

Spectrum Enterprise SIP Trunking Service Mitel MiVoice Business 7.X IP PBX Configuration Guide

About Spectrum Enterprise:

Spectrum Enterprise is a division of Charter Communications following a merger with Time Warner Cable and acquisition of Bright House Networks. Spectrum Enterprise is a national provider of scalable, fiber technology solutions. The Spectrum Enterprise portfolio includes networking and managed services solutions, including Internet access, Ethernet and Managed Network Services, Voice, TV and Cloud solutions. Our industry-leading team of experts works closely with clients to achieve greater business success.

About this document:

Spectrum Enterprise assures IP PBX compatibility by conducting interoperability testing to ensure any potential compatibility issues have been resolved prior to installation. Please review the IP PBX configuration instructions in this guide prior to your installation date.

Be advised that this document may contain references to Time Warner Cable Business Class. All references to Time Warner Cable Business Class, TWCBC or TWC should be read as Spectrum Enterprise.

Thank you,

Spectrum Enterprise

MITEL – SIP CoE

Technical Configuration Notes

Configure MiVoice Business 7.X for use with Time Warner Cable Business Class SIP Trunking service

MARCH 2015 SIP COE 15-4940-00363 TECHNICAL CONFIGURATION NOTES



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Mitel Technical Configuration Notes – Configure MiVoice Business for use with Time Warner Cable Business Class SIP Trunking

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OVERVIEW	
Interop History	1
Interop Status	1
Software & Hardware Setup	2
Tested Features	3
Device Limitations and Known Issues	4
Network Topology	5
CONFIGURATION NOTES	6
MiVoice Business Configuration Notes	6
Configuration Template	6
Network Requirements	6
Assumptions for MiVoice Business Programming	6
Licensing and Option Selection – SIP Licensing	7
Class of Service Assignment	
Class of Service for Trunk	9
General	9
Advanced	
Class of Service for Phone	
General	
Advanced	
Network Element Assignment	
Network Element Assignment (Proxy)	
Trunk Attributes	
SIP Peer Profile	
ARS Digit Modification Plans	
ARS Routes	
ARS Digits Dialed	
FAX Configuration	
Zone Assignment	
Personal Ring Groups Configuration	
3300 Setup for Connecting NuPoint	
Licensing and Option Selection – SIP Licensing	
System Options	
Class of Service Options	
IP Endpoints used for NuPoint Ports	
Voice Mail Hunt Group	
HCIReroute Hunt Group	
MiCollab NuPoint Configuration	

Network Elements	42
Voice Mail Line Group	43
Adding Mailboxes	46
MiVoice Border Gateway Configuration Notes	48

Overview

This document provides a reference to Mitel Authorized Solutions providers for configuring the MiVoice Business to connect to Time Warner Cable Business Class (TWCBC) SIP Trunking. The different devices can be configured in various configurations depending on your VoIP solution. This document covers a basic setup with required option setup.

Interop History

Version	Date	Reason
1	26-Feb-2015	Initial Interop with MiVoice Business Release 7.0 SP1 PR1 Software Load 13.0.1.28 and TWCBC SIP Trunking

Interop Status

The Interop of TWCBC SIP Trunking has been given a Certification status. This service provider or trunking device will be included in the SIP CoE Reference Guide. The status TWCBC SIP Trunking achieved is:

Software & Hardware Setup

This was the test setup to generate a basic SIP call between TWCBC SIP Trunking and the MiVoice Business.

Manufacturer	Variant	Software Version
Mitel	MiVoice Business	Release 7.0 SP1 PR1 Active Software Load 13.0.1.28
Mitel	Minet Sets:5320, 5360, 5312,	6.02.00.06
Mitel	MiVoice Border Gateway – Teleworker	8.1.23
Service Provider	TWCBC	NA

Tested Features

This is an overview of the features tested during the Interop test cycle and not a detailed view of the test cases. Please see the SIP Trunk Side Interoperability Test Pans (08-4940-00034) for detailed test cases.

Feature	Feature Description	Issues
Basic Call	Making and receiving a call through TWCBC and their PSTN gateway, call holding, call forwarding, transferring, conferencing, busy calls, DTMF RFC2833, long calls durations, variable codec, G.711 and G.729 Codec, Privacy, Loop back calling, Long Ringing.	V
Automatic Call Distribution	Making calls to an ACD environment with RAD treatments, Interflow and Overflow call scenarios and DTMF detection.	Ţ
NuPoint Voicemail	Terminating calls to a NuPoint voicemail boxes as well as Embedded voicemail and DTMF detection.	Ń
Packetization	Forcing the MiVoice Business to stream RTP packets through its E2T card at different intervals, from 10ms to 90ms	
Personal Ring Groups	Receiving calls through TWCBC and their PSTN gateway to a personal ring group. Also moving calls to/from the prime member and group members.	Ţ
Teleworker	Making and receiving a call Through TWCBC and their PSTN gateway to and from Teleworker extensions.	1
Video	Making and receiving a call through TWCBC with video capable devices.	Δ
Fax	T.38 and G711Fax Calls	

 \vec{v} - No issues found imes - Issues found, cannot recommend to use Δ - Issues found

Device Limitations and Known Issues

This is a list of problems or not supported features when TWCBC SIP Trunking is connected to the MiVoice Business.

Feature	Problem Description		
Packetization Rate	TWCBC supports 20ms packetization rate only		
	Recommendation: Set packetization rate to 20ms		
Ring back not heard after Mitel unsupervised transfer completion	Mitel phone A completes unsupervised transfer to connect Remote DUT/DUT PSTN to another Mitel phone B. Remote DUT/DUT PSTN continue hears music while Mitel phone B is ringing, this is not Mitel test plan expected result.		
4.CD			
Interflow/Overflow to external loop	When setup ACD interflow/overflow to a Mitel answer point through TWCBC network, TWCBC's loop detection feature will reject the call when Mitel answer point picks up the call.		
detection	Recommendation : configure the proper ACD Interflow/overflow target to avoid using more than 2 SIP trunks for one call.		
Video Call	TWCBC does not Support video calls.		
	Recommendation: Contact TWCBC for update on this feature		
Voice Codec	TWCBC supports only G711Ulaw for Voice codec,		
	Recommendation: Configure Intra-zone Compression to No and allow only G711 codecs		
FAX T.38	TWCBC does not support T.38 fax, only G711 pass-through fax is supported		
	Recommendation: configure Fax using G711 Pass-through only		
Split (Mid-Call Feature) via single digit FAC from EHDU in	External Hot Desk User (EHDU) could not invoke call split via single digit FAC while in the conference call, all other Mid-Call Features such as Hold/Retrieve, Transfer, Conference, Swap, Handoff work as expected.		
conference call	Recommendation: Contact Mittel Support		

Network Topology

This diagram shows how the testing network is configured for reference.



Figure 1 – Network Topology

Configuration Notes

This section is a description of how the SIP Interop was configured. These notes should give a guideline how a device can be configured in a customer environment and how MiVoice Business programming with TWCBC SIP Trunking was configured in our test environment.

Disclaimer: Although Mitel has attempted to setup the interop testing facility as closely as possible to a customer premise environment, implementation setup could be different onsite. YOU MUST EXERCISE YOUR OWN DUE DILIGENCE IN REVIEWING, planning, implementing, and testing a customer configuration.

MiVoice Business Configuration Notes

The following steps show how to program a MiVoice Business to interconnect with TWCBC SIP Trunking.

Configuration Template

A configuration template can be found in the same MOL Knowledge Base article as this document. The template is a Microsoft Excel spreadsheet (.csv format) **solely** consisting of the SIP Peer profile option settings used during Interop testing. All other forms should be programmed as indicated below. Importing the template can save you considerable configuration time and reduce the likelihood of data-entry errors. Refer to the MiVoice Business documentation on how the Import functionality is used.

Network Requirements

- There must be adequate bandwidth to support the voice over IP. As a guide, the Ethernet bandwidth is approx 85 Kb/s per G.711 voice session and 29 Kb/s per G.729 voice session (assumes 20ms packetization). As an example, for 20 simultaneous SIP sessions, the Ethernet bandwidth consumption will be approx 1.7 Mb/s for G.711 and 0.6Mb/s. Almost all Enterprise LAN networks can support this level of traffic without any special engineering. Please refer to the MiVoice Business Engineering guidelines for further information.
- For high quality voice, the network connectivity must support a voice-quality grade of service (packet loss <1%, jitter < 30ms, one-way delay < 80ms).

Assumptions for MiVoice Business Programming

The SIP signaling connection uses UDP on Port 5060.

Licensing and Option Selection - SIP Licensing

Navigation: Licenses -> Licenses and Option Selection

Ensure that the MiVoice Business is equipped with enough SIP trunk licenses for the connection to TWCBC SIP Trunking. This can be verified within the License and Option Selection form.

Enter the total number of licenses in the SIP Trunk Licences field. This is the maximum number of SIP trunk sessions that can be configured in the MiVoice Business to be used with all service providers, applications and SIP trunking devices.

Extended Hunt Group: this is set to YES for NuPoint Voice Mail configuration.

	Hadu StaQlear Cl	ear					N	lessage Board	About He	p Logout
Local_2 View by Category Verson Share	License and (Option Selection on	.ocal_2	DN to se	arch	~	Shov	form on Not	Accessible	✓ Go ↓
Licenses	Change						Print	Import	Export	ata Refresh
System Capacity Dimension Selection	License a	nd Option Selection								
Application Group Licensing 📣	Online Licen	ising with the Applicat	tion Management Cente	۶r						
Voice Network System Properties		Application Record	D 26682	859						
Hardware Trunks	System Type Enterprise	e License Sharing No	Hardware Identifier 0000003a1a4f							
Users and Devices Integrated Directory Services									Local Limits	.
Voice Mail Call Routing	Licensed Op	tions		Co	Locally insumed	Locally Allocated	Available for Allocation	Purchased	Licenses Allowed	Can be Over Allocated
Music On Hold	Users									
Emergency Services Management Property Management		External Hot Desk U ACD Active Agents	sers		11 1 1	16 5 10	0 5 0	16 10 10	Unrestricted Unrestricted Unrestricted	Yes Yes No
Maintenance and Diagnostics		HTML Applications Analog Lines Milloice Business Co	onsole Active Operator	e	0	0 16	20 1# 0 20 1#	0 16	Unrestricted Unrestricted	Yes Yes
		Multi-device Users Multi-device Suites		5	0	5	0 5	5 5	Unrestricted 0	Yes
	Messagin	g Embedded Voice Ma	ii i		1	16	0	16	Unrestricted	Vac
	-	Embedded Voice Ma	iil PMS		1	Yes	0	1	Unrestricted	Yes
	i runking/	Digital Links Compression			0	1	0	1 8	Unrestricted Unrestricted	Yes Yes
	[FAX Over IP (T.38) SIP Trunks			10	4 353	0 0	4 353	Unrestricted Unrestricted	Yes Yes
	Others	IDS Connection			1	Yes	0	1	Unrestricted	Yes
	Configuratio	n Options			U	NO	Ū	U	Unrestricted	NO
		Country Extended Agent Skill	I Group			America No				
	1	Maximum Elements Maximum Configural Extended Hunt Grou 5560 IPT Device Exter	per Cluster ble IP Users and Device p ended Key Lines	98		30 700 Yes No				

Figure 2 – License and Option Selection

Class of Service Assignment

Navigation: System Properties-> System Feature Settings-> Class of Service Options

The Class of Service Options Assignment form is used to create or edit a Class of Service and specify its options. Classes of Service, identified by Class of Service numbers, are referenced in the Trunk Service Assignment form for SIP trunks.

