

# Release Notes for Cisco Small Business IP Phone SPA525G/525G2 Firmware Version 7.4.9a and 7.4.9c

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These Release Notes describe the updates and fixes in the Cisco Small Business IP Phone SPA525G/525G2 firmware version 7.4.9a and 7.4.9c.

**NOTE** There are two SPA525G/525G2 7.4.9a and 7.4.9c firmware versions. One of them contains updated Bluetooth firmware. The updated Bluetooth version is larger in size and takes longer to install (about 3 to 4 minutes). If you use Bluetooth, for the best possible experience we recommend that you upgrade to the Bluetooth version of the firmware.

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# Changes in Cisco Small Business IP Phone SPA525G/525G2 Firmware Version 7.4.9c

## Open Issues in Firmware Version 7.4.9c—Phones Used With a SIP Call Control System

Identifier	Summary
CSCtt44924	<p>SIP Server Failback is not Consistently Using the Primary DNS SVR Record</p> <p>The device does not consistently send SIP Request (REGISTER/INVITE) messages to the primary DNS SVR record. In the event of a failback, the device sends the SIP packet to the device in the second DNS server record.</p>
CSCts62229	<p>SRTP/TLS Registration Session is Terminated When There is Packet Loss</p> <p>With SRTP, and TLS enabled, if the device experiences packet loss, instead of retransmitting the packets the device tries to initiate a new TCP session.</p>

## Resolved Issues in Firmware Version 7.4.9c—Phones Used With a SIP Call Control System

Identifier	Summary
CSCtt23775	<p>When the primary line is configured for shared call appearance, a blind transfer by using a speed dial causes the phone to become unresponsive.</p>

## Changes in Cisco Small Business IP Phone SPA525G/525G2 Firmware Version 7.4.9a

### Open Issues In Firmware Version 7.4.9a—Phones Used With a SPCP Call Control System

Identifier	Summary
CSCts53403	SPA525G phones unregister and become unresponsive when they are subjected to continuous, short duration Hunt Group calls. To recover the phone, power cycle the device.

### Resolved Issues in Firmware Version 7.4.9a—Phones Used With a SIP Call Control System

Identifier	Summary
CSCto09246	Added support for the attended transfer call option for the SPA525G/525G2 phones when using the SPA500S attended console.
CSCto14672	In certain timing conditions, a bye message is sent before the ack for “200 ok” on an invite message.
CSCto26484	The TransferVM key is not displayed after the initial selection.
CSCto26561	Call control is keeping the wrong DTMF state. As a result, audio mixer does not work as expected.
CSCto47968	With line key 2 enabled as shared, the softkey does not display properly when using Metaswitch.
CSCto48683	There is a delay in the incoming audio received when mp3 is used as a ringtone.
CSCto51717	The XML application variable \$MA does not expand properly.

## Release Notes

Identifier	Summary
CSCto57095	Increased the number of LDAP server entries that the phone displays to 20 entries.
CSCto81067	When using the SPA500S, the Busy Lamp Field (BLF) timer option (Retry-After) does not work as expected.
CSCto87029	The profile download was successful, but the profile rule was not displayed.
CSCto91430	The Refresh SUBSCRIBE message is sent to the CONTACT header instead of the proxy address.
CSCto94942	With the share line configured, a call on hold cannot resume from a different phone.
CSCto95213	The Notify message does not match the To/From fields correctly per section 3.3.4 of rfc3265.
CSCtq08190	Added notification when trying to monitor video while the Bluetooth option enabled.
CSCtq16039	Audible far-end high-pitched noise if the phone housing is tapped while on speakerphone.
CSCtq27158	The phone running firmware version 7.4.8 resubscribes to the CONTACT header address, and not the proxy address.
CSCtq35233	Added support for localization dictionary file over 100 KB in size.
CSCtq55920	The Mobilelink audio is interrupted if there is an incoming intercom call.
CSCtq58001	Added BLF string parsing to prevent the duplication of the "sip:" tag in the URL in some Broadworks versions.
CSCtq95659	Added inventory management type, length, and value descriptions (TLVs) to Link Layer Discovery Protocol-Media Endpoint Devices (LLDP-MED).
CSCtr65293	If the resync Profile rule fails due to an ICMP or a 502 connection error, the device fails to retry.

## Resolved Issues in Firmware Version 7.4.9a—Phones Used With an SPCP Call Control System

Identifier	Summary
CSCtn63391	UC500 application VoiceViewExpress—Unable to listen to multiple messages in a single session.
CSCto75275	With the localization language installed, the missed call message disappears from the phone display.
CSCto91170	The user must manually select the line key when dialing from a directory.

