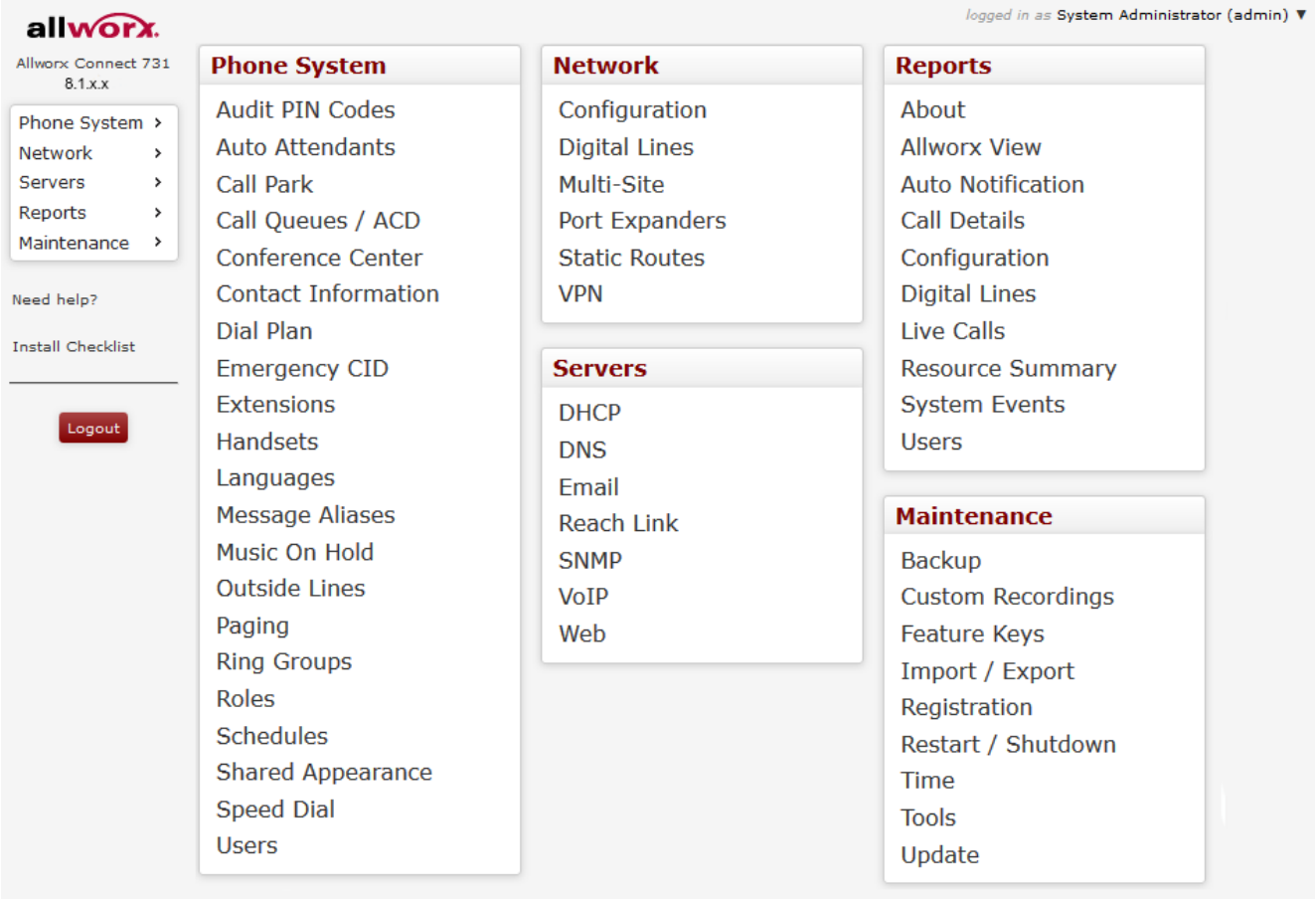
Allworx® System Administrator Guide

Version 8.1

Updated 03/25/2016

Allworx® System Administrator Guide



Version 8.1

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Part 1 Introduction

The Allworx System Software Version 8.1 is an application for Allworx administrators to configure and manage Allworx servers with the following settings:

- Phone System
- Network
- Servers
- Reports
- Maintenance

The Allworx server web administration interface has built-in descriptions, help, and tips on many of its pages. Additional documents related to Allworx System Software and Allworx applications:

- Allworx User's Guide, Release 8.1
- Allworx System Software Release Notes, Release 8.1
- Allworx Advanced Multi-Site Guide, Release 8.1
- Allworx Phone Guides
- Multi-Tech FaxFinder Setup Application Notes 8.1
- Allworx SNMP User's Guide
- Allworx Interact and Interact Professional User's Guide
- Allworx Reach User's Guide
- Allworx OfficeSafe Operations Guide
- Allworx View Installation Guide

These publications as well as System Administrator's Guides for Releases 8.0 and lower are available on the Allworx Partner Portal (www.allworxportal.com).

1.1 Who Should Read this Guide

This guide is for Allworx administrators that:

- install and maintain Allworx servers.
- understand computer networking and basic telephony.
- completed the Allworx Partner technical training.

1.2 Guide Organization

The Allworx Server Administrator's Guide describes:

- requirements necessary to perform the operations described within the document.
- steps necessary to install, log in, and configure the Allworx server. To view the mounting, electrical connections, and input/out accessories of the Allworx server, see the Allworx Server Installation Guide specific to the Allworx server model.
- steps necessary to manage each web administration page to configure the Allworx server. Each web administration page is a separate chapter within this document.

1.3 Equipment Requirements

The table below is a complete list of equipment and requirements necessary to perform all operations identified in this Administrator's Guide.

Equipment	Requirements
PC	• Running OS (with latest service pack). • Windows 7 32-bit SP1 • Windows 8/8.1 32-bit • Windows 10 32-bit • Windows 7 64-bit SP1 • Windows 8/8.1 64-bit • Windows 10 64-bit • RAM minimum: 2 GB. • Monitor resolution: 1024 x 768 (XGA). • Internet connection.
Allworx server	• Allworx System Software Version 8.1. • Administration permissions and passwords for each Allworx server. • IP Address or DNS name of each Allworx server.
Allworx Partner Portal	• Login permissions and password.
Supported Web Browsers	• Microsoft Edge • Microsoft Internet Explorer 11 (latest release with auto upgrade enabled). • Google Chrome (Latest Release). • Mozilla Firefox (Latest Release).
Allworx Server Installation Guide	The guide is specific to the Allworx server model that describes the mounting, electrical connections, and input/output accessories of the Allworx Server. This guide is available at: https://allworxportal.com/.
Allworx System User Guide	The guide is specific to My Allworx Manager and describes the features within the application. This guide is available at: https://allworxportal.com/.
Allworx Multi-Site Guide	The guide describes the advanced set up configurations for multi-site networks. This guide is available at: https://allworxportal.com/.

1.4 Prerequisites

Each chapter of this document includes a Prerequisites table:

Access Permissions	Identifies features that users with assigned roles can access and manage. The Allworx Server Administrator can assign roles to a specific user on the **Phone System** > **Users** page. See "Roles" on page 3 for more information.
Required Feature Key	Identifies add-on features that are available as a separate purchase from the base feature set for Allworx servers. See "Feature Keys" on page 217 for more information.

1.5 Roles

The available user roles include:

- **Server Administrator**: predefined system administrator with access to manage all functions of the server. The Allworx Server Administrator assigns roles, manages the server administrative functions, manages day-to-day phone system settings, manages the network and VoIP settings, and initiates system backups and/or restarts.
- **System Administrator**: access to manage the administrative functions of the server. The user permission setting does not enable this role to change the password of the Allworx Server Administrator. However, the Allworx Server Administrator can change the password of the System Administrator.
- **Phone Administrator**: access to manage day-to-day phone system settings including changes to system recordings as well as adding, changing, and deleting users, extensions, and handsets.
- **Network Administrator**: access to manage the Network and VoIP settings, as well as SIP proxies and SIP gateways outside lines.
- **Support Technician**: access to initiate system backups and restarts as well as managing logging operations.

Note:	To enable one user to have roles on different servers in a multi-site network, the Allworx administrator must create separate user accounts for the user on each server, and then assign the roles on each server. Use different usernames for each user account.
Note:	The Allworx administrator can assign users to manage queue and Auto Attendant recordings. See "User Template Settings" on page 136 for more information.
Note:	The Allworx administrator can assign users to manage individual queue settings or queue supervisor. See "User Template Settings" on page 136 for more information.

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Part 2 Allworx Server Set Up

The Allworx Server Set Up section describes the installation and configuration procedures for the Allworx server. Additionally, this section describes the Allworx System Software compatibility of each Allworx server.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator
Feature Key Required	No

2.1 Allworx System Software Compatibility

	Allworx Server Model				Connect Server Model				
	6x12	6x	24x	48x	320	324	530	536	731
Allworx System Software									
System Software 7.7 and lower	X	X	X	X					
System Software 8.0	X	X	X	X	X	X	X	X	X
System Software 8.1	X	X		X	X	X	X	X	X

2.2 Allworx Server Features and Compatibility

	Allworx Server Model			Connect Server Model				
	6x12	6x	48x	320	324	530	536	731
Hardware Support								
Enhanced Diagnostic Port				X	X	X	X	X
Network Ports	2	2	2	2	2	3	3	3
External USB Disk Drive Support	X	X	X					
Supported Web Browser								
Microsoft Internet Explorer 11	X	X	X	X	X	X	X	X
Google Chrome (latest version)	X	X	X	X	X	X	X	X
Mozilla Firefox (latest version)	X	X	X	X	X	X	X	X
Microsoft Edge	X	X	X	X	X	X	X	X

	Allworx Server Model			Connect Server Model				
	6x12	**6x**	**48x**	**320**	**324**	**530**	**536**	**731**
Allworx System Software 8.1 Support								
Five- and six-digit dialing[5]	X	X	X	X	X	X	X	X
Number of Auto Attendants Supported	9	16	32	9	9	16	16	32
Supports 2000 DID Blocks	X	X	X	X	X	X	X	X
Telnet Support	X	X	X					
Allworx System Software 8.0 Support								
SSH Support				X	X	X	X	X
Allworx Server Features								
FXO Ports	6	6	3	0	4	0	6	2
FXS Ports	5	5	2	2	2	2	2	2
T1 Ports			2	0	0	0	0	1
Base System Extensions Limit	12	30	48	12	12	30	30	30
Maximum System Extensions Limit[1]	12	60	250	20	20	50	50	180
Base Users	12	30	48	12	12	30	30	30
Maximum Users[1]	12	60	250	20	20	50	50	180
Maximum Handsets	24	120	500	40	40	100	100	360
Maximum External Calls[3]				12	12	30	30	60
Conference Bridges[1]	1	1	4	1	1	1	1	4
Maximum Total Bridge Users	8	8	8	8	8	8	8	30
Maximum Calls in All Queues[1]	16	16	64	12	12	30	30	60
Maximum Calls per Queue[1]	8	8	16	12	12	30	30	60
Maximum Number of Queues[1]	10	10	10	10	10	10	10	10
Automatic Call Distribution[1]	No	Yes	Yes	No	No	Yes	Yes	Yes
Auto Attendant Ports	9	9	9	4	4	8	8	16
Multi-Site Controller[1]	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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	Allworx Server Model			Connect Server Model				
	6x12	**6x**	**48x**	**320**	**324**	**530**	**536**	**731**
Maximum Servers in a Multi-Site Network		99	99	99	99	99	99	99
Maximum Multi-Site System Extensions[4]	1000	1000	1000	1000	1000	1000	1000	1000
Maximum Multi-Site Users[4]	1000	1000	1000	1000	1000	1000	1000	1000
Voicemail Ports	8	8	16	4	4	8	8	15
Voicemail Limits (number of messages per user)[6]	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Voicemail Limits (amount of time per user)[6]	140 hr	140 hr	140 hr	50 min	50 min	50 min	50 min	50 min
Activation Required				X	X	X	X	X
Secure Web Page Access				X	X	X	X	X
Enhanced Codec Support				X	X	X	X	X
SIP-Video Pass-Through [2]				X	X	X	X	X
PPPoE	X	X	X					

[1] Requires an Allworx software feature key.

[2] A SIP endpoint that supports video can register with the Allworx Connect server, and it supports negotiation of video calls with that device. The Allworx Connect server supports up to two video sessions and one audio session per call. The Allworx Connect server supported codecs are: H263, H264, and MP4V-ES.

[3] The total external SIP calls are limited to the Maximum External Calls less any TDM (FXO ports and T1 channels) lines configured.

[4] The total number of Multi-Site Users and Multi-Site System Extensions varies upon the maximum users licensed on each Allworx server.

[5] Compatible with Reach for Android/Reach for iOS Version 2.0.7 (minimum) and Interact/ Interact Professional 2.3 (minimum).

[6] There is a practical system limit on 6x, 6x 12, and 48x servers because the system disk can become full before all users have met the personal limit. On Connect servers, even if all users max out the limits, the disk will not be full.

2.3 Install and Configure the Allworx Server

To install the Allworx server:

1. Use the Allworx Server Installation Guide for mounting, electrical connections, and optional input/output accessories specific to the Allworx server model.

2. Plug the PC into the server LAN port (ETH0 on Connect servers), and set up the network interface on the PC to obtain an IP address automatically (using DHCP).

Windows 7	1. Click **Start** and navigate to the Control Panel. 2. Locate **View by**: select **Small Icons** from the drop-down list. 3. Double-click **Network and Sharing Center** > **Change adapter settings** (left column). 4. Right-click **Local Area Connection** > **Properties**. NOTE: For wireless computers, select Wireless Network Connection > Properties. 5. Click **Internet Protocol Version 4 (TCP/IPv4)** > **Properties**. 6. Click **Obtain an IP Address automatically** and **Obtain DNS server address automatically.** 7. Click **OK** to save the changes.
Windows 8 / Windows 10	1. Click **Start** and navigate to the Control Panel. In the search box, type **adapter**. 2. Click **Network and Sharing Center**, and then click **View network connections.** 3. Locate and right-click the connection to change, and then click **Properties**. 4. (Optional) If prompted, enter the administrator credentials and confirm. 5. Click the **Networking** tab, and then click **Internet Protocol Version 4 (TCP/IPv4)** or **Internet Protocol Version 6 (TCP/IPv6)** > **Properties**. Specify the address settings: IPv4 — Click **Obtain an IP address automatically**, and then click OK. IP v6 — Click **Obtain an IPv6 address automatically**, and then click OK.

3. Verify the PC has an IP address on the 192.168.2.x network. It may be necessary to release and renew the IP address on the PC to get an address from the server.

   a. Click **Start** and type **cmd** in the Search field. A command window opens. Type the following to clear the PC current IP settings:

   ```
   ipconfig /release
   ```

   b. Press enter to clear the PC current IP settings. Type the following to obtain a new IP Address:

   ```
   ipconfig /renew
   ```

   c. Press enter.

4. Use a web browser via the LAN interface on TCP port 8080 (8443 on Connect servers) to access the administrative interface of the Allworx server. Enter:

Allworx 6x, 6x12, 48x server	http://192.168.2.254:8080
Connect servers	https://192.168.2.254:8443 (Entering a URL of http://192.168.2.254:8080 redirects to https://192.168.2.254:8443.)

5. Log in to the web admin page using **admin** as the username and password. The Allworx server admin page displays the factory default settings at first log in and displays the customized settings with any subsequent log in. The server is ready for configuration.

To configure the Allworx server:

1. Log in to the web admin page using **admin** as the username and password.

2. Locate the left side of the web admin page and click **Install Checklist.**

3. Follow the order of the steps of the Install Checklist for a successful configuration. Check the box on the web admin page next to each step to avoid duplication. The Install Checklist table below links to the appropriate System Administrator's Guide chapter to configure the server.

Install Checklist

Step	Description	Allworx Server Admin Guide Link
1	Set time on server.	"Time" on page 235
2	48x and Connect 731 servers only: Program Digital Lines. If connected to T1 interface(s), configure the system to match the settings obtained from the service provider.	"Digital Lines" on page 147
3	Program Network configuration: 1. Network Mode 2. VLAN settings 3. Public Interface 4. Gateway 5. Server Host Name 6. Domain Name 7. Firewall Settings	"Configuration" on page 143
4	Enable/Disable DHCP server.	"DHCP" on page 169
5	Set DNS server addresses.	"DNS" on page 171
6	Optional: Configure Port Expanders	"Px Expanders and Remote Phones" on page 157
7	Enable VPN, if required.	"Virtual Private Network (VPN)" on page 165
8	Restart server for settings to take effect. NOTE: After restarting the server, close this window, and then re-open it after logging into the server.	"Restart / Shutdown" on page 231
9	Activate server with Portal, if required.	"Registration" on page 229
10	Download/enter the required Feature Keys.	"Feature Keys" on page 217
11	Update the Allworx server to the latest software release, if required.	"Update" on page 241
12	Optional: Configure use of Primary and Secondary Languages.	"Languages" on page 87
13	Define the Internal Extension Length and Internal Dial Plan.	"Manage the Internal Extension Length" on page 37 "To manage the Internal Dial Plan:" on page 39
14	Add users. Associate handsets to users, if available.	"Manage Users" on page 131

Step	Description	Allworx Server Admin Guide Link
15	Add handsets. Add the Analog and SIP Handsets using Plug and Play or manual programming. Once programmed, check the phone by dialing #7 from any Auto Attendant Main Menu.	“Manage Analog Handsets” on page 61 “Manage Handsets” on page 63
16	If live answering inbound calls, create a system extension and preferred call routes. Use a Ring Group if live answer with line appearances on Allworx handsets is required. If different sets of handsets need to ring depending on the incoming line, give a descriptive name to a Ring Group, create an extension for each incoming line, and route the call to the Ring Group.; Configure the Allworx handsets later to use the Ring Group(s) defined in this step.	“Add New Extension” on page 55 “Ring Groups” on page 111
17	Define additional system extensions used for routing to groups or places such as conference rooms.	“Add New Extension” on page 55
18	Optional: Create and define Call Queues	“Call Queues/ACD” on page 25
19	Optional: Define Paging Zones. Define the Paging Zones, add Line Out or Handsets to the required zones.	“Paging” on page 109
20	Add/Configure Outside Lines to phone system (standard FXO loops, SIP Gateways, SIP Proxies). Enable line appearances, if required and define call routes.	“Outside Lines” on page 97
21	Configure Allworx handsets by defining the programmable function keys (PFKs).	“Manage the Programmable Function Keys (PFKs)” on page 67
22	Optional: Save the Allworx handset configuration as a template, and then apply to remaining Allworx handsets. Modify individual handset configurations as required.	“Manage Handset Templates” on page 78
23	Program operator route (0).	“Manage Call Routes” on page 57
24	Record Auto Attendant and Call Queue prompts, if required.	“Custom Recordings” on page 213
25	Set the Dial Plan for the system. Create special Service Groups, if required, and then define the Dialing Rules.	“Dial Plan” on page 37
26	Check handset permissions to access outside resources, if required.	“Handsets” on page 61
27	Enter business contact information and schedules.	“Contact Information” on page 35 “Schedules” on page 121
28	Check system: 1. Make 3 to 4 inbound calls (e.g., use cell phone to call the Allworx server). 2. Make outbound local and long distance calls to several area codes.	N/A

Step	Description	Allworx Server Admin Guide Link
29	Configure Email server. 1. Leave incoming WAN email forwarding disabled, unless server is within firewall! 2. Enter alternate email domains. 3. Enter spam blocking services (e.g., spamhaus.org)	“Email” on page 173
30	Enable VPN for additional users, if required.	“Manage Users” on page 131
31	Create aliases for email/voicemail distribution lists.	“Message Aliases” on page 91
32	Set up and perform a backup using OfficeSafe	“Backup” on page 211
33	Deliver user documentation (Welcome sheet, Allworx User’s Guide, and Allworx Phone Guides) and conduct basic training for each user.	

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Part 3 Phone System

The Phone System sections describe the setup and management of the Allworx server specific to the business requirements. Each chapter explains:

- necessary access permissions and feature keys,
- necessary equipment to perform the procedure, and
- necessary procedures to manage the Allworx server feature.

The various Phone System pages on the server web admin site enable the Allworx administrator to set up, configure, and manage the settings of the following features:

- Audit PIN Codes
- Auto Attendants
- Call Park
- Call Queues / ACD
- Conference Center
- Contact Information
- Dial Plan
- Emergency Caller ID
- Extensions
- Handsets
- Languages
- Message Aliases
- Music On Hold
- Outside Lines
- Paging
- Ring Groups
- Roles
- Schedules
- Shared Call Appearances
- Speed Dial
- Users

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Chapter 3 Audit PIN Code

Audit PIN Code supports call tagging and controls outside line access. The Audit PIN Code does not support outside line access when using a Line Appearance PFK.

Example:

A company charges customers for the tolls and time spent on each call.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

To use tagging to properly bill each customer:

- The Allworx administrator assigns each project a unique PIN code.
- The phone user dials 78[1] + <PIN code specific to the project> + <phone number> to access the outside line to work with the customer.
- The Accounting Department uses the PIN code from the call records to bill each customer.

To specify the number of digits and the service group used by the Audit PIN Code, see "Manage the Services" on page 46 for more information.

To manage an Audit PIN code:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Audit PIN Codes**, and locate the **Audit PIN Codes** section.

2. Click one of the following links:

add new PIN code	Enter the new PIN code and description in the respective fields, and then Click Add to save the changes or Cancel to disregard the request. To change the PIN code length, see "Manage the Services" on page 46
Modify	Change the current PIN code and description. Click Update to save the changes or Cancel to disregard the request.
Delete	The server removes the PIN code from the list. 1. Confirm this is the PIN code to remove. 2. Click **Delete** to remove the user from the list or **Cancel** to disregard the change.

To enable or disable the Audit PIN Code Verification:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Audit PIN Codes**.

2. Locate the **Audit Pin Code Configuration** section and click **modify**.

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature.

3. Select one of the following options from the drop-down list:

Enabled	The Allworx server verifies that the PIN code is the correct length and loaded in the PIN code list on the Allworx server.
Disabled	The Allworx server only checks for the correct PIN code length.

4. Click the **Update** button to save changes or **Cancel** to disregard the request.

Click here to return to the "Install Checklist".

Chapter 4 Auto Attendants

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

Auto Attendants answer incoming calls automatically, and then directs the callers to the appropriate person or department using the dial-by-name or company phone directory.

Each Auto Attendant supports the Open and Closed greeting and up to seven custom greetings and one custom message for each Auto Attendant with a length limit of 15 minutes per greeting or message. Users with permissions to record and manage custom Auto Attendant greetings and messages and can assign each Auto Attendant to a different schedule. See "Number of Auto Attendants Supported" on page 6 for the number of Auto Attendants each Allworx server supports.

Example: use one Auto Attendant to answer calls for Sales and another Auto Attendant to answer calls for Support. Each Auto Attendant plays a greeting specific to the assigned department.

4.1 Setup Checklist

Follow the order of the steps to successfully setup the Auto Attendant.

Step	Description	Installation Guide Link
1	Configure the Auto Attendant.	"Configure the Auto Attendant" on page 17
2	Create an extension and/or assign the Auto Attendant to an outside line, and then update the call route to the Auto Attendant.	"Extensions" on page 55 or "Manage Analog Central Office (CO) Lines" on page 98
3	Record the custom greetings and messages for each Auto Attendant.	"Record Auto Attendant Greetings and Messages" on page 20
4	Configure the Auto Attendant greetings to change, per time of day.	"Schedules" on page 121

4.2 Configure the Auto Attendant

To configure an Auto Attendant:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Auto Attendants**. The Auto Attendants display with the assigned extension (4301 to 43xx[1] - where xx is the maximum number of Auto Attendants supported by the Allworx server) and Auto Attendant number.

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature.

2. Locate the Auto Attendant and click the additional information arrow ▶, if necessary. Click one of the following links:

modify	Change the Auto Attendant configuration. Select the settings to update in the drop-down list. See "Auto Attendant Configuration Settings" on page 18 for more settings information.
reset	Change the configuration to the factory defaults. Select an option: • Reset to default settings, but keep all custom recordings • Delete all custom recordings • Reset to default settings AND delete all custom recordings Click Reset to update the settings or Cancel to leave the settings as is.

3. Click **Update** to save the settings or **Cancel** to disregard the request.

Auto Attendant Configuration Settings

Features and Prompts	
Description	Enter description of the Auto Attendant.
Schedule	Select the schedule created for switching greetings. See "Schedules" on page 121 for more information.
Include Remote Users	For multi-site networks - includes users from other sites in Dial-By-Name. • Enabled • Disabled (Default)
Dial-By-Name Menu (#1)	Enable callers to select an Allworx user by typing the user's name based on the setting in the Dial-By-Name Spell Option field. • Enabled • Disabled (Default)
Dial-By-Name Prompt	Prompt: Press 1 to dial by name. • Do not play • Play (Default)
Dial-By-Name Spell Options	Select the spelling method for the Dial-By-Name option. • spell first or last name • spell last name • spell first name
Dial-By Directory Menu (#2)	Enable the caller to listen to a list of users and extensions, and then enter an extension. • Disabled • Enabled (Default) Note: The system automatically disables Dial-By-Directory if there are more than 50 users assigned to the Auto Attendant
Dial-By-Directory Prompt	Prompt: Press 2 for a listing of all users and extensions. • Do not play • Play (default) Note: The system automatically disables Dial-By-Directory if there are more than 50 users assigned to the Auto Attendant.
Dial-By-Directory List Order	Controls the order in which the directory is spoken. • List in extension order • List in name order
Dial It Now Prompt	Prompt: If you know your party's extension you may dial it now. • Do not play • Play (default)

Repeat Menu Behavior	Identifies what repeats when requested by the caller. • replay Custom Message only • replay Greeting Only • replay Greeting and Custom Message
Repeat Options Prompt	Prompt: Press * to listen to these choices again. • Do not play • Play (default)
Speed Dial Numbers	(support for dialing 350-399, 34000-34999* from main menu) (listed as *250-*299 AND *24000-*24999) • Allowed • Not Allowed (default)
Day Mode Menu Shortcuts Night Mode Menu Shortcuts	Identifies if users can dial the Menu Shortcuts in Day or Night Mode for each Auto Attendant. • Allowed (default) • Not Allowed

Day Mode Internal Call Restriction
 	
Night Mode Internal Call Restriction
	Restricts what internal calls can be made from each Auto Attendant based on the day mode.
	• Auto Attendant Default - blocks all calls except the following (examples are from the Default Dial Plan, 3-digit, not using extension mode):
	  • Operator (x0)
	  • Conference Center (x408)
	  • Other Auto Attendants (x400, x43n)
	  • Call Queues (x44n)
	  • Message Center (x404)
	  • User and System Extensions (x1nn, x2nn)
	  • Speed Dial 3 and 5 digits (x350-300, x34nnn)
	  • Leave a message (x3 + user extension)
	  • Message Center for user (x6 + user extension)
	• <List of available restrictions>

After	Select the number of seconds (1 to 15) with no input, and then indicate the next step. • Replay Menu • Transfer to <select an extension/user>

Menu Shortcuts

The Allworx administrator can configure the Auto Attendant to enable dialing digits 0 through 9 as single-digit Menu Shortcuts. Dialing the digit transfers a caller to a designated extension, another Auto Attendant, Dial-By-Directory, or Dial-By-Name.

To use the Dial-by-name or Dial-By-Directory option, enable the option and set the Dial-By-Name or Dial-By-Directory Prompts to Do not play.

Day Mode Menu Shortcuts **Night Mode Menu Shortcuts**	Select an option from the drop-down list: • disabled - turns off the Menu Shortcuts option. • enabled - select an extension in the drop-down list for the corresponding digit. The default assignment is '0 – operator'* and does not provide the option of Dial-By-Directory or Dial-By-Name. • use Day Mode - the Menu Shortcuts are the same for both Day and Night Mode. Available on Night Mode Menu Shortcuts only.

* Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature.

4.3 Record Auto Attendant Greetings and Messages

Auto Attendants play built-in or custom greetings and messages. Users with Recording Manager permissions can record the greetings Offline up to 15 minutes in length, and then import the greetings into the system see “To import/export greetings and messages:” on page 21 for more information. Or, record up to nine greetings and one custom message for each Auto Attendant using the Message Center on the phone.

To enable Recording Manager permissions, see “To modify or delete existing users:” on page 133 and update the following settings:

Roles	Select System or Phone Administrator for access to Auto Attendants.
Recording Manager	Select the specific Auto Attendants for the user.

The Allworx system plays the greetings, messages, and prompts in this order:

- Business schedule greeting – for the current time of day (See “Manage the Greetings” on page 121.).
- Custom message (This does NOT change based on the business schedule)
- Other selected, built-in prompts.

Note:	When routing a caller to an Auto Attendant after playing all prompts, if the caller presses * to hear the selections again, the system skips the business schedule greeting.

To record a new greeting / custom message or manage the Auto Attendant schedule:

Note:	To modify the greetings (Auto Attendant) or custom messages, the user (not the administrator) must have Allworx System Administrator or Allworx Phone Administrator role permissions.
Note:	Allworx does not recommend using an Reach handset to record new greetings or queue messages as the ability of the server to record greetings is intolerant of network packet loss. As a result, recordings made via lossy networks may have impaired quality. Local or wired networks are best for making these recordings.
Note:	For systems with Dual Language Support: Users cannot change languages within the Message Center. To record new messages in a second language, select an option: • Setup an account configured for the secondary language, and then record the greetings using that account. • Temporarily modify the user’s default language to match the secondary language of the system.

1. Dial the Message Center extension (404[1]).
2. Log in using the assigned extension and PIN code.
3. Press 9 to manage greetings, and then press 1 to manage the Auto Attendant.

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature.

4. Press the number corresponding to the Auto Attendant (4301 to 43xx[1] - where xx is the maximum number of Auto Attendants supported by the Allworx server).

5. Press 1 to manage the greetings for the selected Auto Attendant.

   a. Enter the number (0 through 8) of the greeting to record.

   b. Press 2 to record a new greeting.

   c. Record the new greeting and press '#' when complete.

   d. Press 1 to save the greeting.

6. Press 1 to record additional greetings or press # to go to the previous menu to manage other Auto Attendants.

7. Press 2 to manage the custom message for the Auto Attendant.

Greeting	Sample Script
Greeting 0 (Open)	Welcome to <your company name>, your best source for <product>. Dial 1 for store hours and directions. Dial 2 for Sales. Dial 3 for Service. Dial 0 to reach the operator.
Greeting 1 (Closed)	Welcome to <your company name>, your best source for <product>. We are currently closed, but we will re-open at <opening time>. Our hours are <hours of operation>. If you know your party's extension, you may dial it now. You may also leave a message in our general mailbox at extension <number>.
Custom	<Your company name> is the premier provider of <products>. We specialize in <specialty>. Our latest product is...

To import/export greetings and messages:
Import the greetings and messages recorded off-line onto the Allworx system. The files use a specific internal format and have a specific file name format - Example: aa#x.snd. The filename for the status message for Auto Attendant 2 is "aa20.snd".

Digit	Description
#	Replace with the Auto Attendant number 1 through 9
x	Replace with greeting number (0 through 9 - Use '0' for the Open greeting, '1' closed greeting) or "c" for Custom Message.

See "Custom Recordings" on page 213 for more information.

To manage the Auto Attendant schedule:
This option is only available to users with recording manager permissions on Allworx systems.

1. Log in to the Audio Message Center and press 9 on the numeric keypad.

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature.

2. Select option 1 (To manage the Auto Attendant), and then select the Auto Attendant (4301 to 43xx[1] - where xx is the maximum number of Auto Attendants supported by the Allworx server) number to change.

3. Select option 3 (To manage the schedule). The following message plays, “The Auto Attendant is using schedule <number>. To select a different schedule, enter the schedule number followed by #.”

4. Enter the schedule number, and then enter the # sign. After successfully selecting a different schedule, the user hears, “The Auto Attendant has been changed to use schedule <number>.” The Message Center returns to the Manage Auto Attendant Menu.

   If selecting a different schedule is unsuccessful, the user hears, “You must enter a valid schedule number.” The Message Center returns to the Manage Auto Attendant Schedule Menu.

4.4 Assign the Auto Attendant to an Outside Line

The default Auto Attendant determines the setting when selected in the configuration of the outside line. To assign the Auto Attendant to an outside line, see “Manage Analog Central Office (CO) Lines” on page 98 for more information.

Follow the same procedure for any of the outside lines, including SIP Gateways and SIP Proxies.

Click here to return to the “Install Checklist” .

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature.

Chapter 5 Call Park

Call Park feature places a call on a system wide hold via a designated extension number and retrieving the same call on any other handset.

Example: park a call from one office, and then walk to another office to retrieve the call.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

Allworx servers support up to 59 parked calls at one time using Parking Orbit extensions between 701 to 709[1] and 4950 to 4999[1] and assigns the parked call the lowest available Parking Orbit number.

To configure the Parking Orbit:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Call Park**.

2. Click one of the following options:

Call Park > **modify**	
Timeout (seconds)	Enter a value in seconds for the call to timeout. Default is 600 seconds.
After timeout	Sends the call to the next stop in the call route. Options include: • Transfer caller to handset that parked call, on busy <select an extension from the drop-down list>. • Transfer caller to extension <select an extension from the drop-down list>. Default is the Default Auto Attendant.
Multi-Site Parking > **modify**	
Permit other sites to retrieve parked calls from this site.	Enables users at other sites to retrieve calls parked in its Parking Orbits. • The server must participate in Multi-Site Parking Orbits. All sites that participate share 150 Multi-Site Parking Orbits at extensions between 4800 and 4949[1]. • See the Allworx Advanced Multi-site User Guide for information on configuring Multi-site parking. 1. Check the box to enable. 2. Enter the number of parking orbits to use per site. The Call Park page displays the Number of Orbits and the Retrieve # for each site.

3. Click **Update** to save the changes or **Cancel** to disregard the request.

To configure the Allworx IP phone PFKs for parking orbits, see "Manage the Programmable Function Keys (PFKs)" on page 67 for more information.

Click here to return to the "Install Checklist" .

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature.

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Chapter 6 Call Queues/ACD

Call Queues/ACD distributes calls to a specific set of users.

The Allworx system manages and distributes the incoming calls that are too numerous for agents to answer immediately in a first-in-first-out order.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	• Call Queuing • Automatic Call Distribution

Note:	The Call Queue feature works only with Allworx IP phones, no other manufacturer's phones support this feature.
Note:	Pressing the phone MUTE/DND button does not stop incoming queue calls.

Available features:

- Provides feedback to call queues callers:
  - greeting plays when calls enter the queue.
  - configurable periodic status messages while waiting in the Call Queue.
  - ringing for waiting customers to hear, as an alternative to the periodic status messages.
- Using an Allworx IP phone, agents can:
  - log in and out of queues.
  - receive calls from or answer calls in a queue.
  - monitor the status of the queues.
- Configure the maximum wait time for a call before hanging up or transferring to: an Auto Attendant, an extension, another queue, or a user's voicemail.
- Exit the queue at any time by pressing zero. Different exit routes can be set up for each queue.
- Statistics for all queues are available from My Allworx Manager, as an export file and streamed to a PC on the network using a TCP streaming port number configured on the Allworx server.

Allworx server Call Queues/ACD support

	Allworx Server			Allworx Connect Server		
	6x12	6x	48x	320/324	530/536	731
Maximum calls in one queue	8	8	16	12	30	60
Total calls in all queues	16	16	64	12	30	60
Call queues	X	X	X	X	X	X
ACD queues		X	X		X	X

6.1 Setup Checklist

Follow the order of the steps to successfully setup a Call Queue.

Step	Description	Installation Guide Link
Ring All Queue		
1	Set the Distribution Mode set to Ring All.	"To manage the Call Queues/ACD settings:" on page 27.
2	Assign Queue Appearance PFK to phones assigned/ available to agents.	"Manage the Programmable Function Keys (PFKs)" on page 67
3	Agents log in to queue with Queue Appearance PFK (by default, Queue Appearance PFKs are set to automatically log in when the phones start up).	Allworx Server User Guide
4	(Optional) Assign the Queue Alarm PFK to any Allworx phones.	"Manage the Programmable Function Keys (PFKs)" on page 67
Automated Call Distribution Queuing		
5	Set the distribution mode to one of the ACD features.	"To manage the Call Queues/ACD settings:" on page 27
6	Assign a user as queue supervisor (the admin user is a queue supervisor).	"User Template Settings" on page 136
7	Queue supervisor assigns agents to single or multiple queues in My Allworx Manager.	Allworx Server User Guide
8	Assign an ACD appearance PFK to the agent Allworx IP phone (ACD queuing requires Allworx IP phones).	"Manage the Programmable Function Keys (PFKs)" on page 67
9	(optional) Assign the Queue Alarm PFK to any Allworx phones.	
10	Agents log in to queue with ACD Appearance PFK.	Allworx Server User Guide
11	Enable Call Queue supervisor permissions.	"User Template Settings" on page 136
All Call Queues		
12	Configure calls to route to a Call Queue.	"Manage Calls to Route to a Call Queue" on page 30
13	Route the calls using an Auto Attendant to the Call Queue.	"Route a Call using Auto Attendant to a Call Queue" on page 30
14	View the Call Queue statistics.	"Display Queue Statistics" on page 31
15	Record the custom greetings and messages for each queue.	"Record Queue Greetings and Messages" on page 31
16	Import the custom greetings/messages for each queue.	"Import Greetings and Messages" on page 32

6.2 Set Up A Call Queue: Ring All

The Ring-All distribution rings all phones assigned a Queue Appearance PFK logged into the queue simultaneously. If there are any callers pending in the queue, all available phones ring according to the configured behavior. Caller ID information during inbound ringing and statistics related to specific agents is not available.

To place calls directly into the queue:
See “Extensions” on page 55. for more information about the steps below.

1. Create a system extension for each queue, such as a Customer Support system extension. Define the call route to immediately transfer calls to the Customer Support queue.

2. Define the call route of the outside line to direct calls to the Customer Support system extension.

6.3 Set Up An Automated Call Distribution Queue

Automated Call Distribution Queues use any of the other available distribution features, and directs each call to a specific agent with an assigned ACD Appearance PFK. The Allworx 6x12 and Connect 300 series servers do not support ACD queuing. The ACD Call Distribution settings include:

Linear Priority	Distribute calls based on a prioritized list of agents. The queue supervisor sets the priority by assigning a unique ranking to each agent. As each call comes in, it goes to the available agent with the highest priority ranking.
Sequential Round-Robin	Distribute calls in a circular manner to the logged-in agents, and evenly distribute the calls so the agents have an opportunity to answer approximately the same number of calls. • Maintains a list of available agents. When a call gets to the front of the queue, the next agent on the list receives it. When agents log in, they are put at the bottom of the list. • After the last agent on the list receives a call, the distribution option returns to the top of the list. If the agent in line to receive the next call is currently busy with another call, the call goes to the next agent on the list. The busy agent that missed the call moves down the list of agents to receive the next call when they are available.
Fairness-Longest Idle	Distribute calls to logged-in agents that are idle for the longest time to evenly distribute the calls so that all agents spend approximately the same amount of time on calls. • Maintains a list of all available agents. When a call gets to the front of the queue, the next agent on the list receives it. • Places agents at the top of the list after logging in. After completing a call, the agent moves to the bottom of the list.

6.4 Manage Call Queues / ACD

To manage the Call Queues/ACD settings:
1. Log in to the server admin page and navigate to **Phone System** > **Call Queues/ACD** page.

2. Click one of the Call Queues / ACD options options:

manage	Provides a short cut to the custom recordings settings played by the Call Queues. See “Custom Recordings” on page 213 for more information.
View	Provides a short cut to the Languages settings page. See “Languages” on page 87 for more information. This feature is only available to Allworx Server or Allworx System Administrators.

3. Click the more information button (▸) to expand the queue. Click **modify**. Change the Call Queue / ACD settings. See “Call Queue /ACD Settings” on page 28.

4. Click **Update** to save the updated Queue Streaming Settings or **Cancel** to disregard the request.

5. Click **modify** to update the Queue Streaming Settings or the ACD Queue Busy Reasons. Click the **Update** button to save the changes or **Cancel** to disregard the request.

Queue Streaming Settings	Monitor the Call Queue statistics in real-time by streaming the data to a client application connected to a specified TCP port on the Allworx service LAN interface.
	• Provides a mechanism for the development of a third party wallboard application.
	• **To set up the streaming queue data:**
	1. Set the Queue Streaming field to:
	  • Do not stream Call Queue Data
	  • Stream Call Queue data
	2. Set the Queue Streaming Port to the appropriate TCP port setting (1 through 65535; the default is 16367).
	
	When there is queue activity (e.g. callers enter, are serviced, exit queues, agent logs in or out, etc.) the data streams. Each record is a complete XML file. See the Allworx ACD Statistics Collection Internet Interface document for a complete definition of the record layout.
	
	To receive and view this data, use a Telnet application (e.g., HyperTerminal) configured to log data from the TCP port configured on the server for ACD data streaming. The client connections limit is 16.

ACD Queue Busy Reasons	Change the ACD Queue busy reasons. Enter the Queue Busy Reason description in the available field, and then restart the server for the changes to take effect.

Call Queue /ACD Settings

Description	Textual description of the queue (e.g., Sales, Tech Support). The system displays this description in other areas (e.g., Statistics, handset display screen, etc).
Distribution Mode - Ring All	Select the Call Queue: Ring All option.
Distribution Mode - ACD	Select any option except the Ring All option. • ACD: Fairness - Longest Idle • ACD: Linear Priority • ACD: Sequential Round Robin
Replay Status Message	Enter a value (seconds) between successive status update messages. Entering zero (0) disables the status message.
Maximum Wait	Enter a value (minutes) callers can wait in a queue; after exceeding this period the call to the beginning of the queue. Entering zero (0) enables the caller to wait without a limit.
When queue answers call	Select the option for the caller to hear while waiting in the queue: • Play queue prompts • Do no play prompts (caller hears ringback)
Queue Depth Alarm Threshold	Enter a value (number of calls in the queue) to trigger the Queue Alarm PFK for yellow and red alarm levels. Entering zero (0) does not trigger an alarm.
Wait Time Alarm Threshold	Enter a value (seconds) to trigger the Queue Alarm PFK for yellow and red alarm levels.
Hold Music Selection	Select the hold music source that callers hear while waiting in the queue from the drop-down list.
When caller leaves queue due to	Calls can exit the queue under any of the following conditions: • Maximum wait time expired • Queue is full • Caller presses 0

When caller leaves queue due to (con't)	Click the more information arrow and select one of the following routes for each exit conditions: • Hang up • Transfer to extension <specify extension> • Transfer to voicemail for user <specify user> • Transfer to Call Queue <specify call queue>
ACD settings - only	
Maximum Rings	Enter a value (number of rings) agents have to answer a call. If the agent does not answer the call before the maximum number of rings, the system sets the agent to unavailable (No Answer), and the call returns to the front of the queue. The call rings the next available agent. NOTE: the system does not log out agents for not answering calls from an ACD queue even while on another call.
Wrap Up Time	Enter a value (seconds) the agent has available after ending a call before the system makes the agent available to receive subsequent ACD queue calls. Agents can dismiss/end the wrap up time from the handset. Reboot the agents phones to apply changes to wrap up time.
When no agents are logged in*	Select the option for callers entering the queue: • Force callers to leave queue immediately • Allow callers to wait in queue
When calls are received with all agents busy	Select the option for callers when agents are unavailable: • Allow callers to enter queue • Don't answer, treat as if caller left queue
When all agents are in No Answer state	Select the option for call when all agents are unavailable due to the No Answer state: • Force callers to leave queue immediately • Allow callers to wait in queue
Last Agent in queue	Select the option for the last agent: • Is allowed to logout of queue • Is NOT allowed to logout of queue NOTE: If the last agent servicing a queue does not pick up a call within the maximum number of rings, the system sets the agent to unavailable (No Answer). Queue Supervisors can log any agent out, regardless of this setting.
Distribute calls to busy handsets	Select to enable or disable distributing calls to agent handsets that are currently busy with non-ACD calls. A busy handset is an agent handset any active call.
Play greeting before call distribution	Select enabled for calls to wait for the greeting message to complete if an agent is available or disabled to distribute calls immediately upon entering the queue. In either case, the messages play until the agent picks up the call.
Queue Priority	Select a lower number to indicate a higher priority. When an agent is logged into more than one queue, the next call comes from the highest priority queue where calls are waiting. For example, if the VIP Queue has priority 0 and the Support Queue has priority 3, the agent always gets calls from the VIP Queue first. The only time a call from the Support Queue goes to the agent is if the VIP Queue has no calls. Queues that have the same priority function the same way as previous releases.
Agents	Click show to view and assign agents to the Call Queue. Also sets the order of linear priority distribution mode. Click hide for no display.

