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PRODUCT
GUIDE

MiCollab Client Resiliency Guide

MiCollab Client Resiliency Guide

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Purpose of this Guide

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In MiCollab Release 7.1 onwards, MiCollab Client softphones support Domain Name System (DNS)-based Session Initiation Protocol (SIP) resiliency with clustered MiVoice Border Gateways (MBGs) or clustered Communication Platforms (PBXs). This guide provides the DNS configuration required to support SIP resiliency for MiCollab Client softphones in an Enterprise or Cloud environment.

This chapter contains the following sections:

- [Supported MiCollab Clients](#)
- [How SIP resiliency works](#)
- [DNS Service Records](#)

The MiCollab Client softphone supports SIP for audio and video communication. It uses SIP for all call-related signaling, Transport Layer Security (TLS), Secure Real-time Transport Protocol (SRTP), and resiliency support.

In an Enterprise or Cloud environment, a SIP softphone can connect to the network either through an MBG or a PBX in a cluster. SIP softphone resiliency ensures that users experience minimal disruption in service when the MBG or the PBX to which the softphone is connected goes out of service. The Registrar/Proxy file in the MiCollab Client softphone lists the hostnames of multiple MBGs and PBXs. The softphone re-registers with any of the MBGs in the list subject to the priority settings to re-establish the service. The softphones register on client start-up or after the registration interval time expires.

2.1 Supported MiCollab Clients

The following MiCollab Clients support DNS-based SIP resiliency:

- MiCollab for PC Client
- MiCollab MAC Desktop Client
- MiCollab for Mobile Client
 - Android (supports only MBG resiliency)
 - iPhone (supports only MBG resiliency)

Note:

MiCollab users can start the Client even when the MiCollab Server is not reachable but with limited functionality. See *MiCollab Client End-User Online Help > Troubleshooting > MiCollab Client Server Connection Issues* section for information on the functionality.

2.2 How SIP resiliency works

In an Enterprise or Cloud environment, the softphones are connected to the network through an MBG cluster or a PBX cluster. One element of the cluster must be defined as the primary and one or more among the remaining elements as the secondary.

For MiVoice Border Gateway

To enable resiliency when a softphone is connected through an MBG, you use DNS to map the Fully Qualified Domain Name (FQDN) of the cluster to the hostnames of the member MBGs. This mapping is contained in the configuration file on the DNS server. If the MBG that supports the softphones goes out of service, the softphones use the configuration data that they received from the DNS server to register with an alternate MBG (secondary) in the cluster. This allows the softphone to re-establish the service.

For MiVoice Business

To enable resiliency when a softphone is connected directly to an MiVB, the secondary element for the softphone must be defined in the MiVB server. You must also select the same secondary element from the **User and Services** page in the MiCollab server. You must then use DNS to map the FQDN of the cluster to the hostnames of the member MiVBs. This mapping is contained in the configuration file on the DNS server. If the MiVB that supports the softphone goes out of service, the softphones use the configuration data that they received from the DNS server to register with an alternate MiVB (secondary) in the cluster. This allows the softphone to re-establish the service.

Note:

For MiVB resiliency to work, Teleworker must be set to OFF.

For networks with MBG and MiVB

When a softphone is connected to a network that has both MBG and MiVB, the user must enable resiliency for both MBG and MiVB. See the sections [“For Mivoice Border Gateway”](#) and [“For MiVoice Business”](#).

2.3 DNS Service Records

DNS Service (SRV) records are used to provide FQDN-to-hostname mapping and to specify priorities, port configuration and Time to Live (TTL). If the MBG or MiVB that connects the softphone to the network fails, the softphone registers with a secondary MBG or MiVB in the cluster depending on the data configuration in the SRV record. An SRV record name is made up of the service and the protocol in use.

For SIP, there are only three valid DNS SRV transport protocols. These are:

- `_sip._tcp`
- `_sips._tcp`
- `_sip._udp` (not supported by MiCollab)

Configuration example for resilient operation:

The following examples show four sample DNS SRV records for an MBG resilient network. This will be similar to a MiVB resilient network.

Sample DNS SRV Records:**DNS SRV for TCP connections for some users:**

```
_sip._tcp.mbgtwosomeusers.company.com  
priority 1, weight 100 port 5060 host mbgl01.company.com TTL 60min  
priority 2, weight 100 port 5060 host mbgl02.company.com TTL 60min
```

DNS SRV for TLS connections for some users:

```
_sips._tcp.mbgtwosomeusers.company.com  
priority 1, weight 100 port 5061 host mbgl01.company.com TTL 60min  
priority 2, weight 100 port 5061 host mbgl02.company.com TTL 60min
```

DNS SRV for TCP connections for other users:

```
_sip._tcp.mbgtwotherusers.company.com  
priority 2, weight 100 port 5060 host mbgl01.company.com TTL 60min  
priority 1, weight 100 port 5060 host mbgl02.company.com TTL 60min
```

DNS SRV for TLS connections for other users:

```
_sips._tcp.mbgtwotherusers.company.com  
priority 2, weight 100 port 5061 host mbgl01.company.com TTL 60min  
priority 1, weight 100 port 5061 host mbgl02.company.com TTL 60min
```

**Note:**

For TCP connection the SIP DNS SRV prefix is `_sip`, while for TLS this changes to `_sips`.

**Note:**

The MiCollab Softphone does not support load balancing. Each MBG configured in the SRV record should have its own priority.

In the above sample records:

- FQDN of the MBG cluster is "mbgtw.company.com"

- Primary registrar/proxy = mbgtw.company.com
- "mbgtw.company.com" maps to the following MBG nodes:
 - mbg101.company.com
 - mbg102.company.com
 - mbg103.company.com
- priority: determines the order in which the MBGs or MiVBs are used.
- port: identifies the SIP port used (5060 is default for TCP; 5061 is default for TLS).
- TTL: identifies the duration for which the data remains in the network. In this example, after 60 minutes, the timer expires and the softphone updates its Registrar/Proxy file with the latest version from the DNS server.

