PROVISIONING USERS IN MITEL NETWORKS

SOLUTIONS GUIDE

OCTOBER 2015

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Provisioning Users in Mitel Networks
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CHAPTER 1: INTRODUCTION

CHAPTER 2: PROVISIONING USERS IN MITEL NETWORKS

Chapter 1

INTRODUCTION

Introduction

Many Mitel products provide administrative interfaces that allow you to add, edit or delete user entries and their phones and applications. If you have only Mitel MiVoice Business controllers in your network, you use the **User and Services Configuration** (USC) form. But when you add MiCollab, which includes the User Service Provisioning (USP) application, or if Microsoft® Active Directory is being used, which is the best application to use for provisioning users?

This Solutions Guide provides recommendations for the user provisioning methods to use for various system configurations.

While this guide contains full explanations of the user provisioning methods, you can refer directly to the following tables for quick reference:

- Table 3, “Recommended user-provisioning tool for Mitel network configurations,” on page 9
- Table 4, “User Provisioning by provisioning type,” on page 12
- Table 5, “Provisioning users in standalone applications,” on page 15
- Table 6, “Provisioning users in MiCollab applications,” on page 16

Note: This guide focuses on MiVoice Business-based networks. MiCollab Release 7.0+ also supports MiVoice 5000 and MiVoice MX-ONE® communication platforms. For integration details, including user and services configuration, see the *MiCollab Platform Integration Guide*.

Product releases discussed in this book

Because the recommendations for user provisioning methods may change with changes to product features, it is important to know what Mitel product releases are being discussed in this guide.

Table 1: Mitel product releases

Product	Release
MiVoice Business	7.0, 7.1, 7.2
Mitel Communications Director (MCD)	5.x 6.0
MiCollab (formerly MAS)	6.0, 7.0
Mitel Applications Suite (MAS)	3.1 SP1 4.0 5.0
NuPoint Unified Messaging (UM)	4.x, 5.x, 6.0 7.0, 7.0 SP1 8.0
MiCollab Client (formerly UC Advanced)	6.0, 6.0 SP1 7.0

Table 1: Mitel product releases

Product	Release
UC Advanced	5.0
MiCollab Audio, Web, and Video Conferencing	6.0 7.0
Mitel Collaboration Advanced (MCA)	4.0 5.0
Mitel Integrated Configuration Wizard (MiCW)	4.0 5.0, 5.3
MiVoice Border Gateway (MBG)	7,1 8.0, 8.1 9.0, 9.1
Enterprise Manager	8.0, 8.1 9.0, 9.1

Terms and Acronyms

The following table defines some of the terms and acronyms used in this guide.

Table 2: Terms and acronyms

Term	Definition
AD Active Directory	Microsoft® Active Directory: An LDAP-compliant directory that also manages user identity and credentials.
Flow Through Provisioning	A MiCollab feature that allows an administrator to perform user and service provisioning for a single or a cluster of MiVoice Business elements from a single administration interface - MiCollab Users and Service Provisioning application. System Data Synchronization (SDS) is used to synchronize updates made between the MiCollab and MiVoice Business system databases. The following data is synchronized: • user and services data • Programmable Ring Groups (PRG) • Multi-device User Groups (MdUG) • roles and templates
LDAP	Lightweight Directory Access - Active Directory uses LDAP.
LDIF ldifde command	LDAP Data Interchange Format LDAP Data Interchange Format, Data Exchange command This file format and command are used to import and export information to and from Active Directory. For more information, refer to the Microsoft Active Directory documentation.
IDS	Integrated Directory Services
ISS	Industry Standard Server
MAS	Mitel Applications Suite (now called MiCollab)
MBG	Mitel Border Gateway (up to Release 8.0) MiVoice Border Gateway Release 8.1+
MCA	Mitel Collaboration Advanced (now called MiCollab Audio, Web, and Video Conferencing)
MCD	Mitel Communications Director - now called MiVoice Business MiVoice Business is Mitel's call control software. MiVoice Business runs on the Mitel 3300 ICP hardware, industry standard servers, and on VMware virtual machines.
MCD-ISS	Mitel Communications Director running on Industry Standard Server Now called MiVoice Business for ISS.
MiCollab	Mitel applications (formerly called Mitel Applications Suite - MAS)
MiCollab Client	Mitel unified communications and presence application (formerly Unified Communicator Advanced - UCA)
MiCollab Audio, Web, and Video	Mitel conferencing and collaboration application (formerly Mitel Collaboration Advanced - MCA)

