Digium Phone User Guide

Digium Phone firmware version 1.0

Contents

Overview

This guide provides information about the setup and use of Digium Phones when a Digium Configuration Server is not being used. Below is an overview of this process.

See the Digium website for information about using Digium Phones with Switchvox or the Digium Phone Module for Asterisk (DPMA).

1. **Get On the Network**

   Automatic. Phone uses DHCP and LLDP-MED to get IP address and VLAN membership information. If successful, it attempts to find a configuration file.

   Manual. If not successful, enter the information as described in Getting the Phone Network and VLAN Information on page 7.

2. **Configure the Phone (two choices)**

   Web UI tool to enter all of the configuration information as described in Web User Interface Settings on page 11.

   Create XML configuration file and make it available to the phone as described on Getting the Phone Configuration on page 8.

3. **Get Acquainted with Phone Apps & Calling Features**

   Phone Apps, page 16.
   - **Contacts** are used for rapid dialing, and for finding detailed information about someone in your list of contacts.
   - **Status** indicates Do Not Disturb (DND) or Available.
   - **Msg** button calls the voicemail system as indicated in your phone configuration.

- **Call Log** displays your call activity for received, dialed, and missed calls.
- **Forward Calls** forwards all of your incoming calls to another number.

Calling Features,

- **Dialing Calls**
- **Receiving Calls**
- **Redial**
- **Hold**
- **Transfer**
- **Conference (3-way Calls)**

1 *Network & System Tools*

As soon as your Digium Phone powers up, its main display shows the Digium logo and indicates that it is initializing, loading necessary information, and starting the phone. By default, the phone uses the dynamic protocols DHCP and LLDP-MED to attempt to get its IP address and VLAN membership information. If successful, the phone then attempts to find a configuration file.

The following sections describe what to do if your phone cannot get on the network and needs to be configured.

Getting the Phone Network and VLAN Information

If DHCP does not assign the phone an IP address, you can press the **Settings** softkey to specify network and VLAN information, or press the **Retry** softkey.

Network Settings
- **DHCP** is selected (highlighted) by default.
- To enter the network information manually, press the **Change** softkey. This changes the protocol from DHCP to **Static**, which requires you specify four-part network addresses for the following:
  - Static IP
  - Gateway
  - Netmask
  - Primary DNS
  - Secondary DNS (optional)
- When ready, press **Save**.

  NOTE: The **Normal** softkey lets you switch between Numeric or IP keypad characters. The **Delete** softkey lets you delete a character, and the **Cancel** softkey redisplays the Phone Setup Options.

VLAN Settings
- The Discovery Mode **LLDP** is selected (highlighted) by default. If the phone does not get a response from LLDP for LLDP-MED voice endpoint, it will assume there is no VLAN. (VLAN information cannot be obtained via DHCP.)
- If you wish to enter the VLAN information manually, press the **Next** softkey, which changes the Discovery Mode to **Manual**. Then enter a VLAN ID and a VLAN QOS value in the text boxes.
  - **VLAN ID** is a value between 1 and 4095.
  - **VLAN QoS** is a value between 0 and 7.
- The VLAN configuration-information attributes are

  lldp-med.policy.vlan.vid

  lldp-med.policy.priority
- If you do not want the phone to attempt to use LLDP and you do not want the phone to use a specific VLAN ID and QoS number, press **Next** to change the Discovery Mode to **None**.
- When finished, press the **Submit** softkey.

  NOTE: The **Back** softkey redisplays the Phone Setup Options.

Getting the Phone Configuration

The phone can be configured using either an XML-formatted configuration file, or by defining configuration information using the phone's Web UI Tool. The following sections describe each option.

> **NOTE**: If you do not want to manage your full phone configuration, you can manually enter the basic information for your SIP accounts using the **SIP Accounts** option.

If you are going to create your own XML configuration file, see https://wiki.asterisk.org/wiki/display/DIGIUM/XML+Configuration for a description of the content and XML format.

