

Spectralink IP-DECT Server 200/400/6500
Spectralink Virtual IP-DECT Server One

Dstny

Interoperability Guide

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Chapter 1: About This Guide

This guide describes how to configure a Spectralink IP-DECT Server 200/400/6500 or a Virtual IP-DECT Server One for connecting to the Dstny Gateway.

In the following the servers will be referred to as “Spectralink IP-DECT Server”.

This guide is intended for qualified technicians and the reader is assumed to have a basic knowledge about the Spectralink IP-DECT Server and Dstny. It is also assumed, that you have an installed and functioning Spectralink IP-DECT Server.

The guide is divided into two parts:

- Dstny
- Spectralink IP-DECT Server

Each part describes the general configuration and the user administration.

Environment Information

- Dstny – <https://www.dstny.com/>.
- Spectralink IP-DECT Server 200/400/6500 (must have firmware version PCS 22BA or newer).
- Spectralink Virtual IP-DECT Server One (must have firmware PCS 22BA or newer).
- Spectralink DECT Handsets 72x2, 75x2, 76x2, 77x2 (must have firmware PCS 22BA or newer).
- Spectralink network and security requirements - see description of communication ports for the relevant server in the Server Installation and Configuration Guide.

Related Documentation

All Dstny technical configuration and system administration documents are available at <https://mizone.telepo.com/home>.

All Spectralink documents are available at <http://support.spectralink.com/>.

Spectralink Documentation

Subject	Documentation
Spectralink DECT Handsets	For more information about the handset, refer to the user guide available online at http://support.spectralink.com/products .
Site Survey Function in Handset	For more information about the site survey function in handset, refer to the guide available online at http://support.spectralink.com/products .

Subject	Documentation
Synchronization and Deployment Guide	For more information about synchronization and deployment, refer to the guide available online at http://support.spectralink.com/products .
Spectralink IP-DECT Server	For more information about the server, refer to the guide available online at http://support.spectralink.com/products .
Provisioning	For more information about provisioning, refer to the guide available online at http://support.spectralink.com/products .
Spectralink Technical Bulletins	Available online at http://support.spectralink.com/products .
Release Notes	Document that describes software changes, bug fixes, outstanding issues, and hardware compatibility considerations for new software releases. Available online at http://support.spectralink.com/products .
Spectralink DECT Training material	In order to gain access to the Spectralink training material, you must attend training and become Spectralink Certified Specialist. Please visit http://partneraccess.spectralink.com/training/classroom-training for more information and registration.

Chapter 2: Feature List

The following features are supported:

	<i>Supported features</i>
Telephony	<ul style="list-style-type: none">• Basic Calling• Call Hold• Call Transfer• Call Waiting• Caller Forward (all endpoints)• Music on Hold (MOH)• Call Completed Elsewhere• Message Waiting Indication (MWI)
User experience	<ul style="list-style-type: none">• Centralized phone book via Active Directory and LDAP• SIP URI Support Phone Book (75x2, 76x2, 77x2 only)

Chapter 3: Configuration and Feature Details

<i>Supported features</i>	<i>Description/Setting</i>
Basic Calling	Allows user to make and answer calls.
Call Hold	Allows user to place active calls on hold.
Call Transfer (warm, blind)	Allows user to transfer the active call to some other number.
Speed Dial	Assign a number to one of the speed-dialing keys.
Call Waiting	Allows user to answer another incoming call when already in an active call. For more information, see Configuration > SIP > Call status and parameter description in the web-based Administration Page of the server.
Call Forwarding	Allows the user to: <ul style="list-style-type: none">• Call forward unconditional - enable Enable Call forward unconditional by dialing this code *21*, followed by the desired extension (\$ = extension) and #. E.g.: *21*\$#• Call forward unconditional - disable Disable Call forward unconditional by dialing this code #21#. For more information, see " Enabling Feature Codes ".
Music on Hold (MOH)	Play music to callers on hold.
Centralized Phonebook	Supports integration with LDAP and pulls contact names, numbers, titles and other information to form a phonebook. There is also an option to generate a local phonebook from the IP-DECT server, using only DECT handset numbers, if no LDAP server is configured.
Message Waiting Indication (MWI)	Notifies users that they have a new or unheard voice mail message.