Table 2: Terms and acronyms

Term	Definition
MiVoice Business	MiVoice Business is Mitel's call control software. MiVoice Business runs on the Mitel 3300 ICP hardware, industry standard servers, and on VMware and Microsoft Hyper-V virtual machines. MiVoice Business also runs on MiVoice Business Multi-instance, formerly known as MICD. MiVoice Business was formerly known as Mitel Communications Director, MCD.
MiCW	Mitel Integrated Configuration Wizard
NuPoint UM Standalone	Standalone e-mail application for use in Mitel networks.
Resilient Pairs	Devices (IP phones and IP consoles) can be configured to have a primary controller and a secondary controller, with the secondary controller available to immediately take over if the primary controller fails. The primary and secondary controllers can be referred to as a resilient pair. SDS allows you to keep these two controllers synchronized so that the devices can be moved seamlessly from primary to secondary in the event of a controller failure.
SDS	System Data Synchronization - Refer to the Using System Data Synchronization Solutions Guide, available on Mitel OnLine.
Single Point Provisioning (SPP)	A pre-MiCollab 7.0 feature that allows an administrator to perform user and service provisioning for a MiVoice Business platform from a single interface -- the MiCollab Users and Services application. User provisioning data that the administrator enters on the MiCollab server (user profile information, phone services, and application services) is automatically provisioned on the MiVoice Business system(s). However, data is updated in one direction only -- from MiCollab to the MiVoice Business servers. SPP is not supported in MiCollab Release 7.0 or later; Flow Through Provisioning is supported instead with MiVoice Business Release 7.2+. MiCollab Release 6.0 continues to support SPP with MiVoice Business Release 7.2
UCA	Unified Communicator Advanced (now called MiCollab Client)
UDC	User and Device Configuration form in the System Administration Tool in MCD (pre-Release 7.0). Used for provisioning users and phones.
USC	User and Services Configuration form in the System Administration Tool in MiVoice Business Release 7.0+. Used for provisioning users and services.
USP	User and Service Provisioning: The MiCollab (formerly MAS) user-provisioning interface.

Chapter 2

PROVISIONING USERS IN MITEL NETWORKS

Best practices for provisioning users in Mitel networks

There are many ways to provision users and devices in a Mitel network. Use the following sections for recommendations, based on the deployment type and whether you are provisioning a new network or an already functional network, and whether you are provisioning a few users or many users.

Although this is not shown in the following tables, each appliance can also be provisioned manually, one record at a time, from its interface.

A note about the term “Standalone” in this book

When discussing applications in this book, “standalone” means:

- For NuPoint Unified Messaging (e-mail): NuPoint UM can be run with or without MiCollab in the network, and MiCollab UM and NuPoint UM can be run in the same network.
- For MiCollab Client (formerly called UCA) and MiCollab Audio, Web, and Video Conferencing (formerly called MCA): MiCollab Client and MiCollab AWV require that MiCollab be running in the network, but they can be run on a separate server. These are called standalone instances (of MiCollab AWV or MiCollab Client), and they rely on having MiCollab in the network, but the user provisioning options are different.
- For MiVoice Border Gateway (MBG): If MBG is standalone on a separate server, there will also be an MBG instance running on the MiCollab server. If MBG is configured in server-gateway mode, then it must be provisioned using MiCollab USP.

There are three variations of Mitel unified messaging and voice mail, and each is provisioned differently.

- MiVoice Embedded Messaging: The MiVoice unified communication platforms offer entry-level embedded voice mail solutions that provide cost-effective voice and unified messaging solution for under 748 users. This voice mail solution is embedded in MiVoice Business and is provisioned along with the MiVoice Business.
- MiCollab Unified Messaging: The MiCollab solution offers Unified Messaging capabilities for businesses up to 5500 users. MiCollab Unified Messaging is available on both physical and virtual deployments and offers a flexible unified messaging solution. In previous releases, this was called MAS NuPoint.
- NuPoint UM Standalone: The NuPoint Unified Messaging solution is a highly scalable, robust, and sophisticated messaging solution, scaling up to 120,000 users, and offers unique deployment integrations, such as those for Hospitality installations, and is available for physical or virtual deployments. In previous releases, this was called standalone NuPoint.

User Provisioning by network deployment type

Table 3 shows the recommended tool to use when provisioning each type of Mitel network deployment.

Note: If USP mode is On, then you cannot use Active Directory to provision users. This applies to legacy behavior of MCA run as a single application. In MAS 5.0+ and MiCollab, Integrated Directory Services (IDS) is used to integrate with Active Directory.

Note: Microsoft Active Directory cannot be used to provision Teleworker or Secure Recording Connector users.

