

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

# Microsoft Teams

## Integration Guide

## Copyright Notice

© 2023 Spectralink Corporation All rights reserved. Spectralink™, the Spectralink logo and the names and marks associated with Spectralink's products are trademarks and/or service marks of Spectralink Corporation and are common law marks in the United States and various other countries. All other trademarks are property of their respective owners. No portion hereof may be reproduced or transmitted in any form or by any means, for any purpose other than the recipient's personal use, without the express written permission of Spectralink.

All rights reserved under the International and pan-American Copyright Conventions. No part of this manual, or the software described herein, may be reproduced or transmitted in any form or by any means, or translated into another language or format, in whole or in part, without the express written permission of Spectralink Corporation.

Do not remove (or allow any third party to remove) any product identification, copyright or other notices.

## Notice

Spectralink Corporation has prepared this document for use by Spectralink personnel and customers. The drawings and specifications contained herein are the property of Spectralink and shall be neither reproduced in whole or in part without the prior written approval of Spectralink, nor be implied to grant any license to make, use, or sell equipment manufactured in accordance herewith.

Spectralink reserves the right to make changes in specifications and other information contained in this document without prior notice, and the reader should in all cases consult Spectralink to determine whether any such changes have been made.

NO REPRESENTATION OR OTHER AFFIRMATION OF FACT CONTAINED IN THIS DOCUMENT INCLUDING BUT NOT LIMITED TO STATEMENTS REGARDING CAPACITY, RESPONSE-TIME PERFORMANCE, SUITABILITY FOR USE, OR PERFORMANCE OF PRODUCTS DESCRIBED HEREIN SHALL BE DEEMED TO BE A WARRANTY BY SPECTRALINK FOR ANY PURPOSE, OR GIVE RISE TO ANY LIABILITY OF SPECTRALINK WHATSOEVER.

## Warranty

The Product Warranty and Software License and Warranty and other support documents are available at <http://support.spectralink.com/>.

## Contact Information

### US Location

+1 800-775-5330

Spectralink Corporation  
2560 55th Street  
Boulder, CO 80301  
USA

[info@spectralink.com](mailto:info@spectralink.com)

### Denmark Location

+45 7560 2850

Spectralink Europe ApS  
Bygholm Soepark 21 E Stuen  
8700 Horsens  
Denmark

[infoemea@spectralink.com](mailto:infoemea@spectralink.com)

### UK Location

+44 1344 206591

Spectralink Europe UK  
The Lightbox, Willoughby  
Rd, Bracknell, RG12 8FB  
United Kingdom

[infoemea@spectralink.com](mailto:infoemea@spectralink.com)

# Contents

<b>Chapter 1: About This Guide</b> .....	<b>4</b>
Environment Information .....	4
Related Documentation.....	6
<b>Chapter 2: Feature List</b> .....	<b>7</b>
<b>Chapter 3: Configuration and Feature Details</b> .....	<b>8</b>
<b>Chapter 4: Spectralink IP-DECT Server</b> .....	<b>10</b>
Configuring the Spectralink IP-DECT Server .....	10
<b>Chapter 5: Handset onboarding and Sign-in</b> .....	<b>19</b>
Handset onboarding.....	19
Local and Remote Sign-in.....	21
Teams Admin Center Sign-in.....	25
<b>Chapter 6: Handset Sign-out</b> .....	<b>29</b>
<b>Chapter 7: Migrating from other systems to Microsoft Teams</b> ....	<b>31</b>

# 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 integrating the Microsoft Teams 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 Microsoft Teams. It is also assumed, that you have an installed and functioning Spectralink IP-DECT Server and an active Microsoft Teams account.

The guide is divided into two parts:

- Spectralink IP-DECT Server
- Handset onboarding and sign-in

Each part describes the general configuration and the user administration.

## Environment Information

- Microsoft Teams - Navigate to the [Microsoft documentation](#) site for the latest Microsoft documentation.
- Spectralink IP-DECT Server 200/400/6500 (must have firmware version PCS22Aa or newer)
- Spectralink Virtual IP-DECT Server One (must have firmware version PCS22Aa or newer)
- Spectralink DECT Handsets 72x2, 75x2, 76x2, 77x2 (must have firmware PCS22Ab or newer)
- Spectralink network and security requirements - see description of communication ports for the relevant server in the Server Installation and Configuration Guide.

### Spectralink prerequisites

Microsoft Teams integration is supported exclusively on PP7 handset models (72x2, 75x2, 76x2, 77x2), and the following servers: Spectralink IP-DECT Server 200/400/6500 and Spectralink Virtual IP-DECT Server One.

End of life KIRK base stations, 7xx0 and Butterfly DECT Handset models are not supported.

## Microsoft prerequisites

There is no additional cost for organizations to use SIP Gateway, and any users meeting the following requirements can use SIP Gateway:

- Users must be licensed for [Teams Phone](#) (via any Office 365 E5, Microsoft 365 license that includes Teams Phone, or as a standalone license)
- SIP devices for calls must be enabled in the calling policy the user has assigned
- PSTN numbers must be assigned in the Teams Admin Center (TAC)
- No proxies are allowed

For information on ports, whitelisting of IP addresses and more, refer to the Microsoft documentation available online at: <https://docs.microsoft.com/en-us/microsoftteams/sip-gateway-configure>

## Related Documentation

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 <a href="http://support.spectralink.com/products">http://support.spectralink.com/products</a> .
Synchronization and Deployment Guide	For more information about synchronization and deployment, refer to the guide available online at <a href="http://support.spectralink.com/products">http://support.spectralink.com/products</a> .
Spectralink IP-DECT Server	For more information about the server, refer to the guide available online at <a href="http://support.spectralink.com/products">http://support.spectralink.com/products</a> .
Provisioning	For more information about provisioning, refer to the guide available online at <a href="http://support.spectralink.com/products">http://support.spectralink.com/products</a> .
Spectralink Technical Bulletins	Available online at <a href="http://support.spectralink.com/products">http://support.spectralink.com/products</a> .
Release Notes	Document that describes software changes, bug fixes, outstanding issues, and hardware compatibility considerations for new software releases. Available online at <a href="http://support.spectralink.com/products">http://support.spectralink.com/products</a> .
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 <a href="http://partneraccess.spectralink.com/training/classroom-training">http://partneraccess.spectralink.com/training/classroom-training</a> for more information and registration.

