

Business Talk & BTIP Mitel MiVoice Business

versions addressed in this guide : MIVB 7.2 to 9.0

Information included in this document is dedicated to customer equipment (IPBX, TOIP ecosystems) connection to Business Talk & BTIP service : it shall not be used for other goals or in another context.

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Goal of this document

The aim of this document is to list technical requirements to ensure the interoperability between Mitel MiVoice Business (MiVB) with Business Talk or BTIP service from Orange Business Services, hereafter so-called “service”.

Notes :

- This document describes only the main supported architectures either strictly used by our customers or that are used as reference to add specific usages often required in enterprise context (specific redundancy, specific ecosystems, multi-PBX environment, multi-codec and/or transcoding, recording...)

1 Architecture overview

1.1. Introduction to architecture components and features

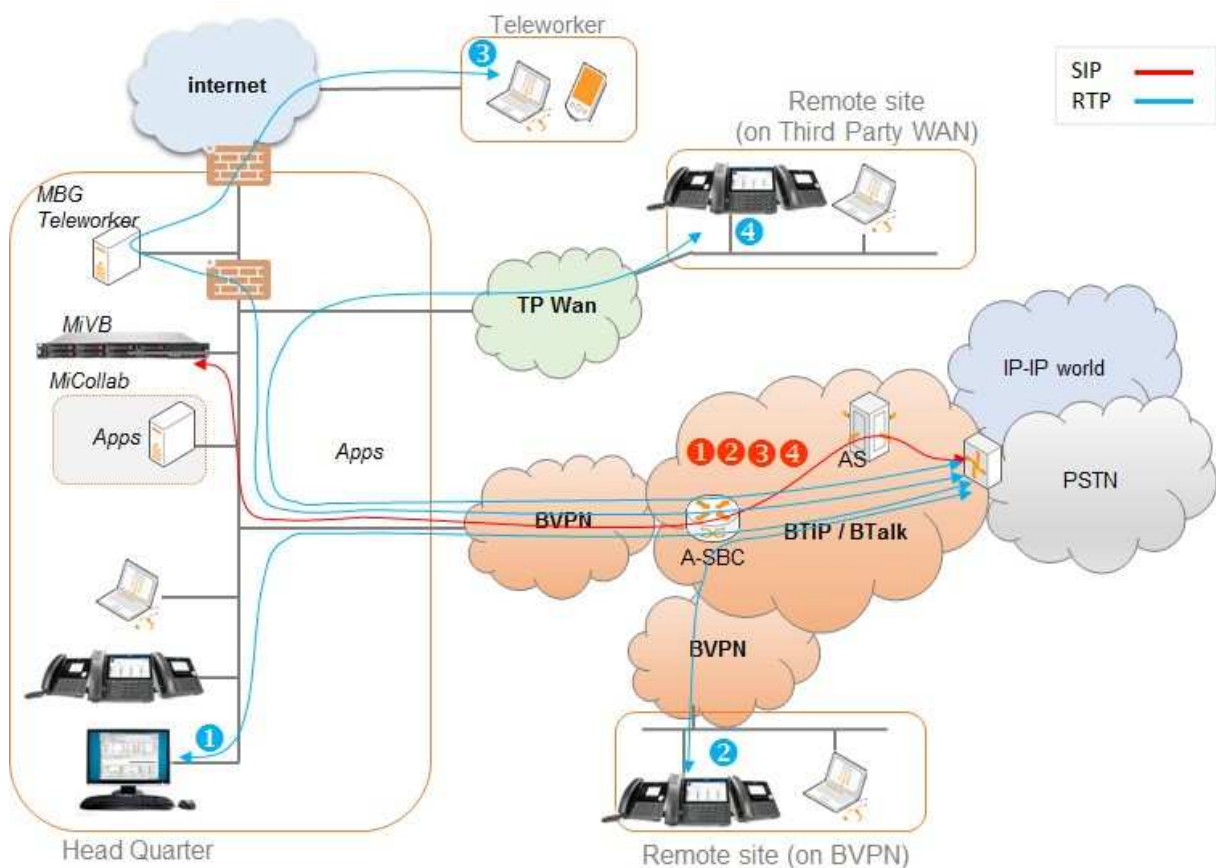
This document describes “only” the main supported architectures either strictly used by our customers or that are used as reference to add specific usages often required in enterprise context (specific redundancy, specific ecosystems, multi-PBX environment, multi-codec and/or transcoding, recording...)

