

EOH STREAMING QUEUE MUSIC™

A software application from Easy On Hold® that provides streaming audio for queue and hold in MiTel MiVoice Border Gateway.



DESCRIPTION
BENEFITS
REQUIREMENTS
INSTALLATION AND OPERATION
PROOF-OF-CONCEPT CRITERIA

Definition and Background

STREAMING QUEUE MUSIC™ (a.k.a. SQM) is a cloud-based software application that provides streaming audio for queue and hold in various communications platforms, including Mitel MiVoice Border Gateway.

The solution includes:

- **SQM appliance software** operating in the EOH Cloud
- **Content management** via customer portal (Content Control Center™)

SIP CONNECTIVITY

The SQM solution is capable of providing MOH streams from the cloud to a registered SIP end-point. This document will address the use of SQM in a Mitel hosted environment, using MiVoice Border Gateway.

SCALE

The EOH SIP cloud server can be configured to handle many calls simultaneously. An understanding of your call volume should be discussed to allow proper scale. Streaming audio content can be shared across multiple call groups, or uniquely assigned to each of many call groups (sales, support, regions, etc.).

Benefits

The benefits of Streaming Queue Music™ compared to traditional files-based queue and hold music include:

- Technical support is relieved of music/message-on-hold file management.
- Marketing or business clients manage content schedules in the EOH Content Control Center (audio management portal).
- A continuous stream of content can be changed immediately; a variety of custom content, licensed music, and licensed popular (“hit”) music.

Methodology

To enable streaming audio to callers, the end-point must be configured as the MOH resource, to be used as a kind of “conference room” where calls hear the audio stream while waiting.

System Requirements

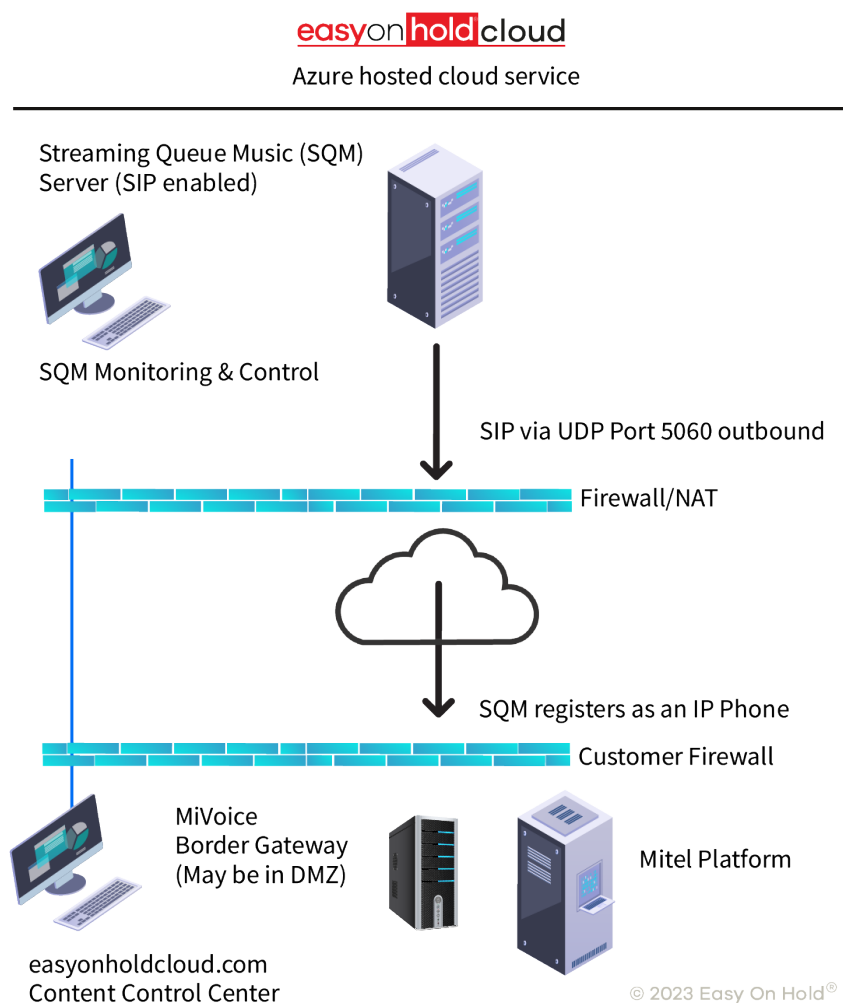
- The Streaming Queue Music solution works with MiVB (MiVoice Browser), with an available Enterprise IP User License assigned for this application.
- A working Teleworker solution with available licenses to be assigned for this application is also required. Estimated labor is 3 hours.

Questions to Answer Before Deployment

- How many data centers will be in use?
- How many call groups will each need a unique stream of content?
- What is the maximum number of concurrently-held calls in each call group?