To configure the Allworx IP phone:

Configure an Allworx IP phone Programmable Function Key (PFK) as a Queue Appearance. See "Manage the Programmable Function Keys (PFKs)" on page 67 for more information. The PFK monitors the status of a queue and answer calls in the queue.

6.5 Manage Call Supervision

The supervisor presses the Call Supervision PFK, enters an agent extension, and begins supervising the call. If the supervisor has a BLF PFK for the agent, press the Call Supervision PFK followed by the BLF PFK to initiate the session. There is no indication to the agent that supervision is in progress.

Call supervision is available via a PFK configured on the supervisor's Allworx phone. See "Manage the Programmable Function Keys (PFKs)" on page 67 to configure the handset. Enable the agent phone for supervision by modifying the agent Call Supervision setting of the Handset Preference Group.

6.6 Manage Calls to Route to a Call Queue

Calls enter a queue when routed by an extension. Select a queue for the final call route of an extension (refer to this extension as the "queue extension"). Route the incoming calls to the queue extension:

- route outside lines directly to the queue extension, see "Manage Call Routes" on page 57.
- configure an Auto Attendant with a shortcut to the queue extension and route incoming calls to the Auto Attendant, see Menu Shortcuts in "Auto Attendant Configuration Settings" on page 18.

6.7 Route a Call using Auto Attendant to a Call Queue

Inbound calls come into an Auto Attendant. If configured, the Auto Attendant plays a custom greeting. Example: "For Customer Support, press 2." After pressing 2, the caller hears the queue greeting, and the system places the call into the queue.

To configure the Call Routing to an Auto Attendant, and then to a Call Queue:

1. Define the call route of the outside line to direct calls to the Auto Attendant. See "Manage Call Routes" on page 57 for more information.

2. Create a Customer Support extension. Define the call route to immediately transfer calls to the Customer Support queue. See "Add New Extension" on page 55 for more information.

3. Record an Auto Attendant custom greeting instructing the caller to press 2 to reach Customer Support. See "Record Auto Attendant Greetings and Messages" on page 20 for more information.

4. Configure the Auto Attendant menu shortcut for digit 2 to transfer calls to the Customer Support system extension. See "Auto Attendant Configuration Settings" on page 18 for more information.

6.8 Display Queue Statistics

Allworx ACD Queuing offers a rich variety of statistics to monitor, track, and analyze queue activity. The statistics are available in three ways:

- view via My Allworx Manager.
- export to XLS file from My Allworx Manager.
- stream to an external device connected to server.

6.8.1 Display Queue Statistics Report

All users can see the agents of the logged in queues. The statistics are available for queues determined by if the queue is a Ring All queue or an ACD queue. See the Allworx Server User Guide for report information.

6.8.2 Display Live Calls

To display the live calls from the queue, see "Live Calls" on page 201 for more information.

6.9 Record Queue Greetings and Messages

Call queues play built-in or site-specific greetings and messages. Users with Recording Manager permissions can record the greetings Offline, and then import the greetings into the system (see "Import Greetings and Messages" on page 32 for more information) or record up to nine (9) greetings and one (1) custom message for each Call Queue using the phone through the Message Center.

To enable Recording Manager permissions, see "To modify or delete existing users:" on page 133 and update the Recording Manager setting. Select the specific Call Queue for the user.

To record a new queue greeting and status message:

Note:	Allworx does not recommend using a Reach handset to record new greetings or queue messages as the ability of the server to record greetings is intolerant of network packet loss. As a result, recordings made via lossy networks may have impaired quality. Local or wired networks are best for making recordings.
Note:	For systems with Dual Language Support: Users cannot change languages within the Message Center. To record new messages in a second language, select an option: • Setup an account configured for the secondary language, and then record the greetings using that account. • Temporarily modify the user's default language to match the secondary language of the system.

1. Dial the Message Center extension, 404[1] from the phone.

2. Log in using the assigned Allworx PIN followed by the # sign.

   If configuring the system for Dual Language Support, the system associates the new greetings and messages with the current language. To record greetings for an alternate language, switch languages before proceeding to the next step.

1. Extensions may vary per system. If you are using a non-default Internal Dial Plan, consult the Phone Features tab of the My Allworx Manager page to determine what extensions to use for the corresponding feature.

3. Dial 9 to manage recordings, and then dial 2 to manage Call Queue.

4. Enter the number of the Call Queue to manage (0 through 9).

5. Dial 1 for the greeting or 2 for the status message.

Dial	Greeting	Dial	Greeting
1	Manage Call Queue greeting	#	Return to the Auto Attendant
2	Manage Call Queue status message	*	Replay the options

6. Dial 2 to start recording. Begin speaking after the beep.

7. Dial # to stop recording and select from the following options:

Dial	Greeting	Dial	Greeting
1	Save the greeting	#	Cancel the changes
2	Change the greeting	*	Replay the options
3	Review the greeting		

8. Hang up to end the session.

6.10 Import Greetings and Messages

Import the greetings and messages recorded Offline onto the Allworx system. The files use a specific internal format and have a specific file name format - Example: cq#x.snd. The filename for the status message for Call Queue 3 is “cq3s.snd”.

Format Digit	Description
#	Replace with a Call Queue number 0 through 9.
x	Replace with “g” for greeting or “s” for status message.

See “Custom Recordings” on page 213 for more information.

Click here to return to the “Install Checklist” .

Chapter 7 Conference Center

Conference Center enables users to reserve conference bridges using My Allworx Manager while enforcing password restricted access to the conference for attendees.

The Conference Center terminates the call ff the conference call extends beyond the scheduled end time unless there are other scheduled conference calls.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	Conference Center

Server Type	Termination
Allworx 6x, 6x12, Connect 300 and 500 series Servers	A scheduled or unscheduled conference currently in use automatically terminates when another scheduled conference begins. • An unscheduled conference does not terminate conferences in session. • Supports one active conference at a time.
Allworx 48x, Connect 731 Servers	When using all conference bridges and a new conference is scheduled to begin, the server terminates the unscheduled conference with the oldest start time first. • If none of the unscheduled conferences are in use (i.e., all in-use conferences are scheduled conferences), the server terminates the conference farthest past the scheduled duration. • Initiation of an unscheduled conference does not terminate conferences in session.

To manage the conference calls:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Conference Center**. The server displays a list of scheduled conferences.

2. Locate the conference and click one of the following links:

end conference	Terminates the in-process conference call.
modify	Change the description, password, and moderator. Click Update to save the changes or Cancel to disregard the request.
Enabled / Disabled	Check or uncheck the box to activate or deactivate the specified conference, respectively.
Delete	Removes the conference call from the schedule. Click Delete to save changes or Cancel to disregard the request.

Click here to return to the "Install Checklist" .

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Chapter 8 Contact Information

Contact Information feature enables entering information about the primary business contact.

Providing this information is recommended but not required.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

To manage the contact information:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Contact Information**. The Contact Information page displays.

2. Click **Modify** and enter the contact information in the fields provided.

   For activated Connect servers, there is an option to import the customer contact information from the registration information on the Portal.

3. Click **Update** to save change or **Cancel** to disregard the request.

Click here to return to the "Install Checklist" .

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Chapter 9 Dial Plan

Dial Plan manages the internal extension length and the Emergency Number Dialing. Additionally, Allworx administrators can customize the digits for users to dial to access to the Allworx server features.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

9.1 Setup Checklist

Follow the order of the steps to successfully setup the Dial Plan.

Step	Description	Installation Guide Link
1	Set up the Internal Extension Length before defining users, handsets, or extensions.	"Manage the Internal Extension Length" on page 37
2	Set up the Internal Dial Plan.	"To manage the Internal Dial Plan:" on page 39
3	Set up the Service Groups.	"Manage DID Routing Configuration" on page 40
4	Set up the External Dialing Rules (including Emergency Number Dialing).	"Manage External Dialing Rules" on page 42
5	Set up the Dialing Privileges Groups.	"Manage Dialing Privileges Groups" on page 46

9.2 Manage the Internal Extension Length

Note:	This feature is compatible with Reach 2.0.7 (minimum) and Interact 2.3 (minimum)
Note:	Define users, handsets, or extensions, and then increase the internal extension length.

Caution:	Internal extension lengths cannot be decreased AFTER increasing extension length. It is highly recommended that Allworx administrators perform an OfficeSafe Backup before increasing the extension length.Once the system extension length has increased, Allworx administrators can only decrease the extension length by using an OfficeSafe Restore, which resets the Allworx server to the backed-up configuration.

Configure the handset extensions from three (default) up to six digits. All existing extensions expand to the new length. After increasing the internal extension length to 5 or 6 digits, the extensions **show available** link is no longer available on the following web admin pages:

- **Phone System** > **Users** > **add new user**
- **Phone System** > **Users** > **Modify**
- **Phone System** > **Extensions** > **add new extension**

In addition to the changes in user and system extensions, the following server configurations automatically update when changing the internal extension length:

- Extension call routes including Internal Caller-ID checking
- System Speed Dials (the Speed Dial extension doesn't change but the dialed extension changes)
- DID mappings
- Incoming outside line call routes
- Speed Dial PFK (differs from Personal Speed Dial PFK)
- Default Extensions, extensions accessed by Shortcuts, and "Dial By Directory" listings of Auto Attendants
- Off hook digits dialed for handsets
- Call Detail Records (prior records are unaffected by the change)

Extension Length changes do not affect the following server configurations[1]:

- System Speed Dial extensions (350-399, 34000-34999)
- Call Park extension and Parking Orbits (700-709)
- Auto-Attendant extensions (400, 4301-43xx*)
- Door Relay (403)
- Message Center (404)
- Conference Center (408)
- Paging extensions (460-469)
- Queue extensions (4400-4409, 4410-4419)
- Modifying Internal Dial Plan
- Personal Speed Dials (users must modify since the phone stores the numbers)

* Where xx is the maximum number of Auto Attendants supported by the Allworx server.

To change the extension length:

Note:	Servers that are part of multi-site networks cannot change the Extension Length.
Note:	Existing extensions change after modifying the system extension length.

Caution:	Internal extension lengths cannot be decreased AFTER increasing extension length. It is highly recommended that Allworx administrators perform an OfficeSafe Backup before increasing the extension length.Once the system extension length has increased, Allworx administrators can only decrease the extension length by using an OfficeSafe Restore, which resets the Allworx server to the backed-up configuration.

1. Log in to the Allworx server admin page. Navigate to **Phone System** > **Dial Plan**.
2. Locate the **Internal Extension Length** section, and click **modify**.
3. Select the number of digits to use for the extensions in the drop-down list.
4. Click **Update** to save the changes or **Cancel** to disregard the changes.
5. Update other dial plan changes, as needed, and then click **Reboot Phones** to update the handsets to the new configuration.

1. Extensions may vary per system. When using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Features tab to determine what extensions to use for the corresponding feature.

9.3 Manage Internal Dial Plan

The Internal Dial Plan specifies the first digit for user extensions and other PBX functions such as forwarding calls and accessing outside lines. There are two configuration modes for the Internal Dial Plan:

Normal Mode	User and system extensions are a continuous range of extensions numbers. The numeric range varies between 1xx and 9xx. Example: three-digit extensions between 100 and 299 or between 700 and 899. System functions (Speed Dials and retrieving parked calls) are in other ranges not assigned to user extensions.
Extension Mode	User and system extensions can be in any numeric range. The server reserves only the operator digit (e.g.,0) and the PBX external dial digit (e.g., 9). System functions begin with an asterisk (*). Example: extensions can range between 100 and 899 or 1000 and 8999.

To manage the Internal Dial Plan:

1. Log in to the Allworx server admin page. Navigate to **Phone System** > **Dial Plan**.

2. Locate the **Internal Dial Plan** section, and click one of the following options:

modify	Change the internal dial plan settings. • Default: Normal mode • Extension Mode: click the checkbox. NOTE: If the system is part of a Multi-site network, the Allworx administrator cannot change the Internal Dial Plan between Normal Mode and Extension Mode.
view	Opens the My Allworx Manager log in page. Enter the user Username and Password, and then click Login. The Phone Functions Reference Card page displays in a new browser window.

3. Select the leading digit from the drop-down list in the first column. The table displays examples of the dialing plan during the selection process

4. Click **Update** to save the changes or **Cancel** to disregard the changes.The Dial Plan page displays. Locate the top message about rebooting Allworx phones and click **Reboot Phones** to update the handsets to the new configuration.

Internal Dial Plan Settings

User and System Extensions	Identifies the first number used for phone extensions.
Operator	Identifies the number for callers to dial to contact the internal operator.
External Call access	Identifies the number to dial first to gain access to an outside line. Follows the External Dialing Rules.
Enterprise calling	Enables a third party SIP server to be the central hub for calls between multiple sites that have Allworx servers. This provides a centralized phone book and administrative service for the entire VoIP network.
Internal station access	Reserved for system
Speed dial numbers	Identifies the number to indicate a speed dial number follows.
Message Center	Short-cut access to the Message Center to: • manage presence and presence greetings • name recording • PIN • access and listen to voicemail messages (even from another Allworx phone).

Call Functions	Identifies the initial number to dial to access various call functions (park/pickup/audit pin code).
Leave a voicemail for extension	Identifies the initial number to dial to access a voicemail box to leave a message for another user.
PBX Functions	Identifies the initial number to dial to access various PBX functions - door relay, Conference Center, do not disturb, Auto Attendants, Call Queues, call retrieve, call forwarding, or paging.

9.4 Manage DID Routing Configuration

Enables Allworx administrators to disable or enable the DID-to-extension mapping feature. If disabled, the internally dialed DID numbers route via the external dialing rules.

To manage the Internal Dial Plan:

1. Log in to the Allworx server admin page. Navigate to **Phone System** > **Dial Plan**.
2. Locate the **DID Routing Configuration** section.
3. Select an option from the drop-down list.
4. Click **Update** to save the changes or **Cancel** to disregard the changes.

9.5 Manage Service Groups

A Service Group is a collection of services use for placing outside calls. The Allworx server uses a variety of services to place outside calls; some of these services are optimum for particular types of calls. **Example**: the SIP Proxy might be the least expensive way to make long distance calls, but the CO lines are best for local calls. The server creates several Service Groups automatically:

- All Digital Lines
- All SIP Proxies
- All Trunk Devices
- All SIP Gateways
- All Digital Lines, CO Lines & SIP Gateways
- No Devices (use to prevent placing external calls)
- All Digital Lines & CO Lines

The Allworx administrator can define additional Service Groups to control the use of services or set of services for certain dialed calls.

When initiating an outbound call using the Service Group, the server tries services in the group in top-down order until an idle service is found. The call made uses the first idle service in the list. Therefore, the last step in setting up a Service Group ensures that the order of the services reflects the preferred use priority. When one of the services in the group is a SIP proxy, the server considers the SIP proxy idle until reaching the Maximum Active Calls setting.

To manage the service group:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Dial Plan**.

2. Locate the **Service Groups** section and click one of the following links:

add new Service Group	Create an additional Service Group. 1. Enter a Description for the new group. 2. Move the preferred services into the Service Group box. 3. (optional) User the Move Up or Move Down buttons to change the Services order. 4. Click **Add** to save the changes or **Cancel** to disregard the changes, and reboot the phones to update the handsets to the new configuration. Requires no further action.
Copy	Create a new dialing privileges group with the same settings as the copied group.
Modify	Change the settings configuration. 1. Enter a Description for the new group. 2. Move the preferred services into the Service Group box. 3. (optional) User the Move Up or Move Down buttons to change the Services order. 4. Click **Update** to save the changes or **Cancel** to disregard the changes, and reboot the phones to update the handsets to the new configuration. Requires no further action.
Delete	Remove the current Service group from the server (the Allworx administrator cannot delete the default group). Confirm the decision and click **Delete** to remove the Service Group from the server or Cancel to disregard the request. Requires no further action.

9.5.1 Configure Remote Sites as Services

Note:	Remote sites should not be the only method available to place external calls. Loss of Internet connectivity between the local site and the remote site (at either end) may disable the ability to place calls including 911 Emergency calls.

Select remote sites as services for handling outbound calls. If the line selection process results in a routing call to a remote site, the call connects using one of the remote sites' outside lines. The dialing rules configured on the remote site determines which lines to use and how to dial the number (with or without area code).

The Allworx server automatically prevents configuring the dial plans on multiple sites accidentally to avoid routing a call back and forth among the sites. If a call comes to a server from a remote site, the receiving server does not forward the call to the same or other remote sites. If the dialing rule that the call is using on the receiving site includes any remote sites, the system skips the remote sites and uses another outside line service.

9.5.2 Configure Service Groups / Handset Outside Line Restrictions

Service Groups direct outbound calls to specific services. The server selects the first idle service in the group. The handset configuration supports restricting the use of lines further when placing an outside call. The server uses the number dialed to locate the configured Service Group for the outbound call.

After finding the first idle service in the group, the Outside Line Selection Method in the handset Call Appearance Dialing Privileges Group is checked. If the idle service is restricted for the handset, it finds the next idle service and requires the handset to check again. This continues until the system finds a non-restricted idle service to place the call. If the server cannot find a non-restricted idle service, the caller hears a fast busy signal to indicate there are no available outside lines.

9.6 Manage External Dialing Rules

The external dialing rules indicate to the Allworx server what digit sequences are valid for dialing out on the public phone network. As a user dials digits on an Allworx phone, the server collects the digits, one at a time to place the call. Use the dialing Rules and Service Groups for Call Appearance, not for Line Appearance calls because the Line Appearance accesses outside lines directly.

Enhanced external dialing rules supports matching specific dialing sequences and then deleting, inserting, and/or appending digit strings to those numbers before sending the dial string to any SIP Gateway, SIP proxy, T1/PRI Digital Line, or CO line. This flexible dialing supports programming the dialing behavior of the Allworx server to match specific business needs. Examples:

Number	Description
Local number	Users dial a 7-digit number (normally not 1 + <area code>). The server collects the 7-digits dialed, and then attempts to make the call. The server is not waiting for more digits.
Long distance	Users normally dial 1 + <area code> + 7-digit local number. The server recognizes this case distinctly from the local number case, and collects all 11 digits before attempting to make the call.
Some local calling areas	Require dialing a <area code> + 7-digit number (without the 1 prefix) to properly dial some numbers. This implies that these rules may vary depending on the local calling area with an installed Allworx server.

The server dialing rules automatically detects when an outbound dialed number is associated with an internal extension (local or multi-site). When detecting this case, the system places the call to the internal extension. The system considers 10-digit DIDs for matching and attempts to match all 10-digit dialed calls as well as all 7-digit dialed calls, if the server home area code is set. If there are overlapping DID blocks on a local server, the server uses the first matching DID. In a multi-site network, the local server uses the DIDs for the local site first followed by the DIDs at the remote sites.

Example: 789-456-0123 maps to extension 101 (external call access number is 9 in this example)

User Dials	Home Area Code set to 789	Call Placed to
9-1-789-456-0123	N/A	Extension 101.
9-456-0123	Yes	Extension 101.
9-456-0123	No	Phone number: 456-0123.

9.6.1 Manage the North American Numbering Plan Administration (NANPA)

The Allworx server routes calls using the Service Group assigned to the type of number dialed. When enabling or disabling NANPA, it changes the types of numbers dialed that the system supports.

To manage the NANPA settings:

1. Log in to the Allworx server admin page. Navigate to **Phone System** > **Dial Plan** > **External Dialing Rules.**

2. Locate the **North American Number Plan** section, and click **modify.**

3. Check the box to enable NANPA for installations in North America, and disable NANPA for all other locations. When disabling NANPA (unchecked) access the outside lines using the steps described in the Exceptions section, above. Click **Update** to save the changes or **Cancel** to disregard the request.

   When enabling NANPA, the Allworx administrator cannot add, modify, or delete the default rules. The rules affected by enabling NANPA are service rules, operator rules, emergency rules, and 11-digit dialing rules. Exception: the Allworx administrator can add to the 11-digit dialing rules, if the total digits is equal to 11.To add, modify, or delete the rules, the Allworx administrator must disable NANPA.

NANPA Enabled Requirements

Rule	Leading Digits	Total Digits	Auto Delete Existing
Service Rule	211	3	Yes
Service Rule	311	3	Yes
Service Rule	411	3	Yes
Service Rule	511	3	Yes
Service Rule	611	3	Yes
Service Rule	711	3	Yes
Service Rule	811	3	Yes
Operator Rule	Operator	1	Yes
Emergency Rule	Emergency	Any	Yes
Rules beginning with 1	1 [any other digits]	Not equal to 11	Yes

9.6.2 Manage the Home Area Code Requirements

Some features of the Allworx server and phones (example: redialing from call history and when mapping numbers to 11-digit forms to SIP proxies) require knowledge of the home area code. This required information is part of the dialing rules to support those features to operate properly.

To manage the home area code:

1. Log in to the Allworx server admin page.

2. Navigate to **Phone System** > **Dial Plan** > **External Dialing Rules** > **Home Area Code** > **Modify**.

3. Enter the area code in the field provided.

4. Click **Update** to save the change or **Cancel** to disregard the request.

9.6.3 Select the Automatic Route

The dial method controls whether or not to include the area code when the placing the call. If the area code is not properly configured for the local rules, the system may not correctly place local calls. Configure the area codes to use the correct service for the local and other area codes and to use the correct number of digits when placing the call.

To select the automatic route:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Dial Plan**.

2. Locate the **External Dialing Rules** > **Automatic Route Selection** section.

3. Click one of the following links:

Bulk Edit	Delete the checked route definitions.
add new rule	Activate another rule. See "Automatic Route Selection Rule Settings" on page 44 for more settings information. Click **Add** to save the new rule or **Cancel** to disregard the request.
Modify	Change the selected rule. See "Automatic Route Selection Rule Settings" on page 44 for more settings information. Click **Update** to save the changes or **Cancel** to disregard the request.

4. Locate the message about rebooting Allworx phones and click **Reboot Phones** to update the handsets to the new configuration.

Automatic Route Selection Rule Settings

Setting	Description
Leading Digits	User dialed digits. For areas that require dialing the area code or other type exchange, this is the aaa (area code). For areas that require dialing 1 + area code (or other exchange), this is 1aaa (aaa is the area code/ exchange).
Total Digits	Number of digits (1 to 24) including digits 0-9 dialed by the user for the pattern.
Delete Leading Digits	Number of the first 0 to 24 caller-dialed digits deleted from beginning of the dial string before sending the request to a service group.
Insert Leading Digits	Digits not dialed by the user. Inserted at the beginning of the dial string after deleting leading digits before the string passes to the remote device. It is possible to insert 0 to 24 digits (0-9), #, *, or pauses (P).
Append Trailing Digits	Digits added to the end of the dial string - 0 to 24 digits (0-9), #, *, or pauses (P).
Service Group	Select an option from the drop-down list: • All CO Lines • All CO Lines & SIP Gateways • All SIP Gateways • All SIP Proxies • All Trunk Devices • Including any added service groups • No Devices

Example 1:

Adding an area code with "Area code NOT dialed". In this case, the user dials 1234567, the area code

is 585, and the output dial string is 15851234567.

Setting	Description	Setting	Description
Leading Digits	0	Insert Leading Digits	1aaa
Total Digits	7	Append Trailing Digits	0
Delete Leading Digits	0		

Example 2:
Adding an area code with “Area code dialed”. In this case, the user dials 5851234567, and the output dial string is 15851234567.

Setting	Description	Setting	Description
Leading Digits	aaa	Insert Leading Digits	1aaa
Total Digits	10	Append Trailing Digits	0
Delete Leading Digits	0		

Example 3:
Adding an area code with “1 + area code dialed”. The user dials 15851234567, and the output dial string is 15851234567.

Setting	Description	Setting	Description
Leading Digits	1aaa	Insert Leading Digits	0
Total Digits	11	Append Trailing Digits	0
Delete Leading Digits	0		

9.6.4 Manage the Emergency Number Rules

Note:	Do not enter an Emergency number that conflicts with other dial plan options as this may result in the emergency center not being called.
Note:	Reboot Allworx phones when making changes to the Emergency values.

Caution:	Do not attempt to place emergency (911) calls prior to activating the Connect server.

Important: Prior to configuring the emergency dial plan, the emergency number rule defaults are:

Not Set	Emergency Number: 911 Direct Dial: enabled (checked)
Set	Uses the Emergency Number and Direct Dial settings as previously set by the administrator.

To configure emergency number rules:
1. Log in to the Allworx server admin page, navigate to **Phone System** > **Dial Plan**.

2. Locate the **External Dialing Rules** > **Emergency** section, and click **Modify**.

3. Update the fields:

Emergency	Enter the number to dial for emergency situations.
Dial Direct	Enables users to dial the emergency number without the line access number. Check the box to enable.

4. Click **Update** to save the changes or **Cancel** to disregard the changes.The Dial Plan page displays.

5. (optional) Locate the **Emergency Call Email Notification** line and click **modify**. Check box to enable email notifications of emergency calls, and then click **Update** to save the change or **Cancel** to disregard the request.

6. Locate the top message about rebooting Allworx phones and click **Reboot Phones** to update the handsets to the new configuration.

9.6.5 Manage the Services

To manage the services:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Dial Plan**.

2. Locate the **External Dialing Rules** section, and then the Services table. Click **Modify**.

3. Select the Service Group affected in the drop-down list. For the Public SIP Director and PIN Code feature, specify the number of digits.

Note:	To change the PIN code length, the system cannot have any previously configured PIN codes.

4. Click **Update** to save the changes or **Cancel** to disregard the request.

5. Locate the message about rebooting Allworx phones and click **Reboot Phones** to update the handsets to the new configuration.

9.7 Manage Dialing Privileges Groups

A Dialing Privileges Group is a set of dialing permissions and handset Call Appearances with the same settings. Apply custom configurations to any or all of the site handsets by creating a Dialing Privileges Group, specifying the settings, and assigning handset Call Appearances to the group. Changes made to the group settings take effect immediately. Handset Call Appearance dialing permissions determine how to access outside lines, determine which outside lines to use, and enable or block phone numbers.

To manage the dialing privileges groups:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Dial Plan**.

2. Locate the **Dialing Privileges Groups** section, and then click one of the following links:

View	View and modify the current dialing permissions group.
Copy	Create a new dialing privileges group.
Delete	Remove the current dialing privileges group from the server. However, the Allworx administrator cannot delete the default group or groups with assigned handsets. Therefore, move all handsets into other groups to delete the group.

3. Locate the section to update and click **Modify**:

Section	Description
Dialing Privileges Group	When upgrading Allworx servers, create an additional Dialing Privileges Group for each unique combination of Outside Line Connection settings for the existing phones. NOTE: The system does not change settings for existing handsets in this process. Dialing Privileges Group settings include the following: • Emergency Service Group • Schedule • Toll Restrictions • Outside Line Selection Method
Name	Enter a new name in the field
Emergency Service Group	Select a group from the drop-down list.
Schedule	Associate a schedule with each Dialing Privileges Group to specify different Toll and Internal Call Restrictions for the Dialing Privileges Group based on the schedule. This option supports additional flexibility by limiting which numbers specific handsets can dial at various times of the day. **Example**: • Don't let the lobby phone dial the door relay or paging zones. • Don't let certain employees dial the CEO. • Don't let any phone make long distance calls after business hours. Select a schedule option from the drop-down list, and then use the option drop-down lists to further refine the call restriction type. See the **Toll Restriction** and **Internal Call Restriction** sections below for the restriction options.
Seize Rule	Select a rule from the drop-down list.
Outside Line Selection Method	Select one of the options: • Use External Dialing Rules for number dialed • User External Dialing Rules, but restrict to these services: check the appropriate check boxes. **Shortcut**: click **check all** or **uncheck all**. • Ignore External Dialing Rules and always use this service or Service Group: select an option from the drop-down list.

Schedule Option	Restriction Type Available
Not Used	• Toll Restriction • Internal Call Restriction
<Available Schedule>	• Day Mode Toll Restriction • Night Mode Toll Restriction • Day Mode Internal Call Restriction • Night Mode Toll Restriction

Section	Description

Toll Restriction

Define toll restrictions between different Dialing Privileges Groups.When programming a specific Dialing Privileges Group, the Allworx administrator selects which **Toll Restrictions** to apply to the Dialing Privileges Group.

The server enables all numbers defined by the External Dialing Rules unless listed in the Blocked Numbers list.

- Numbers in the Exceptions list override the blocked numbers.If listing a number as both blocked and as an exception, the server enables calls to that number.
- Entries in the Blocked Numbers list need not be complete phone numbers but can be only the first part of phone numbers. The numbers entered are a pattern, which the Allworx server reads left to right. Once the pattern has been matched (see example) the number is blocked. Example: entering 1900 in the Blocked Numbers list prevents all 1-900 number calls.

Entries in the Exceptions list should be more specific than those in the Blocked Numbers list.

- The Exceptions to the Blocked Numbers list does not need to have any entries to specify enabling similar numbers.
- If the Blocked Numbers list contains 1 as an entry and the Exceptions to Blocked Numbers list contains 1800, then users can dial 1-800 numbers but no other long distance number.
- If the Blocked Number list contains a complete number (e.g. 19005553850) then the server blocks only that number.

NOTE: When attempting to block the emergency number, the Allworx System Software requires a confirmation prior to accepting the request.

Add	Create a new rule.	
	Enter new name	Describe the new rule.
	Blocked Numbers	Enter the blocked numbers in the fields provided.
	Exceptions to Blocked Numbers	Enter the exception numbers in the fields provided.
	Click **Add** to save the change or **Cancel** to disregard the request.	
Modify	Update the rule.	
	Update the name	Describe the rule. **Note**: The Toll Restrictions (Default) name cannot be changed.
	Blocked Numbers	Enter the blocked numbers in the fields provided.
	Exceptions to Blocked Numbers	Enter the exception numbers in the fields provided.
	Click **Update** to save the change or **Cancel** to disregard the request.	
Delete	Remove the rule from the list. Verify this is the rule to delete, and then click **Delete** to remove the rule or **Cancel** to disregard the request. **Note**: Toll Restrictions (Default) cannot be deleted.	

Internal Call Restrictions

Block internal calls (extensions, PBX functions, etc.) When programming a specific Dialing Privileges Group, the Allworx administrator selects which **Internal Call Restrictions** that apply to the Dialing Privileges Group.

The server enables all numbers unless listed in the Blocked Numbers list.

- Numbers in the Exceptions list override the blocked numbers.
- If listing a number as both blocked and as an exception, the server enables calls to that number.
- Entries in the Blocked Numbers list need not be complete phone numbers but can be only the first part of phone numbers. Example: entering 12 in the Blocked Numbers list prevents calling internal extensions 1200 to 1299 or entering *4 in the Blocked Numbers list prevents calling all PBX functions.

Entries in the Exceptions list should be more specific than those in the Blocked Numbers list.

- The Exceptions to the Blocked Numbers list does not need to have any entries to specify enabling similar numbers.

Section	Description	
Add	Create a new rule.	
	Enter new name	Describe the new rule.
	Blocked Numbers	Enter the blocked numbers in the fields provided.
	Exceptions to Blocked Numbers	Enter the exception numbers in the fields provided.
	Click **Add** to save the change or **Cancel** to disregard the request.	
Modify	Update the rule.	
	Enter new name	Describe the new rule. **Note**: The Internal Call Restrictions (Default) name cannot be changed.
	Blocked Numbers	Enter the blocked numbers in the fields provided.
	Exceptions to Blocked Numbers	Enter the exception numbers in the fields provided.
	Click **Update** to save the change or **Cancel** to disregard the request.	
Delete	Remove the rule from the list. Verify this is the rule to delete, and then click **Delete** to remove the rule or **Cancel** to disregard the request. **Note**: Internal Call Restrictions (Default) cannot be deleted.	

Call Appearances Assigned to Group
Check the box next to a Call Appearance to include it in the group. When removing a Call Appearance from a user-defined group, it moves automatically to the default Group.

4. Click **Update** to save the changes or **Cancel** to disregard the request, and then reboot the phones to update the configurations.

Click here to return to the "Install Checklist" .

Chapter 10 Emergency Alerts and Caller ID

The 911 Alert sends audible and visual alerts to designated handsets immediately after making an emergency call from any local or remote handset and supports email and SMS message notification of emergency calls. The 911 Alert supersedes any handset functionality, except when the handset user is in an admin menu.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

Caution:	Do not attempt to place emergency (911) calls prior to activating the Connect server.

Important: Prior to configuring the emergency dial plan, the emergency number rule defaults are:

Default	Description
Not Set	Emergency Number: 911 Direct Dial: enabled (checked)
Set	Uses Emergency Number and Direct Dial settings as previously set by the administrator.

- To dial the emergency number without dialing the external line access digit, see “Manage the Emergency Number Rules” on page 45 for more information.
- To configure handsets to receive 911 alerts, assign an Emergency Alert PFK. See “Manage the Programmable Function Keys (PFKs)” on page 67 for more information.

10.1 Emergency Alerts

When any handset places an emergency call on the system, handsets with the emergency alert PFK produce an audible beeping and displays the information:

- owner of the handset which placed the call.
- station number of the handset the call originated from.
- date / time of the call.

Status	Pressing the PFK
Active Alert	Acknowledges the alert, silences the beep, and removes the alert information from the display screen.
Inactive Alert	Retrieves information of the last alert stored on the handset.
Rebooting the handset	Removes stored alert details from the handset.

The Allworx server automatically acknowledges active alerts by silencing all handsets beeping after 10 minutes and removing the handset display alert information after 60 minutes.

Additional emergency calls placed from other handsets within 15 seconds results in the server disregarding the new alerts, and the handset stores the emergency call placed after the 15 second time period after the user acknowledges the first alert. Press the PFK or CLEAR soft key to acknowledge the alert.

Emergency alerts supersede any handset functionality (e.g. placing/receiving a call, logged into message center), except when the user of the handset is in an admin menu (e.g. viewing directory, CONFIG menu settings, changing presence setting). In this case, the PFK blinks. Once the user exits the menu screens, the handset repeats the alert audible beeping and information.

Note:	Calls do not disconnect when an Emergency alert is propagated to the handset.

10.2 Manage Emergency Handset Caller ID

The Allworx server supports assigning an Emergency Caller ID (CID) number to each Allworx handset. When dialing an emergency number from the handset, the Emergency CID passes to the emergency call center instead of the normal CID. For employees not at the main site, the properly configured Emergency CID helps the emergency call center locate the handset placing the call.

Caution:	Setting Emergency Caller IDs to place emergency calls on a CO line do not work. The Emergency CID does not override the Caller ID of the CO line.
Caution:	If using SIP trunks or PRI lines, check with the provider to determine the Caller ID numbers to use, if any, or to configure additional phone numbers as caller IDs for emergency calls. After setting up Emergency Caller ID numbers on the Allworx server, call the emergency phone number (e.g., 911) to test each number. Use a phone configured with the caller ID to ensure that the emergency calls connect, route to the correct emergency call center, and the call center can independently determine the handset location. Advise the call center that these test calls are non-emergency calls to test the phone system.

To configure Emergency Caller IDs for specific handsets:

- define an Emergency Caller ID and assign it to the handsets.
- give each Emergency CID a Location name and associate each with a Service Group to use when placing an emergency call. When selecting the **Use External Dialing Rules** service group, the server selects the outside line or service group with the area code of the Emergency CID number.

To manage the Emergency Caller ID numbers:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Emergency CID**, and locate the **Emergency Caller ID Numbers** section.

2. Click one of the following links:

add new Caller ID Number	Create another emergency caller ID number. 1. Enter the Caller ID number and Location. Use a descriptive handset name for the locations that use this caller ID. 2. Select a service group from the drop-down list. 3. Click **Add** to save the changes or **Cancel** to disregard the request.

modify	Update the Location and Service Group fields. 1. Enter the new Location. 2. Select a service group from the drop-down list. 3. Click **Update** to save the changes or **Cancel** to disregard the request.
Delete	Removes the Caller ID number from the list. However, administrators cannot delete Emergency CIDs with assigned handsets. Assign all handsets to another Emergency CID prior to deletion. Confirm the number and click OK to save the changes or Cancel to disregard the request.

10.3 Assign the Emergency Caller IDs

Note:	Assigned Emergency Caller IDs via the phone admin page or its CONFIG menu overrides the CID number for the handset, if assigned on the server.

To assign using the server administration page:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Emergency CID.** The page displays all handsets on the system in the table under the Handset Emergency Caller ID Number Assignments section.

2. Locate the **Handset Emergency Caller ID Number Assignments** table, and then locate the handset.

3. Click **Modify**, and then select a Caller ID number from the drop-down list.

4. Click **Update**. If using the handset option, the system requires a phone reboot to display the changes on the server admin page.

Note:	When assigning an Emergency CID number to a handset from the Allworx server admin page, the Caller ID number does not display on the phone admin page or under the CONFIG menu.

Click here to return to the "Install Checklist" .

Chapter 11 Extensions

Extensions manage extensions or call routes - this includes special purpose call routing to these extensions. Additionally Extensions provide a short cut to manage users.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

11.1 Add New Extension

Enables adding an extension to the Allworx system directory.

To add a new extension to the directory:

Note:	After increasing the internal extension length to 5 or 6 digits, the extensions **show available** link is no longer available.

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Extensions** > **add new Extension** and update the fields.

System Extension	Enter a requested extension number or click show available and click on an available number to select the extension. Click hide available to close the list of available numbers.
Description	Enter a name for the extension, i.e., Conference Room.
Schedule	Select a schedule for the extension to use for business hours from the drop-down list.

2. Locate the **Call Route** section, and click **add a connection attempt**. This enables forwarding the call to another number.

3. Locate **{no selection}**, the number of rings, and the Ring Type sections and select an option for each from the drop-down list. (Number of rings and Ring Type style are optional).

Ring Types
Enable handsets connected to the Allworx server to be set to ring with different patterns and tones. The table below defines the supported ring types.

	Analog Handset	Allworx Handsets Families 1 - 4	Allworx Handsets Family 5
Single Ring	Single	Single Ring Pitch A	Single Ring Pitch E
Double Ring	Double Ring [short, short]	Double Ring Pitch A	Double Ring Pitch F
Ring Type 1	Double Ring [short, long]	Single Ring Pitch B	Triple Ring [short, long, short] Pitch G
Ring Type 2	Double Ring [long, short]	Double Ring Pitch B	Quad Ring [long, long, short, short] Pitch H
Ring Type 3	Triple Ring [long, long, long]	Single Ring Pitch Tone C	Triple ring [long, long, long] Pitch I
Ring Type 4	Triple Ring [short, short, long]	Double Ring Pitch Tone C	Triple Ring [short, short, long] Pitch J

	Analog Handset	Allworx Handsets Families 1 - 4	Allworx Handsets Family 5
Ring Type 5	Triple Ring [short, long, short]	Single Ring Pitch Tone D	Triple Ring [long, short, long] Pitch K
Ring Type 6	Triple Ring [long, short, short]	Double Ring Pitch Tone D	Triple Ring [long, short, short] Pitch L

Phone users can select a Ringtone Family within the phone **CONFIG** > **Preferences** > **Ringtone Family** menu. Selecting Family 1 (the default family) causes the phone to produce ringtones that are the same as the ringtones available in Release 7.3 and lower. Ringtone Families 2 through 4 have the same single/double ring pairs as Family 1 except that the frequencies of the ringtones are in different ranges:

Family	Frequency Range of Pitches A through D
Family 1	Default Frequencies (Same as Release 7.3 and lower)
Family 2	Middle Frequencies
Family 3	High Frequencies
Family 4	Very High Frequencies
Family 5	Pitch ranges from very low to high. Uses more diverse cadences including triple and quad rings. On a given phone, if multiple ringing are used to differentiate between different call sources or intended destinations, select different Ring Types in the Call Route configuration. Then on the phone, select Ringtone Family 5 to produce the widest range of ringtones.

On phones installed in adjacent offices, selecting different Ringtone Families help users more easily detect whose phone is ringing. To improve this further, choose different ring types for different phones in the Call Route configuration on the server.

4. (optional) Click **add a destination** and repeat steps 4 and 5 to ring multiple phones simultaneously.

5. (optional) Click **add another connection attempt** and repeat steps 4 and 5 to forward the call to another handset, if the first connection attempt does not answer. Continue repeating, as required.

6. Locate the **Finally...** box, and select an option for the call from the drop-down list, if the user or any of the connection attempts do not answer. To delete any of the connection attempts, click **delete this attempt**.

Hang up	Requires no further action.
Transfer to Auto Attendant	Select an option from the drop-down list.
Transfer to Call Queue	Select an option from the drop-down list.
Transfer to Voicemail for user	Select an option from the drop-down list.
Dial number	Enter a new number to forward the call.

7. Click **Add** to save the change or **Cancel** to disregard the request.

11.2 Perform a Search

Locate extensions based on extension, description, login name, or site.

To perform a search:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Extensions.**

2. Locate the search line and enter the search criteria. Press **Enter**. The table displays the information matching the search criteria.

11.3 Manage the Description

Click the description name as a short cut to manage the user. See "To modify or delete existing users:" on page 133 for additional information.

11.4 Manage Call Routes

The building blocks of a call route are the Connection Attempts and the Finally route. In a typical call route, there is one Connection Attempt and the Finally route. The Allworx server supports configuring the call routes for special purpose routing such as:

Presence Specific Routing	When on vacation, forward the call directly to voicemail (User extensions).
Multiple Destinations	Ring multiple phones simultaneously.
Multiple Connection Attempts	Ring a series of phones when the primary phone is not answered.
On Busy Routing	Ring alternate phone(s) when the line is busy (User extensions).
Follow-Me Anywhere	Forward the call to a cell phone or home phone.
Caller ID Based Routing	Separate call route dependent on the Caller ID of the incoming call (User extensions).
Hot Desk Routing	Route the call to a logged-in phone after logging into a shared phone. Default is disabled.

To enable users to define the extension routing using the My Allworx Manager page, see "To modify or delete existing users:" on page 133 for more information.

To manage the presence call route:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Extensions**.

2. Locate the extension or the user and click **View Call Routes**. The page displays the presence settings and associated call route for each setting.

3. Locate the presence setting and click one of the following links:

add new call route

Create a call route specific to the user. To update the call route:

1. Locate the **Call Route Selection** section and check the box or boxes to add the new route to the selected presence.
2. Use the Caller ID of the incoming call to a User extension to determine the call route.

external - Caller ID Number	enter the phone number with area code in the text box. Use the asterisk as a wild card.
internal - phones owned by	select the extension from the drop-down menu.

3. Locate the **Call Route** section. Follow the instructions below in **add a connection attempt**.

Modify

Update the current presence call routing. To update the call route:

1. Locate the **Call Route Selection** section and check the box or boxes to add the new route to the selected presence.
2. Use the On calls from all callers to determine the call route:

Modify Primary Route	Updates the call route for all calls meeting the external caller criteria.
Modify On Busy Route	This avoids having callers hear a busy signal when calling an extension by configuring an alternative On Busy call route. The system ignores additional call attempts when configuring the busy route to use a call route instead of treating a busy call as no answer.

NOTE: Create and save (**Update** button) the primary call route before creating or modifying the On Busy Route.

