



Avaya Solution & Interoperability Test Lab

Application Notes for configuring Fijowave Business DECT with Avaya IP Office 500 V2 R9.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps for provisioning Fijowave's Business DECT to interoperate with Avaya IP Office R9.1.

Readers should pay particular attention to the scope of testing as outlined in **Section 2.1**, as well as observations noted in **Section 2.2** to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps for provisioning Fijowave's Business DECT to interoperate with Avaya IP Office 500 V2 R9.1. Fijowave's DECT handsets are configured to register with IP Office via SIP protocol and are also subscribed to the base station via DECT. Each handset is configured as a SIP user on IP Office. The Fijowave DECT handsets then behave as third-party sip extensions on IP Office able to make/receive internal and external calls and have full voicemail and other telephony facilities available on IP Office.

2. General Test Approach and Test Results

The interoperability compliance testing evaluates the ability of Fijowave DECT handsets to make and receive calls to and from Avaya Digital, H.323 and SIP deskphones. Avaya IP Office Voicemail Pro (voicemail) was used to allow callers to leave voicemail messages and to demonstrate Message Waiting Indication was working on the Fijowave handsets. Fijowave can use both UDP and TCP as the SIP transport protocol and both protocols were tested.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya's formal testing and Declaration of Conformity is provided only on the headsets/Smartphones that carry the Avaya brand or logo. Avaya may conduct testing of non-Avaya headset/handset to determine interoperability with Avaya phones. However, Avaya does not conduct the testing of non-Avaya headsets/Smartphones for: Acoustic Pressure, Safety, Hearing Aid Compliance, EMC regulations, or any other tests to ensure conformity with safety, audio quality, long-term reliability or any regulation requirements. As a result, Avaya makes no representations whether a particular non-Avaya headset will work with Avaya's telephones or with a different generation of the same Avaya telephone.

Since there is no industry standard for handset interfaces, different manufacturers utilize different handset/headset interfaces with their telephones. Therefore, any claim made by a headset vendor that its product is compatible with Avaya telephones does not equate to a guarantee that the headset will provide adequate safety protection or audio quality

2.1. Interoperability Compliance Testing

The compliance testing included the test scenarios shown below. Note that when applicable, all tests were performed with Avaya SIP deskphones, Avaya H.323 deskphones, Fijowave DECT handsets and PSTN endpoints.

- Registration of handsets
- Basic Calls
- Call Waiting/Hold and Retrieve
- Attended and Blind Transfer
- Call Forwarding Unconditional, No Reply and Busy
- Call Park/Pickup
- Mobile Twinning
- Conference
- Do Not Disturb
- Calling Line Name/Identification
- Codec Support
- DTMF Support
- Message Waiting Indication
- Serviceability testing

2.2. Test Results

The following observations were noted during testing.

1. If the battery is removed with a MWI on a Fijowave DECT handset and reinserted and turned back on the MWI is no longer present. This is an issue as there is a message still present. If the DECT handset is powered down and back up again the MWI is starts working again.
2. Failover from the master base station to the standby base station caused an issue with MWI. Because the initial “subscribe” came from the master base station when messages are added or read when on the standby base station the MWI is not updated. A solution is to power off the handset using the power button and power back on again and this will make the handset subscribe to the standby base station.
3. When a DECT handset is placed on Do Not Disturb, the caller does not get a busy tone, only gets silence.
4. When conducting a blind transfer from a Fijowave DECT handset to the PSTN the CLID was not updated on the DECT handset for the original caller. This was the case also for an IPO extension.

2.3. Support

Support from Avaya is available by visiting the website <http://support.avaya.com> and a list of product documentation can be found in **Section 9** of these Application Notes. Technical support for the Fijowave Business DECT product can be obtained as follows:

- Web: <http://www.fijowave.com>
- Email: mail@fijowave.com
- Help desk: +353 1 525 3072

3. Reference Configuration

Figure 1 shows the network topology during compliance testing. The Fijowave DECT handsets connect to the Fijowave DECT master base station which is placed on the LAN. The Fijowave DECT handsets register with the Fijowave base station which registers with IP Office; this allows the DECT handsets make/receive calls to and from the Avaya desk phones on IP Office.