The following are the possible results of your phone's attempt to find a configuration source:

- It finds more than one source for a configuration file and displays them in a list. It prompts you to select the source you want.
- It finds only one source for a configuration file. It tries to obtain that configuration after 5 seconds.
- It finds no source for a configuration file and indicates that in a message.

> **NOTE**: The option **Digium Configuration Server** applies to only users using Digium Switchvox or DPMA.

Option 66

If you are creating your own configuration file and DHCP returns option 66 with a URL, the file location is found in this order:

        `<URL>lowercase_mac.cfg`
        `<URL>UPPERCASE_mac.cfg`
        `<URL>000000000000.cfg`
        `<URL>`

The following is an example for the URL 10.10.8.237 and the phone MAC 00-19-15-9C-06-46:.

        http://10.10.8.237/0019159c0646.cfg
        http://10.10.8.237/0019159C0646.cfg
        http://10.10.8.237/000000000000.cfg
        http://10.10.8.237

The phone uses Wget to make the request to the URL indicated by option 66, so the URL can contain username, password, and a port number if necessary.

If a configuration file can be fetched, the phone saves the file location. If the phone later restarts and does not get a response from option 66, it will use the previously saved file location to try and obtain a configuration file.

Fetch Configuration File From URL

If you are creating your own configuration file, but not using option 66, you may enter a location for the configuration file by selecting **Fetch Configuration File from URL.**

Fill in the following fields for this option:

* Select the **Protocol** you wish to use to fetch the file.
  Choices are **http**, **https**, **ftp**, **ftps.**
* Enter the four-part **Server** address.
* Enter the **Port** number (optional).
* Enter the **Path**.
* Enter the **Username** (optional).
* Enter the **Password** (optional).

Click **Go**, or click **Cancel** to quit and return to the Phone Setup/Configuration Options.

If a configuration file can be fetched, the phone saves the file location.

Web UI Tool

If you are not creating your own configuration file, you can use the Web UI tool to enter all of the configuration information. This is described in Web User Interface Settings on page 11.

Resetting, Reconfiguring, or Restarting

Reset to Factory Defaults

To clear all configuration information in the phone and start over, select **Reset to Factory Defaults** (option 7) from the Phone Settings/Configuration Options.

> **CAUTION**: This removes all existing accounts and contacts as well as configuration information.

Reconfigure

Click **Reconfigure** (option 1 of Advanced in the Main Menu). The phone asks you to confirm the reconfigure request. Click Yes to begin the operation.

> **NOTE**: Reconfigure does not remove the current configuration until the new configuration is obtained.

Restart

Press the **Restart** softkey to restart the phone using the current configuration.The phone asks you to confirm the restart.

Tech Support

The first three options under the Tech Support setting (option 6 from the Phone Settings/Configuration Options page) are used only under Digium Technical Support direction.

> **IMPORTANT**: Do not use them unless it is at the request of Digium Technical Support.

However, the Network Utilities option is available to give you quick access to the following common network diagnosis tools:

Ping. Tests the reachability of a host on the Internet.

Traceroute. Displays the route (path) and measures transit delays of packets across the network.

NSlookup. Queries the domain name system to obtain the domain name or IP address mapping or for any other specific DNS record.

List mDNS Services. Lists the services being advertised via mDNS that the phone can see on the network.

2 *Web User Interface Settings*

The Digium Phone web user interface gives you a means of setting your phone configuration options from a web browser. To get to the Phone's web UI, go to:

> http://*phone-ip*
> Username: admin
> Password: 789

> **NOTE**: To find your phone's IP address, press the **More...** softkey, then the **Menu** softkey and select **About**. This displays the phone's model number, firmware version, MAC address, and IP address. To find the IP address when the phone has no configuration, press the **Settings** softkey and select **Network Settings**.

The web UI main page includes tabs that display pages for these items: Lines, General, Preferences, Contacts, Networks, Logging, and Ringtones.

