets'. Below the header, there are two tables: 'Analog Handsets' and 'SIP Handsets'.

Analog Handsets Table:

| Handset | Owner | Caller ID | Port | Action |
|---------|-------|-----------|------|--------------------------------------------------------------------|
| 06 | | | 06 | Modify Delete Ring |
| 16 | | | 16 | Modify Delete Ring |
| | | | 05 | New Handset |
| | | | 07 | New Handset |
| | | | 08 | New Handset |
| | | | 09 | New Handset |
| | | | 10 | New Handset |
| | | | 11 | New Handset |
| | | | 12 | New Handset |
| | | | 13 | New Handset |
| | | | 14 | New Handset |
| | | | 15 | New Handset |

SIP Handsets Table:

| Handset | Line | Owner | Caller ID | Identification | Action |
|-------------------|------|-------|-----------|------------------------|--------------------------------------------------------------------|
| | | | | | New SIP Handset |
| 000dbd0f3657 | 1 | | | MAC: 00-0D-BD-0F-36-57 | Modify Delete Ring |
| 0007ebcdcbf2 | 1 | | | MAC: 00-07-EB-CD-CB-F2 | Modify Delete Ring |
| 0007ebcdcbf2 (L2) | 2 | | | MAC: 00-07-EB-CD-CB-F2 | Modify Delete Ring |

Handsets page

2. To scan for new handsets, click **Scan For New Analog Handsets**. Any new handsets will appear on the Analog Handsets list on this page.

- To add a handset, click **New Handset**.

Program New Handset page

- Enter a Description, the Caller ID, and select the extension for the handset.
- Select Analog Phone or SIP Phone according to the type of handset you are configuring.
 - For an Analog Phone, select the Port
 - For a SIP Phone, select the Model and specify the number of lines. If the phone must be authenticated, enter a Login ID and Password. If the phone is plug-and-play, enter the MAC Address and the IP Address if Allworx will not be used to automatically assign it.
- Click **Program**. The new line appears on the Handsets page.

Modifying an Existing Handset

1. Expand Phone System and click **Handsets**.

 **Handsets**
 [Scan For New Analog Handsets](#)

| Analog Handsets | | | | |
|-----------------|-------|-----------|------|--------------------------------------------------------------------|
| Handset | Owner | Caller ID | Port | Action |
| 06 | | | 06 | Modify Delete Ring |
| 16 | | | 16 | Modify Delete Ring |
| | | | 05 | New Handset |
| | | | 07 | New Handset |
| | | | 08 | New Handset |
| | | | 09 | New Handset |
| | | | 10 | New Handset |
| | | | 11 | New Handset |
| | | | 12 | New Handset |
| | | | 13 | New Handset |
| | | | 14 | New Handset |
| | | | 15 | New Handset |

| SIP Handsets | | | | | |
|-------------------|------|-------|-----------|------------------------|--------------------------------------------------------------------|
| Handset | Line | Owner | Caller ID | Identification | Action |
| | | | | | New SIP Handset |
| 000dbd0f3657 | 1 | | | MAC: 00-0D-BD-0F-36-57 | Modify Delete Ring |
| 0007ebcdcbf2 | 1 | | | MAC: 00-07-EB-CD-CB-F2 | Modify Delete Ring |
| 0007ebcdcbf2 (L2) | 2 | | | MAC: 00-07-EB-CD-CB-F2 | Modify Delete Ring |

Handsets page

- Click **Modify** next to the Handset you want to change.

Modify Handset

Identification

Phone Type: **Analog** Port: **06**

Description:

CallerID:

Owner:

Handset State

Do Not Disturb: **disabled**

Call Forwarding: **disabled**

Handset Features

Can place calls

Can receive calls

Second Call Handling:

Message Waiting Stutter Dialtone

Message Waiting Light (requires SDMF and/or MDMF below)

Caller ID Display (requires SDMF and/or MDMF below)

Caller ID Type I (SDMF)

Caller ID Type II (MDMF)

Outside Line Connection

Seize rule:

Use any CO Line, SIP Gateway, or SIP Proxy

Use only checked CO Lines, SIP Gateways, and SIP Proxies:

01 (Port:01)

2 (Port:02)

fxo-1 (Login ID: test)

fxo-2 (Login ID: test)

fxo-3 (Login ID: test)

fxo-4 (Login ID: test)

Modify Handset page

- Change the Phone Type, Description, Caller ID, and Owner, as needed.
- Change the Handset Features, as needed.
- Select the Seize rule that you want to apply to the handset.
- If you want to specify the CO Lines, SIP Gateways, and SIP Proxies that can be used by the handset, select the desired items.
- You can click Start Over at any time to reset the configuration to its default settings. When finished, click **Update**.

