

# Release Notes for SPA9000 Voice System Firmware Version 6.1

## September 2008

These Release Notes describe the new features and enhancements in the SPA9000 Voice System firmware release for SPA9000, SPA400, SPA8000 WRP400, SPA9x2. The following table lists the firmware versions that are included in this release.

Product	Firmware Version
SPA9000	6.1.5
SPA400	1.1.2.2
SPA922/942	6.1.3
SPA962	6.1.3
WRP400	1.00.06
SPA8000	6.1.3

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## New Features

The major features in this release are summarized in the following table.

Feature	SPA9000	SPA400	SPA922	SPA942	SPA962	SPA8000	WRP400
Support for 16 users without additional licensing	X						
Simultaneous hunt order for hunt groups	X						
New web user interface access rights	X						
FXO port selection for outbound calls	X	X					
Disconnect Tone Configuration		X					
New default settings for easier installation and configuration		X					
SRTP enhancements: RFC4568			X	X	X		
Contact header in 18X messages			X	X	X		
Busy display information for 486 Busy Here message			X	X	X		
VLAN and priority tagging on phone data port (802.1p/q)			X	X	X		
LDAP Corporate Directory Search			X	X	X		
Attended transfer enhancements			X	X	X		

Feature	SPA9000	SPA400	SPA922	SPA942	SPA962	SPA8000	WRP400
Busy Line Field, Call Pickup, and Speed Dial for idle line keys				X	X		
Configure missed call display per Line			X	X	X		
VLAN ID and priority tagging per router port							X
Remote provisioning of data parameters							X
Guest network configuration with SSID_2 WAN access only							X
SIP Trunking						X	

## SPA9000 Enhancements

The following enhancements were made to the SPA9000 Voice System:

- SPA9000 16-user capacity

The SPA9000 supports 16 users by default. No additional licensing is required.

- SPA9000 simultaneous hunt order

Incoming calls can be routed to a list of stations so that all stations ring simultaneously. In the Contact List rule, enable this feature by using the new `hunt=all` syntax.

**EXAMPLE:** `500:name=Sales,hunt=all;101,102,103`

This hunt group is assigned an extension number (500). The group is named Sales and includes three stations (101, 102, 103). A call to extension 500 rings all three stations simultaneously (`hunt=all`). For detailed instructions about hunt groups, see the *SPA9000 Voice System Administration Guide*.

- **New SPA9000 web user interface access rights**

The user account now has access to the PBX Status page in the SPA9000 administration web server.

- **SPA9000 call routing enhancements for SPA400 FXO port selection**

You can configure a SPA9000 call routing rule that selects the SPA400 FXO port based on the dialed digits. For example, you can associate different steering digits with different outbound phone lines, for the purpose of allowing different work groups to dial out with different callback numbers in the caller ID header.

### SPA400 Enhancements

The following enhancements were made to the SPA400:

- **FXO port selection**

Using a call routing rule on the SPA9000, you can route calls to specified SPA400 FXO ports based on the dialed digits. For example, you can associate different steering digits with different outbound phone lines, for the purpose of allowing different work groups to dial out with different callback numbers in the caller ID header.

- **Configurable SPA400 call disconnect tones**

You can localize the call disconnect tones on your SPA400 units to ensure VoIP-PSTN integration in the local region. This operation allows the gateway to detect that the call has been terminated on the other end, so the local line hangs up automatically.

- **New default settings for easier SPA400 installation and configuration**

The SPA400 has new default settings to reduce the time needed to install and configure a unit.

### SPA9x2 Phone Enhancements

The following enhancements were made to the SPA9x2 phones:

- **Secure Real Time Protocol (SRTP) enhancements for secure calling**

The security methods for VoIP calls were enhanced to incorporate a standard base SRTP Key Negotiation called Security Description (RFC 4568).

- Contact header in 18X messages for Application Server features

The Contact Header is now included in all 18X messages. This enhancement improves the interoperability of the phones with Application Server features that use the contact header to identify the endpoint interaction.

- Busy display information for 486 Busy Here message

This feature enables the phone to display the word “Busy” when receiving a 486 Busy Here message as response to an INVITE.

- VLAN and priority tagging on phone data port (802.1p/q)

This feature facilitates tagging of the VLAN ID (802.1Q) and priority bits (802.1p) of the traffic coming from the PC port of the SPA9x2 phone. Three new parameters are included with the feature:

Parameter	Description
<Enable_PC_Port_VLAN_Tagging>	Yes/No (default No). Enables or disables the tagging algorithm.
<PC_Port_VLAN_ID>	0-4095 (default 0). Value of the VLAN ID. The phone tags all the untagged frames coming from the PC (it will not tag frames with an existing tag).
<PC_Port_VLAN_Highest_Priority>	0-7 (default 0). The priority applied to all frames, tagged and untagged. The phone modifies the frame priority only if the incoming frame priority is higher than this value.