Table 3: Recommended user-provisioning tool for Mitel network configurations

Deployment type	Recommended user provisioning method	Notes
MiVoice Business-only deployments		
"MiVoice Business-only deployment"	Import, using an Import Spreadsheet, into the **User and Services Configuration (USC)** form in the System Administration Tool**.**	When you import or enter data into the USC to provision users and devices in an MiVoice Business network, if the network elements are in the same Admin Group, you can use the Reach-Through feature to update the other nodes in the Admin Group.
MiVoice Business-only deployment with Enterprise Manager See "Any configuration with Enterprise Manager in the network"	Import, using an Import Spreadsheet, into the **User and Services Configuration (USC)** form in the System Administration Tool**.**	You cannot provision users in Enterprise Manager, but it allows you to view all of the users on all of the nodes. When you are logged in to the System Administration Tool on a node, you can see only the users provisioned on that node.
"Multiple MiVoice Business controllers with Microsoft Active Directory Server (AD)"	Active Directory interface	You can provision users by Importing them in the System Admin Tool, or through Active Directory. When you provision users and devices from the AD interface, you can schedule the MiVoice Business to query AD for any new user and device records.
Multiple MiVoice Business controllers with Active Directory and Enterprise Manager See "Any configuration with Enterprise Manager in the network"	Active Directory interface	You can provision users by Importing them in the System Admin Tool, or through Active Directory. When you provision users and devices from the AD interface, you can schedule the MiVoice Business controller to query AD for any new user and device records. You cannot provision users in Enterprise Manager, but it allows you to view all of the users on all of the nodes. When you are logged in to the System Administration Tool on a node, you can see only the users provisioned on that node.

Table 3: Recommended user-provisioning tool for Mitel network configurations

Deployment type	Recommended user provisioning method	Notes
MiVoice Business deployments with applications		
"Multiple MiVoice Business controllers with MiCollab, with or without Active Directory"	MiCollab User Service Provisioning (USP)	**For MiVoice Business Release 7.2 and MiCollab Release 7.0:** The Flow Through Provisioning feature replaces Single Point Provisioning. When you make user and device changes in the MiCollab USP, the changes are automatically sent to the MiVoice Business databases, through SDS (Flow Through Provisioning). In the same way, changes made on the MiVoice Business are shared with MiCollab USP.
		For MiVoice Business up to Release 7.2 and MiCollab up to Release 6.x: When you add users and devices in the MiCollab USP, they are automatically added to the MiVoice Business database, too, but not vice-versa. (Single Point Provisioning). **When using pre-Release 5.0 MCD**, any updates you make to existing user records must be made both on MCD and MAS.
Multiple MiVoice Business controllers and MiCollab with Active Directory and Enterprise Manager See "Any configuration with Enterprise Manager in the network"	MiCollab User Service Provisioning (USP)	**For MiVoice Business Release 7.2 and MiCollab Release 7.0:** The Flow Through Provisioning feature replaces Single Point Provisioning. When you make user and device changes in the MiCollab USP, the changes are automatically sent to the MiVoice Business databases, through SDS (Flow Through Provisioning). In the same way, changes that made on the MiVoice Business are shared with MiCollab USP. **For MiVoice Business up to Release 7.0 and MiCollab up to Release 6.x:** When you add users and devices in the MiCollab USP, they are automatically added to the MiVoice Business database, too (Single Point Provisioning). **When using pre-Release 5.0 MCD**, any updates you make to existing user records must be made both on MCD and MiCollab. You can then use an LDIF file to copy the users to Active Directory. You can view all of the users in Active Directory or in Enterprise Manager.
"Deployments with MiCollab Unified Messaging (formerly MAS NuPoint)"	MiCollab USP MiCollab UM Web interface	Enter users into MiCollab, MiVoice Business, or Active Directory, then program any advanced UM features (like hunt groups, for example) manually into MiCollab UM.