3. Locate the **Call Route** section. Follow the instructions in **add a connection attempt**.

Delete

remove the call route from the list. Click **Delete Route** to remove the call route or Cancel to disregard the request.

add a connection attempt

Forward the call to another extension. To setup the connection attempt:

1. Locate **{no selection}** and select an available location* from the drop-down list.
   - For Follow-Me Anywhere**: Enter 9 or 78[1]+PIN (to gain an outside connection) followed by the phone number in the text box that appears to the right.
     Examples†:9+1+aaa-xxx-nnnn, 9+1+xxx-nnnn, 78+ PIN+1+aaa-xxx-nnnn, or 78+PIN+xxx-nnnn
2. (optional) Select the number of rings from the drop-down list. Click the ring style and select an option.
3. (optional) Click **add a destination** and repeat steps 1 and 2 to ring multiple phones simultaneously.
4. (optional) Click **add another connection attempt** and repeat steps 1 and 2 to forward the call to another handset, if alternate phones should ring when the handset(s) in the First connection attempt are not answered. Continue to repeating step 4, as required.

add a connection attempt (con't)

5. Locate the **Finally...** box, and select an option for the call if the user or any of the connection attempts do not answer.

Hang up	
Transfer to Auto Attendant	Select an option from the drop-down list.
Transfer to Call Queue	Select an option from the drop-down list.
Transfer to Voicemail for user	Select an option from the drop-down list.
Dial number	Enter a new number to forward the call.

To delete any of the connection attempts, click **delete this attempt**.

*** Hot Desk Routes**	Hot Desking enables users to log in to shared phones, receive their calls on that phone, and place calls with their caller ID. Users can initiate the log in using a Hot Desk PFK or by selecting the Hot Desk Login option from the phone Config menu. Users can add Hot Desk destinations manually or automatically to user call routes. If none are present when the user Hot Desks into a phone, then Hot Desk destinations are added as the first connection attempt to all Presence call routes.
**** Follow-Me Anywhere**	Users can forward calls to other phones outside of the Allworx System such as cell or home phones. If the recipient does not answer the call, the system directs the call back to the system in order to follow the rest of the configured call route. In following the rest of the call route, unanswered Follow-Me-Anywhere calls may eventually be directed to the Finally route, which enables callers to leave messages in the default voicemail inbox. If the preferred setting is having callers leave messages on a personal phone voicemail, do not use the Follow-Me-Anywhere features. Instead, use the Finally route to direct calls to a cell or home phone by entering the phone number into the Dial number text box. **NOTE**: When an outside phone answers the call, the default is for the recipient to hear a prompt requesting to enter a '1' to accept the call. However, the Allworx administrator can configure user extensions so that Follow-Me-Anywhere calls to their extensions require a Message Center password in order to accept the call. **NOTE**: The Follow-Me-Anywhere feature requires the recipient to listen to a message and enter a code. Therefore, increment the normal number of rings by at least two in order to give the recipient extra time to answer the call.

7. Click **Update** to save the changes or **Cancel** to disregard the request.

11.5 Delete an Extension

To remove an extension from the directory:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Extensions**.

2. Locate the extension or the user and click **Delete**.

3. Review the confirmation and click **Delete** to remove the extension or **Cancel** to disregard the request.

Click here to return to the "Install Checklist" .

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Chapter 12 Handsets

Handsets manages analog, generic SIP, and Reach handsets, as well as configure an Allworx phone.

The Handsets web admin page also provides access to manage the Allworx phone programmable function keys (PFKs) and the handset preference groups / templates.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	• Generic SIP Handsets • Reach

12.1 Manage Analog Handsets

Use the following procedures to connect an analog handset to the Allworx server and to manage the available settings on the Allworx server for the analog handset.

To connect an analog phone via FXS Phone Port:

1. Plug the phone into one of the server FXS phone ports reserved for Inside Phone Extensions.
2. Lift the phone receiver so that the phone is off hook, and refresh the browser window. The phone displays in the Analog Handsets section of the page.
3. Hang up the phone receiver.

Note:	Analog phones plugged into Port Expander FXS ports do not automatically display on the Handsets page. Add the analog phones manually.

To manually connect an analog phone:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets**.
2. Locate the **Analog Handsets** section and click **New Analog Handset**, and click the additional information arrow ▶, if necessary. The Analog Handset page opens. Update the fields.

Port:	Automatically filled in.
Owner	Select the handset owner from the drop-down list.
Extension	Optional. See TIP next to the field for more information.
Caller ID Number	Select an option from the drop-down list.
Caller ID Name	Automatically populates from Owner selection. Update as necessary.
Description	Automatically populates from Owner selection. Update as necessary.

3. Click **Add** to update the Analog Handset list or **Cancel** to disregard the changes.

To manage the settings on an existing analog phone:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets**, and locate the **Analog Handsets** section. Click the additional information arrow ▸, if necessary

2. Click an option:

Modify	Change the current analog handset settings. See "Analog Handset Settings" on page 62 for more information.
Delete	The server removes the analog handset connection. Click Delete to confirm the change or Cancel to disregard the request.
Ring	Click to test the analog handset connection.

3. Click **Update** to save the changes or **Cancel** to disregard the request.

Analog Handset Settings

Handset	
Phone Type	Automatically filled in.
Port:	Automatically filled in.
Owner	Select the handset owner from the drop-down list.
Internal Caller ID Name	Automatically populates from Owner selection. Update as necessary.
Internal Caller ID Number	Select an option from the drop-down list.
External Caller ID Number	Optional. Enter information as necessary.
External Caller ID Name	Optional. Enter information as necessary.
Description	Automatically populates from Owner selection. Update as necessary.
Phone Status Visibility	• Normal • Hide Completely • Hide Status
Dialing Privileges Group	Select an option from the drop-down list.
Handset Features	
Hold Music Selection	• Line-In • None • moh_supplied.snd
Can Place Calls	Check the box to enable.
Can Receive Calls	Check the box to enable.
Second Call Handling	Identifies how to manage a second incoming call. • Busy • Call Waiting • Not Busy
Message Waiting Stutter Dialtone	Check the box to enable.
Message Waiting Light	Check the box to enable.
Caller ID Display	Check box to enable. • Caller ID Type I - check the box to enable. • Caller ID Type II - check the box to enable.

Auto Off-Hook Dialing	Enter the digits for the Allworx phone to automatically dial every time the user takes the phone off hook.
Auto Answer DTMF String	Enter the DTMF digits sent when the user answers a call. The system sends these digits to the FXS device as soon as it answers the call. The following characters are available for use:

DTMF Digits	Timing Controls	Variables
• 0 – 9 • A – D • * • #	• P generates a one second pause • + increases the duration and gap of all DTMF tones by 50ms • - decreases the duration and gap of all DTMF tones by 50ms	• $xN sends the last N digits (0 for all digits) of the dialed extension • $nN sends the last N digits (0 for all digits) of the DNIS number

12.2 Manage Handsets

Connect an Allworx handset, Reach handset, or generic SIP handset to the Allworx server and manage the available settings on the Allworx server for the handset.

Note:	If installing Generic SIP phones on the server, Internal Dial Plan changes can modify the configuration on the server such that the Generic SIP phones no longer register.

To add a handset:

When registering a phone with the server, it displays on the Handsets page with an expiration date/time to indicate a registered phone.

Note:	The Allworx server feature key provides each Generic SIP handset a license to operate. Allworx administrators can add a small number of handsets without a key (2 on the Allworx 6x12 server, 4 on the Allworx Connect 300 series servers, 6 on the Allworx 6x and Allworx Connect 500 series servers, and 12 the Allworx 48x and Connect 731 servers). • Available feature keys provide one, five, or 10 licenses each. • For larger numbers of Generic SIP handsets, install multiple feature keys.
Note:	The Allworx 6x12 server maximum limit is two (2) generic SIP phones; the Allworx 6x12 server does not require a feature key.

If it is necessary to restart all of the Allworx handsets, click the **Reboot Allworx Handsets** button. Clicking this button ends all active calls.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets**, and locate the **SIP Handsets** section. Click the additional information arrow ▸, if necessary.

2. Click one of the following links to add a handset:

add new Allworx Handset	1. Locate the **Allworx Handset** section and fill in the fields:

Owner	Select an option from the drop-down list.
Extension*	Optional. Creates the extension with a call route to ring the handset.
Caller ID Number	Select an option from the drop-down list.
Caller ID Name	Enter the name to display on the caller ID.
Description	Enter a meaningful name.

add new Allworx Handset (con't)

2. Locate the **Handset Configuration** section and fill in the fields.

Model	Select an option from the drop-down list.
MAC Address	If there is an incorrect MAC address entry and the phone boots on the network, the server has a duplicate entry for this phone. The Plug and Play registration continues with the system using the correct MAC address and does not use the manually entered information. To locate the MAC Address information on the phone: 1. Press the phone CONFIG soft key. Use the up and down arrows to scroll to highlight Current Status/Info and press the Select button. 2. Use the up and down arrow buttons to scroll to locate the MAC Address. 3. Press EXIT soft key twice to return to the main screen.

add new Allworx Reach Handset

If the link is unavailable, purchase more licenses. Fill in the fields:

Owner	Select an option from the drop-down list.
Extension*	Optional. Creates the extension with a call route to ring the handset.
Caller ID Number	Select an option from the drop-down list.
Caller ID Name	Enter the name to display on the caller ID.
Description	Enter a meaningful name.

add new Generic SIP Handset

If the link is unavailable, purchase more licenses and fill in the fields:

Owner	Select an option from the drop-down list.
Extension (Optional)	Creates the extension with a call route to ring the handset. If selecting an owner other than admin, the server automatically adds the handset to the In Office call route of the owner. If selecting an extension, the server creates the extension with a call route to ring this handset. Typically used in the case of a conference room or lab phone that does not require an owner.
Caller ID Number	Select an option from the drop-down list.
Caller ID Name	Enter the name to display on the caller ID.
Description	Enter a meaningful name.

Locate the **Handset Configuration** section and fill in the fields.

Number of Lines	Use a single, generic SIP handset to configure multi-port FXS gateways. Enter the number of gateway ports available on the gateway device (example: 6). This adds a generic SIP handset for each Call Appearance. Each Call Appearance represents a different gateway port.
Login ID*	Enter a unique Login ID. If no Log in ID is specified, the server generates a Login ID when creating the handset.
Password*	Select the password complexity by clicking the password requirements buttons. The Allworx server generates a new password upon request based on the complexity rules, and displays the new password when configuring the Generic SIP device. For existing Generic SIP devices, the system maintains the current password until the Allworx administrator requests a new password.

* Login ID and Password are the credentials for the SIP handset to authenticate with the Allworx Server.

- If not specifying a Login ID, the server generates one when creating the handset and generates a handset User ID automatically.
- Do not use the same Login ID on multiple phones.

8. Click **Add** to add the new handset to server or **Cancel** to disregard the request.

9. FXS gateway only: Click **Modify** to configure each Call Appearance. For example: the Allworx administrator can assign users to each Call Appearance.

To perform a search:
Locate handsets based on extension, description, owner, IP Address, or Caller ID.

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Handsets** > **SIP Handsets**. Locate the search line.

2. Enter the search criteria. Press **Enter**. The handsets matching the search criteria display.

To review the configuration:
1. Login to the Allworx server admin page and navigate to **Phone System** > **Handsets** > **SIP Handsets**. Click the additional information arrow ▸, if necessary.

2. Review the installed Generic SIP phone User IDs.

3. Determine if the registration configuration for each Generic SIP phone is the same or different from the current User ID on the server Handsets page. If there is a difference, modify the on-phone configuration to match the new User ID.

Note:	Allworx user guides frequently refer to dialing patterns based on the factory default internal dial plan. After making changes to the dial plan, the **My Allworx Manager** > **Phone Functions** tab automatically updates to the new digits. Distribute this sheet to all end users. See "To manage the Internal Dial Plan:" on page 39 for more information.
Note:	Changing the Operator to something other than "0" does not automatically change the Operator digit shortcut in the Auto Attendants. If changing the Operator digit, manually update the Auto Attendants shortcuts. See "Auto Attendants" on page 17 for more information.

12.3 Manage Allworx Handsets

These procedures describe assigning a Handset Preference Group and applying a Handset Template.

Note:	For Allworx handsets or generic SIP handsets: unregistered handsets display the registration information in gray italic font while registered handsets display the registration information in the standard black font. Additionally, the last handset reboot date/time and the last handset SIP registration time display for each handset.

To manage Allworx handset:
1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets** > **SIP Handsets**. Click the additional information arrow ▸, if necessary.

2. Check the Show boxes for Allworx Handsets and Reach Handsets. The table lists all installed Allworx desk phones and Reach handsets.

3. (optional) Click the **Bulk Edit** side arrow and check the box next to the handset to select it. Then click one of the following buttons:

Delete	Removes the selected handsets from the server.
Assign	Changes the Allworx Handset to the newly selected Handset Preference Group.
Apply	Changes the Allworx Handset to the newly selected Handset Template.

4. Review and update the settings per the table below:

Setting	Description	Applies to: Allworx Desk Phone	Allworx Reach App	Generic SIP Phone
<Handset Preference Group Name>	Name of the HPG assigned to the phone. Default setting: PBX Station (Default). Click the link for the group settings. See "Manage Handset Preference Groups" on page 72 for more information.	Yes	Yes	No
View Configuration	Modify the current settings. See "To manage the View Configuration:" on page 67 for more information.	Yes	Yes	No
Add Call Appearance	Create another handset Call Appearance. Multiple Call Appearances enable handling calls for multiple users with a single phone. • Every automatically registered phone configuration includes one Call Appearance and two PFKs assigned to the Call Appearance. • Adding a second Call Appearance creates another address to use in call routes. Example: Administrative Assistant The office administrative assistant, Susan Bell, must answer the phones of two executives: Tom Brown and Lisa Andrews. • Susan has a Call Appearance for calls to her extension and a separate Call Appearance for each executive. • The Allworx administrator adds a Call Appearance PFK for each executive to Susan's phone. • The call route for each executive is set to ring both the executive handset and the Call Appearance on Susan's handset. • The PFK corresponding to the executive receiving a call flashes so that Susan knows which executive line is ringing and can answer accordingly (e.g. "Good morning, Tom Brown's office…")	Yes	No	No
Reboot	Restarts the phone. If the phone is in use, the reboot begins when the phone is idle. • **Reboot Allworx Handsets** is available at the top of the SIP Handsets section to reboot all Allworx phones with one action. • One handset reboots every 10 seconds until all phones reboot.	Yes	Yes	No
Replace	Transfers all of the original phone configuration parameters and settings to a new phone. • Replace a defective handset with a new one. If the replacement has fewer PFKs than the original handset, the server copies the PFKs from the original handset, in order from the bottom, left of the PFKs, up to the number of PFKs on the replacement handset. • The system replaces original unsupported handset PFK definitions on the replacement handset with default values.	Yes	No	No
IP Address	IP Address assigned to the handset. If the PC has a network communications path to the phone, click the Handset IP Address link to open the phone administration page in a separate browser window; see "Access Phone Web Administration" on page 81 for more information.	Yes	No	No
Setup	Displays the Reach Installation Assistance website.	No	Yes	No
Modify	Modify handset Call Appearance parameters.	Yes	Yes	Yes
Delete	Deletes the Call Appearance from the phone. If there is only one Call Appearance, the server deletes the phone from the system.	Yes	Yes	Yes
Ring	Click to verify an operational phone connection.	Yes	Yes	Yes

5. Reboot the phone after changing any settings on the View Configuration page to update the phone to the new settings using **Reboot** described above or manually from the phone.

To manage the View Configuration:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets** > **SIP Handsets.** Click the additional information arrow ▸, if necessary.

2. Check the Show boxes for Allworx Handsets and Reach Handsets.

3. Click **View Configuration** to see the SIP handset phone configuration parameters. In addition to the phone summary information, the following options display:

Handset Preferences Group	Displays the current preference group. Click modify to update the current preference group. See "Manage Handset Preference Groups" on page 72 for more information.
Template Options	Save: keeps the current configuration as a template. Apply: select a different handset configuration.
Programmable Function Keys	Adjust the PFK assignment options. Click modify to update the current settings. See "Manage the Programmable Function Keys (PFKs)" on page 67 for more information.
Interact Appearances	Adjust the settings for each appearance. Click modify to update the current setting. See "To manage the Call Appearance configuration:" on page 71.

4. Reboot the phone to save changes.

12.4 Manage the Programmable Function Keys (PFKs)

Manage the PFKs by describing and assigning a PFK, reordering the PFK assignments, and managing the Call Appearance configuration.

To manage the PFKs:

1. Log in to the Allworx server admin page, navigate to **Phone Systems** > **Handsets**.

2. Locate the **SIP Handsets** section, and click the additional information arrow ▸, if necessary.

3. Click **View Configuration** in the handset row. The Configuration page displays for the handset.

4. Locate to the **Programmable Function Keys** section, and click **Modify**. Notice the numbered row in the table corresponding to the individual phone PFK.

   For handsets with more than 12 PFK buttons or Tx Expander, the user can assign options to more than 1 column of PFKs. There are links for the left/right sets of PFK buttons for the handsets and the TxExpander.

5. Optional. Click the **Show PFK auto-assignment options** to manage all unused PFKs at once. Click one of the following options:

Assigns	Commits selected Stations to all unused PFKs. Check the top checkbox to select or deselect all options at once. Click **Assign** to save the updates or **Cancel** to disregard the request.
Reset	Updates all the BLF PFKs to unused.
Assign	Commits selected Line Appearances to all unused PFKs. Check the top checkbox to select or deselect all options at once. Click **Assign** to save the updates or **Cancel** to disregard the request.
Reset	Updates all the Line Appearance PFKs to unused.
Reset All	Updates all of the handset PFK definitions to unused.

6. Click the key number drop-down menu, and select one of the features below for each PFK.

ACD Appearance	Automatic Call Distribution Appearance - users log in and out of the ACD queues. When logged in, the user receives and answers calls from the ACD queues. Pressing the PFK toggles between temporarily stopping and starting ACD calls to route to the agent.
Busy Lamp Field (BLF)	Monitors and dials another specified phone when setting up the BLF function. When pressing the PFK, the behavior of this function depends upon the station Mode selection. PBX Behavior — The phone dials the designated extension. Key System Behavior — The phone places an intercom connection to the designated phone. See "Manage Handset Preference Groups" on page 72 to set station Mode.

Call Appearance	Maps to available handset Call Appearances to place or receive calls.
	• Supports using each Call Appearance for call routing and for managing calls independently and concurrently on the same phone.
	• Mapping more than one PFK to the same Call Appearance supports multiple active calls to that Call Appearance at the same time. The Call Appearance does not display as busy to the call route until all the PFKs defined for that Call Appearance are in use. This is similar to call waiting except the system uses the PFKs to alert and select a new call.
	Example: Busy Receptionist
	• Requirements: A receptionist gets many phone calls each hour. She wants to answer each call while minimizing the possibility of any caller getting a busy signal.
	• Phone Configuration: There is one Call Appearance defined on the phone set up with 8 of the phone PFKs mapping to the phone Call Appearance (remaining PFKs support other functions).
	• Discussion:
	  • The first call comes in, the phone rings and the Call Appearance PFK flashes.
	  • A second call comes in. The phone rings and the second Call Appearance PFK flashes.
	  • She presses the Hold button to place the first caller on hold and presses the second Call Appearance PFK to answer the second caller.
	• She continues to place callers on hold and answer new calls or switches to another Call Appearance PFK to continue/terminate calls.

<table>
<tr><td>Call Supervision</td><td>Enables supervisors to dial in and monitor calls for designated handsets in three modes:<table>
<tr><td>Barge in</td><td>After connecting the call, both participants in the call hear the supervisor. The supervisor can transition to silent monitoring by pressing the phone Mute button.</td></tr>
<tr><td>Whisper</td><td>(Available only when the receiving handset is a 9202E or 9204/9204G series handset) – Only the user hears sounds from the supervising phone, not the other participant. The supervisor MUTE button controls audio going to the user. The supervisor cannot initiate two-way communications with the other participant.</td></tr>
<tr><td>Silent Monitor</td><td>Neither party in the call hear the supervisor. The Mute button on the supervisor handset lights red. The supervisor can speak to the participants of the monitored call at any time by pressing (disabling) the Mute button.</td></tr>
<tr><td colspan="2">See “Manage Call Supervision” on page 30 for more information.</td></tr>
</table></td></tr>
<tr><td>Emergency Alert</td><td>Receive audible and visual alerts when any local or remote handset on the system makes an emergency call. See “Emergency Alerts and Caller ID” on page 51 for more information.</td></tr>
<tr><td>Function</td><td>Does one set of functions:<table>
<tr><td>Centrex Flash</td><td>Provides an analog hook flash signal to the CO (when connected to a CO line) to perform flash-related actions such as call transfer. This option is only available on Allworx 6x, 6x12, or 48x servers.</td></tr>
<tr><td>Headset</td><td>Turns the Headset on and off. If the handset is off-hook with a headset plugged-in, this button toggles the audio between the headset and the handset. Note: If using an undefined Headset PFK, the phone speaker button operates the headset.</td></tr>
<tr><td>Info</td><td>Get information regarding the other buttons on the phone.</td></tr>
<tr><td>Park</td><td>Use a PFK to perform the Park operation. After defining a Park PFK, use the Hold button for the dedicated hold function and not the parking operation.</td></tr>
<tr><td>Personal Speed Dial</td><td>Dials a number programmed directly on the phone. The handset associates the uppermost Personal Speed Dial PFK to the lowest Speed Dial entry number.</td></tr>
<tr><td>Redial</td><td>Redials the last dialed number. Unless the Line Appearance(s) Use of Dial Plan</td></tr>
</table></td></tr>
<tr><td>Hot Desk</td><td>Log in to shared phones, receiving calls, and placing calls using the caller ID.
• Users can initiate the login using a Hot Desk PFK (the PFK is solid red but goes off after a user logs in) or using the phone Config menu and selecting the Hot Desk Login option.
• PFKs configured for phones do not change when a new user logs in. The Hot Desk PFK and all other PFKs remain as originally configured for the phone.</td></tr>
<tr><td>Line Appearance</td><td>Monitors the status of an outside line, answers incoming calls on that line, and selects the line for outbound calls. When setting up this function for this PFK, the user specifies the line.
To enable outside lines available for selection:
1. Navigate to Phone System > Outside Lines and go to the Analog (CO) Lines section.
2. Select the Analog (CO) Line, and click Modify.
3. Go to the Outside Line section, and check the Enable Line Appearance check box.
4. Click Update to return to the Outside Lines page.
Unique Allworx Functionality: an enhanced key-system capability relative to SIP devices and Digital Lines. Any SIP proxy, SIP gateway, or Digital Line (T1) bearer channel made available as Line Appearance selections when enabled on the respective configuration pages. Through this, the Allworx system presents a common key-system use model to all external voice circuit facilities including VoIP trunks going to an ITSP.</td></tr>
<tr><td>Messages</td><td>Monitors the status of a designated handset Message Center voicemail inbox. Press to access the inbox. The PFK LED lights red to indicate a new message in the monitored inbox. The Allworx administrator must specify the monitored inbox when setting up the PFK.</td></tr>
<tr><td>Not Used</td><td>No action. Select this choice to disable a previously defined PFK.</td></tr>
</table>

Parking Orbit	Assigns a call to any of the Parking Orbits. The PFK lights if there is a call in the parking orbit.
	• Pressing the PFK retrieves the parked call in that orbit. Parking Orbit PFKs do not function if the server is part of a multi-site network and configured to enable other sites to retrieve its parked calls.
	• Only Allworx IP phones configuration supports Parking Orbit PFKs and parked call reminders.
	• To park calls using analog phones or third-party IP phones is by transferring the call to extension 700. If doing an attended (or announced) transfer, the user hears the parking orbit number.
	• To configure the Parking Orbit PFK:
	  • Set the Parking Orbit for the PFK to monitor: 701 – 709 or 4950 - 4999 (extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extensions to use for the corresponding feature).
	  • Set the Reminder Duration to ring the handset after parking the call longer than the elapsed time (enter 0 to disable the reminder or enter a time period from 10 to 600 seconds).

Park Set Monitor	Use a PFK to monitor a configurable set of parking orbits or monitor the local parking orbits of a remote server in a multi-site environment. The PFK lights if parking calls in any of the set of orbits. • Pressing the PFK displays a list of parked calls in the orbit along with Caller ID and other information. • Users can retrieve one of the parked calls using the UP/DOWN arrow keys and the SELECT button. • Example: use a single PFK to monitor all local park orbits and a single indicator for any call placed in a parking orbit. • For multi-site network, use the check boxes to select the parking orbits available.
Push to Talk	Provides a one-way, walkie-talkie-like capability. The configured PFK accesses a specific handset. • The user speaks to the target handset user by holding the PFK down and speaking. • To respond, the user of the target handset must place a regular call back to the originator.
Queue Alarm	Maps to one of the 10 Call Queues in the system. It notifies the user of the queue activity levels (number of calls in the queue and/or longest wait time). The administrator can configure the queue alarm to include an audible alarm with the queue status displayed on the phone LCD. The PFK lights yellow when there are no logged-in agents in the queue and the queue is set to force callers to leave the queue when no agents are logged in.
Queue Appearance	Maps to one of the 10 Call Queues in the system. It automatically monitors the status of a Call Queue and used to answer calls that are in the queue.Configuration settings:

Call Queue	Select one of the available Call Queues from the drop-down list.
Login to queue when phone reboots	Check the box to enable/disable automatic login after rebooting the phone.

Ring Type
(for more information, see “Ring Types” on page 55.
	Select a unique ring type to distinguish calls to this PFK from other phone calls.
	• When set to **No Ring**, the Queue Appearance never rings. The agent uses the LED to monitor when there are calls in the queue. Press the PFK to service the next call in the queue.
	• Set to ring (Ring Type other than No Ring) enables the following fields, which control when the Queue Appearance rings:
	  • Wait Period: Enter a value (seconds) a call must be in a queue before the Queue Appearance starts to ring.
	  • Number of Callers: Enter a value (number of callers) that must be in a queue before the Queue Appearance starts to ring.
	  • Wrap-up Time: Enter a value (seconds) the agent has available after ending a call before the system makes the agent available to receive the next ACD queue call. Agents can dismiss/end the wrap up time from the handset. Reboots the agent phone to apply changes to wrap up time.
	• Meet the following conditions for a Queue Appearance to ring:
	  • Log in to the station.
	  • Queue Appearance is idle.
	  • Reach the wait period of number of callers thresholds.
	  • Agent is not in the Wrap-up Time.

Ring Group	Displays the status of and to answer a Ring Group call. When routing a call to a specified Ring Group, all phones ring with a PFK defined for that Ring Group. In addition, Allworx administrators can program an Allworx IP phone to display: • Multiple Ring Groups per phone to track more than one Ring Group. • Multiple occurrences of the same Ring Group. This enables a user to take more than one call at a time from the same Ring Group to avoid missing additional calls while attending to the current call.
Schedule	Displays the mode (day or night) of the configured business schedule. • The LED is off for day mode and solid amber for night mode. • To configure switching the current mode and greeting of the schedule, see "Schedules" on page 121 for more information.
Shared Call Appearance	Supports handling a set of one or more PFKs by the system as a single appearance shared across multiple handsets. All handsets in the Shared Appearance have common access to calls and call operations within the group of handsets. • Selecting this PFK assigns consecutive PFKs, one for each Shared Call Appearance line. • If there are not enough consecutive PFKs available, the PFK assignment fails and an error message displays. • If the Shared Call Appearance PFK assignment would overwrite existing PFKs, the system displays an error message and enables canceling the operation. • Shared Call Appearance PFKs display consecutively on the PFK configuration page, the Allworx administrators can move the assignments to different PFKs limited only by the constraints within the particular handset model.
Speed Dial	Automatically dial an extension, PBX function, or System Speed dial. Specify the number when setting up the Speed Dial PFK.

10. Locate the next column and click **define**. Update the PFK settings by selecting an available option in the drop-down list. The Emergency Alert and Hot Desk assignments do not have a define link. There are no further options to select.

11. Click **Done** to save the change or **Cancel** to disregard the request. Repeat for each PFK, as necessary.

12. Use Location column use the icons to adjust the order of the programmable function keys.

	Move up	Shifts the current PFK definition up one position.
	Move Down	Shifts the current PFK definition down one position.
	Delete	Removes the PFK and shifts all PFK definitions below it up by one location. Because of the shift, PFK definition #1 in each bank of 12 shifts "up" to the bottom (to position number #12) of the bank to its left. The last PFK definition on the station becomes Not Used (position #12 of the last bank).
	Insert	Shifts all PFK definitions below it down by one position. Because of the shift, PFK definition #12 in each bank of PFKs shifts "down" to the top (to position number #1) of the bank to its right. If the last PFK on the station (handset or Expander) was in use, its definition will "drop off" the end of the list and is no longer configured.

13. Click **Update** to save the changes or **Cancel** to disregard the request.

To manage the Call Appearance configuration:

The Call Appearance on the Allworx phone is for originating calls. The Call Appearance settings extend the number of the features available in programmable function keys by creating virtual keys within the Call Appearance software application.

- The additional virtual appearances are only available when connecting the Call Appearance feature to an Allworx IP phone.
- When connected, the following features display as having additional PFKs beyond the physical keys available on the actual phone.

• Call Appearance	• Line Appearance	• Ring Groups (formerly known as Call Monitors)
• Shared Call Appearances	• Queue Appearance	

When routing calls from the Call Appearance to applications within the Allworx System (e.g., Auto Attendants, Call Queues, or Conference Center), the server uses or overrides the Call Appearance language, depending on the application language setting. The handset rings when any of these appearances ring.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets**.

2. Locate the Interact Professional username, and click **View Configuration** on the specific handset.

3. Locate the **Interact Appearances** section, and click **Modify**. This opens the Interact Appearances configuration page.

4. Check the boxes to enable the displayed Interact Appearances. Click **change** to select a new Ring Type. For more information on Ring Type, see "Ring Types" on page 55.

5. Click **Update** to save the changes or **Cancel** to disregard the request.

12.5 Manage Handset Preference Groups

Each Handset Preference Group is a custom configuration of the handset settings and used to configure many handsets easily and efficiently by assigning handsets to the group. The Handset Preference Group section displays the available default and custom preference groups.The PBX and Key System Default groups contain the factory default handset options for the respective modes.

Note:	Settings for existing handsets do NOT change in this process.

Use the following procedures to create, manage, and assign a Handset Preference Group.

To manage a Handset Preference Group:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets** > **Handset Preference Groups** section. Click the additional information arrow ▶, if necessary.

   Click **Show Handsets assigned to each Handset Preference Group** to display the handsets assigned to each Handset preference group.

2. Select a default group, and click one of the following links:

View	Displays the Handset Preference Group current options. Click Modify to update. See "Handset Preference Group Settings" on page 73 for more information. Click Update to save the changes or Cancel to disregard the request. NOTE: The system software does not enable modifying default Handset Preference Groups. Copy a default Handset Preference Group, and then click **View** > **Modify**.
Copy	Create a new Handset Preference Group.
Delete	Remove the current Handset Preference Group from the server. If the Delete link is unavailable: 1. Click **View**, and locate the **Handsets Assigned To Group** section. 2. Click **Modify**, and deselect all the associated handsets. 3. Click **Update**, and restart this procedure.

Handset Preference Group Settings

Setting	Description	Applies to	
		Allworx Handsets	Reach App
Handset Preference Group Name	Description of the Handset Preference Group.	Yes	Yes
Station Mode	Changes the phone behavior to PBX Behavior or Key System Behavior. It affects how some of the PFK functions work, see "Manage the Programmable Function Keys (PFKs)" on page 67.	Yes	No
Interact CLID	Selects which call information displays in the Interact and in TAPI-compliant PC applications that receive calls using the TSP driver. Configure the phone to display one option: • dialed name/number. • regular caller ID name/number information.	Yes	No
Call History Size*	Specifies the number of calls the station keeps in the call history. If specifying a value of zero, the phone does not maintain a Call History to help preserve the privacy of the handset user.	Yes	No
Clock Mode*	Displays phone station clock. • **Off** disables the clock display. • **12-hour** format or **24-hour** format.	Yes	No
Codec Preference Order	Check the box to select the codecs to use.Click and drag the codecs for the preferred codec usage order. Contact the service provider for the preferred CODEC order. **6x12, 6x, 48x**: CODEC preference choice must include G.711u. **G.722:** is not supported for server audio. This setting defines codec selection order and does not support all codecs for all call types (example: accessing the Auto Attendant requires G.711). The phone attempts to use the first choice but uses the codec required to support the call.	Yes	Yes

Setting	Description	Applies to Allworx Handsets	Applies to Reach App
Daylight Saving Time	Specifies if the handset uses Daylight Savings Time (DST) to compute the local time. off: Does not use DST. on: Follows US rules for DST. use current server setting: The phone is in the same time zone as the server. NOTE: For remote phones, use the DST setting of the actual location (available further down the page).	Yes	No
Display Date Format	Changes the date display order. Options include: • MM/DD/YY • YY/MM/DD • DD/MM/YY NOTE: If the phone does not display the year (e.g., 9202e phone), the month and day matches the order of the selection without the year.	Yes	No
Display Language	Changes the Allworx phone display language. • Requires Allworx System Software 7.6.6.5 or later. • Requires the Dual Language Support feature key. The phone defaults to English during a Factory Reset, functional test mode, or if the Dual Language Support feature key is unavailable. • Not available to change the phone display language within the phone configuration menu. • Does not support the characters beyond the standard English characters, e.g., accented characters are unavailable for user names.	Yes	No
Hold Button Mode*	Controls the behavior of the phone Hold button: Hold Calls, Park Lines: Holds calls on Call Appearances. Parks calls on line appearances. Hold then Park: Press and release quickly to place the call on hold. If the button is pressed for longer, the call is parked. Park then Hold: Press and release quickly to park the call. If the button is pressed for longer, the call is held.	Yes	No
Hold Reminder Mode*	Reminds the handset user there is a call on hold. Select the reminder type from the drop-down list: No Reminder: Does not notify the user. On Hook: Beeps whenever the phone is put on-hook with the call(s) on hold. Timer: Beeps after holding the call for the specified period. On Hook and Timer: Beeps after the holding call for the specified period or if placing the handset on hook.	Yes	No
Hold Reminder Timeout*	Specifics a length of time a call is on hold before the call beeps. Available: If Hold Reminder mode is **Timer** or **On Hook and Timer**. Unavailable: If Hold. Reminder **No Reminder** or **On Hook.** Default: 120 seconds.	Yes	No

Setting	Description	Applies to: Allworx Handsets	Applies to: Reach App
Hold Music Selection	Determines the hold music such as Line-In or a .snd file.	Yes	Yes
Jitter Buffer Size	Alters the size of the jitter buffer. • Variation in network audio packet; the phone experiences latency, resulting in a reduction in audio quality. • Uses a jitter buffer to maximize the audio quality when jitter occurs.	Yes	No
Message Waiting Indication (optional for stations with no owner)	Controls the voicemail message indicator on the phone for the handset owner. Select an available option: No Indication — Provides no visual display on the handset. Visual — Illuminates the red LED on the Messages button. Stutter Dial Tone — Emits a stutter from the phone when a dial tone starts for each call. Both — Provides a visual indicator and a stutter dial tone.	Yes	No
Messages Button Operation*	Controls the behavior of the phone Messages Button: Displays Messages List — Press the Messages button to view and manage the voicemail using the phone display. Press the Messages button a second time to call the Audio Message Center to use audio menus to manage voicemail. Calls Message Center — Press the Messages button to call the Message Center and use audio menus to manage voicemail.	Yes	No
Missed Call Tracking*	Displays the number of calls missed since last making or receiving a call. Select which missed calls to track: • Call Appearances Only • All Appearance Types	Yes	No
Mobile Data Access	Enables the phone to access WiFi and Mobile Networks.	No	Yes
Off Hook Digits Dialed	Enables the phone to dial specified digits automatically whenever the phone is off hook. • **Example 1**: a service phone placed at a locked door or loading dock - disable all dialing, and the phone automatically dials a predefined number when it is taken off hook. • **Example 2**: the phone automatically dials 9* to get an outside line. Note:The phone always dials these digits when taking the phone off hook, so this might interfere with other uses of the phone. Example: if configuring the phone to automatically dial '9', the user cannot use PBX features that don't start with '9' (e.g. Call Park, Call Forwarding, etc.).	Yes	No
Paging Mode*	Specify the conditions for hearing pages on this handset. Options: • Pages Always Accepted. • Pages Never Accepted. • Pages Only Accepted when the station is on-hook (default).	Yes	No
PCP Keep-alive Interval	Adjust the communication time between the Interact or Interact Professional application and the Allworx handset, if there are network problems between Interact and the Allworx phone that are causing Interact to disconnect from the phone, extending this interval can avoid spurious disconnection and reconnection.	Yes	No

Setting	Description		Applies to: Allworx Handsets	Applies to: Reach App
Phone Status Visibility	Controls how the phone displays in the Interact Directory tab.		Yes	No
	Normal	Displays the extension and the phone status.		
	Hide Status	Displays the extension and the phone status always shows as Idle.		
	Hide Completely	Displays neither the extension nor the status.		
Redial Memory*	Sets the length of time the redial memory persists in the phone station. Useful to maintain privacy on phones used in shared areas.		Yes	No
RTP /RTCP Port Range	Specifies the range of UDP ports used for Real Time Protocol audio. • Typically 16384 to 32767 - where the low value must be even numbered and the high value must be odd numbered. • When placing remote phones behind third-party firewalls, under certain conditions, to create mapping rules for each phone behind the firewall, greatly restrict the UDP port range. • See "Px Expanders and Remote Phones" on page 157.		Yes	Yes
SIP NAT Keep-alive Interval	Some NAT firewalls automatically time out and close connections to devices it protects. • If a remote phone is behind such a firewall, then this setting prevents the timeout. • The phone sends messages called keep-alive packets to the Allworx server at the specified frequency. • Set the value to an interval that is shorter than the firewall timeout.		Yes	No
Server RPC Timeout	For use with Hot Desk login timeout. • Adjustable from 3 to 30 seconds for network latency. • Default value is 10 seconds.		Yes	No
SIP Port	UDP port number used for the SIP protocol by the phone. Use the default value of 5060 unless the handset is behind a third-party firewall and the network requires a different value.		Yes	Yes
Handset Network Template	Select Handset Network Profile Template from the drop-down list to download to the handset.		Yes	No
Network Settings	Determines if the handset uses the selected Network Template or relies on the network settings entered on the phone.		Yes	No
Time Zone	Specifies the time zone used to compute the local time.		Yes	No
	Use Current Server Setting	Phones are in the same time zone as the server.		
	GMT <12-hour clock/ location>	All other phones, including a remote phone.		
Unannounced Transfer Mode	Specifies how the user completes unannounced (blind) transfers immediately after dialing the recipient phone number.		Yes	No
	Requires hang-up	Enables the person initiating the transfer to hold on the line and speak to the recipient (i.e. perform an announced/attended transfer) before hanging up to complete the transfer.		
	Immediate	Results in standard system software releases 7.3 and lower unannounced (blind) transfer behavior.		

* Indicates using the on-handset configuration menu to override the setting.

Setting	Description	Applies to	
		Allworx Handsets	Reach App
Checkbox Parameters			
Audible Dialing*	Hear DTMF sounds on the handset or speaker when dialing the phone. When disabled, dialing operations are silent.	Yes	Yes
Auto On Hold*	Place an active call on hold when another call comes in (with a free Call/ Line Appearance PFK) when pressing the PFK for the new call. • Avoids terminating the first call. • Default: enabled.	Yes	No
Auto Retrieve Calls*	Enables automatic retrieval of a hold call by going off hook. • If disabled, the phone connects to an open line (if available) when going off hook. • Default: disabled.	Yes	No
Call Supervision	Monitor the handset by another handset with a Call Supervision PFK.	Yes	No
Call Timer Display*	Enables the phone LCD displays call duration timers.	Yes	No
Caller ID Display	Enables the phone to display any caller ID information.	Yes	No
Configuration Menu	Enables the phone handset owner to access the configuration menu when securing phones located in common areas.	Yes	No
DTMF Playout	Send DTMF digits during an active call.	Yes	Yes
Intercom Auto Answer*	Answer an incoming Intercom call automatically. • Unchecked (unchecked) - the user must manually go off hook to answer Intercom calls. • Checked (default: enabled) - automatically answers Intercom calls with a live microphone after the alerting tone.	Yes	Yes
Keypad Dialing	Initiate or transfer a call via the keypad. • Does not prevent the keypad from functioning during an active call. • Prevents the use of the keypad to initiate functions directly with the Allworx server (for example: dial number, Call Park, etc.).	Yes	No
Line Appearance(s) Use Dial Plan	If not enabled when selecting a Line Appearance PFK to dial a phone number, the phone does not display the number, does not include the number in the call history, and does not enable the user to redial the number. A reason for disabling this option is if the CO lines on the system do not follow the North American Numbering Plan (including if the lines connect to another PBX). The use of this feature requires configuring the server dial plan. See "Dial Plan" on page 37).	Yes	No
Off Hook Auto Answer*	Answer any new call when it goes off hook.	Yes	No
Off Hook Ringing*	Enables the phone to ring if there is an active, incoming call while the user is already on an active call. • Disabled (default) - does not ring the phone station, if the user is on an active call. • Does not affect the appearance LED indicators and the display operation.	Yes	Yes
On Hook Dialing*	Dial a keypad number. • Does not require picking up the handset or pressing the speaker phone button. • Enters speaker phone automatically, if the phone is on hook and the user dials a digit on the keypad.	Yes	No

Setting	Description	Applies to	
		Allworx Handsets	Reach App
Quick Transfer	Enables one-touch call transfers using BLF and Speed Dial PFKs. If disabled, pressing a BLF key during an existing call terminates the original call, standard in system software releases 7.3 and lower.	Yes	No
SNMP	Enables using the SNMP agent on the handset with network management tools.	Yes	No
Visual On Call*	Lights the handset Visual Ring Indicator when the handset is off hook.	Yes	No
Visual Ringing*	Lights the Visual Ring Indicator when the phone receives an incoming call. If disabled, the user only hears ringing.	Yes	No

* Indicates using the on-handset configuration menu to override the setting.

To assign handsets to the Handset Preference Groups:

When adding new handsets, the server assigns the handsets automatically to the Handset Preference Group in the active Handset Template. To save time, if the factory default options on the phone are not accurate for the site, create a custom Handset Preference Group and incorporate it into a new, active phone template before adding the site handsets.

Note:	If there is a change to the Display Language setting, the phone displays the current language at the beginning of the reboot and displays the new language at the end of the reboot.

To add handsets manually to Handset Preference Groups:

View Configuration	See "To manage the View Configuration:" on page 67 for more information.
Handsets assigned to Group	1. Log in to the Allworx server admin page, navigate to **Phone Systems** > **Handsets** page. 2. Locate the **Handset Preference Groups** section and click **View.** 3. Locate to the **Handsets Assigned To Group** and click **Modify**. 4. Select or deselect the user check boxes to add or remove the user from the Handset Preference Group. When removing a handset, it automatically moves to the server PBX Station or Key System Station default group.

12.6 Manage Handset Templates

To save time and reduce errors while configuring phones, the Allworx server includes templates that store phone configurations for each phone type or create specific templates.

To see a list of current templates:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets**.

2. Locate and open (click the additional information arrow ▸, if necessary):

Handset Network Profile Templates	Displays the current network profile templates. Click View to see the available profile templates.
Handset Configuration Templates	Displays the list of Active Templates and Handset Templates. Click the phone model link in either table to view that template.

To manage Network Profile Templates:

The phone stores network and registration settings as a Handset Network Profile. Allworx administrators can select a Handset Network Profile to avoid manually changing phone settings for different situations such as connecting to a second Allworx server for disaster recovery purposes or temporarily connecting to the Allworx server from home by selecting a user or server profile.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets** > **Handset Network Profile Templates**, and click the additional information arrow ▸, if necessary.

2. Click one of the following links:

View

Displays the Handset Network Profile Template settings. Users cannot change the default templates. For non-default templates, click **Modify** to update:

Template Name:	Type a new description in the field provided.
Next Phone Reboot use:	Select an option from the drop-down list: • Current Phone Settings • Phone Archived Profile • <Newly created profile(s)>

Note:
Phone settings can override the Next Phone Reboot setting. To verify the Handset Network setting:
- Press the CONFIG soft key on the phone, and then press the down arrow key to highlight **Preferences**.
- Press the Select button, and then press the down arrow key to highlight **Server Profile Selection**.
- Press the Select button. Two options display - **Use Server Selection** or **Ignore Server Selection**.
- Select **Use Server Selection** enable the Handset Network Template setting to take effect, and press the Select button.
- Press the EXIT soft key on the phone twice to get back to the main screen.