Configuration example to achieve resilient operation with load balancing:

Create two sets of DNS Service records:

- mbgtwsomeusers . company . com - SRV record A with mbg101 . company . com as Priority 1 , and mbg102 . company . com as Priority 2
- mbgtwsotherusers . company . com - SRV record B with mbg102 . company . com as Priority 1 , and mbg101 . company . com as Priority 2

Create two MiCollab Client Deployment profiles:

- Deployment profile 1 for some users - Configure SRV record A - Deploy this profile to all users expected to connect to mbg101 . company . com as their primary MBG (one example might be to use this profile for all of users with odd-numbered directory numbers)
- Deployment profile 2 for other users - Configure SRV record B - Deploy this profile to all users expected to connect to mbg102 . company . com as their primary MBG (one example might be to use this profile for all of users with even-numbered directory numbers)

Typical Deployment

3

This chapter contains the following sections:

- [For MBG](#)
- [For MiVB](#)

3.1 For MBG

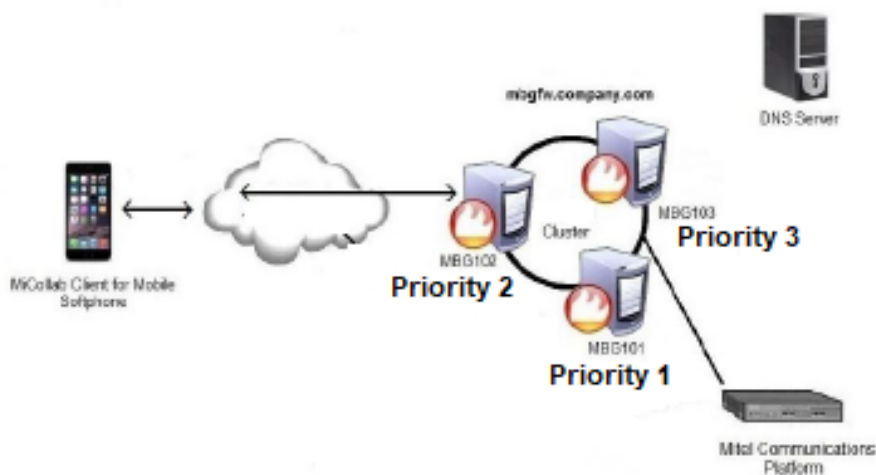
In a typical Cloud deployment, the softphones use DNS SRV records to receive service through a preferred cluster of two or more MBGs with access to a backup MBG. The MBGs in the cluster provide access to a communication platform (MiVoice Business, MiVoice 5000 or MiVoice MX-ONE). The communication platforms can also provide varying degrees of resiliency.

The following figure shows a deployment in which DNS resiliency for the MiCollab Client softphones is supported by three MBGs.

On startup, or after the TTL expires, the softphone queries the DNS server and the DNS server returns the list of configured MBGs. The softphone tries to connect to the MBG with the highest priority, and if it fails to connect, it tries to connect to the record with the second highest priority. Multiple records with the same priority are not supported, and the client softphone does not take weightings into account.

You can also create a lower priority list on the DNS server that directs the softphone service to another MBG cluster to provide reasonable (possibly more expensive) service in the event that the MBG cluster associated with higher priority list goes out of service.

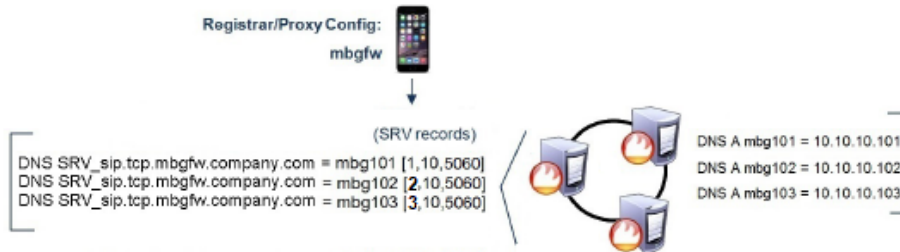
Figure 1: Softphone Resiliency in Cloud Deployment



The softphones periodically poll the MBGs in the higher priority list so that once service is restored, the user's softphone returns to the preferred MBG cluster.

MiCollab Client softphones use SRV records. Other SIP phones can use other DNS queries, such as A-records or NAPTR. The following figure shows an example of DNS SRV entries for resilient softphones in cloud deployment:

Figure 2: DNS SRV Entries for Resilient Softphones in Cloud Deployment



3.2 For MiVB

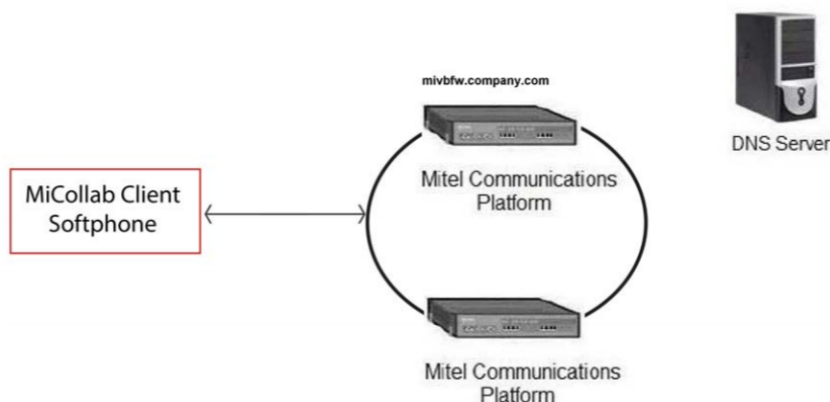
In an Enterprise deployment, the softphones use DNS SRV records to receive service through an MiVB with access to a backup MiVB.

The following figure shows a deployment in which DNS resiliency for the MiCollab Client softphones is supported by a MiVB cluster.

On startup, or after the TTL expires, the softphone queries the DNS server and the DNS server returns the list of configured MiVBs. The softphone starts with the highest priority entries and selects an MiVB. If the MiVB is unavailable, the softphone attempts to connect to other members at the same priority level; otherwise, it moves a member at the next priority level down.

