



A MITEL
PRODUCT
GUIDE

Multi-MiCollab Solution Document Configuration and Deployment

Release 9.7 SP1

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What is Multi-MiCollab?

1

When a customer's business requirements are beyond the maximum user capacity of a single MiCollab platform (5000 users), scalability can be achieved by adding additional MiCollab servers to a MiVoice Business Cluster. Multi-MiCollab is a feature that allows a MiCollab Administrator to connect up to three MiCollab servers to a single MiVoice Business Cluster. Multi-MiCollab increases the total number of users from the existing limit of 5000 users on a single MiCollab server to 15000 users in a Multi MiCollab solution. To support this feature, MiCollab must be Release 9.7 SP1 or later and MiVoice Business must be Release 10.0 SP1 or later.

License management groups are created for a Multi-MiCollab solution. For a Multi-MiCollab solution it is expected two group ARIDS (that is, GARIDS) will need to be created on the Mitel License Server (AMC).

- DLM (Designated License Manager) – MiVoice Business systems are grouped together in a DLM group. The DLM allows the administrator to move licenses from one MiVoice Business Platform to another with a network (or cluster) of MiVoice Business systems without having to make changes to the individual applications records (ARIDs) on the Mitel License Server (that is, AMC) for each MiVoice Business.
- ULM (UCC License Manager) – A ULM is used for site solutions that include the following:
 - MiCollab server(s)
 - MiVoice Business (a single MiVB will have an ARID) or multiple MiVoice Business servers (will be in a DLM)
 - MiVoice Border Gateway

To license a solution with Multi-MiCollab, a MiVoice Business Cluster, and MiVoice Border Gateway:

- Create ARIDs for all the MiCollab servers to be added to the ULM (up to 3 MiCollab servers in total).
- Create ARIDs for all the MiVoice Business servers.
- Create a DLM and add MiVoice Business servers.
- Create a DLM and add all MiVoice Business servers (that is, ARIDs) to the DLM.
- Create a ULM from either the MiVoice Business or MiCollab.
- Add DLM to ULM.
- Add UCC licenses to ULM -UCC Entry or UCC Standard.

Some of the prerequisites to be ensured before the actual deployment:

1. Identify the number of MiVoice Business servers required based on the total number of users.
2. Ensure that the MiVoice Business servers are in one single cluster.
3. Enable SDS sharing between the MiCollab server and the MiVoice Business server and then enable Multi-MiCollab mode.

This chapter contains the following sections:

- [Deploying a Multi-MiCollab \(Greenfield\)](#)
- [Provisioning of users](#)
- [Multi-MiCollab Deployments \(Brownfield\)](#)
- [Deployment Limitations and Guidelines](#)

4.1 Deploying a Multi-MiCollab (Greenfield)

The deployment steps are as follows:

Perform the following steps as an administrator to set up a Multi-MiCollab cluster:

1. Select one of the MiCollab servers and enable Multi-MiCollab mode by checking the Enable Multi-MiCollab box under **Configuration > MiCollab Settings > MIVB Sharing > Enable Multi-MiCollab**.

Configuration

- Integrated Directory Service
- MiCollab Client Integration Wizard
- Reconcile Wizard
- MiCollab Settings**
- MiCollab Language
- Vidyo Settings
- Networks
- E-mail settings
- Google Apps
- Cloud Service Provider
- DHCP
- Date and Time
- Hostnames and addresses
- Domains
- IPv6-in-IPv4 Tunnel

MiCollab Settings

☐ Password Strength
 ☐ Welcome E-mail
 ☐ Collect Logs
 ☐ Client Deployment Settings
 ☒ **MIVB Sharing**
☐ CloudLink Integration

☒ **Enable Multi-MiCollab**
 Use this option to enable sharing with multiple MiCollab servers. The MiVoice Business servers must already be at version 10.0 SP1 or higher. Once a system is in Multi-MiCollab mode it cannot be taken out of Multi-MiCollab mode.

☐ Add new users to this MiCollab when created or updated on MIVB.
 In Multi-MiCollab mode, new users created or updated on MIVB are not automatically added to MiCollab.