For each change, click **Update** to save the changes or **Cancel** to disregard the request.

To include a new profile associated with the template, click **add profile** and update the settings. For existing profiles, click **modify** to update the existing settings or **delete** to remove the template from the list.

Next Phone Reboot use:	Select an option from the drop-down list: • Current Phone Settings • Phone Archived Profile

Network Profile Settings

Profile Name:	Enter a description.
Phone IP:	Select an option from the drop-down list: • DHCP • Use Phone Setting. It is not possible to assign a static IP address to a phone using a Handset Network Profile.
VLAN:	Select an option from the drop-down list: • Use Phone Setting • Disabled • Manual • Hub Debug Mode • CDP Enabled • LLDP Enabled • Auto Configure

View (con't)	**Network Profile Settings**	
	Auto NAT:	For remote phone use. When enabled, the phone communicates the server via SIP. The server automatically sets up the NAT information at SIP REGISTER time of the device. The server uses the device NAT information and communicates to the phone what address is receiving packages with the device and what address the server is receiving packets from so the phone can use it in media negotiation. Select On or Off from the drop-down list.
	Plug and Play Key:	Enter a new key.
	Boot Server Address:	Enter the IP Address or Domain Name.
	Time Server Address:	Enter the IP Address or Domain Name.
	Contact Server IP:	Enter the IP Address.
	Phone VLAN Settings	Enter an ID and Priority number.
	PC VLAN Settings	Enter an ID and Priority number.
	Click **Add** to save the new profile or **Cancel** to disregard the request.	
Copy	Duplicates the selected Handset Network Profile Template. Click **Update** to save the changes or **Cancel** to disregard the request.	
Delete	Removes the profile from the list. Verify the selected template, and then click **Delete** to remove the template or **Cancel** to disregard the request.	

3. Select **Add** for more profiles following the steps above.

After creating a template, assign it to the phone using the Handset Preference Groups. Follow the procedure "Manage Handset Preference Groups" on page 72 for more information.

To change the handset configuration template:
The current, default template for each phone type lists in the Active Templates section.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets** > **Handset Configuration Templates.** Locate the phone model number, and click **Change** in the action column.

2. Select a Handset Template from the drop-down list to use as the default.

3. Click **Update** to save the change or **Cancel** to disregard the request.

To manage the Handset Templates:

Note:	Allworx administrators cannot change factory default handset templates.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets**.

2. Locate and open the **Handset Configuration Templates** > **Handset Templates** section, and click the additional information arrow ▸, if necessary, and then click one of the following links:

<Template name>	Click a default template to view the settings. Click a non-default template to view/modify the settings.

Copy	Creates a duplicate of the selected Handset Template.
Delete	Removes the Handset Template from the list. IMPORTANT: The Allworx server does not enable deleting Factory Default or Active Handset Templates. Requires no further action.

3. Click the new Handset Template to open the View Template page and select an option:

edit name	Enter a new description in the field provided.
Handset Preference Group section	Click **modify** and select a **Handset Preference Group** from the drop-down list.
Programmable Function Keys	Click **modify**. The Modify PFKs window displays. See "Manage the Programmable Function Keys (PFKs)" on page 67 for more information.
Interact Appearances	Click **modify** and check or uncheck the appropriate check boxes to enable or disable the Interact Appearances, respectively.

4. Click **Update** to save the change or **Cancel** to disregard the request.

5. Navigate back to the **Phone Systems** > **Handsets** window, locate **SIP Handsets**, and click **Reboot Allworx Handsets**. This reboots the Allworx handsets for the changes to take effect.

To assign a handset template:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Handsets**.

2. Locate the **SIP Handsets** section, and click the additional information arrow ▶, if necessary. Click one of the following links:

+	Bulk edit feature - assigns the Handset Preference Group to multiple handsets at once. 1. Click the check box in the left column to select the phones to apply the Handset Preference Group. 2. Locate the **Handset Preference Group** line and select the Handset Template in the drop-down list. Click **Apply**.
<User>	1. Locate the line for the specific phone and click **View Configuration**. 2. Locate the **Template Options** section and select the preferred template in the drop-down list. Click **Apply**.

3. Locate the **SIP Handsets** heading and click **Reboot Allworx Handsets.** This reboots the Allworx handsets for the changes to take effect.

12.7 Access Phone Web Administration

Access each Allworx handset using a web interface to view stored configuration information of the handset, modify the handset configuration and personal speed dials, and view information (event log, call history, phone configuration parameters). The phone web admin page has the same look and feel as the Allworx server web admin page, but the password used to access the phone web admin page is NOT the same.

Note:	The server must be able to reach the phone IP Address. Typically, the server cannot reach remote phones.

To access the phone administration:

1. Log in to the Phone Administration page. To learn the password, see "VoIP Server" on page 181 for more information.

2. Access the administration page of an Allworx handset using one of the following options.

Allworx server web admin page	1. Navigate to the **Phone System** > **Handsets** page. 2. Click **handset IP address**.
Browser	1. Enter the IP address of the handset. 2. Find the IP address using the handset soft keys: **CONFIG** > **Current Status** > **Info.**

12.7.1 Connect Allworx Desk Phones to the Allworx Server LAN

The procedures below describe connecting the Allworx phones to the same LAN as the Allworx server. If connecting to a different network, see "Px Expanders and Remote Phones" on page 157.

12.7.2 Manage DHCP IP Addressing

The Allworx phone default is DHCP client enabled. When connecting an Allworx phone to a network with a DHCP server, the phone receives the network setup information.

Phone Registration and Installation

The phone registration requires updating the configuration with the IP Address of the Allworx server as well as the network setup.

- If the network DHCP server is the Allworx server, the phone registers automatically.
- If the DHCP server is not the Allworx server, setup the DHCP server to provide the phone with the Allworx server IP Address. Use the TFTP boot server (option #66) in the DHCP data set. If the TFTP boot server is set properly, the phone needs no additional configuration.
- If the phone gets the IP address from a non-Allworx DHCP server and the DHCP server does not provide the TFTP boot server IP address, manually set the boot server IP address (the address of the Allworx server) on the phone.
- If the DHCP server is the Allworx server or if using a properly configured third-party DHCP server, use Plug and Play feature to install the Allworx phone. See "Install with Plug and Play" on page 85 for more information.

1. Press the phone CONFIG soft key. Use the arrow buttons to highlight Network Settings, and press the Select button ☑. If prompted for a password, enter **allworx** using the numeric keypad, and then press the Select button ☑. The DHCP setting highlights.

2. Use the arrow keys to highlight Edit Boot Server. Press the Select button ☑. Use the numeric keypad to enter the Allworx server IP address. Use the asterisk key (*) for periods. When done, press the Select button ☑.

3. Press the EXIT soft key repeatedly until asked to save the settings. Press the YES soft key.

4. Reboot the phone: press the CONFIG soft key, use the arrow keys to highlight Reboot Phone, and press the Select button. Answer Yes to the prompts. The phone reboots and connects using the DHCP and manually entered settings.

12.7.3 Manage Static IP Addressing

If assigning the phones static addresses rather than using DHCP, manually enter the following network settings on the phone:

- Boot server (the Allworx server IP address or domain name)
- Time Server (optional, can be an IP address or domain name)
- DNS Server IP
- Phone IP
- Netmask IP
- Gateway IP

To update the Static IP Address:

Note:	To abort an Allworx phone boot cycle: • Allworx System Software release 7.4 or higher: press the MUTE/DND button three times. • Allworx System Software release 7.3 or lower (phone firmware version 2.3 or lower), press the RELEASE button three times.

1. Press the phone CONFIG soft key.

2. Use the arrow buttons to highlight Network Settings, and press the Select button. If prompted for a password, enter **allworx** using the numeric keypad, and then press the Select button. The Network Settings menu displays and DHCP highlights.

3. Press the Select button until the DHCP setting is Disabled.

4. Use the arrow keys to highlight Edit Boot Server. Press the Select button. Use the phone keypad, enter the IP address or the domain name of the Allworx server. Use the asterisk key (*) for periods. When done, press the Select button.

5. Highlight, select, and enter the remaining settings from the list above. Press the EXIT soft key repeatedly until the system prompts to save the settings. Press the YES soft key.

6. Press the CONFIG soft key to reboot the phone, use the arrow keys to highlight Reboot Phone, and press the Select button. Answer Yes to the confirmation. The phone reboots and connects using the DHCP and manually entered settings.

12.8 Manage VLAN Settings

A network site using VLANs requires additional configuration. Change the setting to **Manual** to reduce

the phone boot time, if:

- the network settings VLAN is set to Auto Configure, and
- connecting the Allworx server to a switch port that does not support a discovery protocol.

The Allworx phones VLAN configuration options are as follows:

System software release 7.2 or higher (phone firmware version 2.2 or higher)	Default to VLAN auto configure.
Automatically configured Allworx phone	The network utilizes LLDP-MED or CDP to set network host VLAN configurations.
Manually configured Allworx phone	If the phone is running an earlier version of firmware or if the network does not use LLDP-MED or CDP.

To configure VLANs on the phone:

1. Press the phone CONFIG soft key.
2. Use the arrow buttons to highlight Network Settings and press the Select button ☑. If prompted for a password, enter **allworx** using the numeric keypad, and then press the Select button ☑. The Network Settings menu displays and DHCP highlights.
3. Use the arrow keys to highlight VLAN. Press the Select button ☑ until the VLAN setting is Manual. Use the arrow buttons to highlight Phone VLAN Settings. Press Select ☑.
4. Enter the value for Phone VLAN ID, and press the Select button ☑, and then Enter the value for Phone VLAN Priority, and press the Select button ☑.
5. Use the arrow buttons to highlight PC VLAN Settings. Enter the value for PC VLAN ID, and press the Select button ☑, and then Enter the value for PC VLAN Priority, and press the Select button ☑.
6. Press the EXIT soft key repeatedly until prompted to save the settings. Press the YES soft key.
7. Press the CONFIG soft key to reboot the phone, use the arrow keys to highlight Reboot Phone, and press the Select button☑. Answer Yes to the confirmation. The phone reboots and connects using the DHCP and manually entered settings.

Note:	If the phones are running an earlier version of the firmware or if the network does not use LLDP-MED or CDP, it may be more efficient to upgrade the phones prior to connecting to the site network. Do this in a lab by connecting the phones to an Allworx server that uses the system software release 7.2 or higher.

12.8.1 Create On-phone Archive Profile

The Allworx phone can store an On-phone Archive profile using the CONFIG menu on the phone. Download additional profiles to the phone from the server using the Handset Preference Groups.

To create the On-phone Archive profile:

1. Press the CONFIG soft key on the phone.

2. Use the arrow buttons to highlight Network Settings, and press the Select button. If there is already a connection between the Allworx server and the phone and the system prompts for a password, enter the password from the Allworx server admin **Servers** > **VoIP** page, and then press the Select button. The Network Settings menu displays.

3. Use the arrow buttons and the Select button, configure the network settings.

4. Press the ARCHIVE soft key. This saves the current network settings as the Archive profile. The Archive profile is when changing the Network Settings and/or rebooting the phone.

12.8.2 Install with Plug and Play

The Allworx administrator may add Allworx phones to the Allworx server using the Plug and Play installation. After setting up the network connection to the server, the phones register with the server during the next restart or power up.

Caution:	The Plug and Play feature enables unauthorized users to add phones to the server without Allworx administrator knowledge. To avoid this, disable the Plug and Play installation feature of handsets. See "VoIP Server" on page 181 for more information. Manually add phones to the system when disabling Plug and Play for security reasons or to configure the phone prior to plugging into the network (for example: pre-configure the server before an installation at the customer site).

To add VoIP phones manually from other manufacturers, see "Manage Handsets" on page 63.

- If there is difficulty configuring a phone, restore the phone to the factory defaults, and then reapply the settings.
- If rebooting an Allworx IP phone on the network and a new version of phone software is available, the phone firmware requests to load the upgrade.
- When first connecting to the Allworx system, assign an Allworx IP phone to a user or replace an existing phone. The following options are available:

Now > Add	Assigns a user to the phone immediately. Select from the list of all system users or limit the list to those users with no assigned phones. Reboot the phone to complete the assignment.
Now > Replace	Replaces a compatible, existing Allworx phone. Select from the list of the all Allworx system phones. The phone web administration password, if any, is required to replace a phone. See "VoIP Server" on page 181 to view or change the password. Reboot the phone to complete the phone replacement.
Later	Defers the user assignment. If there is no existing phone configuration from within the Web Admin page, the user assignment prompts display on subsequent reboots.
Via Web	Assign the user via the web administration. The user assignment prompt does not display on subsequent restarts.

- When using Plug and Play to register a phone, the server displays the phone on the **Phone System** > **Handsets** page in the SIP Handsets section with the correct model and the MAC address.

12.9 Test the Phones

Some suggested steps for verifying that a phone is set up correctly:

- dial 400[1] for Auto Attendant.
- enter '#7'. The Auto Attendant plays back the phone configuration information.
- hang up. The phone rings back.

If any of these steps fail, check:

- physical wiring between phone and server.
- network settings.
- phone and server configuration.

Click here to return to the "Install Checklist" .

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the Phone Functions tab of the My Allworx Manager page to determine the extensions to use for the corresponding feature.

Chapter 13 Languages

Languages supports US English and one second language for audio prompts. The server language configuration supports playing prompts in one of two languages. Callers can switch between the two languages by pressing '##'.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role*
Feature Key Required	Dual Language Support
*Not all features on the Languages page are available to Phone Administrators.	

Note:	To change the handset display to Castilian Spanish or Canadian French, see "Handset Preference Group Settings" on page 73 for more information.

Important points of dual language support:

- Factory-installed primary language: US English.
- Additional languages: install a Language Pack (available from the Allworx Reseller Portal) and select it as either the Primary or Secondary language.
- Assign points of origin of new calls (Outside Lines, Users, and handset Call Appearances) a language. The default language is Primary.
- Configure the prompts in the following Allworx system call features to use the language of the call point of origin or override it with a specific language:
  - Auto Attendants*
  - Call Queues*
  - Leaving Voicemail
  - Phone Features (Call Park, Call Forward, Do Not Disturb extensions, Displays)
  - Conference Center*
  - Follow Me*
  - Message Center*

  * If configured, callers can toggle between languages by pressing ##. Example: An Auto Attendant uses Spanish prompts. The prompt speaks in English "To switch to English, press ##."
- Record and save custom greetings for Auto Attendants and Call Queues with a length limit of 15 minutes per greeting separately for the primary and secondary languages. The custom recordings are not a part of the previously downloaded language pack. Therefore, if the primary or secondary language changes, the server continues to use the original primary custom recordings.To manage the custom recordings, see "Custom Recordings" on page 213 for more information.
- Incoming calls to the Allworx system from remote Allworx servers retain the language used by the remote system, unless overridden by language settings on the local server.

Note:	All interconnected Allworx servers must run the same release of software and use the same languages.

13.1 Install the Language Pack

The Allworx system default language is US English. After adding the Dual Language Support feature key to the system, the Allworx administrator can install one additional language.

To install an additional language:

1. Download the language pack from the software download page of the Reseller Portal at www.allworxportal.com.

2. Unzip the download and copy the language pack (.alp) file onto the PC.

3. Log in to the Allworx server admin page, navigate to **Phone System** > **Languages** and locate the **Language Pack Installation and Removal** section. Click one of the following options:

Remove	Deletes the currently installed language pack. Be sure this is the language file to delete - there is no further action after clicking this button.
Choose File	Select the appropriate language pack to install on the server. To install the language pack: 1. Navigate to the location of the language file on the PC, select the .alp file and click **Open**. 2. Click **Install**. After the installation is complete, locate the **Server Language Configuration**, and click **Modify**. 3. Select the new language for the Primary or Secondary language. 4. Select a second available language (e.g. US English) as the Primary or Secondary language, and then click **Update** to save the change or **Cancel** to disregard the request.

4. Restart the server for the changes to take effect.

13.2 Manage the Language Settings

Features such as Auto Attendants and Call Queues within the Allworx system play audio prompts. To configure outside lines, see “Outside Lines” on page 97. To configure specific handsets, see “Handsets” on page 61.

To control the language behavior of the prompts:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Languages**. Locate the **Call Application Language Settings** section.

2. Click **modify**. Locate the feature line and change the settings:

Answer Language	Prompts play in the selected language. Select an option from the drop-down list.	
	Automatic	Prompts play in the current language. For calls from an outside line or Call Appearance, the system uses the call origin default language. If calls come from another application (e.g. the call came into a queue from an Auto Attendant), the system uses the language from the previous application (e.g. Auto Attendant).
	Primary Language	Overrides the current language.
	Secondary Language	Overrides the call current language, if installed.
Enable Language Change	Enables callers to switch languages when the call reaches an Allworx server feature. To switch languages, callers must press ##. To enable callers to change language for the preferred application, check the Display Language Change box.	

Language Change Prompt	Change the prompt language when reaching an Allworx server feature (except for when leaving a voicemail message or when using phone features). Select an option from the drop-down list:

Play if needed	The prompt does not play if the caller has already had a chance to change languages in a prior application. For example: if a Call Queue Language Change Prompt setting is If Needed and directs a routed call to the queue from an outside line, the language change prompt plays. If the call came through an Auto Attendant that enables language changing, the prompt does not play because the caller already had a chance to select a preferred language.
Always play	Every time a call reaches the application, in addition to the prompts normally played, the prompt plays to change the language ("To switch to English, press ##").
Never play	The prompt to change the language does not play. Used when incorporating the prompt to change language to a custom greeting or message. Unavailable for Follow-Me-Anywhere prompts.

Configuration Examples

Example 1: A company has clients that speak English or Spanish. English-speaking clients use one phone number while Spanish-speaking clients use another phone number. The server configuration is:

Configuration	Setup
Primary Language	English
Secondary Language	Spanish
CO Line 1, Default Language	Primary, routed to Auto Attendant 1
CO Line 2, Default Language	Secondary, routed to Auto Attendant 1
All Applications	
Answer Language	Automatic
Language Change	Enabled
Language Change Prompt	Always play

Results:

- English-speaking clients call the English phone number (CO Line 1) and route to Auto Attendant 1 to hear English prompts as well as a prompt to switch to Spanish. Callers dial the appropriate extension. All additional prompts are in English, i.e., leave a voicemail or the Follow-Me-Anywhere prompt to record.
- Spanish-speaking clients call the Spanish phone number (CO Line 2) and route to Auto Attendant 1 hearing Spanish prompts as well as a prompt to switch to English. Callers dial the appropriate extension. All additional prompts are in Spanish, i.e., leave a voicemail or the Follow-Me-Anywhere prompt to record.

Example 2: A company has a Customer Support operation; the technicians speak English or French Canadian. The company has one incoming line for Customer Support calls. The server directs all callers to the same Auto Attendant.

- English-speaking callers dial a shortcut to a support queue serviced by the English-speaking technicians.
- French Canadian-speaking callers switch to a second Auto Attendant, and then dial a shortcut to a queue serviced by the French Canadian-speaking technicians.

The server configuration is:

Configuration	Setup	Configuration	Setup
Primary Language	English		
Secondary Language	French Canadian		
T1 Language (all lines)	English		
Auto Attendant 1		**Auto Attendant 2**	
Answer Language	Primary	Answer Language	Secondary
Language Change	Disabled	Language Change	Disabled
Shortcuts	• Dial 1 for x4302 (Auto Attendant 2) • Dial 2 for x4401 (Call Queue 1)	Shortcut	• Dial 1 for x4402 (Call Queue 2)
Custom Messages	• “For French Canadian, press 1” (recorded in French Canadian) • “To speak with Customer Support, press 2” (recorded in English)	Custom Message	• “To speak with Customer Support, press 1” (recorded in French Canadian).
Call Queue 1		**Call Queue 2**	
Answer Language	Primary	Answer Language	Secondary
Language Change	Disabled	Language Change	Disabled

Results:
The server directs all callers to Auto Attendant 1 to:

Option	Result
Hear an English greeting	Prompts to: • Press 1 for French Canadian. • Press 2 for Customer Support.
Callers press 1	Enter Auto Attendant 2 • Hear the full greeting and prompts in French Canadian. • Prompt to press 1 for Customer Support. • Enter Queue 2 to hear the greeting and status messages in French Canadian. A French Canadian-speaking technician services the call.
Callers press 2	• Enter Queue 1. • Hear the greeting and status messages in English. An English-speaking technician services the call.

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Chapter 14 Message Aliases

Message Aliases enable Allworx administrators to add user or group email addresses on the Allworx server.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

The Allworx server supports unified messaging, which supports:

- combining user voicemail and email messages into one inbox.
- forwarding messages to another email account or POP to an email client.
- using a phone to listen, delete, or forward voicemail messages. When deleting a voicemail message via a phone, the server inbox deletes the message.
- deleting unified messages from the server due to a POP or mail forward; the server also deletes the voicemail, and it is no longer accessible by phone.

14.1 Access Voicemail and Email Messages

To access voicemail and email messages from the server:

- Forward messages to another email account.
- Use a POP3 or IMAP email client to transfer the messages to a PC. IMAP is only available after installing a Mobile VM feature key on the server. See "Email" on page 173 for more information.

14.2 Manage Message Aliases

Note:	If saving a copy of each message on the server, users can exceed the server inbox storage space quota. To avoid this, users should manage old messages in the Message Center. To delete saved messages for individual users, see "Delete User Messages or Recordings" on page 134.

Use the server Message Aliases feature to forward any incoming message (voicemail or email) for a user to an external (non-Allworx server) email account.

1. Log in Allworx server admin page, navigate to **Phone System** > **Message Aliases**.

2. Determine the Message Alias type (options are as follows):

User Message Alias	Message sent to a specific user; may include multiple addresses.
Group Message Alias	Message sent to a specific group; may include multiple addresses.

3. Click one of the following links:

<table>
<tr><td>add new alias</td><td>Adds another message alias to the server.
1. Locate the first field and:<table><tr><td>User Message Alias</td><td>Select option from the drop-down list to update the user field.</td></tr><tr><td>Group Message Aliases</td><td>Enter the group name.</td></tr></table>2. (optional) Locate the Message Center Alias field and click the drop-down list. Select the appropriate Message Center alias from the list.
3. Check the Keep copy on server to keep a copy of the voicemail in the Message Center.
4. Locate the Addresses field and enter the external email address. Click the tab button to add multiple addresses.
5. Click Add to save the new message alias or Cancel to disregard the changes.</td></tr>
<tr><td>Modify</td><td>Updates an existing message alias.
1. Locate the first field and:<table><tr><td>User Message Alias</td><td>Select option from the drop-down list to update the user field.</td></tr><tr><td>Group Message Aliases</td><td>Enter the group name.</td></tr></table>2. (optional) Locate the Message Center Alias field and click the drop-down list. Select the appropriate Message Center alias from the list.
3. Check the Keep copy on server to keep a copy of the voicemail in the Message Center.
4. Locate the Addresses field and enter the external email address. Click the tab button to add multiple addresses.
5. Click Update to save the new message alias or Cancel to disregard the changes.</td></tr>
<tr><td>Delete</td><td>The server removes the message alias.
1. Locate the user in the Users list and click Delete in the Action column for the appropriate message alias. Read the pop-up message and confirm this is the user to remove from the business directory.
2. Click Delete to remove the user from the list or Cancel to disregard the request.
No further action is necessary.</td></tr>
</table>

14.3 Avoid Common Mistakes in Forwarding Messages

A common error is assigning the Allworx server domain name the same as an existing domain name. An Internet hosting service provides email for employees: user@mycompany.com. Configure the email application to POP the email off the hosting service email server for employees to get email.

When installing the Allworx server, it receives a domain name of mycompany.com. This creates a problem when configuring the Internet DNS servers sending mail to user@mycompany.com to the external hosting service IP address, but the Allworx DNS server thinks it is responsible for handling email for the same domain name.

The solution is to not use the same domain name for both servers.Put user@mycompany.com in the members list for the Allworx server to recognize the username and send the email to itself instead of the external IP address.

To setup external accounts (SMTP, POP3 Client, IMAP Client), see “Email Server Configuration Settings” on page 173. When using personal email accounts for External SMTP Accounts or POP3 Clients, see “User Template Settings” on page 136 for more information.

Example 1

Requirements	Tom (login name tom) does not expect to get email at the Allworx server address, but he uses an external email account (tom@yahoo.com). The Allworx server voicemail should go to the external email account and also be available from his phone.
Configuration	Set up an Allworx server User Message Alias for Tom to forward all messages to the external email account, and keep a copy on the Allworx server. Create a new message alias to: • Set the email Alias to Tom. • Set members to Tom and tom@yahoo.com.
Commentary	Tom uses the phone to delete old voicemail messages. If sending an email to the Allworx account, the Allworx server forwards it to an external account, leaving a copy on the Allworx server. If email accumulates on the server, Tom needs to connect with a POP email client to delete the old messages.

Example 2

Requirements	Tom is a remote user of the system and does not have a phone. The extension configuration sends all calls directly to voicemail. Tom wants to access all email and voicemail messages from his external email account (tom@yahoo.com).
Configuration	Set up an Allworx server User Message Alias for Tom to forward all messages to the external email account. Create a new message alias to: • Email Alias is set to tom. • Members is set to tom@yahoo.com.
Commentary	Tom gets all email and voicemail messages using the external email account. Since the system deletes the messages off the server after forwarding, Tom does not need to periodically delete anything.

Example 3

Requirements	Tom wants use the Allworx server for his email, and his phone to listen to voicemail messages. Tom does not want the voicemail sent to his email account.
Configuration	Set up Tom's Allworx server POP3 Mail Transfer configuration to transfer email messages. Set up Tom's PC email application to POP email off the Allworx server without leaving a copy on the server.
Commentary	The server deletes Tom's email messages as soon POPping to his PC email application. The server keeps Voicemail messages until he deletes them via his phone.

Example 4

Requirements	Tom wants to use the Allworx server for email. He wants to use his phone to listen to voicemail messages and wants to send those messages to his email account.
Configuration	Configure Tom's Allworx server POP3 Mail Transfers for email and voicemail messages (default). Set up Tom's PC email application to POP email off the Allworx server and leave a copy on the server until deleting the message on his PC.
Commentary	Tom can to listen to voicemail messages on his phone or PC (via email). If he deletes a voicemail message using his phone, it remains on the PC. However, if he deletes a voicemail from the PC, it does not remain on the server, making it no longer available on his phone. Tom must periodically delete messages from the PC to avoid exceeding the server message quota.

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Chapter 15 Music On Hold

Music on Hold provides audio to callers in queues, calls held on phones, and parked calls. It also supports configuring multiple file sources and playing different music to different callers.

Music can come from a Line-In source or from electronic files stored on the Allworx server. To use a Line-In source, consult the Allworx Server Installation Guide.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

15.1 Filename Requirements

The Allworx server provides an electronic hold music file (default music file: “moh_supplied.snd”), and the Music On Hold file repeats as long as there are callers on hold. If a different style or a site-specific music track is necessary, import it onto the Allworx server. See “To import/export greetings and messages:” on page 21 for more information.

Note:	Allworx recommends assigning the files to Handset Preference Groups instead of individual Call Appearances. Assigning the file to a Handset Preference Group updates the Hold Music Selection preference setting for the group. See “Handset Preference Group Settings” on page 73 for more information.

The system audio (e.g. Auto Attendant greetings) files must be Telephony, raw, mu-law (u-law), mono, 8-bits per sample, 8KHz sample rate and use the file naming convention:

File name: moh_n_m.snd

- 'n' is a number between 1 and 30. This is a unique number among the Music On Hold files on the system. If importing a Music On Hold file that duplicates the number ‘n’ of a file that is already on the system, the system replaces the existing file.
- 'm' is a user defined string that uniquely identifies the file. Valid characters include ('A'-'Z'), ('a'-'z'), ('0'-'9') and underscore.
- Example: **moh_1_sales.snd** or **moh_2_service.snd**.

To convert files into the required format for the Allworx server, see “Custom Recordings” on page 213.

To assign individual Call Queues or ACD queues, see “To manage the Call Queues/ACD settings:” on page 27.

15.2 Manage the Music On Hold

To manage the Music On Hold:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Music On Hold**. The following sections display on the page:

File Statistics	The memory allocation for imported music file.
Music On Hold Source	Individual music file details, assigning music sources to Call Queues, Call Appearances, and handset preference groups.

2. Locate the **Music On Hold Sources** section. Locate the file type and click **Usage**.

Option	Description
Line-In	Default music source. Change the selection by going to a different music source, click Usage, and check the preferred client(s). Click check all to change all clients to the default option.
None	Sets the client to use no Music On Hold. Clicking check all or uncheck all selects or de-selects all the clients, respectively. Or click the checkbox next to the individual client(s). Unchecking a box next to a client resets that client to the Line-In option.
moh_supplied.snd	Sets the client to use custom, supplied files. Clicking check all or uncheck all selects or unselects all the clients, respectively. Or click the checkbox next to the individual client(s). Unchecking a box next to a client resets that client to the Line-In option.

3. Click **Update** to save the change or **Cancel** to disregard the request.

Click here to return to the "Install Checklist" .

Chapter 16 Outside Lines

Outside Lines support access to various communication lines. Allworx servers support placing and receiving calls over the following line types:

Allworx Server				
Line Type	**6x12**	**6x**	**48x**	**Connect**
POTS/CO	X	X	X	X*
SIP Proxies	X	X	X	X
Px Expanders		X	X	X
SIP Gateways		X	X	X
T1/PRI			X	X**
T1/CAS - T1/RBS			X	X**
NFAS			X	
* Applies to Connect 324, 536, and 731 servers only.				
** Applies to Connect 731 server only.				

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role* Network Administrator role*
Feature Key Required	No
* Features are available to Phone Administrators or Network Administrators, but not both roles.	

Additionally, the Allworx server and Allworx IP phones support a configuration like a Key System. **Example Configuration**:

Requirement	An insurance agency, Best Insurance, has 3 CO lines. • The office has five employees, each having an Allworx phone. • The system behaves like a Key System with a PFK on each phone mapped to each of the CO lines. • Using the PFK, each employee can monitor and directly answer each of the CO lines. If unanswered, an incoming call should ring 6 times before routing to a central (not individual user) voicemail for the office.
Configuration	1. Create a generic user on the system to receive the central voicemail for the office. Call the user “Best Insurance”. 2. Create a system extension to route all incoming calls. Set up the call route so that it has one connection attempt with Key System Ring Delay so the Call Appearance (phone) that rings 6 times. 3. Configure the call route Finally Route to transfer to voicemail for user “Best Insurance”. For each CO line, check the **Enable Line Appearance** box in “Manage Analog Central Office (CO) Lines” on page 98. 4. Configure the call route for each CO line so all calls go to the created system extension. 5. Configure a Line Appearance PFK for each CO line on each Allworx phone. See “Manage the Programmable Function Keys (PFKs)” on page 67.

16.1 Manage Anonymous Call Handling

Anonymous Call Handling is the call routing when the incoming Caller ID is private. Anonymous Call detection requires receiving Caller ID information that specifies the calling party has requested privacy. The Allworx server default routes anonymous calls normally, unless otherwise specified.

To manage anonymous call handling:

1. Log in to the Allworx server admin page and navigate to **Phone System** > **Outside Lines**.

2. Locate the **Anonymous Call Handling** section, and click the additional information arrow ▸, if necessary**.**

3. Click **modify.** The Anonymous Call Handling window opens. Click one of the following options:

Routed normally	Default setting. Incoming calls continue to follow the specified call route. See "Manage Call Routes" on page 57 for more information.
Routed to extension	Configure a new number to route private calls normally on the system. Select an extension/ user from the drop-down list. NOTE: Not all ITSPs support Anonymous Call Handling.

4. Click **Update** to save the changes or **Cancel** to disregard the request.

16.2 Manage Analog Central Office (CO) Lines

Central office (CO) lines connect and route telephone calls in the public switched telephone network.

Limitations with CO lines:
If connecting the parties from one CO (POTS) line to another CO (POTS) line, the announced call transfer feature does not work. Set up the handset so that all transfers are blind transfers by managing the **Handset Preference Group** > **Unannounced Transfer Mode** > **Immediate** option. See "Manage User Templates" on page 135 for more information.

To manage an Outside (CO) FXO Line:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Outside Lines**.

2. Locate the **Analog (CO) Lines** section, and click the additional information arrow ▸, if necessary**.** Locate the **Analog (CO) Lines** table, and click one of the following links:

New FXO Line	1. Enter the settings information per "Outside (CO) FXO Line Settings" on page 98. 2. Click **Add** to save the change or **Cancel** to disregard the request.
Modify	1. Update the settings per "Outside (CO) FXO Line Settings" on page 98. 2. Click **Update** to save the change or **Cancel** to disregard the request.
Delete	Removes the Outside (CO) Line from the server. Click **Delete** to remove the line or **Cancel** to disregard the request.

Outside (CO) FXO Line Settings

Outside Line	
Description	DNIS display on phones that receive calls on this line.
Port	Automatically filled in.
Enable Line Appearance	Configure the handsets with Line Appearance PFKs for this line.
Default Language	Select a language for systems configured with multiple languages to use with Auto Attendant and/or queue prompts for inbound callers.

Features	
Line has Caller ID Service	Display the Caller ID information.
Enable Echo Cancellation	Only disable at the request of Allworx Customer Support.
Enable Comfort Noise	Applies to Allworx Connects servers only. Enable or disable Comfort Noise Generation. Default is enabled, only disable at the request of Allworx Customer Support.
Optimize for short loops	Check for FXD/IADs less than 500 feet away, not typically selected.
Send digits as dialed	Indicate sending outbound numbers dialed exactly as on the handset placing the call. The number converts into NANPA dialing form, so this box is not normally checked. However, in some cases, the service provider or proxy may be doing the conversion automatically and need to defeat the Allworx server's conversion mechanism without processing per External Dialing Rules.
Prefix Digits	Enter automatically dialed digits on the line prior to dialed digits by handsets placing outbound calls on this line.
CPC Disconnect timer	Default 350 milliseconds.
Pre-dial delay	Typically 500 milliseconds.
DTMF Duration	Typically 100 milliseconds.
DTMF Gap	Typically 100 milliseconds.
Default Auto Attendant Section	
Select the attendant used to answer when calls received from this source are routed to an Auto Attendant.	Select an option from the drop-down list.
Call Route	
Calls received from this CO line go to:	• Extension - select from the drop-down list. • Auto Attendant • Voicemail for user - select from the drop-down list.

To setup Fax Server Support and route an outside line to the device:

The Allworx server provides the ability to send control information in the form of DTMF digits to devices connected to the server FXS ports. Use a phone extension phone and/or the dialed number (DNIS) along with arbitrary DTMF characters to control the following devices:

- Analog FAX servers (e.g. Multi-Tech FaxFinder)
- External paging amplifiers
- External voicemail servers

The server sends the digits immediately after the device answers and before audio from the calling source is available. To add the device and configure sending the DTMF digits, see "Manage Analog Handsets" on page 61. To receive incoming calls, route an outside line to the attached device port.

1. Create an extension that rings the port of the device. See "Add New Extension" on page 55 for more information.

2. Route an outside line to the extension.

Note:	For specific device setup instructions for the Multi-Tech FaxFinder, please refer to the application notes located on the Allworx Partner Portal at www.allworxportal.com.

16.3 Manage Direct Inward Dial (DID) Blocks

Direct inward dialing (DID) is a block of phone numbers for calling into a PBX without requiring a physical line for each number offered by a local telephone company. Working with the PBX, it maps each number to a PBX extension. Each PBX user has a unique outside number that rings the user's phone directly, rather than directing the incoming call to an Auto Attendant. The maximum number of DID blocks is 2000.

Setup Checklist

Follow the order of the steps to successfully configure the Allworx server for DID service.

Step	Description	Installation Guide Link
1	Create a DID block	"To create a DID Block:" on page 100.
2	Configure the call routing plan for the DID block.	"To configure a Call Routing Plan for the DID Block:" on page 101
3	Create a DID line for each DID trunk line plugged into the server.	

To create a DID Block:

1. Login to the Allworx server admin page, navigate to **Phone System** > **Outside Lines**.
2. Locate the **Direct Inward Dial Blocks** section, and click the additional information arrow ▸, if necessary.
3. Click one of the following links:

add new DID Block	Creates a new direct inward dialing block. 1. Enter the following information: • Starting Phone Number (include area code and exchange) • Total number of phone numbers in DID block (specified by the telephone company) • DID Routing Plan - select the plan from the drop-down list. 2. Click **Add** to save the changes or **Cancel** to disregard the request. NOTE: If the site phone numbers are over a range of numbers, create DID blocks for each individual or grouping of phone numbers. • It is suggested to create a larger DID block that spans multiple DID ranges, even if many of the numbers in the block are not in use for easier management of the blocks. • Since there is a limit to the number of assigned DID blocks to any outside line (128 blocks per line), combining DID numbers into larger blocks avoids reaching this limit.
Modify	Reconfigure the existing settings. 1. Enter the following information: • Starting Phone Number (include area code and exchange) • Total number of phone numbers in DID block (specified by the telephone company) • DID Routing Plan - select the plan from the drop-down list. 2. Click **Update** to save the changes or **Cancel** to disregard the request.
Delete	Removes the DID Block from the system. Verify the DID block selection, and then click Delete to remove the DID Block or Cancel to disregard the request

To configure a Call Routing Plan for the DID Block:
The server uses the Default Extension to map any unassigned phone numbers to an extension.

1. Create the DID block. See "To create a DID Block:" on page 100 for more information.

2. Log in to the Allworx server admin page, navigate to **Phone System** > **Outside Lines.** Locate the **Direct Inward Dial Blocks** section. Click the additional information arrow ▶, if necessary.

3. Locate the **Routing Plan** and click one of the following links:

Details	**Routing Plan Information** 1. Click **modify** to change the existing settings.

Description	Enter a name for the routing plan.
Default Extension	Select the extension from the drop-down list.
Default DNIS Name	Displays on calls to DID numbers when no specific DNIS Name is specified in the Phone Number to Extension Mapping section, indicated by $ in the DID-specific DNIS name. Enter a Dialed Number Identification Service (DNIS). The DNIS name displays on the recipient's Allworx phone. If there is no DNIS name entered, the originally dialed number displays on the phone.
Default Prompt Language (requires the Dual Language Support feature key)	Each outside line has a default language. When receiving calls over an outside line, the system assigns the default language for that line. Thereafter, when the call reaches some applications within the server (e.g. Auto Attendant, queue), the system uses or overrides the outside line language, depending on the application's language setting. Select an option from the drop-down list: • Use Source of call • Primary Language • Secondary Language

2. Click **Update** to save the changes or **Cancel** to disregard the request.

Phone Number to Extension Mapping
1. Click **modify** to change the existing settings.

Search Term	Enter criteria and press enter. Displays all numbers meeting the criteria.
Bulk Edit	Apply operations to more than one Phone Number. Click the check boxes next to the Phone Number, and then click **Assign** to: • Extension • DNIS Name • Default Prompt Language

<Phone Number>	Click **Modify** and update the information:
	• Extension - Select the extension from the drop-down list.
	• DNIS Name - Leave the $ to use the DID Block Default DNIS name or enter a DNIS Name for this DID number.
	• Default Prompt Language - Select the language from the drop-down list:
	  • Use Plan's Default Prompt Language settings
	  • Primary Language
	  • Secondary Language
	  • Use Source of call

2. Click **Update** to save the changes or **Cancel** to disregard the request.

Delete	Removes the DID Block from the system. Verify the DID Routing Plan selection, and then click **Delete** to remove the DID Block or **Cancel** to disregard the request.

16.4 Manage SIP Proxies and SIP Gateways

Allworx servers support connectivity to external SIP-compliant devices such as Internet Telephony Service Provider (ITSP) servers and SIP gateways. The Allworx products interface with four different types of SIP devices based the ability to interact with the Allworx system.

- SIP Gateways and SIP Proxies are different features with similar configurations.
- The Allworx 6x12 servers do not support SIP Gateways.

SIP devices include:

SIP Proxy	Refers to a SIP Trunk, an external SIP service for routing calls. Access the SIP Proxy through the Internet or through the wide area network (WAN). • To connect to a SIP proxy (or ITSP), configure the SIP Proxy on the Allworx server. • Application notes for configuring Allworx servers with approved ITSPs are available on the Allworx Partner Portal www.allworxportal.com.
SIP Gateway	A SIP-compatible device that extends the connectivity of the Allworx PBX. Examples are FXO, FXS or T1 expander gateways. Typically, SIP Gateways connect to the Allworx server via an Ethernet interface directly to the Allworx server LAN.
Remote Allworx Servers (Multi-Site)	An Allworx server at another site configured to behave as if it is part of the local system. The Allworx administrator can configure the remote Allworx server to provide outside line services for the local server. See the Allworx Advanced Multi-site User Guide for information on configuring these services.

Limitations with SIP Outside Lines:
The following calling features are not available when using SIP trunks or SIP Gateways:

- Consultation and call transfer (using *# or *7) by users of Follow-Me-Anywhere call routes.
- Disconnecting calls (using *#) when accessing outside lines through the Message Center.
- These features ARE available when one of the parties in the call is using an Allworx phone or Px Expander.

To manage a SIP Gateway or SIP Proxy:
SIP Proxies and SIP Gateways have configuration settings specific to using the ITSP or device.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Outside Lines** page.
2. Locate the appropriate section and click the additional information arrow ▸, if necessary.
3. Click the link. Update the parameters (see table below) specifically for the ITSP service in use.

SIP Gateway	
add new SIP Gateway	Click to open the SIP Gateway dialog box. Update the parameters, and then click **Add** to save the request or **Cancel** to disregard the request.
Modify	Locate the SIP Gateway in the list and click **Modify**. This opens the SIP Gateway dialog box. Update the parameters, and then click **Update** to save the request or **Cancel** to disregard the request.
Delete	Locate the SIP Gateway in the list and click **Delete**. Verify the SIP Gateway selection, and then click **Delete** to remove the SIP Gateway from the list or **Cancel** to disregard the request. Requires no further action.

SIP Proxies	
add new SIP Proxy	Click to open the SIP Proxy dialog box. Update the parameters, and then click **Add** to save the request or **Cancel** to disregard the request.
Modify	Locate the SIP Proxy in the list and click **Modify**. This opens the SIP Proxy dialog box. Update the parameters, and then click **Update** to save the request or **Cancel** to disregard the request.
Delete	Locate the SIP Proxy in the list and click **Delete**. Verify the SIP Proxy selection, and then click **Delete** to remove the SIP Proxy from the list or **Cancel** to disregard the request. Requires no further action.