Table 3: Recommended user-provisioning tool for Mitel network configurations

Deployment type	Recommended user provisioning method	Notes
Standalone applications (deployed with or without MiCollab in the network)		
Note: If USP mode is On, then you cannot use Active Directory to provision users. This applies to legacy behavior of MCA run as a single application. In MAS 5.0, IDS is used to integrate with Active Directory.		
"NuPoint UM Standalone Messenger with MiVoice Business and Active Directory"	Active Directory interface	You can set up AD to communicate with both the MiVoice Business and NuPoint UM at the same time, so they are both provisioned.
"Standalone MiCollab Client with MiVoice Business and Active Directory"	Active Directory interface	If AD is not available, MiCollab Client users must be provisioned manually. If MiCollab Audio, Web, and Video Conferencing (formerly called MCA) is licensed, provision users from MiCollab. Do not add or manage MiCollab AWV users from the MiCollab AWV administrator interface.
NuPoint UM with MiVoice Business	NuPoint UM Web interface	If Active Directory is available, provision NuPoint UM users through AD. If Active Directory is not available, you must enter users manually, using the NuPoint UM Web interface.
MiVoice Business or MiCollab deployment in MiVoice Business Multi-instance		
Import users into each MiVoice Business individually.	Import, using an Import Spreadsheet, into the **User and Services Configuration (USC)** form in the System Administration Tool**.**	When you import or enter data into the USC to provision users and devices in a MiVoice Business network, if the network elements are in the same Admin Group, you can use the Reach-Through feature to update the other nodes in the Admin Group. In a hosted environment, individual customers can add, delete, and modify users through Mitel Oria.

User Provisioning by type of provisioning

Table 4 shows the best provisioning method for the these main situations:

- provisioning a new network: new MiCollab and new MiVoice Business
- provisioning a new network: new MiCollab in an existing MiVoice Business
- ongoing provisioning: additions, removals, and changes to an existing network including MiCollab and MiVoice Business
- adding users in bulk

Note: If USP mode is On, then you cannot use Active Directory to provision users. This applies to legacy behavior of MCA run as a single application. In MAS 5.0+ and MiCollab, IDS is used to integrate with Active Directory.

Note: For MiVoice 5000 and MiVoice MX-ONE platforms, you provision users from the MiVoice 5000 or MiVoice MX-ONE management interfaces, not from MiCollab. The roles and templates must be provisioned on MiCollab. See the *MiCollab Platform Integration Guide* for an overview.
See the MiVoice 5000 and MiVoice MX-ONE documentation for provisioning details for those platforms.

Table 4: User Provisioning by provisioning type

Provisioning type	Deployment type	Notes
Adding users and devices to a new network		
	"Newly installed MiVoice Business deployment"	**New MiCollab and new MiVoice Business** Start with MiCW to provision system resources, then provision users from a CSV file, using the USP Bulk Provisioning application. **Existing MiVoice Business and a new MiCollab** Import the database from MiCollab using CSV files **Note:** In MCD 6.0 and MiVoice Business 7.0+, you can also provision Hunt Groups, Call Pickup Groups, Ring Groups, and External Twinning, plus embedded voice mail on MiVoice Business-ISS and MiCollab Client using MiCW.
Ongoing provisioning: additions, removals, and changes		
	"MiVoice Business-only deployment"	To add or delete just a few users, enter them manually or Import them, using an Import Spreadsheet, into the **User and Services Configuration (USC)** form in the MiVoice Business System Administration Tool**.** To change just a few users, it is best to do it manually in the System Administration Tool. As an example, one scenario in which changing using the import tool would not give the desired result is changing a user's last name. Importing the record with the new name would not change the record; it would create a new user record.

Table 4: User Provisioning by provisioning type

Provisioning type	Deployment type	Notes
	"Multiple MiVoice Business controllers with Microsoft Active Directory Server (AD)"	To add or delete just a few users, enter them manually or Import them, using an Import Spreadsheet, into the **User and Services Configuration (USC)** form in the MiVoice Business System Administration Tool**.** To change just a few users, it is best to do it manually in the System Administration Tool. As an example, one scenario in which changing using the import tool would not give the desired result is changing a user's last name. Importing the record with the new name would not change the record; it would create a new user record.
	"Multiple MiVoice Business controllers with MiCollab, with or without Active Directory"	To add or change users and services: • MiCollab 7.0+ and MiVoice Business 7.2 or up: enter them in the MiCollab User and Service Provisioning (USP) application. They are automatically shared with the MiVoice Business databases using SDS. (Flow Through Provisioning) • MiCollab up to 7.0 and MCD 5.0+ or MiVoice Business: You can add, edit, and delete user configuration records in MiCollab, and they will be automatically changed on the MiVoice Business. This works only for users with IP phones. (Single Point Provisioning) • MCD pre-5.0: Make the changes on the **User and Device Configuration** form in the MCD System Administration Tool.
	"Deployments with MiCollab Unified Messaging (formerly MAS NuPoint)"	When you provision users in MiCollab, users are automatically provisioned in MiCollab Unified Messaging. This does not apply to NuPoint UM Standalone. **Note:** Some advanced NuPoint configuration items must be entered directly in the NuPoint UM Web interface.
	"NuPoint UM Standalone Messenger with MiVoice Business and Active Directory"	• MCD pre-5.0: Provision users manually in NuPoint Messenger. • MCD 5.0+ and MiVoice Business 7.0: Provision both MiVoice Business and NuPoint UM at the same time by setting up Mitel IDS links from AD to MiVoice Business and NuPoint Messenger.
	"Standalone MiCollab Client with MiVoice Business and Active Directory"	Provision users from the Active Directory interface.
Bulk additions of users **Note: In most cases, only additions can be made using the bulk provisioning methods like Import.**		
	"MiVoice Business-only deployment" on page 18	You can enter users manually using the **User and Services Configuration (USC)** form, or if you are adding many users, create an Import spreadsheet and import it into the USC form.
	"Multiple MiVoice Business controllers with Microsoft Active Directory Server (AD)"	After provisioning users in MiVoice Business, create an LDIF file, and transfer the file manually into AD using the ldifde command.

