



ADMINISTRATOR GUIDE

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VVX D230 DECT IP Phone

GETTING HELP

For more information about installing, configuring, and administering Poly/Polycom products or services, go to Polycom Support.

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Before You Begin

This guide describes how to administer, configure, and provision VVX D230 devices, focusing on the D230 DECT IP phone base station. For information specific to using the D230 DECT IP phone handset, see *D230 DECT IP Phone User Guide*.

Audience, Purpose, and Required Skills

This guide is for a technical audience. You must be familiar with the following concepts before beginning:

- Current telecommunications practices, protocols, and principles
- Telecommunication basics, audio teleconferencing, and voice or data equipment
- OpenSIP networks and VoIP endpoint environments

Related Poly and Partner Resources

See the following sites for information related to this release.

- The [Poly Online Support Center](#) is the entry point to online product, service, and solution support information including Licensing & Product Registration, Self-Service, Account Management, Product-Related Legal Notices, and Documents & Software downloads.
- The [Polycom Document Library](#) provides support documentation for active products, services, and solutions. The documentation displays in responsive HTML5 format so that you can easily access and view installation, configuration, or administration content from any online device.
- The [Poly Community](#) provides access to the latest developer and support information. Create an account to access Poly support personnel and participate in developer and support forums. You can find the latest information on hardware, software, and partner solutions topics, share ideas, and solve problems with your colleagues.
- The [Poly Partner Network](#) are industry leaders who natively integrate the Poly standards-based RealPresence Platform with their customers' current UC infrastructures, making it easy for you to communicate face-to-face with the applications and devices you use every day.
- The [Polycom Collaboration Services](#) help your business succeed and get the most out of your investment through the benefits of collaboration.

System Configuration Parameters

This guide provides system configuration parameters and their values in the following formats:

- Canonical fashion
- Literal fashion

Both notational conventions point to the same parameters, but their appearances are different.

The canonical fashion simplifies locating parameters on your device's system web interface, the [PDMS-SP](#) service, or in the [Polycom Obihai Data Model](#), which is a collective list of configuration parameters, syntaxes, and valid values for VVX D230.

Canonical Fashion

This example shows the format of the canonical fashion.

- **Parameter Group Name::ParameterName = Parameter Value**
{replace-with-actual-value}

The **Parameter Group Name** is the heading of the parameter group on the left side panel of the device's system web interface or the PDMS-SP service web page. This string may contain spaces. When a group heading has more than one level, a – separates each level, such as:

- **Services Providers – ITSP Profile A – SIP:**

The `ParameterName` is the name of the parameter as shown on the web page and mustn't contain any spaces. **Parameter Group Name** and `ParameterName` are separated by two colons (::), as shown in the first example.

The `Parameter Value` is the literal value to assign to the named parameter and may contain spaces. You can omit **Parameter Group Name** or its top-level headings when the context is clear. For example:

- **SP1 Service::AuthUserName = 4082224312**
- **ITSP Profile A – SIP::ProxyServer = sip.myprovider.com**
- `ProxyServerPort = 5082`

Literal Fashion

These examples show the format of the literal fashion. Use the literal fashion when provisioning systems.

- **ParameterGroupName.ParameterName.Parameter Value** {replace-with-actual-value}
- **Parameter.Group.Name.ParameterGroupName.ParameterName.Parameter Value**

The **ParameterGroupName** is the name of the first parameter group in literal fashion. This string mustn't contain any spaces, and always ends with a period, as shown. You can use more than one **ParameterGroupName**. The **ParameterGroupName** is case-sensitive.

The **ParameterName** is the name of the parameter, and always ends with a period, as shown. This string mustn't contain any spaces. The **ParameterName** is case-sensitive.

The `Parameter Value` is the literal value to assign to the named parameter and can contain spaces. The `Parameter Value` isn't case-sensitive, but it must exactly match the value when one or more choices are available.

When using the literal fashion in your XML, you need to exactly match the text string for **ParameterGroupName.ParameterName.Parameter Value**, but text formatting such as bold face isn't required and is removed when your script or app is processed.

Boolean Values

Parameters that take a Boolean value have a check box next to the parameter name on your system web interface pages. Throughout the document, we refer to a Boolean value as “enable or disable” or “yes or no”,

but the only valid Boolean parameter values to use in a phone configuration file is either `true/false` or `True/False` (case-sensitive). This is equivalent to selecting or clearing the check box on the configuration web pages.

Multiple Choice Values

You must provision parameters that take one of several valid options from a drop-down menu on the configuration message with string values that match exactly one of those choices. Otherwise, the system uses the default choice. Matching the provisioned value against valid strings is case-sensitive and doesn't allow extra spaces.

Parameter Values

When entering a parameter value from the web page or via provisioning, avoid adding extra white spaces before or after the parameter value. If the value is a comma-separated list of strings or contains attributes after a comma or semicolon, avoid adding extra white space before and after the delimiter.

For example: **CertainParameter** = `1,2,3,4;a;b;c`

If a parameter value can include white spaces, such as **X_STUNServerPort**, use just a single space and no extra space before and after the value.

For example: **X_STUNServerPort** = `UDP listen port of the STUN Server`

XML Usage

When you write or edit XML for your VVX D230 system, use an XML editor that automatically checks your syntax.

You can also use the template for the [VVX D230 Obihai Data Model](#) to get started.

Getting Started

The VVX D230 DECT IP phones are standalone IP-based wireless phone systems that enable you to manage your calls when you're away from your desk. The system consists of a base station with support for up to 10 handsets. This section includes overview information on using the VVX D230 system.

VVX D230 DECT IP Phone Overview

VVX D230 phones support Polycom HD Voice technology. You can manage the local interface and network interaction on VVX D230 systems directly from the [PDMS-SP](#) service or through the system web interface.

VVX D230 systems implement the following features and functionalities:

- Aggregation and bridging of eight SIP accounts
- Recursive digit maps and associated call routing (outbound and inbound)
- Support for all standard SIP-based IP PBX and ITSPs/VSPs
- Cloud management enabled via the [PDMS-SP](#) service with both a user portal and an ITSP partner portal
- VoIP network management for endpoint devices and applications
- High-quality voice encoding using G.711, G.722, G.726, G.729, iLBC, and Opus codecs
- Registration of 10 handsets on a single base station

Hardware Summary

Your VVX D230 system consists of these components:

- Base station, which interfaces with between one and 10 handsets, and connects to Ethernet for VoIP communications, and has one charger slot for storing and charging a handset.
- Handsets, which provide the user-to-base station interface, allowing voice communication and some system interaction.
- Handset chargers, which provide one charger slot for storing and charging a handset.
- Power adapters, which power the base station and handset chargers.

In this guide, the terms “base station” and “handset” refer to those individual components. The term “system” refers to the base station and handset together.

LED Status Indicators

VVX D230 systems contain one LED and one pushbutton on the base station, and one LED on the handset.

This table describes the system's base station LED behavior and status information.

VVX D230 LED Status Indicators

| Component | Indicator | Status |
|--------------|--------------|---|
| Base Station | Solid red | Powering on On Idle |
| | Blinking red | Waiting for network availability—on for 1 second and off for 1 second Locating a handset—on for 1 second and off for 1 second Registering a handset—on for 2 seconds and off for 1 second |
| Handset | Blinking red | Incoming call Missed call New voicemail |

Power the Base Station On and Off

The VVX D230 base station turns on when you plug it into a power source such as Power over Ethernet (PoE). Connect the power adapter to the base station if PoE isn't available.

Don't use the 5V adapter when you use PoE with your VVX D230 base station.

To power the base station on and off:

- » Plug an Ethernet cable into the Ethernet port on the base station. If the base station powers on, you have PoE, and the base station automatically obtains an IP address via DHCP.

If the base station doesn't power on, connect its 5V power adapter.

Use only the 5V adapter supplied with the original packaging to power the base station if PoE isn't available. Using any other adapter voids the warranty and may cause the unit to malfunction.

Power the Handset Charger On and Off

The VVX D230 handset charger turns on when you plug in its 5V adapter.

To power the handset charger on and off:

- » Plug in the handset charger's 5V adapter, and place the handset in the charger.

Use only the 5V adapter supplied with the original packaging to power the handset. Using any other adapter voids the warranty and may cause the unit to malfunction.

Set Up Ethernet and PC Connections

By default, when you connect your base station to an internet router or Ethernet switch, it obtains an IP address, a DNS, and an internet (LAN) gateway IP address via DHCP.

To connect to Ethernet and a PC:

- 1 Plug an Ethernet cable into the Ethernet port on the base station. If the base station powers on, you have PoE, and the base station automatically obtains an IP address via DHCP.
If the base station doesn't power on, connect its 5V power adapter.
- 2 Optionally, connect your PC to the base station's PC port.

Pair Handsets to Base Stations

Before you use your D230 system, you need to pair your handsets to your base station. You can do this before you provision your lines. You can pair up to 10 handsets per base station.

Your base station supports up to seven active calls.

To pair your handsets to your base station:

- 1 On the handset, choose **Menu > Settings > Registration**.
- 2 Select **Register**.
- 3 Press and hold the base station's **Find** button for 5 seconds.
- 4 On the handset, choose **Yes** to confirm registration.
- 5 Repeat for each handset.

Access the System Web Interface

After pairing a handset to your base station, use the system web interface to configure and make changes to your system.