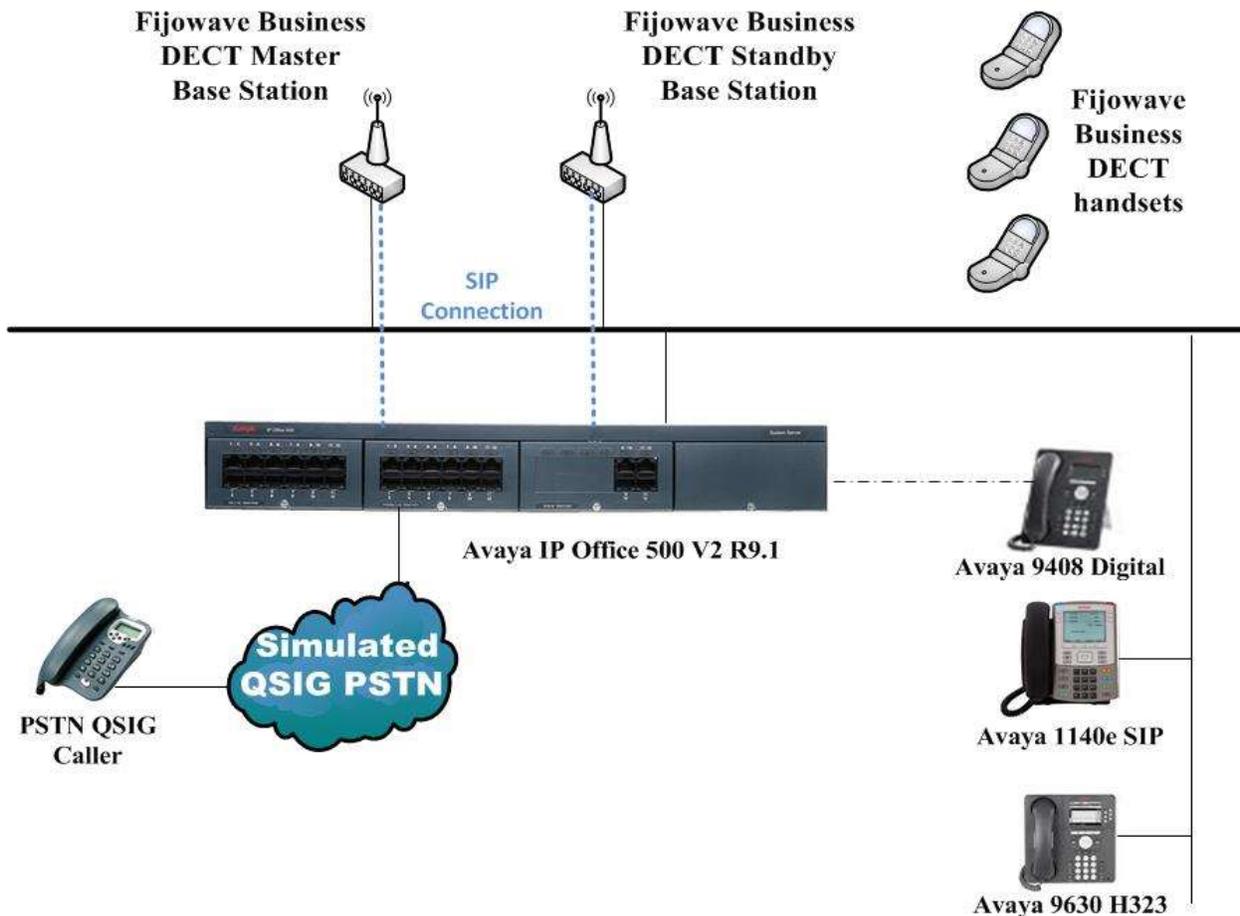


Figure 1: Reference Configuration of Fijowave Business DECT with Avaya IP Office

4. Equipment and Software Validated

The following equipment and software was used for the compliance test.

Equipment/Software	Version/Release
Avaya IP Office 500 V2	R9.1 SP4
Avaya IP Office Manager	R9.1 SP4
Avaya 9630 Deskphone	H.323 Release 6.4014U
Avaya 1140e Deskphone	SIP R04.03.12.00
Avaya 9408 Digital Deskphone	N/A
Fijowave DECT Base Station	Multi-Cell 220: s/n 15220000023 (Primary) & s/n 15220000024 (Secondary) Software: V323 B15 Single-Cell 200: s/n 15200000062 Software: V323 B15
Fijowave DECT Handsets	s/n 15310000223 s/n 15310000224 s/n 15310000225 Software: V323 B15

5. Configure Avaya IP Office

Configuration and verification operations on the Avaya IP Office illustrated in this section were all performed using Avaya IP Office Manager. The information provided in this section describes the configuration of the Avaya IP Office for this solution. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Launch Avaya IP Office Manager.
- Display LAN Configuration.
- Configure New SIP User.
- Save Configuration.

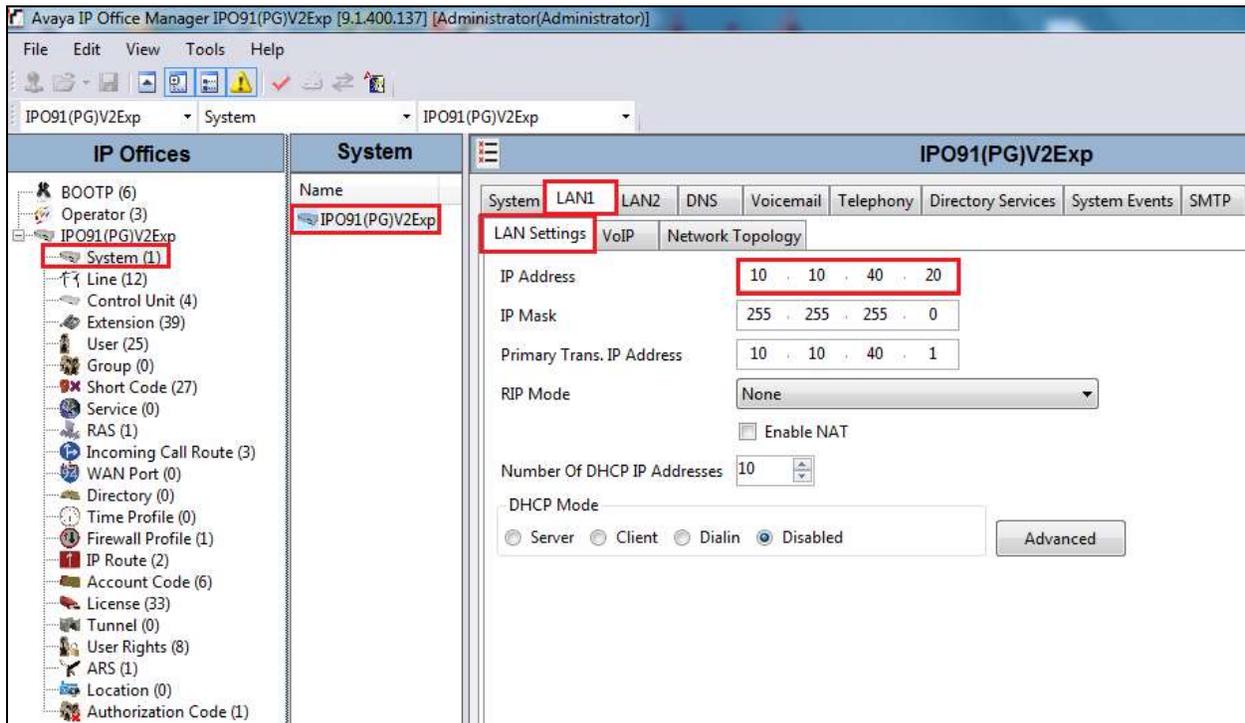
5.1. Launch Avaya IP Office Manager

From the Avaya IP Office Manager PC, go to **Start** → **Programs** → **IP Office** → **Manager** to launch the Manager application or use the shortcut on the desktop (not shown). Tick the required server to log in to, this will be the IP Office 500 V2 and log in to Avaya IP Office using the appropriate credentials to receive its configuration.



5.2. Display LAN Configuration

Once logged in navigate to **System** in the left window and this will display the IP Office system properties in the main window. Select the **LAN1** tab in the main window and within that tab select the **LAN Settings** tab. This displays the **IP Address** information for the DECT base station to register to in **Section 6.2**.



