



Yealink@Home

Requirements and Configuration

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Contents

Yealink@Home.....	2
1.1 Concept.....	2
1.2 Requirements	2
1.3 Configure AudioCodes SBC.....	3
1.4 Configuration of the desk phone	4
1.5 Verification	6

1 Yealink@Home

You can connect a Yealink desk phone to SwyxWare from any location outside a virtual private network.



In this scenario, you can use a Yealink desk phone only as a SIP terminal with basic IP telephony features.

1.1 Concept

A SwyxWare user can connect his Yealink desk phone at home to a DSL router with Internet access, log on to SwyxServer with his SIP credentials and use the SwyxWare telephony functionality.



It is ensured that SIP messages are only forwarded by registered users.

DSL gateway

The static public IP address of the DSL gateway serves as the SIP registrar, SIP proxy, and media endpoint for the Yealink phones. Using appropriate port forwarding rules, the received encrypted SIP and RTP packets are forwarded to the AudioCodes Session Border Controller (SBC).

AudioCodes SBC

AudioCodes' Session Border Controller receives the encrypted SIP and RTP packets, decrypts them and forwards them to SwyxWare.

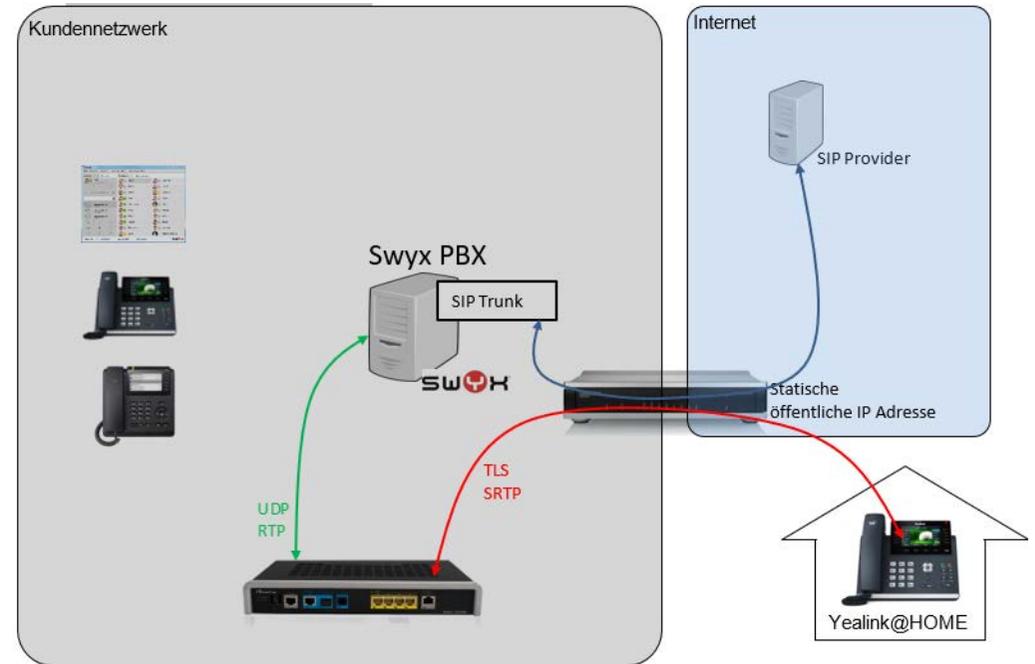


Abbildung 1: Netzwerkübersicht, SwyxWare

1.2 Requirements

SwyxWare

- Installed and configured SwyxWare environment
- On SwyxWare a SIP trunk with the corresponding public phone numbers should be set up, see [https://help.swyx.com/cpe/latest.version/Administration/Swyx/en-US/index.html#context/help/sip_connections_\\$](https://help.swyx.com/cpe/latest.version/Administration/Swyx/en-US/index.html#context/help/sip_connections_$)
- Public phone numbers should be assigned to SwyxWare users, see [https://help.swyx.com/cpe/latest.version/Administration/Swyx/en-US/index.html#context/help/assign_numbers_\\$](https://help.swyx.com/cpe/latest.version/Administration/Swyx/en-US/index.html#context/help/assign_numbers_$)
- To operate a Yealink desk phone as a pure SIP end device from the home office, SIP credentials have to be configured for the respective user in SwyxWare Administration, see