To access the system web interface:

- 1 On the handset, choose **Menu > Settings > Basestation Info**. The base station's IP address displays.
- 2 Enter the base station's IP address in a local PC web browser.
- 3 When prompted, enter the user name and the password.
The default user name is `admin`, and the default password is `admin`.

Configure the Primary Line

The primary line is the default service used to make calls when not using an explicit access code prefix.

The primary line offers these services:

- SP1–8 Service: SIP-based service. By default, the primary line is SP1.
- OBiTalk Service: Peer-to-peer service provided free with all system models.

Your handset can simultaneously manage two calls maximum.

To configure the primary line:

- 1 Contact your service provider to get the values for these parameters:

SP Configuration Parameters

| Service Provider Parameter | D230 Parameter Name | Notes |
|----------------------------|---------------------|--|
| Proxy server | ProxyServer | Proxy server for your service provider |
| Registrar server | RegistrarServer | Registrar server for your service provider |
| SIP account number | X_DisplayNumber | Account number (phone number) |
| User name | AuthUserName | SIP account user name |
| User password | AuthPassword | SIP account password |

- 2 From the system web interface, go to **Service Providers > ITSP ProviderN > SIP**.
- 3 In the **Default** column, uncheck the boxes for the `ProxyServer` and `RegisterServer` parameters.
- 4 Enter the values from your service provider for the `ProxyServer` and `RegisterServer` parameters.
- 5 Click **Submit**.
- 6 Go to **Voice Services > SPn Service**.
- 7 In the **Default** column, uncheck the box for the `X_DisplayNumber` parameter.
- 8 Enter the value from your service provider for the `X_DisplayNumber` parameter.
- 9 Optionally, click **Submit**.
- 10 Scroll down to **SIP Credentials**.
- 11 In the **Default** column, uncheck the boxes for the `AuthUserName` and `AuthPassword` parameters.
- 12 Enter the values from your service provider for the `AuthUserName` and `AuthPassword` parameters.
- 13 Click **Submit**.
- 14 Click **Reboot**.

Configuration and Management

Your VVX D230 system provides the following options to configure and manage your system:

- System web interface
- Interactive voice response (IVR) system
- Remote provisioning

Configure Your D230 With the System Web Interface

You can access the D230's system web interface from a PC using a web browser. Although all popular browsers are tested for compatibility with the system web interface, some inconsistencies may arise from time to time. Contact obi.spsupport@polycom.com if you have any questions about the system web interface and how it appears in your browser window.



You must submit every configuration page after you make changes on the page. Otherwise, those changes are discarded once you go to another page. Many changes also require you to reboot the unit. However, you can reboot the unit just once after you make and submit all your changes on all the pages.

Access the System Web Interface

You can access the system web interface to see settings on your D230 system.

To access the system web interface:

- 1 Connect your base station to the LAN.
- 2 Dial * * * from the handset to access the **Config Attendant**.
- 3 Choose **1** to hear the IP address of the system read back to you. Write this down.
- 4 Enter the system IP address in a local PC web browser.
- 5 When prompted, enter the user name and the password.

The default user name is `admin`, and the default password is `admin`.

Make Changes With the System Web Interface

You can configure and make changes to your D230 system with the system web interface.

To make changes with the system web interface:

- 1 Access the system web interface.
- 2 Go to the page containing the parameter you want to change.
- 3 Enter your changes in the system web interface.

Always click the **Submit** button to save your changes before going to another page.

A message displays when a system reboot is required. When you finish making changes, click **Reboot**.

Configuring VVX D230 with the Setup Wizard

The Setup Wizard web page provides a convenient way to set basic system parameters on your D230 base station.

You can change the following parameters from the Setup Wizard page:

Setup Wizard Parameters

| Parameter | Description |
|---|--|
| <i>System Management</i> | |
| LocalTimeZone | Local time zone. |
| AdminPassword | Administrator password is case-sensitive and can contain uppercase and lowercase letters, numerals, and special characters. Note: If the default password is set, a warning message displays in the top-right corner of the web page. |
| <i>ITSP x Profiles (for x = ITSP A through ITSP D). Note: Your system has ITSP A – H.</i> | |
| ITSP x SignalingProtocol | Signaling protocols for this ITSP. Choose from: <ul style="list-style-type: none"> • SIP • Google Voice |
| ITSP x SIP ProxyServer | Host name or IP address of the SIP proxy server. |
| ITSP x SIP ProxyServerPort | Destination port to connect to the SIP server. Don't choose a port at random. |
| ITSP x DigitMap | A digit map to restrict the numbers that can be dialed or called with this service. Maximum length is 511 characters. |
| <i>Outbound Calls (for Phone1 and Phone2)</i> | |
| Phone1 PrimaryLine | This parameter indicates to your handset which voice service is considered as the primary line when dialing out from your system. |
| Phone1 DigitMap | Digit map to limit dialable numbers on this handset. |
| Phone1 OutboundCallRoute | Routing rule for outbound calls made via this handset. |
| Attendant PrimaryLine | This parameter indicates to your handset which voice service is considered as the primary line when using the Auto Attendant. |

Voice Services (for n = SP1 through SP4, and OBi). Note: Your system has SP1 – 8.

Setup Wizard Parameters (continued)

| Parameter | Description |
|---|--|
| SPn X_ServProvProfile (ITSP Profile) | Selects a Service Provider profile for this service. Choices are A, B, C, D, E, F, G, or H. |
| SPn AuthUserName | User name used to authenticate the connection to the server. |
| SPn AuthPassword | Password used to authenticate the connection to the server. |
| SPn URI | See the description of the <code>URI</code> parameter for more details and examples. |
| SPn InboundCallRoute | Routing rule for inbound calls on this trunk. |
| OBI-TALK InboundCallRoute | Routing rule for directing incoming calls on this service. The default rule is to send all incoming calls to the handset (<code>dtm</code>). |
| POTS-line InboundCallRoute | Routing rule for directing incoming land line (POTS) calls. |

Configure the Base Station with the Setup Wizard

You can use the Setup Wizard to configure some common parameters on your base station quickly.

To configure your base station with the Setup Wizard:

- 1 In the system web interface, go to **Setup Wizard**.
- 2 In the **Default** column, uncheck the boxes for the parameters you want to configure.
- 3 In the **Value** column for these parameters, enter your values. Record these values for future use such as for troubleshooting.
- 4 Click **Submit**.
- 5 Click **Reboot** to reboot your system.

Configuring VVX D230 With the IVR System

Your VVX D230 system uses the IVR system for both its configuration and normal functionality. Access the IVR system using the handset to receive verbal prompts and information from the system.

Note the following information regarding the IVR system:

- If a setting change requires a reboot, your VVX D230 reboots automatically when you quit the IVR system.
- You can access the next menu of the IVR system or invoke a command without waiting for the previous announcement to end.

Configure Basic Settings With IVR

Use the IVR system's main menu to configure your VVX D230's basic settings or to access additional configuration menus.

To configure basic settings with IVR:

- 1 Dial *** from the handset.
- 2 Enter the number for the configuration menu you want to access.

Integrated Voice Response Operations

| Menu Selection | Setting | Description |
|----------------|--|---|
| 1 | Basic Network Status | System IP address and DHCP status. |
| 2 | Advanced Network Status | Information on the primary and back-up DNS server and primary and back-up NTP server. |
| 3 | Set DHCP | Current DHCP value. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. |
| 4 | Set IP Address | Current IP address. Note: If you enter a new value (static IP address), you disable DHCP. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. |
| 5 | Set Password | Current IVR password. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. |
| 6 | Software Update The system plays one of the following messages: <ul style="list-style-type: none"> • Software update available. Press 1 to update software. • Software update not available. | If an update is available, press 1 to update the software. The software update process starts as soon as you hang up. Warning: Once the software upgrade process starts, your base station's power LED blinks rapidly. Make sure the power and network cable stay connected to the unit until the process is complete. |
| 8 | Restore Factory Default | Restores the system to factory default settings. <ul style="list-style-type: none"> • Press 1 to confirm the factory restore. • Press # to return to the main configuration menu. • Press ## to exit the IVR system. |

Integrated Voice Response Operations (continued)

| Menu Selection | Setting | Description |
|----------------|--------------------|---|
| 9 | Reboot | Reboots the system. <ul style="list-style-type: none"> Press 1 to confirm system reboot. Press # to return to the main configuration menu. Press # # or hang up to exit the IVR system. |
| 0 | Additional Options | Access other configuration settings. |

Configure System Settings With IVR

Configure system options through the system settings submenu. Note that the handset doesn't announce the available settings in the submenu.

To configure system settings with IVR:

- 1 Dial *****0** from the handset.
- 2 Enter the number for the configuration menu you want to access, followed by the **#** key.

System Settings Submenus

| Menu Selection | Setting | Description |
|----------------|------------------|--|
| 1 | Firmware Version | Current firmware version. <ul style="list-style-type: none"> Press 0 to repeat the information. Press # to enter another configuration menu selection. |
| 2 | IVR Password | Current IVR password. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 3 | Debug Level | Current debug level. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |

System Settings Submenus (continued)

| Menu Selection | Setting | Description |
|----------------|--------------------------|--|
| 4 | Syslog Server IP Address | Current syslog server IP address. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 5 | Syslog Server Port | Current syslog server port value. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value of 514. Press # to enter another configuration menu selection. |

Configure Network Settings With IVR

Configure network options through the network settings submenu.