How it Works

The Streaming Queue Music™ server makes an outgoing SIP REGISTER attempt from its private network to the publicly-visible remote Mitel host. The remote host responds, and through the SIP registration process NAT traversal is resolved, establishing two-way UDP communications. Keep alive traffic over that channel maintains the UDP connections through the NAT. A call on the Mitel system, being sent to listen on-hold music causes the Mitel platform to send a SIP INVITE message to SQM. SQM accepts that request and connects the remote call to the already running audio stream. This sends that PCM mu-law audio using the RTP protocol over UDP back to the Mitel system, using the SIP established audio port numbers.



Procedure

1. Configure a new SIP Device Capabilities profile
2. Configure a SIP extension
3. Assign the SIP extension as Music Source. It can be any one of the following:
 - The primary source assigned in the System Audio Source Update form
 - A Tenant source
 - A source assigned in the Call Coverage Service form
 - An audio source assigned in the ACD Paths form
4. Configure SIP extension on the Teleworker server.

Procedure Screenshots

1. CONFIGURE A NEW SIP DEVICE CAPABILITIES PROFILE

Below is BVN internal configuration notes (usually not shared with the customer, but there might be a few customers that would like to configure this themselves)

Basic	SDP Options	Signaling and Header Manipulation	Distinctive Ring Tones	Timers	Key Press Event	Called Party Inward Dialing Modification	Record Information	Advanced
SIP Device Capabilities Number								11
Comment								SIP MOH
Call Routing and Administration Options								
Outbound Proxy Server								
Replace System based with Device based In-Call Features								No
Allow MWI Notifications without Subscription								No
Enable Digit Collection In Busy Or Alerting State								No
TLS Only								No

All other tabs were left in their default settings.

Basic	SDP Options	Signaling and Header Manipulation	Distinctive Ring Tones	Timers	Key Press Event	Called Party Inward Dialing Modification	Record Information	Advanced
Allow Device To Use Multiple Active M-Lines								Yes
Allow Using UPDATE For Early Media Renegotiation								No
AVP Only Device								Yes
Enable Mitel Proprietary SDP								No
Force sending SDP in initial Invite message								Yes
Ignore SDP Answers in Provisional Responses								No
IP Media Default								ipv4
Limit to one Offer/Answer per INVITE								No
Prevent Codec Selection on Answer								No
Prevent SDP Renegotiation If Peer Initiated Hold								No
Prevent the Use of IP Address 0.0.0.0 in SDP Messages								No
Renegotiate SDP To Enforce Symmetric Codec								No
Repeat SDP Answer If Duplicate Offer Is Received								No
Send Answer only after renegotiation is complete								No
Support CTI Hold/Retrieve								No
Suppress Use of SDP Inactive Media Streams								Yes

2. CONFIGURE A SIP EXTENSION

- Set the class of service to a common COS (Class Of Service) or create a new one.
Be sure that HCI is enabled and Public Network access is allowed.
- Set the class of Restriction to an unrestricted number.
- Enter the SIP Device Capabilities number created in Step 1.
- Enter a SIP password (does not need to be strong). Make note of this password for Teleworker configuration.

Class of Service Options

User Profile	Service Profile	Device Details	Service Details	Access and Authentication	Phone Applications	Keys
Number	187					
Service Label	Phone Service					
Directory Name	SIP MOH					
Prime Name	☒ No ☐ Yes					
Privacy	☒ No ☐ Yes					
Hot Desking User	☒ No ☐ Yes					
Device Type	Generic SIP Phone					
Service Level	Full					
Home Element	MiVB					
Secondary Element	Not Assigned					
Local-only DN	☐					
ACD Enabled	☐					
Single Line Phone	☐					
Sync with SIP-DECT Manager	☐					

HCI is enabled

HCI	
HCI/CTI/TAPI Call Control Allowed	Yes
HCI/CTI/TAPI Monitor Allowed	Yes

Public Network access is allowed

Trunk	
ANI/DNIS/ISDN Number Delivery Trunk	No
DASS II OLI/TLI Provided	No
Public Network Access via DPNSS	Yes
Public Network To Public Network Connection Allowed	Yes

SIP Device Capabilities

User Profile	Service Profile	Device Details	Service Details	Access and Authentication	Phone Applications	Keys
		Day	Night 1	Night 2		
Class of Service	1		1	1		
Class of Restriction	1		1	1		
External Hot Desking Enabled	☒ No ☐ Yes					
External Hot Desking Dialing Prefix						
External Hot Desking Number						
DID Service Number						
Use DID Number for Outgoing Calls	☐					
CPN Substitution Number						
Billing Number						
Personal Speedcall Allocation						
Zone Assignment Method	Default					
Zone ID	1					
SIP Device Capabilities	11					
Interconnect Number	1					
Tenant Number	1					

SIP Password

User Profile	Service Profile	Device Details	Service Details	Access and Authentication	Phone Applications	Keys
User PIN						
Confirm User PIN						
SIP Password	*****					
Confirm SIP Password	*****					
Wireless PIN						
Confirm Wireless PIN						

3. ASSIGN SIP EXTENSION AS MUSIC SOURCE

If using as the primary MOH, edit the System Access points form. Set the Music Source to IP Endpoint and enter the SIP extension number in the Music Source – Directory Number.