Table 4: User Provisioning by provisioning type

Provisioning type	Deployment type	Notes
	Multiple MiVoice Business controllers with MiCollab, with or without AD	Import of new users (and services) into MiCollab can be done in bulk using CSV files. See the MiCollab documentation for instructions, rules, and limitations.
	Deployments with NuPoint UM (without Active Directory)	No bulk addition method available. You must provision users manually.
	NuPoint Unified Messaging with Active Directory	• MCD pre-5.0: Import a Microsoft Excel file using batch commands. • MCD 5.0+ and MiVoice Business 7.0+: Provision both MiVoice Business and NuPoint UM at the same time by setting up Mitel IDS links from Active Directory to MiVoice Business and NuPoint Messenger.
	Standalone MiCollab Client with MiVoice Business and AD	Users can be provisioned using Active Directory. After provisioning users in MiVoice Business, create an LDIF file, and transfer the file manually into AD using the ldifde command.

User Provisioning for Mitel applications by release

Because the recommended user provisioning method may change from release to release, the following tables are specific about the releases being used.

Table 5 describes applications running standalone, whether or not MiCollab is running in the network. Table 6 describes applications running with MiCollab, and on the same server as MiCollab.

When discussing applications, “standalone” means:

- For NuPoint Unified Messaging: NuPoint UM can be run with or without MiCollab in the network. It can be also be run both in standalone mode and as a MiCollab application in the same network, so NuPoint UM is shown in both Table 5 and Table 6.
- For MiCollab Client (formerly UCA) and MiCollab AWV (formerly MCA): MiCollab Client and MiCollab AWV require that MiCollab be running in the network, but they can be run on a separate server. This is called a standalone instance (of MiCollab AWV or MiCollab Client), and the user provisioning options are different, but they still rely on having MiCollab in the network.
- For MiVoice Border Gateway: If MBG is standalone on a separate server, there will also be an MBG instance running on the MiCollab server. If MBG is configured in server-gateway mode, then it must be provisioned using MiCollab USP.

Note: MiCollab Virtual does not support server-gateway mode, so MBG Virtual (in MiCollab Virtual) can be daisy-chained with MBG configured in server-gateway mode, and provisioning can be done using MiCollab USP and Reach-through.

Table 5: Provisioning users in standalone applications

MiCollab USP	MS AD	NuPoint UM	MiCollab UM	MiCollab Client	MiCollab AWV	MBG	Provisioning Method
RELEASE							
6.X, 7.X		8.0	7.0	7.0	7.0	9.1	
Y	Y	Y	N	Y	Y	Y	**When using MiCollab 7.0 and MiVoice Business 7.2:** Use Flow-through Provisioning to make changes from either MiCollab USP or the connected MiVoice Business; the SDS synchronizes changes. **When using MiCollab 6.0 and MiVoice Business:** Use Single Point Provisioning to make changes from MiCollab USP.
Y	Y	Y	N	Y	Y	Y	Use Active Directory to provision MiVoice Business, NuPoint UM, MiCollab Client, and MiCollab AWV.
N	N	Y	N	-	-	-	Provision MiVoice Business from System Administration Tool. Provision NuPoint UM from its interface.
Y	Y	N	Y	Y	Y	Y	Use Active Directory to provision MiVoice Business, MiCollab UM, MiCollab Client, and MiCollab AWV. Use MiCollab USP to provision MBG.
Y	N	N	Y	Y	Y	Y	Use MiCollab User and Service Provisioning (USP) to provision MiVoice Business and all of the MiCollab applications at the same time, including MBG.
Y	Y	Y	Y	Y	Y	Y	Use Active Directory to provision MiVoice Business, and all of the MiCollab applications. Use MiCollab USP to provision MBG.
Y	N	Y	Y	Y	Y	Y	Use MiCollab USP to provision MiVoice Business and all of the MiCollab Client applications, including MBG. NuPoint UM must be provisioned separately.
N	Y	Y	N	N	N	N	Use Active Directory or System Administration Tool Import to provision MiVoice Business. Provision NuPoint UM separately.