To configure network settings with IVR:

- 1 Dial *****0** from the handset.
- 2 Enter the number for the configuration menu you want to access, followed by the **#** key.

WAN Settings Options

| Menu Selection | Setting | Description |
|----------------|--------------------|--|
| 20 | DHCP Configuration | Current DHCP configuration value. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 21 | IP Address | Current IP address. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |

WAN Settings Options (continued)

| Menu Selection | Setting | Description |
|----------------|---------------------------------|---|
| 22 | Default Gateway | Current default internet gateway. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 23 | Subnet Mask | Current subnet mask. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 24 | DNS Server (Primary) | Current primary DNS server. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 25 | LLDP Discovery (Enable/Disable) | Current LLDP Discovery configuration value. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 26 | NTP Server (Primary) | Current primary NTP server. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 27 | CDP (Enable/Disable) | Common values included in CDP broadcast messages are: <ul style="list-style-type: none"> System Type and Model Duplex/Speed Setting VLAN Setting PoE Class (Power Draw). |

Configure SIP Service Provider Settings With IVR

Configure SIP service provider options through the SIP service provider settings submenu.

To configure SIP service provider settings with IVR:

- 1 Dial *****0** from the handset.
- 2 Enter the number for the configuration menu you want to access, followed by the **#** key.

SP1 Configuration Settings

| Menu Selection | Setting | Description |
|----------------|---|--|
| 100 | Enable Service Provider One (SP1) | Current SP1 value. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 101 | Registration State of SP1 | SP1 registration state. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press # to enter another configuration menu selection. |
| 102 | SP1 User ID | SP1 user ID value. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 167 | SP1 Block Caller ID Enable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 168 | SP1 Block Anonymous Call Enable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 172 | SP1 Call Forward ALL – Enable / Disable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 173 | SP1 Call Forward ALL Number | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |

SP1 Configuration Settings (continued)

| Menu Selection | Setting | Description |
|----------------|--|--|
| 174 | SP1 Call Forward on Busy – Enable / Disable | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 175 | SP1 Call Forward on Busy Number | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 176 | SP1 Call Forward on No Answer – Enable / Disable | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 177 | SP1 Call Forward on No Answer Number | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |

SP2 Configuration Settings

| Menu Selection | Setting | Description |
|----------------|----------------------------------|---|
| 200 | Enable Service Provider Two SP2. | Current SP2 value. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 201 | Registration State of SP2 | SP2 registration state. <ul style="list-style-type: none"> Press 0 to repeat the information. Press # to enter another configuration menu selection. |
| 202 | SP2 User ID | SP2 user ID value. <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |

SP2 Configuration Settings (continued)

| Menu Selection | Setting | Description |
|----------------|--|--|
| 267 | SP2 Block Caller ID Enable | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 268 | SP2 Block Anonymous Call Enable | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 272 | SP2 Call Forward ALL – Enable / Disable | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 273 | SP2 Call Forward ALL Number | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 274 | SP2 Call Forward on Busy – Enable / Disable | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 275 | SP2 Call Forward on Busy Number | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 276 | SP2 Call Forward on No Answer – Enable / Disable | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |
| 277 | SP2 Call Forward on No Answer Number | <ul style="list-style-type: none"> Press 0 to repeat the information. Press 1 to enter a new value. Press 2 to set the default value. Press # to enter another configuration menu selection. |

Configure OBiTALK Settings With IVR

You can configure OBiTALK options through the OBiTALK settings submenu.

To configure OBiTALK settings with IVR:

- 1 Dial *****0** from the handset.
- 2 Enter the number for the configuration menu you want to access, followed by the **#** key.

OBiTALK Service Options

| Menu Selection | Setting | Description |
|----------------|---|---|
| 900 | Enable OBiTALK Service | Current OBiTALK service value. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 901 | Registration State of OBiTALK | OBiTALK registration state. <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press # to enter another configuration menu selection. |
| 967 | OBiTALK Block Caller ID Enable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 968 | OBiTALK Block Anonymous Call Enable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 972 | OBiTALK Call Forward ALL – Enable / Disable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 973 | OBiTALK Call Forward ALL Number | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |

OBiTALK Service Options (continued)

| Menu Selection | Setting | Description |
|----------------|--|--|
| 974 | OBiTALK Call Forward on Busy – Enable / Disable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 975 | OBiTALK Call Forward on Busy Number | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 976 | OBiTALK Call Forward on No Answer – Enable / Disable | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |
| 977 | OBiTALK Call Forward on No Answer Number | <ul style="list-style-type: none"> • Press 0 to repeat the information. • Press 1 to enter a new value. • Press 2 to set the default value. • Press # to enter another configuration menu selection. |

Star Codes

Star codes are short sequences of digits that serve as a command to your system to perform certain operations. Each sequence usually starts with the star (*) key followed by a 2-digit code (such as *69).

You can use star codes to set the value of one or more configuration parameters. VVX D230 allows you to issue a star code from the handset only. A short star code script parameter defines each star code and its operation.

A star code script contains a number of predefined variables and actions. Each variable represents one or a group of configuration parameters. An action can be checking or setting a variable's value, collecting a phone number, or calling a certain number.

The set of star codes that you can dial from the handset is a *star code profile*. VVX D230 has two star code profiles available in its configuration known as Star Code Profile A and Star Code Profile B. Each profile has 30 star code script parameters known as Code1 to Code30. The default star codes in both Star Code Profiles match the standard telephone provider star codes.

Find more information on star codes in the *VVX D230 DECT IP Phone Technical Reference* on the [Poly Online Support Center](#). See a list of star code parameters in the [VVX D230 Data Model](#).

Set the Star Code Profile

You can select a Star Code Profile (A, B, or None) for interpreting the star codes users enter on the phone.

To set the star code profile:

- 1 In the system web interface, go to **DECT Wireless > Handsetn**
- 2 In the **Default** column, clear the check box for the `StarCodeProfile` parameter.
- 3 In the **Value** column for the `StarCodeProfile` parameter, select **A** or **B**, or **None** if star codes aren't used.
- 4 Click **Submit**.
- 5 Reboot your system when you complete your changes.

Program a Star Code

You can program star codes for any enabled feature in addition to the default star codes available on VVX D230.

To program a star code:

- 1 In the system web interface, go to **Star Codes > Star Code Profile N**.

- 2 In the **Default** column, clear the check box for a Parameter Name with an empty value column.
- 3 In the **Value** column, enter a star code script in the following format: *code, name, action1*
For example, for Code30, the star code script is *01, Page Group 1 Talk, pg1tx. Using the star code *01 will send a page to Group 1.
- 4 Click **Submit**.
- 5 Reboot your system when you complete your changes.

Preprogrammed Star Codes

Your system has the following star codes preprogrammed.

Preprogrammed Star Codes

| Code | Description |
|------|---|
| *03 | Request peer system to loop back media in the next outbound call |
| *04 | Request peer system to loop back RTP packets in the next outbound call |
| *05 | Tell system to periodically redial the last called number until the called party rings or answers |
| *06 | Cancel the last repeat dial request |
| *07 | Redial |
| *10 | Day Mode |
| *11 | Night Mode |
| *12 | Auto Night Mode |
| *56 | Enable Call Waiting |
| *57 | Disable Call Waiting |
| *60 | Call Forward on Busy (Enter Number + #) |
| *61 | Disable Call Forward in Busy |
| *62 | Call Forward on No Answer (Enter Number + #) |
| *63 | Disable Call Forward No Answer |
| *66 | Repeat Dial |
| *67 | Block Caller ID (One Time) |
| *68 | Unblock Caller ID (One Time) |
| *69 | Call Return |
| *72 | Call Forward All (Enter Number + #) |
| *73 | Disable Call Forward All |
| *74 | Set Speed Dial |

Preprogrammed Star Codes (continued)

| Code | Description |
|--------------|---|
| *75 | Check Speed Dial |
| *76 | Clear Speed Dial |
| *77 | Block Anonymous Calls |
| *78 | Do Not Disturb – Turn On |
| *79 | Do Not Disturb – Disable |
| *81 | Block Caller ID (Persistent Mode) |
| *82 | Unblock Caller ID (Persistent Mode) |
| *86 | Block Last Caller |
| *87 | Unblock Anonymous Calls |
| *96 | Barge In |
| *98 | Blind Transfer |
| *4678 | Use Opus Only on the next outbound call |
| *4711 | Use G711 Only on the next outbound call |
| *4722 | Use G722 Only on the next outbound call |
| *4729 | Use G729 Only on the next outbound call |

System Settings

You can control system codec features, handset tones, and ring tones on your D230 base station. You also can control how handsets dial calls using speed dial numbers and user-defined digit maps.

Codec Profile Features

Codecs define the digital process your system uses to encode and decode communications with other systems. You can set codec profiles in three places:

- SP*n* Service
- OBiTALK Service Settings
- Page Groups

Your system provides two codec profiles (A and B), selectable per trunk (SP*n* and OBiTALK).

For more information on codec profile parameters, see the [VVX D230 Data Model](#).

Select a Codec for an SP*n* Service

You can select a codec as the preferred codec for an SP*n* service.