Chapter 4: Dstny

Each individual DECT handset must be assigned to a Dstny user extension. Spectralink DECT Handsets have to be configured as 3rd party SIP phones in the BCS portal.

Activating a Third-Party SIP Phone in BCS

To activate a 3rd party phone in BCS, do the following:

- 1 Access the BCS Portal, navigate to the **User details** page, and then go to the **Personal phones** section.

3rd party SIP phone

Enable 3rd party SIP phone

Username device.tracy.robinson@thecompany.com

Password *****

Retype password *****

Reset password

Appear as Analog phone Desk phone

- 2 Tick the **Enable 3rd party SIP phone** checkbox.
- 3 Set up a new password.
- 1 Click **Save** at the bottom of the page to save your settings.

Chapter 5: Spectralink IP-DECT Server

Below is a description of how to configure the Spectralink IP-DECT Server and how to add users and handsets to the system.



Note:

It is assumed that you have installed and configured the Spectralink IP-DECT Server solution including deployment and administration of base stations before continuing the configuration described below.

You can access the web-based Administration Page of the Spectralink IP-DECT Server through a standard web browser by entering the IP address discovered by UPnP, along with the username and password.

- Default username of the system is: **admin**
- Default password of the system is: **admin**

For configuration required to integrate Spectralink IP-DECT Server 200/400/6500 or Virtual IP-DECT Server One with Dstny you will need information about IPEI of the handset and ARI of the server:

You can identify the unique ARI number on the server in the following ways:

- Spectralink IP-DECT Server 6500: See label on the bottom of the server.
- Spectralink IP-DECT Server 200/400: See label on the rear side of the server.
- Spectralink IP-DECT Server 200/400/6500 and Virtual IP-DECT Server One: From the web-based **Administration Page > Status > Wireless Server**.

You can identify the unique IPEI number on a handset in two ways:

- From the handset: **Menu > Status > General**
- From label by removing the battery cover and battery

Configuring the Spectralink IP-DECT Server

Basic Network Settings

Basic network settings can be obtained the following ways:

- From a DHCP server
Using DHCP the device requests and obtains an available IP address from a DHCP server. The device also obtains other parameters such as the default gateway, subnet mask, DNS server, Time server and other IP parameters from the DHCP server.

- Entered manually through web-based **Administration Page > Configuration > General > General Configuration** page.

Using manual network configuration, the IP-addresses and other networking parameters are entered manually through the web-based Administration Page.

Recommended Network Configuration

When configuring a Spectralink IP-DECT Server solution, Spectralink recommends doing it the following way:

- Spectralink IP-DECT Server 200/400/6500 and Virtual IP-DECT Server One using a static IP address

This is to avoid sudden change of the IP address which would temporarily affect all base stations and thus the entire installation.

- Spectralink DECT Media Resources using a static IP address

Like with the servers, this is to avoid sudden change of the IP address.

- Spectralink IP-DECT Base Stations using DHCP

This makes it easy to manage many base stations without having to keep track of many IP addresses.



Note:

When the base stations are set up to DHCP, you can use UPnP to discover all the Wireless devices on the local network. In Windows Explorer the devices will appear under **Network** and **Other Devices** as “<device name>-<Serial number>“ (e.g. KWS6500-8442621, MR6500-84532341).



Note:

Spectralink IP-DECT Base Stations, Spectralink DECT Media Resources can be managed from the web-based Administration Page of the Spectralink IP-DECT Server.

To discover the IP address of an IP-DECT Server, you can use a handset that is subscribed to the system. Dial ***999*00 + Off Hook key, and the handset will display the IP address of the server.

If the Spectralink IP-DECT Server 6500 solution is configured as recommended above, it is possible to assign options to the DHCP server making it extremely easy to configure all media resources and base stations. If the Spectralink IP-DECT Server is configured using DHCP, it is necessary to assign a reservation for the device on the DHCP server.

SIP Settings

The Spectralink IP-DECT Server requires a few SIP settings to be adjusted in order to connect properly to the Dstny Gateway.

**Note:**

SIP settings not mentioned below should be left at their default values.

To modify the SIP settings from the web-based Administration Page:

- 2 Click **Configuration**, and then click **SIP**.
- 3 Modify the settings below.