You can also create a lower priority list on the DNS server that directs the softphone service to another MiVB cluster to provide reasonable (possibly more expensive) service in the event that the MiVB cluster associated with higher priority list goes out of service.

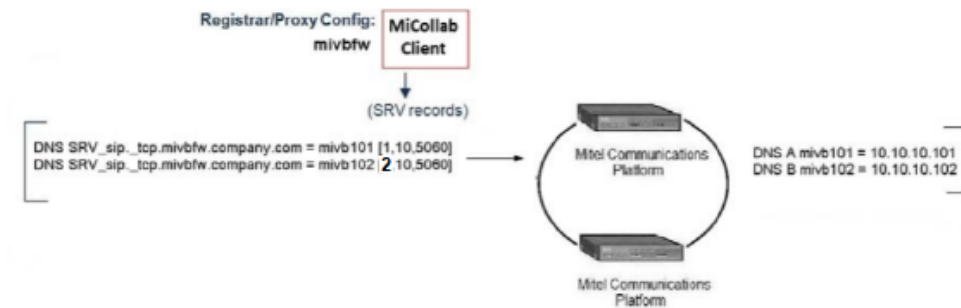
Figure 3: Softphone Resiliency in Enterprise Deployment



The softphones periodically poll the MiVBs in the higher priority list so that once service is restored, the user's softphone returns to the preferred MiVB cluster.

MiCollab Client softphones use SRV records. Other SIP phones can use other DNS queries, such as A-records or NAPTR. The following figure shows an example of DNS SRV entries for resilient softphones in enterprise deployment:

Figure 4: DNS SRV Entries for Resilient Softphones in Enterprise Deployment



This chapter contains the following sections:

- [When the softphone is connected to MiVB through MBG](#)
- [When the softphone is directly connected to MiVB](#)
- [TLS and SRTP support](#)
- [Supported RFCs](#)
- [Limitations of MiCollab Client SIP Softphones](#)

The following sections describe the behavior of the softphone in a resilient network:

- when the softphone is connected to MiVB through MBG
- when the softphone is directly connected to MiVB

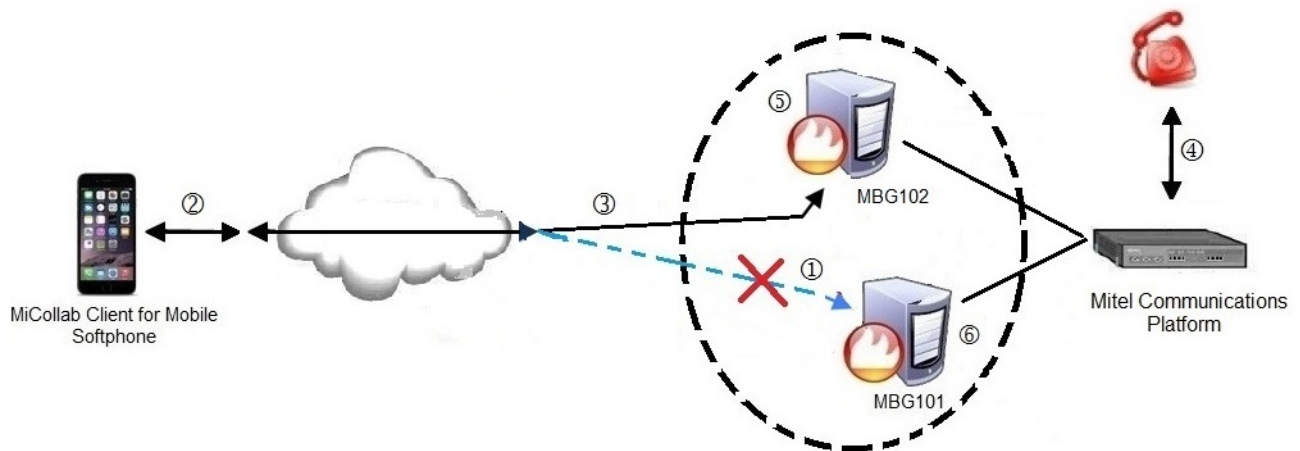
4.1 When the softphone is connected to MiVB through MBG

This section describes the behavior when the softphone is connected to MiVB through MBG, and the MBG goes out of service.

1. If the MiVB to which a softphone is registered is taken out of service, or if the connection to that MiVB is lost, an ongoing call is not affected (unless that call is going to a PSTN Trunk through that MiVB). However, mid call features do not work. The call can be ended using the End Call button. The ongoing call is maintained until the SIP session timer times out. The MBG redirects the next SIP softphone registration to the secondary MiVB. When the call ends, the softphone automatically re-registers with the secondary MiVB. This is supported by the MBG.
2. If the MBG to which a softphone is registered is taken out of service, or if the connection to that MBG is lost, the ongoing call is dropped. The softphone re-registers automatically with another MBG in the cluster.
3. When the primary MiVB/MBG recovers, the softphone re-registers automatically with the primary MiVB/MBG.
4. If there is no ongoing call at the time of an MBG outage, the softphone detects the loss of registration (either on its own or when the user tries to make a call) and re-registers automatically with the secondary MBG.
5. Incoming calls cannot connect with the softphone until the softphone registers with the secondary MBG. During this registration period, incoming calls are routed to voicemail if the user has a mailbox on a Mitel communications platform.
6. Calls that are in setup state when the MBG outage occurs are also dropped. The user is notified of the failure.
7. When the service outage occurs, the softphone initiates registration with another MBG in the list. After the softphone registers, it receives service from the secondary MBG. Note that MiCollab Client features such as Status and Presence provide limited service when the softphone is connected to a secondary MBG.

8. For an iOS and Android softphone with Push Notification, if an MBG outage occurs:
 - a. When there is an incoming call to the phone, the PBX sends the push INVITE to the MBG's address to wake up the device to receive the call. The device cannot reach the MBG (that is down) and the call is dropped.
 - b. The device will then try to connect the second MBG in the list. If the PBX registration is successful, the next push INVITE from the PBX will be sent to the second MBG and the push notification will be received by the device.
9. If the MiCollab server fails at any time during the failures described here, the calls are not affected and re-registration on the MBG continues automatically as described; that is, the softphone is not dependent on the MiCollab server in order to register.