Concerning the fax support, Business talk and BTIP support the following usage :

- fax servers connected to the IPBX* -and sharing same dial plan-, or as sperate ecosystems -and separate dial plan-
 - analog fax machines, usually connected on specific gateways* (seen as IPBX ecosystem or not)
- Fax flows are handled via T.38 transport only.

*Certification is ongoing.

1.2. Distributed architecture with single MiVB



Notes :

- in the diagram above, Mitel internal or proprietary protocols are hidden (such as Minet, DPNSS and so on)
- call flows would be similar with or without MiVB redundancy

In this architecture :

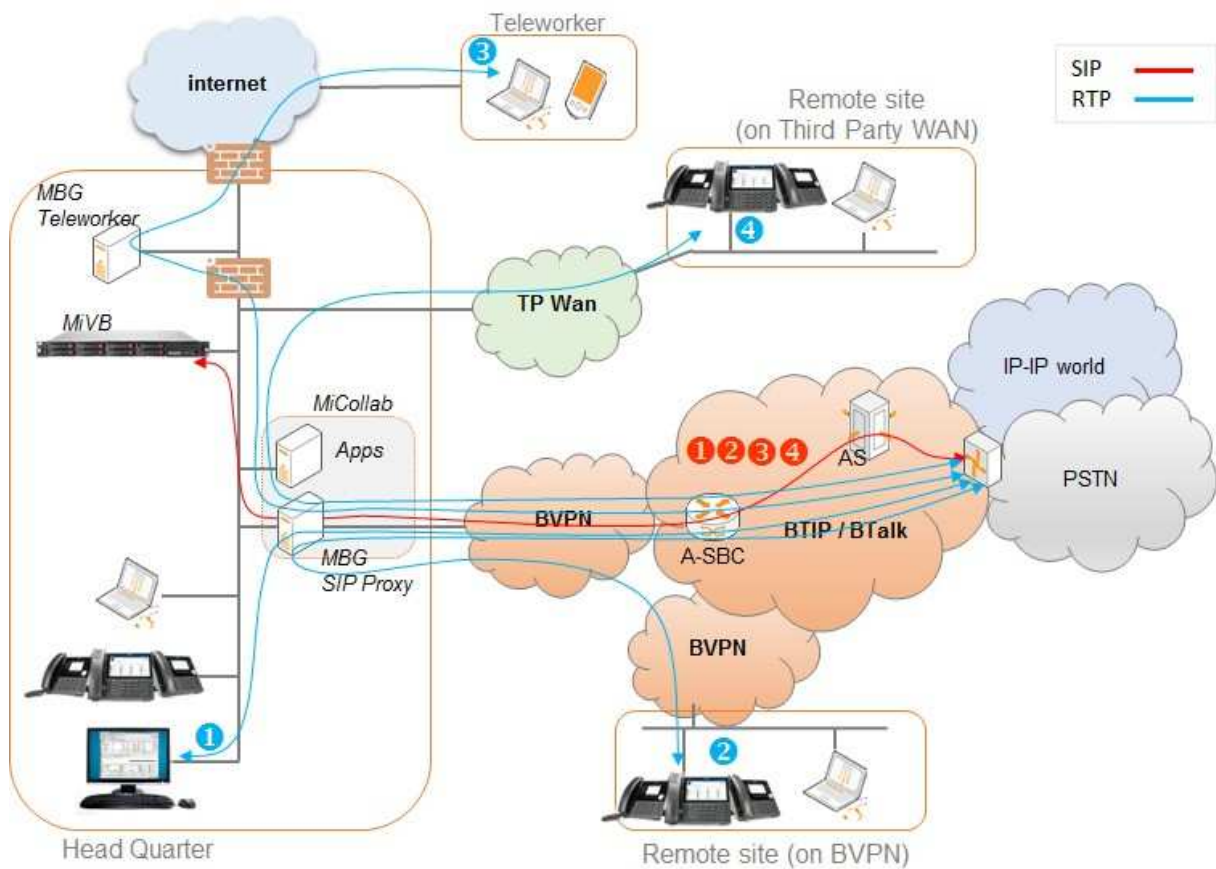
- all 'SIP trunking' signaling flows are carried by MiVB and routed on the main BVPN connection.
- Media flows are direct between endpoints and the Business Talk/BTIP but IP routing differs from one site to another :
 - For the Head Quarter site, media flows are just routed on the main BVPN connection
 - For Remote sites on BVPN, media flows are just routed on the local BVPN connection (= **distributed architecture**),
 - For Remote sites on Third Party WAN, media flows are routed through the Head Quarter (but not through the IPBX) and use the main BVPN connection (= **centralized architecture**, cf sizing below).