[https://help.swyx.com/cpe/latest.version/Administration/Swyx/en-US/index.html#context/help/SIP_registry_\\$](https://help.swyx.com/cpe/latest.version/Administration/Swyx/en-US/index.html#context/help/SIP_registry_$)

AudioCodes SBC

- Licensed AudioCodes Session Border Controller (1x FEU license per registration)
- AudioCodes Firmware v7.20 and higher



You can change the ports or port ranges if necessary. You must then take the corresponding entries into account when configuring the SBC and the Yealink desk phones.

- AudioCodes SBC must be preconfigured for use with Yealink@Home, see *Configure AudioCodes SBC*, page 3

Edge / DSL Gateway

- Static, public IP address for the DSL gateway
- On the DSL gateway, the following port forwarding must be set up from the public ports to the AC SBC:
 - SIP Signaling Port (TLS): **2606**
 - Media Ports: e.g **8000 - 8199**

Yealink

- Yealink desk phone (T41S, T42S, T46S, T48S)
- Yealink desk phone must be updated to the latest firmware, at least to version 66.84.133.2

1.3 Configure AudioCodes SBC

The AudioCodes Session Border Controller can be configured using the commented CLI file.



You can change the ports or port ranges if necessary. You must then take the corresponding entries into account when configuring the SBC and the Yealink desk phones.

In addition, if the ports are changed, the DSL gateway must also be adjusted accordingly.

To import the CLI file with your configuration data to the SBC

- 1 Download the ZIP file from our web page: https://www.swyx.de/download.php?file=Yealink_at_HOME_M500L_LAN.zip&loc=extern
- 2 Unzip the CLI file into a folder and open it in a text editor.
- 3 Adjust the configuration data according to the pertaining comments and save your changes.
- 4 Open the AudioCodes web interface.
- 5 In the upper menu bar, open "Actions | Configuration File" on the right.

The screenshot shows the AudioCodes web interface. At the top, there is a navigation bar with tabs for SETUP, MONITOR, and TROUBLESHOOT. Below this, there is a sub-menu for ADMINISTRATION, which includes options for CONFIGURATION & MEDIA, ADMINISTRATION, and VALUE. A dropdown menu is open under ADMINISTRATION, showing options for Configuration File, Auxiliary Files, License Key, and Software Upgrade. The main content area is titled 'Configuration File' and contains several sections: INI FILE, CLI SCRIPT, and CONFIGURATION PACKAGE. Each section has buttons for saving and loading files to the PC and to the device. The 'Load CLI Startup Script to the device.' section is highlighted with a red box.

- Under "Load CLI Startup Script to the device" click on "Choose File" and select the CLI file.



The existing configuration on the SBC will to be completely overwritten by the data in the CLI file.

- Click on "Load CLI Startup Script".
 - ✓ Your configuration data has been transferred to the device. The process may take a few minutes. The Session Border Controller can be restarted 1 or 2 times.

1.4 Configuration of the desk phone

For configuration use the web interface from the manufacturer.



If you would like to delete any existing configuration, perform a factory reset.