## Updates in Firmware Version 7.4.9a—Phones Used With a SIP Call Control System

### Report Configuration Deltas

A new option has been added to the Report Rule to trigger the reporting of configuration changes (deltas) to the server since the last resync, reboot, or upgrade.

The syntax of this option is:

Report Rule: [--delta] *URL*

Where *URL* is the path to where the report is stored on the server.

For example, to store delta configuration changes in a file with a name like SPA504G\_<MAC>\_<serial#>.xml, do one of the following:

- On the phone Web GUI, set the **Report Rule** field on the **Configuration Profile** page (Voice tab > Provisioning tab > Configuration Profile) to:

```
[--delta] http://reportTargetServer/reportPath/$PN_$MA_$SN.xml
```

- Add the following to your provisioning file:

```
<Report_Rule ua="na">[ --delta ]
http://reportTargetServer/reportPath/$PN_$MA_$SN.xml
</Report_Rule>
```

### Capability to Configure DND and CFWD on a Per Line Basis (Applicable to Broadsoft)

Enable Do Not Disturb (DND) and Call Forwarding (CFWD) on a per line basis by using the new **Feature Key Sync** parameter that has been added to all extension tabs. For any registered extension, enable device feature key synchronization by setting the **Feature Key Sync** to **Yes**.

### Support for Basic ACD Functions

To support basic Automatic Call Distribution (ACD), a new parameter **Broadsoft ACD** is added to the Web GUI under the **Call Feature Settings** section for each extension. The supported values are **Yes** and **No** (default).

If you set **Broadsoft ACD** to **Yes**, the phone sends a Subscribe message according to the Broadsoft specification.

If you set **Broadsoft ACD** to **No**, the phone might still send out a Subscribe message because another feature is using ACD, but the phone ignores any Notify message from the Broadsoft server related to ACD.

Add the following to your configuration file to configure this feature on line 1:

```
<Broadsoft_ACD_1_ ua="na">Yes</Broadsoft_ACD_1_>
```

### Interoperability with Bluetooth Headsets

For the best experience using Bluetooth headsets, upgrade to version 7.4.9a and 7.4.9c of the firmware using the Bluetooth firmware version 0.00.34.

For a list of supported Bluetooth headsets, see this document:

<https://supportforums.cisco.com/docs/DOC-9926>

### Latest Bluetooth Firmware Driver Update (version 0.00.34)

The Bluetooth firmware has been updated to address interoperability issues.

To check the Bluetooth firmware version on your phone, log in to the phone Web GUI using admin/advanced access privileges. The Info page lists the version.

## Reboot Reasons Stored in the Phone Status XML File and Viewable from the LCD Screen and Web GUI

The phone now stores the last reboot/refresh reasons. When the phone is reset to factory defaults, this information is deleted.

The following is a list of the supported reboot/refresh reasons:

Reason	Description
Upgrade	An upgrade operation caused a reboot (regardless whether the upgrade completed or failed).
Provisioning	Changes made to parameter values by using the phone LCD or Web GUI, or a resync caused a reboot.
SIP Triggered	A SIP request caused a reboot.
RC	A remote customization caused a reboot.
User Triggered	The user manually triggered a warm reboot.
Software Req	A remote server triggered a warm reboot.
System <i>n</i>	System events (for example, running out of resources) triggered a warm reboot.
IP Changed	The phone IP address was changed triggering a warm reboot.

You can view the reboot history from the phone Web GUI, the phone LCD screen, and the phone SPA Status Dump file (<http://phoneIP/status.xml> or <http://phoneIP/admin/status.xml>).

### Viewing the Reboot History on the Web GUI

(Info > System Information > Reboot History). On the **Reboot History** page, 5 fields were added (**Reboot Reason 1** (most recent reboot), **Reboot Reason 2**, **Reboot Reason 3**, **Reboot Reason 4**, and **Reboot Reason 5**).

Each field, if applicable, displays the reason for the reboot and a time stamp indicating when the reboot took place as in the following examples:

```
Reboot Reason 1: Provisioning(06/22/2011 13:29:33)
Reboot Reason 2: Upgrade(06/22/2011 13:01:43)
Reboot Reason 3: Provisioning(06/22/2011 10:40:12)
```

The reboot history is displayed in reverse chronological order, with the reasons for the latest reboot displayed in the **Reboot Reason 1** field.