# Chapter 2: Feature List

The following features are supported:

	<i>Supported features</i>
<i>Telephony</i>	<ul style="list-style-type: none"><li>• Make and receive basic calls</li><li>• Message Waiting Indication (MWI) and voice mail access</li><li>• Caller ID</li><li>• Call Hold and Resume</li><li>• Call Transfer (blind, semi-attended, attended)</li><li>• Call Forwarding</li><li>• Call Waiting</li><li>• Local Do Not Disturb (DND)</li><li>• DTMF tones</li><li>• Music on Hold (MOH)</li><li>• Shared Line</li></ul>
<i>User experience</i>	<ul style="list-style-type: none"><li>• Centralized Phonebook via LDAP</li><li>• Local Phonebook generated from user data</li><li>• Call Completed Elsewhere</li><li>• Available Status / In-call presence indication</li></ul>
<i>Management/Administration</i>	<ul style="list-style-type: none"><li>• Remote sign-out and re-onboarding through the IP-DECT server web interface</li><li>• Auto check sync configuration</li><li>• Handset sign-in using web sign-in, with the verification code being acquired directly on the DECT handset, or through the Teams Admin Center (TAC)</li></ul>
<i>Security</i>	<ul style="list-style-type: none"><li>• Secure Voice - TLS 1.2</li></ul>
<i>Value added Spectralink features</i>	<ul style="list-style-type: none"><li>• AMIE integration</li><li>• Centralized management and provisioning via DECT server management capability</li><li>• Multi-language (on handsets)</li><li>• Microsoft Teams logo expose</li></ul>

# Chapter 3: Configuration and Feature Details

Supported features	Description/Setting
Make and receive basic calls	Allows user to make and answer calls.
Message Waiting Indication (MWI) and voice mail access	Notifies the user when a new voice message has been received. Access voice messages by dialing your own number or SIP address.
Caller ID	Display Caller ID information for incoming and outgoing calls.
Call Hold and Retrieve	Allows user to place active calls on hold.
Call Transfer (blind, semi-attended, attended)	Allows user to transfer the active call to some other number.
Call Forwarding	<p>Allows the user to:</p> <ul style="list-style-type: none"><li>• Reset/disable call forwarding Disable call forwarding by dialing code <b>*32*</b>.</li><li>• Enable call forwarding Enable call forwarding by dialing code <b>*33*</b>, followed by the desired extension. E.g.: <b>*33*123456</b> will forward all calls 123456</li><li>• Custom timeout forwarding Enable call forwarding after a set number of seconds by dialing code <b>*34*</b>, followed by the desired number of seconds, and lastly the extension). E.g.: <b>*34*10*123456</b> will forward all calls to <b>123456</b> after 10 seconds Default timeout is 20 seconds.</li><li>• Simultaneous ring Enable the calling of a secondary extension after 20 seconds by dialing code <b>*35*</b>, followed by the desired extension. E.g.: <b>*35*123456</b> will ensure that both your extension and <b>123456</b> will ring simultaneously after 20 seconds.</li></ul> <p>For more information, see <a href="#">"Enabling Feature Codes"</a>.</p>
Call Waiting	<p>Allows user to answer another incoming call when already in an active call.</p> <p>The user can then choose to:</p> <ul style="list-style-type: none"><li>• Ignore the call waiting</li><li>• Decline the call waiting</li><li>• Accept the call waiting</li></ul> <p>If the user accepts the call, then they can toggle between the two calls or disconnect one of the two or both.</p>



<i>Supported features</i>	<i>Description/Setting</i>
Centralized Phonebook	<p>Supports integration with LDAP and pulls contact names, numbers, titles and other information to form a phonebook.</p> <p>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.</p>
Do Not Disturb (DND)	<p>Allows user to silence incoming calls.</p> <p>Note: The DND status is applied only on the handset. Other devices logged in with Teams will not be updated with the DND status.</p>
DTMF	Supports touch-tone feature codes.
Music on Hold (MOH)	Play music to callers on hold.
Presence	<p>Displays a locally handled presence status, such as:</p> <ul style="list-style-type: none"> <li>• A DND logo, signaling the DND state</li> <li>• An available state, which is shown on the handset's front screen, indicating a successful connection and registration to Microsoft Teams.</li> <li>• A yellow dot, signaling that the handset is currently in the on-boarding state</li> </ul>
Secure Voice - TLS 1.2	Encrypted call security.
Shared line	Supports SIP forking together with additional Microsoft Teams devices and/or soft clients

**Note:**

It is possible to make and receive calls, to and from: Microsoft Teams PC clients, Web clients, Phones or any other devices connected to the Microsoft SIP Gateway, and lastly PSTN (mobile phones or fixed lines).

The capability to make and receive calls will be dependent on how Microsoft Teams is set up.

# Chapter 4: Spectralink IP-DECT Server

Below is a description of how to configure the Spectralink IP-DECT Server and an overview of all the automatically configured fields changed in the Microsoft Teams provisioning process.



## 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**

The IP address can also be obtained by dialing \*\*\*999\*00 + Off-hook on handsets

## Configuring the Spectralink IP-DECT Server

### Infrastructure version requirements

To support the configuration described in this guide:

- Spectralink IP-DECT Server 200/400/6500 must have firmware version PCS22Aa or newer
- Spectralink Virtual IP-DECT Server One must have firmware version PCS22Aa or newer
- Spectralink DECT Handsets 72x2, 75x2, 76x2, 77x2 must have firmware PCS22Ab or newer

### License installation

In order to set up Microsoft Teams, you must first install a Microsoft Teams Integration license on your Spectralink IP-DECT Server.