Here below a table with a few sizing elements :

Call scenario	nb of voice channels/media resources used		
	IPBX	WAN router*	BTIP
1 offnet call from/to the head quarter (HQ)	1 for HQ	1 for HQ	1 for HQ
1 offnet call from/to a remote site (RS) on BVPN	0 for HQ 1 for RS	0 for HQ 1 for RS	0 for HQ 1 for RS
1 offnet call from/to a remote site (RS) on TP Wan	2 for HQ 1 for RS	1 for HQ BVPN 1 for HQ TPWan 1 for RS TPWan	0 for HQ 1 for RS
1 offnet call from/to a remote site with music on hold	1 for HQ 0 for RS	1 for HQ 0 for RS	0 for HQ 1 for RS
1 offnet call from/to a remote site after transfer/forward to BTIP	0 for HQ 0 for RS	0 for HQ 0 for RS	0 for HQ 2 for RS
1 forced onnet call from head quarter to a remote site (= through Business Talk infrastructure)	1 for HQ 1 for RS	1 for HQ 1 for RS	1 for HQ 1 for RS

*on the WAN router, 1 voice channel = 80Kb/s

1.3. Centralized architecture with Mitel Border Gateway (MBG) as SIP Proxy



Notes :

- in the diagram above, Mitel internal or proprietary protocols are hidden (such as Minet, DPNSS and so on)
- call flows would be similar with or without MiVB redundancy
- this architecture is mandatory for the use of DTMF-based Mid-Call Features by External Hot Desking users located on the PSTN

In this architecture :

- both 'SIP trunking' and RTP media flows between endpoints and the Business Talk/BTIP are anchored by the MBG :
 - for the Head Quarter site, media flows are routed through the MBG and the main BVPN connection. Note that a call between two PSTN peers resulting from a call transfer made by an internal user would remain anchored in the MBG as well, consuming local voice channels
 - for Remote Sites either on BVPN or Third Party WAN, media flows transit **through the Head Quarter MBG Sip proxy** and use the central BVPN connection (= **centralized architecture**, of sizing below).

Warning : with a MBG SIP Proxy architecture, site access capacity has to be sized adequately on the Head Quarter. Here below a table with a few sizing elements :

