Teldio

Technical Specifications

PBX Integration via SIP Trunks

Integrating your IP PBX to Teldio RBX +Plus

The Teldio RBX +Plus software uses an open source PBX (FreeSWITCH) to handle SIP connectivity. In order to connect your IP PBX to the RBX +Plus software, **your IP PBX must comply with the RBX SIP stack** which has the following requirements/characteristics.

RBX +Plus SIP Settings:

- Compliant with IETF RFC3261
- Only offers and accepts codec of PCMU or PCMA (G.711U or G.711A)
- INFO, UPDATE and REFER methods are supported
- Early sessions, provisional responses, early media, caller preferences and session timers supported
- TCP and UDP over IPv4 or IPv6 supported
- Provides SDP offer-answer negotiations as specified in RFC3264
- Provides STUN as specified in RFC3489

The customer's phone network must also be able to support the communication between the RBX server and the PBX. The RBX and PBX must be on the same network or networks that are able to communicate. Also, it requires the following port ranges to be open between the RBX and PBX:

- 10,001-40,000 for media traffic over RTP
- 5060, 5061, 5004 and 10,000 for signaling data over SIP

If your IP PBX is compliant with the above list of characteristics, it will then be able to integrate with the Teldio RBX +Plus software. **The SIP trunk configuration and all programming on the customer PBX must be carried out by a qualified PBX technician.** Teldio will assist in setting up the integration once the communication between the PBX and RBX has been established.

If connection between your PBX and the RBX +Plus software cannot be established, Teldio offers an **Analog to SIP Gateway** that will only require an analog telephone line or a trunk line from an Analog PBX to establish phone connection to the Teldio RBX +Plus. While there are small differences in integrating to the RBX via an Analog to SIP Gateway as opposed to integrating via an IP PBX *(see page 3)* the call functionality will be the same.

Current list of Compatible IP PBX Models

Teldio has successfully integrated with several IP PBX models via a SIP trunk. However, because of the various configurations on these different IP PBX models, the setup may be more or less complex. Teldio has some custom integration guides available, but PBX SIP integration documents should be referenced for specifics to the system model and version.

List of IP PBX systems that have successfully integrated with Teldio RBX +Plus

- Mitel 3300
- Cisco Call Manager (Cisco Unified Communications Manager) – versions 5 and higher
- Avaya Aura Session Manager
- Avaya IP Office
- Nortel/Avaya CS 1000E
- Nortel BCM 50
- Avaya CM S8800
- Panasonic KX-TDE
- Alcatel-Lucent
- Tadiran Coral IPx
- Asterisk
- 3CX

Main Differences in Call Behaviour between an IP PBX and an Analog to SIP Gateway

Dialing Phones

IP PBX

Radios are able to directly dial phone extensions to reach Phone users

Analog to SIP Gateway

If using an Analog Trunk line, Radios are able to directly dial phone extensions to reach Phone users. If using an Analog Line, Radios will have to dial the external 7 or 10 digit number to reach the PBX and then dial the phone extension

Dialing Radios

IP PBX

Phone Users can directly dial the Radio users' extensions to reach the Radios.

Analog to SIP Gateway

Phone users will have to dial in to the RBX Auto Attendant and then dial the Radio extension to reach the Radio users

Caller ID

IP PBX

Phone and Radio users will see the ID of the Phone or Radio user that is calling

Analog to SIP Gateway

Since analog lines do not support caller ID, the Caller ID feature cannot be supported.

Call Hang up

IP PBX

When the phone and/or Radio users hangs up the call is terminated immediately and the voice channel is cleared.

Analog to SIP Gateway

Depending on the Analog line's settings, if the analog line can't disconnect following the completion of a call, then a silence detection method or a hang up tone detection method will be used and it might take longer to end the call and to clear the voice channel.

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