Each Spectralink IP-DECT server must be fitted with a feature license:

<i>Licenses</i>	<i>Description</i>
1 Year MS Teams Direct integration (includes Software Assurance)   IP-DECT Server 400 12 Users (14232882)	Allows: Up to 12 users. Access to MS Teams Integration Software, Technical Support 8-5
1 Year MS Teams Direct integration (includes Software Assurance)   IP-DECT Server 400 +48 Users (14232883)	Allows: An additional 48 users. Access to MS Teams Integration Software, Technical Support 8-5
1 Year MS Teams Direct integration (includes Software Assurance)   IP-DECT Server 6500 30 Users (14232884)	Allows: Up to 30 users. Access to MS Teams Integration Software, Technical Support 8-5
1 Year MS Teams Direct integration (includes Software Assurance)   IP-DECT Server 6500 +150 Users (14232885)	Allows: An additional 150 users. Access to MS Teams Integration Software, Technical Support 8-5
1 Year MS Teams Direct integration (includes Software Assurance)   IP-DECT Server 6500 +500 Users (14232886)	Allows: An additional 500 users. Access to MS Teams Integration Software, Technical Support 8-5
1 Year MS Teams Direct integration (includes Software Assurance)   Virtual IP-DECT Server ONE 30 Users (14233237)	Allows: Up to 30 users. Access to MS Teams Integration Software, Technical Support 8-5
1 Year MS Teams Direct integration (includes Software Assurance)   Virtual IP-DECT Server ONE +150 Users (14233238)	Allows: An additional 150 users. Access to MS Teams Integration Software, Technical Support 8-5
1 Year MS Teams Direct integration (includes Software Assurance)   Virtual IP-DECT Server ONE +500 Users (14233239)	Allows: An additional 500 users. Access to MS Teams Integration Software, Technical Support 8-5
MS Teams perpetual Firmware Update License   IP-DECT Server 200 (14232887)	Allows: Access to MS Teams Integration Software, Technical Support 8-5

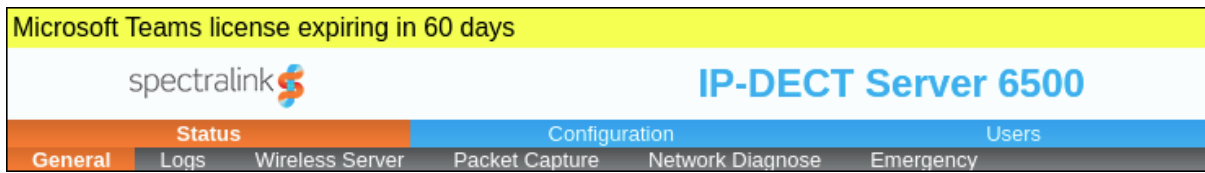
To order and install a Teams Integration license on your Spectralink IP-DECT Server, please consult the [License Ordering and Loading section of the Install and Configuration Guide](#).



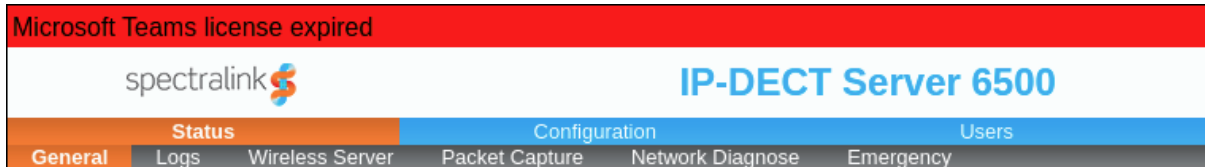
**Note:**

Microsoft Team licenses have an expire period of one year. When a license expires, subscriptions will be disabled, preventing the addition of new handsets on the server. Subscription can only be enabled again by loading a new Microsoft Teams license.

When 60 days or fewer are left until the license expires, a yellow warning banner will be displayed in the GUI.



Once the license has expired, a red banner will be displayed in the GUI.



## Microsoft Teams Settings

To setup Microsoft Teams from the web-based Administration Page

Go to **Configuration** -> **Teams** and input the following settings:

Field	Setting
<b>Provisioning</b>	
Method	<p>DHCP (default value): automatically get the Microsoft Teams provisioning server URL using DHCP option 160. This option needs to be configured on your DHCP server first.</p> <p>Static: manually enter the Microsoft Teams provisioning server URL according to your region</p> <ul style="list-style-type: none"> <li>• EMEA: <a href="http://emea.ipp.sdg.teams.microsoft.com/">http://emea.ipp.sdg.teams.microsoft.com/</a></li> <li>• Americas: <a href="http://noam.ipp.sdg.teams.microsoft.com/">http://noam.ipp.sdg.teams.microsoft.com/</a></li> <li>• APAC: <a href="http://apac.ipp.sdg.teams.microsoft.com/">http://apac.ipp.sdg.teams.microsoft.com/</a></li> </ul> <p>For more information on how to configure your SIP gateway, please consult the <a href="#">Gateway Configuration Guide</a> from Microsoft.</p> <p>Disabled: disable provisioning</p>
URL	The URL used for Microsoft Teams provisioning.
Username	Leave blank
Password	Leave blank
<b>General</b>	
Configuration sync time (hh:mm)	Synchronize new configurations from the provisioning server at a specific time. Synchronizations are performed

<i>Field</i>	<i>Setting</i>
	daily. If left empty, no synchronizations will be performed.
Handset limit per account	Allowed number of handsets to sign-in to the same Teams account. Set to 2 by default.
Domain whitelist	Allowed domains in a comma separated list. If left empty all domains are allowed.
Show handset standby text as	<p>Changes the handset standby text to one of the following options:</p> <ul style="list-style-type: none"> <li>Assigned phone number</li> <li>Phone number extension</li> <li>Display name</li> </ul> <p>In order for the standby text to update on the handset, the user must sign in again after the setting is applied.</p>
Set secondary username as	<p>Change your secondary username based on your Microsoft Teams Admin Center configurations:</p> <ul style="list-style-type: none"> <li>None</li> <li>Extension</li> <li>Last 4 digits of the phone number</li> <li>Last 5 digits of the phone number</li> </ul> <p>In order for the secondary username to update, the user must sign in again after the setting is applied.</p>
Enable remote sign out warning	Enables the option to send out a warning from the server to the handset, indicating that the handset is signed out.
Remote sign out warning tone	Changes the remote sign out warning tone

**Note:**

If the Microsoft Teams services become unavailable, calls and MSF messages will be internally routed through your secondary username.