Change

 System Access Points

Night Bell Directory Number

DISA Forced Account Code - Directory Number

DISA Directory Number

Music Source

IP Endpoint

Music Source Port - Location ID

Music Source - Directory Number

187

Message Center - Directory Number

Milliwatt Test Directory Number

Balance Test Directory Number

100 Test Directory Number

Please wait while your data is being saved...

Save

Cancel

4. CONFIGURE SIP EXTENSION AS A TELEWORKER

In the Mitel Border Gateway, click the Teleworking tab and Select SIP. In the SIP profile Information pane, click the “+” to add a new profile.

SIP profile information										
+										
Enabled	Set-side username	ICP-side username	Availability	Configured ICP	Description	Local streaming between devices	Log verbosity	Cluster Zone		
✓	jbriceno-34*8	34*8	Everywhere	mivb	34*8 - Jaime Briceno	Use master setting	Use master setting	WAN		

CONFIGURE SIP EXTENSION AS A TELEWORKER (CONTINUED)

- Click Enabled.
- Select the phone system on which the extension is configured.
- Enter the set-side username and password (credentials that Easy On Hold uses to connect.) This should be a strong password.
- Enter the ICP-Side username and password. (This is the internal extension number and the password created in step 2.)
- Set PRACK support to Disabled.
- Enter a Description.
- Click Save.

Manage SIP profile

Enabled	☒	Configured ICP	mivb
Set-side username	easyonhold_murietta_001	Set-side password	Change set-side password
ICP-side username	187	Confirm set-side password	
PRACK support	Disabled	ICP-side password	Change icp-side password
Heartbeat interval		Confirm icp-side password	
Description	MOH port	Options keepalives	Use master setting
Set-side RTP security		Challenge methods	Use master setting Override
Inbound	Use master setting	Availability	Everywhere
Outbound	Use master setting	ICP-side RTP security	
Preferred cipher	Use master setting	Inbound	Use master setting
Local streaming between device calls	Use master setting	Outbound	Use master setting
Enable Detailed Jitter Log	Use master setting	Preferred cipher	Use master setting
Codec support	Use master setting	Log verbosity	Use master setting
Tone injection	Enabled ☐	RTP Framesize	Use master setting
		Cluster Zone	WAN
		Use master	☒

Contact Easy On Hold support to confirm server status and conduct a quality check.

Support Model

Direct to customer

Support Coverage Hours

Standard business hours, with
after-hours pager support

Support Hotline

+1 888-798-4653

Support Alias

Proof of concept.

Easy On Hold® offers a proof-of-concept exercise to allow clients to become familiar with the streaming queue music service.

POC Process

POC CONTRACT

A POC contract is provided by Easy On Hold®. The provisions state that the product and service delivery is for testing purposes only, and are provided without obligation. Further, the POC contract protects the parties' proprietary information and trade secrets. EOH does not provide any warranty with regard to the POC.

SQM DOCUMENT

This document is provided to assist in preparing and executing the POC/trial. Contact Easy On Hold® for further information regarding SQM.

Proof of Concept Test Criteria

TEST #	DESCRIPTION	VERIFY EXPECTED RESULT	RECORD RESULTS
1	After configuration, check Registration	SIP connection is registering in EOH SQM Cloud Edition	
2	Inbound call is queued and gets the queue music	Verify caller hears music provided by SQM.	
3	Queue music ends when agent answers call	Verify that when the agent answers, the queue music is stopped.	
4	Queue music when agent not available	Verify that caller hears queue music when agent is not available.	
5	Multiple hold music instances	Verify that queue music plays when more than one agent places call on hold.	
6	Repeated call hold	Verify that queue music is present when agent puts call on hold, resumes call with normal agent audio, returns call to hold state and caller hears queue music.	
7	Time to music	Verify that the time it takes for music to play in hold state is one second or less.	
8	Longer hold times	Verify that music plays during the entirety of a long (10 minutes) hold time.	
9	Audio quality #1: Continuous Audio	Verify that music is continuous and uninterrupted.	
10	Audio quality #2: Audio artifacts	Verify that audio does not contain noise artifacts, pops, hum and the like.	
11	Audio quality #3: Volume	Adjust volume to make improvements in sound quality.	

STREAMING QUEUE MUSIC™

Developed by Easy On Hold® as an easy-to-integrate, reliable, maintenance-free queue audio alternative.

Support Model

Direct to customer

Support Coverage Hours

Standard business hours, with after-hours pager support

Support Hotline

+1 888-798-4653

Support Alias

support@easyonhold.com

Support URL

<https://easyonhold.com/support>