☐ Enable Reach Through:

Save

To make the **Enable Multi-MiCollab** check box visible, log in to the MiCollab terminal and execute the script: `/usr/mas/bin/toggleMultiMas.sh`.

When you enable Multi-MiCollab in a MiCollab server, the MiCollab server name will be appended to all UCC role names and template names of the server that have MiCollab services.

MiCollab admin@micollabdoc.mitel.micollabdoc.com

MiVoice Business Network Element Local_230 performed a Start Sharing operation with this MiCollab Server. Conflicts have been detected in the data synchronized from the MiVoice be reconciled with the data configured in this server. Click [here](#) to launch the Reconcile Wizard. See [help](#).

Users and Services

The Users and Services directory allows you to maintain user data and assign or remove user services. The directory lists the usernames and office numbers of the MiCollab users, and shows the assigned to each user. Services are only available if they have been installed on the server as an application blade and are licensed.

Default	Label	Description
<input checked="" type="checkbox"/>	Basic User - micollabd	User with a single phone
<input checked="" type="checkbox"/>	MiCollab Client Teamwork Mode User - micollabd	The default template for MiCollab Client teamwork users
<input checked="" type="checkbox"/>	UCC (V4.0) Entry - micollabd	The default template for the UCC Entry User for Enterprise (V4.0) bundle
<input checked="" type="checkbox"/>	UCC (V4.0) Premium - micollabd	The default template for the UCC Premium User for Enterprise (V4.0) bundle
<input checked="" type="checkbox"/>	UCC (V4.0) Standard - micollabd	The default template for the UCC Standard User for Enterprise (V4.0) bundle

2. Add the Multi-MiCollab enabled MiCollab Server as a network element to the **MiVoice Business Network Elements** form. In the **Name** field, enter the name of the server and in the **FQDN or IP**

Address field, enter the required FQDN/IP address of the MiCollab server, and select the network element type under the **Type** field as **MSL server (MiCollab)**.

The screenshot shows the Mitel MiVoice Business interface. On the left is a navigation menu with categories like Licenses, LAN/WAN Configuration, Voice Network, System Properties, Hardware, Trunks, and Users and Devices. The main area displays 'Network Elements on Local_155'. An 'Add' dialog box is open, titled 'Add Network Elements'. It contains the following fields: Name (empty), Type (dropdown menu showing 'MSL Server (MiCollab)'), FQDN or IP Address (empty), Local (checkbox set to False), Version (empty), Zone (dropdown menu showing '1'), and ARID (empty). At the bottom of the dialog are 'Save' and 'Cancel' buttons. In the background, a table of network elements is visible with columns: P Address, Data Sharing, Version, and Zone.

3. Click **Save**.

4. Select the MiCollab server from the **Network Elements** list and click **Start Sharing** to initiate Flow Through Provisioning.

At the start of the data synchronization process, the system automatically runs a reconciliation of the users, roles, and templates in the MiCollab and MiVoice Business databases. After the synchronization, in case a warning message is displayed in the MiVoice Business server, prompting you to log in to the MiCollab server and run **Reconcile Wizard**, then follow the instructions in the wizard and complete the steps.



Note:

Run the **Reconcile Wizard** only if a warning banner is displayed instructing you to do so.

The screenshot shows the Mitel MiVoice Business interface. A dialog box titled 'Review the synchronization results from Local_187 to the following network element(s):' is open. It contains a table with the following data:

Network Element	Type	IP Address	Error Message
vmas199	MSL Server	10.112.85.199	Synchronization completed but there were conflicts with data on MiCollab. Please log into the MiCollab server and run the Reconcile Wizard.

An 'OK' button is located at the bottom right of the dialog. In the background, the interface shows the 'Local_187' node with a navigation menu and a table of network elements.

5. Click **OK**.

6. Log in to the MiCollab server. If the system displays a warning banner instructing you to run the Reconcile Wizard, follow the instructions under the *Reconcile Wizard > MiCollab Users and Services Provisioning Online Help* to complete the steps.