The screenshot displays the Avaya IP Office Manager interface. The left-hand pane shows a tree view of system components, with 'System (1)' selected and highlighted in red. The main window is divided into three sections: 'IP Offices', 'System', and 'IPO91(PG)V2Exp'. The 'System' section shows the name 'IPO91(PG)V2Exp'. The 'IPO91(PG)V2Exp' section has several tabs: 'System', 'LAN1', 'LAN2', 'DNS', 'Voicemail', 'Telephony', 'Directory Services', 'System Events', and 'SMTP'. The 'LAN1' tab is selected, and within it, the 'LAN Settings' sub-tab is active. The 'LAN Settings' sub-tab displays the following configuration:

IP Address	10 . 10 . 40 . 20
IP Mask	255 . 255 . 255 . 0
Primary Trans. IP Address	10 . 10 . 40 . 1
RIP Mode	None
Enable NAT	<input type="checkbox"/>
Number Of DHCP IP Addresses	10
DHCP Mode	<input type="radio"/> Server <input type="radio"/> Client <input type="radio"/> Dialin <input checked="" type="radio"/> Disabled

An 'Advanced' button is located at the bottom right of the LAN Settings section.

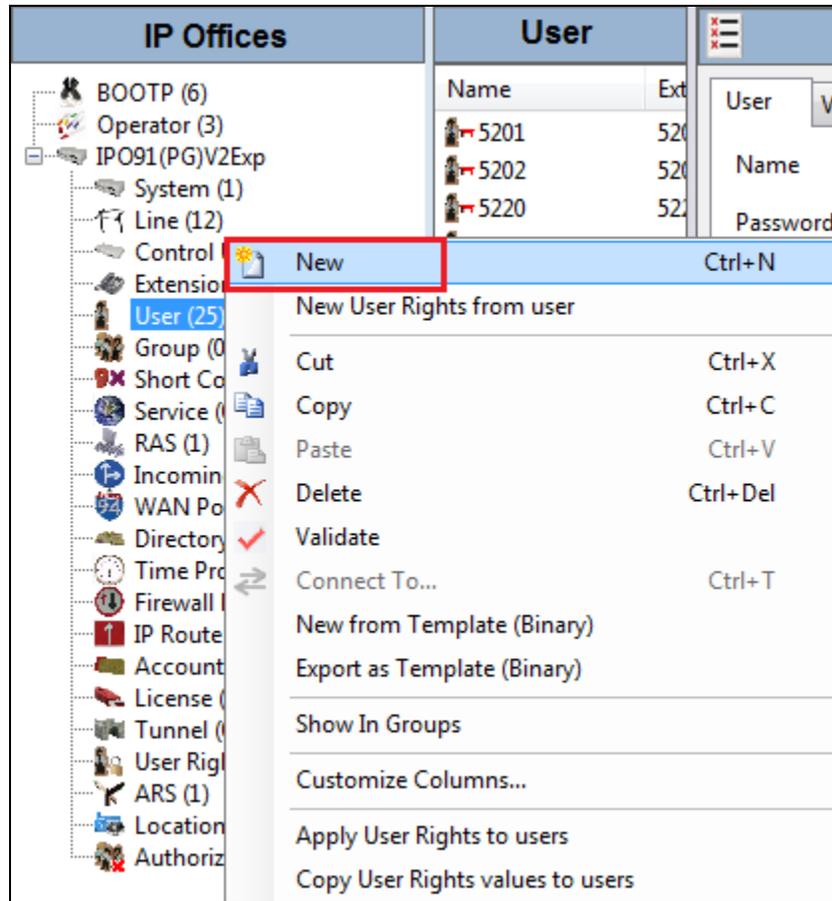
Selecting the **VoIP** tab displays the **Domain Name** and the **UDP** and **TCP Port** details used in the configuration of the DECT base station in **Section 6.2**.

The screenshot displays the configuration interface for IPO91(PG)V2Exp. The 'VoIP' tab is selected and highlighted with a red box. The 'SIP Registrar Enable' checkbox is also highlighted with a red box. The 'Domain Name' field contains 'devconnect.local', which is also highlighted with a red box. The 'Layer 4 Protocol' section shows 'UDP' and 'TCP' checked, with their respective ports set to 5060. The 'Remote UDP Port' and 'Remote TCP Port' are also set to 5060. The 'Challenge Expiry Time (secs)' is set to 10. The 'RTP' section shows 'Port Number Range' with 'Minimum' set to 49152 and 'Maximum' set to 53246. The 'Port Number Range (NAT)' section is partially visible at the bottom.

Protocol	Port	Remote Port
<input checked="" type="checkbox"/> UDP	5060	5060
<input checked="" type="checkbox"/> TCP	5060	5060
<input type="checkbox"/> TLS	5061	5061

5.3. Configure New SIP User

From the left window right click on Users and select New as shown below, this will allow a new user to be added to IP Office, this new user will be a SIP user.



Within the **User** tab at the top of the screen, enter a suitable **Name** and **Password** for the user. Add the **Extension** number as shown below.

5280: 5280

User Voicemail DND Short Codes Source Numbers Telephony Forwarding Dial In Voice Recording Button Programming Menu Programming

Name 5280

Password ****

Confirm Password ****

Conference PIN

Confirm Conference PIN

Account Status Enabled

Full Name Fijowave 5280

Extension 5280

Email Address

Locale

Priority 5

System Phone Rights None

Profile Basic User

Receptionist

Enable Softphone

Enable one-X Portal Services

Enable one-X TeleCommuter

Enable Remote Worker

Navigate to the **Voicemail** tab and ensure that **Voicemail On** is ticked, enter a suitable **Voicemail Code** for a password.

5280: 5280

User Voicemail DND Short Codes Source Numbers Telephony Forwarding Dial In Voice Recording Button Programming Menu Programming

Voicemail Code ****

Confirm Voicemail Code ****

Voicemail Email

Voicemail On

Voicemail Help

Voicemail Ringback

Voicemail Email Reading

UMS Web Services

Voicemail Email

Off Copy Forward Alert

DTMF Breakout

Reception / Breakout (DTMF 0) System Default ()

Breakout (DTMF 2) System Default ()

Breakout (DTMF 3) System Default ()

Select the **Telephony** tab and within the tab select the **Call Settings** tab. To enable call waiting for the DECT handsets both **Call Waiting On** and **Answer Call Waiting on Hold** must be ticked as shown below.