To select a preferred codec on an SP*n* service:

- 1 In the system web interface, go to **Voice Services > SP*n* Service** (where *n* is the SP service whose codec you want to specify).
- 2 In the **Value** column for the `X_CodecProfile` parameter, choose the codec profile (A or B) you want to use for this service.
- 3 Click **Submit**. Reboot your system when you complete your changes.
- 4 When reboot completes, go to **Codecs > Codec Profile A** or **Codec Profile B** (the codec profile you chose).
- 5 In the **Default** column, uncheck the box for the `Priority` parameter for the codec you want to use.
- 6 In the **Value** column for the `Priority` parameter, set this parameter to 1.
- 7 Click **Submit**. Reboot your system when you complete your changes.

Select a Codec for OBiTALK

You can select a codec as the preferred codec for OBiTALK.

To select a preferred codec on OBiTALK:

- 1 In the system web interface, go to **Voice Services > OBiTALK Service**.
- 2 In the **Default** column, uncheck the box for the `CodecProfile` parameter.
- 3 In the **Value** column for the `CodecProfile` parameter, choose the codec profile (A or B) you want to use for the service.
- 4 Click **Submit**. Reboot your system when you complete your changes.
- 5 When reboot completes, go to **Codecs > Codec Profile A** or **Codec Profile B** (the codec you chose).
- 6 In the **Default** column, uncheck the box for the `Priority` parameter for the codec you want to use.
- 7 In the **Value** column for the `Priority` parameter, set this parameter to 1.
- 8 Click **Submit**. Reboot your system when you complete your changes.

Select a Codec for a Page Group

You can select a codec as the preferred codec for a page group.

To select a preferred codec on a page group:

- 1 In the system web interface, go to **Voice Services > Page Groups**.
- 2 In the **Default** column for your chosen page group, uncheck the box for the `AudioCodec` parameter.
- 3 In the **Value** column for the `AudioCodec` parameter, choose the codec you want to use for this page group.
- 4 Click **Submit**. Reboot your system when you complete your changes.
- 5 When reboot completes, go to **Codecs > Codec Profile A** or **Codec Profile B** (the codec you chose).
- 6 In the **Default** column, uncheck the box for the `Priority` parameter for the codec you want to use.
- 7 In the **Value** column for the `Priority` parameter, set this parameter to 1.
- 8 Click **Submit**. Reboot your system when you complete your changes.

When you set the priority for a codec in a codec profile, that setting applies for all places that use the codec profile. For example, if you choose Codec Profile B for SP3 and OBiTALK, your codec priority applies to both SP3 and OBiTALK.

Set a Tone Pattern

Tone patterns provide audible call progress indicators to the user. Your system enables you to create customized tone patterns.



Tone Profile A default settings use North American telephone standards. Tone Profile B default settings use Australian telephone standards. You can download tone profiles for other countries from the OBiTALK forum.

To set a custom tone pattern:

- 1 In the system web interface, go to **Tone Settings > Tone Profile A** or **Tone Profile B**.
- 2 Choose a tone pattern. In its **Default** column, uncheck the box for its `TonePattern` parameter.
- 3 In the **Value** column for this `TonePattern` parameter, enter your new tone pattern.
- 4 Click **Submit**.
- 5 Click **Reboot** to complete your changes.

Tone Examples

These examples show the interpretation of a few common tone patterns:

Dial Tone Example

DIAL, "350-18,440-18"

A mixture of two frequency components generates the dial tone.

350 Hz at -18 dBm and 440 Hz at -18 dBm

The expiration time is infinite, and tone active time is infinite.

Busy Tone Example

BUSY, "480-18,620-18;10;(.5+.5)"

A mixture of two frequency components generates the busy tone.

480 Hz at -18 dBm and 620 Hz at -18 dBm

The expiration time is 10 seconds. It has only one cadence segment, which has tone active 0.5 second and tone inactive 0.5 second.

Prompt Tone Example

PROMPT, "480-16;10"

A single frequency component generates the prompt tone.

480 Hz at -16 dBm. The expiration time is 10 seconds. It has only one cadence segment, which has tone infinite active time.

SIT Tone Example

SIT_1, "985-16,1428-16,1777-16;20;(1/.380+0,2/.380+0,4/.380+0,0/0+4)"

A set of frequency components generates the special information tone (SIT).

- First frequency: 985 Hz at -16 dBm
- Second frequency: 1428 Hz at -16 dBm
- Third frequency: 1777 Hz at -16 dBm

The expiration time is 20 seconds. It has only one cadence segment, which includes four on-off sections. The segment has infinite repeating time:

- The first on-off section: generated by the first frequency component, and it has 0.38 tone second active time and 0 inactive time.
- The second on-off section: generated by the second frequency component, and it has 0.38 tone second active time and 0 inactive time.
- The third on-off section: generated by the third frequency component, and it has 0.38 tone second active time and 0 inactive time.
- The fourth on-off section: only generates silence, since you specified no frequency component. It has tone 0 second active time and 4 seconds inactive time.

Stutter Tone Example

```
STUTTER, "350-18,440-18;20;.2(.1+.1);()"
```

A mixture of two frequency components generates the stutter dial tone.

350 Hz at -18 dBm and 440 Hz at -18 dBm. The expiration time for the entire tone is exactly 20 seconds. It has two cadence segments.

- The first segment includes only one on-off section, on 0.1 second and off 0.1 second, and on-off repeats for 2 seconds.
- The second segment includes one on-off section, and has infinite repeating time and infinite tone active time, and plays until the entire tone duration has elapsed.

For more information on Tone Profile A & B and call waiting parameters, see the [VVX D230 Data Model](#).

Distinctive Ring Tones and Patterns

You can add `Alert-Info` to the SIP invite header to configure distinctive ringtones based on how you set up incoming call parameters. In a SIP-based distinctive ring, the `RingName` is matched against the `Alert-Info` of the form `Alert-Info: <http://127.0.0.1/ring-name>`, where `ring-name` is one of the preloaded ringtones.

If there's no `Alert-Info`, or if the specified `ring-name` doesn't match any of the ring patterns, the handset uses the ring tone configured in `X_DefaultRing` parameter under **SPn Service**.

Set Ring Tones and Patterns

You can set a distinctive ring tone and pattern for incoming calls on the lines on your handset. There are ten ring tones and patterns for each ring profile.

To set a custom ring pattern:

- 1 In the system web interface, go to **Ring Settings > Ring Profile A** or **Ring Profile B**.
- 2 Choose a **Call Waiting Tone X** or **Ring Pattern X**.
- 3 In the **Default** column, uncheck the box for one of the following parameter groupings:
 - `ToneName` and `TonePattern`

➤ RingName and RingType

- 4 In the **Value** column, enter your new ring pattern.
- 5 Click **Submit**.
- 6 Click **Reboot** to complete your changes.

Preloaded Ringtones

The handset can only play the following preloaded ringtones:

- Handset Default
- **Type 2** - Low Trill
- **Type 3** - Medium Trill
- **Type 4** - High Trill
- **Type 5** - Highest Trill
- **Type 6** - Beeble
- **Type 7** - Triplet
- Silent Ring

Group Paging

VVX D230 phones support 10 paging groups, group paging with UCS multicast group paging, and group paging auto answer.

Enable Group Paging

You can enable your phones to connect to a Polycom UCS group page. When you connect to the UCS group page, the assigned VVX D230 phone can send and receive audio on that page group.



Phones must use the same audio codec as the other phones in the UCS page group.

Procedure

- 1 In the system web interface, go to **Voice Services > Page Groups**.
 - a In the **Default** column, clear the check boxes for the `Polycast` and `PolycastGroup` parameters.
 - b In the **Value** column for `Polycast`, select the check box.
 - c In the **Value** column for `PolycastGroup`, select the UCS page group you want to join.
- 2 Select **Submit**.
- 3 Reboot your phone.

Enable Handset Group Page Auto Answer

You can configure handsets to automatically answer incoming group pages and intercom calls. You can configure the handset to auto answer up to 10 different page groups.

Procedure

- 1 In the system web interface, go to **DECT Wireless > Handset n > Calling Features** (where n is the handset you want to configure).
 - a In the **Default** column, clear the check box for the `JoinPageGroup` parameter for the page group you want to join.
 - b In the **Value** column for the `JoinPageGroup` parameter, select the check box.
- 2 Select **Submit**.
- 3 Reboot your phone.

Set the Page Group Interruption Priority

You can configure the priority settings to interrupt a call when receiving a page. This setting doesn't stop emergency pages from interrupting calls.

When calls are interrupted, the group page audio mixes with the call audio.

Procedure

- 1 In the system web interface, go to **DECT Wireless > Handset n > Calling Features** (where n is the handset you want to configure).
- 2 In the **Value** column for the `PgDoNotInterrupt` parameter, choose one of the following options:
 - **Never** - Allow pages to interrupt calls.
 - **During Active Call** - Ignore incoming pages during an active call.
 - **Always** - Ignore incoming pages.
- 3 Select **Submit**.
- 4 Reboot your phone.

Show the Call Forwarding Contact in the Diversion Header

The call server uses the Diversion field with a SIP header to track call history. You can configure the Diversion header to display who a forwarded call is from and the phone number that forwarded the call.

To show the call forwarding contact in the diversion header:

- 1 In the system web interface, go to **Voice Services > SPN Service > Calling Features**.
- 2 In the **Default** column, clear the check box for the `X_ShowDiversion` parameter.
- 3 Choose one of the following options:

- **Last** - shows the last person who forwarded the call.
 - **First** - shows the first person who forwarded the call.
 - **Off** - doesn't show the call forwarder.
- 4 Select **Submit**.
 - 5 Reboot your phone.