SIP Gateway and SIP Proxy Settings

SIP Gateway	
Description	Assign a name to the SIP Gateway - such as the ITSP name.
Caller ID Name	Display the name of handset or user. Enter a up to 47 characters in the field provided or check a box: • Use External Caller ID Name from handset • Use Caller ID Name from external sources
Caller ID Number	Display the name of handset or user. Enter a up to 24 digits in the field provided or check one of the boxes: • Use External Caller ID Number from handset • Use Caller ID Number from external sources
Number of Line Appearances	Enter a number up to 99 that does not exceed the number of CO lines attached to the gateway.
Send digits as dialed	Uses the digits as specified in the External Dialing Rules. Check the box to enable.
SIP Server	The DNS name or IP address of the proxy server to connect to provided by the ITSP. The port number is usually 5060 but verify with the ITSP.
Default Prompt Language	Each outside line has a default language. When receiving calls over an outside line, the Allworx server assigns the default language for that line. Afterwards, when the call reaches some features within the server (e.g. Auto Attendant, Call Queue), the server uses or overrides the outside line language depending on the application's language setting. The language usage for Allworx audio messages and played greetings for inbound calls is through the SIP Proxy. This feature requires the Dual Language Support feature key. Select an option for the default language from the drop-down list: • Primary Language • Secondary Language
SIP Proxy	
Description	Assign a name to the SIP Proxy - such as the ITSP name.
User ID	The ITSP typically assigns this value and is often the account phone number.
SIP Server / Port	The DNS name or IP address of the proxy server to connect to provided by the ITSP. The port number is usually 5060 but verify with the ITSP.
Outbound Proxy / Port	DNS name or IP address of the outbound redirect server, if it differs from the SIP Server. The system does not require this in many cases.
SIP Registration Required	Use of the SIP proxy server requires a SIP registration. The ITSP assigns the Login ID and Password. If the ITSP uses a registrar server that is different from the SIP proxy server, enter the DNS name or IP address of this server in the Registrar name field.
Caller ID Name	Displays the name of handset or user. Enter a up to 47 characters in the field provided or check a box: • Use External Caller ID Name from handset • Use Caller ID Name from external sources

Caller ID Number	Displays the name of handset or user. Enter a up to 24 digits in the field provided or check a box: • Use External Caller ID Number from handset • Use Caller ID Number from external sources
Maximum Active Calls	The Allworx server uses this number to limit the total number of the incoming and outgoing active calls with the SIP Proxy. Useful for controlling the network bandwidth, since the Allworx system understands that the SIP proxy is not a LAN local service.
Number of Line Appearances	Enter a number up to 99 that does not exceed the number of CO lines attached to the gateway.
Append Enterprise Prefix to Dial back number of incoming calls.	Adds the enterprise dial plan digits (8 by default, *8 for extension mode) to the beginning of the caller's extension of an inbound call from a proxy server. This enables automatic dial back (e.g., selecting a call from the phone Calls list to contact the original caller) to function properly when the proxy server requires enterprise dialing for outbound calls.
Send Digits as Dialed	Indicate sending outbound numbers dialed exactly as on the handset placing the call. • The number converts into NANPA dialing form, so this box is not normally checked. • In some cases, the service provider or proxy may do the conversion automatically and need to override the Allworx server conversion mechanism.
Digits Sent	Number of dialed DTMF digits sent to the ITSP when making a call. • If the number specified is fewer than the number of digits dialed, the Allworx server sends only the trailing digits. • The default value is all digits.
Default Prompt Language	Each outside line has a default language. When receiving calls over an outside line, the Allworx server assigns the default language for that line. Thereafter, when the call reaches some applications within the server (e.g. Auto Attendant, Call Queue), the system uses or overrides the outside line language depending on the application's language setting. The language for Allworx audio messages and played greetings for inbound calls is through the SIP Proxy.
SIP Registration - applies to SIP Gateway only	
Gateway uses SIP Registration	If the gateway supports registration, select this option. • Assign an arbitrary Login ID and Password for the gateway to use to register with Allworx. • Use this preferred configuration, especially if the gateway uses DHCP to obtain its IP address so that the Allworx server always knows how to contact the gateway for outbound calls.
Gateway uses Static IP Address	Use if the gateway does not support registration or if not authenticating the gateway. Contacting the gateway through this mechanism requires the gateway to have a static IP address. The system does not enable DNS names for security reasons.
Advanced Settings*	Checking the box enables the option.
Pad DTMF RTP packets	Some switches and routers discard any UDP packets shorter than 64 bytes. • Enabled: the Allworx system pads the DTMF packet and expands the RTP header to make the packet at least 64 bytes long. • Default: Disabled.
Enable Early Media	Some service providers send audio before answering an outbound call (using 183 Session Progress in SIP). Use this to relay announcements (e.g. Your call can not be completed as dialed) or remote ring back tones. • Enabled: the Allworx system presents the audio to the caller when received. • Disabled: the Allworx system disregards the early audio and generates a ring back tone internally. • Default: Disabled.
Supports SIP REFER	Selects the method of transferring calls between multiple remote end-points through the service provider. • Enabled: the Allworx system sends the SIP REFER to the service provider to enable them to connect the two end-points within the network without intervention by the Allworx. I • Disabled: the Allworx server acts as a proxy between the two remote ends of the calls. • Default: Disabled.

Supports SIP Redirect	This selects the method of redirecting forwarded inbound calls back to the service provider answering (e.g., system forwards all calls to a cell phone). • Enabled: the system sends a SIP 300 redirect message. • Disabled: the Allworx system negotiates the call setup for the service provider. • Default: Disabled.
Use E.164 format for phone numbers	Enabling this feature causes rewriting of phone numbers into the international E.164 format (e.g. 800-555-1212 becomes +18005551212). • Enabled: if required by the ITSP. • Default: Disabled.
Offer '100rel' support	Indicate the Allworx supports 'reliability of provisional responses (RFC 3262)'. Default: Disabled
Supports Symmetric Response Routing	SIP Proxy only - Some service providers assist the remote end in NAT traversal by supporting RFC 3581 Symmetric Response Routing. • Enabled: a remote handset behind a NAT firewall assumes the service provider can correctly detect the audio port to send traffic. • Disabled: port-forward the handset through the NAT firewall, or use the Allworx for proxying of audio traffic (see "VoIP Server" on page 181). • Default: Disabled.
Allow SIP P-Asserted-Identity	SIP Proxy only - The server asserts its identity with enabled proxies as well as proxy asserted identity from trusted devices to other trusted devices.
Send SIP Division header row	SIP Proxy only. Select an option from the drop-down list: • never • always • on redirect
Obtain DID/DNIS number from [source]	For inbound calls, where the server gets the DID and DNIS information. Typically, this is set to [SIP To: header field].
Use [source] in Request URI of outbound calls	This defines the username parameter of the SIP Request Uniform Resource Identifier (URI) for outbound calls to the service provider. • Most service providers expect to have the requested number or ID [dialed number] in this field, but some require the registered account information [address of record]. • Typically this is set to [dialed number].

* These settings are specific to the ITSP. For instructions on configuring them for Allworx partner ITSPs, download the ITSP Application Notes from www.allworxportal.com.

Features

Prefix String	Define the DTMF digits pre-pended to the dialed number string when placing outbound calls through the gateway (e.g., '9' for dialing through another SIP PBX).

Default Auto Attendant

Select the auto-attendant to use from the drop-down list when routing inbound calls from this Proxy to an Auto Attendant.

Call Route

Each outside line (CO Line, DID Line, SIP Proxy, SIP Gateway, or a Digital Line) has an associated call route. The Call Route section directs the call coming into the system through Digital Line 1 channel 01.

Calls received from this SIP Gateway go to: Click a radio button to select the option:

Extension	Routes incoming calls to a User or System extension. Using a System Extension provides more call routing flexibility and enables using a common route for multiple lines. Select an extension from the drop-down list.
Auto Attendant	Routes an outside line to a designated Auto Attendant defined in the Default Auto Attendant section. Requires no further action.
Voicemail for user	Sends incoming calls directly to a voicemail box for a User. Select a user from the drop-down list.

Calls received from this SIP Gateway go to: (con't)	Routed using DID Block(s)	When using DID blocks for incoming calls, enable the DID block for the outside line or each preferred channel, if using digital lines. check the box to enable a DID block. To configure the DID Lines: 1. Configure each of the incoming lines using DID blocks.The following line types can use DID blocks: • T1/PRI • SIP Proxy • T1/RBS • SIP Gateway 2. Click on Routed using DID Block(s) and check the block(s) to use for this outside line. NOTE: For Digital lines, do this for each channel. If all channels use the same settings, check the Apply settings for this line to all lines with the same Port box.

16.5 Manage Enterprise Dialing

Use the following procedures to configure the Enterprise Client and the Central Hub/Enterprise Server.

16.5.1 Configure the Allworx Enterprise Client

Configure each Allworx server as an enterprise client and direct inter-office calls to the central hub. The system creates a SIP Proxy for the central hub with the call routing set to Proxy is an enterprise server.

The Enterprise Dialing rule is set to a service group that contains just the SIP Proxy entry for the central hub server. The number of digits to collect/send is set to cover the entire enterprise. See "Internal Dial Plan Settings" on page 39 for more information.

The Allworx dial plan uses an '8' prefix[1] to indicate forwarding the dialed number to the Enterprise Server. Example: dialing 81234 sends a SIP INVITE with a URI of <sip:1234@centralHubServer> to the Enterprise Server.

16.5.2 Configure the Central Hub / Enterprise Server

The central hub is a SIP proxy server that:

- accepts incoming INVITEs from the Allworx servers.
- determines the final destination for the request.
- forwards the request to the Allworx destination.
- maintains an active list of Enterprise extensions and the mappings to extensions at each site.

1. Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager > Phone Functions tab to determine what extensions to use for the corresponding feature.

Example: an enterprise with four-digit dialing might have the following information in its databases.

Site Account Name	Account Password	Current Address*	Site Description
allworx1	*****	66.64.219.38:5060	New York City office
allworx2	********	64.129.42.33:5060	Atlanta office
allworx3	*****	129.116.21.193:5060	San Diego office

* IP Address and SIP Protocol port of the Allworx server. This can be static or updated through periodic SIP Registration.

Configure the Enterprise extensions as follows (using three-digit extensions):

Enterprise Extension	User	User Extension	Site
1234	Chris Jones	108	allworx1
1452	Tom Roberts	111	allworx1
4689	Mike Zwick	108	allworx2
5999	Jason Diaz	177	allworx3

Example: Chris Jones in New York City dials 84689 to reach Mike Zwick. The SIP INVITE is sent to the central hub with a URI of <sip:4689@centralHubAddress>. The Central Hub validates the sender credentials and finds 4689 in the databases. It creates an INVITE with <sip:108@64.129.42.33:5060> as the URI and sends it to allworx2. Mike Zwick answers the phone and establishes the call.

Later, Chris Jones dials 81452 to reach Tom Roberts. The SIP INVITE is sent to the central hub with a URI of <sip:1452@centralHubAddress>. The Central Hub validates the sender credentials and finds 1452 in its databases. The recipient is on the same server as the sender (allworx1), so the hub responds with a 300 Redirect with a Contact header URI of <sip:111@66.64.219.38:5060>. The Allworx server (allworx1) initiates a call to extension 111. Tom Roberts answers the phone and establishes the call.

To access Enterprise Dialing:

Note:	The steps for configuring and maintaining the SIP centralized server are well beyond the scope of this document. To deploy such an arrangement across sites requires detailed knowledge about the use and administration of SIP proxy servers. Contact Allworx Customer Support for an application note with additional helpful administration.

1. Log in to the Allworx server admin page and navigate to **Phone System** > **Outside Lines** and Click one of the following links:

add new SIP Proxy	Adds another SIP Proxy to the Central Hub.
Modify	Locate the SIP proxy that is the target for the Central Hub, click Modify to update the settings.

2. Locate the **Call Route** and check **Proxy is an Enterprise Server** to indicate the SIP Server is an Enterprise central server. Calls received from this proxy follow the server internal dial plan.

3. Click the **Update** button to save settings.

16.6 Manage Digital Lines

Allworx refers to the integrated T1 interfaces on Allworx 24x, 48x, and Connect servers as Digital Lines. Connect servers have one T1 Digital Line interface. Allworx 24x and 48x servers have two T1 Digital Line interfaces. There are differences in T1 port functionality between the 24x and 48x servers. For more information about Digital Lines or configuring the T1 line, see "Digital Lines" on page 147.

To manage the Digital Lines:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Outside Lines** page. Locate the Digital Lines section and click the additional information arrow ▶, if necessary.

2. Locate the Digital Line and click **modify**. The Digital Line settings page opens. If the T1 option is unavailable, see "Configuration" on page 143 to enable the T1 port.

3. Update the settings, as required, and then click **Update** to save the changes.

Digital Lines Settings

Digital Line	
Description	DNIS display on phones that receive calls on this line.
Port	Automatically filled in.
Default Language	Select a language for systems configured with multiple languages to use with Auto Attendant and/or queue prompts for inbound callers.
Enable Line Appearance	Configure the handsets with Line Appearance PFKs for this line.
Features	
Line has Caller ID Service	Display the Caller ID information.
Enable Echo Cancellation	Only disable at the request of Allworx Customer Support.
Enable Comfort Noise	Applies to Allworx Connects servers only. Enable or disable Comfort Noise Generation. Default is enabled, only disable at the request of Allworx Customer Support.
Default Auto Attendant Section	
Select the attendant used to answer when calls received from this source are routed to an Auto Attendant.	Select an option from the drop-down list.
Call Route	
Calls received from this CO line go to:	Click the radio button to select one of the following options: • Extension - select from the drop-down list. • Auto Attendant • Voicemail for user - select from the drop-down list. • Routed using DID Blocks(s):

16.6.1 Allworx Port Expanders

See "Px Expanders and Remote Phones" on page 157 for more information.

Click here to return to the "Install Checklist".

Chapter 17 Paging

Paging provides communication over a speaker at specific areas in a building. The Allworx server supports up to 10 paging zones via a single paging circuit and one active page at a time. Any attempts to page during another page results in a fast, busy signal. The types of Paging are:

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

- **Overhead Paging** - the audio exits through the LINE IN/OUT jack or terminal block of the associated server. If used at a site, connect the LINE IN/OUT jack or terminal block to a paging amplifier or a Public Address Announcement system.
- **Zoned Paging** - a set of phones emitting the same class of pages. Each handset can be in multiple zones. The system assigns any combination of zones to the Overhead Paging circuit for those pages also play the audio out to the LINE IN/OUT jack or terminal block.

17.1 Manage Paging Amplifier / Door Release Relay

Allworx server internal relay controls a door release mechanism. Users dial a phone extension for entry into a secured area. The relay contacts are available via the DB-9 connector (9-pin D shell serial type connector) or the Allworx server terminal block. See the Allworx Server Installation Instructions for more detailed information.

To manage the relay option mode:

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Paging**.
2. Click **modify**. Select the operation mode from the drop-down list.

DB9 is connected to a Door Entry System	Dial extension 403* to remotely enable access. The relay activates for the duration of the phone call or five (5) seconds, whichever is shorter.
DB9 is connected to a Paging Amplifier	Automatically activates immediately preceding each overhead page, and then turns back off when the page is complete.
DB9 is unconnected.	Disables the relay; it does not operate through either mechanism.
* Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extension to use for the corresponding feature.	

3. Click **Update** to save the changes or **Cancel** to disregard the request.

17.2 Manage Paging Zones

Use the following procedures to change the paging zone name, manage the paging zone settings, or manage the paging zone operation on handsets.

To change the paging zone name:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Paging**.

2. Locate the **Paging Zone Names** section and click **modify** to update the information:

Link	Description
Multi-Site Paging Groups	
Modify	Enter an updated description in the New Name field, and then click Update to save the change or Cancel to disregard the request.
Delete	Deletes a multi-site paging group from any of the zones using the group. Click Delete to save the change or Cancel to disregard the request.
Add new group	Enter a description in the New Group Name field, and then click Add to save the change or Cancel to disregard the request.
Paging Zone Names	
Name	Click in the Name field and enter an updated description.
Prepage Tone	Play a tone before the paging message starts. The system default tone is enabled. Users placing a page hear a tone to indicate that the channel is open to begin speaking.
Multi-Site Group	Enables handsets to become part of paging zones that span multiple sites. For Multi-Site Paging, see the Allworx Advanced Multi-Site User Guide for more information.
* Extensions may vary per system. If using a non-default Internal Dial Plan, consult the My Allworx Manager Phone Functions tab to determine what extension to use for the corresponding feature.	

3. Click **Update** to save changes or **Cancel** to disregard the change. Any changes to paging zone names require a handset reboot. Otherwise handsets with a PFK defined for those paging zones do not use the new name.

To manage Paging Zones on an Allworx handset:

By default, the system enables each applicable line out and handset for Paging Zone 0 and disables all others.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Paging** > **Paging Zones** section and click **modify**. A table of handset users and Paging Zones displays.

2. Check the appropriate boxes for each user and Paging Zone to enable the feature.

3. Click **Update** to save the changes or **Cancel** to disregard the changes.Any changes to paging zone assignments require a handset reboot.

To manage the paging zone operation on handsets:

The Allworx administrator can enable or disable the Paging Zones on the handset configuration page. See “Handset Preference Group Settings” on page 73 for more information.

Click here to return to the “Install Checklist” .

Chapter 18 Ring Groups

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

Ring Groups (formerly known as Call Monitors) are call routing destinations that enable ringing one call to multiple phones and multiple calls to a single Ring Group. Calls are answered in first in, first out order.

A call enters a Ring Group when routed from a system or user extension. Configure the server so that inbound calls enter a Ring Group is the same as configuring any inbound call routing. Use the same features for the handling of any inbound call to route a call to a Ring Group by sending the outside call to the Auto Attendant or routing directly to the Ring Group extension.

Ring Groups Features:

- Up to ten available Ring Groups (numbered 0 through 9).
- Configure the Ring Group.
- Ring multiple Allworx IP phones on the system with a single call.
- Stack multiple ringing calls to a single Ring Group extension.
- Configure Allworx handsets for multiple Ring Groups.
- Configure Allworx handsets for multiple occurrences of the same Ring Group.

To configure calls to route to the ring group, see “Manage Call Routes” on page 57 for information on setting up call routes. Both user extensions and system extensions can be set up to route a call to a Ring Group.

To configure calls to route to an Auto Attendant, see “Auto Attendants” on page 17 for more information.

To configure a Ring Group PFK, see “Manage the Programmable Function Keys (PFKs)” on page 67 for more information.

To modify the description of the Ring Group:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Ring Groups**.
2. Locate the **Action** section, and then select **Modify**.
3. Enter a new Ring Group Description in the description field.
4. Click **Update** to save the changes or **Cancel** to disregard the request.

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Chapter 19 Roles

Roles assigns user permission levels to users for delegating some of the administrative task management using the assigned Allworx username and password.

See "Role Permissions" on page 114 for the administrative tasks and delegation permissions.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role*
Feature Key Required	No
* Not all features on the Roles page are available to Phone Administrators. These features require Allworx Server Administrator or Allworx System Administrator permissions.	

The available user roles include:

- **Server Administrator**: predefined system administrator with access to manage all functions of the server. The Allworx Server Administrator assigns roles, manages the server administrative functions, manages day-to-day phone system settings, manages the network and VoIP settings, and initiates system backups and/or restarts.
- **System Administrator**: access to manage the administrative functions of the server. The user permission setting does not enable this role to change the password of the Allworx Server Administrator. However, the Allworx Server Administrator can change the password of the System Administrator.
- **Phone Administrator**: access to manage day-to-day phone system settings including changes to system recordings as well as adding, changing, and deleting users, extensions, and handsets.
- **Network Administrator**: access to manage the Network and VoIP settings, as well as SIP proxies and SIP gateways outside lines.
- **Support Technician**: access to initiate system backups and restarts as well as managing logging operations.

Note:	To enable one user to have roles on different servers in a multi-site network, the Allworx administrator must create separate user accounts for the user on each server, and then assign the roles on each server. Use different usernames for each user account.
Note:	The Allworx administrator can assign users to manage queue and Auto Attendant recordings. See "User Template Settings" on page 136 for more information.
Note:	The Allworx administrator can assign users to manage individual queue settings or queue supervisor. See "User Template Settings" on page 136 for more information.

19.1 Manage the User Roles

To assign or remove user roles:
When changing the user role and the user is logged into the server, the user must log out and re-login in order to access the changes.

1. Log in to the Allworx server admin page, and navigate to **Phone System** > **Roles**. The Roles page displays.

2. Locate the section of the role, and click the additional information arrow ▸, if necessary**.** The Allworx Server admin page displays a list of users assigned to each role.

3. Click one of the following links:

show unassigned users	Displays a list of assigned and available users to assign.
hide unassigned users	Displays a list of assigned users.
Assign Role	Enable role permissions to the user account. Designated users have access to the administration functions that are included in the roles. See "Role Permissions" on page 114 for more information.
Remove Role	Remove the assigned role privileges the user account.

19.2 Role Permissions

Each assigned user role has access to specific management tasks. Use the table to identify the administrative management access level of each User Role.

Allworx Server Page	Link	Phone	Network	Support
Home	Allworx Server Model Number	Yes	Yes	Yes
Home	Install Checklist	No	No	No
Home	Logout	Yes	Yes	Yes
Phone System				
Audit PIN Codes	add new PIN Code > modify	Yes	No	No
	Configuration - modify	Yes	No	No
	Delete	Yes	No	No
Auto Attendants	Auto Attendant n modify	Yes	No	No
	reset	Yes	No	No
Call Park	Call Park Modify	Yes	No	No
	Multi-Site Parking Modify	Yes	No	No
Call Queues / ACD	manage the custom recordings link	Yes	No	No
	View the language settings	No	No	No
	Call Queue n Modify	Yes	No	No
	Queue Streaming Settings Modify	Yes	No	No
	Queue Busy Reasons modify	Yes	No	No
Conference Center	Conference X modify	Yes	No	No
	Conference X delete			
Contact Information	Modify	Yes	No	No

Allworx Server Page	Link	Phone	Network	Support
Dial Plan	Reboot phones	Yes	No	No
	Internal Extension Length > modify	No	No	No
	Internal Dial Plan > modify	No	No	No
	Internal Dial Plan > view phone functions reference card	No	No	No
	External Dialing Rules > Modify NANPA	No	No	No
	External Dialing Rules > Modify Area Code / Exchange	No	No	No
	External Dialing Rules > Modify Emergency	No	No	No
	External Dialing Rules > Modify Emergency Call Email Notification	No	No	No
	Services > Modify	No	No	No
	Dialing Privileges Groups > View	Yes	No	No
	• Modify	Yes	No	No
	• Toll Restriction > Modify	Yes	No	No
	• Call Appearances Assigned to Group > Modify	Yes	No	No
	Dialing Privileges Groups > Copy	Yes	No	No
	Dialing Privileges Groups > delete	Yes	No	No
	Service Groups “add new Service Group”	No	No	No
	Service Groups “modify”	No	No	No
	Service Groups “copy”	No	No	No
	Service Groups “delete”	No	No	No
Emergency CID	Emergency Caller ID number > add new caller ID number	Yes	No	No
	Emergency Caller ID number > Modify	Yes	No	No
	Emergency Caller ID number > Delete	Yes	No	No
	Handset Emergency Caller ID Number Assignments > Modify	Yes	No	No
Extensions	add new extension	Yes	No	No
	view call routes	Yes	No	No
	delete	Yes	No	No
	<username>	Yes	No	No
	Bulk Edit	Yes	No	No
Handsets Analog Handsets	• New Analog Handset	Yes	No	No
	• Modify	Yes	No	No
	• Delete	Yes	No	No
	• Ring	Yes	No	No
SIP Handsets	• Reboot Allworx Handsets	Yes	No	No
	• add new Allworx Handset	Yes	No	No
	• add new Allworx Reach Handset	Yes	No	No
	• add new Generic SIP Handset	Yes	No	No

Allworx Server Page	Link	Phone	Network	Support
SIP Handsets (con't)	• Bulk Edit	Yes	No	No
	• handset preference group	Yes	No	No
	• View	Yes	No	No
	• Copy	Yes	No	No
	• Delete	Yes	No	No
	• View Configuration	Yes	No	No
	• Add Call Appearance	Yes	No	No
	• Reboot	Yes	No	No
	• Replace	Yes	No	No
	• Modify	Yes	No	No
	• Delete	Yes	No	No
	• Ring	Yes	No	No
Handset Preference Groups	• View	Yes	No	No
	• Copy	Yes	No	No
	• Delete	Yes	No	No
Handset Network Profile Templates	• View	Yes	No	No
	• Copy	Yes	No	No
	• Delete	Yes	No	No
Handset Configuration Templates	• Change	Yes	No	No
	• Copy	Yes	No	No
	• Delete	Yes	No	No
Languages	Manage the custom recordings	Yes	No	No
	Export Primary/Secondary Language Recordings	Yes	No	No
	Import Primary/Secondary Language Recordings	No	No	No
	Language Pack Installation and Removal	No	No	No
	Server Language Configuration	No	No	No
	Call Application Language Settings	No	No	No
Message Aliases	add new alias	Yes	No	No
	modify	Yes	No	No
	delete	Yes	No	No
Music on Hold	manage	Yes	No	No
	Usage	Yes	No	No
Outside Lines Analog CO Lines	Anonymous Call Handling < modify	Yes	No	No
	• new FXO line	Yes	No	No
	• modify	Yes	No	No
	• delete	Yes	No	No
	Digital Lines > modify	Yes	No	No

Allworx Server Page	Link	Phone	Network	Support
Direct Inward Dial Blocks	• add new DID block	Yes	No	No
	• modify	Yes	No	No
	• delete	Yes	No	No
Direct Inward Dial Routing Plans	• Details	Yes	No	No
	• Delete	Yes	No	No
SIP Gateways	• add new SIP Gateway	No	Yes	No
	• modify	No	Yes	No
	• delete	No	Yes	No
SIP Proxies	• add new SIP Proxy	No	Yes	No
	• modify	No	Yes	No
	• delete	No	Yes	No
Paging	Paging Amplifier > modify	Yes	No	No
	Paging Zone Names > modify	Yes	No	No
	Paging Zones > modify	Yes	No	No
Roles	System Administrator [Assign Role] [Remove Role]	No	No	No
	Network Administrator [Assign Role] [Remove Role]	No	No	No
	Phone Administrator [Assign Role] [Remove Role]	Yes	No	No
	Support Technician [Assign Role] [Remove Role]	No	No	No
Schedules	Greetings > modify	Yes	No	No
	Schedule n > Copy	Yes	No	No
	Schedule n > Delete	Yes	No	No
	Schedule n > modify	Yes	No	No
	Schedule n > add holiday	Yes	No	No
	Schedule n > copy holiday	Yes	No	No
	Schedule n > delete holiday	Yes	No	No
	Schedule n > modify holiday	Yes	No	No
Shared Appearance	add new Shared Call Appearance	Yes	No	No
	Modify	Yes	No	No
	Show Handsets	Yes	No	No
	Delete	Yes	No	No
Speed Dial	add new speed dial number	Yes	No	No
	modify	Yes	No	No
	delete	Yes	No	No
Users	add new user	Yes	No	No
	add users from CSV file	Yes	No	No
	Modify	Yes	No	No
	Delete	Yes	No	No

Allworx Server Page	Link	Phone	Network	Support
Users (con't)	more...			
	• delete messages	Yes	No	No
	• delete recordings	Yes	No	No
	• Wipe remote devices	Yes	No	No
	<extension>	Yes	No	No
	Bulk Edit	Yes	No	No
	show/hide templates last applied to user	Yes	No	No
	User Templates > View	Yes	No	No
	User Templates > Copy	Yes	No	No
	User Templates > Delete	Yes	No	No
	Password Requirements > modify	No	No	No
Network				
Configuration	modify	No	Yes	No
Multi-Site	modify	No	No	No
	advanced	No	No	No
	handsets	No	No	No
	delete	No	No	No
	test	No	No	No
Port Expanders	add a port expander	No	Yes	No
	delete	No	Yes	No
	replace	No	Yes	No
	handsets	No	No	No
	outside lines	No	No	No
	px description view	No	Yes	No
	View > Modify	No	Yes	No
	View > Delete	No	Yes	No
	View > Replace	No	Yes	No
	View > Handsets	No	No	No
	Port Expander > Outside Lines	No	No	No
	View > Reboot	No	Yes	No
Static Routes	modify	No	Yes	No
VPN	modify	No	Yes	No
Servers				
DHCP	modify	No	Yes	No
	Active Leases	No	Yes	No
	Known Hosts	No	Yes	No

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Allworx Server Page	Link	Phone	Network	Support
DNS	flush the cache	No	Yes	No
	modify	No	Yes	No
Email	manage the email queue	No	Yes	No
	modify	No	Yes	No
Reach Link	modify	No	Yes	No
SNMP	modify	No	Yes	No
VoIP	modify	Yes	Yes	No
Web	modify	No	Yes	No
Reports				
About		Yes	Yes	Yes
Allworx View	Allworx View Settings > modify	Yes	No	Yes
Auto Notification		No	No	No
Call Details	modify	Yes	No	Yes
	Completed Call Details Report			
	• delete	Yes	No	Yes
	• View Report	Yes	No	Yes
	• Export TSV Report	Yes	No	Yes
	• Export XML Report	Yes	No	Yes
Configuration	Generate XML Report	No	No	Yes
	View	No	No	Yes
Digital Lines	Digital Line n > Clear Report	No	Yes	Yes
	Digital Line n > Refresh Report	No	Yes	Yes
Live Calls	Refresh Now	No	No	Yes
Resource Summary	check server compatibility	Yes	Yes	Yes
System Events	Download	No	No	Yes
	show Severity Filter	No	No	Yes
Users	<username>	Yes	No	No
	Delete Messages	Yes	No	No
Maintenance				
Backup	modify	No	No	No
	Backup Now	Yes	Yes	Yes
Custom Recordings	File Export > File Naming Conventions	Yes	No	Yes
	Export	Yes	No	Yes
	File Import > Choose File	Yes	No	Yes

Allworx Server Page	Link	Phone	Network	Support
Feature Keys	Install	Yes	Yes	Yes
	Submit	Yes	Yes	Yes
	Reach	Yes	Yes	Yes
	Generic SIP Handsets	Yes	Yes	Yes
	Interact Professional	Yes	Yes	Yes
Import / Export	Export Configuration > Export	Yes	Yes	Yes
	Import Configuration > <Choose File>	No	No	No
	Import Configuration > Load	No	No	No
Restart	Restart Now	Yes	Yes	Yes
	Restart Later	Yes	Yes	Yes
	[x] Restart Server	Yes	Yes	Yes
	[x] Restart Phones	Yes	Yes	Yes
Time	Modify	Yes	Yes	Yes
Tools	Network Diagnostics	Yes	Yes	Yes
	Syslog - System Events	Yes	Yes	Yes
	Allworx Technical Support Server	Yes	Yes	Yes
	Advanced Troubleshooting	Yes	Yes	Yes
	Network Address Translation (NAT) Information	Yes	Yes	Yes
	Four Wire Return Loss Measurements	Yes	Yes	Yes
	Network Statistics Logging	Yes	Yes	Yes
	Packet Capture Tool	Yes	Yes	Yes
	Telnet	Yes	Yes	Yes
	Advanced Troubleshooting > Advanced Diagnostics	Yes	Yes	Yes
Update		No	No	No

Click here to return to the "Install Checklist" .

Chapter 20 Schedules

Schedules plays the appropriate greetings of the Auto Attendants based on the time of day and switching between open and closed modes for call routes of system extensions automatically or manually.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

The Allworx administrator can define multiple schedules and configure each system extension or Auto Attendant to follow any one of the defined schedules. A schedule consists of defined daily periods, associated open/closed modes, and Auto Attendant greeting names. The Auto Attendant plays the schedule greeting first, and then plays the custom message.

To assign a schedule to an Auto Attendant, see "Configure the Auto Attendant" on page 17 for more information.

20.1 Manage the Greetings

Each business schedule can use up to nine (9) different greetings. The greetings numbers are 0– 8.

- Greeting 0: fixed description of **Open**.
- Greeting 1: fixed description of **Closed**.
- Greetings 2 through 8: a unique, customer-defined greeting name for each greeting used on the Auto Attendants on the Allworx server.

To manage the greeting names:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Schedules**.
2. Locate the Schedule and click **Show Greeting Names for this schedule.**
3. Click **modify** and enter the new name in the field.
4. Click **Update** to save the changes.

20.2 Manage the Schedules

Use the following procedures to manage the schedules and settings as well as assign the schedules.

To manage the schedules:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Schedules**.

2. Locate the schedule to manage and click:

▶	Displays additional information and enables modifying the current schedule. See "To modify the schedule:" on page 122 for more information.
Copy	Duplicates the current schedule. The new schedule name is Schedule <number>: Copy of schedule <number>.
Delete	Removes the current schedule from list.

3. Click **Update** to save the changes.

To modify the schedule:
The purpose of a schedule is to change modes/greetings automatically, based on the Allworx server clock. It is possible to disable the automatic control to change the modes/greetings manually.

At installation, the Allworx system defines the following schedules:

- Schedule 0 (open) - The Open default is Monday through Friday, 8:00 – 5:00 and assigns greeting 0. Users can modify but cannot delete this schedule.
- All other hours as Closed and uses greeting 1. Users can modify the schedule time and add schedules to accommodate business needs.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Schedules.**

2. Locate the schedule to configure and click the additional information arrow ▶.

3. Click:

Show Greeting Names for this schedule	Displays the Open, Closed, and custom greeting names associated with the schedule.
Show resources using this schedule	Displays the Users, System Extensions, Dialing Privileges Groups, and Auto Attendants associated with the schedule.
Description: **Mode/Greeting Control:**	Change the schedule name and toggling between automatic or manual greeting control. If selecting the Manual schedule, users must set the mode/greeting via the handset Schedule PFK. 1. Click **modify**. 2. Enter a new name in the description field. 3. Locate the **Mode/Greeting** control and select an option from the drop-down list.

Automatic	Sets the mode/greeting automatically by the server according to the schedule.
Manual	Sets the mode/greeting by the handset schedule PFK. To change: the user of the handset can press the PFK to set the mode and greeting. See "Manage the Programmable Function Keys (PFKs)" on page 67. for more information. NOTE: Even if configuring the schedule for automatic control, use a schedule PFK to override the current mode/greeting. If overridden, control of the mode/greeting returns to the schedule when the next defined time period begins.

4. Click **Update** to save the change or **Cancel** to disregard the request.

Schedule is currently set to Mode:	Change the schedule mode and greeting to use. If selecting the Automatic Schedule, a daily calendar opens to assign Start, End, Mode, and Greeting requirements, see "Manage the Greetings" on page 121. To update this information: 1. Click **modify**. 2. Click **Mode** and select an option (day or night) from the drop-down list. 3. Click **Greeting** and select an option from the drop-down list (see "Manage the Greetings" on page 121 for more information). 4. Click **Update** to save the change or **Cancel** to disregard the request.
<day of week>	Available only with **Automatic** mode. Specify a schedule for each day of the week and assigning a greeting to use for each time period. To manage the time schedule and greetings: 1. Click **modify.** Click: add period — (Optional) Enter specific start and end time periods to the daily schedule. delete — Removes the time period from the schedule. 2. Locate the **Mode** column and select an option from the drop-down list. 3. Locate the **Greeting** column and select an option from the drop-down list. 4. Click **Update** to save the changes or **Cancel** to disregard the request. To save steps modify one day and copy the changes to other days within the same schedule. Click copy and select the days that use the same periods.
Holidays	Available only with **Automatic** mode. To add a holiday to the schedule: 1. Click **add holiday**. 2. Locate the newly added holiday and click **modify.** 3. Enter the dates for the holiday. 4. Check the repeat yearly to enable. 5. (Optional) Click **add period** to enter specific start and end time periods to the holiday schedule. 6. Click **Update** to save the changes or **Cancel** to disregard the request. To duplicate a holiday schedule: Copy all of the holidays from one schedule to other schedules. This is useful when setting up holidays with new dates for a new year if several defined schedules are available. 1. Click **copy holidays**. 2. Check the box(es) to use the currently selected holiday. 3. Click **Copy** to save the request or **Cancel** to disregard the request.
Copy	Duplicates the current schedule. The new schedule name is Schedule <number>: Copy of schedule <number>. Schedule is available to modify.
Delete	Removes the current schedule from list. Requires no further action.

Click here to return to the "Install Checklist" .

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Chapter 21 Shared Call Appearance

Shared Call Appearance shares a set of one or more PFKs across multiple handsets. All handsets in a Shared Appearance have common access to calls within the group of handsets.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

Example:
An incoming call rings on all handsets with the Shared Call Appearance.

- One user answers and places the call on hold.
- Another user retrieves the call the first user placed on hold.

There are two cases for Shared Call Appearances:

- **Call Group** – Users with similar business needs or tasks assigned to a group can answer any calls to the group shared appearance. A handset can place the call on hold and another handset can retrieve the call.
- **Executive/Assistant Arrangement** – An appearance exists on the handsets of both an executive and assistant. The assistant answers the calls to the executive and places the caller on hold for the executive to pick up. The assistant always displays the state of all calls on the executive's handset.

Note:	9202E and Reach handsets do not support the use of Shared Call Appearances.

Shared Call Appearances support three distinct types of hold behavior:

Shared Hold	Any handset using the Shared Call Appearance can retrieve the call on hold. • To place the active Shared Call Appearance phone call on hold, press the HOLD key. The LED flashes slow, green on all phones of the Shared Call Appearance; including the phone used to place the call on hold. • All handsets in the Shared Call Appearance can retrieve the held call. • The system delivers Hold Reminders to all phones in the Shared Call Appearance per the individual phone settings. If no one retrieves the call, all phones receive a notification per the individual HOLD reminder settings. NOTE: The Allworx server does not support including a call on a shared hold during phone-hosted conferences.
Privacy Hold	Only the handset that placed the call on hold can retrieve the call. • To place the call on "privacy" hold, quickly press the HOLD button twice. The phone has a fast, alternating green and red LED. • The LED for all other handsets in the Shared Call Appearance become solid red for the Shared Call Appearance line. • If the user does not pick up the call, the phone receives a notification per the phone HOLD reminder settings.
Bridged Hold	The handset that placed the call on hold and one other handset that has the same Shared Call Appearance can retrieve the call. • To place the call on "Bridged Hold", place an intercom call to the handset within the same Shared Call Appearance. • The second handset can select the flashing Shared Call Appearance PFK to resume the held call. • If neither party resumes the call, the handset placing the call on hold receives a notification per the individual HOLD reminder settings.

21.1 Setup Checklist

Follow the order of the steps to successfully setup the Shared Call Appearance.

Step	Description	Installation Guide Link
1	Add a new Shared Call Appearance.	"Manage Shared Call Appearances" on page 126
2	Modify the Shared Call Appearance information, as necessary.	
3	Assign the Shared Call Appearance programmable function keys (PFKs).	"Assign Shared Call Appearance Programmable Function Keys (PFKs)" on page 127
4	Define the call routes.	"Manage Call Routes" on page 57

21.2 Manage Shared Call Appearances

The Shared Call Appearance has all the attributes assigned to a normal call appearance (Caller ID, hold music, etc.). Outbound Caller ID is common for all outbound calls on a given Shared Call Appearance. If deleting a Shared Call Appearance, the server removes it from all handsets.

To manage a Shared Call Appearance:

1. Log in to the Allworx server admin page; navigate to **Phone System** > **Shared Appearances**.

2. Click one of the following links:

add new Shared Call Appearance

1. Update the Description field and the Number of Lines field (number of PFKS assigned to the handsets).
2. Click **Add** to save the change or **Cancel** to disregard the request.

Show Handsets

Displays the handsets assigned to the Shared Call Appearance. Click **Close** when complete.

Modify

1. Update the Description field, and then update the information.

Description	Enter a new name.
Number of Lines	The Number of Lines is not available for change as this affects the number of PFKs on all phones, rendering some phones unable to support the Shared Call Appearance feature.
Owner	Select an available option from the drop-down list.
Internal Caller ID	Enter up to 47 characters.
Internal Caller ID Number	Select an available option from the drop-down list.
External Caller ID Name	Enter up to 47 characters.
External Caller ID Number	Enter up to 24characters.
Emergency Caller ID Number	Select an available option from the drop-down list.
Dialing Privileges Group	Select an available option from the drop-down list.
Hold Music Selection	Select an available option from the drop-down list.
Can Place Calls	Click the box to enable placing outgoing calls.
Can Receive Calls	Click the box to enable receiving outgoing calls.

2. Click **Update** to save the change or **Cancel** to disregard the request.

Delete

Verify the Shared Call Appearance and click OK to delete it or Cancel to disregard the request. Reboot all affected phones to remove the Programmable Function Key.

21.3 Assign Shared Call Appearance Programmable Function Keys (PFKs)

When assigning a Shared Call Appearance PFK to a handset, the system assigns consecutive PFKs for each Shared Call Appearance line. The Allworx system notifies the Allworx administrator when:

- there are not enough consecutive PFKs available and the PFK assignment fails.
- the Shared Call Appearance PFK assignment would overwrite existing PFKs.The Allworx administrator can choose to cancel the operation.

After the server allocates consecutive PFKs for all the lines in the Shared Appearance, the Allworx administrator can move the lines to other PFKs within the constraints of the handset model.

- If replacing a phone that is using a Shared Call Appearance, the replacement phone automatically shares the Shared Call Appearance.
- If the handset has enough PFKs available to accommodate all Shared Call Appearance lines.
- If the handset does not have enough PFKs available, the Allworx system notifies the Allworx administrator, and the handset replacement finishes without adding the Shared Call Appearance to the new handset.

To assign a Shared Call Appearance PFK, see “Manage the Programmable Function Keys (PFKs)” on page 67 for more information.

21.4 Define Call Routes

Each defined Shared Call Appearance is selectable as a destination in any extension call route. For more information, see “Manage Call Routes” on page 57. In multi-site networks, Allworx administrators can map defined Shared Call Appearances on one site to other sites to use as destinations in the other site call routes.

Click here to return to the “Install Checklist” .

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Chapter 22 Speed Dial

Speed Dial creates a dialing shortcut for users instead of dialing a lengthy number.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

The Allworx server supports:

- 50 three-digit speed dial numbers (example: 350 through 399).
- 1000 five-digit speed dial numbers (example 34000 through 34999).

The Allworx system automatically generates speed dial numbers based on the Dial Plan.

To manage a speed dial number:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Speed Dial**.

2. Click one of the following links:

add new Speed Dial Number

Create a speed dial number:

1. Select a Speed Dial Number from the drop-down list.
2. Enter a name in the Description field.
3. Enter a number in the Number to Dial field. Use one of the number formats described in the TIP box. Click **Start Over** to clear the fields.
4. Click **Add** to save the change or **Cancel** to disregard the request.

add Speed Dial Numbers from CSV file

Add Speed Dial numbers with a Comma Separated Value (CSV) file.

1. (Recommended) Perform a full system backup before adding multiple Speed Dial numbers.
2. Create a CSV file using any text editor or Microsoft Excel with the Description, Number To Dial, and Speed # attributes. The Allworx server automatically matches the column types when the CSV file contains the values (exact matches) as column headings in the first row of the CSV file. Required attributes (columns): Description and Number To Dial.
   Example: CSV file content - the first row is the header and the next two are Speed Dial import data:

Description	Number To Dial	Speed #
Red Conference Room	1110	351
Blue Conference Room	1251	352

3. Click **Choose File**. Locate the file and click **Open** > **Load** > **Process.**
4. (Optional) Check the box to **Skip records with an existing Speed #**. This is useful to avoid overwriting speed dial numbers.
5. Verify the column heading represents the data supplied. Use the drop-down list to assign the column headings. To exclude a column, select a heading value of **Skip**.
6. Review the rows to add. Uncheck a row to exclude it from the import.

	7. Click **Add** to import the users or **Cancel** to disregard the request. A message displays indicating the number of Speed Dial numbers successfully added and/or which Speed Dial numbers were skipped during the import. Additional details about skipped Speed Dial numbers may be available in the system events log. 8. Click **Done** to return to the Speed Dial List or **Continue** to repeat this process. **NOTE:** The Allworx system will not import any record from the data set that is missing required values or cannot be read by the Allworx system. The maximum field length is 1,024 characters and the maximum line length is 2,048 characters for each line in the CSV file.
Modify	Update the speed dial information. 1. Enter a new name in the Description field. 2. Enter a number in the Number to Dial field. Use one of the number formats described in the TIP box. Click **Start Over** to clear the fields. 3. Click **Update** to save the change or **Cancel** to disregard the request. NOTE: The Speed Dial Number can not be edited.
Delete	Remove the Speed Dial Number from the list. Click **Delete** to remove the Speed Dial Number or **Cancel** to disregard the request.

Click here to return to the "Install Checklist" .

Chapter 23 Users

Users manages adding users and user templates, deleting email and/or voicemail messages, deleting recordings of the username and/or presence greetings, wiping remote devices, and managing password requirements.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role
Feature Key Required	No

The name area for each user displays a red dot (●) next to each user that has not recorded their name in the Message Center.

The User Template contains a set of common configuration settings to apply when creating or modifying users, but does not include all user settings. Some configuration settings are available at **<user>** > **modify**.

The System User (Default) Template contains the factory default settings. For best results create a custom template (optional), and then apply the custom template or the default System User Template when adding multiple new users.