	3tatu Statilear Clear		Message Board About Hel	p Logout
Local_2 View by Category V SDS Share	Class of Service Options on Local_2	DN to search	Show form on Not Accessible	Go 🗸
Licenses	Change Copy		Print Import Export D	ata Refresh
LAN/WAN Configuration Voice Network	Page 1 of 10 💈 >	Go to:	value:	Go
 System Properties 	Class of Service Options			
System Settings	Class Of Service Number		Comment	
System Feature Settings	1		ТWCBC	
System Options	2		Mitel Phone	
Class of Service Options	3		Embedded VM	
SIR Davice Capabilities	4		RAD ANN	
Class of Restriction Groups	5		NuReint VM	
System Access Points 🚓			NUF OILT VIN	
Eeature Access Codes 📌	6			
Independent Account Codes 🛷	7			
Default Account Codes 🚕	8			
System Account Codes 🚙	9			
System Speed Calls 🛹	10			



Class of Service for Trunk

General

eneral Advanced	
Class Of Service Number	1
Comment	TWCBC
CD	
ACD Agent Behavior on No Answer	Logout
ACD Agent No Answer Timer	15
ACD Make Busy on Login	No
ACD Silent Monitor Accept	No
ACD Silent Monitor Accept Monitoring Non-Prime Lines	No
ACD Silent Monitor Allowed	No
ACD Silent Monitor Notification	No
Follow 2nd Alternate Reroute for Recall to Busy ACD Agent	No
Work Timer	0
nnounce	
Call Announce Line	No
Off-Hook Voice Announce Allowed	No
Handsfree AnswerBack Allowed	No
usy Override	
Busy Override Security	No
Disable Executive Busy Override Tone	No
Executive Busy Override	No
all Control Timer	
Busy Tone Timer	30
Dialing Conflict Timer	3
First Digit Timer	15
Inter Digit Timer	10
Lockout Timer	45
all Duration	
Call Duration	10
Call Duration Forced Cleardown Timer	0
Enable Call Duration Limit on External Calls	No
Enable Call Duration Limit on Internal Calls	No

Figure 4 – Class of Service (Basic) for SIP Trunk

Call Forward - Delay	
Call Forward No Answer Timer	
Call Forward Override	
Call Forwarding (External Destination)	
Call Forwarding (Internal Destination)	
Call Forwarding Accept	
Call Reroute after CFFM to Busy Destination	
Call Forwarding Reminder Ring (CFFM and CFIAH only)	
Disable Call Reroute Chaining On Diversion	
Group Call Forward Follow Me Accept	
Group Call Forward Follow Me Allow	
Third Party Call Forward Follow Me Accept	
Inito Party Call Forward Follow Me Allow	
Use Held Party Device for Call Re-routing	
Call Hold	
Call Hold	
Call Hold - Retrieve with Hold Key	
Call Hold Remote Retrieve	
Call Hold Timer	
Local Music On Hold source	
Music on Hold on Transfer	
Use Called Party Call Hold Timer	
Call Park	
Call Park Timer	
Call Park-Allowed To Park	
Call Pickup	
Allow Directed Call Pickup Of Attendant Call	
Call Pickup Dialed Accept	
Call Pickup Directed Accept	
Call Privacy	
Call Privacy	
Calling Party Name Substitution	
Name Suppression on outgoing Trunk Call	
Privacy Released	
Public Network Identity Provided	
Call Waiting	
Call Waiting Swap	
ONS CLASS/CLIP: Visual Call Waiting	
Campon	
Auto Campon Timer	
Campon Recall Timer	

Call Forwarding/Rerouting

Figure 5 – Class of Service (Basic) for SIP Trunk cont.

Direct Voice Call	
Direct Voice Call - Accept	N
Direct Voice Call - Allow	N
Direct Voice Call - Maximize Volume	N
Display	
After Answer Display Time	
Calling Name Display - Internal - ONS	- Ye
Calling Number Display - Internal - ONS	Ye
Display ANI/DNIS/ISDN Calling/Called Number	N
Display ANI/ISDN Calling Number Only	N
Display Caller ID on multicall/keylines	N
Display Caller ID On Multicall/Keylines Timer	5
Display Caller ID On Single Line Displays For Forwarded Calls	N
Display Dialed Digits during Outgoing Calls	N
Display DNIS/Called Number Before Digit Modification	N
Display Held Call ID on Transfer	N
Display Transfer Destination on Recall	N
Hot Desk External User - Display Internal Calling ID	N
Maintain Ringing Party During Recall	N
Non-Prime Public Network Identity	N
Originator's Display Update In Call Forwarding/Rerouting	N
Suppress Delivery of Caller ID Display between Sets	N
Suppress Delivery of Caller ID Display between Sets - Override	N
Suppress Display Of Account Code Numbers	N
Suppress Redial Display	N
Fax	
Campon Tone Security	N
External Trunk Standard Ringhack	- N
Fax Capable	- N
Return Disconnect Tone When Far End Party Clears	N
HCI	
HCI/CTI/TAPI Call Control Allowed	_ Ye
HCI/CTI/TAPI Monitor Allowed	Y6
Hot Desk	
Green BLF Lamp for Logged in Hotdesk User	N
Hot Desk External User - Allow Mid-Call Features	Ye
Hot Desk External User - Answer Confirmation	Ye
Hot Desk External User - Dial Tone on Call Complete	Ye
Hot Desk External User - Permanent Login	N
Hot Desk External User - Remote MWI Enable Feature Access Code	
Hot Desk External User - Remote MWI Disable Feature Access Code	
Hot Desk Login Accept	Ye
Hot Desk Remote Logout Enabled	N
Miscellaneous	
Backlighting Enabled	V
Close All Eastures Domoto	- 16 N
Force Device Rusy If Apy Line In Lise	N
Handsot Volume Adjustment Saved	- N
Hanuset volume Aulusunent saveu	11

Figure 6 – Class of Service (Basic) for SIP Trunk cont.

Head Set Switch Mute	
Multi-Color LED Support - Disable	
Phone Lock	
Reseize Timer	
Timed Reminder Allowed	
User inactivity limer	
Paging	
Group Page Accept	
Group Page Allow	
Loudspeaker Pager Equivalent Zone Override Security	
Loudspeaker Pager Override	
Pager Access All Zones	
Pager Access Individual Zones	
PC Port	
PC Port On IP Device - Disable	
RAD	
Answer Plus Delay To Message Timer	
Answer Plus Expected Off-hook Timer	
Answer Plus Message Length Timer	
Answer Plus System Reroute Timer	
Recorded Announcement Device	
Recorded Announcement Device - Advanced	
Ringing	
Delay Ring Timer	
No Answer Recall Timer	
Ringing Line Select	
Ringing Timer	
SMDR	
SMDR External	
SMDR Internal	
Trunk	
ANI/DNIS/ISDN Number Delivery Trunk	
DASS II OLI/TLI Provided	
Public Network Access via DPNSS	
Public Network To Public Network Connection Allowed	
Public Trunk	
R2 Call Progress Tone	
Suppress Simulated CCM after ISDN Progress	
Trunk Calling Party Identification	
Trunk Flash Allowed	
Voice Mail	
COV/ONS/E&M Voice Mail Port	
ONS VMail-Delay Dial Tone Timer	

Figure 7 – Class of Service (Basic) for SIP Trunk cont.

"

Advanced

General	Advanced		
Account	Code		
Accou	Int Code Len	gth	12
Accou	int Code Veri	fied	No
Forced Non-Verified Account Code		No	
Force	d Verified Ac	count Code	No
Non V	erified Accou	int Code	Yes
Attendan	t		
Attend	lant Busy Ou	t Timer	10
SC100	0 Attendant	Basic Function Key	No
Conferen	се		
Confe	rence Call		Yes
Disab	e Conference	e Join Tone	No
DND			
Do No	t Disturb		Yes
Do No	t Disturb - Ad	ccess to Remote Phones	Yes
Do No	t Disturb Per	manent	No
Emergen	су		
Emerg	jency Call - A	udio Level for Set	Ringer
Emerg	jency Call No	tification - Audio	No
Emerg	jency Call No	tification - Visual	No
Group Pr	esence		
Group	Presence Co	ontrol	No
Group	Presence Th	ird Party Control	No
Hotel			
Displa	y VIP		No
Hotel	Room Monito	or Setup Allowed	No
Hotel	Room Monito	oring Allowed	No
Hotel/	Motel Room I	Personal Wakeup Call Allowed	No
Hotel/	Motel Room I	Remote Wakeup Call Allowed	No
Message	Waiting		
Messa	ige Waiting		Yes
Messa	ige Waiting -	Usable Ringing Lamp Notification	No
Moses	ige waiting A	activate On Off Hook	N0
Mossa	ige Waiting D		Ves
Messa	de Waiting R	inging Start Time Hour	165
Messa	ige Waiting R	linging Start Time Minute	
Messa	ge Waiting R	tinging Stop Time Hour	
Messa	ge Waiting R	tinging Stop Time Minute	
Multili	ne Set Voice	Mail Callback Message Erasure Allowed	No
ONSO	LASS/CLIP:	Message Waiting Activate/Deactivate	No

Figure 8 – Class of Service (Advanced) for SIP Trunk

Miscellaneous
Auto Answer Allowed
Auto Release on Key Select
Brokers Call
Called Party Features Override
Check COR after PSTN Dial Tone
Dialled Night Service
Disable Send Message
Flexible Answer Point
Individual Trunk Access
Key A
Key B
Key C
Key D
Multiline Set Loop Test
Multiline Set Message Center Remote Read Allowed
Multiline Set Music
Multiline Set On-hook Dialing
Multiline Set Phonebook Allowed
Non DID Extension
ONS CLASS/CLIP: Set
ONS/OPS Internal Ring Cadence for External Callers
Override Interconnect Restriction on Transfer
Recall If Transferred to Original Call Destination
Redial Facilities
Use Default Billable Number For Trunk Calls
Voice Dial Preferred
Voice Mail Softkey
honebook
Bhanabaak Laakun Dafault to Usar Lagatian
Phonebook Lookup - Default to User Location
Phonebook Lookup - Display User Location
Record A Call
Record-A-Call - Save Recording on Hang-up
Record-A-Call - Start Automatic Incoming Call Recording
Record-A-Call - Start Automatic Outgoing External Call Recording
Record-A-Call Active

Miscellaneous

Figure 9 – Class of Service (Advanced) for SIP Trunk cont.

Class of Service for Phone

General

General Advanced	
Class Of Service Number	2
Comment	Mitel Phone
ACD	
ACD Agent Behavior on No Answer	Logout
ACD Agent No Answer Timer	15
ACD Make Busy on Login	No
ACD Silent Monitor Accept	No
ACD Silent Monitor Accept Monitoring Non-Prime Lines	No
ACD Silent Monitor Allowed	No
ACD Silent Monitor Notification	No
Follow 2nd Alternate Reroute for Recall to Busy ACD Agent	No
Work Timer	0
Announce	
Call Announce Line	No
Off-Hook Voice Announce Allowed	No
Handsfree AnswerBack Allowed	No
Busy Override	
Busy Override Security	No
Disable Executive Busy Override Tone	No
Executive Busy Override	No
Call Control Timer	
Busy Tone Timer	30
Dialing Conflict Timer	3
First Digit Timer	15
Inter Digit Timer	10
Lockout Timer	45
Call Duration	
Call Duration	10
Call Duration Forced Cleardown Timer	0
Enable Call Duration Limit on External Calls	No
Enable Call Duration Limit on Internal Calls	No

Figure 10 – Class of Service (Basic) for Phone

0
15
Ye
Ye
Ye
Ye
No
Ye
Ye
N0
10
10
Ye
No
10
10
No
Ye
Te
No
No
No
No
Ye
No
Ye
10
10
No
No
No

Call Forwarding/Rerouting

Figure 11 – Class of Service (Basic) for Phone cont.