Network Settings

You can control how your D230 base station accesses the web and the network. Control features include:

- [Default DHCP Settings](#)
- [DNS NAPTR Support](#)
- [Enable Cisco Discovery Protocol \(CDP\)](#)

Default DHCP Settings

When you initialize a network connection to a configuration server, your D230 extracts DHCP Option 160 from a DHCP offer by default. Your D230 also prioritizes DHCP Option 160 ahead of other options in the `ConfigURL` parameter using the following parameters and macros:

- Option 160 is added to the **System Management > WAN Settings > DHCP Client Settings::ExtraOptions** parameter.
- The **System Management > Auto Provisioning > ITSP Provisioning::ConfigURL** parameter includes the `$DHCPOPT160/$MAC.xml;$DHCPOPT160/$DM.xml;$DHCPOPT160;tftp://$DHCPOPT66/$DM.xml;$DHCPOPT66/$DM.xml;$DHCPOPT66` macro string.

Don't reconfigure this default setting.

DNS NAPTR Support

This feature enables DNS Name Authority Pointer (NAPTR) lookup for SIP proxy servers or outbound proxies. Combining NAPTR with SRV records enables chaining multiple records. With NAPTR lookup, your system can discover:

- The hosts to access the SIP service for a given domain
- The SIP transport, preference, and order of each host
- The types of DNS records to use for each listed host (SRV or A record)

You can enable NAPTR for each ITSP Profile. If enabled, your system only attempts NAPTR lookup of the domain name specified in the `OutboundProxy` parameter (if configured). Otherwise, your system uses the `ProxyServer` parameter (on the corresponding **ITSP Profile x > SIP** web page).

If NAPTR records aren't available, your system doesn't fall back to perform regular DNS SRV or DNS A record lookup.

If a NAPTR record indicates to look up the host name as an SRV record, your system considers the host name to be complete and doesn't add a prefix when querying the DNS server for its SRV record, regardless of the settings of the `X_DnsSrv` and `X_DnsSrvAutoPrefix` parameters.

When more than one UDP, TCP, or TLS option is available and all are at the same order and preference, your system considers UDP the highest priority, then TCP, then TLS.

With NAPTR enabled, your system can fail over and fall back among UDP/TCP/TLS transports or change to a different transport based on the result of each NAPTR lookup, which renews at half of the TTL value from the DNS server.

This feature complies with RFC 2915.

Enable NAPTR Lookup

NAPTR lookup enables locating domains for mapping your system in the internet.

To enable NAPTR lookup:

- 1 In the system web interface, go to **Service Providers > ITSP Profile x > SIP** (where *x* is the ITSP Profile where you want to enable NAPTR lookup).
- 2 In the **Default** column, uncheck the box for the `X_DnsNAPTR` parameter.
- 3 In the **Value** column for the `X_DnsNAPTR` parameter, check the box to set this parameter to True.
- 4 Optionally, set the `X_ProxyServerRedundancy` parameter to True.
 - In the **Default** column of the `X_ProxyServerRedundancy` parameter, uncheck the box for this parameter.
 - In the **Value** column for the `X_ProxyServerRedundancy` parameter, check the box to set this parameter to True.
- 5 Click **Submit**. Reboot your system when you complete your changes.

Enable Cisco Discovery Protocol (CDP)

This feature enables your systems to automatically configure VLAN and other network parameters using the Cisco Discovery Protocol (CDP). CDP can coexist with LLDP-MED, but LLDP-MED always takes precedence.

To enable CDP discovery:

- 1 In the system web interface, go to **System Management > WAN Settings > Internet Settings**.
- 2 Set the `CDP` parameter to True.
- 3 Click **Submit**. Reboot your system when you complete your changes.

Call Features

You can configure call features in one of three ways:

- A system-level feature applies to all calls on the system, regardless which line a call is on. For example, call waiting is a system feature.
- A line-level feature applies only to calls on a specific line. For example, server-based Do Not Disturb (DND) and centralized conference are line-based features.
- Some features can have both a system feature version and a line feature version.

For example, you can provision Call Park as a system feature for all calls and as a line feature for each line for the SP services (SP1–SP8) and OBiTALK services.

For more information on call feature parameters, see the [VVX D230 Data Model](#).

Local Call Park

Local call park is independent of Service Provider-based call park services, and it allows users to park calls on a VVX D230 base station and retrieve calls from any handset registered to the base station. Local call park (if enabled) takes preference over Service Provider-based call park.

The D230 base station provides this feature without relying on the service provider's call park service. This feature provides 99 call parking slots (numbered 00 to 99), and a base station can hold up to 10 parked calls at a time.

Enable Local Call Park

You can configure local call park on the VVX D230 base station to enable users to park and retrieve calls locally.

To enable local call park:

- 1 In the system web interface, go to **DECT Wireless > System > Local Call Park**.
- 2 In the **Default** column, clear the check box for the `LocalCallPark` parameter.
- 3 In the **Value** column for the `LocalCallPark` parameter, select the check box to set this parameter to True.
- 4 Click **Submit**.
- 5 Reboot your system when you complete your changes.

When local call park is enabled, local call park status is also enabled and a new status page is shown on the system web interface at **Status – Parking Lot Status** that shows the list of parked calls.

Set the Call Park Pickup Prefix

After users park a call, they can use a retrieval code that includes a pickup prefix and the parking slot number to retrieve the call from the parking lot. For example, 7xx. The default pickup prefix is 7, but you can configure the prefix in the system web interface.

To enable local call park:

- 1 In the system web interface, go to **DECT Wireless > System > Local Call Park**.
- 2 In the **Default** column, clear the check box for the `PickupPrefix` parameter.
- 3 In the **Value** column for the `PickupPrefix` parameter, select a prefix between 2 and 8.
- 4 Click **Submit**.
- 5 Reboot your system when you complete your changes.

Enable Call Hold Transfer to Call Park

For shared lines, you can enable the system to automatically convert a call hold into a call park. When a user places a call on hold, the call is parked in an automatically selected parking lot instead of the normal call hold function. This enables the user to park a call without knowing where the call is parked.

To enable call hold transfer to call park:

- 1 In the system web interface, go to **DECT Wireless > System > Local Call Park** and verify that call park is enabled (`LocalCallPark` is set to True).
- 2 Go to **Voice Services > SPn Service > Share Line Features**, where *n* is any voice service configured for your base station.
- 3 In the **Default** column, clear the check box for `X_LocalShareHoldIsPark`.
- 4 In the **Value** column of `X_LocalShareHoldIsPark`, check the box to set this parameter to True.
- 5 Click **Submit**.
- 6 Reboot your system when you complete your changes.

View Local Call Park Status

Enabling local call park also enables local call park status, which provides a parking lot status page on the system web interface for your D230 base station. This page shows calls currently parked by handsets registered to your base station, if any.

To see local call park status:

- » In the system web interface, go to **Status > Parking Lot Status** to see calls parked by the handsets registered to your base station.

Enable Local Call Back

This feature enables your system to call you back after a given time when you park a call, preventing you from leaving a call on hold indefinitely.

You can configure the following Call Back options:

- `CallBackTimer` - The amount of time in seconds a call will sit in a parking slot before it is sent back to the phone that parked the call.
- `CallBackMaxRetry` - The number of attempts to return the call to the phone that parked it before the call is released. Set to 0 or leave blank for unlimited attempts.
- `CallBackRingTimeOut` - The amount of time in seconds between each call back attempt. If the parameter `CallBackMaxRetry` is set to 1, the `CallBackRingTimeOut` doesn't apply.

To enable local call back:

- 1 In the system web interface, go to **DECT Wireless > System > Local Call Park**.
- 2 In the **Default** column, clear the check box for the `LocalCallPark`, `CallBackTimer`, `CallBackMaxRetry`, and `CallBackRingTimeOut` parameters.
- 3 In the **Value** column for `LocalCallPark`, check the box to enable this parameter (set to True).
- 4 In the **Value** columns for the `CallBackTimer` and `CallBackRingTimeOut` parameters, enter a value in seconds for the parameters.
For example, if you set the value as 60 for both parameters, then parked calls will automatically call back after 60 seconds and the call will ring for 60 seconds before timing out.
- 5 In the **Value** column for `CallBackMaxRetry`, enter a value for the parameter.
- 6 Click **Submit**. Reboot your system when you complete your changes if this is the first time you've activated `LocalCallPark`.

Enable Network-Based Call Park

Network-based call park enables users to park calls to a monitored parking lot, and any users on the network can retrieve a call from the parking lot.

To enable network-based call park:

- 1 In the system web interface, go to **Service Providers > ITSP Profile *N* > SIP > Feature Configuration** (where *N* is the ITSP profile you want to configure).
 - a In the **Default** column, clear the check box for the `X_CallParkMethod`, `X_DirectedCallPickupMethod`, and `X_CallParkStatusMethod` parameters.
 - b In the **Value** column, select an option for the `X_CallParkMethod`, `X_DirectedCallPickupMethod`, and `X_CallParkStatusMethod` parameters.
- 2 Go to **Voice Services > SP*n* Services > Network Provided Services** (where *n* is the SP service you want to configure).
 - a In the **Default** column, clear the check boxes for the `CallPark`, `CallParkStatus`, and `CallParkExtensions` parameters.
 - b In the **Value** column, select the check box for `CallPark` and `CallParkStatus`.