Table 5: Provisioning users in standalone applications

MiCollab USP	MS AD	NuPoint UM	MiCollab UM	MiCollab Client	MiCollab AWV	MBG	Provisioning Method
RELEASE							
6.X, 7.X		8.0	7.0	7.0	7.0	9.1	
N	N	Y	N	N	N	N	Use Active Directory or System Administration Tool Import to provision MiVoice Business. Provision NuPoint UM separately.

Notes:

1. Except for the first row, this table assumes MCD Release 5.0 or 6.0, or MiVoice Business Release 7.0 is used in every configuration.

   For information about user provisioning for MiVoice Office (formerly Mitel 5000 CP), refer to the MiVoice Office documentation on Mitel OnLine.

2. MS AD means Microsoft Active Directory.

Note: If USP mode is On, then you cannot use Active Directory to provision users. This applies to legacy behavior of MCA run as a single application. In MAS 5.0+ and MiCollab, IDS is used to integrate with Active Directory.

Table 6: Provisioning users in MiCollab applications

MiCollab USP	MS AD	NuPoint UM	MiCollab UM	MiCollab Client	MiCollab AWV	MBG	Provisioning Method
RELEASE							
6.X. 7.X		8.0	7.0	7.0	7.0	9.1	
Y	Y	Y	N	Y	Y	Y	For MiCollab 7.0 with MiVoice Business 7.2, configure Flow Through Provisioning. Recommended best practice is to provision users and services from MiCollab. If Active Directory is also in use, provision from Active Directory using roles. Users are provisioned on MiCollab using roles/templates and data is shared to MiVoice Business using Flow Through Provisioning. Use Active Directory to provision NuPoint UM. Use MiCollab USP to provision the MiCollab applications and MBG.
Y	Y	N	Y	Y	Y	Y	Use Active Directory to provision MiVoice Business. Use MiCollab USP to provision the MiCollab applications and MBG.

Table 6: Provisioning users in MiCollab applications

MiCollab USP	MS AD	NuPoint UM	MiCollab UM	MiCollab Client	MiCollab AWV	MBG	Provisioning Method
RELEASE							
6.X. 7.X		**8.0**	**7.0**	**7.0**	**7.0**	**9.1**	
Y	N	N	Y	Y	Y	Y	Use MiCollab USP to provision MiVoice Business, all MiCollab applications, and MBG.
Y	Y	Y	Y	Y	Y	Y	Use Active Directory to provision MiVoice Business, and NuPoint UM. Use MiCollab USP to provision all of the MiCollab applications and MBG,
Y	N	Y	Y	Y	Y	Y	Use MiCollab USP to provision MiVoice Business, all of the MiCollab applications, and MBG. NuPoint UM must be provisioned separately from its own interface.

Notes:

1. This table assumes MCD Release 5.0 or 6.0, or MiVoice Business 7.0+, is used in every configuration.

   For information about user provisioning for MiVoice Office, refer to the MiVoice Office documentation on Mitel OnLine.

2. MS AD means Microsoft Active Directory.

Newly installed MiVoice Business deployment

Start by installing all of the network elements, and configuring SDS sharing. Then provision users using the Mitel Integrated Configuration Wizard (MiCW) with an Import spreadsheet that you have filled in with all of the users you want to add. With SDS sharing active, new users are automatically copied to all of the other MiVoice Business network elements. For detailed information about setting up and using SDS sharing, refer to *Using System Data Synchronization* on Mitel Online.

In the Configuration Wizard, you can enter user and device data using the Import Spreadsheet (CSV file). The Import functionality allows you to add new configuration data to your system database for IP, analog, and DN devices.

Note: The same Import Spreadsheet is used for both the Configuration Wizard and the System Administration Tool **User and Services Configuration** form. You must download the latest Import Spreadsheet for your MCD or MiVoice Business release.

Refer to the System Administration Tool Online Help for instructions.

Note: You can add users from the Import spreadsheet. The **Key** and **Voice Mail** tabs must be filled in manually.

With MiCollab installed in the system

With MiVoice Business 7.2 (all nodes must be running Release 7.2) and MiCollab 7.0, you can add the MiCollab server to SDS Sharing (add as a Network Element), and run the Reconcile Wizard to make sure the first data share with the MiVoice Business controllers is successful. After this is done, user and phone information changed on a MiVoice Business node is propagated to MiCollab, and vice versa. This feature is called Flow Through Provisioning.