Display

After Answer Display Time	
Calling Name Display - Internal - ONS	
Calling Number Display - Internal - ONS	
Display ANI/DNIS/ISDN Calling/Called Number	
Display ANI/ISDN Calling Number Only	
Display Caller ID on multicall/keylines	
Display Caller ID On Multicall/Keylines Timer	
Display Caller ID On Single Line Displays For Forwarded Calls	
Display Dialed Digits during Outgoing Calls	
Display DNIS/Called Number Before Digit Modification	
Display Held Call ID on Transfer	
Display Transfer Destination on Recall	
Hot Desk External User - Display Internal Calling ID	
Maintain Ringing Party During Recall	
Non-Prime Public Network Identity	
Originator's Display Update In Call Forwarding/Rerouting	
Suppress Delivery of Caller ID Display between Sets	
Suppress Delivery of Caller ID Display between Sets - Override	
Suppress Display Of Account Code Numbers	
Suppress Redial Display	
Fax	
Campon Tone Security	
External Trunk Standard Ringback	
Fax Capable	
Return Disconnect Tone When Far End Party Clears	
C	
HCI/CTI/TADI Call Control Allowed	
101 Desk	
Green BLF Lamp for Logged in Hotdesk User	
Hot Desk External User - Allow Mid-Call Features	
Hot Desk External User - Answer Confirmation	
Hot Desk External User - Dial Tone on Call Complete	
Hot Desk External User - Permanent Login	
Hot Desk External User - Remote MWI Enable Feature Access Cod	e
Hot Desk External User - Remote MWI Disable Feature Access Cod	le
Hot Desk Login Accept	
Hot Desk Remote Logout Enabled	
Aiscellaneous	
Backlighting - Enabled	
Clear All Features Remote	
Force Device Busy If Any Line In Use	
Handset Volume Adjustment Saved	
Head Set Switch Mute	
Multi-Color LED Support - Disable	
Phone Lock	
Reseize Timer	
Timed Reminder Allowed	

Figure 12 – Class of Service (Basic) for Phone cont.

User Inactivity Timer	0
Paging	
Group Page Accept	No
Group Page Allow	No
Loudspeaker Pager Equivalent Zone Override Security	No
Loudspeaker Pager Override	Yes
Pager Access All Zones	Yes
Pager Access Individual Zones	No
PC Port	
PC Port On IP Device - Disable	No
RAD	
Answer Plus Delay To Message Timer	20
Answer Plus Expected Off-hook Timer	30
Answer Plus Message Length Timer	10
Answer Plus System Reroute Timer	0
Recorded Announcement Device	No
Recorded Announcement Device - Advanced	No
Ringing	
Delay Ring Timer	10
No Answer Recall Timer	17
Ringing Line Select	No
Ringing Timer	180
SMDR	
SMDR External	Yes
SMDR Internal	No
Trunk	
ANI/DNIS/ISDN Number Delivery Trunk	Yes
DASS II OLI/TLI Provided	No
Public Network Access via DPNSS	Yes
Public Network To Public Network Connection Allowed	Yes
Public Trunk	Yes
R2 Call Progress Tone	No
Suppress Simulated CCM after ISDN Progress	Yes
Trunk Calling Party Identification	Yes
Trunk Flash Allowed	Yes
Two B-Channel Transfer Allowed	No
Voice Mail	
COV/ONS/E&M Voice Mail Port	No
ONS VMail-Delay Dial Tone Timer	5

Figure 13 – Class of Service (Basic) for Phone cont.

Advanced

General Advanced	
Account Code	
Account Code Length	12
Account Code Verified	No
Forced Non-Verified Account Code	No
Forced Verified Account Code	No
Non Verified Account Code	Yes
Attendant	
Attendant Busy Out Timer	10
SC1000 Attendant Basic Function Key	No
Conference	
Conference Call	Yes
Disable Conference Join Tone	No
DND	
Do Not Disturb	Yes
Do Not Disturb - Access to Remote Phones	Yes
Do Not Disturb Permanent	No
Emergency	
Emergency Call - Audio Level for Set	Ringer
Emergency Call Notification - Audio	No
Emergency Call Notification - Visual	No
Group Presence	
Group Presence Control No.	
Group Presence Control	No
Hotal	140
Diaplay VID	No
Uispiay VIP Hotal Room Manitar Satur Allowed	
Hotel Room Monitoring Allowed	No
Hotel/Motel Room Personal Wakeup Call Allowed	No
Hotel/Motel Room Remote Wakeup Call Allowed	No
Message Waiting	
Message Waiting	Ves
Message Waiting - Disable Ringing Lamp Notification	No
Message Waiting Audible Tone Notification	No
Message Waiting Deactivate On Off-Hook	Yes
Message Waiting Inquire	Yes
Message Waiting Ringing Start Time Hour	
Message Waiting Ringing Start Time Minute	
Message Waiting Ringing Stop Time Hour	
Message Waiting Ringing Stop Time Minute	
Multiline Set Voice Mail Callback Message Erasure Allowed	No
ONS CLASS/CLIP: Message Waiting Activate/Deactivate	No

Figure 14 – Class of Service (Advanced) for Phone

Miscellaneous	
Auto Answer Allowed	Yes
Auto Release on Key Select	No
Brokers Call	No
Called Party Features Override	No
Check COR after PSTN Dial Tone	No
Dialled Night Service	Yes
Disable Send Message	No
Flexible Answer Point	No
Individual Trunk Access	Yes
Key A	
Key B	
Key C	
Key D	
Multiline Set Loop Test	No
Multiline Set Message Center Remote Read Allowed	No
Multiline Set Music	No
Multiline Set On-hook Dialing	Yes
Multiline Set Phonebook Allowed	Yes
Non DID Extension	No
ONS CLASS/CLIP: Set	No
ONS/OPS Internal Ring Cadence for External Callers	No
Override Interconnect Restriction on Transfer	No
Recall If Transferred to Original Call Destination	No
Redial Facilities	Yes
Use Default Billable Number For Trunk Calls	No
Voice Dial Preferred	No
Voice Mail Softkey	No
Phonebook	
Phonebook Lookup - Default to User Location	No
Phonebook Lookup - Display User Location	No
Record A Call	
Record-A-Call - Save Recording on Hang-up	No
Record-A-Call - Start Automatic Incoming Call Recording	No
Record-A-Call - Start Automatic Outgoing External Call Recording	No
Record-A-Call Active	No

Figure 15 – Class of Service (Advanced) for Phone cont.

Network Element Assignment

Navigation: Voice Network -> Network Elements

Create a network element for TWCBC SIP Trunking. In this example, the softswitch is reachable by an IP Address and is defined as "TWCBC" in the network element assignment form. The FQDN or IP addresses of the SIP Peer (Network Element), the External SIP Proxy and Registrar are provided by your service provider.

If your service provider trusts your network connection by asking for your gateway external IP address, then programming the IP address for the SIP Peer, Outbound Proxy and Registrar is not required for SIP trunk integration. This will need to be verified with your service provider. Set the transport to UDP and port to 5060.

✓Network Elements	
Name	TWCBC
Туре	Other
FQDN or IP Address	10.65.1.200
Local	False
Version	
Zone	1
ARID	
SIP Peer	\checkmark
SIP Peer Specific	
SIP Peer Transport	UDP 🗸
SIP Peer Port	5060
External SIP Proxy FQDN or IP Address	10.65.1.200
External SIP Proxy Transport	UDP 🔽
External SIP Proxy Port	5060
SIP Registrar FQDN or IP Address	
SIP Registrar Transport	default
SIP Registrar Port	0
SIP Peer Status	Auto-Detect/Normal
	Save Cancel

Figure 16 – Network Element Assignment

Network Element Assignment (Proxy)

In addition, depending in your configuration, a Proxy may need to be configured to route SIP data to the service provider. If you have a Proxy server installed in your network, MiVoice Business will require knowledge of this by programming the Proxy as a network element then referencing this proxy in the SIP Peer profile assignment (later in this document).

Network Elements		
News		
Name	I WCBC_MBG ×	
Туре	Outbound Proxy	~
FQDN or IP Address	10.65.1.20	
Local Version	False	
Zone	1	
ARID		
Outbound Proxy Specific		_
Outbound Proxy Transport Type	default	
Outbound Proxy Port	0	
		-
	Save	ancel

Figure 17 – Network Element Assignment (Proxy)

Trunk Attributes

This is configured in the Trunk Attributes form. In this example the Trunk Attributes is defined for Trunk Service Number 1 which will be used to direct incoming calls to an answer point in the MiVoice Business.

Program the Non-dial In or Dial In Trunks (DID) according to the site requirements and what type of service was ordered from your service provider. **Dial in Trunks Incoming Digit Modification- Absorb** is set to 0.

🕈 Trunk Attributes	
Trunk Service Number	1
Release Link Trunk	No 🗸
Call Recognition Service	Trusted
Direct Inward Dialing Service	Off
	On
Class of Service	1
Class of Restriction	1
Baud Rate	9600 🗸
Intercept Number	1
Non-dial In Trunks Answer Point - Day	
Non-dial In Trunks Answer Point - Night 1	
Non-dial In Trunks Answer Point - Night 2	
Dial In Trunks Incoming Digit Modification - Absorb	0
Dial In Trunks Incoming Digit Modification - Insert	
Dial In Trunks Answer Point	
Dial In Trunks Insert Forwarding Information	● No ○ Yes
Trunk Label	TWCBC



Figure 18 – Trunk Attributes

SIP Peer Profile

Navigation: Trunks -> SIP -> SIP Peer Profile

The recommended connectivity via SIP Trunking does not require additional physical interfaces. IP/Ethernet connectivity is part of the base MiVoice Business Platform. The SIP Peer Profile should be configured with the following options:

Basic (Figure 19):

Network Element: The selected SIP Peer Profile needs to be associated with previously created "TWCBC" Network Element.

Registration User Name: Leave this field blank.

Address Type: Select IP address of your Mitel 3300ICP.

Maximum Simultaneous Calls: This entry should be configured to maximum number of SIP trunks provided by TWCBC.

Outbound Proxy Server: Select the Network Element previously configured for the Outbound Proxy Server.

SMDR: If Call Detail Records are required for SIP Trunking, the SMDR Tag should be configured (by default there is no SMDR and this field is left blank).

Trunk Service: Enter the trunk service number that was previously configured- **1** is used in this configuration.

Subscription User Name/Password: Enter user name and password which will be matched in later MBG configuration for KPML credentials under Configuration > Settings > Service Parameter. This is part of configuration for Mid Call features to function with KPML such as pressing 5 to handoff from the EHDU in the PRG (Personal Ring Groups).

NOTE: Ensure the remaining SIP Peer profile policy options are similar to the screen capture below.

		-	
Basic Call Routing Calling Line ID	SDP Options	Signaling and He	ader Manipulation
Timers Key Press Event Outgoing D	ID Ranges Pro	file Information	
SIP Peer Profile Label	TWCBC		
Network Element	TWCBC		
Local Account Information			
Registration User Name			
Address Trees	IP Address:		
Address Type	10.35.32.2		
Administration Options			
Interconnect Restriction	1		
Maximum Simultaneous Calls	10		
Minimum Reserved Call Licenses	10		
Administration Ordinan			
Administration Options			
Outbound Proxy Server	TWCBC_MBG		
SMDR Tag	0		
Trunk Service	1		
Zone	1		
User Name			
Password	******		
Confirm Password	******		
Authentication Option for Incoming Calls	No Authentication		
Subscription User Name	administrator		
Subscription Password	******		
Subscription Confirm Password	******		

Figure 19 – SIP Peer Profile - Basic

Call Routing (figure 20):

Leave the default settings as shown.