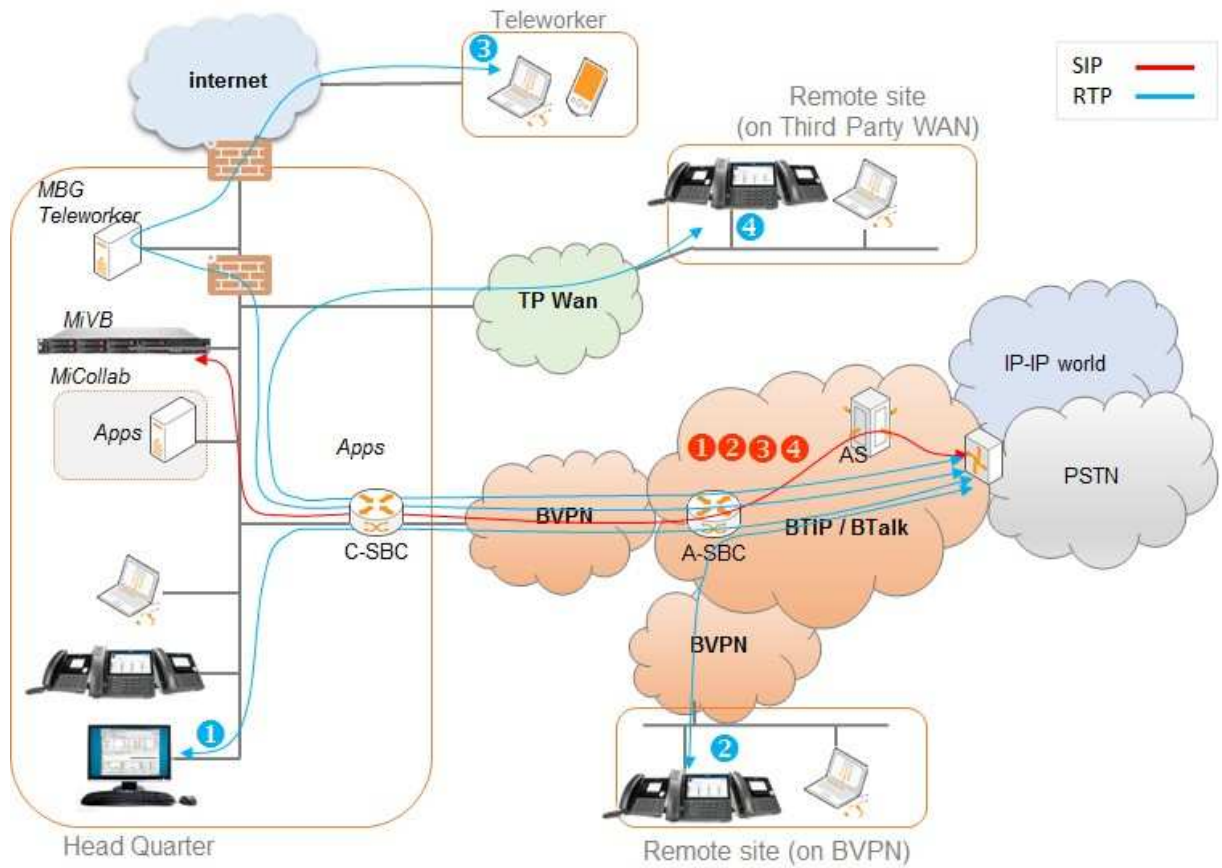
Call scenario	nb of voice channels/media resources used		
	IPBX	WAN router*	BTIP
1 offnet call from/to the head quarter (HQ)	1 for HQ	1 for HQ	1 for HQ
1 offnet call from/to a remote site (RS) on BVPN	2 for HQ 1 for RS	2 for HQ 1 for RS	0 for HQ 1 for RS
1 offnet call from/to a remote site (RS) on TP Wan	2 for HQ 1 for RS	1 for HQ BVPN 1 for HQ TPWan 1 for RS TPWan	0 for HQ 1 for RS
1 offnet call from/to a remote site with music on hold	1 for HQ 0 for RS	1 for HQ 0 for RS	0 for HQ 1 for RS
1 offnet call from/to a remote site after transfer/forward to BTIP	2 for HQ 0 for RS	2 for HQ 0 for RS	0 for HQ 2 for RS
1 forced onnet call from head quarter to a remote site (= through Business Talk infrastructure)	3 for HQ 1 for RS	3 for HQ 1 for RS	1 for HQ 1 for RS