Using Prefix Digits

In Release 4.5, Allworx can automatically add a *prefix* to phone numbers. You may need to do this if:

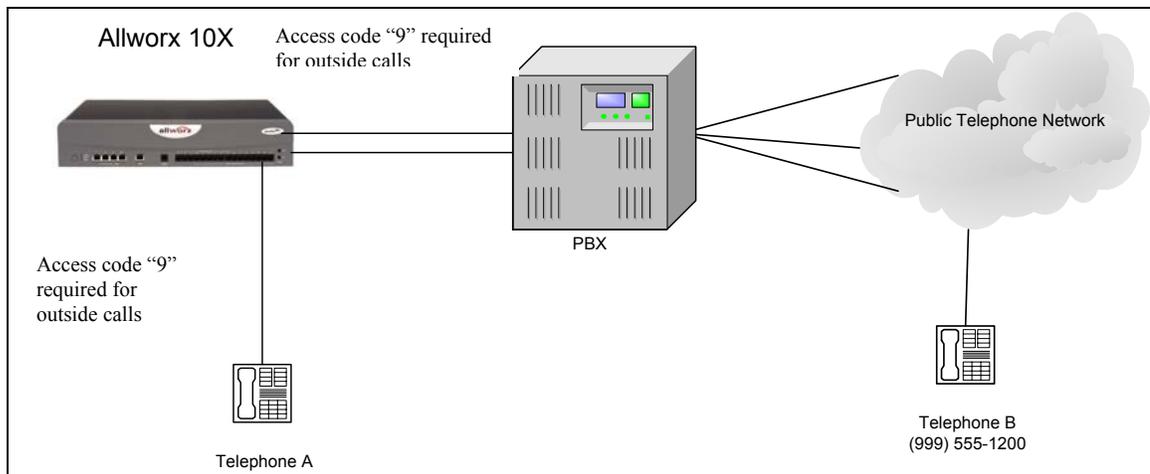
- The phone company in your area requires additional numbers to be dialed when accessing their services.
- More than one PBX is used (i.e., the systems are cascaded together).

Skip this section if neither situation is present for your system.

Prior to Release 4.5, the caller dialed 9# to reach a line outside of the PBX. For example, a caller would dial 9# 9 555-1200 where:

- 9# would grab a line between the Allworx and the upstream PBX
- The next 9 would indicate an outside call to the PBX
- 555-1200 is the called party's telephone number

With Release 4.5, you can configure each Outside Line so that it adds the access digits to the called number automatically. This means that the user no longer needs to dial 9# to start the call.



Simple Allworx PBX system



You'll need this much time

Setting up prefix digits will take less than 10 minutes.



Gather This Information

To set up prefix digits, you'll need the following information:

- **Outside Lines:** The lines on which you want to set up prefix digits.
- **Prefix Digits:** The digits you are currently dialing to reach an Outside Line.



Before You Begin

Make sure all you inform everyone about the new dialing procedure that will be in place after you set up the prefix digits.

How to Set Up Prefix Digits

1. Expand **Phone System** and click **Outside Lines**.

| Analog Outside (CO) Lines | | | |
|---------------------------|------|------|-----------------------------------------------------------|
| Outside (CO) Line | Type | Port | Action |
| 01 | FXO | 01 | Modify Delete |
| 02 | FXO | 02 | Modify Delete |
| 03 | FXO | 03 | Modify Delete |
| 04 | FXO | 04 | Modify Delete |
| --- | --- | 05 | New FXO Line New DID Line |
| --- | --- | 06 | New FXO Line New DID Line |
| --- | --- | 07 | New FXO Line New DID Line |
| --- | --- | 08 | New FXO Line New DID Line |
| --- | --- | 09 | New FXO Line New DID Line |
| --- | --- | 10 | New DID Line |
| --- | --- | 11 | New DID Line |
| --- | --- | 12 | New DID Line |
| --- | --- | 13 | New DID Line |
| --- | --- | 14 | New DID Line |
| --- | --- | 15 | New DID Line |
| --- | --- | 16 | New DID Line |

Direct Inward Dial Blocks

| Block | Action |
|-------|-------------------------------|
| | New DID Block |

Direct Inward Dial Routing Plans

No Routing Plans have been defined. New Routing Plans can be created when a new DID Block is added, or an existing DID Block is modified.