Figure 5: Client Softphone Resiliency with MBG Cluster

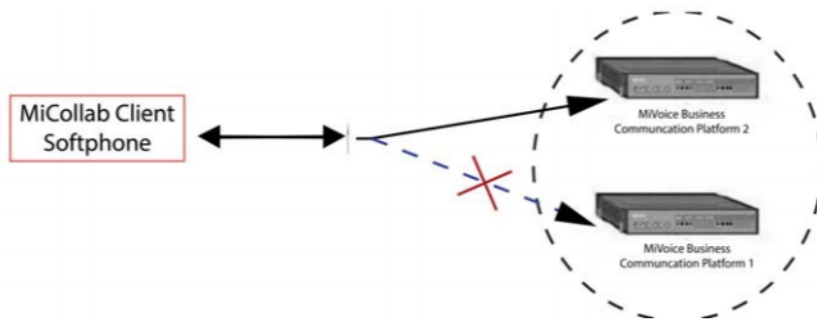


4.2 When the softphone is directly connected to MiVB

This section describes the behavior when the softphone is directly connected to MiVB, and the MiVB goes out of service.

1. If the MiVoice Business (MiVB) to which a softphone is registered is taken out of service, or if the connection to that MiVB is lost, an ongoing call is not affected (unless that call is going to a PSTN Trunk through that MiVB). However, mid call features do not work. The call can be ended using the End Call button. The ongoing call is maintained until the SIP session timer times out. When the call ends, the softphone automatically re-registers with the secondary MiVB. After the primary MiVB returns to service, the softphone automatically re-registers with the primary MiVB.
2. If there is no ongoing call at the time of MiVB outage, the softphone detects the loss of registration (either on its own or when the user tries to make a call) and automatically re-registers on the secondary MiVB.
3. Incoming calls cannot connect to the softphone until it automatically registers with the secondary MiVB. During this registration period, incoming calls are routed to voicemail if the user has a mailbox on a Mitel communications platform.
4. If the MiCollab server fails at any time during the failures described here, the calls are not affected and re-registration on the MiVB continues automatically as described; that is, the softphone is not dependent on the MiCollab server in order to register.

Figure 6: Client Softphone Resiliency with MiVB Cluster



4.3 TLS and SRTP support

The softphones support TLS and SRTP for audio when they are connected to the following communication platforms:

- MiVoice Border Gateway
- MiVoice Business
- MiVoice 5000 and
- MiVoice MX-ONE

TLS versions 1.1 and 1.2 support SIP traffic encryption as well as SRTP encryption (using SDES) of audio media streams. TLS 1.0 does not support this functionality.

Video stream is not encrypted or decrypted in MiCollab Release 7.1 or later.

All SIP-related security measures and SDES parameter negotiation in the Session Description Protocol (SDP) in the softphone are handled by the M5t SIP stack while all low-level certificate and key management is handled by OpenSSL 1.0.1 or later versions.

4.4 Supported RFCs

The MiCollab Client softphone supports the following Request for Comments (RFCs):

- RFC 1321 The MD5 Message-Digest Algorithm For authentication
- RFC 2782 A DNS RR for specifying the location of services (DNS SRV)
- RFC 2976 The SIP INFO Method
- RFC 3261 SIP v2.0: Session Initiation Protocol
- RFC 3263 Session Initiation Protocol (SIP): Locating SIP Servers (NAPTR)
- RFC 3264 An Offer/Answer Model with SDP
- RFC 3265 SIP-Specific Event Notification (Subscribe/Notify)
- RFC 3311 The Session Initiation Protocol UPDATE Method
- RFC 3323 Privacy Mechanism

- RFC 3325 Private Extensions to the SIP for Asserted Identity within Trusted Networks
- RFC 3326 The Reason Header Field for the Session Initiation Protocol (SIP)
- RFC 3515 The Session Initiation Protocol (SIP) Refer Method
- RFC 3550 RTP: A Transport Protocol for Real-Time Applications
- RFC 3551 RTP Profile for Audio and Video Conferences with Minimal Control
- RFC 3725 Best Current Practices for Third Party Call Control
- RFC 3842 A Message Summary and Message Waiting Indication Event Package
- RFC 3891 The Session Initiation Protocol (SIP) 'Replaces' Header
- RFC 3892 The SIP Referred-By Mechanism
- RFC 3960 Early Media and Ringing Tone Generation
- RFC 4028 Session Timers
- RFC 4566 SDP: Session Description Protocol
- RFC 5923 Connection Reuse in the Session Initiation Protocol (SIP)

4.5 Limitations of MiCollab Client SIP Softphones

- If a user manually disables the Softphone in the MiCollab Client and then later starts the MiCollab in an offline mode, where the MiCollab server cannot be reached, the Softphone toggle will be disabled until the server is reachable again. This behavior is intended to prevent two Clients from logging-in to the same DN at the same time.
- The SIP softphone can work independently of the MiCollab server, but mobile devices won't receive calls if they are not open and active because push notifications are not possible. Similarly, if MiCollab is online but unable to access the internet for any reason, push notifications will not be successful.

This chapter contains the following sections:

- [Configuration for MiVoice Border Gateway](#)
- [Configuration for MiVoice Business \(without MiVoice Border Gateway\)](#)
- [Configuration for a network with softphone connections to both MBG and MiVB](#)

This sections describes the configuration that needs to be carried on the MiVoice Border Gateway and the MiVoice Business server for the resiliency feature to work.

5.1 Configuration for MiVoice Border Gateway

Prerequisites

- MiCollab Client installed with Release 7.0 or later
- MBGs installed, configured, and clustered
- DNS server and an available domain name

Configure MiCollab Client Softphones and Specify FQDN

Specify the Fully Qualified Domain Name of the MBG cluster in the MiCollab Client Deployment Profiles.

1. Log in to the MiCollab Server Manager.
2. Under **Applications**, click **MiCollab Client Deployment**.

Note:

Configure the MiCollab Client softphones using the MiCollab Client Deployment blade. See *MiCollab Client Deployment Online Help > Configuration Tab* for instructions on configuring MiCollab Client Softphones.