> **IMPORTANT**: When entering information or making changes, anytime you press **Submit Phone Settings** it saves all changes across all tabs.

Lines Tab

To define the Digium Phone's Line keys (the SIP accounts), click the **Lines** tab. This displays the Lines page with tabs for Lines 1-6,depending on the model of your Digium Phone.

All lines have the following options. For each line, enter or select information as indicated:

Line Status   If a line is not enabled, it is not available to be used on your phone. In other words, you will not receive calls.

Enable this Line—YES or NO. If enabled, this line will be displayed on your phone's line keys, otherwise its settings will be preserved and it will not appear on your phone.

> **NOTE**: Line 1 is permanently enabled. This is the main extension for your phone, and you cannot disable it.

General
- **User ID / Extension**
- **Authorization Name**—By default this is the same as your User ID / Extension. Leave this blank unless instructed by your provider.
- **Line Label on Phone**
- **Caller ID Name**
- **Digitmap**— digitmap defines phone dialing behavior.[1]
- **Register**—NO or YES
- **Password**
- **Voicemail Extension** or **SIP URI.** Numeric Extension or URI formatted sip:user@host

Host
- **IP Address or Hostname**
- **Port**
- **Transport**—UDP or TCP
- **Seconds until Re-Registration**
- **Seconds until Retry on Failure**

General Tab

Enter the following general setting information as indicated:

Settings Password Protection
- Enter the **Admin Password**. The program informs you of the quality of the password—too short, weak, strong, etc.
- Enter the password again for confirmation.

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1. Digitmap is the setting that describes different patterns of numbers. When a number matches a pattern, the number is sent to Asterisk to place the call. The pattern may include a timer at the end. If no numbers are entered before the time expires, the number matching the pattern will be sent. If additional numbers are entered before the time elapses, the pattern no longer matches.

Time
- Select **Timezone / Location** from dropdown.
- Enter **NTP Server**
- Enter **Seconds until NTP Resync**

SIP
- Select either **Accept all calls from any host** or **SIP Account Hosts.** If you choose SIP account hosts, the phone will only accept calls from servers on which the phone has registered accounts.
- Enter **Local SIP Port**

Firmware Updates
- Displays the Current Firmware Version: in the following format: 1_0_0_44308
- Click **Apply Firmware** to apply a different version to your phone.

Advanced: Audio Codecs
- Click to display list.
- Use the hand icon to reorder the list.
- Use the delete icon to remove a codec.
- Click rotary icon for a codec o view/edit it.

Preferences Tab

The following preferences can be set:

Idle Screen
- **Idle Screen Image**—the current image is displayed, and you have the option of uploading a different image.
- **Display Missed Calls Notification**—NO or YES

Display
- Adjust **Brightness** by moving the marker on the sliding scale.
- Adjust **Contrast** by moving the marker on the sliding scale.
- Select **Backlight Dimming**—NO or YES
- If dimming, enter the **Seconds until Backlight Dim**
- If dimming, adjust the **Backlight Dim Level.** It cannot be greater than brightness

Sounds
- Select the **Default Ringtone** from the dropdown.
- Adjust the following volumes by moving the marker on the sliding scale.
  - **Ringer Volume**
  - **Speaker Volume**

- •**Handset Volume**
- •**Headset Volume**
- Select **Reset Volume Every Call**—NO or YES

Answering Calls

- **Headset Answer**—NO or YES. If this is **YES**, when you press the **Answer** sofkey during an incoming call, the call is answered on the headset, not the speaker.

Contacts Tab

- Select **Enable Contacts on Main Line Keys**—NO or YES. If enabled, your unregistered line keys will be used as Rapid Dial Keys for contacts.

Network Tab

Network Tab settings are the same as described in Chapter 1. See

Logging Tab

Logging Tab is a Technical Support tool; it does not need changing unless required for support.