- LDAP Corporate Directory Search

The SPA9X2 phones now incorporate the LDAPv3 Corporate Directory Search Menu as in other Cisco Phones to enable the retrieval of directory information based on LDAP, an Active Directory Technology. SPA9X2 phones support the following parameters:

Parameter	Description
<LDAP_Dir_Enable>	Yes/No (default No). Enables the LDAP functionality.
<LDAP_Corp_Dir_Name>	String (default is Corporate Directory). The name of the Service to be displayed in the Directory menu when LDAP Corporate directory is active.
<LDAP_Server>	String (default blank). Server address or name. Can be an IP address or FQDN.
<LDAP_Port>	String (default blank). Server port. If blank, the default LDAP port will be selected.
<LDAP_Search_Base>	String (default blank). LDAP Search base object according to LDAP specifications.
<LDAP_Username>	String (default blank). Username of the LDAP database.
<LDAP_Password>	String (default blank). User Password of the LDAP database.
<Last_Name_Filter>	String (default blank). Last Name search filter, according to LDAP specification.
<First_Name_Filter>	String (default blank). First Name search filter, according to LDAP specification.
<Search_item_3_Name>	String (default blank). Name to be displayed on the Phone-Corporate Directory-Advanced Search menu. If blank, this option is not displayed.
<Search_item_3_Filter>	String (default blank). Item 3 search filter, according to LDAP specification.

Parameter	Description
<Search_Item_4_Name>	String (default blank). Name to be displayed on the Phone-Corporate Directory-Advanced Search menu. If blank, this option is not displayed.
<Search_Item_4_Filter>	String (default blank). Item 4 search filter, according to LDAP specification.
<Display_Name_Attributes>	String (default blank). Attributes to be returned for each record in the database.
<Number_Attributes>	Comma separated list (default blank). Attributes to be returned for each record in the database.
<Number_mapping>	Dial plan (default blank). Similar to the incoming caller ID map option. Used for mapping the format of the number in the database to a telephone number that can be processed by the phone or network.

- **Attended transfer enhancements**

The SPA9x2 phones now support the transfer of a call that is on hold.

- **Busy Line Field, Call Pickup, and Speed Dial for idle line keys on SPA942/962**

Idle line keys on the SPA942 and SPA962 can be used for Busy Lamp Field, Speed Dial, and Call Pickup functions, as described below.

- **Busy Lamp Field:** The line button is used to monitor activity on another station. The LED indicates the line status:
  - Red: Busy
  - Red Fast Blink: Ringing
  - Amber: Failed to subscribe (received 4xx response)
  - Amber Slow Blink: Undefined (may be no response to subscribe, or BLF not specified)
- **Call Pickup:** The user can press the line button to answer a call that is ringing on the other station. This feature is available only when BLF is enabled.

- Speed Dial: The user can press the line button to place a call to the other station.

To program a line key:

- a. Start Internet Explorer, and enter the IP address of the phone. Click the **Admin Login** link and then click **advanced**.
- b. Click the Phone tab.
- c. Find the Line Key that you want to configure, such as Line Key 1.
- d. From the Share Call Appearance drop-down list, choose **shared**.
- e. Enter the rule in the Extended Function field, as described below.

Line Key 2		Short Name: Accounting	
Extension:	2		
Share Call Appearance:	shared		
Extended Function:	fnc=blf+sd+cp;sub=Accounting@\$PROXY;ext=103@\$PROXY		

**SYNTAX:** `fnc=type;sub=stationname@$PROXY;ext=extension#@$PROXYvid=#`

Example 1: Busy Lamp Field and Speed Dial:

**fnc=blf+sd+cp;sub=Accounting@\$PROXYext=103@\$PROXY**

In this example, the line key is programmed as a shared line with extension 103, Accounting. The button can be used for Busy Lamp Field, speed dial, and call pickup.

- Configuration of missed call display per extension

The user can configure the missed call log function for each extension, to avoid collecting unneeded missed call messages for shared lines. This option is found on the *Phone > User* tab of the Web UI. The *Log Missed Calls for EXT N* field can be set to **Yes** (missed calls are displayed) or **No** (missed calls are not displayed).

## WRP400 Enhancements

The following enhancements were made to the WRP400:

- VLAN ID and priority tagging per port

You can use remote provisioning to configure a VLAN ID that is included in all outgoing packets.



- Remote provisioning of data parameters  
All data parameters can be configured by remote provisioning.
- Guest network configuration with SSID\_2 WAN access only  
You can configure a wireless “guest network” to allow guests to connect to the Internet while preventing access to your local network.

### SPA8000 Enhancements

A SIP Trunking feature was added to the SPA8000. You can assign each line to one of four trunk groups for the purpose of inbound call routing and outbound caller identification. An incoming call to trunk line automatically rings the member lines simultaneously or in a specified order. For outbound calls, SIP Trunking ensures that all calls on a trunk line can be identified by the trunk number and a common caller ID.

## Downloading the Firmware

To obtain current firmware for Cisco Small Business and Small Business Pro products, visit the following URL:

[www.cisco.com/go/smallbiz](http://www.cisco.com/go/smallbiz)

## Technical Support

To obtain current support contact information for Cisco Small Business and Small Business Pro products, visit the following URL:

[www.cisco.com/go/smallbiz](http://www.cisco.com/go/smallbiz)

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