3. On the **Deployment Profiles** tab, create client profiles with the FQDN of the MBG cluster.
 - Under **General Settings**, ensure that the **Use Teleworker** option is selected.
 - Set the MBG SIP host field to "Custom DNS SRV"
 - Enter the FQDN of the MBG cluster (for example: mbgtw.company.com).

Note:

For MiCloud deployments with MiCloud Management Portal (MMP), you will need to modify the Default Profile as described in [Additional Configuration in MiCollab Client Deployment Service for MiCloud Deployment with MMP](#).

Figure 7: MBG Cluster FQDN

Manage MiCollab Client Deployment

Users | Deployment Profiles | Configuration

Profiles

> Location: [Deployment Profiles](#) / Modify Show info

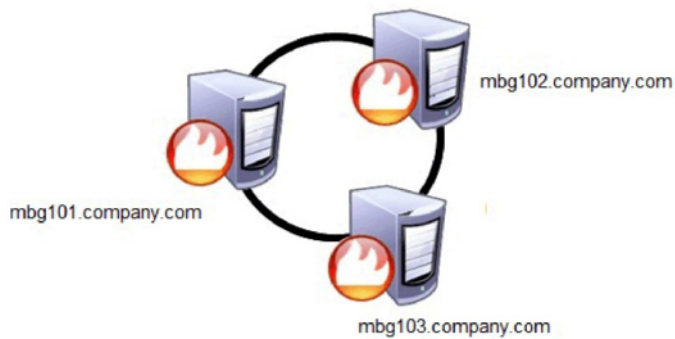
General Settings

Name *	default	Log Level	DEBUG
Use Teleworker	☒	Call Mode	Audio
Use Softphone	☒	Office Number	6135925660,,
		Office Number Pause	0
MBG	Local	Config download host *	Custom masdi2.mitel.com
		MBG SIP host *	Custom DNS SRV mbgfw.company.com
		PBX SIP host	Default
Override user email	☐	Conference Access Code	
Deployment email address	fariba.gillen@mitel.com	Emergency Numbers	000,110,112,118,119,911,999

Configure the MiVoice Border Gateway cluster

Configure each MBG in the cluster with the hostnames of the other MBGs in the cluster. The following shows an example of a cluster in which each MBG is configured with the hostnames of the other MBGs in the cluster.

Figure 8: MBG Cluster with Hostnames (example)



Complete the following steps on *each MBG in the cluster*:

1. Log in to the MBG Server Manager (for example: mbg201.company.com).
2. Click **System Configuration > Settings**.
3. Under **SIP Options**, ensure that the TCP/TLS box is selected.
4. Under **Allowed URI names** (see [Figure 10](#)):
 - Click **Add another** to add the DNS SRV FQDN.
 - Enter the DNS SRV FQDN that you defined earlier.
5. Click **Save**.

Figure 9: MBG SIP Options

The screenshot shows the 'SIP options' configuration page. It is divided into several sections:

- SIP support**: Includes checkboxes for UDP, TCP (checked), and TCP/TLS (checked). There are also dropdowns for 'Access profile' (Public) and 'Certificate' (Web server).
- Set-side RTP security**: Contains radio buttons for 'SRTP only', 'SRTP or RTP' (selected), and 'RTP only'. It also has a note: 'Accept either SRTP or RTP inbound to this server'.
- Outbound**: Contains radio buttons for 'SRTP only', 'AVP+crypto' (selected), and 'RTP only'. It has a note: 'Do our best to send only AVP + crypto outbound from this server'.
- Preferred cipher**: A dropdown menu showing 'AES_CM_128_HMAC_SHA1_32'.
- Device -- device local streaming**: A checkbox that is unchecked.
- Device -- trunk local streaming**: A dropdown menu showing 'Unrestricted'.
- PRACK support**: A checkbox that is checked. Below it are fields for 'Send options keepalives' (Never), 'Options interval' (20), and 'Challenge methods' (Invite, Subscribe, Refer, Prack).
- KPML username**, **KPML password**, and **Confirm KPML password**: Three input fields.
- Registration Mode**: A dropdown menu showing 'Pass-Through'.
- Set-side registration expiry time**, **ICP-side registration expiry time**, and **Allowed URI names**: Three input fields. The 'Allowed URI names' field contains 'mbg101.company.com'.

6. Add the following configuration override to each MBG:

Filename	Section	Parameter	Content
Filename	Section	Parameter	Content
tug.ini	proxy::sip_tcp	idle_timeout	1200

Filename	Section	Parameter	Content
tug.ini	proxy::sip_tls	idle_timeout	1200

This configuration override will prolong the life of the mobile phone batteries.