*on the WAN router, 1 voice channel = 80Kb/s

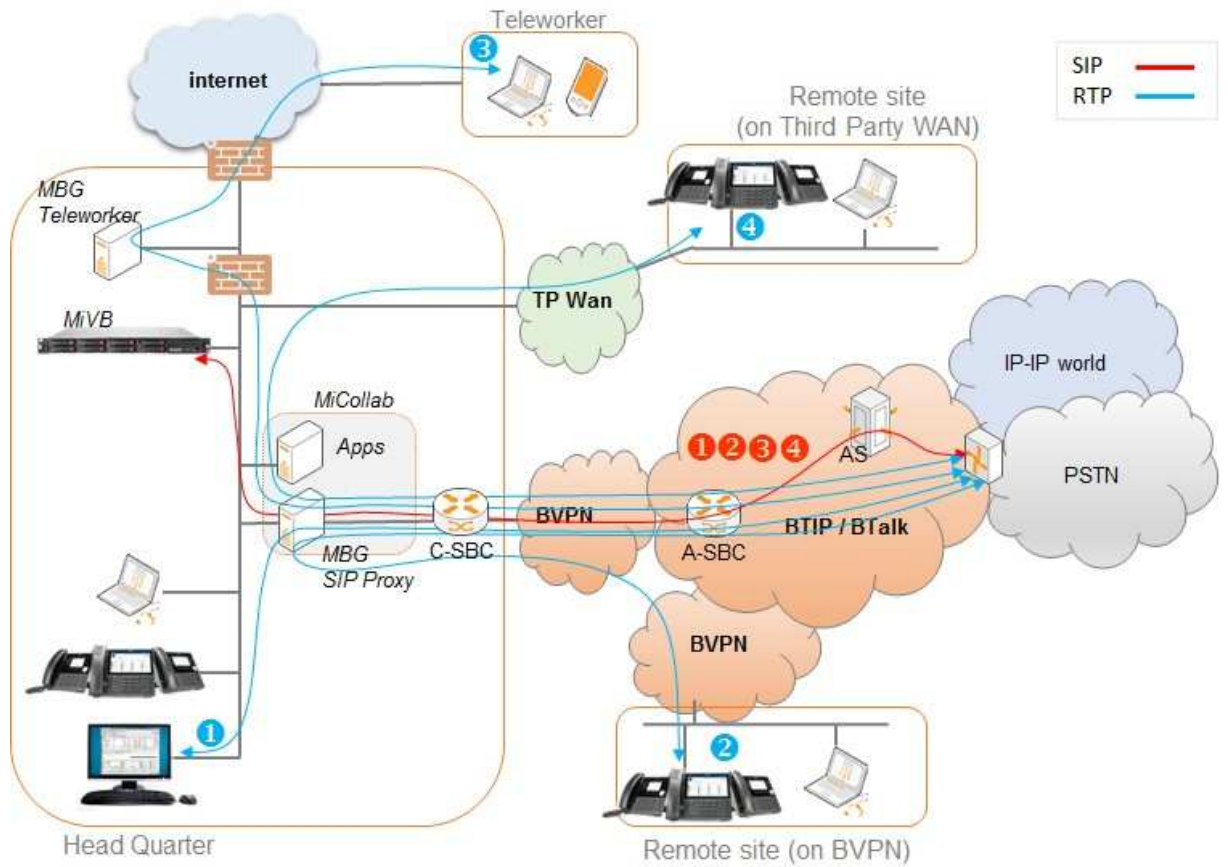
1.4. Centralized architectures with Customer SBC

Following centralized architectures involving a third party Customer SBC (C-SBC) need a specific validation.

Customer SBC with no MBG

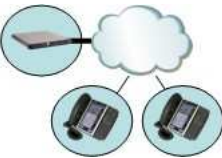
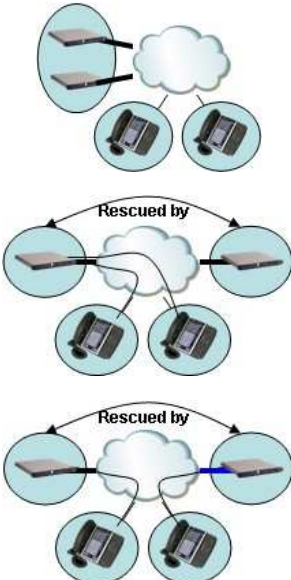