Basic Call Routing Calling Line ID SDP O	ptions Signaling and Header Manipulation
Timers Key Press Event Outgoing DID Range	Profile Information
Alternate Destination Domain Enabled	No
Enable Special Re-invite Collision Handling	No
Only Allow Outgoing Calls Private SIP Trunk	No No
Reject Incoming Anonymous Calls	No
Route Call Using P-Called-Party-ID (if present)	Yes
Route Call Using To Header	No

Figure 20 – SIP Peer Profile Assignment- Call Routing

Calling Line ID (figure 21):

Default CPN: Default CPN (Calling Party Number) is applied to all outgoing calls. TWCBC accepts the calls from all assigned DID numbers hence this field is left blank.

CPN Restriction: By default, this parameter is set to "NO" to not block the caller ID.

r							_
Basic	Call Routing	Call	ing Line ID	SDP Option	ns Signaling and H	eader Manipulation	
Timers	Key Press Ev	ent	Outgoing DI	D Ranges	Profile Information		
Default C	PN						
Default C	PN Name						
CPN Res	triction				No		
Public Ca	alling Party Nun	nber	Passthrough		No		
Strip PNI					No		
Use Dive	rting Party Num	nber (as Calling Pa	rty Number	No		
Use Origi	inal Calling Par	ty Nu	mber If Avail	able	No		

Figure 21 – SIP Peer Profile Assignment- Calling Line ID

SDP Options (figure 22):

Force sending SDP in initial Invite message: Yes is selected for this configuration.

Leave all other fields as default.

Basic Call Routing Calling Line ID	SDP Options	Signaling and H	eader Manipulation
Timers Key Press Event Outgoing DID) Ranges Pro	ofile Information	
Allow Poor To Use Multiple Active M Lines	v		
Allow Liging LIDDATE For Early Modia Dono	notiation N	es 0	
Allow Using UPDATE FOI Early Media Relie	youauon N	0	
AVD Only Door	V	6 5	
Enable Mitel Draprietany SDD	f	-	
Enable Milei Proprietary SDP	N	0	
Force sending SDP in Initial Invite message	3 Y	es	
Force sending SDP in initial Invite - Early A	nswer N	0	
Ignore SDP Answers in Provisional Respon	ises N	0	
Limit to one Offer/Answer per INVITE	Y	es	
NAT Keepalive	Y	es	
Prevent the Use of IP Address 0.0.0.0 in SD	P Messages Y	es	
Renegotiate SDP To Enforce Symmetric Co	dec N	0	
Repeat SDP Answer If Duplicate Offer Is Re	ceived N	0	
Postrict Audio Codoc	N	0	
Resulti Audio Codec	R	estriction	
RTP Packetization Rate Override	N	0	
RTP Packetization Rate	20)ms	
Special handling of Offers in 2XX response	s (INVITE) N	0	
Suppress Use of SDP Inactive Media Stream	ns N	0	

Figure 22 – SIP Peer Profile Assignment- SDP Options

Signaling and Header Manipulation (figure 23):

Disable Reliable Provisional Response: set to YES for this setup.

Require Reliable Provisional Response on Outgoing Calls: Set to No for this setup.

Leave all other fields as default.

Basic Call Routing Calling Line ID SDP Options	Signaling and Header Manipulation
Timers Key Press Event Outgoing DID Ranges Pro	file Information
Trunk Group Label	
Allow Display Undate	No
Allow Display Opuale	No
Build Contact Using Request OKI Address	NO
Disable Deliable Dravisional Despenses	Yes
Disable Reliable Provisional Responses	Yes
Disable Use of User-Agent and Server Headers	No
E.164: Enable sending '+'	No
E.164: Add '+' if digit length > N digits	0
E.164: Do not add '+' to Emergency Called Party	No
E.164: Do not add '+' to Called Party	No
Force Max-Forward: 70 on Outgoing Calls	No
If TLS use 'sips:' Scheme	No
Ignore Incoming Loose Routing Indication	No
Only use SDP to decide 180 or 183	Yes
Prefer From Header for Caller ID	No
Require Reliable Provisional Responses on Outgoing Calls	No
Signal Privacy (if enabled) on Emergency Calls	No
Suppress Redirection Headers	No
Use Fixed Retry Time for 491	No
Use Privacy: none	No
Use P-Asserted Identity Header	Yes
Use P-Asserted Identity for Billing	No
Use P-Call-Leg-ID Header	No
Use P-Preferred Identity Header	No
Use Restricted Character Set For Authentication	No
Use To Address in From Header on Outgoing Calls	No
Use user=phone	No

Figure 23 – SIP Peer Profile Assignment- Signaling and Header Manipulation

Timers (figure 24):

Session Timer: **120 seconds** is used in this configuration, set this value to 0 will disable the session audit.

Leave all other fields as default.

Basic Call Routing	Calling Lir	ne ID	SDP Options	Signaling and Header Mani	pulation
Timers Key Press	Event Out	going D	ID Ranges Pr	ofile Information	
Keep-Alive (OPTION	s) Period	120			
Registration Period F	lefresh (%)	50			
Registration Maximu	m Timeout	90			
Session Timer		120			
Session Timer: Loca	as Refresher	No			
Subscription Period		3600			
Subscription Period	Minimum	300			
Subscription Period	Refresh (%)	80			
Invite Ringing Respo	nse Timer	0			

Figure 24 – SIP Peer Profile Assignment- Timers

Key Press Event (figure 25):

Set Yes for Allow Inc Subscription for Local Digit Monitoring and Request Outbound Proxy to Handle Out Subscriptions.

Set KPML Transport to UDP.

Set KPML Port to 5060

Basic Call Routing Calling Line ID SDP Option	s Signaling and Header Manipulation
Timers Key Press Event Outgoing DID Ranges	Profile Information
Allow Inc. Subscriptions for Local Digit Monitoring	Yes
Allow Out Subscriptions for Remote Digit Monitoring	Yes
Force Out Subscriptions for Remote Digit Monitoring	No
Request Outbound Proxy to Handle Out Subscriptions	Yes
KPML Transport	UDP
KPML Port	5060

Figure 25 – SIP Peer Profile Assignment- Outgoing DID Ranges

Outgoing DID Range (figure 26) and Profile Information (figure 27):

Leave those two sections as is.

Basic Timers	Call Routing C Key Press Event	alling Line ID SDP Opti Outgoing DID Ranges	ons Signaling and H Profile Information	eader Manipulation
			Add Member	Delete Member
Index	DID Range	CPN Substitution		

Figure 26 – SIP Peer Profile Assignment- Outgoing DID Ranges

Basic Call Routing	Calling Line ID SDP Options Signaling and Header Manipulation
Timers Key Press E	vent Outgoing DID Ranges Profile Information
Creator	
Date Created	
Created with Version	
Service Provider	
Vendor Notes	

Figure 27 – SIP Peer Profile Assignment – Profile Information

ARS Digit Modification Plans

Navigation: Call Routing -> Automatic Route Selection (ARS) -> ARS Digit Modification Plans

Ensure that Digit Modification for outgoing calls on the SIP trunk to TWCBC absorbs or inject additional digits according to your dialling plan. In this example, we will be absorbing 1 digit (in this case will be 9 to dial out).

• Licenses	Change Change	Page Change All Cl	ear	Print Import	Export
LAN/WAN Configuration Voice Network	< Page 1 of 55	> Go to:		✓ value:	Go
System Properties Hardware Trunks	ARS Digit Modific	ation Plans			
Users and Devices Integrated Directory Services	Digit Modification Number	Number of Digits to Absorb	Digits to be Inserted	Final Tone Plan/ Marker	Information
• Voice Mail	1	1			
Call Routing	ē	We	ebpage Dialog		×
Automatic Route Selection (ARS) ARS Call Progress Tone Detectic	ARS Digit Modif	cation Plans			
ARS Digit Modification Plans 🧬	Digit Modification Nu	mber	1		
ARS Maximum Dialed Digits 🖨	Number of Digits to A	Absorb	h	×	
ARS Routes	Digits to be Inserted				
ARS Route Lists ARS Route Plans ARS Digits Dialed	Final Tone Plan/Infor	mation Marker			

Figure 28 – Digit Modification Assignment

ARS Routes

Navigation: Call Routing -> Automatic Route Selection -> ARS Routes

Create a route for SIP Trunks connecting a trunk to TWCBC. In this example, the SIP trunk is assigned to Route Number 1. Choose SIP Trunk as a Routing Medium and choose the SIP Peer Profile and Digit Modification entry created earlier.

Dicenses	Change Page Change All Clear Print Import Expo	rt
LAN/WAN Configuration Voice Network System Properties	< Page 1 of 14 > Go to: value:	Go
Hardware Trunks	ARS Routes	
Users and Devices Integrated Directory Services Voice Mail Call Routing	PBX Digit Digits Route Routing Trunk SIP Number / COR Digit Digits Number Medium Group Peer Cluster Group Modification Before Route Type Number Mumber Profile Element Number Number Outpulsing ID ID ID ID ID ID ID	с
Automatic Route Selection (ARS) ARS Call Progress Tone Detectic	1 SIP Trunk TWCBC 1 1 Non-verified Acc	ount O
ARS Digit Modification Plans 🧬	Webpage Dialog	×
ARS Maximum Dialed Digits ARS Routes ARS Route Lists ARS Route Plans ARS Digits Dialed ARS Leading Digits ARS Day and Time Zones Call Handling Music On Hold Emergency Services Management	ARS Routes Route Number 1 Routing Medium SIP Trunk Trunk Group Number SIP Peer Profile TWCBC ✓ PBX Number / Cluster Element iD COR Group Number 1 Digit Modification Number 1 Digits Before Outpulsing ✓ Route Type Non-verified Account ✓ Compression Off ✓	

Figure 29 – SIP Trunk Route Assignment

ARS Digits Dialed

Navigation: Call Routing -> Automatic Route Selection -> ARS Digits Dialed

ARS initiates the routing of trunk calls when certain digits are dialed from a station. In this example, when a user dials 9, the call will be routed to TWCBC via route 1 configured in previous step.

• Licenses	Add Chan	ge Delete		Print Imp	ort Export	Data Refresh
LAN/WAN Configuration Voice Network	< Page 1 o	of 1 >	Go to:		✓ value:	Go
System Properties Hardware Trunks	ARS Digits D	Dialed				
 Users and Devices Integrated Directory Services 	Digits Dialed 8	Number of D 9	igits to Follow	Termination Ty Route	ype Terminati 1	ion Number
Voice Mail	9	10		Route	1	
 Call Routing Automatic Route Selection (ARS) 	91	10		Route	1	
ARS Call Progress Tone Detectio ARS Digit Modification Plans 📣 ARS Maximum Dialed Digits 📣	Change Rang	e Programming	ange Program g - ARS Digits Dia	ming Webpagi aled	e Dialog	^
ARS Routes ARS Route Lists ARS Route Plans	Digits Dialed 9	Number of Digit	s to Follow Termin Route	records, starting at nation Type Terminat 1	the following recor	rd:
ARS Routes ARS Route Lists ARS Route Plans ARS Digits Dialed ARS Leading Digits	1. Enter the num 2. Define the C Field Name	ws you to char Number of Digit 10 mber of records hange Range P	to change: 1 rogramming Patte	records, starting at a nation Type Terminat 1	Increment by	rd:
ARS Routes ARS Route Lists ARS Route Plans ARS Digits Dialed ARS Leading Digits ARS Day and Time Zones ARS Node Identities Call Handling Music On Hold	1. Enter the nu 2. Define the C Field Name Digits Dialed Number of Di	ws you to chan Number of Digit 10 mber of records hange Range P gits to Follow	s to Follow Termin Route to change: 1 rogramming Patte Change action Change to V	Proceeding at the starting at	Increment by	rd:
ARS Routes ARS Route Lists ARS Route Plans ARS Digits Dialed ARS Leading Digits ARS Day and Time Zones ARS Node Identities Call Handling Music On Hold Emergency Services Management Property Management	1. Enter the nu 2. Define the C Field Name Digits Dialed Number of Di Termination	www.you to chai Number of Digit 10 mber of records hange Range P gits to Follow fype Number	to change to V Change to V Change to V Change to V Change to V Change to V	Imation Type Terminat 1	Increment by	rd:

Figure 30 – ARS Digit Dialed Assignment

FAX Configuration

Navigation: Voice Network -> Fax Service Profiles

TWCBC uses the inter-zone FAX profile. This form allows you to define the settings for FAX communication over the IP network. You can modify the default settings for the:

- Inter-zone FAX profile: defines the FAX settings between different zones in the network. There is only one Inter-zone FAX profile; it applies to all inter-zone FAX communication. It defaults to V.29, 7200bps. It defines the settings for FAX Relay (T.38) FAX communication.
- Intra-zone FAX profile: defines the FAX settings within each zone in the network.
 - Profile 1 defines the settings for G.711 pass through communication.
 - Profile 2 to 64 define the settings for FAX Relay (T.38) FAX communication.
 - All zones default to G.711 pass through communication (Profile 1).