To set an extension as a secondary username on the IP-DECT Server, you must first configure it in the Microsoft Teams Admin Center. Likewise, using the last 4/5 digits of the phone number as a secondary username assumes that Microsoft Teams has been configured in accordance to your company's dial plan.

For further information, please consult the [Microsoft Teams admin documentation](#).

**Note:**

At least one handset has to be subscribed to the server in order for the provisioning process to initiate.

A connection status to the provisioning server can be seen under **Status -> General -> Quick status**

### Microsoft Teams Configuration

Provisioning

Method \* DHCP ▾

URL \*

Username

Password

General

Configuration sync time(hh:mm)

Handset limit per account 1 ▾

Allowed domains

Show handset standbytext as Display name ▾

Set secondary username as None ▾

Enable remote sign out warning

Remote sign out warning tone Handset Tone 9 ▾

\*) Required field \*\*) Require restart

## Remote sign-out and re-onboarding

For handsets that have previously completed the on-boarding process, remote sign-out and re-onboarding are available by accessing **Users -> List Users** from the Web interface.

Remote sign-out enables an admin to quickly sign out multiple users, by selecting them from the User List and pressing Sign Out.

Re-onboarding enables the admin to remotely initiate the onboarding process for multiple users, by selecting them from the User List and pressing Re-onboard. Starting this process will sign out the handset, and contact the Microsoft Teams provisioning server to get the latest onboarding configurations.

When a handset/user is signed out remotely from the Teams Admin Center (TAC), or from any other Microsoft application not related to a user/IP-DECT server function, an alarm can be setup for the DECT handsets by enabling the remote sign out warning option on the IP-DECT server.

The handset will display a message, and will play the Handset Tone set on the server, to signal that user action is required. Causes for sign-out can be also related to conditional access, or other Azure-related limitations in how long a Teams SIP gateway user can be signed in.



### Automatically configured fields

The following IP-DECT Server fields will be automatically changed when the server is configured for Microsoft Teams

<i>Field</i>	<i>Setting</i>
<b>SIP Configuration – General</b>	
Local port	5060
Transport	TLS
DNS method	DNS SRV
Register each endpoint on separate port	Disabled
Send all messages to current registrar	Disabled
Allow internal routing fallback	Enabled
Registration expire (sec)	IP-DECT 200/400 – 600 sec IP-DECT 6500 – 1200 sec Virtual IP-DECT Server One – 2400 sec
Handset power off action	De-register
Blacklist timeout (sec)	3600
GRUU	Enabled
NAT keepalive	SIP OPTIONS (rfc3261)
NAT keepalive interval (sec)	30
Send BYE with REFER	Disabled
Lync	Disabled
<b>SIP Configuration – Media</b>	

<i>Field</i>	<i>Setting</i>
Enable media encryption (SRTP)	Enabled
Require media encryption (SRTP)	Enabled
Include lifetime in SDES offers	Disabled
Include MKI in SDES offers	Disabled
<b>SIP Configuration – Call status</b>	
Call waiting	Enabled
<b>Wireless Server Configuration – DECT</b>	
Subscription allowed	Enabled
Automatically disable subscription allowed	Disabled
Access code (IP-DECT Server 200/400)	Default value: last 4 digits of the ARI code
Handset login (SfB)	Disabled
Handset sharing	Disabled
<b>Provisioning Configuration – Default server</b>	
NOTIFY check_sync	Disabled
<b>Provisioning Configuration – Firmware server</b>	
NOTIFY check_sync	Disabled
<b>Provisioning Configuration – License server</b>	
NOTIFY check_sync	Disabled
<b>Provisioning Configuration – Configuration and users server</b>	
NOTIFY check_sync	Disabled
<b>Phonebook Configuration – System user data</b>	
Phonebook source	Auto
Sync time(hh:mm)	00:00
<b>Security Configuration – Data protection</b>	
Remove user passwords from exported data	Enabled



## SIP Configuration

General	
Local port *	<input type="text" value="5060"/>
Transport *	<input type="text" value="TLS"/>
DNS method *	<input type="text" value="DNS SRV"/>
Default domain *	<input type="text" value="example.com"/>
Register each endpoint on separate port	<input type="checkbox"/>
Send all messages to current registrar	<input type="checkbox"/>
Allow internal routing fallback	<input type="checkbox"/>
Registration expire(sec) *	<input type="text" value="2400"/>
Max pending registrations *	<input type="text" value="1"/>
Handset power off action	<input type="text" value="De-register"/>
Max forwards *	<input type="text" value="70"/>
Client transaction timeout(msec) *	<input type="text" value="16000"/>
Blacklist timeout(sec) *	<input type="text" value="3600"/>
SIP type of service (TOS/Diffserv) *	<input type="text" value="96"/>
SIP 802.1p Class-of-Service *	<input type="text" value="3"/>
GRUU	<input checked="" type="checkbox"/>
Use SIPS URI	<input type="checkbox"/>
TLS allow insecure	<input type="checkbox"/>
TCP ephemeral port in contact address	<input type="checkbox"/>
NAT keepalive	<input type="text" value="SIP OPTIONS (rfc3261)"/>
NAT keepalive interval(sec)	<input type="text" value="30"/>
Send Hold before REFER	<input checked="" type="checkbox"/>
Send BYE with REFER	<input type="checkbox"/>
Convert SIP URI to phone number	<input checked="" type="checkbox"/>

Media	
Packet duration(msec) *	20 ▾
Media type of service (TOS/Diffserv) *	184
Media 802.1p Class-of-Service *	5
Port range start *	58000
Codec priority *	1: AAL2-G726-32/8000 ▾
	2: PCMU/8000 ▾
	3: PCMA/8000 ▾
	4: None ▾
	5: None ▾
	6: None ▾
Add G729A media type for G.729 codec	<input type="checkbox"/>
SDP answer with preferred codec	<input type="checkbox"/>
SDP answer with a single codec	<input type="checkbox"/>
Ignore SDP version	<input type="checkbox"/>
Enable media encryption (SRTP)	<input checked="" type="checkbox"/>
Require media encryption (SRTP)	<input checked="" type="checkbox"/>
Include lifetime in SDES offers	<input type="checkbox"/>
Include MKI in SDES offers	<input type="checkbox"/>
Enable ICE	<input type="checkbox"/>
Enable TURN	<input type="checkbox"/>
TURN server	<input type="text"/>
TURN username	<input type="text"/>
TURN password	<input type="text"/>



**Note:**

The feature codes used for call forwarding are also automatically configured by Microsoft and cannot be changed from the IP-DECT Server Web interface.