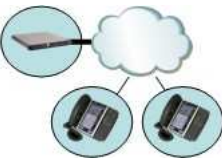
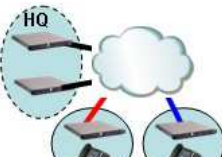
Customer SBC and MBG SIP Proxy



2. Parameters to be provided by customers to access to the service

IP addresses marked in red have to be indicated by the Customer, depending on Customer architecture scenario

Head Quarter (HQ) or Branch Office (BO) architecture*	Level of Service	IP@ used by service	
Single MiVB Call Server or MBG 	No survivability, no trunk redundancy	MiVB or MBG IP@	
2-node cluster 	- Local redundancy if both MiVB or MBG are hosted in the same site (MiVB1 or MGB1+ MiVB2 or MGB2) OR - Geographical redundancy if each MiVB or MGB is hosted in 2 different physical sites MiVB1 or MGB1+ MiVB2 or MGB2	MiVB1 or MBG1 IP@	MiVB2 or MBG2 IP@

Remote Site (RS) architecture**	Level of Service	IP@ used by service	
Remote site without survivability 	No survivability, no trunk redundancy	N/A	
Remote site with survivability 	- Local survivability for the remote site hosting the MiVB or MBG and the Trunk in case of non access to HQ (HQ crash) - Nominal outgoing and incoming traffic goes through HQ	MiVB or MBG RS IP@	

3. Business Talk & BTIP certified versions

		9.0SP3	8.0SP3PR2	7.2
IP-PBX Components	ICP 3300, vMiVB...	20.0	14.0	13.2
Voice mail	NuPoint Voice Mail	NA	NA	NA
Unified Communications	Mitel Application Suite for NuPoint, AWC & MBG	NA	NA	NA
	Mitel Collaboration Advanced (MiCollab)	9.0	7.2	7.0
Specific	MBG Teleworker (vMBG)	11.0	10.0	9.1
Attendant	5500 IP Console	9.0	8.0	7.2
IP	IP Phones 5304 to 5430	6.3	6.3	6.3
IP	IP Phones 69xx	1.5	1.3	NA
IPDECT	Base Station RFP 12	tbc	3.55	NA

4. SIP trunking configuration checklist

4.1. Guidelines

Configuration guidelines required for interoperability between Business Talk/BTIP and MiVB with or without MbG are under Mitel's responsibility. Mitel's integrator partners must be provided with the documentation by Mitel.

4.2. Quality of Service parameters / DSCP

In Business VPN, voice flows are classified either by using "Access Control Lists" on CE routers or by trusting DSCP configuration of voice endpoints. "DSCP trust" is intended to become the main way of managing QoS. Therefore, take care to have the following DSCP values configured on your Mitel equipment (MiVB, MBG, MiCollab, IPPhones, Softphones...):

Voice media: **46** (= EF) *!! mandatory !!*

Video media: **26** (=AF31) or **34** (= AF41)

Signaling: : **24** (=CS3) or **26** (=AF31) or **40** (= CS5) or **46** (= EF)

Note that default values are generally compliant with our requirements, except for Video media.

For MiVB, these parameters are located in "LAN Policy (QoS)" form.

For MBG, they are located in server-manager > Applications > Mitel Border Gateway > System > Settings

Glossary

- MIVB : MiVoice Business
- MBG : Mitel Border Gateway
- MiCollab : MiCollab is a software and hardware solution that allows to install multiple Mitel applications on a single server, and manage the server and the installed applications from this web-based administrator portal. MiCollab and the installed applications provide services (voice mail, for example) to the users on a MiVoice Business. In addition, MiCollab provides users with a personal web-based end-user portal (MiCollab End User Portal) that allows them to modify the settings of their installed applications
- A-SBC : access Session Border Controller (Orange Business Services)
- AS : Application Server Business Talk / BTIP
- TP WAN : Third Party WAN (on customer side)
- BVPN : Business Virtual Private Network (Orange Business Services)