The screenshot shows the configuration page for user 5280:5280. The 'Telephony' tab is selected, and within it, the 'Call Settings' sub-tab is active. The following settings are visible:

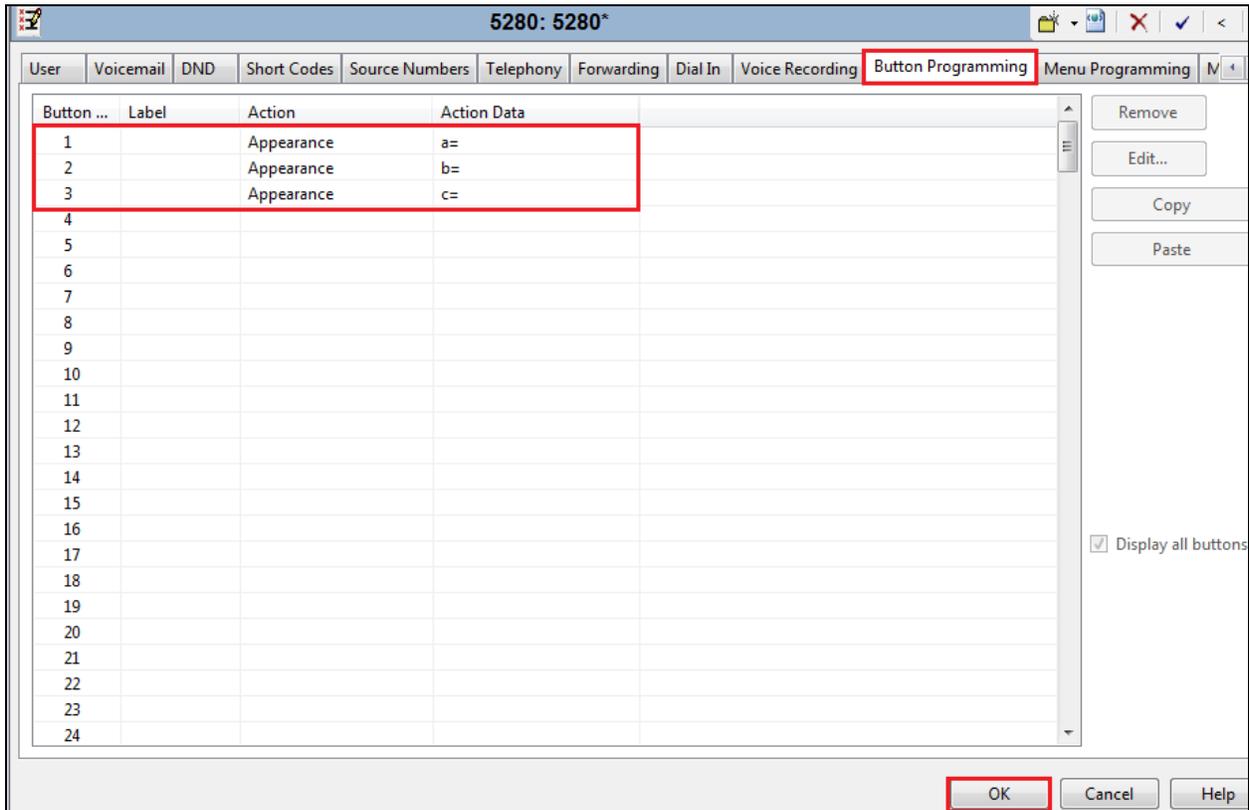
- Outside Call Sequence: Default Ring
- Inside Call Sequence: Default Ring
- Ringback Sequence: Default Ring
- No Answer Time (secs): System Default (11)
- Wrap-up Time (secs): 2
- Transfer Return Time (secs): Off
- Call Cost Mark-Up: 100
- Call Waiting On
- Answer Call Waiting on Hold
- Busy On Held
- Offhook Station

Select the **Supervisor Settings** tab, enter the **Login Code** for the SIP user and note that this password will be required for the DECT configuration in **Section 6.3**. Ensure that **Force Login** is ticked.

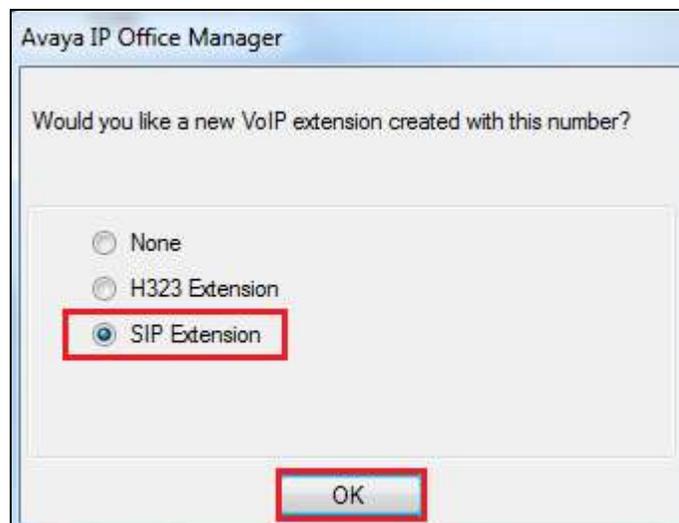
The screenshot shows the configuration page for user 5280:5280, specifically the 'Supervisor Settings' sub-tab. The following settings are visible:

- Login Code: [Redacted]
- Confirm Login Code: [Redacted]
- Login Idle Period (secs): [Empty]
- Monitor Group: <None>
- Coverage Group: <None>
- Status on No-Answer: Logged On (No change)
- Reset Longest Idle Time:
 - All Calls
 - External Incoming
- Force Login
- Force Account Code
- Force Authorization Code
- Incoming Call Bar
- Outgoing Call Bar
- Inhibit Off-Switch Forward/Transfer
- Can Intrude
- Cannot be Intruded
- Can Trace Calls
- Deny Auto Intercom Calls

Navigate to **Button Programming** and the three call appearance buttons should already be programmed, click on **OK**. If not create the appearance buttons (not shown) and click on **OK**.