**Note:**

The IP-DECT Server backup function will be unable to backup user data when the server is configured for Microsoft Teams.

## Chapter 5: Handset onboarding and Sign-in

Below is a description on how to setup a handset to connect to a Spectralink IP-DECT Server configured with Microsoft Teams. This section assumes that the DECT handsets have been upgraded to firmware version PCS22Ab or newer, prior to performing the following steps. This process consists of two parts:

**The onboarding phase**, in which the handset subscribes to the Spectralink IP-DECT Server and is provisioned securely by the Microsoft Teams provisioning server. Once the handset has received the onboarding configuration, it will register on the onboarding server, and it will be ready for the next phase.

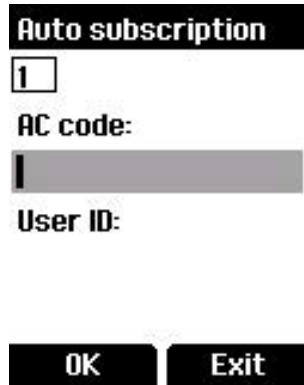
**The sign-in phase**, in which the user signs into Microsoft Teams, by pairing the handset with their Microsoft Teams account. This can be done in three ways:

- As a **local sign-in** on the handset, by getting the pairing code directly on the DECT handsets Teams menu after selecting sign-in.
- As a **remote sign-in**, initiated from the Spectralink IP-DECT Server GUI. You can generate up to 10 pairing codes at the same time. Each pairing code will also have a link directly to the Microsoft Sign-in page, where the code will be automatically copied.
- As a **sign-in using the Teams admin center**, where the admin adds the handset's IPEI as the MAC address on a provisioned user and activates the handset by sending a \*55\*+verification code to the onboarding server. The handset is then found under the *Waiting for sign-in* tab, where you can get the pairing code for the handset for the normal device login and sign-in procedure.

### Handset onboarding

#### To connect the handset to the Microsoft on-boarding server

- 1 Turn on the DECT handset. The following screen should be displayed:



**Note:**

If the above screen is not displayed, the handset needs to be restored to the default factory settings. In order to perform a factory reset, type \*99940\* HOOK key and OK. The factory reset PIN code is 0000.

The Auto subscription screen will be displayed after the handset reboots.

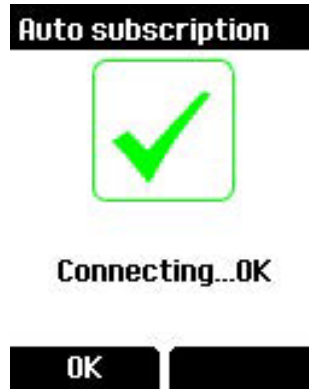
**2** Subscribe the handset:

- IP-DECT Server 200 or 400: Input the **AC code** into the field. The **AC code** consists of the last 4 digits of the ARI, and can be viewed either from the IP-DECT server Web interface (Status -> General), or from the label on the rear side of the server.
- IP-DECT Server One or IP-DECT Server 6500: enable subscription on the DECT server and you will be able to subscribe the handset without an AC code or you can set a code in the web UI.

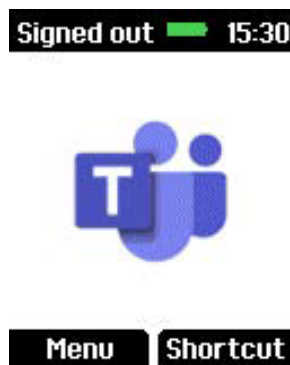
**3** The handset will now attempt to subscribe to the server (this process may take several minutes)



After a successful OTA connection is established, the following icon will be displayed:



- 4 The handset will automatically begin the on-boarding process. After a few seconds the handset screen should indicate a successful connection:



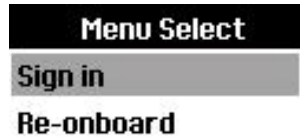
## Local and Remote Sign-in

### To locally sign-in to Microsoft Teams

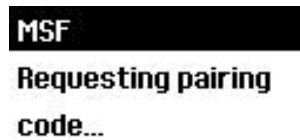
- 1 Press the Menu softkey on the handset, and select the “Teams” option



- 2 Select Sign in



- 3 The handset will request a pairing code from Microsoft



If successful, the handset will display a pairing URL and code, similar to the ones below:



- 4 Note down the URL and the pair code.

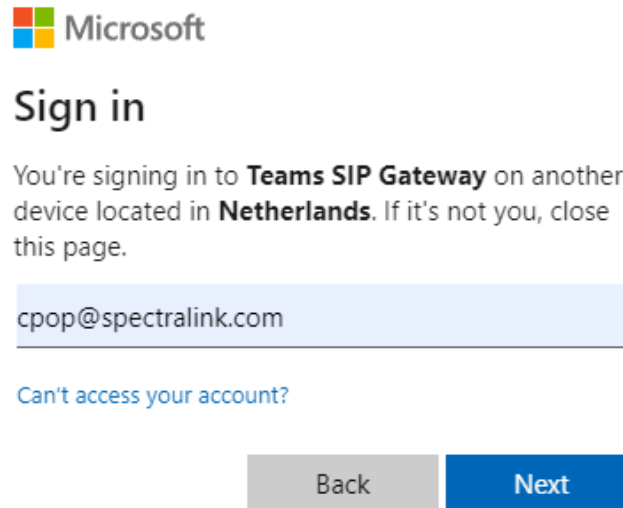


**Note:**

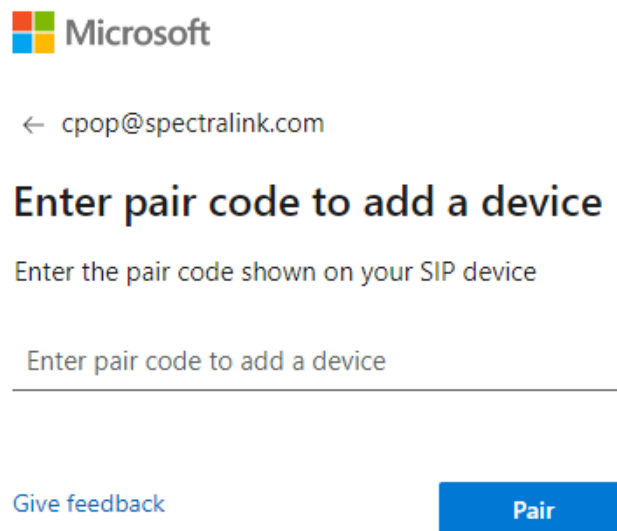
If the pairing URL and code are not displayed, make sure that your DHCP server provides NTP and DNS services to the DECT system, and that it has access to the internet.