23.1 Setup Checklist

Follow the order of the steps to successfully setup the users.

Step	Description	Installation Guide Link
1	Add a new or modify the user template.	"Manage User Templates" on page 135
2	Add a new user.	"To add a new user:" on page 132
3	Configure or update the password requirements.	"Define Password Requirements" on page 140

23.2 Manage Users

Use the following procedures to show or hide the template applied to each user, add a new user, and modify or delete existing users.

To show or hide the template applied to each user:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users**.

2. Locate the **Users** section, and click the additional information arrow ▸, if necessary.

3. Click the **show** or **hide** templates last applied to user to view or conceal the user template applied to each user. An exclamation point (!) indicates a template override.

To add a new user:

Note:	After increasing the internal extension length to 5 or 6 digits, the extensions **show available** link is no longer available.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users**.

2. Locate the **Users** section, and click the additional information arrow ▸, if necessary. Click:

add new user

Add users one at a time.
1. Update the user settings. See "User Settings" on page 133 for more information.
2. Click **Add** to save the user or **Cancel** to disregard the request. The Users page displays, and the users table displays the last applied template to each user.

Add users from CSV file

Add multiple users with a Comma Separated Value (CSV) file.
1. (Recommended) Perform a full system backup before adding multiple users.
2. Create a CSV file using any text editor or Microsoft Excel and any combination of required and optional attributes. Required attributes (columns): Login Name, Last Name

The Allworx server automatically matches the column types when the CSV file contains the values (exact matches) as column headings in the first row of the CSV file.

Example CSV file content where the first row is the header and the next two are user import data:

Login Name	Last Name	First Name	Middle Name	Extension*	Msg Alias**	DID Number****	DID DNIS Name***	DID Prompt Language***
ARader	Rader	Alice	B	1008	ARader, group@widgetsinc.com	5855551212	AliceRader	Primary
BOakley	Oakley	Bill	C	1009	Group@widgetsinc.com	5855551234	BillOakley	Secondary

3. Click **Choose File**. Locate the file and click **Open** > **Load** > **Process**.
4. (Optional) Enter a PIN and Password for the users. These values are for all records added. If not supplied, the user's password defaults to the Login Name specified during the add.
5. (Optional) Check the box to **Skip records with a Login Name that already exists**. This is useful to avoid overwriting existing users. Usernames are case sensitive; therefore, JYoung and Jyoung are separate login IDs.
6. Select the template for user settings from the drop-down list.
7. Verify the column heading represents the data supplied. Use the drop-down list to assign the column headings. To not include a column, select a heading value of **Skip**.
8. Review the rows to add. Uncheck a row to exclude it from the import.
9. Click **Add** to import the users or **Cancel** to disregard the request. A message displays indicating the number of users successfully added and/or which users were skipped while adding the new users. Additional details about skipped users may be available in the system events log.
10. Click **Done** to return to the User List or **Continue** to repeat this process.

* If the extension is not included, the server uses the first available extension.

** If using Msg Alias, include the Login Name (as shown in the table above) as part of the Msg Alias field when saving a copy of the message on the server.

*** If the DID DNIS Name or DID Prompt Language parameters are not supplied in the CSV file, the Allworx system uses the values from the DID Routing Plan for the DID Number.

**** Requires a DID block in place on the Allworx System before importing users with DID numbers from a CSV file.

NOTE: The Allworx system will not import any user record from the data set that is missing required values, cannot be parsed, or is conflicting with a user currently defined on the system, specifically matching login name, extension, or first, middle, and last name. The maximum field length is 1,024 characters and the maximum line length is 2,048 characters for each line in the CSV file.

To modify or delete existing users:
When modifying templates already applied to users, changes are NOT automatically applied. To update the user settings, reapply the template to each associated user.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users** > **Users** section, and click the additional information arrow ▶, if necessary**.**

2. Select an option:

▶ Bulk Edit	Performs the same change on multiple users, check the box on the left of the appropriate usernames, and then click the appropriate action button to apply to the users.
<extension number>	Modify the call routes for the user. See "Manage Call Routes" on page 57 for more information.
Modify	The add new user options and user template options displays. To modify the user: 1. Click **Modify**, and update the options, as appropriate. See "User Settings" on page 133 and "User Template Settings" on page 136 for more information on the user template options. 2. (Optional) Locate the **User Template** section and select a new User Template from the drop-down list. Click **Set** to apply all the settings to the user or click **Merge** to apply the settings of the new template while keeping the override settings. Merge does not change any override settings from the last applied template. 3. Click **Update** to save the changes or **Cancel** to disregard the request.
Delete	The server removes the user from the list, and the page refreshes with existing users. 1. Locate the user in the Users list and click **Delete** in the Action column for the appropriate user. Read the pop-up message and confirm this is the user to remove from the business directory. 2. Click **Delete** to remove the user from the list or **Cancel** to disregard the change.
	Displays the Welcome to Allworx page specific to the user. Copy and paste this information into an email window and send to the user.

User Settings

Identification		
Login Name	Identify a username for the new user to log in to My Allworx Manager or other Allworx applications.	
Full Name	Enter the first, middle, and last name of the new user, per company requirements.	
Password	Identify a password for the new user to log in to My Allworx Manager or other Allworx applications.	
	Password	The password must comply with the password requirements.
	PIN	Default keypad PIN code: 1234.
	If the user is already set up prior to upgrading the server, the default PIN code is the same PIN code prior to the upgrade.	
Confirm Password	Reenter the password for the new user. This step verifies the passwords match.	
Require Password Change	Enables the user to log in once with the provided password. After a successful log in, the user must change the password.	
PIN	Used to log in to the Allworx system from a phone keypad, e.g., access voicemail messages or log in to a ACD queue as an agent.	
Confirm PIN	Reenter the PIN for the new user. This step verifies the PINs match.	

Require PIN Change	Enable the user to log in once with the provided PIN. After a successful log in, the user must change the PIN.
Primary Extension	Display the next available extension. To select a different extension: click **show available**, and then select an available extension number. **NOTE:** After increasing the internal extension length to 5 or 6 digits, the extensions **show available** link is no longer available.
New User Options - only applies when adding a new user.	
Assign Phone	Click the drop-down arrow and select a Phone Assignment option.
Assign DID Number	Click the drop-down arrow and select a DID Number option. Applies to the DID Routing Plan phone number to extension mapping.
Presence	Select the user presence. Options include: • In Office • On Vacation • At Home • Busy • At A Meeting • On Business Trip • Away
Roles	Assign additional administrative functionality to the user. See "Roles" on page 113 for more information. **NOTE:** To enable one user to have roles on different servers in a multi-site network, the Allworx administrator must create separate user accounts for the user on each server, and then assign the roles on each server. Use different usernames for each user account. **NOTE:** To assign users to manage queue and Auto Attendant recordings, or to manage individual queue settings or queue supervisor see "User Template Settings" on page 136 for more information.
User Template	Select the template to use for the settings. Select an option from the drop-down list. Click **Set** to update the user settings or **Merge** to import the user settings (keeps current setting overrides).

When updating the remaining sections on the user page, see "User Template Settings" on page 136 for more information. An exclamation point (!) indicates a template override.

23.3 Delete User Messages or Recordings

Deleting the user email and/or voicemail messages/recordings permanently removes the data from the Allworx server.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users**. Locate the **Users** section, and click the additional information arrow ▸, if necessary.

2. Locate the username, click **more...**, and then click an option:

Delete messages	Select one email and one voicemail option to Delete. Options include: • Delete all emails • Delete all voicemails • Delete all read emails • Delete all saved voicemails • Keep all emails • Keep all voicemails
Delete recordings	Select the recording type to delete. Options include: • User's name and all of the user's Presence greetings • All of the user's Presence greetings • User's name

3. Click **Delete** to save the changes or **Cancel** to disregard the request.

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23.4 Wipe Existing User Remote Devices

The Wipe command removes the following information from a lost or stolen remote device:

Application	Login Credentials*	Contact Information	Voicemail Information	Configuration (including backup settings)
Reach	X	X	X	
Interact	X	X		X

* Requires the Allworx administrator to change the user password, which restarts the Reach application and Terminates the Interact application.
  - Device user must re-log in entering the credentials and using the new password.
  - Reach users must reclaim a new license to restore the voicemail information and to send/receive calls.

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users**.
2. Locate the **Users** section, and click the additional information arrow ▸, if necessary.
3. Locate the username, and click the **more...** option. Select the **Wipe remote devices** option.
4. Type a new user password in the field provided. Confirm the password in the next field.
5. Click **Wipe** to save the change.

23.5 Manage User Templates

User Templates contain a set of common configuration settings applied when creating or modifying users, but do not include all user settings. Some configuration settings are from the **<user>** > **modify** page. Prior to adding users on a new system, review feature options (e.g. Off-site Access to Outside Lines or the ability to create conferences) to determine which are necessary for all users.

To see the list of users for each template:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users**.
2. Locate the **User Templates** section, and click the additional information arrow ▸, if necessary. A table of available User Templates displays.
3. Select **View** for the appropriate template, and navigate to the Template Last Applied To Users section for the complete list.

To manage User Templates:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users**.
2. Locate the **Users Template** section, and click the additional information arrow ▸, if necessary.

3. Click one of the following links:

View	The User Template page opens. The factory default templates are view only, and are not available to modify. To modify new templates: 1. Click **Modify**, and update the template options, as appropriate. See "User Template Settings" on page 136 for more information on the user template options. 2. Click **Update** to save the changes or **Cancel** to disregard the request.
Copy	1. Select the user template, such as System User (Default) and click **Copy**. A new User Template displays in the template list with the same user options as the selected template. 2. Click **View** and follow the instructions above to modify the template.
Delete	The server removes the template from the list, and the page refreshes with available User Templates. If the delete option is unavailable, click View to see the users assigned to the template. Reassign the users to another template, and re-try to delete the template.

User Template Settings

Name	Enter a title for the new user template.

System Features

Set Presence Using Schedule

Control a user's presence setting with the selected schedule. When the selected schedule mode is set to Day Mode, the user's presence is **In Office**. This enables users to have unique call routing for Day and Night modes.When the schedule mode is set to Night Mode, the user's presence is **Away**. Select an option from the drop-down list:

- Disabled
- Any schedule available on the Allworx server.

Users can override the presence setting using any of the current available methods. However, the presence changes as the schedule mode changes except for the On Vacation and On Business Trip presence status, according to the table below.

Current Presence	Presence after schedule change to Day Mode	Presence after schedule change to Night Mode
In Office	In Office	Away
Away	In Office	Away
At Home	In Office	Away
Busy	In Office	Away
At a Meeting	In Office	Away
On Vacation	On Vacation	On Vacation
On Business Trip	On Business Trip	On Business Trip

Enable Voicemail

Check the box to enable callers to leave a voicemail message for the extension. If disabled, the user cannot log in to the Message Center, and other callers cannot leave a message. When setting up a Finally… call route, the user is not in the drop-down list for Transfer to Voicemail for user.

Limits the voicemails by the first limit reached among:

- Maximum Number of Voicemails
- Maximum Voicemail Storage Limit (Allworx Connect servers only)
- Maximum Size Universal Inbox (6x, 6x12, and 48x servers only)

Maximum number Voicemails	Select an available option from the drop-down list.
Maximum Voicemail Storage Limit	Select an available option from the drop-down list.
Call Answering maximum message record time	Select an available option from the drop-down list.

<table>
<tr><td>Enable Voicemail (con't)</td><td><table>
<tr><td>Message Center maximum message record time</td><td>Select an available option from the drop-down list.</td></tr>
<tr><td>User has permission for Off-Site Access to outside lines</td><td>Check the box to enable.</td></tr>
<tr><td>User has permission to send voicemail to all users</td><td>Check the box to enable.</td></tr>
<tr><td>Operator Extension</td><td>Select an available option from the drop-down list.</td></tr>
<tr><td>End message recording</td><td>Select an available option from the drop-down list.</td></tr>
</table></td></tr>
<tr><td>User has permission to modify extension's call routes</td><td>Check to the box to enable the user to customize call routes in My Allworx Manager.</td></tr>
<tr><td>User has permission to create conferences</td><td>Check to the box to enable the user to schedule conference calls in My Allworx Manager.</td></tr>
<tr><td>User has permission to administer Allworx View</td><td>Check the box to enable administrative permissions in the Allworx View application.</td></tr>
<tr><td>System-wide Active Calls Display</td><td>Phone displays caller ID information. Select an available option from the drop-down list.</td></tr>
<tr><td>Call Recording Allowed</td><td>Check the box to enable the user to invoke Call Recording.</td></tr>
<tr><td>Record every call automatically</td><td>Directs the Interact Professional application to automatically start the Call Recording feature from the time the Interact Professional user answers the call; the Interact Professional user still has control on the application interface to pause, resume, or stop the recording during the active call.
• Check the box to enable.
• Requires enabling the Call Recording Allowed option.</td></tr>
<tr><td>Maximum size Universal Inbox</td><td>Identifies the maximum space in <number> MBytes the user has for an Inbox. Select an available option from the drop-down list. Applies to Allworx 6x, 6x12, and 48x servers.</td></tr>
<tr><td>Default Prompt Language</td><td>Identifies which language to use for incoming call prompts.</td></tr>
<tr><td>Enable Hot Desking</td><td>Check the box to enable access to the Hot Desking feature. Specify:<table>
<tr><td>Maximum Login Time</td><td>Select an available option from the drop-down list.</td></tr>
<tr><td>Caller ID Name</td><td>Enter the name callers at the opposite end see on the display.</td></tr>
<tr><td>Caller ID Number</td><td>Enter the number callers at the opposite end seen on the display.</td></tr>
</table></td></tr>
<tr><td>Call Queue Supervisor</td><td>Check the appropriate Call Queue boxes to enable supervisor permissions for the user.</td></tr>
<tr><td>Recording Manager</td><td>Check the appropriate Auto Attendant or Call Queue boxes to enable recording manager permissions for the user.</td></tr>
<tr><td>Feature Eligibility</td><td>• Reach Eligibility Count - enter the number of eligible licenses that a user can manage directly from the Reach application without requiring the Allworx administrator to reserve the license.
• Interact Professional Eligibility Count - enter the number of eligible licenses that a user can manage directly from the Reach application without requiring the Allworx administrator to reserve the license.</td></tr>
</table>

Follow Me Calling	Route inbound calls to an external number within call routes. • When receiving a Follow-Me-Anywhere call on an external phone (e.g. cell phone, home phone), a prompt identifies the source of the call and explains how to accept the call. To enable:

PIN required to accept call*	Requires entering an Allworx PIN code to answer the call.
Require caller to record name*	Requires the caller to state their name before ringing the Allworx phone.
Primary Phone	Select a handset from the Primary Phone drop-down list. The Primary Phone selection is independent of the regular phone assignment and call routing. It can be any phone in the system.

* If checking both boxes, the prompt for calls to the user's extension, "Call for (user) from (caller). To accept, enter your PIN followed by the pound sign."

- If the user rejects or does not answer, the incoming call continues along the defined call route.
- If connecting any of the parties via a SIP Trunk or SIP Gateway, the consult and transfer features do not work.

Reach Link	• User has permission to modify Reach Link settings - check the box to enable. • Allow voicemail when attempting to recover lost Reach calls - check the box to enable. **NOTE:** In a multi-site network configuration: Reach Link functionality is limited to users and handsets configured on an Allworx server with the Reach Link feature key installed.
Auto Attendant Menus	• Check the Auto Attendant boxes to include the user in the Dial-By-Name and Dial-By-Directory menus.
POP3 Mail Transfers	Configures the Allworx user for a POP3 request to transfer email to a POP3 client works as email and voicemail messages, email messages only, or no messages. Select an option. See "Email Server Configuration Settings" on page 173 for more information. • Email and Voicemail messages • Email message only • No messages

Voicemail Notification and Escalation

Sends SMS text messages to cell phones and/or email addresses when leaving a voice message in a specified voicemail inbox on the Allworx System. The SMS text messages provide the following information:

- Allworx username associated with the voicemail inbox.
- Date and time the voicemail inbox received the message.
- Length of the recorded message.
- Caller ID name and number of the caller leaving the voicemail (if available).

NOTE: The Allworx SMTP server sends the SMS text messages, which require a valid network path from the Allworx server to the destination mail server through the Internet.

Notification Mode	Sends alerts each time the inbox receives a new voicemail.
	To configure voicemail Notification alerts, enable the Notification Mode radio button and enter an SMS Email Address.
	• The SMS Email Address is the address of the recipient to alert a new message is available.
	• One entry per field; use a message alias to send alerts to multiple recipients. Acceptable entries:
	  • Username
	  • Email address
	  • Message Alias
	  • Cell phone number with service provider SMS text message domain (e.g., 7165552000@txt.att.net)
	• NOTE: Find service provider domains at: www.notepage.net/smtp.htm (Check with the Service Provider for more information).

Escalation Mode

The Voicemail Escalation feature distributes message alerts repeatedly until meeting the set number of retries or until retrieving any voicemail message.

- The system organizes recipients into levels so that after sending a specific number of message alerts to the recipient(s) at one level, the system begins sending the alerts to the recipient(s) at the next highest level.
- Example: A doctor's office has an "on call hours" voicemail box. When leaving voicemail messages in this box, the system sends the notification to the assigned doctor to answer after hour emergencies. If the doctor does not retrieve the call within X minutes, the system sends an escalation message to the next set of backup doctors.

Enable the Escalation Mode radio button and update the fields:

Level	Order for alerting recipients a caller left a message in the voicemail inbox.
SMS Email Message	Address of the recipient(s) to alert when a new message is in the voicemail inbox. Only one entry per field, use a message alias to send alerts to multiple recipients. The following are acceptable entries: • Username • Message Alias • Email address • Cell phone number with service provider SMS text message domain (e.g., 7165552000@txt.att.net) Note: Find a list of service provider domains at: www.notepage.net/smtp.htm (Check with the Service Provider for more information).
Notification Period	Elapsed time before sending another SMS message to the recipients identified in the Level option.
Maximum Retries	Maximum number of attempts sent to the recipients of the level before the message alerts proceed to the next level. • This does not include the initial SMS message. • The server makes one more attempt to the recipients than the entered value. • Escalation message alerts stop after sending the maximum number of messages to the last populated level in the table.
Continue Notifications	Recipients continue to receive message alerts in conjunction with the next level or levels once escalation occurs.

Email Forwarding

External Outgoing Mail (SMTP) Server Configuration

Check the box to override the server configuration for the user. To configure:

1. Check the box to enable. Enter the following information:

Server Address	Enter IP Address or DNS name.
Server Port	Enter a value.
Display Name	Enter a value.
Sender's Email Address	Enter an email address.
Use authentication	Check the box to enable, and then enter the User Name and Password.
Secure Connection	Select an available option from the drop-down list: • None: No secure connection. • SSL: Uses SSL without sending the STARTTLS message at the beginning of the connection prior to doing the SSL handshake. • TLS: Uses SSL WITH sending the STARTTLS message at the beginning of the connection prior to doing the SSL handshake.

2. Click **Send Test Email.**

VPN Settings

Check the box to enable. Enter a VPN password in the field, and then confirm it.

23.6 Define Password Requirements

Users enter PIN codes or passwords to access phone functions and applications. The Allworx administrator can require more stringent password requirements for all accounts, and users to change the PIN or password at the next login by using My Allworx Manager.

Phone Functions requiring a Pin Code	Applications requiring a Password
• Message Center (Audio and Visual) • ACD Agent Login • Hot Desk Login • Follow Me	• Interact / Interact Professional • Reach • My Allworx Manager

To change the password requirements:

1. Log in to the Allworx server admin page, navigate to **Phone System** > **Users**.

2. Locate the **Password Requirements** section, and click the additional information arrow ▶, if necessary. A message displays indicating if Strong User Passwords are or are not required, and the current password requirements.

3. Click **modify** to change the settings.

Default Settings	Require Strong Passwords Settings

• Default setting: Require Strong Passwords is unchecked.
• Only contain letters (A-Z, a-z), digits (0-9), and special characters (above).
• Minimum length of 4 characters / Maximum length of 128 characters
	• Check the Require Strong Passwords box to enable, and then select the strong password requirements:
	  • Minimum password length (6 to 128 characters)
	  • Require lower case letter(s)
	  • Require upper case letter(s)
	  • Require numeric character(s)
	  • Require special character(s)
	• If the password does not already meet all the updated requirements, the server requires the user to change the password at the next login.

[SP]	!	“	#	$	%	&	‘	,
-	.	/	:	;	<	=	}	>
?	@	`	{	~	(	)	|	*
+	[	\	]	^	_			

4. Click the **Update** button to save the changes or **Cancel** to disregard the request.

Click here to return to the “Install Checklist”.

Part 4 Network

The Network sections describe setting up and customizing the network for the Allworx server specific to the business requirements.Each chapter explains:

- necessary access permissions and feature keys.
- necessary equipment to perform the procedures.
- necessary procedures to setup and customize the Allworx server network.

The various Network pages on the server web admin site support the Allworx administrator to set up, configure, and manage the settings of the following features:

- Configuration
- Multi-Site
- Port Expander
- Static Route
- VPN

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Chapter 24 Configuration

Configuration supports customizing the network settings for the business needs.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No

Prior to configuring the network:

- review the security advisories available at: https://allworxportal.com/support_training/advisories.aspx.
- perform a backup of the View database prior to changing the network configuration (see the Allworx View Users Guide for more information).

To manage the network configuration:

1. Log in to the Allworx server admin page. Navigate to **Network** > **Configuration**.
2. Click **modify**. The modify page opens.
3. Update the settings:

   For security purposes, the Allworx administrator can no longer manage the Allworx server from the Public interface IP Address. The Allworx server requires all updates from a LAN IP Address.

Allworx Network Mode

Previous Configuration	Current Feature
LAN Host mode	LAN Host Mode
NAT Firewall	Enable NAT
NAT/Firewall with DMZ	Enable NAT Enable Firewall
NAT/Firewall with Stealth DMZ	Enable NAT Enable Firewall Enable Stealth Mode
Standard Router	

LAN Host Mode	Another device on the Local Phones interface of the Allworx server is the primary router to the Internet. The NAT and Firewall functionalities are not available on the Allworx server.
Enable NAT	Network Address Translation. Enables devices attached to the LAN(s) of the Allworx server with private (non-globally routeable) IP Addresses to communicate on a wider network using the server WAN IP Address. This conserves IPv4 Addresses and protects devices on such LAN networks from all unsolicited Internet traffic.
Enable Firewall	Protects the Allworx server and all services running on it from unsolicited Internet access, enabling access onto to the ports that the administrator deems necessary.
Enable Stealth Mode	The Allworx server does not respond to unsolicited connection attempts at all, as if the server did not exist, instead of responding with the standard ICMP Port unreachable message.

VLAN Configuration

- The Allworx Network Stack supports up to 16 user-defined VLANs shared between the Ethernet ports. Any VLAN shares the full bandwidth among all the VLANs on that port. Virtual Network Interfaces provide the ability to define multiple virtual interfaces on a single physical interface so the Allworx administrator can separate voice and data. Each virtual interface enables a separate IP address and 802.1Q VLAN tagging setup. The Network Configuration page has an updated section for configuring VLAN settings for the Ethernet ports.
- There is always at least one configured VLAN, which acts as the phone LAN. The phone VLAN can be on any Ethernet port - tagged or untagged. The system does not require configuring any other VLAN interfaces. Any Ethernet interface without enabled VLANs (and without configured PPPoE) is unused.
- Each interface has a uniquely assigned VLAN Tag/ID. The Allworx administrator may configure one interface per physical port as untagged without specifying the VLAN Tag/ID. By default, the WAN port has one untagged interface - VLAN Tag/ID unspecified, and the LAN port (ETH0 on Connect servers) has one untagged interface - VLAN Tag/ID unspecified. Both ports cannot use the same VLAN Tag/ID.
- The Allworx administrator cannot delete the first VLAN in the list because of the assigned Local Phone network. At a minimum, there is always one Ethernet port with a configured VLAN (tagged or untagged) for local phones, but the Allworx administrator can disable all other network interfaces.

SNMP

- The server SNMP daemon listens on all VLAN interfaces, and uses the firewall to block access from the public interface. See “SNMP Server” on page 179 to enable or disable SNMP for all interfaces.

Upgrades During the first major software upgrade to Allworx System Software 8.0 and later the software imports the settings from a previous version of the Allworx System Software and creates two VLANs.	
LAN/untagged	• Imports the IP settings from the legacy LAN IP settings. • Imports the Network Mode settings from the previous software version.
WAN/untagged	• Imports the WAN/untagged VLAN IP settings from the WAN settings, if the WAN settings were “Use either a DHCP Server” or “Use Static Settings”, and the new WAN setting selects VLAN. Otherwise, the WAN/untagged VLAN has its default settings and the WAN setting remains unchanged. • Imports the Network Mode settings from the previous software version.

add VLAN	Adds a new VLAN to the list. Users may define up to 16 VLANs.
Enabled	Check the box to enable the VLAN port. The Allworx System Software checks the LAN ports by default.
Port	Indicate the Physical Ethernet Port. Options include LAN or WAN.
Tag/ID	Check the box to tag the VLAN. Manually enter the VLAN (802.1Q) tag.
Description/IP Address	The Allworx System Software identifies LAN phones as Local phones and VLAN phones as public.The first Public VLAN description is fixed, and subsequent description fields are user-defined. Options include: • DHCP • Static <IP Address> • <Net mask drop-down>
Services	Check the box to enable the services. The first local phone VLAN BLF broadcast is always enabled, and subsequent BLF check boxes are user-defined.
Action	Click delete to remove the port from the list.
Public Interfaces	
VLAN	If a VLAN interface is serving as the Public interface, click the radio button. Select the appropriate interface from the drop-down list.
PPPoE (on WAN Port)	If using PPPoE (on WAN Port), click the radio button. Enter the PPPoE Username, PPPoE Password, and the PPPoE Service Name. If necessary, update the PPPoE MTU.
T1 Port	If using T1 as the gateway, click the radio button.

Default Route	
Gateway	Enter or verify the IP address.
External IP Address	Enter or verify the IP address.
Allworx Interface Blocking Rules (Optional)	
<Select Interface>	Select an available option from the drop-down list.
add rule	Saves the new rule to the server.
delete rule	Removes the rule from the server.
Firewall (Optional, if enabling the firewall) The Allworx System Software supports a simple firewall between any two possible network interfaces to prevent unauthorized access. The Allworx administrator can add rules consisting of the pairs of interfaces. The Allworx System Software drops packets normally routed between the interfaces that are in such a rule. These rules are in effect regardless of the state of the Firewall and NAT check boxes, and do not effect spoof ports.	
Allworx Reach and Remote Allworx Handsets (UPD 2088, TCP 8081)	enabled
Allworx View (54441)	enabled
DNS Client (UDP 4069)	enTCP abled
DNS Server (UDP 53)	enabled
HTTP (TCP 80)	disabled
HTTPS: Secure Allworx Administration (TCP 8443)*	disabled
HTTPS: Secure Allworx My Allworx Manager (TCP 443)*	disabled
IMAP4 (TCP 143)	disabled
Multi-Site Voicemail (TCP 26)	disabled
POP3 (TCP 110)	disabled
PPTP (TCP 1723)	disabled
SIP (UDP 5060, TCP 5060)	enabled
SNMP (UDP 161)	enabled
SNTP Client (UDP 4068)	enabled
* Feature is only available on the Connect servers.	
Network Address Translation Rules (Optional, if enabling NAT)	
Public IF Port #	Enter the port information.
Protocol	Select an option from the drop-down list.
IP Address	Enter the IP address.
Local Port #	Enter the port information.
Host Information	
Host Name	Enter the Host information
Fully Qualified Domain Name (FQDN)	Enter the information.

4. Click **Update** to save the changes or **Cancel** to disregard the request. Restart the Allworx server for the new settings to take effect.

Click here to return to the "Install Checklist" .

Chapter 25 Digital Lines

Digital Lines are the integrated T1 interfaces on Allworx 48x and Connect 731 servers. Access the T1 Digital Line interfaces through the connectors labeled T1-A and T1-B on the Allworx servers.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role Support Technician role
Feature Key Required	No
Servers	Allworx 48x and Connect 731

The service provider provisions the line to the interface, which dictates the configuration of the Digital Lines.The settings must match the expected configuration of the service provider or for proper operation. Configure the line or lines in use before physically connecting the server to the T1 line.

When using a Digital Line for circuit switched voice operation (PRI or RBS modes), the preferred method is to set all the Digital Line parameters including the functional definition for each time slot on T1 line. After setting this configuration, each slot configured to support circuit switch voice calls display as a new outside line. That is, logically treat each separate slot configured for circuit switched voice calls as a separate telephone line. The differences include:

Allworx 24x or Connect Server	The T1-A interface operates as: • Primary Rate ISDN line. • T1 data line for connectivity to another site or to an Internet Service Provider. The T1-A interface supports both circuit switched voice calls and TCP/IP data. The T1-A interface also supports Robbed Bit Signaling (RBS) operation. Use the dedicated T1-B interface as a data connection. Use the data connection for connectivity to another remote site on a dedicated T1 line or for connectivity to a service provider for Internet access.
Allworx 48x Server	One or both of the T1 interfaces: • operate as Primary Rate ISDN lines, Robbed Bit Signaling (RBS) lines, and /or T1 data lines for connectivity to another site or to an Internet Service Provider, • support both circuit switched voice calls and TCP/IP data. Use the data connection for connectivity to another remote site on a dedicated T1 line or for connectivity to a service provider for Internet access.
PRI Support	The Allworx server supports Primary Rate ISDN using the National Standard ISDN format (NI-2), Lucent Custom 4ESS, Lucent Custom 5ESS, and Nortel DMS-100 switch types. Always configure the Allworx server ISDN interface as the user side equipment with the intention of hooking to the service provider Central Office (CO) network side equipment. The Allworx server interfaces have a fully integrated CSU/DSU, typically intended for a direct, short haul connection to the service provider smart jack. Consult the product installation instructions for further information. **NOTE:** When using PRI operation it is important to define exactly one PRI D channel for the Digital Line and a minimum of one PRI B channel. Match the configuration provisioning defined by the Central Office with a typical configuration having 23 B channels on slots 1 through 23 and one D channel on slot 24.

NFAS Support

Non-Facility Associated Signaling (NFAS) is a PRI that multiple T1 lines share the same D channel. The Allworx server supports NFAS using the National Standard ISDN, Lucent Custom 4ESS, Lucent Custom 5ESS, Nortel DMS-100 switch types.

NOTE:

The configuration must match the provisioning defined by the Central Office.

- A typical configuration has:
  - Twenty-three B channels on slots 1 through 23.
  - One D channel on slot 24 of the primary T1 line.
  - Twenty-four B channels on slots 1 through 24 of the secondary T1 line.
- To configure NFAS on the Allworx system, connect the NFAS line with the D channel to the T1-A port.

Robbed Bit Signaling / Channel Associated Signaling Support

The Allworx server supports classical T1 Robbed Bit Signaling (RBS) trunk lines on a time slot by time slot basis, sometimes referred to as T1 Channel Associated Signaling (CAS). The system supports the following modes:

- FXO Loop-Start
- FXO Ground-Start
- E&M Feature Group B
- E&M Immediate Start
- E&M Wind Start

For the above selections, operational use is the same as the corresponding analog interface types. The system implements the precise signaling protocols for each interface in conformance with the procedures documented in EIA/TIA-464C. Inbound Caller-ID is supported on the FXO modes, if the CO supports it. See "Digital Lines" on page 147 for more information.

Robbed Bit Signaling / Channel Associated Signaling Support

For primary CO line connectivity, the preferred slot choice is the FXO Ground-Start slot to minimize the possibility for glare conditions, especially when call volume is high. Allworx does not guarantee that the network provides an explicit disconnect signal in FXO Loop-Start mode. Example termination methods:

User hangs up phone.	Normal call termination.
User hangs up phone under the supervision of the Auto Attendant.	No terminating signal can cause the call to remain live for an extended period of time (tens of seconds) after the original call termination.
Line-side answer supervision	The network provides an explicit signal acknowledging that the far end has picked up during an outbound call. • Not all FXO lines support this supplemental feature. • Because not all network equipment can produce this state, calls cannot rely upon it and disregards the state.

Data Support

NOTE: The Allworx administrator can configure and reconfigure the digital lines without a system restart, but changes to the Network Configuration settings do require a system restart after updating them.

NOTE: Since the data support is fully symmetrical, it is possible to connect two Allworx servers back-to-back between their T1 interfaces. Do this either on the same site or across sites using a dedicated T1 line that spans between the two sites via the service provider.

The Allworx server configuration enables the Allworx server to carry TCP/IP packets using PPP encapsulation on any combination of slots constituting a full or fractional T1 interface. Even when configuring a T1 interface for circuit switched PRI operations, use extra (non-voice) slots for dedicated data connections as long as the remote end service provider enables this configuration.

Each T1 interface that has data slots configured on it constitutes a single logical serial channel using HDLC encapsulation of PPP packets per RFC-1662, using any combination of slots for data on each Digital Line, there can be only one logical data interface definition per T1 line.

25.1 Restrictions

- Designate one interface as the logical Public interface for the Connect 731 server. Select the Ethernet Public Interface or the T1 interface for routing TCP/IP traffic. Select either Ethernet VLAN or T1-A port as the data WAN interface for the system even though it is possible to provision multiple interfaces simultaneously.
- Designate one interface as the logical Public interface for the Allworx 24x, 48x, and Connect servers. Select the Ethernet Public Interface, T1-A, or T1-B ports for routing TCP/IP traffic. Select either Ethernet VLAN, PPPoE, T1-A, or T1-B ports as the data WAN interface for the system even though it is possible to provision multiple interfaces simultaneously.

25.2 Configure the Digital Lines

To configure the digital lines:
To change the Digital Lines setting, see “Manage Digital Lines” on page 108 for more information.

To configure the T1 line on the Allworx server:

1. Log in to the Allworx server admin page, navigate to **Network** > **Digital Lines**.

2. Locate the Digital Line and click **Modify.** If using an NFAS line, check the Enable NFAS box.

   It is important to provision Digital Lines not in use as Disabled. The disabled state is the factory default setting for each T1 line.

Description	Description of the Digital Line interface. Use this description in all other places referring to this line, such as in the Outlines Lines view and configuration pages of the phone system.
Line Mode	The provisioned operational mode for this interface - T1 mode and Disabled are available.
Line Code/DS0 Channel Speed	Supports both B8ZS and AMI modes. Allworx strongly recommends using B8ZS mode, if the service provider supports it. • Select the setting that matches the service provider setting, but order the lines as B8ZS, if the CO switch enables it. • In AMI mode, clear channel data service is not available and only a 56K data rate is available on each slot. Generally, a PRI line should always be set to B8ZS mode.
Framing	The Allworx server supports both Super Frame (D4) and Extended Super Frame (ESF) modes. Select the setting that matches the service provider configuration, but Allworx recommends having the service provider use ESF mode, if available.
Clock Source	Specify the Digital Line data clocking source reference for this interface. • Network clocking is almost always the preferred setting because the service provider is the source of the timing reference and the Allworx interface will be the slave to that network clock. • Internal timing mode indicates that the Allworx device is the source of the clocking time reference. This mode is useful to hook two devices back-to-back. One end needs to provide the clock reference and the other must slave to that master. • The exact terminology may vary from device-to-device. For this setting on Allworx devices, Network mode means it is the slave and Internal Mode means it is the clock master.

<table>
<tr><td>Loopback Mode</td><td>Place the interface into a diagnostic mode for testing purposes. For best results, always select Normal Operation. The use of the test modes is beyond the scope of this document.
<table>
<tr><td>Normal Operation</td><td>Transmit and receive lines that connect normally and disables all loop back features modes.</td></tr>
<tr><td>Local Unframed</td><td>Does an internal analog loop back on the local interface so that transmit data immediately loops back to the receive path.
• This mode is useful for verifying that the physical interface is operating correctly on the Allworx unit.
• Although not strictly required, Allworx recommends using B8ZS, ESF, and Clock Source Internal for such tests.</td></tr>
<tr><td>Remote Frames</td><td>Synchronizes and decodes incoming data at the frame level. These decoded frames are then re-framed locally and sent back out on the transmitted output line.</td></tr>
<tr><td>Remote Unframed</td><td>Decodes incoming data at the bit level from analog voltages to digital bits and directly sent out as a stream of bits back towards the source on the transmitted output line. No attempt is made to synchronize or verify the data at the frame level.</td></tr>
</table></td></tr>
<tr><td>Line Build Out</td><td>Determines the pulse shape and transmit power levels used on the analog output of the Digital Line interface.
• The dB settings are for long haul configurations and the distance settings for short haul configurations.
• Always use the short haul settings since Allworx equipment is intended for use with a local smart jack only and not for driving the physical T1 lines on the telephone poles directly.
• Select the length setting that matches the cabled distance between the Allworx server and the service provider’s demarcation point. If this setting is improperly configured line errors may be very common or problematic and affect system reliability.</td></tr>
<tr><td>PRI Switch Type</td><td>Select the Primary ISDN (PRI) switch type that is in use by the service provider.
• Select NONE if there is no connection of this interface to a PRI based service.
• If this parameter is improperly configured the telephone service will most likely work, however there will be subtle problems when certain type of conditions occur such as calling cell phones, busy numbers, or during network congestion. Additionally, this may affect Caller ID functionality as well. Verify the correct setting from the service provider to set this parameter accordingly.</td></tr>
<tr><td>Voice Channel Selection Order</td><td>Determines the order the Allworx PBX attempts to seize a line for outgoing calls within each service group assigned to this Digital Line. This setting is not critical but having it properly set dramatically lowers the probability for a condition called glare where both the PBX and the Central Office attempt to put the same slot into service simultaneously for two unrelated calls.
• Set this selection to be the opposite direction that the service provider uses for incoming calls.
• Example: If the service provider:
  • Hunts incoming calls starting from slot 1 towards higher numbered slots looking for the first available channel for a new incoming call, configure the PBX for Descending Mode.
  • Starts at the top and hunts toward lower-numbered slots, select Ascending Mode.</td></tr>
<tr><td>Caller ID Name</td><td>Since most PRI lines hook directly into the international SS7 telephone signaling network, it is possible to have parties see any Caller-ID string.
• For analog phone lines, the CO determines this string. For PRI lines, the Allworx server determines it.
• Set the caller ID name field to the preferred value for called parties to see when placing outgoing calls on this Digital Line.
• The service provider may override these settings.</td></tr>
<tr><td>Caller ID Number</td><td>The phone number presented to called parties for outgoing calls. See name setting above for more information.</td></tr>
<tr><td>Prefer Originally Dialed Number (RDNIS) for display</td><td>This causes displaying T1/PRI originally-dialed/redirected phone number on Allworx phones, if the original call was redirected and the CO provides the original call information.</td></tr>
</table>

Prefer Originally Dialed Number (RDNIS) for DID lookup/call routing	This causes using T1/PRI originally-dialed/redirected phone number in DID routing, if the original call was redirected and the CO provides the original call information.
Channel Assignments	Select the operating mode for each time slot per the provisioning defined by the service provider or device connected to the Digital Line. Improper selections causes poor results. Select an option from the drop-down list or locate the **Set all channels to**: and select an available option.

Disabled	Indicates an unused time slot on this Digital Line.
PRI B Channel	Bearer channel for ISDN PRI operation used for carrying voice calls. Selecting this mode defines a new outside line for the PBX for each configured slot.
PRI D Channel	Data-signaling channel for ISDN PRI operation used for transporting call control information between the PBX and the Central Office. The Allworx server always operates as user equipment on a PRI line. If enabling PRI operation on this line, configure exactly one slot as the PRI D channel. Typically, this is slot 24. When using NFAS, the D channel must be on the T1-A port.
T1 E and M Immediate Start RBS	Circuit-switched Ear and Mouth mode Robbed Bit Signaling trunk that uses Immediate Start signaling. Defines a new outside line for the PBX for each slot configured in this mode. This mode is symmetrical. Used to hook the PBX back to back to tie PBXs between sites on a leased line.
T1 E and M Wink FG-B RBS	Circuit-switched Ear and Mouth mode Robbed Bit Signaling trunk. • Defines a new outside line for the PBX for each slot configured in this mode. • This mode is symmetrical and used to hook PBXs back-to-back to tie PBXs between sites on a leased line. • Only use DTMF signaling. • The system does not support Multiple Frequency (MF) signaling.
T1 E and M Wink FG-D RBS	Circuit-switched Ear and Mouth mode Robbed Bit Signaling trunk. • Defines a new outside line for the PBX for each slot configured in this mode. • This mode is symmetrical and also used to hook PBXs back-to-back to tie PBXs between sites on a leased line. • Only use DTMF signaling. • The system does not support Multiple Frequency (MF) signaling.
T1 FXO Loop-Start RBS	Circuit-switched Foreign Exchange Office style interface mode that digitally emulates the standard analog telephone line interface that uses Loop-Start signaling. • Defines a new outside line for the PBX for each slot configured in this mode. • If call volume is high, this mode is less desirable than FXO Ground-Start Operation. This connects to the service provider interface that is operating as the FXS side of the interface. • This mode is NOT symmetrical.
T1 FXO Ground-Start RBS	Circuit-switched Foreign Exchange Office style interface mode that digitally emulates the standard analog telephone line interface using Ground-Start Signaling. • Defines a new outside line for the PBX for each slot configured in this mode. • The Ground-Start operation is able to minimize the possibility of glare especially when call volumes are high, making it more preferable than Loop-Start. • This is intended to connect to the service provider interface that is operating as the FXS side of the Ground-Start interface. • This mode is NOT symmetrical.

Channel Assignments (con't)	56K Data Channel	Specifies this slot provides 56Kbits/sec of bandwidth for the Digital Line logical data connection. • This mode is typically used if 64K clear channel service is not available. • Only use this mode for data connections when selecting AMI Line Code mode
	64K Data Channel	Specifies that this slot provides 64Kbits/sec of bandwidth for the Digital Line logical data connection. • Use this when clear channel data service is available. • Do not select this mode if selecting the Digital Line's AMI Line Code mode.

3. Click **Update** to save the changes or **Cancel** to disregard the request.

Click here to return to the "Install Checklist" .

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Chapter 26 Multi-Site

The Multi-Site feature supports the ability to integrate multiple sites seamlessly. Allworx administrators can join up to 99 Allworx servers in a Multi-Site network with up to 1000 users and up to 1000 system extensions across all sites. The total number of Multi-Site Users and Multi-Site System Extensions varies with the maximum users licensed on each Allworx server.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	• Multi-Site Primary • Multi-Site Branch

The Multi-Site feature supports increased multi-site network security and reduces the time necessary to rebuild or rejoin a multi-site network.

26.1 Setup Checklist

Follow the order of the steps to successfully setup the multi-site network.

Step	Description	Installation Guide Link
1	Verify the Internal Dial Plan is the same on all servers in a multi-site network. The Allworx system does not enable sites to join the network if the Internal Dial Plan is different from the Controller site Dial Plan.	"Dial Plan" on page 37
2	Configure and enable multi-site on the Controller before enabling any of the Branch sites. Doing so enables the Branch sites to register immediately. NOTE: The Allworx system does not permit using Allworx 6x12 servers as a Controller site.	"To configure the sites:" on page 154
3	Configure and enable the branch sites.	
4	Build/rebuild (available on the Controller site only) or rejoin (available on the Branch site only) the multi-site network.	
5	Manage the voicemail transfer settings.	"To manage the voicemail transfer settings:" on page 155

26.2 Manage the Multi-Site Network

Prior to setting up the multi-site network or for tips to configure the Allworx Phone system for a multi-site network:

- read the Allworx Advanced Multi-Site Setup Guide for details
- View customers: perform a backup of the View database prior to changing the multi-site configuration (see the Allworx View Users Guide for more information).

To configure the sites:

1. Log in to the Allworx web server admin page.

2. Install the Multi-Site Primary and Multi-Site Branch feature keys. See "Feature Keys" on page 217 for more information. Verify that Multi-Site Primary displays in the Currently Installed Feature list. If it is not in the list, obtain a Multi-Site Primary key from the Allworx Distributor.