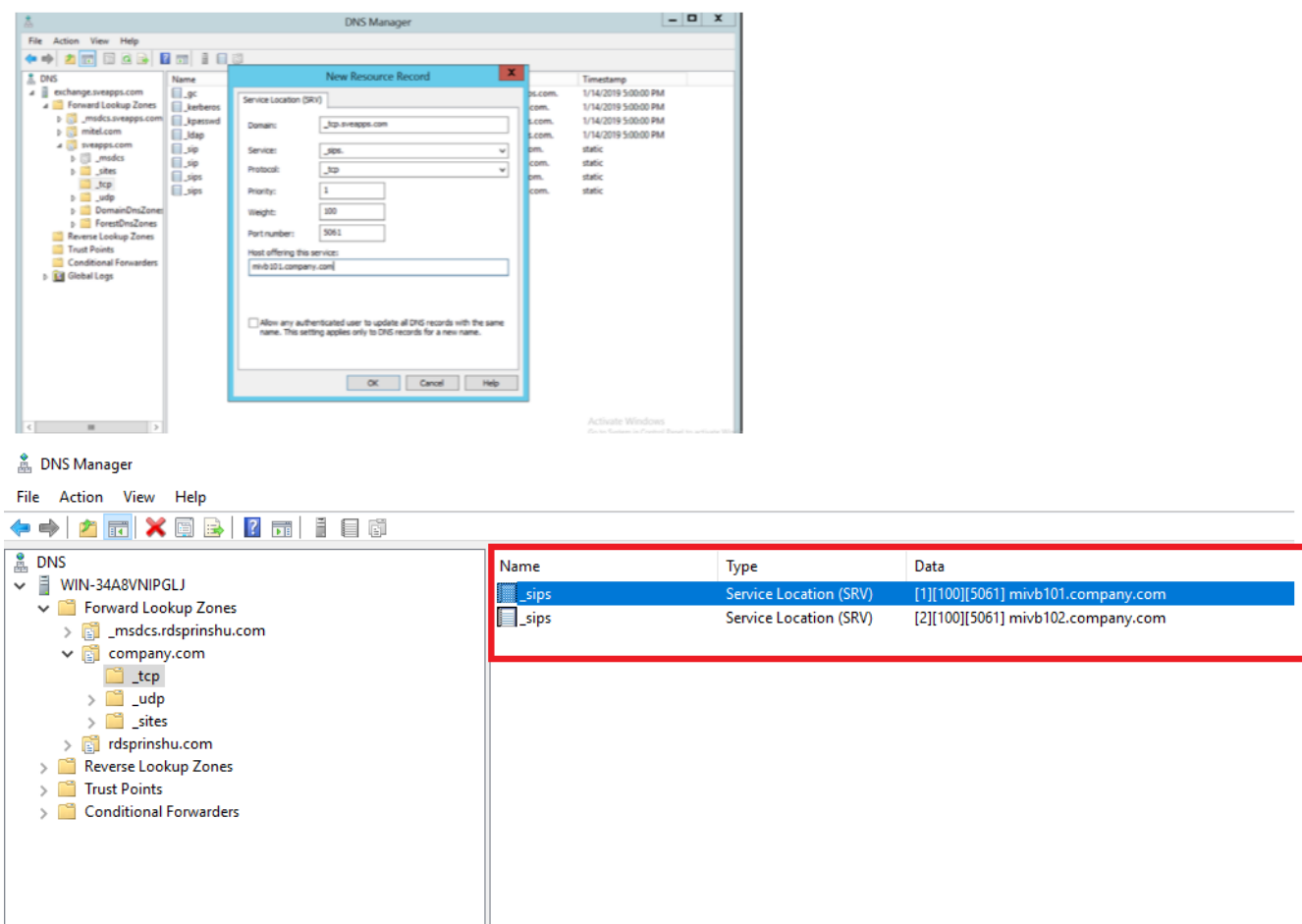
Configure DNS Server

Configure the DNS SRV records on the DNS server to provide the mapping between the MBG FQDN and the MBG cluster member hostname, and to specify priorities, port configuration, and Time to Live (TTL).

"[DNS SRV Entries for Resilient Softphones in Cloud Deployment](#)" provides a mapping example

The following figure shows an example of the DNS server configuration settings.

Figure 10: DNS Server Configuration Settings



5.2 Configuration for MiVoice Business (without MiVoice Border Gateway)

Prerequisites

- MiCollab Client Release 7.0 or later installed
- MiVBs installed, configured, and clustered
- DNS server and an available domain name
- Teleworker set to OFF

Configure MiVoice business

For information about configuring a resilient MiVoice Business system network, see the *Implementing Resiliency* section in the *Resiliency Guidelines*.

Configure MiCollab Client Softphones and specify FQDN

The following are the steps for setting up a MiCollab Client softphone to support SIP resiliency:

1. Log in to the MiCollab Server Manager.
2. Under **Applications**, click **User and Services**.
3. Click the **User** tab.
4. Click **Show all**. Users are listed alphabetically by their last names. Services appear as column headings along the top of the directory.
5. Click on the **Phone** tab. Choose the same **Secondary Element** that you specified in the MiVoice Business server.
6. Click **Save**.
7. Under **Applications**, click **MiCollab Client Deployment**.

**Note:**

Configure the MiCollab Client softphones using the MiCollab Client Deployment blade. See MiCollab Client Deployment Online Help > Configuration Tab for instructions on configuring MiCollab Client Softphones.

8. On the **Deployment Profiles** tab, create client profiles with the FQDN of the MiVB cluster.

- Under **General Settings**, ensure that the **Use Teleworker** option is disabled.
- Set the PBX SIP host field to "Custom DNS SRV"
- Enter the FQDN of the MiVB cluster (for example `mivbfw.company.com`).

Name *	default	Log Level	DEBUG
Use Teleworker	on	Call mode	Audio
Use Softphone	on	Office number	01206628970
MBG	DMZ	Office number pause	0
Override user email	☐	Config download host *	MiCollab Server FQDN
Deployment email address		MBG SIP host *	Custom DNS SRV
RTP timeout detection	☒	MBG's FQDN	mivbfw.company.com
		PBX SIP host *	Custom DNS SRV
			mivbfw.company.com
		Conference access code	88
		Emergency numbers	000,110,112,118,119,911,999,100

Figure 11: MiVB Cluster FQDN

Configure DNS Server

Configure the DNS SRV records on the DNS server to provide the mapping between the MiVB FQDN and the MiVB cluster member hostname, and to specify priorities, port configuration, and Time to Live (TTL). Figure 5 provides a mapping example.

Figure 14 shows an example of the DNS server configuration settings and Figure 14 shows an example of the SRV records.