Log Level

- Select the **Log Level** from the dropdown: **Error, Warning, Information, Debug.**

Enable Network Logging (syslog)

- Select NO or YES.
- If **YES**, enter
  - •**IP Address or Hostname**
  - •**Port**

Ringtones Tab

Select this tab to display the Ringtones page. This page lists the already-uploaded ringtones, including the preloaded tones, and tells you how much space you have available for adding more ringtones.

To add a new ringtone, do the following:

- Click the **Upload Ringtone** button.
- Enter the **Ringtone File** name. It must be a WAV file.
- Enter the **Name** you are calling the ringtone on your phone.
- Click the **Upload Ringtone** button.

Ringtone List

The list of ringtones includes each ringtone's Name, File Size, Type, and Action options: Play, Edit, and Delete. The following tones are preloaded; they cannot be edited or deleted:

- Alarm
- Chimes
- Digium
- Guitar Strum
- Jingle
- Office 2
- Office
- Rotary Phone
- Steel Drum
- Techno
- Theme
- Tweedle
- Twinkle
- Vibe

3 *Phone Apps & Calling*

Phone Apps

Your Digium Phone has several built-in applications. The following sections describe them.

Contacts

Contacts are used for rapid dialing, and for finding detailed information about someone in your list of contacts.

Press the **Contacts** softkey to view your contacts list.

To see the Detail page for a contact, press the **Show** softkey in a list of contacts. Details include the person's Status.

Your contacts can also define your unused Line Keys and Rapid Dial Keys.

Status

You can toggle between Do Not Disturb (DND) and Available. DND sends a SIP response 486, which indicates you are busy.

Press the **Status** softkey to change your status.

Voicemail

The **Msg** button calls the voicemail system as indicated in your phone configuration.

Call Log

This log displays your call activity for received, dialed, and missed calls.

Press the **Call Log** softkey to display your log. You can dial from the Call Log, see the details of the call, and save the caller as a Contact.

Forward Calls

To forward all of your incoming calls to another number, use the Forward Calls app.

From the idle screen: press the **More**... softkey, then press **Menu**. Select **Applications**, then **Forward Calls**.

The main display window now displays a text box for you to enter a forwarding number. Enter the number, or press the **Contact** softkey to select one of your contacts. Then press the **Set** soft key.

To turn off forwarding, return to Forward Calls and press the **Off** softkey.

Calling

The following are the basic calling features of the Digium Phone:

Dialing Calls

Pick up the handset, or press a line key and dial a number. Or, dial a number and press the **Dial** softkey.

You can also use Contacts or Call Log to find the number you want, then press the **Dial** softkey.

Receiving Calls

Pick up the handset, or press a softkey. **Ignore** makes the call stop ringing but uses your Call Rules. **Transfer** begins the Transfer process (see below).

During a call, you can answer another incoming call. Press the blinking line key to answer and put the active call on hold. Or, continue with your active call, press the down direction key to highlight the new call, and press a softkey.

Redial

Press the **Redial** button to redial the last call you made. (If you have multiple lines, Redial automatically uses the correct line.)

Hold

During a call, press **Hold**. The line key flashes red. To resume that call, press either the flashing line key or the **Resume** softkey. If you have multiple calls on hold, and you want to resume one of the calls, highlight that call in your call list and press its **Resume** softkey.

Transfer

ASSISTED–During a call, press the **Transfer** button. Enter a number or press the **Contacts** softkey to find a number. Press the **Dial** softkey. When someone answers, inform them of the call to be transferred. Press the **Transfer** softkey, and the transfer is completed.•

UNASSISTED (blind)–During a call, press the **Transfer** button. Enter a number or press the **Contacts** softkey to find a number. Press the **Transfer** softkey, and the transfer is completed.

Conference (3-way Calls)

During a call, press either the **Conf** button or **Conference** softkey. Make a call, or **Resume** an existing call. Press **Conference** again to connect all participants. To end the Conference and put both calls on Hold, press the **Split** softkey on either call.