Figure 31 – Fax Configuration

Zone Assignment

Navigation: Voice Network -> Network Zone

By default, all zones are set to Intra-zone FAX Profile 1.

Based on your network diagram, assign the Intra-zone FAX Profiles to the Zone IDs of the zones. If audio compression is required within the same zone, set Intra-Zone Compression to "Yes". TWCBC only supports G711 codec for voice, hence **Intra-zone Compression** is set to **NO** for this configuration.

TWCBC uses the default **Intra-zone FAX Profile 1** as it only support G711Ulaw pass-through fax.

• Licenses	Change Clear Print Import	Export Data Refresh
LAN/WAN Configuration Voice Network Network Elements	< Page 1 of 50 > Go to: V	value: Go
Cluster Elements 📣 Admin Groups	✓Network Zones	
Fax Service Profiles 🖨 Fax Advanced Settings	Zone Intra-zone Intra-zone Label SMDR Time Zone LBN Zone ID Compression Fax Profile Label Tag Time Zone Prefix CESID	Default Default Billing CPN Number
Network Zone Topology 🧬	1 No 1 TWCBC America/Chicago	
Bandwidth Management 🧬 Codec Settings 🖨	2 NO 1 3 NO 1	
System Properties	, 🖻 Webpage Dialog	
 Trunks 	Zone ID 1	
 Users and Devices Integrated Directory Services 	Intra-zone Compression No O Yes	
Voice Mail Call Routing	Label TWCBC	
Music On Hold	SMDR Tag Time Zone America/Chicago	~
Property Management	LBN Prefix	
Maintenance and Diagnostics	Default Billing Number	
	Default CPN	
		_
	Save	Cancel

Figure 32 – Zone Assignment

Personal Ring Groups Configuration

Navigation: Users and Devices -> Group Programming -> Personal Ring Groups

Mitel phone extension 1029 and an EHDU (External Hot Desk User) 2030 are added as members of Personal Ring Group. EHDU 2030 targets an external PSTN number

Licenses	^	Add	Change	Сору	Delete			Print	Import	Export	Data Refi	resh
LAN/WAN Configuration		< Pa	age 1 of	1 >			Go to:		\checkmark	value:		Go
Voice Network System Properties		€Pers	onal Ring	g Groups							-	
Hardware		Person	al Ring G	roup (One Busy All Bus	y Pri	ime Member Na	ame Ho	me Element	Second	ary Elemer	nt
💿 Trunks		1029			No	ΤV	VCBC,TWO	Lo	cal_2	Not Assi	gned	
Users and Devices User and Services Configuration												
Attendants												
ACD		Persona	al Ring Gi	oup		102	29					
Group Programming		One Bu	sy All Bu	sy		No	se					
Personal Ring Groups 🖨		Prime N	lember Na	ame		TW	CBC,TWO					
Multi-device User Groups 🛹		Second	ary Eleme	ent		Not	al_2 Assigned					
Hunt Groups 🖨												
Ring Groups 🖨												
Pickup Groups 📣								Add Membe	r Change	e Member	Delete Me	ember
Page Groups Remote Busy Lamps		¢Pers	onal Ring	g Group N	lembers							
Telephone Directory Manageme		Manula				Hama	Casandami					
Advanced Configuration		Index	Number	Presence	Name	Element	Element					
Templates		1	1029	Present	TWCBC,TWO	Local_2	Not Assigned	7				
Integrated Directory Services	~	2	2030	Present	TWCBC hotdesk	Local 2	Not Assigned					
Noico Mail		-	2000	11000111	111000,11010001	20001_2	.tot / looigned					

Figure 33 – Personal Ring Groups

Miltiline IP sets 1029 and 2030 are configured as following.

Navigation: Users and Devices -> Advanced Configuration -> IP Telephones -> Multiline IP Sets

	_															_
Licenses LAN/WAN Configuration	^	Multilin	e IP S	ets Search:												
		Tind of the		Mumbo	the	at bac a w	luo of		£ /	oarch						
Voice Network		Find a fi	eid na	med: [Number	uia uia		alue oi.		3	earch						
System Properties																
Hardware		-														_
💿 Trunks		Add	Ch	ange Dele	te						Print	Import.	. Expor	t Da	ta Refresh	
Users and Devices	1															-
User and Services Configuration		<<	< >	>>>												
Attendants		e Mult	iline l	IP Sets												
ACD																-
Group Programming										HOT						~
Telephone Directory Manageme										User	Hot Desk	Max				
Advanced Configuration			Hot							External	User	Call				
Multing Sat Kaya		Device	Desk	Device	Auxiliary	Number	ACD	Lino Typo	Interconnect	Dialing	External	History	Languago	Tenant	Service	
Multiline Set Keys 🚑		iu	USEI	Type	would	Number	Litableu	Line Type	Number	FICHA	Number	Necorus	Language	Number	Level	
Multiline Appearance Groups		1	No	5320 IP	None	0442	Yes	Single Line	1			0	English	1	Full	
User and Device Attributes 🦨		2	No	5312 IP	None	1029	No	Single Line	1			0	English	1	Full	
Station Attributes 🦨		3	No	5360 IP	None	0487	Ves	Single Line	1			0	English	1	Full	
Multiline Advisory Messages		5	110	5500 11	Hone	0407	105	olligic Line				•	Englion	•	i un	
IP Telephones		4	No	5360 IP	None	1045	No	Single Line	1			0	English	1	Full	
Multiline IP Sets		5	Yes		None	2030	No	Single Line	1	9	14699300487	0	English	1	Full	
Single Line IP Sets 🧬		6	No	5020 IP	None	2910	No	Single Line	1			0	English	1	Full	

Figure 34 – Multiline IP Sets

Change Range Progra	amming	- Multilir	ne IP S	ets										
This form allows you Device Hot Device J Id Desk Type I User	to chang Auxiliary Module	ge one o Number	r more Local- only DN	User PIN	Is, st SIP Pas	sword	at the fo ACD Enabled	Line Ty	pe	ord: Interconnect Number	External Hot Desk User License	Hot Desk User Externa Dialing Prefix	Hot [User Num	Desk External ber
5 Yes	None	2030	False	******	*****	**	No	Single I	Line	1	Yes	9	1469	9300487
 Enter the number of r Define the Change R 	records t ange Pre	o change ogrammir	: 1 no Patt	ern:										
Field Name	-	-	Chai	nge ac	tion	Valu	e to cha	nge		Increment I	by			
Device Id				-		5		_		-				
Hot Desk User			Cha	ange to	\sim	ON	lo 🖲 Ye	s		-				
Device Type			Cha	ange to	\sim	500	5 IP	_	\sim	-				
Auxiliary Module			Cha	ange to	\sim	Non	e 🔪	/						
Number			Cha	ange to	\sim	2030)							
Local-only DN			Cha	ange to	\sim					-				
User PIN			Cha	ange to	\checkmark					-				
Confirm User PIN			Cha	ange to	\sim					-				
SIP Password			Cha	ange to	\checkmark					-				
Confirm SIP Passwor	rd		Cha	ange to	\sim					-				
ACD Enabled			Cha	ange to	\sim	• •	lo 🔍 Ye	5		-				
Line Type				-		Single	e Line			-				
Interconnect Number			Cha	ange to	\sim	1								
External Hot Desk Us	er Licen	se	Cha	ange to	\sim	\bigcirc	lo 🖲 Ye	S	٦	-				
Hot Desk User Extern	nal Dialir	ıg Prefix	Cha	ange to	\sim	9				-				
Hot Desk User Extern	nal Numl	ber	Cha	ange to	\checkmark	1469	930048	7		-				
Language				-		Englis	sh			-				
Max Call History Reco	ords		Cha	ange to	\checkmark	0								
MAC Address			Cha	ange to	\checkmark					-				
Tenant Number			Cha	ange to	\sim	1								
Lock Default Configu	ration		Cha	ange to	\checkmark	۰.	lo 🔿 Ye	5		-				
HTML Infrastructure I	License		Cha	ange to	\checkmark	۰.	lo 🔿 Ye	5		-				
HTML GUI Application	n		Cha	ange to	\checkmark	~				-				
New Page Application	n1		Cha	ange to	\checkmark	~				-				
<														>
											Prev	iew	Save	Cance

Figure 35 – Programming Multiline IP Sets

NuPoint Configuration

3300 Setup for Connecting NuPoint

Licensing and Option Selection – SIP Licensing

The first step in setting up the 3300 for connecting to NuPoint is checking the **Extended Hunt Group option** to see if it is enabled. Refer to <u>Figure 2</u>.

System Options

The ports that are used by NuPoint to connect to the 3300 are programmed as 5020 IP endpoints on the 3300. NuPoint needs to be able to register these IP Endpoints in order to create the ports. Thus the Registration Access Code and Replacement Access Code need to be set on the 3300. Set *** for the **Registration Access Code** and ### for the **Replacement Access Code**.