- c In the **Value** column for `CallParkExtensions`, enter the park extensions you want to monitor, separated by a comma.
For example, 100, 101.
- 3 Select **Submit**.
- 4 Reboot your phone.

Enable Music on Hold

When enabled, this feature plays music to all callers currently on hold. The music is stored internally and isn't user-configurable.

To enable music on hold:

- 1 In the system web interface, go to **DECT Wireless > System > Local Call Park**.
- 2 In the **Default** column, clear the check boxes for the `LocalCallPark` and the `CallParkMusic` parameters.
- 3 In the **Value** columns for the `LocalCallPark` and the `CallParkMusic` parameters, check the boxes to enable these parameters (set to True).
- 4 Click **Submit**. Reboot your system when you complete your changes if this is the first time you've activated `LocalCallPark`.

Enable Generic Network Directory

This feature enables support for a remotely maintained network directory. All external enterprise directories are still available.

To enable a personal or network directory:

- 1 In the system web interface, go to **Voice Services > SPn Service > Network Directory Setup**, where *n* is any voice service configured for your base station.
- 2 In the **Default** column, clear the check boxes for the `DirectoryType` and `URL` parameters.
- 3 In the **Value** column of `DirectoryType`, choose a directory type.
 - For a local directory, choose `Personal`.
 - For a directory shared within your company, choose `Group Common` or `Enterprise Common`. The default for a BroadWorks-hosted directory is `Enterprise`.
- 4 In the **Value** column of `URL`, enter the URL for your personal or network directory.
 - For a directory on your D230 base station, enter the system's IP address.
 - For a directory shared within your company, enter a URL, or for a BroadWorks-hosted directory, leave this value blank.
- 5 Click **Submit**. Reboot your system when you complete your changes.
- 6 Go to **DECT Wireless > Handset n**, where *n* is any handset registered to your base station.
- 7 In the **Default** column, clear the check box for `DirectoryService`.

- 8 Select the SP n Service you just configured.

Using the default value of `Any` tells your base station to use the first directory it finds, which may cause unpredictable results if you configure more than one directory.

- 9 Click **Submit**. Reboot your system when you complete your changes.

Configure SRTP Crypto Suite

You can configure SRTP encryption to enhance the security of your calls. VVX D230 phones support the following crypto suites:

- AES_CM_128_HMAC_SHA1_32
- AES_CM_128_HMAC_SHA1_80
- AES_CM_192_HMAC_SHA1_32
- AES_CM_192_HMAC_SHA1_80
- AES_CM_256_HMAC_SHA1_32
- AES_CM_256_HMAC_SHA1_80
- AES_192_CM_HMAC_SHA1_32
- AES_192_CM_HMAC_SHA1_80
- AES_256_CM_HMAC_SHA1_32
- AES_256_CM_HMAC_SHA1_80

To configure SRTP crypto suite:

- 1 In the system web interface, go to **Voice Services > SP n Service > Calling Features** (where n is the SP service you want to configure).
 - a In the **Default** column, clear the check boxes for the `X_SRTP` and `X_SRTPCryptos` parameters.
 - b In the **Value** column for the `X_SRTP` parameter, select the check box.
 - c In the **Value** column for the `X_SRTPCryptos` parameter, enter the crypto suites you want to use, separated by a comma.
- 2 Select **Submit**.
- 3 Reboot your phone.

Conference Calls

A conference call is a conversation involving two or more remote parties. To start a conference, there must be at least two calls and with at least one of them in the **Connected** state and the other in the **Holding** state.

Your system supports two methods to conference multiple parties:

- Local mixing/bridging
- External conference bridge

Local Mixing or Bridging

After starting three-way conference calls, you can see the two remote parties in the **Connected** state.



The Opus codec doesn't support three-way calling with both legs using Opus.

External Conference Bridge

You can connect only SIP or SP calls with an external conference bridge. When using an external conference bridge, the conference bridge limits the conference size. Check with your conference service provider on the conference size limit.

Enable an External Conference Bridge

You can configure the conference bridge and enable it as follows.

To enable an external conference bridge:

- 1 On the **Voice Services > SPn Service > Calling Features** page, enter the user ID or (SIP) URL of the external conference bridge in the `X_ConferenceBridge` parameter.
- 2 On the **DECT Wireless – HandsetX – Calling Features** page, set the `UseExternalConferenceBridge` parameter to `True`.

X refers to the handset's number.

Note that only participants on the same SP service or using the same ITSP profile as the conference bridge can be referred to the bridge. For participants that are referable, your system keeps them in the conference using local mixing. They're then subject to the local mixing limit.

Add a Participant to the Conference Bridge

You can add participants to the conference bridge with the conference parameter.

To add a participant to the conference bridge:

- 1** From your handset, make a new call to the target number (or answer a new incoming call from another party, if applicable).

Your system automatically holds the call to the conference bridge.

- 2** Select **Option > Conference** when the called target answers.

The call to the conference bridge resumes while the new remote party is referred to the same conference bridge contact to be added to the conference bridge. You can add more participants until the conference reaches the specified limit.

Third-Party Servers

This section provides information on configuring D230 systems and features with third-party servers.

BroadSoft

You can configure D230 systems with BroadSoft server options.

BroadSoft AS-Feature-Event

The AS-Feature is a collection of network-provided features available on a BroadSoft application server. You can view and change the settings from the system web interface. These network-provided features are configured and executed in the context of a single SP service.

To view and change the network-provided features, you must enable the **Voice Services – SPn Service – Calling Features::X_ASFeatureEventSubscribe** option, then enable the individual network-provided features you want users to access from the handset.



The features themselves run entirely on the server. Feature settings are stored on the server. The handset displays settings values as stored on the server, not settings entered and submitted by the administrator or user, which the server may or may not accept.

The AS-Feature is based on the SIP subscribe/notify framework. You can set the `expires` value of the subscription dialog (initiated by the D230 per SP service with the feature enabled) using the **ITSP Profile X – SIP – Feature Configuration::X_ASFeatureEventSubscribeExpires** parameter. When a setting is changed, the server also updates the D230 system with a NOTIFY that specifies the latest settings of just the affected features.

You can access **Call Forward** and the **Do Not Disturb** network-provided features from the handset menu or softkey. You also can change any of the network-provided service settings from the system web interface of the base station.

For more information on AS-Feature Event parameters, see the [VVX D230 Data Model](#).

Configure BroadSoft AS-Feature

You can activate the BroadSoft AS-Feature set to access features available from your third-party server.

To activate the BroadSoft AS-Feature set:

- 1 In the system web interface, go to **Voice Services > SPn Service > Calling Features**.
- 2 Uncheck the box in the **Default** column for `X_ASFeatureEventSubscribe`.

- 3 Check the box in the **Value** column for `X_ASFeatureEventSubscribe` to enable this feature.
- 4 Click **Submit**. Reboot your system when you complete your changes.

Note that this setting configures BroadSoft AS-Feature on a per-line basis only.

Activating BroadSoft AS-Feature lets you use these network-provided services:

- Call Park
- Call Forward Always
- Call Forward Busy
- Call Forward No Answer
- Network Directory
- Do Not Disturb

Configure Call Forward All

The functionality provided by **Call Forward All** is similar to that of the **CallForwardUnconditional** function provided natively by the handset (per line). Poly recommends that you disable the native version when using the network-provided version to avoid ambiguity.

To configure the Call Forward All settings:

- 1 In the system web interface, go to **Voice Services > SPn Service > Network Provided Services**.
- 2 Uncheck the box in the **Default** column for `CallForwardAlways`.
- 3 Check the box in the **Value** column for `CallForwardAlways`.
- 4 Click **Submit**. Reboot your system when you complete your changes.

Note that you can specify the number to forward all incoming calls. These settings are submitted to and stored on the server.

Configure Call Forward Busy

You can activate call forward busy on your third-party provider.

To configure the Call Forward Busy settings:

- » Enable the **SPn Service > Network Provided Services::CallForwardBusy** option.

The functionality provided by this feature is similar to that of the **CallForwardOnBusy** feature that is available natively on the D230 system.

Configure Call Forward No Answer

You can activate call forward on no answer on your third-party provider.

To configure the Call Forward No Answer settings:

- » In the system web interface, enable the **SPn Service > Network Provided Services::CallForwardNoAnswer** option.

This feature is similar to the **CallForwardOnNoAnswer** that is available natively on the D230 system.

Configure Do Not Disturb

You can enable DOD on your third-party provider.

To view and change the Do Not Disturb settings:

- » In the system web interface, enable the **SPn Service > Network Provided Services::DoNotDisturb** option.

The functionality provided by this feature is similar to that of the **DoNotDisturb** that is available natively on the D230 system.

BroadSoft XSI Features

XSI features is a collection of features provided with a BroadSoft XSI application server. The D230 system makes XSI features available per SP/SIP service, so you can configure as many as eight independent sets of XSI services per system, one per SP service.

You can access some of the XSI features from the system by launching dedicated apps (such as Network Directories) via the handset menu.