MiCollab admin@micollabdoc.mitel.micollabdoc.com Status: **Major**

MiVoice Business Network Element Local_230 performed a Start Sharing operation with this MiCollab Server. Conflicts have been detected in the data synchronized from the MiVoice Business which needs to be reconciled with the data configured in this server. Click [here](#) to launch the Reconcile Wizard. See [help](#). (Close)

Users and Services

The Users and Services directory allows you to maintain user data and assign or remove user services. The directory lists the usernames and office numbers of the MiCollab users, and shows the services that have been assigned to each user. Services are only available if they have been installed on the server as an application blade and are licensed.

Users Network Element User Templates User Roles Locations Departments Bulk User Provisioning

Search: [] Search Show All Unassigned services: 2 (View) Total number of users: 1

View: 10 Results at a time

Add Quick Add Edit Delete Send Service Info E-mail Deploy MiCollab Clients Reports

Last Name	First Name	Phone(s)	NuPoint Unified Messaging	MiCollab Client	Audio, Web and Video Conferencing	Teleworker
Perform Search						

7. To check whether the synchronization has been successfully completed, go to **Administration > Event Viewer** and verify that **Event type** displays **Device Sync Completed**.

Mitel | MiCollab admin@vmas181.sas.com Status: **Clear**

Text filter [] Regular expression: ☐

Show cleared events ☐

Auto reload ☐

Reload Clear alarms

System events as of 17 November 2017 13:28:57.
First Previous 1 of 2 Next Last

Application	Event type	Value	Severity	Date/Time	Description
MiCollab Client Service	DB_CHECK_genCongestionUpdate	alarm cleared	Cleared	Fri 17 Nov 2017 13:28:16 IST	Congestion update from module DB_CHECK, congestion type cpu, congestion level 0, description cpu_green, details n.a.
MiCollab Client Service	DB_CHECK_genRsrcUsageCapacityExceeded	alarm cleared	Cleared	Fri 17 Nov 2017 13:28:16 IST	Resource usage capacity exceeded for resource cpu, resource type cpu, resource description cpu_green, capacity 59
sas	Device Sync Completed	SDS	Indeterminate	Fri 17 Nov 2017 13:28:10 IST	Device data synchronization completed [refer to Help]
sas	Device Sync Started	SDS	Indeterminate	Fri 17 Nov 2017 13:27:06 IST	Device data synchronization started [refer to Help]
sas	Reconcile Conflicts Detected	Reconcile	Indeterminate	Fri 17 Nov 2017 13:27:00 IST	MiVoice Business Network Element Local_201 performed a Start Sharing operation with this MiCollab Server. Conflicts have been detected in the data synchronized from the MiVoice Business which needs to be reconciled with the data configured in this server. Click here to launch the Reconcile Wizard. See help.
sas	Reconcile Analysis Completed	Reconcile	Indeterminate	Fri 17 Nov 2017 13:26:57 IST	Finished analyzing MiVoice Business data. Executed 283 operations. Reconcile type: MANUAL. There are 0 unresolvable operations

If the **Event type** displays **Device Sync Failed** you must examine the logs in `/var/log/sdsc`, `/var/log/messages`, and `/var/log/mom-server` and any other event viewer logs to determine the cause of the failure, resolve it, and retry the operation until the device synchronization is successfully completed. For detailed information about Event types and logs, refer to the *MiCollab Users and Services Provisioning Online Help*.

8. Click the direct link to the **Reconcile Wizard** from the warning banner and then click **Start Analysis**.

The wizard analyses the databases and generates a report of the required reconcile operations.

Applications
Users and Services
Audio, Web and Video Conferencing
MiVoice Border Gateway
NuPoint Web Console
MiCollab Client Service
MiCollab Client Deployment
Licensing Information

ServiceLink
Install Applications
Status

Administration
Web services
Backup
View log files
Event viewer
SDS Distribution Errors
System information
System monitoring
System users
Shutdown or reconfigure
Virtualization

Configuration
Integrated Directory Service
MiCollab Client Integration Wizard
Reconcile Wizard
MiCollab Settings
MiCollab Language
Vidyo Settings
Networks
E-mail settings

Reconcile Wizard

Welcome

Reconcile Operations Analysis

Welcome * Indicates required field

Current Status: **Reconcile Required**

Overview
The Reconcile Wizard pairs data entries in the MiCollab database with matching data entries in the MiVoice Business databases for a network that is being configured to support Flow Through Provisioning. It also identifies any data conflicts between the databases so you can manually resolve them.