3. Navigate to **Network** > **Multi-Site**, and then click:

Link	Description
Configuration	

modify	Update the current settings.
	1. Specify a multi-site role for this server:
	• **Disabled** – Ends the server multi-site connections. If a server becomes disabled, the other active sites receive a notification, and the Allworx system removes the disabled site from the database.
	• **Controller Site** – Enter a descriptive site name for this site. The name displays on the Admin page of all sites as the home location for extensions, users, and handsets.
	• **Branch Site** – Enter the public IP Address or the domain name of the Allworx server at the Controller site. The name displays on the Admin page of all sites as the home location of extensions, users, and handsets.
	• In the Site List section, a message displays **<Controller Site IP Address> contacted**. **Pending acceptance from admin at site**. This indicates the Branch site sent a request to the Controller site to join the multi-site network. The Branch site stays in this state until the Controller site manually accepts this request.
	• The message **<Controller Site IP Address> is being contacted**, indicates the Branch site is waiting for a response from the Controller.
	  • Click **Refresh** to verify if the "Pending acceptance" message displays. If the refreshed page continues to display the **is being contacted** message, there is a problem.
	  • Verify the Controller site configuration and verify the network communications between sites.
	2. Click **Update** to save the changes or **Cancel** to disregard the request.
	NOTE: If the Branch Site Internal Dial Plan or Extension Length is different from the settings on the Controller site, the system does not enable the Branch site to join the network.

advanced	**Only change the site identifier at the direction of Allworx Customer Support.**
Go Offline	Disconnects the server from the multi-site network. If a server is Offline, the other active sites receive a notification, which clears the server credentials and prevents the Offline site from communicating with the other servers on the multi-site.
Rebuild	Rejoin all active sites and those without a pending accept status. Sends a request to Branch servers in the list to resend connection information. When rebuilding a Multi-Site network (either by deleting or using the **Rebuild** button), local handsets owned by remote users become "unowned" phones and display **(none)** in the owner column on the Phone System > Handsets > SIP Handsets page.
Rejoin	Send a request to the Controller server to re-establish a connection in the multi-site configuration without disabling the server and re-entering the branch server data. For servers that fail a join attempt.

Link	Description
Site List A list of sites available to add to the multi-site configuration.	
Pending Sites	A list of available sites to add to the multi-site configuration. • Accept - adds the server to the multi-site configuration. • Deny - does not add the server to the multi-site configuration. NOTE: After accepting the sites, the Active Sites table updates from the Pending Sites table. Notice the status that displays in the Inbound Link and Outbound Link columns. It may take a few minutes for all servers to report an Active status. “Active” indicates that the Controller site and the Branch site exchanged all required information (i.e. users, extensions, and handsets).
Active Sites	Displays the handsets available on the branch site. Click:
handsets	• **hide** - collapses the list of sites. • **modify** - map the specified handsets. Click the checkbox next to the handset model to enable. Click **Update** to save the changes or **Cancel** to disregard the request.
delete	Removes the site from this and all other servers. Click Delete to remove the site or Cancel to disregard the request.
test	If any tests fail, the most likely cause is the configuration of network devices between the sites. Check the firewall settings, port assignments, static routes, and port forwarding between the current site and the remote test site. • hide - collapses the list of available tests. • HTTP • BLF • SMTP • SIP • Audio Call
Mapped Handsets Displays a list of handsets mapped from the branch site to the controller site.	
Conflicts If there are cases where the same defined extension phone number was on more than one server, then conflicts in the data result during the data exchange between sites. Another kind of conflict occurs if users defined on more than one server have the same username. Check and resolve conflicts and resolve on each server: Entries in the Username and User Extension Conflicts table indicate either an Ext conflict or a Login Name conflict. Look up the extension at each of the conflicting sites. • If users on different sites are using the same extension, change one of the user’s extensions on all but one of the conflicting sites to resolve the conflict. • If users on different sites are using the same Login name, delete one of the conflicting users and re-add it with a different username. **Note** that this deletes the configurations and saved voicemails for the deleted user. For any entries in the System Extension Conflicts table, delete the extension from one of the conflicting sites to resolve the conflict. Remember the call route of the deleted extension, and then add a new extension with that same call route. Verify that all conflicts have been resolved on all servers.	

To manage the voicemail transfer settings:

Configure the firewall settings for transferring voicemail between sites.

1. Log in to the Allworx web server admin page.

2. Navigate to **Network** > **Multi-Site** and locate the **Voicemail Transfer Settings** section.

3. Click **modify** and update the settings.

TCP/IP Port	Enter the Allworx server IP address LAN TCP/IP Port.
Maximum Sessions	Enter the total number of active voicemail or email transfer sessions across the multi-site network at one time.
Single Message Size Limit (bytes)	Enter the maximum message size in bytes for one message. Entering a 0 equals no limit.
Maximum Messages Per Session	Enter the maximum number of messages per each session. Entering a 0 equals no limit.

4. Click **Update** to save the changes or **Cancel** to disregard the request.

Click here to return to the "Install Checklist" .

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Chapter 27 Px Expanders and Remote Phones

Px 6/2 Expander expands the system analog capability by adding six (6) FXO and two (2) FXS ports to most Allworx servers. Allworx administrators can use the Plug and Play installation feature for locally connected units. For detailed installation instructions, see the Allworx Px 6/2 Expander Installation Guide.

For remote installation use the approach similar for remote Allworx phones.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No
Servers	Allworx 6x, 48x, and Connect

Allworx defines a remote device as a Px Expander or phone on a different Local Area Network (LAN) from the Allworx server.

Example:
An Allworx server is at the company main office but an employee has a home office phone.

The Allworx administrator configures:

- the server for calls to and from the phone as though the employee is at the main office.
- the analog phones or CO lines on a remote Px Expander to integrate into the server network and dial plan.

Caution:	Allworx cannot guarantee proper routing of 911 emergency calls from remote Allworx phones or analog handsets attached to remote Allworx Px Expanders. Do not configure remote handsets to place 911 calls.
Caution:	During a network connection interruption between the Px Expander and the Allworx server it is not possible for regular use of the Px Expander FXO and FXS ports. The only option to place calls through a Px Expander without a functional network connection to the Allworx server is plugging an analog phone into the Power Fail port. The CO line connected to FXO port 1 routes the calls placed using this phone. No other ports are functional.

27.1 Setup Checklist

Follow the order of the steps to successfully setup the Px Expander.

Step	Description	Installation Guide Link
1	Install and configure the Px Expander.	For more detailed information, see Allworx Px 6/2 Expander Installation Guide.
2	Configure the Px Expander.	“To mange a Px Expander:” on page 158.
3	Configure the FXS and FXO ports.	“Manage FXO and FXS Ports” on page 159.
4	Change the network settings on a handset (using soft keys) or Px Expander.	“Change the Network Settings” on page 160.
5	Update the firewall settings.	“Devices Behind a Firewall” on page 161.

27.2 Manage the Px Expander

Displays a list of all Px Expanders on the Allworx server.

To enter the Boot Server IP Address and Plug and Play Secret Key into the phone, press the Config soft key and select the Network Settings menu. See "VoIP Server" on page 181 for more information.

To enter the information into an Allworx Px 6/2 Expander, see the Allworx Px 6/2 Expander Installation Guide for more information.

To mange a Px Expander:

1. Set up and configure the Px Expander per the Allworx Px 6/2 Expander Installation Guide.

2. Log in to the Allworx server admin page, navigate to **Network** > **Port Expanders**.

3. Click one of the following links:

add new Port Expander	Activate a Px Expander on the server. See "Px Expander Settings" on page 159 for additional information. Click **Add** to save the change or **Cancel** to disregard the request.	
<Port Expander name> (available after adding a port expander)	Click one of the following links:	
	Modify	Update the Px Expander settings on the server. See "Px Expander Settings" on page 159 for additional information. Click Update to save the change or Cancel to disregard the request.
	Delete	Removes all related configurations and port definitions from the system.
	Replace	Replace the Px Expander with another Px Expander while automatically transferring all the configuration parameters and settings to the new unit. Use this when replacing a defective Px Expander.
	Handsets	Jumps to the Handsets page to configure Px Expander FXS ports.
	Outside Lines	Jumps to the Outside Lines page to configure Px Expander FXS ports.
	<IP Address>	Opens the Px Expander information page in a separate browser window.
	Reboot	Restart the Px Expander after making configuration changes to the expander or any of its ports. The reboot starts as soon as all of the Px Expander ports are idle.
Delete	Removes the Px Expander from the server. Click **Delete** to save the change or **Cancel** to disregard the request.	
Replace	Replace the Px Expander with another Px Expander while automatically transferring all the configuration parameters and settings to the new unit.	
Handsets	Jumps to the Handsets page to configure the Px Expander FXS ports.	
Outside Lines	Jumps to the Outside Lines page to configure the Px Expander FXS ports.	
<IP Address>	Opens the Allworx admin page of the Px Expander in a separate browser window. Use this link to view the event log or view/modify the on-board settings.	
Reboot	Restart the Px Expander after making configuration changes to the expander or any of its ports. The reboot starts as soon as all of the Px Expander ports are idle.	

Px Expander Settings

Setting	Description
MAC Address	Hardware identifier for the Px Expander. It cannot be changed.
Description	Name given to the Px Expander. During Plug and Play installation, the Description is set to the Px Expander MAC address. Allworx recommends changing it to something more meaningful to the site or configuration.
Codec Preference Order	Set the preferred codec order for the Px Expander. The server does not support all codec for all call types (for example, accessing the server Auto Attendant requires G.711). Codec is the method of encoding/decoding the audio sent and received. • The two possible codec are G.711 and G.729A. G.711 preserves voice quality but takes more bandwidth. G.729A takes less bandwidth but reduces voice quality. • This setting defines the order of codec selection. • The Px Expander attempts to use the first choice but uses whichever required codec to support calls.
RTP Media Range (Port to Port)	Specifies the range of UDP ports used for Real-Time Transport Protocol communications. • When placing remote Px Expanders behind third-party firewalls, under certain conditions restrict the UDP port range to create mapping rules for each Px Expander behind the firewall. See "Phone/Px Expander behind a Third-Party Firewall" on page 159 for more information.
SIP NAT Keep-alive Interval	Some NAT firewalls automatically time out and close connections to devices. • If a remote Px Expander is behind such a firewall, this setting prevents the timeout. • Messages called keep-alive packets are sent from the Px Expander to the Allworx server at the frequency specified. • Set the value to an interval shorter than the firewall timeout.
SIP Port	UDP port number used for the SIP protocol by the Px Expander. Use the default value of 5060 unless the Px Expander is behind a third-party firewall and the network requires a different value.
Time Zone	Specify the time zone that the handset uses to compute its local time. • If the Px Expander is in the same time zone as the Allworx server, select **use current server**. • If the Px Expander is remote, use the time zone of its actual location.
Daylight Savings Time	Specify if the Px Expander will use Daylight Savings Time (DST) to compute its local time. • If the Px Expander is in the same time zone as the Allworx server, select **use current server**. • If the Px Expander is remote, use the DST setting of its actual location.
Jitter Buffer Size	Alters the size of the jitter buffer. Jitter is a variation in network audio packet latency experienced by the Px Expander, resulting in a reduction in audio quality. The Px Expander uses a jitter buffer to maximize the audio quality when jitter occurs.

27.3 Manage FXO and FXS Ports

After installing an Allworx Px Expander, the Allworx administrator can configure the FXS and FXO ports on the Handsets and Outside Lines pages, just like the server ports. On the Dial Plan page, the system adds Px Expander FXO ports to the default service groups. Create new custom service groups or modify existing service groups to include the Px Expander FXO ports.

27.4 Phone/Px Expander behind a Third-Party Firewall

Remote phones and Px Expanders work even when behind a firewall. There are exceptions, which require additional configuration steps. To avoid most problems with firewalls, route remote audio traffic through the server; however, this uses server connection bandwidth.

By default, all audio traffic from remote phones and Px Expanders runs through the Allworx server. When calls to and from remote devices go out over SIP trunks or over the Internet to other remote devices, the bandwidth usage is 180 Kbytes per call, which is double a regular incoming call.

This traffic degrades the call audio quality using the Internet. However, enabling audio between devices to go directly from one to the other, rather than through the server reduces this effect. See "VoIP Server" on page 181. Disabling it reduces server bandwidth usage. However, if doing this and the phone or Px Expander is behind a firewall, the firewall requires configuration.

27.5 Change the Network Settings

If the remote device does not register with the server or if calls to / from the server do not connect, change the settings on the firewall and the phone or Px Expander to enable communications.

To change the network settings on a handset (using soft keys) or Px Expander:

1. Use the phone soft keys, navigate to **Config** > **Network Settings** menu for phones, and locate the Config Mode page for Px Expanders.

2. Change the following settings:

DHCP	Disabled
Remote Plug and Play key	See "Phone/Px Expander behind a Third-Party Firewall" on page 159.
Boot Server IP	See "Phone/Px Expander behind a Third-Party Firewall" on page 159.
Phone/Port Expander IP	Select an address consistent with the remote site network.
Netmask IP	Network Mask of the remote site network.
Gateway IP	Gateway IP of the remote site network.

3. Log in to the Allworx server admin page and navigate to **Network** > **Port Expanders.**

4. Click **Port Expander Description**. Set the RTP port range for the phone or Px Expander to 16384 or 16393. Forward the required IP ports through the Firewall at the remote site, per the table:

Port Type	WAN	LAN	Protocol
BLF	2088	2088	UDP
SIP	5060	5060	UDP/TCP
RTP	16384 - 16393	16384 - 16393	UDP

27.6 Devices Behind a Firewall

27.6.1 Multiple Remote Devices behind the Same Firewall

If there is more than one remote Allworx device behind a firewall, change the firewall settings and the phone or Px Expander to enable the configuration.

1. Use the phone soft keys, navigate to **Config** > **Network Settings** menu for phones, and locate the Config Mode page for Px Expanders.

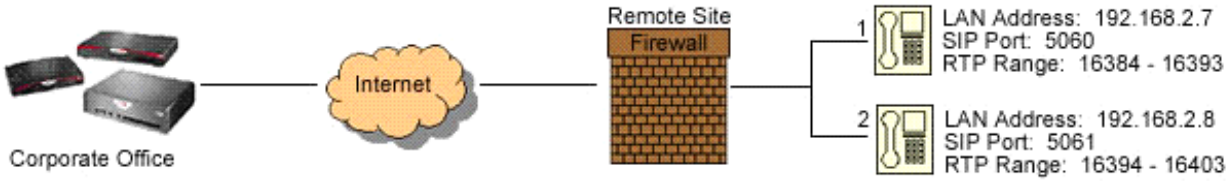
2. Change the following settings:

DHCP	Disabled
Remote Plug and Play key	See "Phone/Px Expander behind a Third-Party Firewall" on page 159.
Boot Server IP	See "Phone/Px Expander behind a Third-Party Firewall" on page 159.
Phone/Port Expander IP	Select an address consistent with the remote site network.
Netmask IP	Network Mask of the remote site network.
Gateway IP	Gateway IP of the remote site network.
Configure the VoIP settings	See "VoIP Server" on page 181.

3. Log in to an Allworx server admin page and navigate to **Network** > **Px Expanders.**

4. Click on the **Port Expander Description**. Allocate 10 ports for each device in the standard range (e.g. phone1: 16384 to 16393, phone2: 16394 to 16403). Select a different SIP port for each device, starting at 5060 (e.g. phone1: 5060, phone2: 5061).

5. Forward the required IP ports through the firewall at the remote site, per the table.



Port Type	WAN	LAN	Protocol	IP Address
BLF	2088	2088	UDP	192.168.2.7
SIP	5060	5060	UDP/TCP	192.168.2.7
SIP	5061	5061	UDP/TCP	169.168.2.8
RTP	16384 - 16393	16384 - 16393	UDP	192.168.2.7
RTP	16394 - 16403	16394 - 16403	UDP	169.168.2.8

Note:	Map the BLF port for one of the remote devices. The device that gets the BLF messages from the server forwards the BLF information to every other Allworx desk phone in that subnet.

27.6.2 Different Remote Site Phones, Each with a Firewall

This is very similar to “Multiple Remote Devices behind the Same Firewall” on page 161. because it is necessary to do the mappings on each site firewall.

- Map the correct RTP port range for the device that is on the configured firewall.
- Map the BLF port (2088) for one device on each firewall.

27.7 Paging with Remote Phones

Remote phones do not receive pages. Users can send pages from a remote phone, but do not hear the zoned or overhead pages. To enable paging to a remote phone, set up a VPN between the Allworx server and the remote phone. See “VoIP Server” on page 181 for more information. This document does not cover the configuration the site firewall for the VPN due to the many possible variations.

Click here to return to the “Install Checklist” .

Chapter 28 Static Routes

Static Route occurs when a router uses a manually-configured routing entry, rather than information from a dynamic routing protocol to forward traffic.

This chapter describes customizing the static routes for the business needs.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No

To manage the Static Routes:

1. Log in to the Allworx server admin page, and navigate to **Network** > **Static Routes**.

2. Click **modify** and update the settings:

Destination	Enter a descriptive name in the field.
Netmask	Select an option from the drop-down list.
Gateway	Enter the Gateway IP Address.
External IP	Enter the External IP Address.

3. Click **Update** to save the changes or **Cancel** to disregard the request. Restart the Allworx server for the new Network Static Route settings to take effect.

Click here to return to the "Install Checklist".

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Chapter 29 Virtual Private Network (VPN)

VPN provides access to remote and secure data. The Allworx Connect servers support a single-user diagnostic VPN, and the VPN feature is not available for Allworx 6x12 servers.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role Network Administrator role
Feature Key Required	Virtual Private Network (VPN)*
* The Allworx server does not require the feature key for opening a single-user remote diagnostic VPN.	

To enable the VPN PPTP server:

1. Log in to the Allworx server admin page, and navigate to **Network** > **VPN**. The VPN page displays.
2. Click **Modify**, and then check the Enable VPN PPTP Server box and update the fields with the required information.
3. Click **Update** to save changes or **Cancel** to disregard the request. Restart the Allworx server for the VPN changes to take effect.

To enable VPN for individual users, see “User Template Settings” on page 136 for more information.

Click here to return to the “Install Checklist” .

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Part 5 Servers

The Servers features support customizing the server types specific to the business requirements.Each chapter explains:

- necessary access permissions and feature keys,
- necessary equipment to perform the procedures, and
- necessary procedures to setup and customize the Allworx server network.

The various Server pages on the server web admin site enable the Allworx administrator to set up, configure, and manage the settings of the following server types:

- DHCP
- DNS
- Email
- Reach Link
- SNMP
- VoIP
- Web

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Chapter 30 DHCP

The DHCP server displays the active leases associated with the DHCP server.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No

30.1 Manage the DHCP Server

To manage the DHCP server:

1. Log in to the Allworx server admin page, navigate to **Servers** > **DHCP**. The DHCP Server page displays with the server information, active leases, and known hosts.

2. Locate the **DHCP Sever** section, and click the IP Address upward or downward facing arrow to sort the servers ascending or descending order, respectively.

3. Click **modify**, and then update the settings.:

Enable DHCP Server	Check the box to enable.
Dynamic Address Range	Enter the ending IP Address ranges in the fields provided.
DHCP Address Reservations	Enter the ending TCP/IP Address and the MAC Address in the fields provided.
Enable Dynamic DNS	DHCP server automatically adds discovered hosts to the DNS Server list. Check the box to enable.

4. Click **Update** to save the changes or **Cancel** to disregard the request. Any saved changes require restarting the Allworx server.

30.2 Delete a Known Host

The web admin page displays the Known Hosts associated with the DHCP server.

1. Log in to the Allworx server admin page, navigate to **Servers** > **DHCP**. The DHCP Server page displays with the server information, active leases, and known hosts.

2. Locate the **Known Hosts** section, and click the IP Address upward or downward facing arrow to sort the servers ascending or descending order, respectively.

3. Check the box next to the IP Address, and click **Delete** to remove the IP Address from the list.

Click here to return to the "Install Checklist" .

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Chapter 31 DNS

The DNS server resolves and maintains a directory of domain names, and then translates the names to Internet Protocol (IP) Addresses.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No

To manage the DNS server:

1. Log in to the Allworx server admin page, navigate to **Servers** > **DNS**. The DNS Server page displays with the current values.

2. Click one of the following links:

modify	Update the current settings.	
	Operating Mode	
	Normal	The Allworx server attempts to resolve domain names to IP addresses in this order: internal cache, Primary DNS Server (if specified), Secondary DNS Server (if specified), list of well-known DNS Root Name Servers (only if there are no specified Primary or Secondary servers). • Primary DNS Server - Enter the IP Address in the field provided. • Secondary DNS Server - Enter the IP Address in the field provided.
	Stand Alone	The Allworx server does not use any external servers to resolve domain names to IP addresses. The Allworx server processes domain names not resolved internally as invalid.
	Host Table	
	DNS Zone:	Use the Allworx DNS server to host the DNS Zone. Uncheck if another computer hosts the DNS Zone.
	Host Name	Enter the host name.
	IP Address	Enter the host IP Address.
flush the DNS cache	Clears the locations (IP addresses) of web servers containing recently viewed pages.	

3. Click **Update** to save the changes or **Cancel** to disregard the request. Any saved changes require restarting the Allworx server.

Click here to return to the "Install Checklist" .

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Chapter 32 Email

The Email server handles and delivers e-mail over a network. The procedure in this chapter describes customizing the email server for the business needs.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No

To manage the Email Server settings:

1. Log in to the Allworx server admin page, navigate to **Servers** > **Email**. The Email Server displays with the current settings and values.

2. Click one of the following links:

Modify	Change the current email settings. See "Email Server Configuration Settings" on page 173 for more information. • Click **Update** to save the changes or **Cancel** to disregard the request. • Modifying the settings requires restarting the Allworx server for the new settings to take effect.
manage the email queue	Displays a list of the current emails. 1. Select a single email by checking the box in the left column or all the emails by clicking **Check All**. To uncheck all the email check boxes, click **Clear All**. 2. Select one of the available options: Flush — Clears the email or emails from the list without Non-Deliverable Receipts (bounced messages). Flush with NDR — Clears the email or emails from the list with Non-Deliverable Receipts (bounced messages). Retry Send Now — Attempts to resend the email. Cancel — Disregards changing the email queue. 3. Refresh Page: click to update the viewable emails.

Email Server Configuration Settings

Features	
Connection Timeout (secs)	Enter a value in seconds.
Voicemail Attachment Format	Select an option from the drop-down list.
SMTP Settings Forward voicemail and email using external Internet SMTP services such as Gmail and Hotmail. The web admin page includes SMTP server settings to enter login credentials for an existing email account. Use this account for email, voicemail, and text alerts. For user voicemail, it sends the email to the address in the user's Message Alias.	
Port	Enter a value.
Transmit Threads	Enter a value.
Transmit Queue Depth	Enter a value.

Notify Sender of Delivery Delay	Check the box to enable.
Enable use of SMTP Smart Host	Check the box to enable. Enter the following information:

Smart Host Address	Enter IP Address or DNS name.
Smart Host Port	Enter a value.
Smart Host requires authentication	Check the box to enable. • Smart Host User name • Smart Host Password
Email for local domain	Select an option from the drop-down list.
Voicemail for local domain	Select an option from the drop-down list.

Enable use of SMTP Server

1. Check the box to enable. Enter the following information:

Server Address	Enter IP Address or DNS name.
Server Port	Enter a value.
Display Name	Enter a value.
Sender's Email Address	Enter a value.
Use authentication	Check the box to enable. • User name • Password
Use authentication	Secure Connection - Select an option from the drop-down list. • None - No secure connection. • SSL - Uses SSL without sending the STARTTLS message at the beginning of the connection prior to doing the SSL handshake. • TLS - Uses SSL WITH sending the STARTTLS message at the beginning of the connection prior to doing the SSL handshake.

2. Click **Send Test Email.**

POP3 Settings

Only the email and voicemail message option transfers voicemail messages to the PC inbox. Configure the email program on the PC used to receives messages to pop the messages from the Allworx server. Use the following information to configure the email program:
NOTE: Most email programs enable leaving the messages on the server when transferring to the PC. When using this feature, the user may exceed the server inbox quota. To avoid this, Allworx recommends enabling the email program to:

- Delete all the server email after N days.
- Delete the email when the user deletes it on the PC.

Port Number	Enter a value.
Maximum Connections	Enter a value.
Number Client Threads	Enter a value.
Max. Depth Client Deferred Queue	Enter a value.
Min. Poll Period (minutes)	Enter a value.
Secure Login	Check the box to enable.

IMAP Settings

IMAP synchronizes email so users can access an account from multiple locations. Configure the PC email application to send and receive messages from the Allworx server. The details depend on the application but require:

- Entering the Allworx server IP address LAN TCP/IP Address (from the **Network** > **Configuration** > **Modify** page) as the incoming IMAP server address.
- Entering the same address as the outgoing SMTP server address.
- Entering the Allworx user login name / password as the IMAP user / password.
- Do not use Secure Password Authentication (SPA).
- Do not use SSL to communicate with the Allworx server.
- Do not use authentication for the outgoing server.

NOTE: Enabling the IMAP protocol requires a Mobile Link Feature Key on the Allworx server.

Port Number	Enter a value.
Maximum Connections	Enter a value.
Alternate Email Domains	
<alternate domain name>	Enter a different email domain in the field provided.
Unsolicited Bulk Email	
Use Block Service(s)	Check the box to enable, and then enter the URL in the field provided.

Click here to return to the "Install Checklist".

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Chapter 33 Reach Link

Adjusting the Reach Link settings requires assigned permissions enabled within the specific application.

In a multi-site network configuration: Reach Link functionality is limited to users and handsets configured on an Allworx server with the Reach Link feature key installed.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	Reach Link (one feature key for all users)
Servers	Connect servers

Server Web Admin Page	My Allworx Manager	Reach Application

• Set the amount of time to determine:
  • Reach device has lost the server connection during an active call.
  • Begin call restoration after the "Lost Connection Timeout" expires during an active call.
	• Set up recovery numbers including descriptions to dial when the connection to an Reach device is lost during an active call per user.	• Set up fallback numbers including descriptions to dial when the connection to an Reach device is lost during an active call per user.

• Select the hold music for the non-Reach user to hear when the Reach connection is lost during an active call.	• Define the restoration number to attempt when an Reach device data connection is lost during an active call per user.	• Define the fallback number to attempt when an Reach device data connection is lost during an active call per user.
	• Define the number of rings to wait when attempting a restoration number when an Reach device data connection is lost during an active call per user.	• Define the final destination when an Reach device data connection is lost during an active call per user

To manage the Reach Link server:

1. Log in to the Allworx server admin page, navigate to **Servers** > **Reach Link**. The Reach Link Server page displays with the current values.

2. Click **modify** and update the information:

Enable Reach Link Server	Globally enable or disable Reach Link on all Reach handsets on the server.
Lost Connection Timeout (secs)	Enter a value for the amount of time a network is down before the Reach Link reconnection process begins.
Call Recover Timeout (secs)	Enter a value for the amount of time after starting the Reach Link feature and determining a call is lost.
Hold Music Selection	Select an option from the drop-down list.

3. Click **Update** to save the changes or **Cancel** to disregard the request. Any saved changes require restarting the Allworx server.

Click here to return to the "Install Checklist".

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Chapter 34 SNMP Server

The SNMP server collects information from and configures network devices on an Internet Protocol (IP) network such as:

- servers
- hubs
- routers
- printers
- switches

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No

To manage the SNMP server:

1. Log in to the Allworx server admin page, navigate to **Servers** > **SNMP**. The SNMP Server page displays with the current values.

2. Click **modify** and update the **Enable SNMP Agent** line. Check the box to enable.

3. Click **Update** to save the changes or **Cancel** to disregard the request. Any saved changes require restarting the Allworx server.

Click here to return to the "Install Checklist".

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Chapter 35 VoIP Server

The VoIP server supports businesses transferring the traditional phone systems to a dedicated server-based system and offers a central location to control the internal communications systems.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role Network Administrator role
Feature Key Required	No

To manage the VoIP server:

1. Log in to the Allworx server admin page, navigate to **Servers** > **VoIP**. The VoIP Server page displays with the current values.

2. Click **modify** and update the settings:

BLF Port	Typically set to 2088. If necessary, change for firewall rules.
Secure BLF	Default - unchecked.
Force Remote Phone audio through server	For WAN to WAN calls. Check the box to enable.
Plug and Play Secret Key	Click show to see or change the code. Click hide to remove from sight.
Phone Administration Password	Access each handset through a web interface. The Phone Admin page has the same look and feel as the Allworx server admin page. However, the password used to access the phone admin page is NOT the same. • View stored configuration information of the handset. • Modify the handset's configuration and personal speed dials. • View information (event log, call history, phone configuration parameters). Click **show** to see or change the code. Click **hide** to remove from sight. NOTE: Users receive an error message when trying to use Allworx as the password. The system does not accept Allworx as the password, enter another password. **To access the administration page of an Allworx handset:** • From the Allworx server admin page, navigate to the **Phone System** > **Handsets** page and then click **handset IP address**. • From a browser, enter the IP address of the handset. Find the IP address using the handset soft keys: **CONFIG** > **Current Status** > **Info**.
Global SIP Connection Limit	Set to at least 1 for SIP trunks, remote phones, remote sites as bandwidth allows.
Paging Base IP Address	The multicast base IP address used by the server. • Each paging zone uses the base address plus an offset. Zone 0 (the overhead zone), uses an offset of 0, zone 1 uses an offset of 1, etc. • Example, if the base address were set to 239.255.10.0, then zone 2 would use multicast IP address 239.255.10.2.
Paging Port	The UDP port number destination for the packets. All zones use the same port number, but each has its own multicast IP address. Enter a value.
Paging Maximum Hop Count	Controls the time-to-live (TTL) count in the IP header of all paging UDP/RTP frames. Enter a value. • Typically, this value is set to 1 so that the packet is not sent beyond the local subnet. • If there are multiple subnets with phones, increase this value

Paging Maximum Duration	Enter a value.
RTP Base Port	Enter a value.
RTP DTMF Payload	Enter a value.
RTP DSCP Tag	Select an option from the drop-down list.
SIP DSCP Tag	Select an option from the drop-down list.
Disable Phone Creates via LAN Plug and Play	Check the box to activate the feature.
Disable Phone Creates via Wan (Remote Phone) Plug and Play	Check the box to activate the feature.
Disable Assign User at Phone	Check the box to activate the feature.
Disable PCP Proxy	Check the box to activate the feature.

3. Click **Update** to save the changes or **Cancel** to disregard the request. As necessary, restart the Allworx server or handsets.

Setting	Requires a restart		Does not require a restart
	Server	Allworx Handset	
Force Remote Phone audio through server			X
Phone Administration Password		X	
Global SIP Connection Limit			X
Paging Maximum Duration			X
RTP DTMF Payload		X	
RTP DSCP Tag	X		
SIP DSCP Tag	X		
Disable Phone Creates via LAN Plug and Play			X
Disable Phone Creates via Wan (Remote Phone) Plug and Play			X
Disable Assign User at Phone			X
Disable PCP Proxy			X

Click here to return to the "Install Checklist".

Chapter 36 Web Server

The Web server processes requests via HTTP or HTTPS. This chapter describes customizing the Web server for the business needs.

The Connect servers enable HTTPS on Allworx server web admin pages and My Allworx Manager pages.

The Connect server default is HTTP disabled. The Allworx administrator can enable or disable HTTP but cannot disable HTTPS.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No
Servers	• Allworx 6x, 6x 12, 48x servers - HTTP • Connect servers - HTTP (if enabled) and HTTPS

- Disabled HTTP (Connect servers only)
  - Access to My Allworx Manager via secure HTTPS port: 443.
  - Access to the Allworx Server Web Admin via the secure HTTPS port: 8443.
- Enabled HTTP
- Access to My Allworx Manager via the insecure HTTP port on all network interfaces, except the public network interface.
- Access to the Allworx Server Web Admin page via the insecure HTTP port on all network interfaces, except the public network interface.
- The Connect servers do not enable insecure HTTP access on the public network interface.

The server generates a private key, public key, and self-signed SSL certificate to use with HTTPS:

- at first boot up.
- after formatting the server disk.
- after removing a user-installed self-signed certificate.

To manage the web server:

1. Log in to the Allworx server admin page, navigate to **Servers** > **Web**. The Web Server page displays with the current values.

2. Locate the **Web Server** section and click **modify** and update the settings:

Connection Timeout (secs)	Enter a value.
Maximum HTTP/HTTPS Sessions	Enter a value.
Secure Web (HTTPS)	
My Allworx Manager Secure Port (HTTPS)*	Enter a value.
Web Administration Secure Port (HTTPS)*	Enter a value.

Insecure Web Access (HTTP) (Connect servers only) Check the box to enable.	
My Allworx Manager Port (HTTP)*	Enter a value.
Web Administration Port (HTTP)*	Enter a value.
* Feature is only available on the Connect servers.	

3. Click **Update** to save the changes or **Cancel** to disregard the request. Any saved changes require restarting the Allworx server.

To manage the Installed Certificate:
This applies only to the Connect servers and displays the current installed certificate information.

1. Log in to the Allworx server admin page, navigate to **Servers** > **Web**. The Web Server page displays with the current values.

2. Locate the **Installed Certificate** section and click the additional information arrow ▸, if necessary. The SSL information displays.

3. Click:

import/export	Navigation shortcut to Import/Export screen for the current SSL certificate and keys.
Reset Certificate	Deletes the current certificate and the private key, and then create a new self-signed certificate and private key. Click Yes to proceed and No to disregard the request.

To install a user-provided SSL certificate:
1. Log in to the Allworx server admin page, navigate to **Servers** > **Web**. The Web Server page displays with the current values.

2. Locate the **Certificate Installation** section and click the additional information arrow ▸, if necessary.

3. Follow the steps on the web admin page to install a new certificate for Secure Web Access (HTTPS). Verify the certificate adheres to the formatting guidelines listed on the web admin page.

4. Click a link:

Show / Hide	Displays or removes an example certificate, respectively.
import/export	Navigation shortcut to import/export the certificates and keys.
Install	Starts the certificate confirmation process.
Cancel	Disregard the request.

To create the Certificate Signing Request:

1. Log in to the Allworx server admin page, navigate to **Servers** > **Web**. The Web Server page displays with the current values.

2. Locate the **Certificate Signing Request** section and click the additional information arrow ▸, if necessary. The Certificate Signing Request form displays.

3. Enter the information for the Certificate Signing Request into the fields provided.

4. Click **Create CSR** to proceed and **Cancel** to disregard the request.

Click here to return to the "Install Checklist".

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Part 6 Reports

The Reports features support customizing the reports specific to the business requirements. Each chapter explains:

- necessary access permissions and feature keys.
- necessary equipment to perform the procedures.
- necessary procedures to setup and customize the Allworx server network.

The various Server pages on the server web admin site enable the Allworx administrator to access the following information:

- About
- Allworx View
- Auto Notification
- Call Details
- Configuration
- Live Calls
- Resource Summary
- System Events
- Users

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Chapter 37 About

The About page displays information about the Allworx system such as server model, software version, and last successful server backup.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

To view the About page:

1. Log in to the Allworx server admin page, navigate to **Reports** > **About**. The page displays with the Allworx system information.

2. Click one of the following links:

show logged in administrators / hide logged in administrators	Displays or removes the administrators currently logged in to the Allworx system, respectively.
Open Source Licenses	Displays the Open Source Licenses associated with the application. To return to the server web admin page, click the browser back button.

Click here to return to the "Install Checklist" .

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Chapter 38 Allworx View

The Allworx View application is a significantly enhanced version of the Call Detail Record (CDR) streaming feature, which gives dynamic, comprehensive usage reporting on the Allworx phone system The View application provides separate connections and interaction between the Allworx View application and the Allworx server and does not replace the current CDR streaming feature.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	• Allworx View CDR • Allworx View ACDR

Additionally, the Allworx View ACD add-on application:

- offers real-time contact center and analysis to maximize agent productivity,
- ensures an optimal experience for customers,
- customizable dashboards for supervisors and agents,
- displays the selected information using any popular web browser, and
- uses configurable alarms for supervisors and agents to recognize and react to high call volume situations to minimize abandoned calls and frustrated customers.

To change the port:

1. Log into the server admin page and navigate to **Reports** > **Allworx View**.
2. Locate the **Allworx View Settings** section, and click one of the following links:

Reset Allworx View port	• **Port Reset** - shuts down any current connection from an Allworx View client, and then re-initializes the port. The Allworx View client re-connects without user intervention using the same authentication token as when it was previously connected. This is best used as a recovery step when there are connection problems. • **Authentication Token Reset** - (see Modify below) a security-related configuration change that disconnects an Allworx View application client, but with no port reset and requires user authentication for Allworx View to re-connect. This is best used when changing access permissions, such as removing a user with View administration permissions from the system.
Modify	• **TCP/IP Port** - Enter the TCP IP Port number in the field. • **Reset Authentication Token** - Check the box to enable.

3. Click **Update** to save the changes.

Click here to return to the "Install Checklist" .

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Chapter 39 Auto Notification

The Auto Notification report supports configuring automatic email notifications for specified systems events to specific users.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

To setup the Auto Notification:
Prior to performing this procedure, set up the email services. See "Email" on page 173 for more information.

1. Log into the server admin page and navigate to **Reports** > **Auto Notification**.

2. Locate the **Auto Notification** section, and click **modify**. Update the settings:

Auto Notification		
Modify	Updates the current settings. Check the Enable Notification checkbox, if not already checked and edit the settings, as required.	
	Enable Message Severity Filtering	Check the required filters: • Emergency (0) • Critical (2) • Warning (4) • Info (6) • Alert (1) • Error (3) • Notice (5) • Debut (7)
	Enable Log Text Filtering	Check the box to enable and update the settings: • Maximum number of notifications per day - enter a number. • Timeout for sending notifications (min) - enter a number. • Maximum number of messages per notification - enter a number. • Email subject - Enter information. • Email header - Enter information.
	Click Update to save the changes or Cancel to disregard the request.	
Flush Pending Notifications	Clears any pending notifications.	
Text Filtering - requires enabling in Auto Notification > Modify > Enable Log Text Filtering section.		
add new text filter	Enter a new text filter. Click Add to save the change or Cancel to disregard the request.	
delete all	Deletes all of the text filters. Click **OK** to remove the filters or Cancel to disregard the request.	
Modify	Change the text filter information. Click Update to save the change or Cancel to disregard the request.	
Delete	Delete the text filter information. Click **OK** to save the change or Cancel to disregard the request.	
Email Addresses - requires enabling in Auto Notification > Modify > Enable Auto Notification.		
add new email address	Enter a new email address. Click Add to save the change or Cancel to disregard the request.	
delete all	Delete all the email addresses. Click **OK** to remove the filters or Cancel to disregard the request.	
Modify	Change the email address. Click Update to save the change or Cancel to disregard the request	
Delete	Delete the email address. Click **OK** to delete the email address or Cancel to disregard the request.	

Click here to return to the "Install Checklist" .

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Chapter 40 Call Details

The Call Details report supports managing a Call Details Report from the server.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

To change the Call Details Settings:

1. Log into the server admin page and navigate to **Reports** > **Call Details**.

2. Locate the **Call Details Settings** section and click **modify**. Update the settings:

Call Detail Settings		
modify	Change the current settings..	
	Call Detail Storage	Identify what to store. Select an option from the drop-down list. • Do not store calls • Store Completed Calls only • Store Live Calls only • Store Live and Completed Calls
	Call Detail Streaming	Identify what to stream. Select an option from the drop-down list. • Do not stream calls • Stream Completed Calls • Stream Completed Calls only • Stream Live Calls only • Stream Live and Completed Calls
	Call Detail Streaming Port	Enter the port number in the field.
	Click **Update** to save the changes or **Cancel** to disregard the request.	
Completed Calls Detail Report		
delete	Removes specific calls from the report. Select: • Delete all calls • Delete calls made before - select the date from the drop-down list. Click **Delete** to save the changes or **Cancel** to disregard the request.	
Report Start Date	Enter a date in the field and select the number of days to include in the report from the drop-down list.	
View Report	Displays the report on the computer screen.	
Export TSV Report	Exports the report to a Tab Separated Values format.	
Export XML Report	Exports the report to an Extensible Markup Language format.	

Click here to return to the "Install Checklist".

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Chapter 41 Configuration

The Configuration report provides the Allworx server configuration information such as, but not limited to system settings, network settings, internal dial plans, phones, and users.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Support Technician role
Feature Key Required	No

To manage the Configuration Report:
Click the **Generate XLS Report** button to create a configuration report. This report may take up to 10 minutes to complete.

To see the report, click **View** next to the Excel workbook file. The worksheet tabs at the bottom of the report provide specific configuration information.

Click here to return to the "Install Checklist" .

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Chapter 42 Digital Lines

The Digital Lines report displays the information specific to each digital line.

To manage the digital lines report:

1. Log in to the server admin page and navigate to the **Reports** > **Digital Lines** page. A window displays the information for each digital line.

2. Click one of the following options:

Clear Report	Clears the current information from the viewable report.
Refresh Report	Updates the current information on the report.

.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Support Technician role Network Administrator role
Feature Key Required	No
Servers	Allworx 48x and Connect

* Not all features on the Roles page are available to Phone Administrators. These features require Allworx Server Administrator or Allworx System Administrator permissions.

Click here to return to the "Install Checklist" .

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Chapter 43 Live Calls

The Live Calls report displays the call information in a separate browser window.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Support Technician role
Feature Key Required	No

To display Live Calls:

1. Log in to the server admin page and navigate to the **Reports** > **Live Calls** page. A separate window opens.
2. Do one of the following options:

Check the Auto Refresh checkbox.
Click the Refresh Now button. Requires clicking at least once every 30 minutes.

3. Click the “X” on the browser window or tab to close the admin web window (not the Live Calls window). Do not log out of the admin web page before closing.

To hide or show the Queued Calls or Active Calls, click **hide** or **show**, respectively.

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Chapter 44 Resource Summary

The Resource Summary report describes current Allworx server configurations, maximum admissible configurations, and current license usage counts. Additionally, the Resource Summary page supports viewing the compatibility of the current configuration with other server models.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator role Network Administrator role Support Technician role
Feature Key Required	No

To manage the Resource Summary report:

1. Log in to the server admin page and navigate to the **Reports** > **Resource Summary** page. The page displays the current Allworx server information.

2. (requires that the service PC has an Internet connection) Click **check server compatibility** to determine Allworx server data configuration compatibility with other Allworx server models.

   Checking the server compatibility is helpful if there is a need to replace the current Allworx server model with a different Allworx server model.

3. Select a different Allworx server model from the drop-down list.

   A table displays with both the current server counts and the selected server model capabilities.

Green	Configuration is compatible.
Yellow	Configuration is incompatible. Line item describes the issue and suggests a remedy to fix the incompatibility.

Click here to return to the "Install Checklist" .

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Chapter 45 System Events

The System Events report displays system information (i.e., server type, MAC address, software version, etc.) and log information.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Support Technician role
Feature Key Required	No

To manage the System Event Severity filtering:

1. Log in to the server admin page and navigate to the **Reports** > **System Events** page.

2. Click one of the following options:

show Severity Filter / hide Severity Filter	Opens or closes the Event Severity Filtering section, respectively. Check the filter boxes to select the filters to display. Click Apply Filter to save the changes or Reset Default Filter to use the factory default settings.
Download	Downloads the system events to a file.

Click here to return to the "Install Checklist" .

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Chapter 46 Users

The Users report displays a list of all active users in the business directory including the associated extension, the user name, and the messages/space used as well as email and voicemail information.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Network Administrator role
Feature Key Required	No

To manage the Users page:

1. Log in to the server admin page and navigate to the **Reports** > **Users** page.

2. Click one of the following options:

<user>	The Phone System > Users > Modify page opens. See "User Settings" on page 133 for more information.
delete messages	Permanently deletes messages from the Allworx system. Recovering deleted messages requires an OfficeSafe backup. Select the types of messages to delete for the user: • Delete all emails • Delete all read emails • Keep all emails • Delete all voicemails • Delete all saved voicemails • Keep all voicemails Click Delete to remove the messages or Cancel to disregard the request. NOTE: To recover deleted messages, perform a System Report using an OfficeSafe Backup. See "To restore data using the Allworx OfficeSafe application:" on page 232 for more information.