BroadSoft XSI Feature Parameters

| Parameter Group | Parameter | Description |
|--------------------------------------|-------------------|--|
| ITSP Profile X – SIP | X_XsiServer | The XSI server hostname or IP address. The D230 system attempts to resolve the hostname as DNS A Record only. DNS SRV lookup isn't supported here. |
| ITSP Profile X – SIP | X_XsiServerPort | The server port. If not specified (or 0), the default port is used (80 for HTTP or 443 for HTTPS). |
| ITSP Profile X – SIP | X_XsiServerScheme | Must be HTTP or HTTPS. |
| SPn Service – SIP Credentials | X_XsiUserName | The user name to authenticate to the XSI server with. If not specified (blank), the D230 system forms the user name as: <code>{sip-userid}@{sip-domain}</code> where <code>{sip-userid}</code> is the SIP Account User ID that is used for SIP Registration on the same SP service, and <code>{sip-domain}</code> is the domain name used for SIP Registration on the same SP service. |
| SPn Service – SIP Credentials | X_XsiPassword | The password to authenticate to the XSI server with. If not specified (blank), the same password for SIP authentication on the same SP service is used. |

Network Directories

Network directories are directories hosted by a server somewhere in the network. With the BroadSoft BroadWorks platform, the D230 system supports the Enterprise Directory of a network. For more information on setting up and managing the directories on a BroadWorks server, refer to the [BroadSoft documentation](#).

Enable Network Directory Access on the Handset

You can enable network directory access on the handset.

To enable network directory access on the handset:

- 1 In the system web interface, go to **SPn Service > Network Provided Services**.
- 2 Uncheck the box in the **Default** column for `Directory`.
- 3 Check the box in the **Value** column for `Directory`.
- 4 Go to **SPn Service > Network Directory Setup**.
- 5 Uncheck the box in the **Default** column for `DirectoryType`.
- 6 In the **Value** column, choose a directory type.
- 7 Click **Submit**. Reboot your system when you complete your changes.

Note that this setting configures the network directory feature on a per-line basis only.

Access a Network Directory From the Handset

Once you enable network directory access on the handset, you can access a network directory from the handset.

To access a network directory from the handset:

- 1 In the system web interface, enable network directory access for the service provider.
- 2 If you want to assign a directory service to a particular SPn line, go to **DECT Wireless > Handsetn > Settings**.
- 3 Uncheck the boxes in the **Default** column for `PrimaryLine` and `DirectoryService`.
- 4 In the **Value** columns for `PrimaryLine` and `DirectoryService`, choose a service.
- 5 Click **Submit**. Reboot your system when you complete your changes.
- 6 On the handset, click **Directories** from the Main menu of the handset UI.

Search or Download a Generic Network Directory

Your VVX D230 can search or download a generic network directory.

To search for a generic network directory:

- 1 In the system web interface, go to **Voice Services > SPn Service > Network Directory Setup > Directory**.

- 2 If checked, uncheck the boxes in the **Default** column for `URL` and `DirectoryType`.
- 3 Do one of the following:
 - Enter the URL for the directory.
 - In the `DirectoryType` parameter, choose the value for your directory.
- 4 Click **Submit**.
Your directory is selected and downloaded.

Call Routing

Call routing is the process your system uses to set up a call bridge or an endpoint call based on information like the trunk on which the call originates, the caller's number, and the called number.

From your system's perspective, calls originated from the trunk side are considered inbound calls, while calls originated from an endpoint are outbound calls.

Call routing rule configuration relies heavily on digit maps. If you aren't familiar with how digit maps work, see the *VVX D230 DECT IP Phone Technical Reference Guide* on the [Poly Online Support Center](#).

Inbound Call Route Configuration

Every trunk has a corresponding `InboundCallRoute` parameter in your system configuration. It's a comma-separated list of rules where each rule is also surrounded by a pair of curly braces `{ }`. No extra white space is allowed. These rules tell your D230 how to handle an inbound call, such as sending it to a handset and ringing any attached phones.

By default, the `X_InboundCallRoute` parameter specifies the handset on which an incoming call rings.

Edit the Inbound Call Route Configuration

You can edit the inbound call route configuration to specify a different service (trunk) for each handset.

To edit the incoming call route configuration:

- 1 Go to **Voice Services > SPn Service**.
- 2 In the **Default** column for the `X_InboundCallRoute` parameter, clear the check box.
- 3 In the **Value** column for the `X_InboundCallRoute` column, enter the device that uses this call route. Recommended values are `dt1` (handset 1) for SP1, `dt2` (handset 2) for SP2, and so forth.

If you enter the same `dt.n` value for more than one handset, then all handsets with that number ring when an incoming call occurs.

Outbound Call Route Configuration

Every endpoint has an `OutboundCallRoute` parameter in its system configuration. It tells your system where to send the call when the endpoint attempts to make a call. Endpoints can call each other or an outside number using one of the trunks. The `OutboundCallRoute` syntaxes are almost identical to those of the `InboundCallRoute`. The differences are mainly in the implied value when an optional field is omitted, no caller objects, and one and only one terminal object per terminal-list in an `OutboundCallRoute`. Forking isn't supported when routing outbound calls.

Edit the Outbound Call Route Configuration

You can edit the outbound call route configuration to limit the numbers each handset can dial.

To edit the outbound call route configuration:

- 1 Go to ***DECT Wireless > Handsetn***.
- 2 In the **Default** column, clear the check box for the parameters you want to edit.
- 3 In the **Value** columns for these parameters, enter your changes.

Poly recommends keeping the default parameters. For more information on editing outbound call route configuration, see the *VVX D230 DECT IP Phone Technical Reference Guide* on the [Poly Online Support Center](#).

Multiline Setup

After you configure the primary line on the VVX D230 DECT IP Phone, you can configure additional Service Provider and OBiTALK lines on registered handsets.

You can assign handsets with the following types of lines:

- Inbound service provider lines
- Outbound service provider lines
- OBiTALK (peer-to-peer) lines

You can assign two or more inbound or outbound lines and an OBiTALK line to up to ten handsets, assign a primary line for each handset, and label each handset.

Assign Inbound Call Lines

You can assign each handset with up to eight designated service provider lines for receiving incoming calls and assign which handsets can receive calls from OBiTALK (peer-to-peer) lines.

To assign inbound call lines:

- 1 In the system web interface, go to ***DECT Wireless > Multiline Setup***.
- 2 Select the check boxes for the handsets that will receive incoming calls for each service provider line and from OBiTALK devices.

Assign Outbound Call Lines

You can assign each handset with up to eight designated service provider lines for placing outgoing calls and assign which handsets can place calls to OBiTALK (peer-to-peer) lines.

To assign outbound call lines:

- 1 In the system web interface, go to ***DECT Wireless > Multiline Setup***.

- 2 Select the check boxes for the service provider (SP) lines and you want to assign to handsets to place outgoing calls.
- 3 Select a **Primary Line** for each handset.
- 4 (Optional) Assign a **Handset Name** to each handset.

Troubleshooting

Refer to the following topics to help you diagnose and fix issues with your system.

Back Up and Restore Your Base Station Configuration

You can back up your base station configuration, then restore it to any base station.

When you back up the current configuration of your base station, the backup file is stored in XML format at a user-specified location. The default storage location is your PC's **Downloads** folder and the default name of the file is `backupxxxxxxxxxxxx.xml`, where `xxxxxxxxxxxx` represents the MAC address of your base station.

When backing up your base station's configuration, select any of the following options before clicking **Backup**. Note that passwords aren't backed up.

Backup Options

| Option | Description | Default Setting |
|-----------------------------|---|-----------------|
| Incl. Running Status | If checked, the backup file includes the values of all status parameters. Otherwise, status parameters are excluded from the backup. | No |
| Incl. Default Value | If checked, the default values of parameters are included in the backup file. Otherwise, the backup excludes default values. | No |
| Use OBi Version | If not checked, the backup file uses XML tags that are compliant with the TR-104 standard. Otherwise, the backup file is stored in an OBi proprietary format where the XML tags aren't compliant with TR-104, but the file size is smaller and the file is more readable. | No |

When your file browser window opens, you can change the file name and choose the location to save the backup file.



Different web browsers may handle this differently. If the security settings of your web browser block this operation, you should change the security settings temporarily to allow this operation to complete.

Back Up Your Base Station Configuration

You can back up your base station's configuration to restore it later, or copy it to another base station.

To back up your base station configuration:

- 1 In the system web interface, go to **System Management > Device Update**.
- 2 In **Backup Configuration**, choose your backup options.
- 3 Click **Backup** to back up your base station configuration.
- 4 Click **Save**.



All passwords and PINs are excluded from the backup file. Hence, they aren't available to restore. Call history is excluded from the backup, but can be saved as an XML-formatted file separately from the **Call History** web page.

Restore Your Base Station Configuration

You can restore your previously backed up base station's configuration. This procedure assumes you have already backed up your base station configuration.

To restore up your base station configuration:

- 1 In the system web interface, go to **System Management > Device Update**.
- 2 In **Restore Configuration**, choose a backup configuration file and click **Open**.
- 3 Click **Restore**. Your system restarts.

Share Your Base Station Configuration

You can save and then share your base station configuration with other base stations.

To share your base station configuration:

- 1 In the system web interface, go to **System Management > Device Update**.
- 2 In the **Backup Configuration** section, check the boxes for the parameters you want to share.
 - Check **Incl. Running Status** to back up parameters with values that include running counts.
 - Check **Incl. Default Value** to include parameters set to their default value.
 - Check **Use OBi Version** to use the abbreviated OBi-style parameter names.
- 3 Click **Backup** to save your configuration file. Its default location is the **Downloads** folder on your PC.
- 4 Copy the backup configuration file to a location that is visible from the PC you will use to share the configuration.
- 5 In the system web interface for that base station, go to **System Management > Device Update**.
- 6 In the **Restore Configuration** section, choose that file and click **Restore**.