Figure 12: DNS Server Configuration Settings

DNS Manager

File Action View Help

WIN-34ASVNIPGLJ

Forward Lookup Zones

_msdcs.rdsprnshu.com

company.com

_tcp

_udp

_sites

rdsprnshu.com

Reverse Lookup Zones

Trust Points

Conditional Forwarders

Name	Type	Data
_sips	Service Location (SRV)	[1][100][5061] mivb101.company.com
_sips	Service Location (SRV)	[2][100][5061] mivb102.company.com

_sips Properties

Service Location (SRV) Security

Domain: company.com

Service: _sips

Protocol: _tcp

Priority: 1

Weight: 100

Port number: 5061

Host offering this service: mivb101.company.com

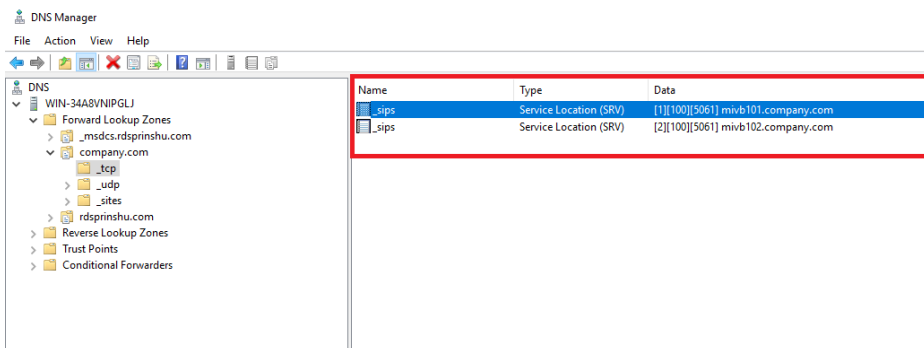


Figure 13: SRV Records List

5.3 Configuration for a network with softphone connections to both MBG and MiVB

In a network where some softphones connect directly to MiVB, while others connect through MBG, DNS SRV resiliency must be configured for both methods of access.

Prerequisites

- MiCollab Client Release 7.0 or later installed.
- MBGs and MiVBs installed, configured, and clustered.
- DNS server and an available domain name.

Configure MiVoice border gateway

For information about configuring a resilient MiVoice Border Gateway system network, see [Configuration for MiVoice Border Gateway](#).

Configure MiVoice business

For information about configuring a resilient MiVoice Business system network, see [Configuration for MiVoice Business \(without MiVoice Border Gateway\)](#).

Configure MiCollab Client Softphones and specify fqdn

The following are the steps for setting up a MiCollab Client softphone to support SIP resiliency:

1. Log in to the MiCollab Server Manager.
2. Under **Applications**, click **MiCollab Client Deployment**.

**Note:**

Configure the MiCollab Client softphones using the MiCollab Client Deployment blade. See *MiCollab Client Deployment Online Help > Configuration Tab* for instructions on configuring MiCollab Client Softphones.

3. On the **Deployment Profiles** tab, create client profiles with the FQDN of the MBG, and MiVB cluster.

- Set the MBG SIP host field to "Custom DNS SRV"
- Enter the FQDN of the MBG cluster (for example: mbgtw.company.com).
- Set the PBX SIP host field to "Custom DNS SRV"
- Enter the FQDN of the MiVB cluster (for example: mivbfw.company.com).

To connect a softphone to the network through MBG, Teleworker must be set to **ON**. From the MiCollab Client, go to **Settings > General > Use Teleworker**.

To connect a softphone to the network through MiVB, Teleworker must be set to **OFF**. From the MiCollab Client, go to **Settings > General > Use Teleworker**.

Figure 14: MBG and MiVB Cluster FQDN

Name *	default	Log Level	DEBUG
Use Teleworker	on	Call mode	Video
Use Softphone	on	Office number	01206628971
PBX	PA1	Office number prefix	3
Override user email	@	Config download host *	Custom pa1-svemas1.oveapple.com
Deployment email address		MBG SIP host *	Custom DNS SRV mbgtw.company.com
		MBG WebRTC SIP host *	MBG's FQDN
		PBX SIP host *	Custom DNS SRV mivbfw.company.com
		Conference access code	4200

MiCloud Deployments with Non-Resilient and Resilient Devices

6

This chapter contains the following sections:

- [Deployment Example](#)
- [Configure MMP with FQDN/IP Address of MBG](#)
- [Configure DNS Server](#)

Overview

For MiCloud deployments with MMP, use the same external MBG cluster FQDN for both the following:

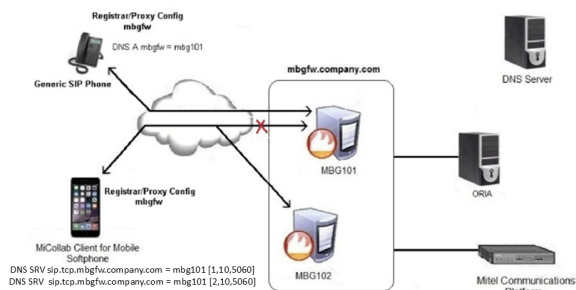
- non-resilient devices such as generic SIP phones (with DNS A records)
- resilient MiCollab softphones (with DNS SRV records).

This section illustrates how to configure a MiCloud deployment using a single MBG external hostname field. This solution is purely a DNS programming exercise.

6.1 Deployment Example

The following figure shows a resilient MiCollab softphone and a non-resilient generic SIP phone.

Figure 15: MiCloud Deployment with Non-Resilient and Resilient Devices



6.2 Configure MMP with FQDN/IP Address of MBG

1. Log in to the MMP administration interfaces.
2. Access the **Home > MiVoice Border Gateways > Register MiVoice Border Gateway Cluster** page.

3. Configure the Public Facing FQDN/IP address of the external MBG cluster (to which the external devices connect):

- "FQDN of External MBG Cluster — MiVoice Business Platform" shows a MiVoice Business platform deployment
- "FQDN of External MBG — MiCollab Platform" shows a MiCollab platform deployment

The screenshot shows the MiCloud Administrator interface. At the top, there's a header with 'Hi Mitel', 'Welcome, Administrator', 'Tasks' with a green checkmark, and 'My Profile'. Below the header is a navigation bar with tabs: Home, Resellers, Bundles, Customers, Platforms, Telephony, and System. The 'Platforms' tab is selected, and a dropdown menu shows 'Platform Groups' and 'MiVoice Border Gateways'. The breadcrumb trail at the bottom of the header reads 'Home > MiVoice Border Gateways > Register MiVoice Border Gateway Cluster'. The main content area is titled 'Platform Details' and contains a form with the following fields:

- Name ***: A text input field with a placeholder 'Enter a name to identify the MBG cluster.'
- Host Name ***: A text input field with a placeholder 'Enter a valid host name for the master of the MBG cluster (e.g. 192.168.221.11 or com.company.mbgAddress)'.
- Public Facing FQDN/IP Address ***: A text input field with a placeholder 'mbgw.company.com' and a tooltip 'Enter a valid Public Facing FQDN/IP Address for the master of the MBG cluster (e.g. 192.168.221.12 or company.mbgDomain.com)'.
- MSL Username ***: A text input field with a tooltip 'Enter the Mitel Standard Linux username to register the MiVoice Border Gateway.'
- MSL Password ***: A password input field with a tooltip 'Enter the Mitel Standard Linux password so that the MiVoice Border Gateway (MBG) cluster can be registered.'
- Description**: A large text area with a tooltip 'Enter a short description for the MBG cluster.'