Your firewall might need to be configured according to [Microsoft specifications](#).

- 5 The rest of the sign-in process is done on a PC or smartphone with an internet browser:
  - a. Go to the pairing URL: <https://aka.ms/siplogin>
  - b. If you're not already logged in, you will be prompted to log into your Microsoft Teams account in order to pair the device



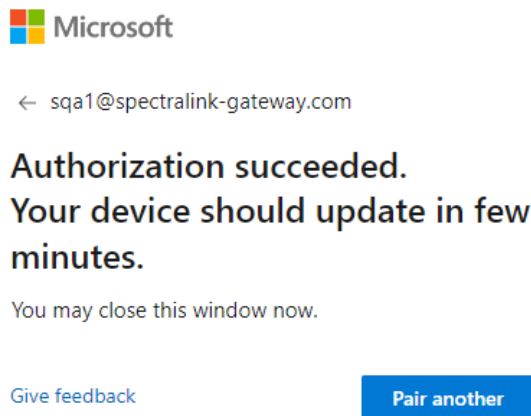
- c. Enter the pair code:



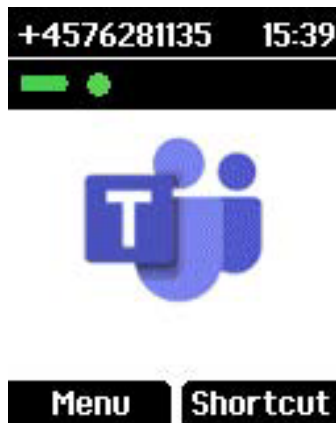
**Note:**

The pairing code is **not** case sensitive.

- d. After the following screen is displayed, the sign-in process will be complete and you can safely close the page or pair another device.



It might take a few minutes for the DECT Server to pair the handset with your Teams account. After the pairing process is complete, your DDI number and the green status icon will be displayed on the screen, indicating that the handset is registered and ready to use:



## To remotely sign-in to Microsoft Teams

- 1 Access the IP-DECT server GUI and navigate to **Users** -> **List Users**.
- 2 Select up to 10 users, using the checkbox in the leftmost column.

User List									
Overview							10056616164		
System AR1							Registered		
					SIP users	Subscribed	Registered		
					2	2	2		
					Total				
					2				
<input type="checkbox"/> New <input type="checkbox"/> Enable <input type="checkbox"/> Disable <input type="checkbox"/> Delete <input type="checkbox"/> Re-register <input type="checkbox"/> Un-subscribe <input type="checkbox"/> Firmware update <input type="checkbox"/> Handset Configuration <input type="checkbox"/> Sign in <input type="checkbox"/> Sign out <input type="checkbox"/> Re-onboard									
Show <input type="text" value="100"/> entries	<input type="checkbox"/>	Enabled	User	Displayname	IPEI	Handset	Firmware	Subscription	Registration
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		00907A00907A#Gu30Z2P	Sign In	05003 0839975	Spectralink 7622	20B	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		00907A00907A#INJ1wBA	Sign In	05003 0670501	Spectralink 7522	22A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



### 3 Press the **Sign in** button, and a new Pair code will be generated.

Status		Configuration		Users		Administration		Firmware	
List Users	Import/Export	Handset Configuration							
Pair Codes - expires at: 2022-11-11 13:23:38									
Show	All	entries							
IPEI	Handset							Pair Code	
05003 0670501	Spectralink 7522							<a href="#">CTMZQXY5K</a>	
05003 0839975	Spectralink 7622							<a href="#">DBCEKUM6W</a>	
Showing 1 to 2 of 2 entries									
<a href="#">Back</a>									

- Each pair code will have a link pointing to the Microsoft Teams Sign-in page. Clicking on any of the pair codes will open the Microsoft Teams Sign-in page.
- Once on the Microsoft Teams Sign-in page, the pairing code will be automatically copied. You can either paste it, or manually input it into the Code field, and then follow the [Sign-in steps presented at Step 5 here](#).

## Teams Admin Center Sign-in

In addition to the **local and remote sign-in** methods, administrators can also opt to use the **TAC sign-in** method to sign-in one or multiple devices from the Teams Admin Center. To sign-in using the Teams Admin Center:

### Add a device MAC address

Before adding a device MAC address, you must first complete the following steps to provision a new device:

- Sign into the Teams admin center.
- Expand **Teams Devices** and chose **SIP devices**.
- Select **Provision devices** from the **Actions** tab found the upper right corner.

In the **Provision devices** window, you can either add the MAC address manually, or upload a file. The MAC address for a DECT handset is the handset IPEI number.



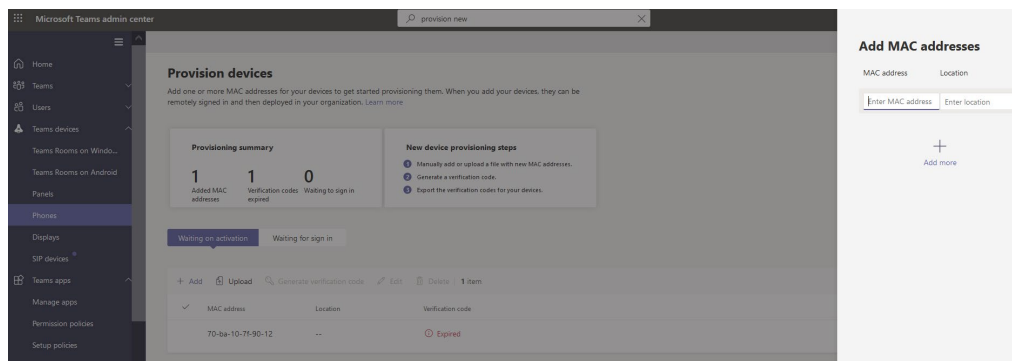
#### Note:

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

To manually add a device MAC address:

- From the **Waiting on activation** tab, select **Add**.