	~	Change	
LANMAN Configuration			
Vision Naturalia		System Ontions	
Voice Network		System Options	
System Properties		AC system	No
System Settings		ACD Event Statistics Refresh Rate	4
System Feature Settings		ACD Make Busy On Login Reason Code	0
System reduie settings		ACD Make Busy Walk Away Codes	No
System Options		ACD Make Last Agent Unavailable on No Answer	No
Shared System Options 🧬		ACD Number of Threshold Alert Indicators Rate	30
Class of Service Ontions		ACD Real Time Events Feature Level	0
class of Service Options		Advice of Charge - Multiplier	0
SIP Device Capabilities 🖨		Advice of Charge - Surcharge	0
Class of Restriction Groups	45	Advice of Charge Feature Active	NO
Ourstein Assess Deinte		Alpha Tagging Enableu	Nono
System Access Points 🚑		Ratton Backup	No
Feature Access Codes 👉		Battery Cabinet Alarm Information	No
Independent Account Code		BLE - Busy Indication based on set enabled	No
Independent Account Code		BLF - CFA Indication based on set enabled	No
Default Account Codes 🛹		Call Forwarding Always - Line Status Indicator ON	No
System Account Codes 🧈		Call History - Default Call History Records	20
		Call History - Disable Record Generation	No
System Speed Calls 🚑		Call Rerouting Timer	22
Tenants		Callback Activation	Group
SMDR Options 🚕		Callback Cancel Timer	8
Traffic David Ordinan		Campon Repetitive Tone Timer	0
Traffic Report Options 🚑		Conference/Call Intrusion Repetitive Tone Timer	0
Inward Dialing Modification	ا ا	Data Line Error Threshold	100
Outward Dialing Modificatio	n	Default Language	English
Outward Dialing Modificatio		Dialed Number Editing For Trunks	2
System IP Ports 🚑		DISA Number Lock-Out Timer	5 15
Location Based Numbers ፈ	2	Disable End of Dial Character (#)	No
System Administration		Do Not Override DND for Public Network DID/DDI Callers	No
System Auministration		DTRX Autobaud Timeout	60
Hardware		DTRX DSA Response Format	Comment
Trunks		DTRX Herald Message	SX2000:
Usors and Devices		DTRX Inactivity Timeout	60
Users and Devices		Email Server	
User and Services Configuration	n 🍾	Email - Sender's Address	
Attendants		External Hot Desking - Single Digit Mid Call Features	Yes
A CONTRACTOR		Feature Active Dial Tone - Call Forwarding	No

Figure 36 – System Option

LAN/WAN Configuration	Sustan Osting	
Voice Network	System Options	
System Properties	Feature Active Dial Tone - Call Forwarding	No
System rioperues	IDS sync maximum sets of results	5
System Settings	Interconnect Checking for Conference Calls	No
System Feature Settings	Last Number Redial Source	All Trunks
System Options	Loop Signalling Trunks - Invalid DN Handling	Immediate
System Options	Maximum CO Trunks In A Conference	3
Shared System Options 🧬	Maximum Parties In A Conference	5
Class of Service Options 🚕	Maximum Trunks In A Conference	4
	Multiline Set Display 24 Hour Format	No
SIP Device Capabilities 🦨	Music On Hold	Yes
Class of Restriction Groups 🛃	Night Answer Prompt for Network Configuration	No
Quetem Assess Daint:	Number Of Forward Hops	2
System Access Points 🚑	Outgoing External Call Prefix For Applications	
Feature Access Codes 👍	Remote Help Server	
Independent Account Codes	Resource runing Threshold	0 Fotomal
independent Account Codes (Ringing Cadence for the Line Calls	External
Default Account Codes 🧬	Route Optimization Attempts	3
System Account Codes 🛁	Route Optimization Establishment Timer	10
System Account Codes a	Route Optimization Retwork to	2
System Speed Calls 📣	Sond Travelling Class Marks	Z
Tenants	Set Pagistration Access Code	***
	Set Registration Auto DN Selection - Pegin	
SMDR Options 🚑	Set Registration Auto DN Selection End	
Traffic Report Options 👍	Set Degistration Auto DN Selection - Enu	Not Assigned
Inward Dialing Modification	Set Registration Security	NOL ASSIGNED
mwaru Dialing Mounication 🦨	Set Replacement Access Code	
Outward Dialing Modification	Site Preference for Hot Desk Device	5020 IP
System IP Ports 🥪	Speed Call Pause Duration	3
Lassian David New 1	SUPERSET Callback Message Cancel Timer	-
Location Based Numbers 🧬	System Data Synchronization	Yes
System Administration	System Name	Local 2
	UK only - Standard for CLIP	
Haruware	Voice Encryption Enabled	Yes
< >	Voice/Video SRTP Encryption Enabled	No

Figure 37 – System Options cont.

Class of Service Options

Navigation: System Properties -> System Feature Settings -> Class of Service Options

The next step is to setup a Class of Services for NuPoint's inbound ports such as Voice Mail.

Licenses	Change Copy	Print	Import Exp
LAN/WAN Configuration	< Page 1 of 11 >	Go to:	V valu
Voice Network		00101	- Turu
System Properties	Class of Service Options		
System Settings	Class Of Service Number	Comment	
👻 System Feature Settings	1	TWCBC	
System Options		Niid Dhana	
Shared System Options 🧬	2	Milel Phone	
Class of Service Options 🧬	3	Embedded V	M
SIP Device Capabilities 🖨	4	RAD_ANN	
Class of Restriction Groups 🧬	5	NuPoint VM	
System Access Points 🧬	6		
F A O	1		



In Class of Service for NuPoint Voice Mail enable the following:

- COV/ONS/E&M Voice Mail Port
- HCI/CTI/TAPI Call Control Allowed
- HCI/CTI/TAPI Monitor Allowed
- Public Network Access via DPNSS.

IP Endpoints used for NuPoint Ports

Navigation: Users and Devices -> User and Services Configuration

5020 IP end points are created to be mapped to the incoming NuPoint Voice Ports. The Number 2910~2913 are configured as NuPoint Voice Ports for this test.

Licenses	^	Add v			Print	Import	Export	Data Refresh
LAN/WAN Configuration	Ľ	User and Services Configuration						
Voice Network		Second and Controlog Contiguration	_					
System Properties		By Last Name	~				Save Chang	es Cancel
Hardware			+ Q	User Profile Service Profile Device Details	Service D	Details A	ccess and Au	thentication
🕟 Trunks		Search Results (12 matches)		Phone Applications Keys				
Users and Devices		A Nuncint net 2					_	
User and Services Configuration		 Nupoint, port 2 Phone Service (2011) 		Number 2910)			
Attendants		Priore Service (2511)		Service Label Phot	ne Service			
ACD		Nupoint, port 3						
Group Programming		Phone Service (2912)		Directory Name Nup	oint.port1		7	
Telephone Directory Manageme		Nupoint, port1		Drime Name	- OY			
Advanced Configuration		Add Veisemeil			o ⊖ res			
Multiline Set Keys 📣		Add voicemail		Privacy N	oOYes			
Multiline Appearance Groups		Nupoint, port4						
User and Device Attributes 🦨		Phone Service (2913)		Hot Desking User N	o 🔿 Yes		_	
Station Attributes 🥪		TWCBC, Fax		Device Type 5020	IP	~	1	
Multiline Advisory Messages		TWCBC, hotdesk		Service Level Full		~	1	
IP Telephones		IWCBC, One		Home Element	12		_	
Qiada Lina ID Octa		TWCBC, Three					-	
Wireless IB Sets		TWCBC, TWO		Secondary Element Not	Assigned	~		
5560 IPT Master/Slave As		IWCBC, User4		Local-only DN				
5225 Idle Software		TWCBC, Video1		ACD Enabled				
5140/5240 Web Services		TWCBC, Video2						
S 140/3240 Web Services	\sim							

Figure 39 – IP Endpoints configuration

Class of Service value for Day, Night 1 and Night 2 of the IP end point should be given the Class of Service of incoming ports created earlier, which is 5.

System Properties	Search Last Name	~					_		Save Chan	ges Cancel
Hardware		+ Q	User Profile	Service Pr	rofile	Device Deta	ils Se	rvice Details	Access and Au	thentication
Trunks	Search Results (12 matches)		Phone Applica	tions Ke	eys					
 Users and Devices 	A Number and 2									_
User and Services Configuration 🖨	Nupoint, port 2					(ay	Night 1	Night 2	
Attendants	Phone Service (2911)		Class of Sei	vice		[5	5	5	
ACD	Nupoint, port 3		Class of Re	striction			1	1	1	_
Group Programming	Phone Service (2912)	.				L				
Telephone Directory Management	Nupoint, port1									
Advanced Configuration	4 😻 Phone Service (2910) 📼		External Ho	t Desking Ei	nabled		🖲 No 🔘	Yes		
Templates	add Voicemail	•	External Ho	t Desking D	ialing l	Prefix				
Integrated Directory Services	A Logint, port4		External Ho	Desking N	umber	· · · · · · · · · · · · · · · · · · ·				
Voice Mail	Phone Service (2913)		DID Service	Numbor						
Call Routing	TWCBC. Fax		DID Service	Number						

Figure 40 – IP Endpoints Class of Service

Voice Mail Hunt Group

Navigation: Users and Devices -> Group Programming -> Hunt Group

Create Voice Mail hunt group that will be used to call voice mail. All of the endpoints created in the section above will be added to this hunt group. Enter the hunt group number that will be used for Voice Mail and change the Hunt Group type to Voice Mail. Here hunt group 2900 is created.

Local_2	Hunt Groups	on Local_2			D	N to search	~	Show form
Licenses	Add C	Change Copy	Delete]				Print In
LAN/WAN Configuration Voice Network	📌 Hunt Gre	oups						
System Properties	Hunt Gr	unt Hunt roup Group	Hunt Group	Hunt Group	Home	Secondary		
Hardware	Group Mo	ode Name	Priority	Туре	Element	Element		
• Trunks	2100 Cir	rcular	64	VoiceMail	Local_2	Not Assigned		
Users and Devices	2900 Cir	ircular	64	VoiceMail	Local_2	Not Assigned		
Attendants	2999 Cir	rcular	64	HCIReroute	Local_2	Not Assigned		
• ACD								
Group Programming								
Personal Ring Groups Multi-device User Groups Hunt Groups Ring Groups Pickup Groups Page Groups Remote Busy Lamps	Hunt Group Local-only Hunt Group Hunt Group Class of Se Class of Se Class of Se Home Elem Secondary	p DN p Mode p Name ervice - Day ervice - Night1 ervice - Night2 nent Element				2900 False Circular Local_2 Not Assigned		
Telephone Directory Manageme	< Page	1 of 1 >					Go to:	
Advanced Configuration								Add Member
Templates								Add Member
Integrated Directory Services	📌 Hunt Gr	oup Members						
Voice Mail	Member In	ndex N	lumber	Presence	e N	ame	Home Ele	ement
Call Routing	1	2	910	Present	N	upoint port1	Local 2	1
Music On Hold	2	2	011	Present	N	uppint port ?	Local 2	
Emergency Services Management		2		Preseill	N	upoint, port 2		
Property Management	3	2	912	Present	N	upoint,port 3	Local_2	
< >	4	2	913	Present	N	upoint.port4	Local 2	

Figure 41 – Voicemail Hunt Group Configuration

HCIReroute Hunt Group

Program the HCIReroute Hunt Group and set it to always route to the NuPoint Voice Mail Hunt Group. The primary reason for setting up a HCIReroute is to enable MiTAI for MWI. 2999 is configured as HCIReroute Hunt Group in this test and Call Rerouting Always Alternative number 2 was modified to reroute everything to Voice Mail Hunt Group.