SIP Gateways

| Gateway | Action |
|---------|---------------------------------|
| | New SIP Gateway |

SIP Proxies

| Proxy | Action |
|-------|-------------------------------|
| | New SIP Proxy |

Outside Lines page

- Click **New FXO Line** to program the line on which you want to set up prefix digits.

Program New Outside (CO) FXO Line page

- Click **Modify FXO Line** for the line on which you want to set up prefix digits.

Adding the Prefix Digits

- Enter the access digits as the **Prefix Digits**. Include the digits that the phone company or cascaded PBX requires but don't include the 9 that you normally need to access Allworx.
- Click **Update**.
- Repeat steps 2 - 5 for each outside line.

- You can also set up Prefix Digits for an existing SIP Gateway. On the Outside Lines page, click **Modify** next to the SIP Gateway that you want to use prefix digits.

Modify SIP Gateway

Identification

Description

SIP Registration

Login ID

Password

Features

Prefix String (digits/characters sent by Allworx to gateway before sending number dialed)

Call Route

Calls received from this SIP Gateway go to:

Extension

Auto Attendant

Voicemail for user

Modify SIP Gateway page

- Enter the access digits as the **Prefix Digits**. Include the digits that the phone company or cascaded PBX requires but don't include the 9 that you normally need to access Allworx.
- Click **Update**.
- Repeat steps 7 - 9 for each SIP Gateway.

Creating Service Groups

You can now set up Service Groups to associate outside lines, SIP gateways, and remote proxy services in unlimited combinations. When a call is placed, Allworx coordinates information about *Service Groups*, *handsets*, and *dialing rules* to route the call properly, as follows:

Service Group The Allworx automatically creates and maintains three service groups (additional groups may be added as needed):

- All CO Lines
- All CO Lines plus all SIP Gateways
- All CO Lines, all SIP Gateways plus all SIP Proxies

When a new call is placed, the listed items are searched until an idle entity is found to handle the call.

Handset For outbound calls, handsets may be configured to grab any available line (analog, gateway, or proxy) or a specific line acquired in a specific order.

Dialing Rules When a Dialing Rule is used, Allworx maps the outbound calls to a designated area code which are assigned to a Service Group. Calls placed to a specific area code can only traverse that Service Group's lines. Dialing rules may be defined for both "dial 9" access and pincode calling

You'll want to add Service Groups to your configuration of handsets and dialing rules if you want to choose the order in which outside lines are accessed to make a call. For example, it may be cheaper to use some lines than others, or you may want to designate certain lines be used for dialing certain area codes. To begin using Service Groups:

- Set up the CO lines and any SIP Gateways or SIP Proxies you'll need.
- Set up the Service Groups that will use specific lines.
- Set up the Dialing Rules for the Service Groups.
- Define the handsets that belong to each Service Group.



You'll need this much time

Setting up a service group will take less than 15 minutes.



Gather This Information

- Determine the handsets which should be routed to specific lines



Before You Begin

Set up the outside lines.

How to Set Up a Service Group

1. Expand **Phone System** and click **Dialing Rules**.

| ### Dialing Rules | | | |
|------------------------------------------|---------------------------------------------------|-----------------------------------|------------------------|
| Dial 9 - Service Groups | | | |
| Area Code | Dial Method | Service Group | Action |
| 315 | Area Code NOT dialed | All CO Lines & SIP Gateways | |
| 585 (home) | Area Code NOT dialed | All CO Lines & SIP Gateways | Modify |
| all others | 1 + Area Code dialed | All CO Lines & SIP Gateways | |
| Dial 8+PIN - Service Group | | | |
| Service Group | Action | | |
| All CO Lines & SIP Gateways | Modify | | |
| Service Groups | | | |
| Group | Service(s) | Action | |
| | | New Service Group | |
| All CO Lines | Test Line (CO) | | |
| All CO Lines & SIP Gateways | Test Line (CO) A new SIP Gateway (SIP Gateway) | | |
| All CO Lines, SIP Gateways & SIP Proxies | Test Line (CO) A new SIP Gateway (SIP Gateway) | | |

Dialing Rules page

- Click **Modify** to change a system-provided group. This means that any line can be used for the area code listed. Continue on to step 4.

Click **New Service Group** to create your own group. This means that you want to specify a certain line for an area code.