- 2 In the pop-out found in the right corner, enter the MAC ID (IPEI of the handset).
- 3 Enter a location (optional), which can help administrators identify the server/location of the newly provisioned handsets.
- 4 Select **+ Add** to add more devices, or press **Apply** when finished.

To add MAC addresses via a file:

- 1 From the **Waiting on activation** tab, select **Upload MAC IDs**.
- 2 Download the file template from the pop-out window.
- 3 Enter the MAC ID (Handset IPEI) and location (optional), and then save the file.
- 4 **Select a file**, and then select **Upload**.

## Generate a verification code

In order to continue the **TAC sign-in** process, a verification code must be generated. The verification code is generated on the device level, or in bulk, and is valid for 24 hours.

- 1 From the **Waiting on activation** tab, select an existing MAC ID. A code is created for the MAC address and is shown in the **Verification Code** column.
- 2 Provide the list of MAC IDs (IPEI) and verification codes to the field technicians. You can export the details directly into a file, by pressing the Excel icon on the right side. Once exported, you can share the file with the administrators who are doing the actual installation of the DECT system and handsets.

## Provision the DECT handset

After the device is powered on and connected to the IP-DECT server (as per the onboarding process above), the administrator must provision the device.

This step must be completed on the DECT handset itself, using the verification code created in the previous step.

- 1 On a provisioned DECT handset, enter **\*55\*** followed by the activation code, and press the Off-hook key.

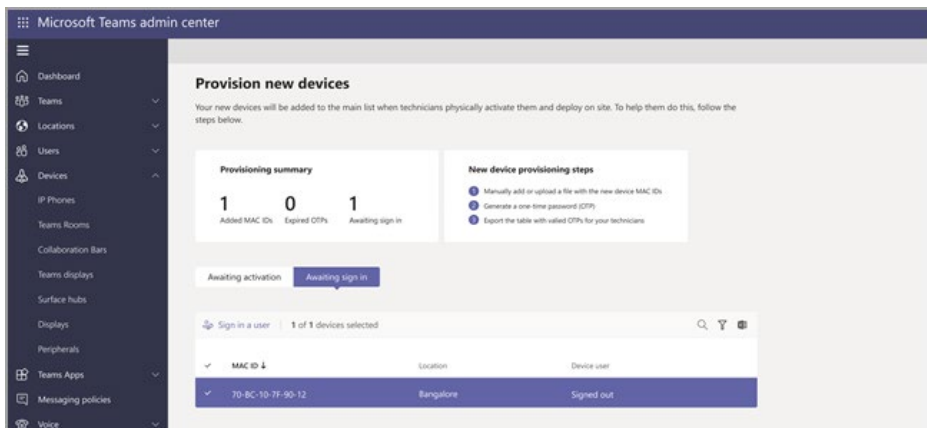


- The handset will return “Verification code sent” in the handset’s display, and will hang-up after 10 seconds.

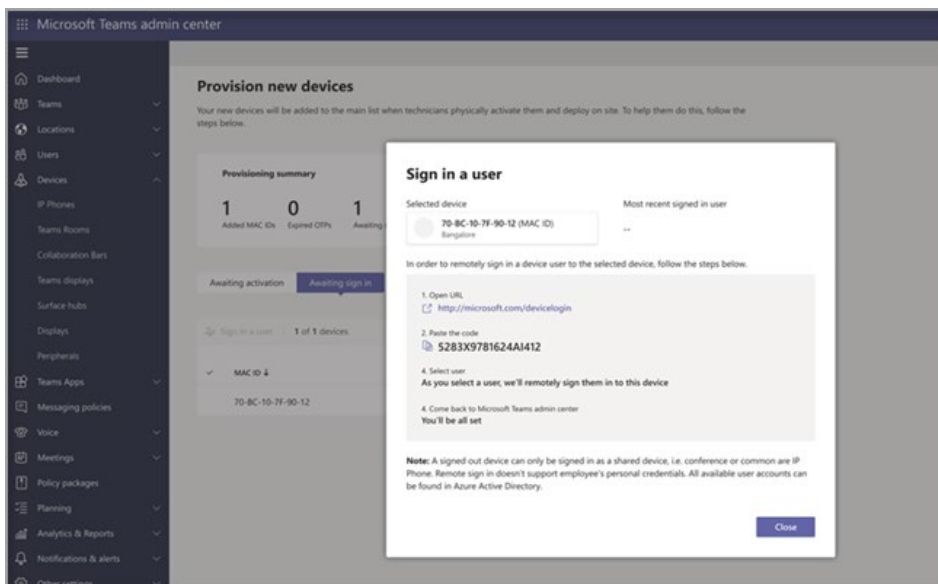
### First-time remote sign-in

The provisioned device appears in the **Waiting for sign-in** tab. Start the remote sign-in process by selecting each device individually.

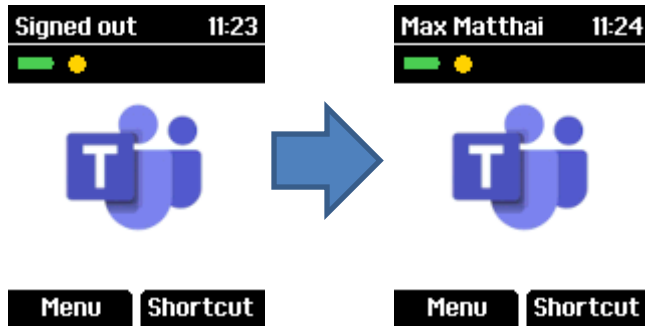
- Select a device from the **Waiting for sign-in** tab.



- Follow the instructions displayed in the **Sign in a user** box, and then select **Close** when done.