Firmware Update

You can update the firmware for your base station from the native web page. The firmware file must be stored locally on a computer that you can access with a web browser.

To update the D230 base station firmware:

- 1 Select the **System Management > Device Update** menu on the side panel of the web page.
- 2 Click the **Browse** button in the **Firmware Update** section of the page. In a file browser window, select the firmware file.
- 3 Click the **Update** button to start the upgrade process.

The process takes about 30 seconds to complete.



Don't disconnect the power from your base station during this procedure. If the new firmware upgrades successfully, your base station reboots automatically to start running the new firmware. Otherwise, the web page shows an error message explaining why the upgrade failed.

Possible Error Messages on Firmware Update Failure

The following table lists the possible error messages encountered when a firmware upgrade fails.

Error Messages for Firmware Update Failure

| Error Message | Description | Suggested Solution |
|--|--|--|
| Firmware Package Checksum Error | A corrupted firmware package file was used for the update. | Check the file and / or redownload the firmware package and try again. |
| System Is Busy | Your base station is busy because one of the services in an active call or system provisioning is in progress. | Try to update again later. |
| Firmware Is Not Modified | Your base station is already running the same firmware as the one selected for update. | No need to upgrade. |

Reboot Reason Codes

The product information status shows some basic product information, as well as the system up-time with the last reboot reason code in parentheses. The reboot reason codes are defined as follows.

Reboot Reason Codes

| Reason Code | Description |
|-------------|---|
| 0 | Reboot on power cycle. |
| 1 | Operating system reboot. |
| 2 | Forward upgrade. |
| 3 | Reboot after new profile invoked. |
| 4 | Reboot after parameter value change or firmware has changed and invoked via system web interface. |
| 5 | Reboot after factory reset using your system hardware PIN. |
| 6 | New profile invoked AND profile URL changed. |

Reboot Reason Codes (continued)

| Reason Code | Description |
|-------------|---|
| 7 | Reboot from SIP Notify (Reserved). |
| 8 | Reboot from telephone port (IVR). |
| 9 | Reboot from webpage — no change in parameter values or firmware. |
| 10 | Reboot during OBiTALK signup. |
| 12 | Reboot after DHCP server offers IP, GW-IP, and/or netmask different from what your system is currently using. |
| 13 | Reboot on data networking link re-establishment. |
| 18 | Reboot on WAN IP address change. |
| 19 | Reboot on LAN IP address change. |

Call History

The Call History page shows the last 200 calls. Detailed call information is available, including the terminals involved, the name (if available) of the peer endpoints making the call and the direction / path the call took, and the time events took place.

Save the Call History

You can save the call history for a D230 handset from the web interface.

To save the call history:

- 1 In the web interface, go to **Status > Call History**.
- 2 Click the **Save All** button.

Your D230 saves the call history to the `callhistory.xml` file in your Downloads folder.

Erase the Call History

You can erase the call history for a D230 handset from the web interface.

To erase the call history:

- 1 In the web interface, go to **Status > Call History**.
- 2 Click the **Remove All** button.

Your D230 permanently erases the call history.

Remove Calls From Parking Lot Status List

You can end parked calls using the Parking Lot Status list in the web interface.

To remove calls from the Parking Lot Status list:

- 1 In the web interface, go to **Status > Call History**.
- 2 In the **Remove** column, check the box for the call you want to remove.
- 3 Click the **Remove** button.
Your D230 ends this call and removes it from the Parking Lot Status list.

Extract PCAP Capture Result

You can enable Packet Capture (PCAP) to see network packet traffic.

If PCAP is enabled on your base station, click the **Extract** button to extract the PCAP capture results. This saves a file named `trace.pcap` to your PC. The default save location is your downloads folder, unless otherwise specified.

Before extracting PCAP capture data, set the `Enable` parameter to `False` to prevent capturing extra data that could corrupt your file.

To enable PCAP:

- 1 In the web interface, go to **System Management > Device Admin > Remote PCAP Server**.
- 2 In the **Default** column, uncheck the box for the `Enable` parameter.
- 3 In the **Value** column of the `Enable` parameter, check the box to set this parameter to `True`.
- 4 Click **Submit**. No reboot is required.

To capture packets using PCAP:

- 1 In the web interface, go to **System Management > Device Admin > Packet Capture**.
- 2 In the **Default** column, uncheck the box for the `On` parameter.
- 3 In the **Value** column of the `On` parameter, check the box to set this parameter to `True`.
- 4 If desired, change the **Storage** setting between `Internal Storage` (the default) and `OBiTalk Designated`.
- 5 Click **Submit**. No reboot is required.
- 6 When you are ready to extract the captured packets, go to **System Management > Device Admin > Packet Capture**.
- 7 In the **Value** column of the `On` parameter, uncheck the box to set this parameter to `False`.
- 8 Go to **System Management > Device Update > PCAP Capture Result**.
- 9 Click **Extract**. You can specify a location to save your packet file

System Logs

You can capture system logs to help troubleshoot your D230 system.

To capture syslog messages, you need to run a syslog server application at an IPv4 address that is reachable from your D230 system.

Activate Syslog Messaging

You can enable your D230 system to send syslog messages for troubleshooting.

To activate syslog messaging:

- 1 In the system web interface, go to **System Management > Device Admin > Syslog**.
- 2 Enter the URL for your syslog server in `Server` parameter.
- 3 Set the `Port` parameter to 514.
- 4 Set the level parameters for the reporting levels you require.

Include Detailed SIP Messages in Syslog Messaging

You can include detailed SIP messages in your D230 syslog messages.

To include detailed SIP messages on an SP service in the syslog:

- 1 Activate syslog messaging.
- 2 Go to **Voice Services > SP n Service > Debug Options** for each service you want to report syslog messages.
- 3 Set the `X_SipDebugOption` parameter for the reporting level you require.
- 4 In the `X_SipDebugExclusion` parameter, enter a list of SIP methods (requests and responses) to exclude from the log.

For troubleshooting a call flow, you can exclude methods such as OPTIONS that are used for keep-alive purpose in most cases.

SP n Service Status Messages

The SP n Service Status ($n = 1-8$) values show the current state of the service with regard to its configuration (or not), and if configured, its registration status. If a problem exists with the registration or authentication of your system with a prescribed service, a **SIP 4xx** error message displays here. You can use this information for troubleshooting issues with SIP-based services.

To view Service Status messages:

- » In the web interface, go to **Status > System Status > SP n Service Status**.

The `Status` parameter shows the status for this service, including error messages, if any.

SPn Service Status Error Messages

The following table lists some of the SPn Service Status error messages encountered when a firmware upgrade fails.

SPn Service Status Error Messages

| Error Message | Description |
|---------------------------------------|--|
| 400 Bad Request | The server couldn't understand the request. |
| 401 Unauthorized | The request needs to perform authentication. |
| 402 Payment Required | Indicates that payment is required for further processing of request. |
| 403 Forbidden | Sent when the server understands the request, found the request to be formulated correctly, but won't service the request. |
| 404 Not Found | The server hasn't found the SIP URI indicated by the user. |
| 405 Method Not Allowed | The request contains a list of methods that aren't allowed. |
| 406 Not Acceptable | The request can't be processed due to a requirement in the request message. |
| 407 Proxy Authentication Required | Indicates that the UAC first has to authenticate itself with the proxy before the request can be processed. |
| 408 Request Timeout | The specified time period in the Expires header field of INVITE request has passed. |
| 423 Interval Too Brief | Returned by a registrar that is rejecting a registration request because the requested expiration time on one or more Contacts is too brief. |
| 480 Temporarily Unavailable | Indicates that the request has reached the correct destination, but the called party isn't available for some reason. |
| 481 Dialog/Transaction Does Not Exist | Indicates that a response referencing an existing call or transaction has been received for which the server has no record or state information. |
| 483 Too Many Hops | Indicates that the request has been forwarded the maximum number of times as set by the Max-Forwards header. |
| 486 Busy Here | Indicates that the user agent is busy and can't accept the call. |
| 487 Request Terminated | Sent by a User Agent that has received a CANCEL request for a pending INVITE request. |

Factory Resetting Your System

You can reset all D230 configuration parameters to factory default values.

Note that these processes can't be reversed. You'll need to reregister your base station with your service provider and reregister your handsets with your base station.

Factory Reset Your D230 Handset

You can reset your D230 handset to factory default values from the handset's local interface.

To factory reset your handset:

- 1 On the handset, go to **Settings**.
- 2 Select **Factory Reset**.
- 3 Press **OK**.

After your handset restarts, reregister it with your base station.

Factory Reset Your D230 Base Station

You can reset your D230 base station to factory default values in the system web interface. Call history and statistical information is removed at the same time. Resetting the base station configuration should be used with extreme caution as the operation cannot be undone.

To factory reset your D230 system:

- 1 In the system web interface, go to **System Management > Device Update > Reset Configuration**.
Optionally, back up your base station.
- 2 Select **Reset**.
- 3 After your base station restarts, restore its configuration.
re-register it with your service provider and re-register your handsets.