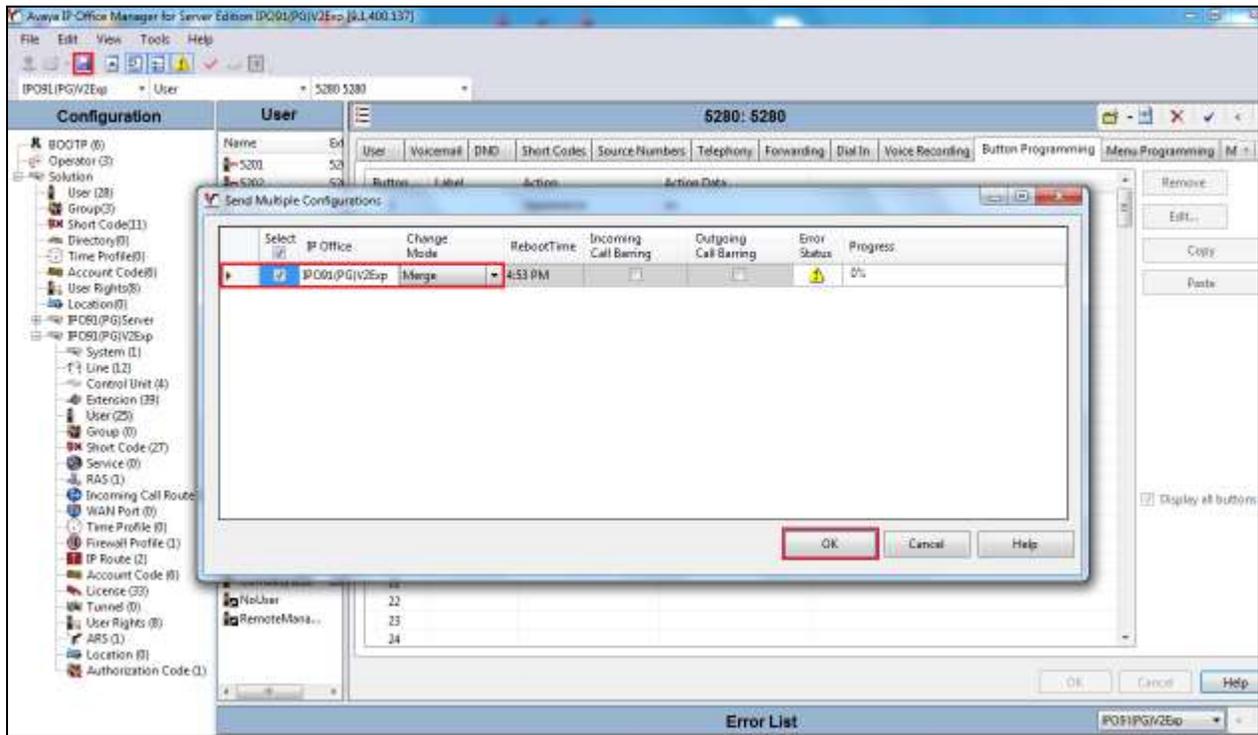


On the subsequent screen, ensure that **SIP Extension** is selected and click on **OK** to create the SIP extension along with the new user.



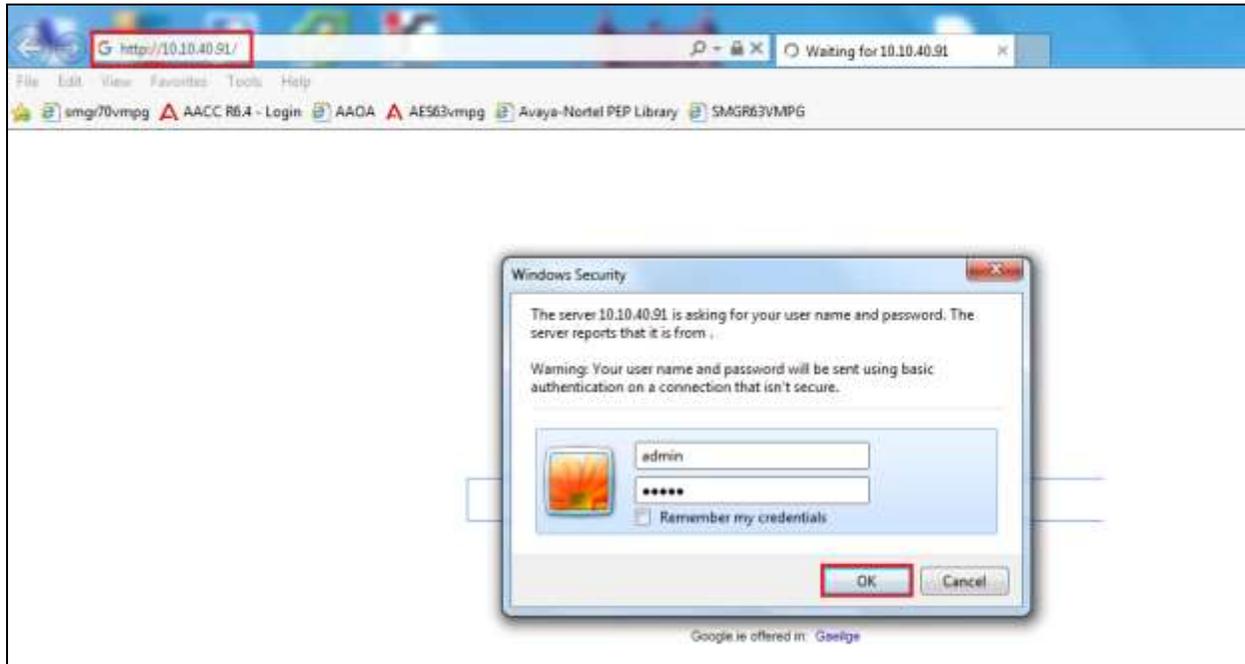
5.4. Save Configuration

Once all the users and extensions have been created click on the Save icon at the top left of the screen, which will bring up a new window. Select the IP Office to save the configurations shown below and click on **OK** to save the new configuration.



6. Configure Fijowave Business DECT

The configuration of the DECT base station and the DECT handsets are both achieved a web interface of the DECT base station. Open a web session to the IP address of the DECT base station, enter the proper credentials and click on **OK**.



6.1. Configure DECT Base Station IP address

The IP Address of the DECT base station must be changed in order to connect to the local LAN. To make changes to the IP Address, select **Network** in the left column and in the main window enter the **IP Address** information of the DECT base station and click on **Save**.