### *Viewing the Reboot History on the Phone LCD Screen*

A new menu, **Reboot History**, was added under the **Setup menu**. On the **Reboot History** Page, the 5 reboot entries are displayed in reverse chronological order, just like the Web GUI.

### *Viewing the Reboot History in the SPA Status Dump File*

The reboot history is stored in the SPA Status Dump file ([http://<phone\\_IP\\_address>/admin/status.xml](http://<phone_IP_address>/admin/status.xml)). In this file, tags **Reboot\_Reason\_1** to **Reboot\_Reason\_5** store the reboot history, as shown in this example:

```
<Reboot_History><Reboot_String/>
<Reboot_Reason_1>Provisioning(06/13/2011 14:03:43)</Reboot_Reason_1>
<Reboot_Reason_2>Provisioning(06/13/2011 13:58:15)</Reboot_Reason_2>
<Reboot_Reason_3>Provisioning(06/13/2011 12:08:58)</Reboot_Reason_3>
<Reboot_Reason_4>Provisioning(05/26/2011 15:26:49)</Reboot_Reason_4>
<Reboot_Reason_5>System 4(05/24/2011 10:20:06)</Reboot_Reason_5>
<Reboot_History/>
```

The Web GUI and the LCD screen get the reboot history from these tags.

### **SIP Publish Signaling Improvements**

The SPA Phone has been updated to resend the SIP PUBLISH message with the voice quality report once per 5xx response with a valid Retry-After header.

A valid time value in seconds is a positive integer from 0 to 65536. A SIP message with a Retry-After time value of 0 is treated as a “500 Server Internal Error” message.

A time value less than 0 is ignored.

The following is a summary of the 5xx messages with Retry-After header that the phone supports:

<b>5xx SIP responses</b>	<b>Description</b>
500 Server Internal Error	Unexpected server condition that prevents fulfillment of request.
503 Service Unavailable	Server is unavailable due to temporary overload, or maintenance.

## Support for Full SIP URI for SIP Publish

The **Voice Quality Report Address** parameter supports a full SIP URI. Examples of valid addresses are:

- collector@domain.com
- 123.collect@123.123.123.123:5555
- 5678@domain.com:5656

For example to configure for extension 1, edit the phone configuration file as follows:

```
<Voice_Quality_Report_Address_1_ ua="na">collector@domain.com
</Voice_Quality_Report_Address_1_>
```

or

```
<Voice_Quality_Report_Address_1_ ua="na">123.collect@123.123.123.123:5555
</Voice_Quality_Report_Address_1_>
```

or

```
<Voice_Quality_Report_Address_1_ ua="na">5678@domain.com:5656
</Voice_Quality_Report_Address_1_>
```

## Audio Indication for Call Pickup Event

A new parameter, **Call Pickup Audio Notification**, was added under the **Attendant Console** section.

By default, this parameter is set to **No**. When set to **Yes**, the phone plays the Call Pickup tone when there are incoming calls to any of the lines that the user is monitoring with the Call Pickup function.

Use the following in your configuration file:

```
<Call_Pickup_Audio_Notification ua="na">Yes
</Call_Pickup_Audio_Notification>
```

Another parameter, **Call Pickup Tone**, is also added under **Regional Tab > Call Progress Tone**. The default value for this parameter is 440@-10;30(.3/9.7/1), which is the same as the call waiting tone.

This feature appears as follows in the phone configuration file:

```
<Call_Pickup_Tone ua="na">440@-10;30(.3/9.7/1)</Call_Pickup_Tone>
```

### User Definable Authentication Realm

A new parameter, **Reversed Authentication Realm**, is added at the extension level under the **Subscriber Information** section. The default value is empty, which means that the proxy address is used as the authentication realm.

The parameter for extension 1 appears as follows in the phone configuration file:

```
<Reversed_Auth_Realm_1_ ua="na"></Reversed_Auth_Realm_1_>
```

To use a different authentication realm, enter the IP address to use in the **Reversed Authentication Realm** field.

### Accepting User Input When Screen Saver is Active

You can now dial a number when the screen saver is active and your first key entry will be accepted.

If the phone LCD is displaying the Home screen and the screen saver becomes active, and if there are no active calls, these events generated by user input are passed to the **Home** screen:

- Numeric keys
- Line keys
- Speaker key
- Headset key
- Mail Box key
- Handset off hook

All other key events are not passed.

### Handling of Failed Park/Transfer Response from the Server

The firmware has been updated so that when the phone receives a NOTIFY sipfrag message, the phone handles it immediately.