- 3 The DECT handset's display will show the display text chosen in the IP-DECT server Teams menu, with the default option set to Display name.

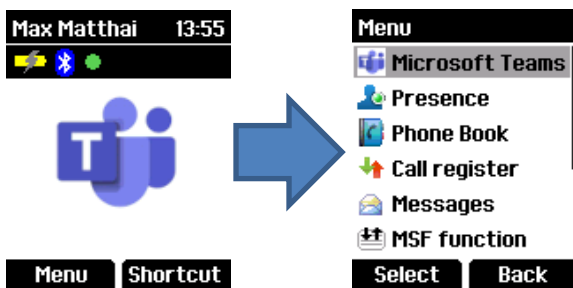


# Chapter 6: Handset Sign-out

You can sign-out from Teams in different ways, either on the DECT handsets itself using the Teams menu, from the IP-DECT server GUI or directly from the Teams admin center (TAC).

## To sign out from a DECT handset

- 1 Enter the handset Menu, and select Microsoft Teams

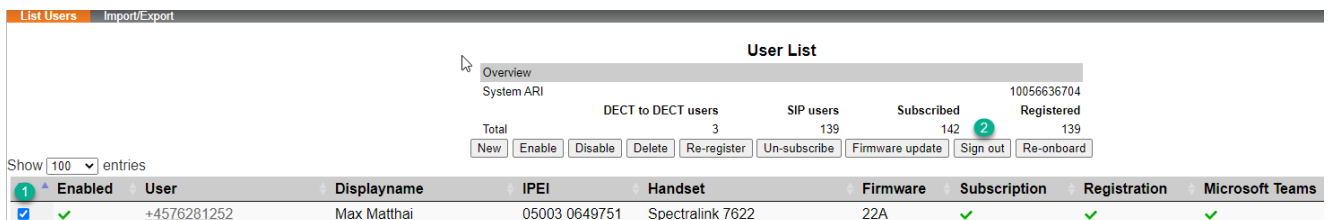


- 2 Select **Sign out**. The handset will display “Signing out...”, and will return to the idle screen, ready for a new sign-in.



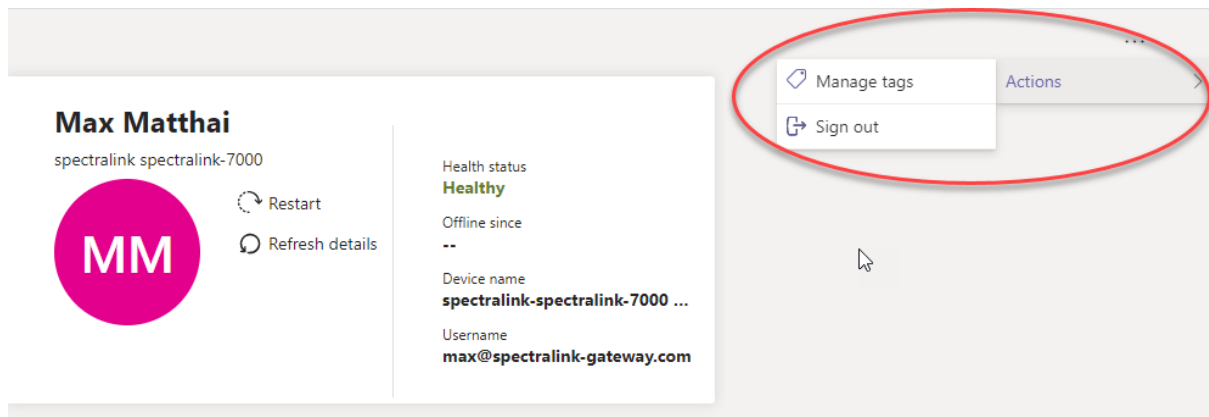
## To sign out a DECT handset from the IP-DECT server GUI

- 3 Access the IP-DECT server GUI and navigate to **Users -> List Users**.
- 4 Select the user(s) you want to sign out, and click the **Sign out** button.



## To remotely sign out a user from the Teams Admin Control Panel (TAC)

- 1 Log in to the Teams admin center and select **Teams devices** -> **SIP devices**
- 2 On the right side, in the SIP devices pane, select the device you want to sign out.
- 3 On the device's **Details** pane, select the **Details** tab. In the upper right corner on the **Actions** menu, select **Sign out**.



## Chapter 7: Migrating from other systems to Microsoft Teams

If your server is configured with other interfaces (Skype for Business, anynode SBC, Ring Central, etc.), there is a seamless migration process available that enables you to quickly reconfigure your server with Microsoft Teams, without requiring a factory reset.

### To migrate from other systems to Microsoft Teams

### Microsoft Teams Configuration

Provisioning

Method \*

URL \*

Username

Password

General

Configuration sync time(hh:mm)

Handset limit per account

Allowed domains

Show handset standbytext as

Set secondary username as

Enable remote sign out warning

Remote sign out warning tone

\*) Required field \*\*) Require restart

- 1 Make a full system backup:
  - a. Go to **Administration** -> **Backup**
  - b. Press **Save** on the **Full system backup** option
- 2 Upgrade the IP-DECT Server firmware to version PCS22Aa or newer, and the Handset firmware to version PCS22Ab or newer.
- 3 Remove any licenses related to the previously installed interface:
  - a. Go to **Administration** -> **License**
  - b. Under **Loaded licenses**, find the relevant license (e.g., Skype for Business license) and click **Delete**

- 4 Add a valid Teams license. Please consult the [License Installation](#) section of this guide on how to add a license.
- 5 After applying the Teams license, the provisioning URL will be automatically set for the EMEA region. If the IP-DECT Server is located in a different region, the provisioning URL must be changed for your appropriate region in order for the provisioning process to commence. Alternatively, DHCP option 160 can be used to automatically get the provisioning URL. (See the provisioning settings in the [Microsoft Teams Settings](#) section)

Any handset already connected to the server will immediately begin the onboarding process as described in the [Handset onboarding](#) chapter, provided that it has the appropriate firmware version installed.



**Note:**

When a Microsoft Teams license is loaded on the IP-DECT server, all 3<sup>rd</sup> party handsets will be removed, with the exception of handsets configured as DECT to DECT.