BT Business DECT 220

Network Settings

IP settings

DHCP/Static IP:

IP Address:

Subnet Mask:

Default Gateway:

DNS (Primary):

DNS (Secondary):

NAT Settings

Enable STUN:

STUN Server:

STUN Bindtime Determine:

STUN Bindtime Guard:

Enable RPORT:

Keep alive time:

VLAN Settings

ID:

User Priority:

Synchronization:

DHCP Options

Plug-n-Play:

SIP/RTP Settings

Use Different SIP Ports:

RTP Collision Detection:

Local SIP port:

SIP ToS/QoS:

RTP port:

RTP port range:

RTP ToS/QoS:

Please refer to Fijowave's documentation listed in **Section 9** of these Application Notes for further information about DECT configuration. The following sections cover specific settings concerning SIP and the connection to IP Office.

6.2. Configure Connection to IP Office

Select **Servers** in the left column and click on **Add Server** in the main window. Then enter the following information for the connection to IP Office. Note that the remaining values can be left as default.

- **Server Alias** Any suitable name for the connection
- **NAT Adaption** **Disabled**
- **Registrar** IP Address of the IP Office (see **Section 5.2**)
- **Outbound Proxy** IP Address of the IP Office (see **Section 5.2**)
- **SIP Transport** Set to either **TCP** or **UDP** (see **Section 5.2**)
- **Signal TCP Source Port** Set to **Enabled** if the above is set to **TCP**
- **Use one TCP Connection per SIP Extension** Set to **Enabled** if above is set to **TCP**
- **DTMF Signalling** Set to **SIP INFO**
- **Codec Priority** Set this to whatever is required typically **G711A** for Europe

Click on **Save** (not shown).

The screenshot shows the 'Servers' configuration page in the BT Business DECT 220 web interface. The left sidebar contains a navigation menu with 'Servers' highlighted. The main content area is titled 'Servers' and shows the configuration for an IP Office connection. The 'IPO:' section is expanded, showing the following settings:

- IPO:** 10.10.40.20
- Server Alias:** iPO
- NAT Adaption:** Disabled
- Registrar:** 10.10.40.20
- Outbound Proxy:** 10.10.40.20
- Reregistration time (s):** 600
- SIP Session Timers:** Disabled
- Session Timer Value (s):** 1800
- SIP Transport:** TCP
- Signal TCP Source Port:** Enabled
- Use One TCP Connection per SIP Extension:** Enabled
- RTP from own base station:** Disabled
- Keep Alive:** Enabled
- Show Extension on Handset Idle Screen:** Enabled
- Attended Transfer Behaviour:** Do not hold 2nd call
- DTMF Signaling:** SIP INFO
- Codec Priority:** G711A, G711U, G728
- RTP Packet Size:** 20 ms
- Secure RTP:** Disabled
- Secure RTP Auth:** Disabled
- S RTP Crypto Suites:** AES_CM_128_HMAC_SHA1_32, AES_CM_128_HMAC_SHA1_80

Buttons for 'Add Server', 'Remove Server', 'Reset Codecs', and 'Remove' are visible at the bottom of the configuration area.

6.3. Configure DECT Users

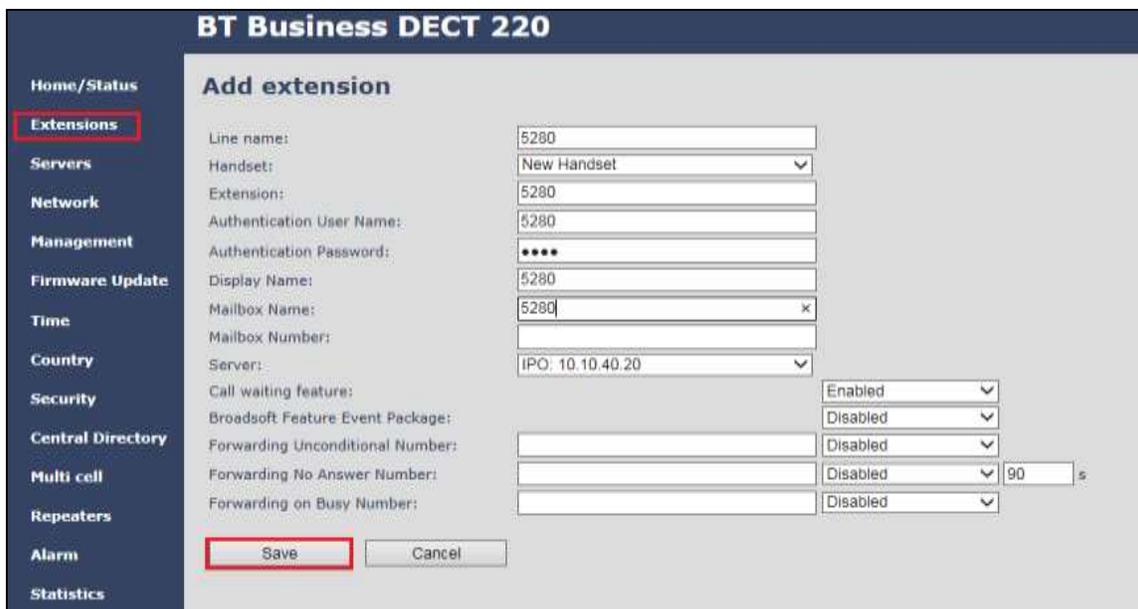
Select **Extensions** in the left column and select **Add extension**, as shown below.



The following information must all be filled in correctly.

- **Line name** Suitable name for the new extension
- **Handset** **New Handset**
- **Authentication User Name** The IP Office user number setup in **Section 5.3**
- **Authentication Password** The password for the IP Office user setup in **Section 5.3**
- **Display Name** The name displayed on the DECT handset
- **Mailbox Name** This must be entered as the extension number of the DECT
- **Server** The IP Office server configured in **Section 6.2**
- **Call waiting feature** **Enabled** if call waiting is a priority

Click on **Save** at the bottom of the screen.



6.4. Register the DECT Handset

The DECT handsets each register with the DECT base station. These handsets communicate via DECT to the DECT base station. The DECT base station registers with Avaya IP Office where each DECT handset is setup as a SIP user. To register the DECT handset with the DECT base station tick the two boxes opposite the DECT user or handset to be registered. Click on **Register Handset(s)**, at the bottom of the screen.