To enable this function:

- Phone Web GUI

Set **Keep Referee When REFER Failed (SIP > SIP Parameters)** to **Yes**.

- Configuration file

Enable this feature as follows in the phone's configuration file:

```
<Keep_Referee_When_REFERER_Failed ua="na">Yes
</Keep_Referee_When_REFERER_Failed>
```

### Added Six Ringtones (SIP Mode Only)

Added two ringtones to the phone LCD GUI:

Ring #	GUI Label	Value of the w Parameter
11	Pulse	w=file://Pulse1.raw
12	Du-dut	w=file://Ring7.raw

These two ringtones are readily available to users. The ringtones appear as follows in the phone configuration file:

```
<Ring11 ua="na">n=Pulse;w=file://Pulse1.raw;c=1</Ring11>
<Ring12 ua="na">n=Du-dut;w=file://Ring7.raw;c=1</Ring12>
```

In addition to these two ringtones, four user-configurable ring tones were added:

GUI Label	Value of the w Parameter
Warble	w=file://Warble.raw
Low	w=file://Low.raw
Floor	w=file://Floor.raw
Reverb	w=file://Reverb.raw

**NOTE** These four ringtones are accessed by specifying a filename as the value of the w parameter, and not an index as in the other ringtones.

These four ringtones must be provisioned or configured using the phone Web GUI.

To configure/provision these ringtones using the Web GUI, go to the **Voice > Phone** page, and, in the **Ring Tone** section, modify the **n** and **w** parameters in four of the 12 ring fields (Ring1 to Ring12). Set the **n** parameter to the label of the ringtone you want displayed by the GUI. Set the **w** parameter equal to the ringtone parameter **w** value listed in the table above.

For example, to replace the ringtone in Ring1 with the Warble ringtone, change the value of the **Ring1** field to **n=warble;w=file://Warble.raw;c=1** or configure as follows in the phone's configuration file:

```
<Ring1 ua="na">n=warble;w=file://Warble.raw;c=1</Ring1>
```

### Support for Distinctive Call Waiting Tone

Support for Distinctive Ring based on the Alert-Info header was extended to support the Distinctive Call Waiting Tone.

When the phone is off-hook on a call, the call waiting tone plays. The distinctive call waiting tone is generated based on the phone call waiting tone's frequency and gain values, and the cadence value of the matched ring tone.

The cadence value, following the **c=** tag, of the matched ring tone must be an integer from 1 to 9, which specifies the ring cadence under the **Regional** tab of the Web GUI.

If there is no matching ring tone name, or an invalid cadence value is specified, the configured Call Waiting Tone is used.

### Support for Display Diversion Info

This parameter controls the Diversion information on the phone display. When it is set to **Yes**, the phone screen displays the Diversion header information, if it exists, in the INVITE message. Otherwise, the Diversion header is not presented to the user.

The parameter is found under the SIP tab. The device displays the message `Display Diversion Info Y or N`. The default is **N**.

## Related Information

Support	
Cisco Small Business Support Community	<a href="http://www.cisco.com/go/smallbizsupport">www.cisco.com/go/smallbizsupport</a>
Cisco Small Business Support and Resources	<a href="http://www.cisco.com/go/smallbizhelp">www.cisco.com/go/smallbizhelp</a>
Phone Support Contacts	<a href="http://www.cisco.com/en/US/support/tsd_cisco_small_business_support_center_contacts.html">www.cisco.com/en/US/support/tsd_cisco_small_business_support_center_contacts.html</a>
Cisco Small Business Firmware Downloads	<p><a href="http://www.cisco.com/go/smallbizfirmware">www.cisco.com/go/smallbizfirmware</a></p> <p>Select a link to download firmware for Cisco Small Business Products. No login is required.</p> <p>Downloads for all other Cisco Small Business products, including Network Storage Systems, are available in the Download area on Cisco.com at <a href="http://www.cisco.com/go/software">www.cisco.com/go/software</a> (registration/login required).</p>
Product Documentation	
Cisco Small Business SPA525G/G2	<a href="http://www.cisco.com/go/spa500phones">www.cisco.com/go/spa500phones</a>
Cisco Small Business	
Cisco Partner Central for Small Business (Partner Login Required)	<a href="http://www.cisco.com/web/partners/sell/smb">www.cisco.com/web/partners/sell/smb</a>
Cisco Small Business Home	<a href="http://www.cisco.com/smb">www.cisco.com/smb</a>

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