Licenses	Add	Change	Сору	Delete				Print
LAN/WAN Configuration Voice Network	€ Hunt	Groups						
 System Properties Hardware Trunks Users and Devices User and Services Configuration <i>*</i> 	Hunt Group 2100 2900	Hunt Group Mode Circular Circular	Hunt Group Name	Hunt Group Priority 64 64	Hunt Group Type VoiceMail VoiceMail	Home Element Local_2 Local_2	Secondary Element Not Assigned Not Assigned	I
Attendants ACD	2999	Circular		64	HCIReroute	Local_2	Not Assigned	
 Group Programming Personal Ring Groups Multi-device User Groups Hunt Groups Ring Groups 								
Pickup Groups Page Groups Remote Busy Lamps Telephone Directory Management Advanced Configuration Templates Integrated Directory Services	Hunt Gr Local-on Hunt Gr Class of Class of Class of Home E Second First RA	oup oup Mode oup Mode oup Name f Service - f Service - f Service - lement ary Eleme D	Day Night1 Night2 nt				2999 False Circular Local_2 Not Assigned	
 Voice Mail Call Routing Music On Hold 	Second Night Ai Hunt Gr Hunt Gr	RAD nswer RAI oup Priori oup Type	D ity				64 HCIReroute	

Figure 42 – HCIReroute Hunt Group

Voice Mail Call Routing	Change Change Page	Change All Clear		Print	Import Export	Data Refresh
Automatic Route Selection (AR:	< Page 1 of 12 >			Go to:	✓ value:	Go
Call Handling	Call Rerouting Always A	Iternatives				
Intercept Handling 👉	Always Alternative Number	Originating Device DID	Originating Device TIE	Originating Device CO	Originating Device INT	Directory Number
Call Coverage Services 🛹	1	No Reroute	No Reroute	No Reroute	No Reroute	
Call Rerouting Always Alterna	2	Reroute	Reroute	Reroute	Reroute	2900
Call Rerouting First Alternative	3	No Reroute	No Reroute	No Reroute	No Reroute	
Call Rerouting Second Alterna	4	No Reroute	No Reroute	No Reroute	No Reroute	
Call Rerouting 📣	5	No Reroute	No Reroute	No Reroute	No Reroute	
Call Park Direct Inward Dialing Service	6	No Reroute	No Reroute	No Reroute	No Reroute	
Music On Hold	7	No Reroute	No Reroute	No Reroute	No Reroute	
Emergency Services Management	8	No Reroute	No Reroute	No Reroute	No Reroute	

Navigation: Call Routing -> Call Handling -> Call Rerouting Always Alternative

Figure 43 – Call Rerouting Always Alternative

Local_2 View by Category V SDS Share	Call Rerou	uting on Local_2		DN to search	×	Show form on Not Acc	essible 🗸 Go 🗸
Integrated Directory Services Voice Mail	Chang	e Change Page			P	rint Import E	xport Data Refresh
Call Routing	< Pa	ge 2 of 2 >			Go to:	✓ va	lue: Go
Automatic Route Selection (ARS	📌 Call F	Rerouting					
Interconnect Restriction	Number	Call Rerouting - Day	Call Rerouting - Night1	Call Rerouting - Night2	Call Rerouting DND Type	Call Rerouting - 1st Alt.	Call Rerouting - 2nd Alt.
Intercept Handling 🚓	2912	1	1	1	All	1	1
Call Coverage Services 👉	2913	1	1	1	All	1	1
Call Rerouting First Alternative	2999	2	2	2	All	2	2
Call Rerouting Second Alterna Call Rerouting							
Direct Inward Dialing Service							
Music On Hold							

Navigation: Call Routing -> Call Handling -> Call Rerouting

Figure 44 – Call Rerouting

MiCollab NuPoint Configuration

Network Elements

From Server Manager, Navigate to: Applications -> Users and Services -> Network Element, Click Add



Figure 45 Add Network Element

- Set System Name: 3300 is given in this test.
- Set Network Address: This is your MiVoice Business 3300 ICP IP address.
- Set Credentials: This is your Mivoice Business 3300 ICP administration credential.
- Set Registration Code: *** is given which is match Set Registration Access Code in System Options in section.
- Set Replacement Code: ### is given to match Set Replacement Access Code in System Options section.
- Set Standard Phone COS: 5 is given for all fields to match the Class of Service for Nupoint Voice Mail port created in <u>Class of Service Option</u> section.
- Set Default COR: 1 is given to all fields in this setup.
- Set **Call Forward Destination Directory Number**: **2900** is given which is the Hunt Group Number for NuPoint Voice Mail.

• Set HCI Reroute Hunt Group Number for Mitai MWI: 2999 is given to match previous configuration

Click	Save.
-------	-------

	/iCollab	
admin@micollab1.tekvizionl	labs.com	Alarm Status: Major Logout
Applications Users and Services Audio, Web and Video	Edit Network Element	? ^
Conferencing MiVoice Business MiVoice Border Gateway	Element Identification	
Remote proxy services NuPoint Web Console MiCollab Client Service	Type: Mitel 3300 ICP ✓ *System Name: 3300 ×	
Licensing Information	*Network Address: 10.35.32.2 Ping Test	
ServiceLink Install Applications Status	Release: Version:	
Administration Web services	Credentials	
Backup View log files	*System Login: system	
Event viewer System information	Confirm Password:	
System monitoring System users	System Properties	
Shutdown or reconfigure Virtualization	*Set Registration Code: ***	
Configuration Integrated Directory Service	-Set Replacement Code: ### Day Night 1 Nigh	.t 2
MiCollab Client Integration Wizard	Standard Phone COS: 5 5 5	
MiCollab Language	Record-A-Call COS:	
E-mail settings Google Apps DHCP	Release NuPoint UM IP Integration Licens (Selecting this checkbox will remove this ICP fro	se om NuPoint UM when the save
Date and Time Hostnames and addresses Domains	Leaving this checkbox unselected will apply any when the save button is clicked.)	y ICP changes to NuPoint UM
IPv6-in-IPv4 Tunnel SNMP Ethernet Cards	☑ Single Point Provisioning Enabled	
Review configuration	Call Reroute First Alternative Number: 1	
Security Remote access	Call Forward Destination Directory Number: 2900	
Web Server Certificate Certificate Management	HCI Reroute Hunt Group Number for Mitai MWI: 2999	
Miscellaneous Support and licensing	Speech Auto Attendant Pilot/Access Number: 2900	
Help	Save Cancel	~

Figure 46 – Network Element cont.

Voice Mail Line Group

From Offline Configuration window select the Line Groups link under the Offline Configuration heading. On the Line Groups web page, click the Add button

	MiCollab					
admin@micollab1.tekvizi	admin@micollab1.tekvizionlabs.com					
Offline Configuration						
Duplicate Active Configuration	Your OFFLINE configuration has changed. You must commit and activate the con	figura				
View Offline Configuration	system.	nguru				
Line Groups						
Dialers (Pagers)	Line Groups					
Fax Groups	Line Oroups					
Network Elements	Add Edit Delete					
Pre-Extension Dial Strings						
External Applications	Number Name Number of Lines User Interface					
NP Net TCP/IP						
Unified TCP/IP						
Auto Durge						



On the Add Line Group web page, click the Next Available button to fill in the Line Group Number (the value should be 1 since this is the first line group being created). Enter a Name such as Voice Mail to describe for what the line group will be used. Choose NuPoint Voice for the Application and NuPoint Voice for the User Interface.

	MiCollab			
admin@micollab1.tekvizio	nlabs.com			
Offline Configuration				
Duplicate Active Configuration	Your OFFLINE configuration has changed. You must commit and activate the confi			
View Offline Configuration	system.			
Line Groups				
Dialers (Pagers)	Add Line Group			
Fax Groups				
Network Elements	Save Cancel			
Pre-Extension Dial Strings				
External Applications	Line Group Number: 1 * Next Available			
NP Net TCP/IP				
Unified TCP/IP	Name: Voice Mail *			
Auto Purge				
Auto Backup	Application: NuPoint Voice			
Commit Changes & Exit	User Interface: NuPoint Voice V			
Discard Changes & Exit	Fax group connection: Name Ad			
Server Manager	i ax group connection. None 🗸			

Figure 48 – Adding Line Group

Next click the Add Button under the Lines heading. This will bring up the Line Triplet dialogue box. Click the Next Available button to get the next available Line Triplet (1:0:0 should come up since this is the first time line triplets are being assigned). Select PBX 3300. Enter the first extension number that was created in the section <u>IP Endpoints</u> used for NuPoint Ports in the Mapping field.

	Collab
admin@micollab1.tekvizionlat	os.com
Offline Configuration Duplicate Active Configuration View Offline Configuration	Your OFFLINE configuration has changed. You must commit and activate the confi system.
Dialers (Pagers) Fax Groups	Add Line Group
Network Elements Pre-Extension Dial Strings	Save Cancel
External Applications NP Net TCP/IP	Line Group Number: 1 * Next Available
Unified TCP/IP	Name: Voice Mail *
Auto Backup	Application: NuPoint Voice
Commit Changes & Exit	User Interface: NuPoint Voice V
Server Manager Return to Server Manager	Fax group connection: None 🗸
	Lines Dialing Plan Voicemail Dial Strings
	Lines Add Edit Delete -
	Line Triplet: 1:0:0 Next Available Extensi
	Baye BX: 3300 ♥ Mapping: 2910 ×
	and Cancel

Figure 49 – Adding Lines

Next, click on the **Dialing Plan** tab on the Add Line Group page. This will bring up the Dialing Plan web page. The dialing plan consists of nine numbers separated by commas and Length of extensions are configured as Variable except 9 for which 3 is configured, this was due to by default, mailboxes 999 and 998 are created, 998 is the default administrative mailbox and 999 is the default attendant mailbox.

admin@minellaht televisionlahe com						
Offline Configuration Duplicate Active Configuration View Offline Configuration Line Groups	Your OFFLINE configuration has changed. You must commit and activate the configur system.					
Dialers (Pagers) Fax Groups Network Elements	Add Line Group					
Pre-Extension Dial Strings	Save Cancel					
External Applications	Line Group Number: 1 * Next Available					
NP Net TCP/IP						
Unified TCP/IP	Name: Voice Mail *					
Auto Purge	Application: NuPoint Voice					
Auto Backup Commit Changes & Evit	Lion Interface: NuBeint Voice M					
Discard Changes & Exit						
Server Manager	Fax group connection: None 🗸					
Return to Server Manager						
	Lines Dialing Plan Voicemail Dial Strings					
	Dialing Plan					
	Standard Mode					
	Length of extensions starting with					
	1: Variable V Standard V					
	2 : Variable V Standard V					
	3 · Variable Standard					
	4 : Variable V Standard V					
	5 : Variable V Standard V					
	6 : Variable V Standard V					
	7 : Variable V Standard V					
	8 : Variable V Standard V					
	9 : 3 digits V Standard V					
	O Classic Mode					
	Dialing Plan: v,v,v,v,v,v,v,3					
	Save Cancel					

Figure 50 – Adding Dial Plan

Click Save button to save the configuration

The next step is to commit the changes that have been made to the offline configuration. Click on the Commit changes & Exit link under the Offline Configuration heading. Click on the Commit button.





Next click Activate link at the top of the page. On the Activate Offline Configuration page, deselect the check boxes for Wait for MWI queue to empty and Wait for Pager queue to empty. Click the Activate button.

Adding Mailboxes

NuPoint with MAS and Single Point Provisioning allows for programming 3300 phones, users and NuPoint Mailboxes from the MAS interface. We assume 3300 phones and users were configured in <u>MiVoice Business Configuration Notes</u> Section and this chapter only cover adding mailboxes.

	MiCo	ollab		
admin@micollab1.tekvizio	onlabs.	com		
Mailbox Maintenance Mailboxes Keport Generation Billing Billing Gather Billing Report Billing Rates Statictics	^	Mailboxes Search Advanced Search Search for Mailbox Number or Range: View: 10 Results V at	a time	arch
Line Usage Line Group Usage Speech Block Usage Call Detail Record System Information		Mailboxes Add Edit • Delete • Unlock • Number Name	Extension	Depa

Navigate to **Mailbox**, click **ADD**

Figure 52 – Add Mailbox

Mailbox 1029 is created for this test. Under **General** tab, set the proper **Name**, **Passcode** and associated 3300 phone/user as **Extension**.

	MiCollab
admin@micollab1.tekviz	ionlabs.com
Mailbox Maintenance Mailboxes	Add Mailbox(es)
Report Generation Billing	
Billing Gather	Create Mailbox(es)
Billing Report	
Billing Rates	Mailbox Number(s): 1029
Statistics	
Line Usage	Copy from another mailbox:
Line Group Usage	
Speech Block Usage	Eave Cancel Pagie Advanced
Call Detail Record	Jave Cancer Dasic Advanced
System Information	
Audit Trail	General Class of Service Message Waiting
Start Audit Trail	
Export	Personal Information
Parameters	
Report	Name: TWCBC User2
Class of Service	
Feature COS	IMPORTANT NOTE
Group COS	If you expect your callers to use "Dial By Name " with First Nam
Limits COS	Enter the name in following format: <first name=""> <last name=""></last></first>
Network COS	If you expect your callers to use "Dial By Name" with Last Name
Restriction COS	Enter the name in following format: <last name="">, <first name<="" td=""></first></last>
Tenant COS	Note that the comma is ESSENTIAL in this case.
View System Configuration	
Line Groups	Passcode: •••• The user will be asked to change the passo
Offline Configuration	Extension: 1020
View Offline Configuration	
Activate Offline Configuratio	Attendant Extension:

Figure 53 – Add Mailbox cont.