The screenshot shows the 'Extentions' page in the BT Business DECT 220 interface. A table lists 10 handsets with columns for Idx, IPEI, Handset State, Handset Type, FW Info, EWI Progress, VoIP Idx, Extension, Display Name, Server, Server Alias, and State. The 'VoIP Idx' column has checkboxes for each handset, and the 'Register Handset(s)' button at the bottom is highlighted with a red box.

Idx	IPEI	Handset State	Handset Type	FW Info	EWI Progress	VoIP Idx	Extension	Display Name	Server	Server Alias	State
<input checked="" type="checkbox"/>	FFFFFFFFF					<input checked="" type="checkbox"/>	5280	5280	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586D3					<input type="checkbox"/>	5281	5281	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E2					<input type="checkbox"/>	5282	5282	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E3					<input type="checkbox"/>	5283	5283	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E4					<input type="checkbox"/>	5284	5284	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E5					<input type="checkbox"/>	5285	5285	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E6					<input type="checkbox"/>	5286	5286	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E7					<input type="checkbox"/>	5287	5287	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E8					<input type="checkbox"/>	5288	5288	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E9					<input type="checkbox"/>	5289	5289	10.10.40.20	IPO	

Buttons at the bottom: [Check All / Uncheck All](#), [Check All Extensions / Uncheck All Extensions](#), [With selected: Delete Handset\(s\) Register Handset\(s\) Deregister Handset\(s\) Start SIP Registration\(s\) SIP Delete Extension\(s\)](#)

The screen shows the **Handset State** as **Enabled**. The handset can now be registered using the menu on the DECT handset.

The screenshot shows the 'Extentions' page in the BT Business DECT 220 interface. The 'Handset State' column for the first handset (Idx 1) is now 'Enabled', highlighted with a red box. The 'Register Handset(s)' button at the bottom is also highlighted with a red box.

Idx	IPEI	Handset State	Handset Type	FW Info	EWI Progress	VoIP Idx	Extension	Display Name	Server	Server Alias	State
<input type="checkbox"/>	FFFFFFFFF	Enabled				<input type="checkbox"/>	5280	5280	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586D3					<input type="checkbox"/>	5281	5281	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E2					<input type="checkbox"/>	5282	5282	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E3					<input type="checkbox"/>	5283	5283	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E4					<input type="checkbox"/>	5284	5284	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E5					<input type="checkbox"/>	5285	5285	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E6					<input type="checkbox"/>	5286	5286	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E7					<input type="checkbox"/>	5287	5287	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E8					<input type="checkbox"/>	5288	5288	10.10.40.20	IPO	
<input type="checkbox"/>	0276A586E9					<input type="checkbox"/>	5289	5289	10.10.40.20	IPO	

Buttons at the bottom: [Check All / Uncheck All](#), [Check All Extensions / Uncheck All Extensions](#), [With selected: Delete Handset\(s\) Register Handset\(s\) Deregister Handset\(s\) Start SIP Registration\(s\) SIP Delete Extension\(s\)](#)

Navigate to **Connectivity** and **Register**. Select a new registration slot (called **Empty**) and click OK. Enter the correct **Access Code** and click OK and the device should now be registered to the base station.

Register handset

- Register handset
- Access code "0000"
- Press "OK"

When the handset is registered to the base station the following should appear on the **Extensions** screen. **Handset State** should display **Present** and the **State** column should show as **SIP Registered**.

BT Business DECT 220											
Extensions											
Add column Show Information											
	Idx	IPFI	Handset State	Handset Type FW Info	EWI Progress	VoIP IdA	Extension	Display Name	Server	Server Alias	State
<input type="checkbox"/>	1	0276A58604	Present@RPH04	310 325.15	0%	<input type="checkbox"/>	5280	5280	10.10.40.20	IPO	SIP Registered@RPH04
<input type="checkbox"/>	2	0276A58603				<input type="checkbox"/>	5281	5281	10.10.40.20	IPO	
<input type="checkbox"/>	3	0276A58602				<input type="checkbox"/>	5282	5282	10.10.40.20	IPO	
<input type="checkbox"/>	4	0276A58605				<input type="checkbox"/>	5283	5283	10.10.40.20	IPO	
<input type="checkbox"/>	5	0276A58603				<input type="checkbox"/>	5284	5284	10.10.40.20	IPO	
<input type="checkbox"/>	6	0276A58601				<input type="checkbox"/>	5285	5285	10.10.40.20	IPO	
<input type="checkbox"/>	7	0276A58604				<input type="checkbox"/>	5286	5286	10.10.40.20	IPO	
<input type="checkbox"/>	8	0276A58605				<input type="checkbox"/>	5287	5287	10.10.40.20	IPO	
<input type="checkbox"/>	9	0276A58603				<input type="checkbox"/>	5288	5288	10.10.40.20	IPO	
<input type="checkbox"/>	10	0276A58607				<input type="checkbox"/>	5289	5289	10.10.40.20	IPO	

Check All / Uncheck All Check All Extensions / Uncheck All Extensions

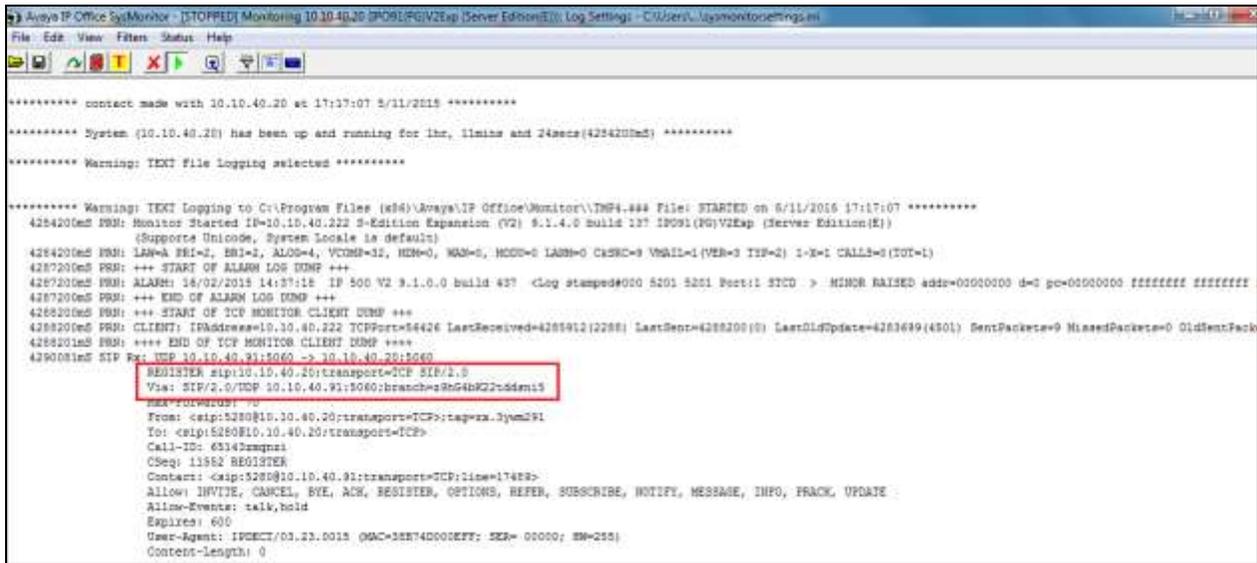
WIP select(w) Delete Handset(s) Register Handset(s) Deregister Handset(s) Start SIP Registration(s) SIP Delete Extension(s)