If the Current Status is "Reconcile Required", you must run this wizard to synchronize the databases and configure Flow Through Provisioning. The MiCollab database will not be synchronized with the MiVoice Business databases until you have completed this wizard.

Note: While a reconcile operation is in progress, changes to users and services should not be made from any of the administration tools.

Previous Summary Reports
You can download previous reconcile operation summary reports by selecting a report from the select list and clicking the Save Report button.

Select Report:

Backup
It is recommended you make backups of your MiCollab and MiVoice Business system databases before running the wizard.

☒ I acknowledge backups are recommended. *

9. Click **Next** and complete the steps under **Reconcile Wizard**.

For detailed steps and information about **Reconcile Wizard**, see *Reconcile Wizard > MiCollab Users and Services Provisioning Online Help*.

10. To add the second and third MiCollab servers to the cluster, repeat the above steps.



Note:

You must reconcile only one MiCollab server with MiVoice Business server at a time. Wait for an ongoing reconcile operation to complete before you initiate another reconcile operation.



Note:

In Multi-MiCollab mode, bulk user provisioning must be done only on one MiCollab Server at a time. See *Bulk User Provisioning > MiCollab Users and Services Provisioning Online Help* for more details about adding users using this feature.

4.2 Provisioning of users

There are several methods to perform the provisioning steps, which include:

- Provisioning with IDS (Integrated Directory Services), including CloudLink

- Bulk User Provisioning
- Manual Provisioning or Quick Add
- Provisioning via MiVoice Business (SDS)
- Provisioning via third-party applications (for example, MMP)

Refer to the section, *Provisioning Methods > MiCollab Users and Services Provisioning Online Help* for detailed information about all the methods.



Note:

Users provisioned on one MiCollab server will not be visible in the other two MiCollab servers provisioned.

4.3 Multi-MiCollab Deployments (Brownfield)

The possible scenarios for brownfield deployment are:

Scenario 1

- One MiCollab server is already enabled with 'n' (n = 1 or 2) MiVoice Business servers with sharing (between MiCollab and MiVoice Business) disabled.
- Additionally, one or two more MiCollab servers need to be added to this existing setup.
- The steps to add more MiCollab servers to this setup are:
 - Because sharing is disabled, first enable SDS sharing between the clustered MiVoice Business servers and the MiCollab server by adding this MiCollab server as a network element in MiVoice Business and perform the steps for sharing and synchronization.
 - Now, for this SDS sharing-enabled MiCollab server, enable Multi-MiCollab mode and again re-initiate SDS synchronization for this MiCollab server network element (optional).
 - Enable Multi-MiCollab mode on the MiCollab server that you want to add and after adding this MiCollab server as a network element in MiVoice Business, repeat the steps for sharing and synchronization.
 - If you want to add more MiCollab servers, repeat step 3 for this MiCollab server as well.

Scenario 2

- Two separate set-ups of MiCollab server and two MiVoice Business, with SDS disabled for both the set-ups. The site wants to turn on SDS for Flow Through Provisioning.

- The steps to combine both the set-ups into one Multi- MiCollab set-up:
 - First create clusters between the MiVoice Business servers and then enable sharing for the MiCollab server by adding this MiCollab server as network element.
 - Next, during the reconcile process over a MiCollab server do not save the users which do not belong to this MiCollab server (in case these users are associated with the other MiCollab server).
 - Now, enable Multi-MiCollab Mode on this MiCollab server and again re-initiate synchronization from MiVoice Business server (optional).
 - Next, enable Multi-MiCollab mode on the other MiCollab server and then initiate sharing for this MiCollab server as well. During reconcile process save the users which were earlier skipped, as these users were created on this MiCollab server.

For existing users on MiVoice Business

Multi-MiCollab does not receive data from MiVoice Business, so users will have to be created to match the details on the MiVoice Business. If they do not match the user on MiVoice Business, a new user will be created. While creating new users, ensure that the **Defer all operations** is selected.