<i>Field</i>	<i>Setting</i>
SIP Configuration - General	
Local port	5061
Transport	TLS
DNS method	A records
Default domain	Enter your organization's domain.
NAT keepalive	CRLF (rfc5626) [TCP only]
SIP Configuration - Proxies	
Proxies	Set Proxy 1 to your Dstny Outbound Proxy IP Address Note: Proxy URL provided by Dstny.
SIP Configuration - Media	
Codec priority	Codec AAL2-G726-32/8000 is not supported and it should be removed from the codec priority list.

Example of SIP configuration:

SIP Configuration

General			
Local port *	<input type="text" value="5061"/>		
Transport *	<input type="text" value="TLS"/>		
DNS method *	<input type="text" value="A records"/>		
Default domain *	<input type="text" value="Organisational Domain Name"/>		
NAT keepalive	<input type="text" value="CRLF (rfc5626) [TCP only]"/>		
Proxies			
	Priority	Weight	URI
Proxy 1	<input type="text" value="1"/>	<input type="text" value="100"/>	<input type="text" value="SIP:Service provider proxy name"/>
	1:	<input type="text" value="PCMU/8000"/>	<input type="text" value=""/>
	2:	<input type="text" value="PCMA/8000"/>	<input type="text" value=""/>
	3:	<input type="text" value="None"/>	<input type="text" value=""/>
	4:	<input type="text" value="None"/>	<input type="text" value=""/>
	5:	<input type="text" value="None"/>	<input type="text" value=""/>
	6:	<input type="text" value="None"/>	<input type="text" value=""/>
Codec priority *			

- 4 Click **Save**, and then reboot the system.

Enabling Feature Codes

The advanced feature, **Call forward unconditional**, is accessed by dialing special feature codes from the DECT handsets. To provide access to the **Call forward unconditional** feature, the feature codes must be enabled.

To Enable Feature Codes from the Web-Based Administration Page

- 1 Go to **Configuration -> Wireless Server**
- 2 Under **Feature Codes**, do the following:

Field	Setting
Wireless Server Configuration - Feature codes	
Enable (Optional)	Enable this to make the server react to the feature codes.
Call forward unconditional (DECT endpoints only) - enable (Optional)	<p>Enable Call forward unconditional by dialing this code *21*, followed by the desired extension (\$ = extension) and #.</p> <p>E.g.: *21*\$#</p> <p>Note: It is possible to change the code *21* on the server to fit your standard. For more information, see the relevant documentation available at http://support.spectralink.com/products.</p>
Call forward unconditional – disable (Optional)	Disable Call forward unconditional by dialing this code #21# .

Feature codes	
Enable	<input type="checkbox"/>
Call forward unconditional - enable	<input type="text" value="*21*\$#"/>
Call forward unconditional - disable	<input type="text" value="#21#"/>

- 3 Click **Save**.

Enabling Message Waiting Indication

You can enable MWI in order to be notified of the presence of any new voicemail messages.

To Enable MWI from the Web-Based Administration Page

- 1 Go to **Configuration -> SIP**
- 2 Under **Message waiting indication**, do the following:

Field	Setting
SIP Configuration – Message waiting indication	
Enable indication (Optional)	If enabled, MWI is displayed in the handset.
Enable subscription (Optional)	If enabled, you can subscribe to MWI indications from the SIP proxy.
Subscription expire (sec)	Enter the number of seconds before MWI subscription will be renewed. Default value: 3600 sec

Message waiting indication	
Enable indication	<input checked="" type="checkbox"/>
Enable subscription	<input checked="" type="checkbox"/>
Subscription expire(sec) *	<input type="text" value="3600"/>

- 3 Click **Save**.

Adding Users and Handsets

Each individual DECT handset/user must be added to the Spectralink IP-DECT Server and also on to the BCS Portal. This section describes how to add the handsets to the Spectralink IP-DECT Server.