7. Verification Steps

The following steps can be taken to ensure that connections between Fijowave Business DECT and IP Office are up.

7.1. IP Office Registration

Open the IP Office Monitor and ensure that the filters show the SIP registration messages. When the DECT handset is started the monitor should display the correct registration messages to show that the DECT handset has registered correctly with the IP Office.



```
Avaya IP Office SysMonitor - [STOPPED] Monitoring 10.10.40.20 (PO91) (V2Exp (Server Edition)) - Log Settings - C:\Users\...ipmonitocettings.m...
File Edit View Filter Status Help
***** contact made with 10.10.40.20 at 17:17:07 5/11/2015 *****
***** System (10.10.40.20) has been up and running for 1hr, 11mins and 24secs(425420ms) *****
***** Warning: TEXT File Logging selected *****

***** Warning: TEXT Logging to C:\Program Files (x86)\Avaya\IP Office\Monitor\TMF4-### File: STARTED on 5/11/2015 17:17:07 *****
425420ms PM: Monitor Started IP=10.10.40.222 S-Edition Expansion (V2) 8.1.4.0 build 137 IP091(PG)V2Exp (Server Edition(E))
(Supports Unicode, System Locale is default)
425720ms PM: LAN=1 ETH=2, ETH=3, ALGO=4, VCMB=31, HSM=0, WAB=0, HODD=0 LASH=0 CASHC=0 VMAIL=1 (VER=3 TYP=2) I-X=1 CALLS=0 (TOT=1)
425720ms PM: *** START OF ALARM LOG DUMP ***
425720ms PM: ALARM: 14/02/2015 14:27:18 IP 500 V2 8.1.0.0 build 437 <Log stamped#020 S101 S201 Ser:11 STCD > MINOR RAISED addr=03020300 d=0 pc=03020300 #####
425720ms PM: *** END OF ALARM LOG DUMP ***
425820ms PM: *** START OF TCP MONITOR CLIENT DUMP ***
425820ms PM: CLIENT: IPAddress=10.10.40.222 TCPPort=54426 LastReceived=4255912(2288) LastSent=4258200(0) LastDLUpdate=4261689(4501) SentPackets=9 MissedPackets=0 OldSentPac
425820ms PM: *** END OF TCP MONITOR CLIENT DUMP ***
429008ms SIP Rx: UDP 10.10.40.21:5060 -> 10.10.40.20:5060
REGISTER sip/10.10.40.20:transport=TCP SIP/1.0
Via: SIP/2.0/TCP 10.10.40.21:5060;branch=8264b922-5d4e15
Max-Forwards: 70
From: <sip:5280@10.10.40.20:transport=TCP>;tag=zx.3ym291
To: <sip:5280@10.10.40.20:transport=TCP>
Call-ID: 63142mqnzi
CSeq: 11562 REGISTER
Contact: <sip:5280@10.10.40.21:transport=TCP;line=17428>
Allow: INVITE, CANCEL, BYE, ACK, REGISTER, OPTIONS, REFER, SUBSCRIBE, NOTIFY, MESSAGE, INFO, FRACK, UPDATE
Allow-Events: talk,hold
Expires: 600
User-Agent: IPDECT/03.23.0015 (MAC=3E74D000EFF; SER= 00000; EM=255)
Content-Length: 0
```

7.2. Fijowave DECT Registration

To verify that Fijowave DECT handsets are registered to the Fijowave base station correctly click on **Extensions** in the left column and the main window would show the **Handset State** column set to **Present** and the **State** column set to **SIP Registered**.



Idx	IPPI	Handset State	Handset Type FW Info	FWU Progress	VoIP Idx	Extension	Display Name	Server	Server Alias	State
1	02531G000A	Present@RP104	310 323.15	0%	1	5280	5280	10.10.40.20	IPO	SIP Registered@RP104
2	0276A586D0				2	5281	5281	10.10.40.20	IPO	
3	0276A586E2				3	5282	5282	10.10.40.20	IPO	
4	0276A586E6				4	5283	5283	10.10.40.20	IPO	
5	0276A586E8				5	5284	5284	10.10.40.20	IPO	
6	0276A586E4				6	5285	5285	10.10.40.20	IPO	
7	0276A586E4				7	5286	5286	10.10.40.20	IPO	
8	0276A586E6				8	5287	5287	10.10.40.20	IPO	
9	0276A586E8				9	5288	5288	10.10.40.20	IPO	
10	0276A586E7				10	5289	5289	10.10.40.20	IPO	

The DECT handset shows that the extension is registered and there are no error messages.



8. Conclusion

These Application Notes describe the configuration steps required for provisioning Fijowave's Business DECT to interoperate with Avaya IP Office 500 V2 R9.1 by registering the Fijowave handsets with IP Office as SIP phones. Please refer to **Section 2.2** for test results and observations.

9. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at <http://support.avaya.com> where the following documents can be obtained.

Product documentation for Avaya products may be found at <http://support.avaya.com>.

- [1] Avaya IP Office R9.1 Manager 10.1, Document Number 15-601011
- [2] Avaya IP Office R9.1 Doc library

Technical support for the Fijowave Business DECT product can be obtained as follows:

- Web: <http://www.fijowave.com>
- Email: mail@fijowave.com
- Help desk: +353 1 525 3072

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