

Application Note

MP-20x Proxy Server Redundancy

Version 2.6.2



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Notice

This document describes the Proxy Redundancy feature application for AudioCodes MP-20x Telephone Adapter (MP-202 and MP-204 FXS/FXO devices).

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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used, and only Industry standard terms are used throughout this manual. The symbol 0x indicates hexadecimal notation.

Related Documentation

Document #	Manual Name
LTRT-505xx	MP-202 Telephone Adapter Release Notes
LTRT-506xx	MP-202 Telephone Adapter User's Manual
LTRT-504xx	MP-202 Telephone Adapter Quick Installation Guide



Note: The term *primary proxy* refers to the primary SIP registrar proxy that the user can configure for MP-20x registration. This proxy can be configured without using the redundant proxy feature.



Note: The term *redundant proxy* refers to the backup SIP registrar proxy that is allowed to be configured for MP-20x - only from this version and later - in addition to the primary proxy.

1 Introduction

Redundant Proxy is a new feature allowing the configuration of a backup SIP proxy server to increase Quality of Service (QoS) stability. Once this feature is enabled, the MP-20x identifies cases where the primary proxy does not respond to SIP signaling messages. In these scenarios, the MP-20x registers to the redundant proxy, and the MP-20x seamlessly continues normal functionality, without the user noticing any connectivity failure or malfunction with the primary proxy.

This document describes in detail this Redundant Proxy feature.

1.1 Feature Modes

The Redundant Proxy feature includes two operational modes:

- **Asymmetric mode:** this mode assigns the primary proxy a higher priority for registration than the redundant proxy.
- **Symmetric mode:** in this mode, both proxies are assigned the same priority for registration.

1.2 Asymmetric Mode

In the Asymmetric mode, once the MP-20x is registered to the primary proxy, it sends keep-alive messages (using SIP OPTIONS messages) to the primary proxy. If the primary proxy does not respond, the MP-20x registers to the redundant proxy, but continues sending keep-alive messages to the primary proxy. If the primary proxy responds to these keep-alive messages, the MP-20x re-registers to the primary proxy. Therefore, the MP-20x assigns the primary proxy a higher priority for registration.

1.3 Symmetric Mode

In the Symmetric mode, once the MP-20x is registered to a proxy, it sends keep-alive messages to this proxy. The MP-20x switches proxies only once the proxy to which it has registered does not respond. Therefore, the MP-20x assigns both proxies the same priority for registration.

In both modes, the following applies:

- If the MP-20x is not registered (i.e., if the proxy server—redundant or primary—to which the MP-20x currently tries to register does not respond), the MP-20x attempts to register to an alternative proxy. These attempts continue until the MP-20x successfully registers.
- If this feature is enabled and the user reboots the MP-20x, the MP-20x registers to the last proxy to which it was trying to register, and not necessarily to the primary proxy.

2 Configuring Proxy Redundancy

The procedures in this section describe how to configure the Redundant Proxy feature using the MP-20x Web interface management tool.

2.1 Step 1: Access the 'Voice over IP - Signaling Protocol' Screen

To enable the Redundant Proxy feature, you need to access the 'Signaling Protocol' screen in the 'Voice over IP' menu. All the configurations for Redundant Proxy are performed in this screen.

➤ **To access the Signaling Protocol screen:**

- On the menu bar, click the **Voice Over IP** button; the 'Voice Over IP' screen opens, displaying the 'Signaling Protocol' screen tab in the Advanced display mode.

Figure 2-1: Voice Over IP Screen

The screenshot displays the 'Voice Over IP' configuration interface. On the left, a dark sidebar contains a navigation menu with items: Home, Quick Setup, Network Connections, Security, Voice Over IP (highlighted), QoS, Advanced, System Monitoring, and Logout. A yellow callout box with a blue arrow points to the 'Voice Over IP' menu item, with the text 'Click this Button'. The main content area is titled 'Voice Over IP' and features a horizontal tab bar with the following tabs: Signaling Protocol (selected), Dialing, Media Streaming, Voice and Fax, Services, Line Settings, Speed Dial, and Telephone Interface. The 'Signaling Protocol' tab is active, showing the following configuration options:

- Signaling Protocol**
 - SIP Transport Protocol: UDP (dropdown)
 - Local SIP Port: 5060 (text input)
 - Gateway Name - User Domain: (text input)
 - Enable PRACK
 - Include ptime in SDP
 - Enable rport
 - Connect media on 180
 - Enable Keep Alive using OPTIONS
- SIP Proxy and Registrar**
 - Use SIP Proxy
 - Use SIP Registrar
 - Use SIP Outbound Proxy
- SIP Timers**
 - Retransmission Timer T1: 500 milliseconds
 - Retransmission Timer T2: 4000 milliseconds
 - Retransmission Timer T4: 5000 milliseconds
 - INVITE Timer: 32000 milliseconds
- NAT Traversal**
 - Enable STUN

At the bottom of the configuration area are four buttons: OK (with a green checkmark), Apply (with a green exclamation mark), Cancel (with a red X), and Basic <<.

2.2 Step 2: Add a Primary SIP Proxy Server

The following procedure describes how to add a primary SIP Proxy server.

➤ **To add a primary SIP proxy server:**

1. Under the group 'SIP Proxy and Registrar', select one of the following check boxes:
 - 'Use SIP Registrar'
 - 'Use SIP Proxy IP and Port for Registration'
2. In the 'Proxy IP Address or Host Name' field, enter the primary proxy's IP address.
3. In the 'Proxy Port' field, enter the primary proxy's port number.

Figure 2-2: 'Voice Over IP Screen - Signaling Protocol' Screen - Adding Primary Proxy

SIP Proxy and Registrar	
①	<input checked="" type="checkbox"/> Use SIP Proxy
②	Proxy IP Address or Host Name: <input type="text" value="10.33.2.36"/>
③	Proxy Port: <input type="text" value="5060"/>
	Maximum Number of Authentication Retries: <input type="text" value="4"/>
①	<input checked="" type="checkbox"/> Use SIP Proxy IP and Port for Registration
	Register Expires: <input type="text" value="3600"/> Seconds
	Sip Security: <input type="text" value="Allow SIP traffic from Proxy and Additional SIP entity"/> ▾
	Address Type: <input type="text" value="IP address"/> ▾
	SIP Entity Address: <input type="text" value="10.33.2.15"/>
	<input type="checkbox"/> Use Redundant Proxy
	<input type="checkbox"/> Use SIP Outbound Proxy

2.3 Step 3: Add the Redundant Proxy

The following procedure describes how to add a redundant SIP Proxy server.

➤ **To add a redundant SIP proxy server:**

1. Under the group 'SIP Proxy and Registrar', select the 'Use Redundant Proxy' check box; additional fields relating to proxy redundancy appear.
2. In the 'Redundant Proxy Address' field, enter the redundant proxy's IP address or DNS name.
3. In the 'Redundant Proxy Port' field, enter the redundant proxy's port number.
4. In the 'Redundant Proxy Keep Alive Period' field, enter the rate (in seconds) of the keep-alive messages for sending to the proxy (as described in Section 1.1 on page 6). The valid range is 10 to 86,400 seconds (i.e., 24 hours). The default value is 60 sec.
5. To toggle between Symmetric and Asymmetric modes, use the check box 'Switch back to Primary SIP proxy when available'.
 - **Asymmetric mode** - select the check box (i.e., check mark it).
 - **Symmetric mode** - clear the check box.

Figure 2-3: 'Voice Over IP Screen - Signaling Protocol' Screen - Adding Redundant Proxy

The screenshot displays the 'SIP Proxy and Registrar' configuration interface. The 'Use Redundant Proxy' section is highlighted with five numbered callouts:

- 1. Use Redundant Proxy
- 2. Redundant Proxy Address: 10.33.2.15
- 3. Redundant Proxy Port: 5060
- 4. Redundant Proxy Keep Alive Period: 60 Seconds
- 5. Switch back to Primary SIP proxy when available

Other visible fields include: 'Use SIP Proxy' (checked), 'Proxy IP Address or Host Name: 10.33.2.36', 'Proxy Port: 5060', 'Maximum Number of Authentication Retries: 4', 'Use SIP Proxy IP and Port for Registration' (checked), 'Register Expires: 3600 Seconds', 'Sip Security: Allow SIP traffic from Proxy and Additional SIP entity', 'Address Type: IP address', and 'SIP Entity Address: 10.33.2.15'. The 'Use SIP Outbound Proxy' checkbox is unchecked.

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