Figure 16: FQDN of External MBG Cluster — MiVoice Business Platform

Figure 17: FQDN of External MBG — MiCollab Platform

Home > Platform Groups > Register Platform Show H

Platform Details

Name *
 Enter a unique name to identify the platform.

Type *
 MiCollab Select the platform type.

Host Name *
 Enter a valid host name (e.g. 192.168.221.11 or com.company.address)

Public Facing FQDN/IP Address *
 Enter a valid Public Facing FQDN/IP Address (e.g. 192.168.221.11 or com.company.address)

MSL Username *
 Mitel Standard Linux login name.

MSL Password *
 Mitel Standard Linux password.

Description
 Enter a short description for the platform.

☒ **Configure Management Host Names For This Platform.** Enable this option if there are platform resources in a customer network that is accessed through a Mitel Management Gateway, third party NAT or VONS. Once this option is set, a platform cannot be taken out of this mode.

☒ **Use Embedded MiVoice Border Gateway** If not selected, the MiVoice Border Gateway (MBG) embedded in the platform will not be available for use.

Public Facing FQDN of External MBG *
 Enter a valid Public FQDN for MBG

☐ **Demo Mode** Registering a platform in demo mode creates a mock site. This platform can be assigned to a customer for demonstrating the portal without live MiVoice Business instances. NOTE: A demo platform can never be taken out of demo mode.

6.3 Configure DNS Server

The following figure shows an example of the DNS A and resilient DNS SRV entries on a GoDaddy server:

Figure 18: Configuration Example on GoDaddy

Manage your DNS seamlessly on this Domain Details page.

Use classic DNS Manager 

ZONE FILE

42 records in this zone

Last updated 23/03/2016 7:09:44 AM MST

 [Add Record](#)  [Delete](#)  [Bulk Actions](#)  [Templates](#)  [More](#) 

[Filter List](#) 

A (Host)

15 Records (1 Selected)

	Host	Points To	TTL	Actions
	@	184.168.221.59	600 seconds	 
	mbgfw.company.com	209.91.139.202	1 Hour	 
	mbgfw.company.com	209.91.139.203	1 Hour	 
	mbg101.company.com	209.91.139.202	1 Hour	 
	mbg102.company.com	209.91.139.203	1 Hour	 
	tenant029	209.91.139.190	1 Hour	 

SRV (Service)

14 Records (4 Selected)

	Service	Protocol	Name	Priority	Weight	Port	Target	TTL	Actions
	_sip	_tls	@	100	1	443	sipdir.online.lync.c	1 Hour	 
	_sip	_tcp	mbgfw.company.com	10	50	5060	mbg101.company.com	1 Hour	 
	_sip	_tcp	mbgfw.company.com	20	50	5060	mbg102.company.com	1 Hour	 
	_sips	_tcp	mbgfw.company.com	10	50	5061	mbg101.company.com	1 Hour	 
	_sips	_tcp	mbgfw.company.com	20	50	5061	mbg102.company.com	1 Hour	 
	_sip	_tls	vmas-uca	10	50	5061	vmbg-dsl-a.blackc	1 Hour	 

Additional Configuration in MiCollab Client Deployment Service for MiCloud Deployment with MMP 7

The built-in SIP softphone of the MiCollab Client application supports SIP resiliency with an MBG, such that if the call signaling path is disrupted or the MBG is taken out of service, the softphone registers with an alternate MBG to regain service.

By default, MMP pushes the host addresses FQDNs of the configured platforms (example: MiCollab, MBG, MiVoice Business) to the MiCollab Deployment service and the MiCloud\MMP System administrator does not need to provision the deployment profile on the MiCollab Deployment service in advance.

In situations where mobile softphone resiliency is required, then you must log in to the MiCollab Client Deployment service and change the “SIP Port” field of the Softphone Settings to a value of zero (0) in the default configuration profile. This must be completed before the MMP bundle that contains the MiCollab (Next Gen) SIP Softphone is assigned to a customer in MMP (see the following figure).

Figure 19: MiCollab Client Deployment Service — SIP Port Configuration

The screenshot displays the MiCollab Client Deployment Service web interface. The top navigation bar includes the Mitel logo, the text 'MiCollab', and the user 'admin@vmicollab.mitel.com' with a 'Status: Clear' indicator. A left-hand navigation menu lists various sections: Applications, Services, Administration, and Configuration. The 'Configuration' section is expanded, showing sub-items like Integrated Directory Service, MiCollab Client Integration Wizard, and various settings. The main content area is titled 'Softphone Settings' and contains a table of configuration options. A red rectangle highlights the 'SIP port' field, which is set to '0'. Other fields include 'PBX type' (MV Business), 'SIP transport protocol' (TLS), 'SRTP mode' (Off), 'SIP DTMF method' (RFC 2833 / RFC 4733), 'Default audio codec' (Best quality (G.722)), and 'Max video TX rate (kbit/s)' (768).

PBX SIP host	
Override user email	☐
Conference Access Code	*40
Emergency Numbers	000.110.112.118.119.911.999
Deployment email address	
Time format	12h

Softphone Settings	
PBX type	MV Business
SIP transport protocol	TLS
SRTP mode	Off
SIP port	0
SIP DTMF method	RFC 2833 / RFC 4733
Default audio codec	Best quality (G.722)
Max video TX rate (kbit/s) *	768