To Add Users to the Spectralink IP-DECT Server from the Web-Based Administration Page

- 1 Click **Users**, click **List Users**, and then click **New**.
- 2 Enter the required information:

<i>Field</i>	<i>Setting</i>
DECT device	
IPEI (Optional)	<p>If a specific handset is being subscribed for this extension, enter the IPEI number of the actual handset. (The IPEI number is readable from the label on the product). If this is not the case this field can be left empty and it will auto-fill when the handsets subscribe.</p> <p>Note: A SIP REGISTER will not be sent before there is an IPEI number present.</p>
Access code (Optional)	<p>Administrators can define a system wide or individual access code as extra wireless security during the subscription process.</p> <p>Note: Some third-party phones may need an Access code to register to the Spectralink IPDECT/DECT/Virtual IP-DECT Server.</p>
Configuration group (Optional)	<p>If using handset configuration, enter the Group ID of the Configuration Group.</p>
User	
Standby text (Optional)	<p>Standby text is a fixed label shown in the top left part of the screen on the DECT handset when in idle state.</p> <p>E.g.: Ext 101, John Smith</p> <p>Note: Disallowed characters: <>\"</p> <p>Note: This feature is only available if Spectralink DECT handsets are being used. If third-party DECT handsets are being subscribed, this feature is not supported.</p>
Disabled (Optional)	<p>If enabled, the user is disabled.</p> <p>Ensure that this is not enabled.</p> <p>Note: A disabled user cannot make calls from the handset.</p>
DECT to DECT (Optional)	<p>If enabled, the user will only be able to call, and be called from, other users that are subscribed to the same IP-DECT server; the user cannot communicate externally.</p>
SIP	
Username/Extension	<p>Enter the Dstny Username provided with the SIP Settings for the extension.</p> <p>Note: Allowed characters: a-z, A-Z, 0-9, -_!~*()&=+\$.;?/</p>
Secondary username (Optional)	<p>If defined, the Secondary username can be used to make voice calls in case the connection to the SIP PBX is lost. The Secondary username must be globally unique.</p> <p>Note: Allowed characters: a-z, A-Z, 0-9, -_!~*()&=+\$.;?/</p> <p>In some PBXs there is a mapping between username and number (e.g. Username = hz2539jk, Number = 1234). If the connection to the SIP PBX is lost, then it is possible to make the mapping internally by defining a Secondary username.</p>
Domain (Optional)	<p>Enter the domain part of a SIP URI.</p> <p>Note: Allowed characters: a-z, A-Z, 0-9, .-</p>

<i>Field</i>	<i>Setting</i>
	Note: If not configured, the default domain entered under SIP configuration will be used.
Display name (Optional)	The name of the user can be entered here (or the same as entered as Standby Text). E.g.: Ext 101, John Smith Note: Disallowed characters: <>\"
Authentication user	Enter the Dstny Authorization ID provided with the SIP Settings for the extension. Note: Disallowed characters: <>\"
Authentication password	Enter the Dstny Password provided with the SIP Settings for the extension. Note: Disallowed characters: <>\"
Features	
Call forward unconditional	A Call Forward Unconditional can be added/removed via the web-based Administration Page. Note: Allowed characters: a-z, A-Z, 0-9, -_!~*()'&=+\$,;?/
Admin rights (Optional)	If enabled, the user becomes an admin rights user with the ability to replace a broken handset.

User

DECT device

Product name
Model number
Software part number
Firmware
IPEI
Access code

User

Standby text
DECT to DECT
Disabled
Phone Language ▼

SIP

Username / Extension *
Secondary username
Domain
Proxy
Displayname
Authentication user
Authentication password

Features

Call forward unconditional
Admin rights

*) Required field

- 3 The required fields are:
 - a. Username / Extension
 - b. Authentication User
 - c. Authentication Password
- 4 Click **Save**.
- 5 When the users have been added to the Spectralink IP-DECT Server, the handsets must be DECT subscribed in order to be able to communicate with the Spectralink IP-DECT Server. Please refer to the relevant handset documentation for this.

**Note:**

You can subscribe up to 12 handsets for Spectralink IP-DECT Server 200, up to 60 handsets for Spectralink IP-DECT Server 400, or up to 4096 handsets for both Spectralink IP-DECT Server 6500 and Virtual IP-DECT Server One to register to Dstny; typically, the same number of users configured with Existing Devices.

**Note:**

To check if your phone is online after manual provisioning, go to Admin Portal > **Phone System** > **Phones & Devices** > **User Phones**. Your phone is online when you see a Green Check User.

User	Displayname	IPEI	Handset	Firmware	Registration
device.anma	Andy	05003 0522863			✓
device.brwe	Brian	05003 0745087	Spectralink 7202	22B	✓
device.dini	Dion	05003 0749626	Spectralink 7642	22B	✓
device.jala	Jacob	05003 0746031	Spectralink 7212	22B	✓