You have to make the following settings under "Account | Register":

Designation	Explanation
Line Active	Select "Enabled" to activate the line.
Label	Enter the display name of the SwyxWare user under "Label" and "Display Name" respectively (This information may differ from the SwyxWare configuration).
Display Name	
Register Name	Enter the SIP credentials of the SwyxWare user that you have configured in the SwyxWare Administration.
Username	
Password	

Designation	Explanation
Server host	Enter the public IP address and the port of the DSL gateway.
Transport	Select "TLS".
Server Expires	Default value: 120

- The following setting must be made under "Account | Advanced":

The screenshot shows the 'Account' settings page for a Yealink T46S phone. The 'Advanced' section is expanded, and the 'RTP Encryption (SRTP)' dropdown menu is highlighted with a red box, showing 'Compulsory' as the selected option. Other settings include Keep Alive Type (Default), Keep Alive Interval (30), RPort (Disabled), Subscription Period (1800), DTMF Type (SIP INFO), DTMF Info Type (DTMF-Relay), DTMF Payload Type (101), Retransmission (Disabled), Subscribe Register (Disabled), Subscribe for MWI (Enabled), MWI Subscription Period (3600), Subscribe MWI to Voice Mail (Disabled), Voice Mail (#=10), Voice Mail Display (Enabled), Caller ID Source (FROM), Session Timer (Enabled), Session Expires (90), Session Refresher (UAC), Send user=phone (Enabled), PTime (20), BLF List URI, BLF List Pickup Code, BLF List Barge in Code, and BLF List Call Parked Code.

Activate the voice encryption: Set the "RTP Encryption (SRTP)" option to "Compulsory" (required).

- The following setting must be made under "Setting | Time&Date":

The screenshot shows the 'Time&Date' settings page. A red box highlights the 'Time Zone' dropdown (set to '+1 Spain, France, Germany, Italy, Netherlan'), the 'Location' dropdown (set to 'Germany(Berlin)'), and the 'Daylight Saving Time' radio buttons (set to 'Automatic'). Other settings include DHCP Time (Disabled), Manual Time (Disabled), Fixed Type, Start Date (March, Last Week, Sunday, 02:00), End Date (October, Last Week, Sunday, 03:00), Offset (60), NTP by DHCP Priority (High), Primary Server (cn.pool.ntp.org), Secondary Server (pool.ntp.org), Update Interval (1000), Time Format (Hour 24), and Date Format (WWW MMM DD). There are 'Confirm' and 'Cancel' buttons at the bottom.

Set the correct time zone, location, and daylight saving time rule.

- The following setting must be made under "Security | Trusted Certificates":

The screenshot shows the Yealink T46S web interface. The top navigation bar includes 'Status', 'Account', 'Network', 'Dsskey', 'Features', 'Settings', 'Directory', and 'Security'. The 'Security' tab is active. On the left, there are links for 'Password', 'Trusted Certificates', and 'Server Certificates'. The main content area displays a table of certificates with columns for Index, Id, Issued to, Issued by, Expiration, and Delete. Below the table, there are settings for 'Only Accept Trusted Certificates' (set to 'Disabled'), 'Common Name Validation' (set to 'Disabled'), and 'CA Certificates' (set to 'All Certificates'). There is also an 'Import Trusted Certificates' section with a file upload area. A 'NOTE' box on the right provides information about Transport Layer Security (TLS) and Trusted Certificates.

NOTE

Transport Layer Security (TLS)

Trusted Certificate

When the IP phone requests a TLS connection with a server, the IP phone should verify the certificate sent by the server to decide whether it is trusted based on the trusted certificates list. The IP phone has 30 built-in trusted certificates. You can upload 10 custom certificates at most. The format of the trusted certificate files must be *.pem, *.cer, *.crt and *.der and the maximum file size is 5MB.

Click here to get more product documents.

The phone must allow TLS connections without certificate checking.

Set the "Only Accept Trusted Certificates" option to "Disabled".

1.5 Verification

After successful configuration, you can check the login status of the Yealink desk phone connected to SwyxWare via Yealink@Home in the SwyxWare Administration.

In addition, the SIP messages can be monitored using AudioCodes' Syslog Viewer:

<http://redirect.audiocodes.com/install/index.html>