Under Message Waiting tab, select Mitai Messaging as Type then click Save.

	MiCo	ollab	
admin@micollab1.tekviz	Alarm Status: Major Logout		
Mailbox Maintenance Mailboxes	~	Mailbox Number(s): 1029	^
Report Generation Billing	- 11	Copy from another mailbox: Copy	
Billing Gather			
Billing Report		Save Cancel Basic Advanced	
Billing Rates			
Statistics		Constal Class of Service Measage Waiting	
Line Usage		General Class of Service message walking	
Line Group Usage			
Speech Block Usage		Message Waiting #1	
Call Detail Record		Type: Mitai Messaging M	
System Information		Type. Wittar Wessaging 👻	
Audit Trail		Details	
Start Audit Trail			
Export		Message Waiting #2	
Parameters		Type: None	
Report		ND-t-ll-	
Class of Service		► Details	
Feature COS			
Group COS		Message Waiting #3	
Limits COS		Type: None 🗸	
Network COS			
Restriction COS			
Tenant COS	\sim	Save Cancel Basic Advanced	~
• - + · · · · · · · · · · · · · · · · · ·			

Figure 54 – Add Mailbox cont.

Click done when pop-up window shows the mailbox added successfully.

MiVoice Border Gateway Configuration Notes

When configuring MiVoice Border Gateway (MIVOICE BORDER GATEWAY), you need to specify the Network profile, gateway mode is used in this setup.

Navigate to: MiVoice Border Gateway -> Configuration -> Network Profiles

Click the " \rightarrow " beside Sever-gateway configuration on the network edge then click Apply.

	MITEL STANDARD LINUX
admin@mbg2.lab.tekvi	zion.com Alarm Status: Major Logo
Applications MiVoice Border Gateway Remote proxy services	Manage MiVoice Border Gateway
ServiceLink Blades Status	Settings • Network profiles • ICPs • Bandwidth management • Alarms • Overrides » Location: Network profiles
Administration Web services Backup View log files Event viewer System information System monitoring System users Shutdown or reconfigure Virtualization	Welcome to the MBG administrative interface. From here you can manage all aspects of the MBG's behaviour. Above are various tabs for accessing different parts of the system. If at any time you require more information, click the Help icon in the upper-right corner of the page. This page provides several "canned" network profiles, to aid in configuring the MBG streaming addresses for this server, depending on where it is located on the network and the function it is to serve. This server is currently in mode: Gateway mode Configure this server in
Security Remote access Port forwarding Web Server Certificate Certificate Management Configuration Networks E-mail settings	For a server on the network edge, the streaming addresses will most likely be the same as those configured on the corresponding interfaces. Server-gateway configuration on the network edge the override addresses, unless the server is behind NAT for some reason. If you click on the "Apply" button below, I will set the streaming addresses appropriately. Server-only configuration on the network DMZ Server-only configuration
Google Apps DHCP Date and Time Hostnames and addresse Domains	network LAN Custom configuration → s Put Into Daisychain Mode

Figure 55 – Network Profiles

In order to make the mid-call feature works for External Hot Desk User, need to setup KPML username and password under Configuration -> Settings, click Edit.

- Set **KPML username**: administrator is given which is same as **Subscription User Name** in section <u>SIP Peer Profile</u>.
- Set KPML password: give the same password as Subscription Password in section <u>SIP Peer Profile</u>.

	MITEL STANDARD LINUX	
admin@mbg2.lab.tekvizio	n.com	Alarm Status: Major Logout
Applications	Manage MiVoice Border Gateway	
MiVoice Border Gateway	·······	
Remote proxy services	Status Configuration Services Applications Clustering	
ServiceLink	Settings • Network profiles • ICPs • Bandwidth management	Alarms
Blades		Overrides
Status	» Location: Configuration settings / Modify	
Administration		
Web services	Welcome to the MBG administrative interface. From here you can manage all aspects of t	he MBG's behaviour. Above are
Backup	the upper-right corper of the page.	information, click the help icon in
View log files		
Event viewer	Modify administration settings.	
System information	MBG status as of 24 February 2015 08:08:19.	
System monitoring	Service parameters	
System users	Security profile Legacy mode V	
Shutdown or reconfigure	SRTP starting port 20000	
Virtualization		
Security	SRTP ending port 31000	
Remote access	DSCP setting for signaling Expedited forwarding 🗸	
Port forwarding	DSCP setting for voice Expedited forwarding	
Web Server Certificate		
Certificate Management	KPML username administrator	
Configuration	KPML password •••••••	
Networks	Confirm KPML password	
E-mail settings	Global Device Options	
Google Apps		
DHCP		

Figure 56 – MBG Settings

Then you need to identify the working MiVoice Business ICP where to forward SIP messages to and then to configure the SIP trunk.

Navigate to MiVoice Border Gateway -> Configuration -> ICPs

	MITEL ST	ANDA						
admin@mbg2.lab.tekvi	zion.com						Alarm Status:	Major Lo
Applications MiVoice Border Gateway	Man	age M	liVoice l	Border Gate	eway			
Remote proxy services	Sta	tus	Configuratio	n Services	Applications Cl	ustering		
ServiceLink Blades	Set	tings	 Network 	profiles • IC	Ps • Bandwidth	n management 🔹	Alarms • Overrides	
Administration Web services Backup View log files Event viewer System information	Welcom accessi page. <i>To tes</i> i	ne to the I ng differe t <i>connecti</i>	MBG administ int parts of th vity to your c	rative interface. Fro e system. If at any onfigured ICPs, or t	m here you can mana time you require more o run a DNS resolution	ge all aspects of the a information, click th test on configured h	MBG's behaviour. Above are va e Help icon in the upper-right c postnames, see the <u>Diagnostics</u> (rious tabs for orner of the page.
System monitoring	ICP In	formatic	'n					
System users Shutdown or reconfigure Virtualization	Defau for MiNet	lt Default : for SIP	t Name	Hostname or IP add	lress Type	Installer password	Indirect call recording capable	
Security	۲	۲	3300 v13.0	10.35.32.2	MiVoice Business	5	×	Modify Delete
Remote access								
Port forwarding							Undate D	efaultICPs
Web Server Certificate							Opdate D	ordanior of j



- On ICPs page, ensure that the "working" MiVoice Business is configured. If needed, click Add ICP link and add a new Mitel switch.
- Click Update Default ICPs button.

To add a new SIP trunk:

- Click Services tab and then click SIP trunking
- Click Add a SIP trunk link.

	MITEL STANDARD LINUX						
admin@mbg2.lab.tekv	rvizion.com Ala	rm Status: Major Lo					
Applications	A Manage MiVoice Border Gateway	6					
MiVoice Border Gateway	, Hanage Hivoice border Gateway						
Remote proxy services	Status Configuration Services Applications Clustering						
ServiceLink	MiNet devices • Device settings by DN • SIP devices • SIP trunking • Recording sta	itus					
Blades							
Status	» Location: SIP Trunks						
Administration Web services Backup View log files Event viewer System information System users Shutdown or reconfigure	Welcome to the MBG administrative interface. From here you can manage all aspects of the MBG's behaviour. Above accessing different parts of the system. If at any time you require more information, click the Help icon in the upper- The SIP trunks Information section below shows a short summary of each SIP trunk. Click on the SIP trunk for detail To make changes to SIP settings in general, please see the <u>SIP settings</u> in the Configuration tab. To test DNS resolution on any configured hostnames, please refer to the <u>Diagnostics</u> page. Add a SIP trunk	are various tabs for -right corner of the page. Ied information.					
Virtualization	SIP trunk information						
Security Remote access	Temp Calls in progress / Name Calls per progress / status PRACK Remote RTP Re-invite RTP address Local Name status Max Hax support framesize (ms) filtering override streamin	g					
Port forwarding Web Server Certificate	TWCBC • 0 / 4 0 / 514 Disabled 20 Off 10.65.1.20 False	Modify Delete Reset metrics					
Certificate Management	SIP trunk licenses: 12						

Figure 58 – SIP trunking configuration page

Enter the SIP trunk details as follow:

Set Name: TWCBC is given in this setup

Set **Remote trunk endpoint address**: 10.65.1.200 is given in this lab setup. This is the LAN IP Address of the TWCBC ESG, Please contact TWCBC for the IP address for your deployment.

Set Remote trunk endpoint port: 5060 is used as suggested by TWCBC.

Set **Remote RTP framesize (ms)**: This is the packetization rate you want to set on this trunk, TWCBC only supports 20ms packetization rate.

Set **RTP address override**: LAN Interface is select from drop- down. MBG send/receive all SIP/RTP packets to/from TWCBC ESG via LAN interface as the WAN of MBG is setup with public IP address for Teleworker.

Set **PRACK**: Select Disabled from drop-down as TWCBC does not support PRACK.

Set **Routing rules:** It allows routing of any digits to the selected MiVoice Business ICP.

The rest of the settings are optional and could be configured if required.

Click Save button.

	ITEL STANDARD LINUX					
admin@mbg2.lab.tekvizion.	com Alarm Status: Hajor	L				
Applications MiVoice Border Gateway Remote proxy services	Status Configuration Services Applications Clustering MiNet devices • Device settings by DN • SIP devices • SIP trunking • Recording status					
ServiceLink Blades Status Administration	» Location: <u>SIP Trunks /View_SIP Trunk - TWCBC</u> / Edit SIP Trunk - TWCBC Welcome to the MUG administrative interface. From here you can manage all aspects of the MBG's behaviour. Above are various tabs for accessing different parts of the system. If at any time you require more information, citck the Help icon in the upper-right corner of the page. This interface provides the ability to edit a SIP trunk's details. Edit below, and click the "Save" button to commit the changes. If you do not wish to save, simply navigate elsewhere.					
Backup	Name: TWCBC					
View log files	Remote trunk endpoint address: 10.65.1200					
System information	Remote trunk endpoint port: 5060					
System monitoring	Options keepalives: Aways					
System users Shutdown or reconfigure	Options interval: 60					
Virtualization	Rewrite host in PAI: 🗹					
Security	Remote RTP framesize (ms): 20ms 🗸					
Remote access	Idle timeout (#): 3600					
Web Server Certificate	Re-invite filtering: Off 🗸					
Certificate Management	RTP address override: LAN Interface - 10.65.1.20 🗸					
Configuration	Local streaming:					
E-mail settings	PRACK support: Disabled					
Google Apps	Log verbosity: Use master setting v					
DHCP	Authentication username:					
Hostnames and addresses	Authentication password:					
Domains	Confirm authentication password;					
IPv6-in-IPv4 Tunnel SNMP Ethernet Cards	Note, if you modify your routing rules, you must save them before changing pages or navigating elsewhere, or those changes be lost.	will				
Review configuration	Rules per page 10 v	Rules per page 10 v				
Miscellaneous Support and licensing Help	Routing rules: First Prev Page 1 of 1 Next Last					
	Match Rule Primary Secondary 1 Request URI 46993000000 3300 v13.0 v v Ease Presend Delete					
	Save Save	ve				

Figure 59 – SIP Trunk configuration settings



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