With MiCollab pre-7.0, Single Point Provisioning (SPP) is supported. With SPP, changes made on MiCollab are propagated through to the connected MiVoice Business controller, but not vice-versa.

In MAS 4.0+ and MiCollab, use MiCW to provision system resources and then provision users with MiCollab USP.

For information about installing and using the Mitel Integrated Configuration Wizard, refer to the *MiCollab Installation and Maintenance Guide* and the Mitel Integrated Configuration Wizard Online Help.

Note: When using Flow Through Provisioning, only one MiCollab Server is allowed in the SDS sharing network.

There are some exceptions to the sharing, including changes to analog phones. Refer to the MiCollab Server Manager Help for details.

MiVoice Business-only deployment

Enter user information into the MiVoice Business using the **User and Services Configuration** form in the System Administration Tool. The best way to enter the data is to import it using an Import Spreadsheet (CSV file).

Note: You can add users from the Import spreadsheet. The **Key** and **Voice Mail** tabs must be filled in manually.

If the network nodes you are provisioning are all sharing with SDS and they are all in the same Admin Group, you can provision all of the users from one node, using Reach-Through to import or enter user data on other nodes.

For more information about provisioning users and devices for MiVoice Business controllers, refer to the MiVoice Business System Administration Tool Online Help.

Multiple MiVoice Business controllers with Microsoft Active Directory Server (AD)

When the MiVoice Business network is connected to Microsoft Active Directory Server, the best way to enter user data is to enter it in Active Directory. Connect Active Directory to one of the MiVoice Business controllers using the Mitel Integrated Directory Services (IDS). Then schedule MiVoice Business to query AD at intervals. AD responds by sending any new user data.

Note: MiVoice 5000 and MiVoice MX-ONE support Active Directory. See the MiCollab Admin help for the supported configurations: **Configuration > Integrated Directory Services > Description > Supported IDS configurations**.

To enter user data into Active Directory:

1. Plan the roles to use for the various types of user. Example roles include Administrator, Engineer, Manager, Sales, and so on.
2. Create templates for the roles, including the user data you want to record for each type of user. Use the fields in the System Administration Tool **User and Services Configuration** form to see the fields you will need.
3. Create each user by copying the appropriate template and editing it to add the user-specific information.

Note: In MCD Release 5.0+, you can create the roles and templates in the System Administration Tool and enter users into the **User and Device Configuration** form by their roles.
Refer to the System Administration Tool Online Help for instructions.

To edit existing users and add details (advanced provisioning):

1. Log into the System Administration Tool on the MiVoice Business where the users are hosted.
2. Navigate to the **User and Services Configuration** form.
3. Select the user record and make the changes.

If you need to transfer updated user and device records back to AD, you must log into the System Administration Tool. Export the data into an LDIF file, and then transfer it manually into AD using the ldifde command. Refer to the System Administration Tool Online Help and the Microsoft Active Directory documentation for detailed instructions.

For information about Mitel Integrated Directory Services (IDS), refer to the MiCollab Online Help.

Multiple MiVoice Business controllers with MiCollab, with or without Active Directory

Starting with MiVoice Business 7.2 and MiCollab 7.0, MiCollab can be added as an SDS Network Element to enable Flow Through Provisioning. Additions and changes made in MiCollab USP are automatically propagated to the MiVoice Business databases through SDS, and vice-versa.

All of the MiVoice Businesses nodes must be running at least MiVoice Business Release 7.2 and they must all be in the same Admin group at the time the MiCollab server is added to SDS Sharing.

If you add or change a user in MiVoice Business, or add or change the phone of a user, the user/phone is also updated on the MiCollab server. For any fields for which data is not propagated (analog phones, for example), you can use Reach Through from the MiCollab to the MiVoice Business Controller, without having to perform a new log in to the System Administration Tool.

Note: Flow Through Provisioning is supported from only one MiCollab system. It is not supported for multiple MiCollab systems in the same SDS sharing network. Refer to the MiCollab Server Manager Help for details and additional limitations.

In MCD Release 5.0+ and MiVoice Business, with MiCollab Release pre-7.0, you can add, edit, and delete user configuration records using MiCollab USP, and they will be automatically changed on the MiVoice Business node, but not vice-versa. This works only for users with IP Phones.

Pre-Release 5.0 MCD: If your MCD network includes MiCollab pre- Release 5.0, you add the users and devices in the MiCollab User and Service Provisioning (USP) application. When you add users and devices in the MiCollab USP, they are automatically pushed out to the MCD databases. This information transfer happens just once per user or device record, so this only works for new user records. For changes to the users or devices, you must make them on both the MCD hosting them and in the MiCollab USP.