Add Service Group page

- Enter a description of the new Service Group. Select services to be included or excluded from the Service Group. You can move services up or down to change the order in which they are used. Click **Submit**. On the Dialing Rules page, click **Modify** to finish setting up the new group.

4. Select an outside line connection:

- Check **Use any CO Line, SIP Gateway, or SIP Proxy** to have Allworx search for an idle line within the service group (from the top of its list) until the call is placed.

Modify Service Group page

- Check **Use only checked CO Lines, SIP Gateways, and SIP Proxies** to restrict a handset so it may only make calls using one or more specific lines. Check each line to be used by the handset. For example, only port 2 may be used by this handset to place calls outside of the Allworx.

Modify Service Group page

5. Click **Submit**.

Creating Special Area Code Dialing Rules

Some cities in the US and Canada have special dialing requirements for an area that are determined based where the caller and the called number reside.

For example, using an analog phone connected to a loop start business line, a caller dials 999-555-1200 to reach a nearby supplier, yet dials 1-999-666-1400 for a cross-town supplier. Prior to release 4.5, the caller heard a dial tone, then dialed 9 followed by #. The caller then heard a second dial tone before dialing 999-555-1200 or 1-999-666-1400. The reason for the second dial tone was because the PBX grabbed the first available outside line and the second tone produced by the telephone company. Hearing the second tone was sometimes confusing to callers.

With release 4.5, the caller no longer needs to use # when placing an outside call. The PBX is now able to grab the first available outside line without the second dial tone sounding.



You'll need this much time

Setting up special area code dialing rules will take less than 15 minutes.



Gather This Information

- Ask the phone company for any special dialing rules they require.
- Make a list of any special dialing rules in your local area code.



Before You Begin

Make sure all that everyone on your phone system is aware of the changes in the special dialing rules.

How to Set Up a Special Dialing Rule

1. Expand **Phone System** and click **Dialing Rules**.

| ### Dialing Rules | | | |
|------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------|------------------------|
| Dial 9 - Service Groups | | | |
| Area Code | Dial Method | Service Group | Action |
| 315 | 1 + Area Code dialed | All CO Lines & SIP Gateways | Modify |
| 585 (home) | Area Code NOT dialed | All CO Lines, SIP Gateways & SIP Proxies | |
| 716 | 1 + Area Code dialed | All CO Lines & SIP Gateways | |
| all others | 1 + Area Code dialed | All CO Lines & SIP Gateways | |
| Dial 8+PIN - Service Group | | | |
| Service Group | Action | | |
| All CO Lines & SIP Gateways | Modify | | |
| Service Groups | | | |
| Group | Service(s) | Action | |
| | | New Service Group | |
| All CO Lines | 03 (CO) 02 (CO) 01 (CO) | | |
| All CO Lines & SIP Gateways | 03 (CO) 02 (CO) 01 (CO) | | |
| All CO Lines, SIP Gateways & SIP Proxies | 03 (CO) 02 (CO) 01 (CO) OneRing (SIP Proxy) iConnectHere (SIP Proxy) | | |
| Centrx test | 03 (CO) | Modify Delete | |

Dialing Rules page

2. In the *Dial 9 - Service Groups*, click **Modify**.

| Area Code | Dial Method | Service Group |
|------------|----------------------|-----------------------------|
| Home 585 | Area Code NOT dialed | All CO Lines & SIP Gateways |
| 315 | 1 + Area Code dialed | All CO Lines & SIP Gateways |
| | 1 + Area Code dialed | All CO Lines & SIP Gateways |
| | 1 + Area Code dialed | All CO Lines & SIP Gateways |
| all others | 1 + Area Code dialed | All CO Lines & SIP Gateways |

Update Cancel

Modify Area Code page

3. Set up area codes:
 - If you're not required to dial the area code when making calls within your Home Area Code, enter your local area code in the Home Area Code field and select **Area Code NOT Dialed** for the Dial Method.
 - If you are required to dial the area code when making calls within your Home Area Code, enter your local area code in the Home Area Code field and select **Area Code Dialed** for the Dial Method.
 - For calls outside of your area code, enter the area code in the next available field and select a Dial Method.
4. Click **Update**.

Important! After you make this change, these rules apply:

When making a call within the area code using a **10-digit number**, the call is placed using the new rule. The call will only be placed using the area code without the preceding 1.

When making a call dialing within the area code using an **11-digit number**, the call is placed using the *all others* rule. The call will only be placed using 1 plus the area code.