Click here to return to the "Install Checklist".

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Part 7 Maintenance

The Maintenance features support customizing the performing routine maintenance on the Allworx server. Each chapter explains:

- necessary access permissions and feature keys.
- necessary equipment to perform the procedures.
- necessary procedures to setup and customize the Allworx server network.

The various Maintenance pages on the server web admin site enable the Allworx administrator to:

- Backup
- Custom Recordings
- feature Keys
- Import/Export
- Restart
- Time
- Tools
- Update

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Chapter 47 Backup

Backup supports restoring entire Allworx server disk data, not a specific file, to a PC. It is critical to configure the Allworx server to initiate backups frequently, including daily backups, before system software updates, and before configuration changes.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

Assess the data loss requirements in the event a restore from a server backup is necessary. In the event of a server failure, restore the system from the backup. See the OfficeSafe User Guide to perform a restore, available on the Allworx Partner Portal (www.allworxportal.com).

To perform an Allworx Server Backup

The OfficeSafe application Current Status and Activity Log displays the progress of the backup process. When the backup is complete, the Current Status state is Idle and the Activity Log displays "Saving backup completed successfully."

1. Start the OfficeSafe application on the backup PC, and enter the network path from the server to the PC.

2. Log in to the Allworx server admin page, navigate to **Maintenance** > **Backup**. Click one of the following options:

Modify	Change the backup settings.	
	Start Time	Specify the time of day to begin the backup using the drop-down lists.
	IP Address	Enter the same IP Address as the PC that is running OfficeSafe. In OfficeSafe, the value is available at: Tools > Options > Network.
	TCP/IP Port	Enter the same TCP/IP Port as the PC that is running OfficeSafe. In OfficeSafe, the value is available at: Tools > Options > Network.
	Frequency	Select an available option from the drop-down list.
	Mode	Select an option from the drop-down list. • **Full** - includes all servers in every backup. • **Incremental** - Includes only the changes to the server data since the most recent Full backup to merge with previous backup data. This backup mode is helpful to speed the duration of each backup by reducing the amount of transmitted data that to the backup PC during every backup.
	Last Successful Backup	Displays the date of the last successful backup.
	Click **Update** to save the changes or **Cancel** to disregard the request. Backups begin at the Start Time on each day based on the Frequency setting.	
Backup Now	Starts the backup process immediately. See the Allworx OfficeSafe User Guide for detailed set up information.	

To transfer the settings from one server to another server, see “Import/Export” on page 225 for more information.

To perform an Allworx server restore using the OfficeSafe application, see “To restore data using the Allworx OfficeSafe application:” on page 232 for more information.

Click here to return to the “Install Checklist” .

Chapter 48 Custom Recordings

Custom Recordings supports easy export/import of greetings and messages without the use of FTP. Allworx administrators can select specific recording categories on the Allworx server to export to a .ZIP file automatically for use on other servers or to archive.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Support Technician Role
Feature Key Required	No

The Allworx server supports the following recording types:

- Auto Attendant - one custom message and up to 9 greetings per Auto Attendant.
- Call Queue - one custom message and one greeting.
- Message Center - one name recording and up to 9 greeting/announcements for each user.
- Music On Hold - up to 30 recordings.

Allworx administrators can select single or multiple recording files at once to import onto the current Allworx server by selecting files with a drag-and-drop or browse/select capability. After exporting the recordings, the Allworx administrator can import to the preferred language.

To export the Custom Recordings:

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Custom Recordings**.

2. Locate the **Custom Recordings - File Export** section, and click the additional information arrow ▶, if necessary. Update the settings:

File Naming Conventions	A short cut to the File Naming Conventions described lower on the page.
Select Recordings	Check the box to select which recordings to export. • Auto Attendants • Call Queues • User Names and Greetings • Music on Hold
Select type	Select an available option from the drop-down list • Primary Language custom recordings • Secondary Language custom recordings.

3. Click **Export** to export the selected recordings to a ZIP file.

4. Click one of the following options:

Download	Downloads the ZIP file to the PC.
Delete	Removes any previous ZIP files. The settings to export redisplay on the page.

To import the Custom Recordings:

Note:	If the system is using the Dual Language Support feature, click Load for the language in which the messages and greetings are recorded. See "Manage the Language Settings" on page 88 for more information.

Files must be Telephony, raw, mu-law (u-law), mono, 8-bits per sample, 8KHz sample rate. The following procedure uses the sound editing application *Audacity* (available at http://audacity.sourceforge.net); conversion of other formats is similar.

1. Verify the file to import is a .snd file. If the file is not a .snd file:

   a. Open an audio file (example: MP3 file) in Audacity. Click **Tracks** > **Stereo Track to Mono**, and then change the Project Rate (Hz) value to 8000.

   b. Click **File** > **Export Audio** > **Save as type**. Select **Other uncompressed files** from the drop-down list.

   c. Enter a file name using the specific file name format and an .snd extension.

Auto Attendant	Example: aa#x.snd • # - Replace with the Auto Attendant number (6x12, Connect 320, and Connect 324 servers support Auto Attendant custom recordings 1 through 9; 6x, Connect 530, and Connect 536 servers support Auto Attendant custom recordings 1 through 16; 48x and Connect 731 servers support Auto Attendant custom recordings 1 through 32). • x - Replace with greeting number (0 through 9 - Use '0' for the Open greeting, '1' closed greeting) or "c" for Custom Message. File name: aa20.snd = auto attendant 2/open greeting.
Call Queue	Example: cq#x.snd • # - Replace with a Call Queue number 0 through 9. • x - Replace with "g" for greeting or "s" for status message. File name: cq3s.snd = call queue/3/status message.
Music On Hold	Example: moh_n_m.snd • 'n' is a number between 1 and 30. This is a unique number among the Music On Hold files on the system. If importing a Music On Hold file that duplicates the number 'n' of a file that is already on the system, the system replaces the existing file. • 'm' is a user defined string that uniquely identifies the file. Valid characters include ('A'-'Z'), ('a'-'z'), ('0'-'9') and underscore. File name: moh_1_sales.snd = music on hold/1/sales department file.

   d. Select **Options** and update the settings to:

Header	RAW (header-less)
Ending	U-LAW

   e. Click the **OK** > **Save**. The Edit Metadata dialog box opens. Leave all fields blank, and click **OK**.

2. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Custom Recordings**.

3. Locate the **Custom Recordings - File Import** section, and click the additional information arrow ▶, if necessary. To see the file name requirements for the recordings, click **File Naming Conventions**.

4. Drag and drop an audio file into the field provided or click **Choose File**, navigate to the file location, and click **OK**.

5. Click one of the following options:

Upload	Identifies the file to install into the Allworx system.
Cancel	Disregards the request to upload the file.

6. Locate the **Select type to install:** and select one of the options from the drop-down list:

Primary Language custom recordings	Imports the file as the Primary Language.
Secondary Language custom recordings	Imports the file as the Secondary Language.

7. Click one of the following options:

Install	Imports the selected file.
Delete	Removes all previously uploaded but uninstalled recordings.

Click here to return to the "Install Checklist" .

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Chapter 49 Feature Keys

Feature Keys support access to advanced server features available as a separate purchase from the base feature set for Allworx servers. Each issued feature key is specific to each Allworx server.

Note:	Feature keys activate features only on the Allworx server for which they are generated. Therefore, one system cannot use feature keys generated for a different system.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

Feature Key	Description
Allworx View CDR*	Provides dynamic, comprehensive usage reporting on the Allworx phone system. This application uses complete and accurate data of the Allworx phone system for users to make data-driven decisions with an easy-to-use web browser-based user interface. Required for **each** Allworx server in a multi-site network.
Allworx View ACDR*	An add-on feature to the Allworx View CDR feature providing customizable dashboards for supervisors and agents, and displays the information - using any popular web browser. Using configurable alarms, supervisors and agents can recognize and react to high call volume situations to minimize abandoned calls and frustrated customers. Requires the ACD and View CDR keys. Required for **each** Allworx server in a multi-site network.
Automatic Call Distribution	Directs calls in a queue to agents using a variety of call distribution algorithms without requiring any additional software. This key also enables the method described for the Call Queuing feature key, therefore, servers with an ACD feature key do not require a Call Queuing feature key. • If installing the Automatic Call Distribution feature key, the Call Queuing feature key is not required. • The Automatic Call Distribution feature is not available for Allworx 6x12 or Connect 300 series servers. • For details on Call Queuing and Automatic Call Distribution, “Call Queues/ACD” on page 25
Call Queuing	Provides the ability to direct inbound calls into Ring All queues. Rings all phones logged into the queue. This option does not require any additional software. The ACD key enables Call Queuing, therefore, servers with an ACD feature key do not require a Call Queuing feature key.
Conference Center	Enables Conference Center feature, and offers password-restricted access for attendees. This option does not require any additional software.
Dual Language Support	Provides the capability of a second language for all audio and phone screen prompts. Language Packs containing audio prompts in languages other than US English are available for download from the Allworx Partner Portal at www.allworxportal.com.
Extended Warranty	Extend the expiration of the Allworx server hardware warranty.

<table>
<tr><th>Feature Key</th><th>Description</th></tr>
<tr><td>Generic SIP Handsets</td><td>Create new Generic SIP handsets on the system without requiring any additional software.
• Generic SIP handsets existing in the system prior to the 7.5 upgrade operate without the purchase of a feature key package.
• Order Feature key licenses in increments of 1, 5, and 10, and the feature counts are additive.
• Installing multiple keys for the same or different feature count adds licenses to the server.
• Server feature key limits:
<table>
<tr><th></th><th></th><th></th><th></th><th colspan="4">Connect servers</th></tr>
<tr><th>License Limit</th><th>6x12</th><th>6x</th><th>48x</th><th>320</th><th>324</th><th>530</th><th>536</th><th>731</th></tr>
<tr><td>Built-in Licenses</td><td>2</td><td>6</td><td>12</td><td>4</td><td>4</td><td>6</td><td>6</td><td>12</td></tr>
<tr><td>Purchase Limit</td><td>0</td><td>54</td><td>238</td><td>16</td><td>16</td><td>44</td><td>44</td><td>168</td></tr>
<tr><td>Total Server Limit</td><td>2</td><td>60</td><td>250</td><td>20</td><td>20</td><td>50</td><td>50</td><td>180</td></tr>
</table></td></tr>
<tr><td>Interact Professional</td><td>Enables users to control a handset with convenient access to call history and contacts from the Allworx directory and accesses personal directory contacts from the user’s Microsoft® Outlook® application.
• Integrates with CRM applications to perform lookups based on incoming Caller ID.
• Order Feature key licenses in increments of 1, 5, and 10; the feature counts are additive. Installing multiple keys for any feature count adds licenses to the server. Each user requires an Interact license.
• Server feature key limits:
<table>
<tr><th></th><th></th><th></th><th></th><th colspan="4">Connect servers</th></tr>
<tr><th>License Limit</th><th>6x12</th><th>6x</th><th>48x</th><th>320</th><th>324</th><th>530</th><th>536</th><th>731</th></tr>
<tr><td>Built-in Licenses</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr>
<tr><td>Purchase Limit</td><td>12</td><td>60</td><td>250</td><td>20</td><td>20</td><td>50</td><td>50</td><td>180</td></tr>
<tr><td>Total Server Limit</td><td>13</td><td>61</td><td>251</td><td>21</td><td>21</td><td>51</td><td>51</td><td>181</td></tr>
</table></td></tr>
<tr><td>Interact Sync</td><td>Activates communication between the Interact Professional application and the Microsoft Office applications running on a PC. One key enables all Interact users. See the Interact Professional User Guide for more information.</td></tr>
<tr><td>Mobile VM (formerly known as Mobile Link)</td><td>Activates the mobile voicemail capability of Reach without configuring the Reach application on the mobile device as a handset.</td></tr>
<tr><td>Multi-Site Branch</td><td>• Enables sites to join a network of sites but not as the controller site.
• Sites without a Multi-Site Primary key are limited to DSS/BLF for a maximum of 10 handsets from other sites.
• This option does not require any additional software.</td></tr>
<tr><td>Multi-Site Primary</td><td>Enables a server to be the Controller in a multi-site network.
• Controls requesting other sites to join a network of sites (up to 99 Allworx servers with up to 1000 users and up to 1000 system extensions across all sites. The total number of Multi-Site Users and Multi-Site System Extensions varies with the maximum users licensed on each Allworx server).
• At least one site in the network must have a Multi-Site Primary key. More than one site can have a primary key.
• The Multi-Site Primary feature is not available for Allworx 6x12 servers.
• This option does not require any additional software.</td></tr>
<tr><td>Multi-Site Upgrade</td><td>• Enables changing the Multi-Site Branch feature key to a Multi-Site Primary feature key.
• When upgrading the Multi-Site Branch feature key to a Multi-Site Primary feature key, the Feature Key list displays Multi-Site Primary - not Multi-Site Upgrade.
• This option does not require any additional software.</td></tr>
</table>

<table>
<tr><th>Feature Key</th><th>Description</th></tr>
<tr><td>Reach</td><td>
• Enables users to send or receive business phone calls from an iOS or Android device. The server provides a single instance of the Reach application without purchasing a feature key.
• Enables working from remote locations and continue to send, receive, hold, transfer, and park calls; see the handset's call history and business/personal contacts; and listen, reply, forward, or create voicemail.
• Enables managing voicemail options without creating a Reach handset.
• Order Feature key licenses in increments of 1, 5, and 10; the feature counts are additive. Installing multiple keys for any feature count adds licenses to the server. Each Reach device requires a Reach license.
• Enables configuring users to claim licenses.
• Server feature key limits:
<table>
<tr><th></th><th></th><th></th><th></th><th colspan="5">Connect servers</th></tr>
<tr><th>License Limit</th><th>6x12</th><th>6x</th><th>48x</th><th>320</th><th>324</th><th>530</th><th>536</th><th>731</th></tr>
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</table>
</td></tr>
<tr><td>Reach Link</td><td>Keep Reach calls connected as the mobile device changes networks. See "Reach Link" on page 177 for more information.
NOTE: In a multi-site network configuration: Reach Link functionality is limited to users and handsets configured on an Allworx server with the Reach Link feature key installed.</td></tr>
<tr><td>Software Upgrade License</td><td>Enable system software updates. Without this key, only patch updates to the currently loaded release are available.</td></tr>
<tr><td>T1 License #1</td><td>Activates the T1-A port. T1 License #1 (Allworx 48x and Connect 731 servers only). This option does not require any additional software.</td></tr>
<tr><td>T1 License #2</td><td>Activates the T1-B port. This does not include the license for the first T1. Install T1 license #1, and then install the T1 License #2 to activate the T1-B port (Allworx 48x server only). This option does not require any additional software.</td></tr>
<tr><td>User Expansion License</td><td>Expands the maximum number of users on Allworx 6x, 48x servers, and Connect servers.
• The expansion does not require downloading any additional software.
• The User Expansion feature is not available for Allworx 6x12 servers.
<table>
<tr><th></th><th></th><th colspan="5">Connect servers</th></tr>
<tr><th>Key</th><th>6x</th><th>48x</th><th>320</th><th>324</th><th>530</th><th>536</th><th>731</th></tr>
<tr><td>20 Users</td><td></td><td></td><td>X</td><td>X</td><td></td><td></td><td></td></tr>
<tr><td>48 Users</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>50Users</td><td></td><td></td><td></td><td></td><td>X</td><td>X</td><td>X</td></tr>
<tr><td>60 Users</td><td>X</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>100 Users</td><td></td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr>
<tr><td>150 Users</td><td></td><td>X</td><td></td><td></td><td></td><td></td><td>X</td></tr>
<tr><td>180 Users</td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td></tr>
<tr><td>200 Users</td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>250 Users</td><td></td><td>X</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
</table>

Feature Key	Description
Virtual Private Network (VPN)	Enables multiple simultaneous remote access sessions. • This key is not required for opening a single-user remote diagnostic VPN. • This option does not require any additional software. • The VPN feature is not available for Allworx 6x12 or Allworx Connect servers.

* Required for **each** Allworx server (both controller and branch servers) in a multi-site network for comprehensive call data reporting to Allworx View. It is not necessary to install the feature keys on Allworx servers that do not provide call reporting data. The installation of Allworx View keys enable reporting the call data only from a single Allworx server to Allworx View. Allworx View will only report the call data from Allworx servers with the Allworx View CDR and Allworx View ACDR feature keys installed.

To install Feature Keys:

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Feature Keys**.

2. Click one of the following options:

Install	Automatically retrieves new Feature Keys from the Allworx Partner Portal.
Enter New Feature Key	Enter the provided Feature Key code in the field provided. Click **Submit** to retrieve the new features.

49.1 Manage Reach Handset Licenses

Users must install the Reach application on the iOS and/or Android devices to provide soft phone capability. See the Allworx Reach User's Guide for information on installing the Reach application.

Each Reach handset requires a license for soft phone capability. The Allworx server includes one Reach license; to add more Reach handsets, install additional Reach feature keys (available in one, five or 10 license increments). To enable larger numbers of Reach handsets, install multiple feature keys of the same or different license counts. To allocate a Reach license, do one of the following:

- Reserve licenses for specific users by manually configuring the Reach handsets.
- Authorize users to claim licenses on a first come, first served basis using Plug and Play.

To reserve an Reach license for a specific user:

1. Log in to the Allworx server admin page.

2. (If necessary) Install the Reach feature key. See "Feature Keys" on page 217 .

3. Navigate to **Maintenance** > **Feature Keys**, and click **Allworx Reach**.

4. Click **add new**. If the link is unavailable, purchase more licenses. Update the following settings:

Allworx Reach Handset	
Owner	Select an available user from the drop-down list.

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Extension	Specify the extension for the handset. If selecting an owner other than admin, the system automatically adds the handset to the In Office call route of the owner. If selecting an Extension, the system creates an extension with a call route to ring this handset. This is typically the case of using a conference room or lab phone that does not require an owner.
Caller ID Number	Select an option from the drop-down list.
Caller ID Name	Automatically populates from Owner selection. Update as necessary.
Description	Automatically populates from Owner selection. Update as necessary.

Handset Features

Hold Music Selection	Select an option from the drop-down list. See "Music On Hold" on page 95 for more information.
Can Place Calls	Check the box to enable.
Can Receive Calls	Check the box to enable.

5. Click the **Add** button to save the changes or **Cancel** to disregard the request.

6. Click one of the links in the table below to email the setup information to the user.

setup link for all users	Opens a new page with information to connect the device running Reach to the server. This link does not contain user-specific information such as username or password.
setup link for <user>	Opens a new page with user-specific information to connect the device running Reach to the server.

To authorize users to claim licenses:
It is possible to over-allocate the number of installed licenses when authorizing users to claim licenses.

- If users have claimed all licenses, the server blocks attempts to install Reach handsets.
- If the Allworx administrator creates a Reach handset and assigns an owner before using all the licenses, the owner keeps the installed license and can register the Reach handset.

See "User Template Settings" on page 136 to adjust the number of Reach activations a user may claim.

To manage Reach licenses:
1. Log in to the Allworx server admin page.

2. (If necessary) Install the Reach feature key. See "Feature Keys" on page 217 for more information.

3. Navigate to **Maintenance** > **Feature Keys**, and click **Allworx Reach**. The Reach page displays.

4. Click one of the following options:

setup link for all users	Opens a new page with information to connect the device running Reach to the server. This link does not contain user-specific information such as username or password.
setup link	Opens a new page with information specific to the user to connect the device running Reach to the server.

View	Display handset information about a specific user.
Manage	Enable or disable the Allworx Reach license, the Reach Link for handset, or both by checking or unchecking the box, respectively.
Delete	Remove the Reach handset from the system and the associated Call Appearances. Click Delete to confirm.

5. Create an email to the Reach user and attach the setup link and the Allworx Reach User's Guide. It is available on the Allworx Partner Portal (www.allworxportal.com) and on the Allworx Reach Installation web page (get.allworx.com/reach). Send the email to the user.

49.2 Manage Generic SIP Handset Licenses

To manage the Generic SIP Handset licenses:

1. Log in to the Allworx server admin page.

2. (If necessary) Install the Generic SIP Handset feature key. See "Feature Keys" on page 217 for more information.

3. Navigate to **Maintenance** > **Feature Keys** > **Generic SIP Handset** >

Create	The Add Generic SIP Handset page displays. See "To add a handset:" on page 63 for more information.
Delete	Removes the user from the handset. Click Delete to save the change or Cancel to disregard the request.

49.3 Manage the Interact Professional Licenses

The Interact application enables users to control a handset with convenient access to call history and contacts from the Allworx directory. The Interact application also accesses personal directory contacts from a user's Microsoft® Outlook® application.

- **Interact** - a free edition of the application is available to all Allworx users and enables users to Answer, Ignore, End, or place calls on Hold.
- **Interact Professional** - a licensed edition of the application that offers all of the Interact edition features as well as Transfer, Park, Conference, and settings features.

Both Interact editions provide a user-centric view of the Allworx business directory. Therefore, a user places a call to another directory contact with multiple handsets without selecting an individual handset. The application works with any Allworx handset and does not disconnect the call. In either edition, the Interact application does not provide voicemail support such as voicemail indicators or the ability to retrieve a voicemail message.

The Allworx administrator manages which users have access to the licensed features of the Interact Professional application. Users that see the Interact free screen pop-up feature and would like to upgrade to Interact Professional should contact the Allworx administrator to reserve a license or make the user eligible to obtain a license from the server. If the Allworx administrator installs the Interact Professional Feature Key on the server, all users can use the free features of the Interact application. Users that upgrade from the Interact edition to the Interact Professional edition see the licensing

changes take effect on the next logout/login in the application.

Each Interact application requires a license for soft phone capability. The Allworx server includes one Interact Professional license. To add more Interact Professional licenses requires purchasing and installing of additional Interact feature keys. The Interact feature keys are available in increments one, five, or 10 licenses. To enable larger numbers of Interact licenses, install multiple feature keys of the same or different license counts.

To reserve an Interact Professional license:

1. Log in to the Allworx server admin page.

2. (If necessary) Install the Interact Professional feature key. See "Feature Keys" on page 217 for more information.

3. Navigate to **Maintenance** > **Feature Keys**, and click **Allworx Interact Professional**. The Interact Professional page displays.

4. Click **create** to assign an owner a license select a user from the drop-down list. Enter a description, if necessary.

5. Click the **Add** button to reserve a license or **Cancel** to disregard the request.

To manage Interact Professional licenses:

1. Log in to the Allworx server admin page, navigate to **Maintenance** > **Feature Keys**, and click **Allworx Interact Professional**. The Interact Professional page displays.

2. Click one of the following links:

setup link for all users	Opens a new page with information to connect Interact to the server. This link does not contain user-specific information such as username or password.
Modify	Enables changing the license assignment. Update the settings and click Modify to save the changes or Cancel to disregard the request.
Delete	Removes the Interact communication from the server. Click **Delete** to confirm.
Disable / Enable	Prevents or permits any further communication with the Allworx Server. The link toggles between Disable and Enable.

To enable users to claim a license:

1. Install the Interact Professional feature key. See "Feature Keys" on page 217. for more information.

2. See "To modify or delete existing users:" and refer to "Feature Eligibility" on page 137 for more information.

Click here to return to the "Install Checklist".

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Chapter 50 Import/Export

Import/Export eases the task of upgrading a site from one Allworx server model to another model. Import/Export is **not** a substitute for using Allworx OfficeSafe to backup the server.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

Important Notes

- When importing the settings, the port numbers assigned to native CO lines and analog handsets settings are available.
- When importing an Allworx Px 6/2 Port Expander, the Import includes all configured CO lines and analog handsets from the export. Do not modify the port assignments. If the Allworx server does not support CO lines, the Analog CO lines display in the Import file as a conflict.
- DID blocks, routes plans, and digital lines do not display on the Import Configuration screen. The system imports these settings, if included on the export.
- The export does not include: Digital line fields, PPP Username, PPP Password, and PPP MTU.
- If the current system is not “clean” and has conflicts with the imported configuration settings, then the system resolves conflicts for the import settings:
  - The system appends digits to user login names and incremented, starting at 01, as needed (e.g. jAdams will become jAdams01).
  - Extensions change to the lowest available extension.
- The Allworx server does not import phones with conflicting MAC addresses and removes all references (e.g. call routing and BLF PFK assignments).
- The Allworx server does not import analog phones with unavailable port and removes all references (e.g. call routing and BLF PFK assignments).
- The Allworx server does not save SIP handsets and SIP gateway station numbers during an import. If changing station numbers for generic SIP phones or SIP gateways, setup the new station number on each device.
- On multi-site configurations, the Export does not include references to extensions, users or outside lines at remote sites.
- Imported extensions/users are limited to the total number available in the imported server. The order in the export file determines the available extensions/users. If exceeding the imported server extensions/user limit, the server disables and does not import the remaining extensions/users.
- Do not modify the XML export file.

To manage the Import / Export:
An export includes all configurable parameters for:

Phone System Settings	Outside Lines	Network Settings
• Users • User Templates • System Extensions • Handsets • Handset Preference Groups • Schedules • Allworx Port Expander (including all attached analog phones and CO lines)	• CO Lines • Digital Lines • SIP Gateways • SIP Proxies • DID Blocks and Routing	• Configurations • Digital Line Configurations • SSL Certificates

VoIP Server Settings	SIP Proxy Settings	Dial Plan Settings
• All	• All	• Internal Dial Plan • External Dial Plan • Automatic route selection for external dial plan • Dialing Privileges Groups • Non-default Service Groups

To manage importing or exporting the configuration settings:

1. Log in to the Allworx server admin page and navigate to **Maintenance** > **Import / Export**.

2. Click one of the following links:

Export Configuration	1. Check the box for the available configurations to export. To select all the available options, click the checkbox next to Configuration Type. 2. Click **Export.** **Note:** For Connect Servers only: Selecting the SSL Keys and Certificates requires entering a Key Encryption password in the field provided. After exporting the configuration, the following options are available:

View	Displays the XML file in a separate browser window. To save the XML file: 1. Right-click and select **Save Link As...** . 2. Browse to the correct file location and enter a description in the File name: field. 3. Click **Save** to keep the file or **Cancel** to disregard the request. 4. Verify the server receiving the imported configuration settings has none of the above configurations added prior to import. Update the internal dial plan and extension length to match the configuration being imported before the doing import.
Delete	Removes the configuration file from the server.

Import Configuration	
Choose File	Select the configuration file to import onto the server. Use the browser to navigate to the file location and select the file. Click Open to import the file or Cancel to disregard the request.
Load	Prepares the selected configuration file to import. Then select Process to finish the import configuration process or Cancel to stop the import configuration process.

Click here to return to the "Install Checklist" .

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Chapter 51 Registration

Registration is comprised of two separate processes - Registration and Activation - of the Allworx server.

Prerequisites	
Alternate Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

Registration
Register the Connect server within the Allworx System Software. Upon completing the online registration, the Registration feature:

- generates the Site ID.
- generates the Connect server Activation Code.
- keeps a service history of each Connect server.

After registering the Connect server, the following functionality is available:

- configuring the server,.
- performing software upgrades.
- testing the Allworx system. **NOTE:** the Allworx system disconnects all phone calls after a few seconds.

Activation
Activate the Connect server software within the Allworx System Software using the registration-generated Activation Code.

After activating the Connect server, the following functionality is available:

- viewing the registration information.
- placing and receiving phone calls.
- starting the warranty period of any warranties and software upgrade keys.
- tracking the server history of Allworx sites by the Allworx Support team.

To register the Connect server:

Note:	This procedure requires Allworx Partner Portal permissions.

1. Log in to the Allworx server admin page and navigate to **Maintenance** > **Registration**.
2. Click **Register**. A new web page for the Allworx Partner Portal opens.
3. Log in to the Allworx Partner Portal with the Allworx assigned username and password.

4. Click **Server Management** located in the left panel.

5. Click **Add/Register Server**. The Add/Register page opens with the server serial number entered in the field.

6. Click **Submit**.The registration form displays.

7. Fill in the registration form fields. The System Name, Street Address 2, and Additional Info fields are optional.

   Providing the System Name and Additional Info fields enables:

System Name	Displays in the Server Management dashboard on the portal. Use this description as a nickname for the account, location, or machine.
Additional info	Any notes to view later in the Server Management dashboard on the portal.

8. Click **Register**. An automatically generated email confirmation that includes the Activation Code goes to the email address of record to the Portal user account.

9. Write down the displayed Activation Code, if using manual activation.

To activate the Connect server:

1. Connect the server following the specific server installation instructions. See www.allworxportal.com for the correct installation guide.

2. Log in to the Allworx server web admin page with the Allworx assigned username and password. The **Maintenance** > **Registration** page displays.

3. Select one of the following options:

Activate	Automatically retrieves the Activation Code from the portal via the Internet.
Enter Activation Code	Manually activates the Connect server. Enter the Activation Code from "To register the Connect server:" on page 229, step 9 in the field provided and click **Submit**.

   The page displays "Server is Activated" and is ready to use.

To see updated server information, click **Refresh**.

Click here to return to the "Install Checklist" .

Chapter 52 Restart / Shutdown

Restart / Shutdown reboots the Allworx server and phones for settings to take effect or powers off the Allworx server from the web admin page and ends all active calls.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

52.1 Restart the Allworx Server and/or Allworx Phones

To manage the Allworx server restart:

1. Log in to the Allworx server admin page and navigate to **Maintenance** > **Restart**.

2. Click one of the following links:

Restart		
Restart or Shutdown the Allworx Server	Check the box to view the Allworx server restart options:	
	Normal restart	Reboots the server with the current settings.
	Restart with factory defaults restored	Reboots the server and returns the server settings to the original factory default settings.
	Enter Migration Mode after restart	Reboots the server for use with the Allworx Migrate tool.
	Enter Safe Mode after restart	Format the disk or restoring an OfficeSafe backup. To perform a Restore with the Allworx OfficeSafe application, see "To restore data using the Allworx OfficeSafe application:" on page 232.
	Shutdown and Power Off	Shutdown and power off the Allworx server from the web admin page. • **Shutdown Now** - Immediately shutdown and power off the Allworx server. • **Shutdown Later -** Schedule a time in the future to shutdown and power off the Allworx server. (the Allworx administrator can cancel the scheduled shutdown). If the Allworx administrator restarts the server before a scheduled shutdown, the Allworx system cancels the pending shutdown.
Restart Allworx Phones	Check the box to initiate a reboot of the Allworx phones connected to server. Check the **Automatically accept phone software update** to force the phones to automatically confirm updates without intervention.	
Restart Now	Begins the restart process immediately.	
Restart Later...	Schedule a time to reboot the server. Enter a start date and time in the provided fields. Click Schedule Restart to save the change or Cancel to disregard the request. If the Allworx administrator restarts the server before a scheduled shutdown, the Allworx system cancels the pending shutdown.	
Logged in Administrators Displays the users currently logged in with administrative permissions.		

52.2 Perform a Restore using Allworx OfficeSafe

See the Allworx OfficeSafe User Guide for detailed restore information. Alternatively, use the Allworx Migrate Tool to transfer the settings from one Allworx server to another Allworx server. See the Allworx Migration Tool Administrator's Guide for more details.

To restore data using the Allworx OfficeSafe application:

1. View customers: perform a backup of the View database prior to performing the restore (see the Allworx View Users Guide for more information).

2. Unplug all the network cables going to the server and only plug in the backup PC.

3. Log in to the Allworx server admin page, navigate to **Maintenance** > **Restart**. Restart the Allworx server into Safe Mode by using one of the following options:

Web administration Page	1. Log in to the Allworx server admin page and navigate to **Maintenance** > **Restart.** 2. Check the box for **Restart Allworx Server.** 3. Select **Enter Safe Mode after restart.** 4. Click **Restart Now**. A warning banner displays. Click **OK**. The Allworx server powers down and then powers back up in Safe Mode. Once the system powers up into Safe Mode, access the Safe Mode web page.
Front Panel of the Allworx Server	The method used to force entry into Safe Mode via the Allworx server front panel varies by product model. Consult the specific product model Allworx server Installation guide for more details.

4. Start the OfficeSafe application on the OfficeSafe PC.

5. Connect the OfficeSafe PC to the Allworx server.

Connect servers	Plug into the ETH0 port.
6x12 server 6x server 48X server	Plug into the LAN port.

6. Navigate to the web server admin page > Safe Mode screen > **Restore** and enter the IP address of the OfficeSafe PC.

7. Verify the PC has an IP address on the 192.168.2.x network. It may be necessary to release and renew the IP address on the PC to get an address from the server.

   a. Click **Start** and type **cmd** in the Search field. A command window opens.

   b. Type the following to clear the PC current IP settings:

   ```
   ipconfig /release
   ```

   c. Press enter to clear the PC current IP settings.

d. Type the following to obtain a new IP Address:

```
ipconfig /renew
```

e. Press enter.

8. Click **Restore from OfficeSafe**.

9. Click **Accept** on the Confirm Restore Request dialog box to begin the restore. Depending on the size of the backup data (and the performance of the network and OfficeSafe PC), it may take several minutes or over an hour to restore the backup, if there are several gigabytes of data to recover. A “Restore was successful” message displays in the Status pane on the Safe Mode page when the operation completes.

10. Click **Reboot in Normal Mode** and select **Reboot**.

Caution:	Do NOT select Reboot the Allworx server in Normal Mode with Factory Defaults restored. This loses the restored settings during the reboot. If this happens, start the entire restore operation over again.

After the Allworx server restarts:

- reconnect the network cables,
- log in to the Allworx server, and
- verify that the data restored successfully.

Click here to return to the “Install Checklist” .

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Chapter 53 Time

Time enables adjusting the time and date on the Allworx server automatically or manually.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

To set the time:

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Time**.
2. Click **modify** in the Action column. The Time page displays.
3. Update the settings:

Use NTP To set time automatically Preferred setting, if the Allworx server has Internet access. Check the box to enable.	
NTP Server	Specify an SNTP-server IP address or a domain name.
Poll Period	Specify the number of minutes between polls.
Set Time Manually	Specify the time in hours, minutes, seconds, and then the date.
Time Zone	Select the correct time zone from the drop-down list. Check the Automatically adjust clock for Daylight Saving Time box to enable the system to update the time automatically.
Set Time	Saves the current changes.
Get Time	Updates the clock to the current time when using an SNTP server.
Cancel	Disregards the changes.

Click here to return to the "Install Checklist" .

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Chapter 54 Tools

Tools is a set of various features to supports troubleshooting server communication problems.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	No

54.1 Network Diagnostics

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Tools**.
2. Locate the **Network Diagnostics** section, and click the additional information arrow ▸, if necessary.
3. Update the settings:

Enter an IP Address or Domain Name	Type in site IP Address or Domain Name.
Select a Function:	Click an option: • Ping • DNS Get Address From Name • DNS Get Name From Address • MX Record Lookup • Trace Route • Bandwidth Test • Discover DHCP Servers • What is my External IP? The results display in the space below.

54.2 Syslog - System Events

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Tools**.
2. Locate the **Syslog - System Events** section, and click the additional information arrow ▸, if necessary.
3. Click one of the following options:

Start	Enter an IP Address and Port in the field provided to transmit the system events to a specified Syslog server.
setup	Send automatic notification of selected system events. See page 193 for more information.

54.3 Allworx Technical Support Server

Connect to the Allworx support server to enable Allworx Technical Support to access the Web Admin page.

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Tools**.
2. Locate the **Allworx Technical Support Server** section, and click the additional information arrow ▸, if necessary.
3. Enter the Support Server IP Address information in the field provided.
4. Click **Connect** to begin.

54.4 Advanced Troubleshooting

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Tools**.
2. Locate the **Advanced Troubleshooting** section, and click the additional information arrow ▸, if necessary.
3. Locate the appropriate section and click the additional information arrow ▸, if necessary:

Setting	Description
Advanced Diagnostic Logging Only enable at the direction of Allworx Customer Support to assist support engineers in troubleshooting a problem. Allworx server performance degrades when enabled.	
Call Control Backplane Messages	Check the box to enable.
SIP Messages	Check the box to enable.
Advanced	Update the fields with the required information: • Module Name • Level Mask
Capture	Enter a value in minutes (1 to 60) for the diagnostic messages.
Stop	Ends the advanced diagnostic logging.
View	Display the advanced diagnostic log in a separate browser window.
Delete	Removes the advanced diagnostic log from the server.
Four Wire Return Less Measurements A noise measurement defined for the LAN and associated components.	
Capture	While capture four wire return loss values, verify the analog CO lines are not active. Incoming or outgoing calls while the test is running causes the test to capture incorrect data. Click to start the test.
Refresh	Resets the current page to check the Packet Capture Tool status when writing packets to the file.

Setting	Description
View	Display the information log in a separate browser window.
Delete	Removes the log from the server.
Network Address Translation (NAT) information A method of modifying network address information in Internet Protocol (IP) datagram packet headers while it is in transit across a traffic routing device.	
Capture	Starts gathering the NAT information for the log.
View	Display the NAT information log in a separate browser window.
Delete	Removes the NAT log from the server.
Network Device Monitoring Watching a computer network for slow or failing components. Only enable at the direction of Allworx Customer Support to assist support engineers in troubleshooting a problem. Allworx server performance degrades when enabled.	
Check All	Selects all displayed devices for network device monitoring.
Uncheck All	De-selects all displayed devices for network device monitoring.
<device>	Check the box selects specific devices for network device monitoring.
Capture	Enter a value in hours (0 to 99) for the network diagnostic monitoring. The value 0 hours indicates the network device monitoring is running continuously.
Open	View the network device monitoring log.
Stop	Ends the network device monitoring.
Delete	Removes the Network Device Monitoring log from the server.
Packet Capture Tool Intercept and log traffic passing over a digital network. Only enable at the direction of Allworx Customer Support to assist support engineers in troubleshooting a problem. Allworx server performance degrades when enabled.	

Network Interfaces	Check the box to enable.
	• LAN Port Interfaces
	  • LAN/untagged | Local Phones
	• WAN Port Interfaces
	  • WAN/untagged | Local Phones
	• IP Addresses
	  • Source IP Address - enter the address in the field provided.
	  • Destination IP Address - enter the address in the field provided

Uncheck All	De-selects all displayed devices for network device monitoring.
<device>	Check the box selects specific devices for network device monitoring.
Capture	Enter a value in minutes (0 to 60) for the network diagnostic monitoring. The value 0 minutes indicates the packet capture tool is running continuously.
Stop	Ends the packet capture tool.
Open	View the packet captures.
Refresh	Resets the current page to check the Packet Capture Tool status when writing packets to the file.
Delete	Removes the packet capture file from the server.

Setting	Description
Performance Monitoring The Allworx server collects system performance data in the background, which may assist Allworx support engineers in troubleshooting a problem. Save the file to disk before making it available to download, in RRD format, which requires specialized tools to view. The performance monitoring data gathered before an Allworx server reboot persists after the Allworx server reboot.	
Write	Saves the system performance file to disk.
Open	View the RRD system performance file.
Delete	Removes the RRD system performance file from the server.
Telnet Using one computer to log onto another computer that is part of the same network. Only Allworx 6x, 6x12, and 48x servers support Telnet. Only enable at the direction of Allworx Customer Support to assist support engineers in troubleshooting a problem. Allworx server performance degrades when enabled.	
Enable Telnet	Click to Enable the Telnet. Enter a port that is not in use by another service on this server.
Disable Telnet	Click to Disable the Telnet. Click Refresh to redisplay the page with Telenet disabled.
SSH Using one computer to securely log onto another computer that is part of the same network. NOTE: The Allworx System Software 8.0 and higher application does support a full pseudo-tty terminal. To avoid warnings in the SSH client, disable the pseudo-tty on the SSH client. When enabled, users see a warning message, but SSH is still operable. Only Allworx Connect servers support Telnet. Only enable at the direction of Allworx Customer Support to assist support engineers in troubleshooting a problem. Allworx server performance degrades when enabled.	
Enable SSH	Click to Enable the SSH. Enter a port that is not in use by another service on this server.
Disable SSH	Click to Disable the SSH. Click Refresh to redisplay the page with SSH disabled.

Click here to return to the "Install Checklist" .

Chapter 55 Update

Update supports upgrading the software version. The page displays the current software version number, build date, and indicates if there is a current software upgrade license feature key available on the Allworx server.

Prerequisites	
Access Permissions	Allworx Server Administrator Allworx System Administrator Phone Administrator Role Network Administrator Role Support Technician Role
Feature Key Required	Yes

Before doing an upgrade, be aware that:

- Downgrading from one release to an earlier release results in undesirable behavior and is not supported.
- Allworx highly recommends running an OfficeSafe backup prior to the upgrade (see "Backup" on page 211.).
- View customers: Allworx highly recommends performing a backup of the View database prior to the upgrade (see the Allworx View Users Guide for more information).
- The upgrade requires a server restart. Since this causes disconnections and disruption of data, verify the system is idle (no phone or data users) when the upgrade is done.
- After installing, close all browser windows and open a new browser window before proceeding. If there is a browser session open during the upgrade, the Allworx server admin page may not display properly.
- See "Install and Configure the Allworx Server" on page 7 for supported web browsers.

Note:	Upgrading from prior releases of the Allworx System Software to Release 8.1 requires installing a Software Upgrade Feature Key or that the server is in its initial software warranty period.
Note:	Do not skip software releases to install Allworx System Software Release 8.1.For example, if upgrading from Release 7.5 to 8.0, install 7.6, 7.7, 8.0, and finally Release 8.1.

To update the server:

1. Log in to the Allworx server admin page, and navigate to **Maintenance** > **Update**.

2. Click an update option.

Download update from web	The server determines if new software releases are available. If an upgrade is available, the option to install them is available. Select the software version, and then click **Download Update**.
Upload update from PC	1. Navigate to the Allworx Partner Portal (www.allworxportal.com) and download the update file. 2. Unzip the downloaded file. 3. Click **Choose file** > **Browse** to navigate to the location of the Allworx System Software file. 4. Select the file, and click **Open**. The Update page displays. 5. Click the Load button. The page displays the current version of software and the software version of the file that was loaded on the system. A warning message displays for any inconsistencies such as: • update version is the same or lower than the current version. • update is for a different Allworx server model.

3. Select an option to activate the system software update.

Note:	The first server restart after an upgrade can be slower due to upgrade processing.
Note:	After installing, close all browser windows and open a new browser window before proceeding. If there is a browser session open during the upgrade, the Admin page may not display properly.

Activate Update Now	Update begins immediately. 1. Click **Activate Update Now**. 2. (optional) Check the **Automatic Update** box to update Allworx Phone firmware automatically. 3. Click **Start Update**.
Activate Update Later	Schedule the update to begin at another time - up to one week later. 1. Click **Activate Update Later**. 2. (optional) Check the **Automatic Update** box to update Allworx Phone firmware automatically. 3. Select the date and time to begin the update, and then click **Submit Schedule**. The Update page displays with the scheduled date and time for the system software update.
Cancel	Ends the update and returns to the main update screen.

Click here to return to the "Install Checklist" .

Appendix A Abbreviations

Abbreviation	Definition
BLF	Busy Lamp Field
CDR	Call Detail Record
CO	Central Office
DHCP	Dynamic Host Configuration Protocol
DID	Direct Inward Dialing
DND	Do Not Disturb
DNS	Domain Name System
DOD	Direct Outward Dialing
DTMF	Dual Tone Multi-Frequency
FTP	File Transfer Protocol
FXO	Foreign Exchange Office
FSX	Foreign Exchange Subscriber
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IP	Internet Protocol
ITSP	Internet Telephony Service Provider
LAN	Local Area Network
NAT	Network Address Translation
PBX	Private Branch Exchange
PFK	Programmable Function Key
PoE	Power Over Ethernet
POP	Post Office Protocol
PPTP	Point-to-Point Tunneling Protocol
RTP	Real-time Transport Protocol
SIP	Session Initiation Protocol
SMTP	Simple Mail Transfer Protocol
SNTP	Simple Network Time Protocol
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
URI	Uniform Resource Identifier
VLAN	Virtual Local Area Network
VoIP	Voice over Internet Protocol
WAN	Wide Area Network

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