For more information, refer to the *MiCollab Installation and Maintenance Guide* and the *MiCollab Engineering Guidelines* for your release of MiCollab.

Deployments with MiCollab Unified Messaging (formerly MAS NuPoint)

Provision all users and devices as described in the appropriate section above.

If MiCollab is installed, and you provision the users in MiCollab (using the MiCW), then the users and basic features are automatically provisioned in MiCollab Unified Messaging. Advanced MiCollab UM configuration items (such as Voice Mail Hunt Groups and Ports, for example) must be entered directly in the MiCollab UM Web interface. For detailed instructions, refer to the *MiCollab Installation and Maintenance Guide*.

Note: MiCollab user provisioning does not extend to a NuPoint Unified Messaging Server.

If NuPoint UM is the only application used on MiCollab, or if NuPoint UM is on a standalone server, you must add the users to NuPoint UM manually using the NuPoint Web interface, or you can provision NuPoint UM using Active Directory, if AD is being used.

For detailed instructions, see the NuPoint Unified Messaging System Administration Help.

NuPoint UM Standalone Messenger with MiVoice Business and Active Directory

In MCD Release 5.0+ and MiVoice Business 7.0+, you can provision MiVoice Business and NuPoint UM Messenger at the same time by setting up Mitel Integrated Directory Services (IDS) links from both to Active Directory.

For detailed instructions, see the NuPoint Unified Messaging System Administration Help and the Microsoft Active Directory documentation.

Standalone MiCollab Client with MiVoice Business and Active Directory

The best way to provision a standalone instance of MiCollab Client (formerly UCA) with MiVoice Business is by using the Active Directory interface, if it is available. If it is not, then you must provision users manually.

In MiCollab Release 6.0+, MiCollab Client is supported in integrated mode or co-located mode.

- Integrated Mode: In Integrated mode, the MAS/MiCollab system keeps the Users and Services database and UCA/MiCollab Client database synchronized so they function like a single database on the MiCollab server. This mode is supported only for MAS/MiCollab with MiVoice Business systems. It allows you to provision UCA/MiCollab Client services from the USP application and supports single-point provisioning of the UCA/MiCollab Client services on the MiVoice Business platforms. This is the recommended mode for sites that meet the integration requirements.
- Co-located Mode: In this mode, the Users and Services data and UCA/MiCollab Client data are contained in separate, independent databases on the MiCollab server. This mode is supported for sites with either MiVoice Business or MiVoice Office 250 platforms. With this mode, you must provision UCA/MiCollab Client services separately from the UCA/MiCollab Client Server application interface. Single-point provisioning of UCA/MiCollab Client services is not supported.

Your system should remain in co-located mode if your site requires any of the following:

- MiCollab with MiVoice Office 250 platforms
- UCA/MiCollab Client with Active Directory
- Multiple UCA/MiCollab Client enterprises
- Multiple MCA/MiCollab AWV servers
- MCA/MiCollab AWV with LDAP configuration.
- MiCollab Client referencing non-local voice mail servers. (MiCollab Client Integrated mode supports only the MiCollab NuPoint UM application, so the MiCollab Client voice mail server field must contain the MiCollab IP address).
- MiCollab Client languages that are not supported by MiCollab.

For more information about these modes, and user provisioning, refer to the *MiCollab Client Administrator's Guide* and the MiCollab Client Admin Help.

MiCollab Audio, Web, and Video Conferencing (MiCollab AWV)

MiCollab Audio, Web, and Video Conferencing was previously called Mitel Collaboration Advanced (MCA).

There are three ways you can provision MiCollab AWV users:

- When MiCollab AWV is provisioned as part of MiCollab, provision MiCollab AWV users using MiCollab USP .
- When MiCollab AWV is running outside of MiCollab, provision MiCollab AWV by entering users manually.
- When standalone MiCollab AWV is run with Active Directory, provision users from AD.

Any configuration with Enterprise Manager in the network

Adding Enterprise Manager does not change the recommendations for user provisioning, since you cannot provision users from Enterprise Manager, but it does provide an interface from which you can view all users in one place.

You can generally see each node's users and devices only by logging in to that node, or by using the Reach-Through feature. Enterprise Manager allows you to view all of the users provisioned on all of the nodes.

You can also use the Enterprise Manager inventory list to log into the host device. Right-click the DN and you will see the login screen for that node. After you are logged in, you can update the records.

For information about Enterprise Manager, see the Enterprise Manager Administrator's Guide Online help.

Note: When you are using Enterprise Manager 7.0+, OPS Manager is not supported.