Another choice would be to delete the MiVoice Business users and allow the MiCollab server to create and manage the new users.

If the new Multi-MiCollab functionality is for deploying new users only, then this will not be a consideration.

4.4 Deployment Limitations and Guidelines

- A maximum of three MiCollab servers can be added to an SDS network:
 - Ensure the first 9 characters in the host FQDN of each MiCollab server is unique.
 - Ensure that the NuPoint and AWV hunt groups for each MiCollab server have a unique directory number.
- Six MiVoice Business controllers hosting user phone services is required per SDS network:
 - Typical deployment: One resilient pair per MiCollab server.
 - Recommend keeping users in the same logical business unit or location on the same resilient pair to make locating services for a user, less difficult during day-to-day maintenance.
- With three MiCollab servers, at least 18 MiVoice Business servers are required to host the users and devices (typically a single MiCollab will host around 5000 users and more than 13,000 devices. For the devices, this implies three MiVoice Business Primary and three MiVoice Business secondary per MiCollab)
- In addition, due to the quantity of controllers, you may wish to use additional MiVoice Business as routing nodes between user MiVoice Business and also to handle the number of trunks and routing of these trunks to the appropriate users. For this past deployment, we had an additional 6 MiVoice Business for routing and trunking for a total of 24MiVoice Business.

- In a peered server environment, the servers have the same organizational ID. Therefore, to fully utilize the capability of Multi-MiCollab servers, all the MiCollab servers should be peered with one another (for contact and presence sharing):
 - Maximum of 5,000 users provisioned on any one MiCollab server.
 - Recommend up to 4800 users for growth buffer.
 - Maximum of 15,000 users across all peered MiCollab servers.

i Note:

Since peering allows the users to view their contacts presence and contact sharing options, there is an option to disable or control the presence privacy from the MiCollab Client. For more information on Presence Privacy, see the section on *Settings > Presence Privacy > MiCollab End-User Online Help for PC, Web, Mac, and Mobile*.

- The UCC licenses for all the MiCollab servers and MiVoice Business controllers should be added to the same group ARID and should be allocated to the MiCollab servers within the GARID. A DLM can be added to contain all the MiVoice Business licenses.
- Up to 5 MBGs can be clustered (MBG cluster) with each MiCollab, for distribution of UCC MBG licenses. MBGs can be deployed in different ways depending on the customer's needs.
- Sharing is only supported in one cluster. It is not possible to start sharing with MiCollab from an SDS network which contains more than one MiVoice Business cluster. This is an MiVB specific limitation.
- Once MiCollab and MiVoice Business are in Multi-MiCollab mode, this set-up cannot be reversed.

Table 1: Troubleshooting Multi-MiCollab related issues

Error	Possible Cause	Corrective Action
<p>SDS distribution error and synchronization issues observed after adding MiVB in a cluster for Multi-MiCollab(MMC)</p> <p>: So, the scenario is, an existing Multi-MiCollab setup is running with one MiVB and the administrator tries to add another MiVB to this setup which results in this error.</p>	<p>Server configuration issues. It may occur when MiVB and MiCollab data has some conflict, which does not get resolved automatically during sync and reconcile.</p>	<p>Remove both the MiVB from the Multi-MiCollab setup and then create a cluster between the two MiVB servers. From the master node of MiVB cluster, synchronize the MiCollab1 to add MiVBs back to MiCollab. The steps are as following:</p> <ol style="list-style-type: none"> 1. Remove MiVB1 and MiVB2 from MiCollab1 and MiCollab2 (use the <code>removenecommand</code>) 2. Drop <code>sdscc</code> schema using command <code>drop schema sdsccschema cascade</code> and restart <code>sdscc</code> 3. Add MiCollab1 in MiVB1(master node in cluster) NE page 4. From MiVB1 NE page add MiCollab1 and start sharing and synchronization. 5. Next, add MiCollab2 in MiVB1 NE page 6. From MiVB1 NE page add MiCollab2 and start sharing and synchronization. 7. Now you can create templates to provision users on MiVB1 or MiVB2 in cluster.

