MiCollab Platform Integration Guide

- MiVoice Office 400
- MiVoice 5000
- MiVoice MX-ONE

RELEASE 8.0

AUGUST 2017

Mitel®

NOTICE

The information contained in this document is believed to be accurate in all respects but is not warranted by Mitel Networks™ Corporation (MITEL®). The information is subject to change without notice and should not be construed in any way as a commitment by Mitel or any of its affiliates or subsidiaries. Mitel and its affiliates and subsidiaries assume no responsibility for any errors or omissions in this document. Revisions of this document or new editions of it may be issued to incorporate such changes.

No part of this document can be reproduced or transmitted in any form or by any means - electronic or mechanical - for any purpose without written permission from Mitel Networks Corporation.

Trademarks

The trademarks, service marks, logos and graphics (collectively "Trademarks") appearing on Mitel's Internet sites or in its publications are registered and unregistered trademarks of Mitel Networks Corporation (MNC) or its subsidiaries (collectively "Mitel") or others. Use of the Trademarks is prohibited without the express consent from Mitel. Please contact our legal department at legal@mitel.com for additional information. For a list of the worldwide Mitel Networks Corporation registered trademarks, please refer to the website: http://www.mitel.com/trademarks.

MiCollab Platform Integration Guide
Release 8.0
August 2017

®,™ Trademark of Mitel Networks Corporation
© Copyright 2017, Mitel Networks Corporation
All rights reserved

CHAPTER 1: INTRODUCTION

CHAPTER 2: MIVOICE OFFICE 400 INTEGRATION

Chapter 1

INTRODUCTION

PURPOSE OF THIS GUIDE

This guide provides instructions on how to configure the to support the MiCollab applications.

COMMUNICATION PLATFORM SUPPORT

All the communication platforms (network elements) must be of the same type on a single MiCollab or a multi-MiCollab site deployment. You cannot connect MiCollab to a mix of different network elements (for example, MiVoice 5000 and MiVoice MX-ONE). Also, it is not possible to change the communications server that is connected to the MiCollab system. The MiCollab system must be reinstalled and reconfigured to support a different type of communication server.

SUPPORTED MICOLLAB APPLICATIONS

The applications supported by a MiCollab installation are dependent on the following criteria:

- Communications platform
- Deployment configuration, and
- MiCollab platform
-

MIVOICE 5000 AND MIVOICE MX-ONE PLATFORMS

The following MiCollab applications are supported:

- MiCollab NuPoint Unified Messaging (not standalone NuPoint Unified Messaging) or MiCollab Advanced Messaging
- MiCollab Client
- MiCollab Audio, Web and Video (AWV) Conferencing
- MiVoice Border Gateway: MiVoice Border Gateway: Refer to the *MiVoice Border Gateway Installation and Maintenance Guide* for a table of the supported features.
- MiVoice for Skype for Business
- Vidyo.

CLIENT STATION SUPPORT

MiCollab clients (for example, MiCollab End User portal, MiCollab System Administrator portal, MiCollab AWV clients, and so forth) are supported on various operating systems. Refer to the *Engineering Guidelines* for details.

Chapter 2

MIVOICE OFFICE 400 INTEGRATION

OVERVIEW

You can integrate a single MiCollab system with a single MiVoice Office 400 platform to provide MiCollab applications, such as MiCollab Client, Teleworker, and Audio, Web, and Video to users who are hosted on the MiVoice Office 400 platform.

- For MiCollab integrations with the MiVoice Office 400 system, the administrator performs user provisioning separately on both MiCollab and on the MiVoice Office 400 system.
- Roles and templates with associated UCC licenses are used to define the MiCollab services for MiCollab users in the Users and Services application.
- Licenses and Roles are used to define the services for MiVoice Office 400 users.

The administrator can import a CSV file of users entries from the MiVoice Office 400. The users can be assigned MiCollab roles in the CSV file and imported into MiCollab using the Bulk User Provisioning tool.

A typical integration consists of the components shown in Figure 1:

- **Communications Platform**: A single MiVoice Office 400 communications platform or Advanced Intelligent Network can be integrated with a single MiCollab system.
- **MiCollab Server**: Provides application services (AWV, MBG, and MiCollab Client) to MiVoice Office 400 users and supports MiCollab Client softphones for external users over the Internet.
  - Audio, Web and Video integrates with the MiVoice Office 400 using SIP terminals.
  - MiCollab Client softphones are integrated with the MiVoice Office 400 via SIP terminals. Computer Telephony Integration (CTI) is achieved via a CSTA Proxy in the MiCollab system.
  - MiVoice Border Gateway solution provides a secure communications path for remote MiCollab Client Softphones to the MiCollab Client Service. The MBG provides support for MiCollab Client softphones through the implementation of proprietary SIP headers, SIP feature enhancements, line enhancements, and security enhancements, along with administrator interface changes for its management.
  - MiCollab Client CSTA Proxy: Provides Computer Telephony Integration (CTI) between the MiVoice Office 400 and MiCollab Client to support telephony features such as "Click-to-Call" and line state.
- **Standalone MBG**: A standalone MBG server is installed in the Demilitarized Zone (DMZ) of a customer's existing firewall. The MiCollab MBG application must be clustered with the standalone MBG.
- **Firewall**: Protects corporate LAN from Internet.
- **Redirection and Configuration Service (RCS) Server:** Provides the configuration data to MiCollab mobile clients. This is a Mitel server located on the Internet. It sends MiCollab mobile client users a configuration e-mail that allows the users to download and install the required configuration files from the redirect server.
- **Voice mail**: The voice messaging application embedded in the MiVoice Office 400 provides users with voice mail services.

- **SIP Terminals**: The Audio, Web and Conferencing application audio channels are configured in the MiVoice Office 400 Web Admin interface as an internal user group with standard SIP terminals.
- **Administration Interfaces**: User provisioning must be performed separately on both the MiVoice Office 400 and on MiCollab. The administrator provisions users on the
  - MiVoice Office 400 from the WebAdmin (Expert Mode), and on
  - MiCollab from the Users and Services application.

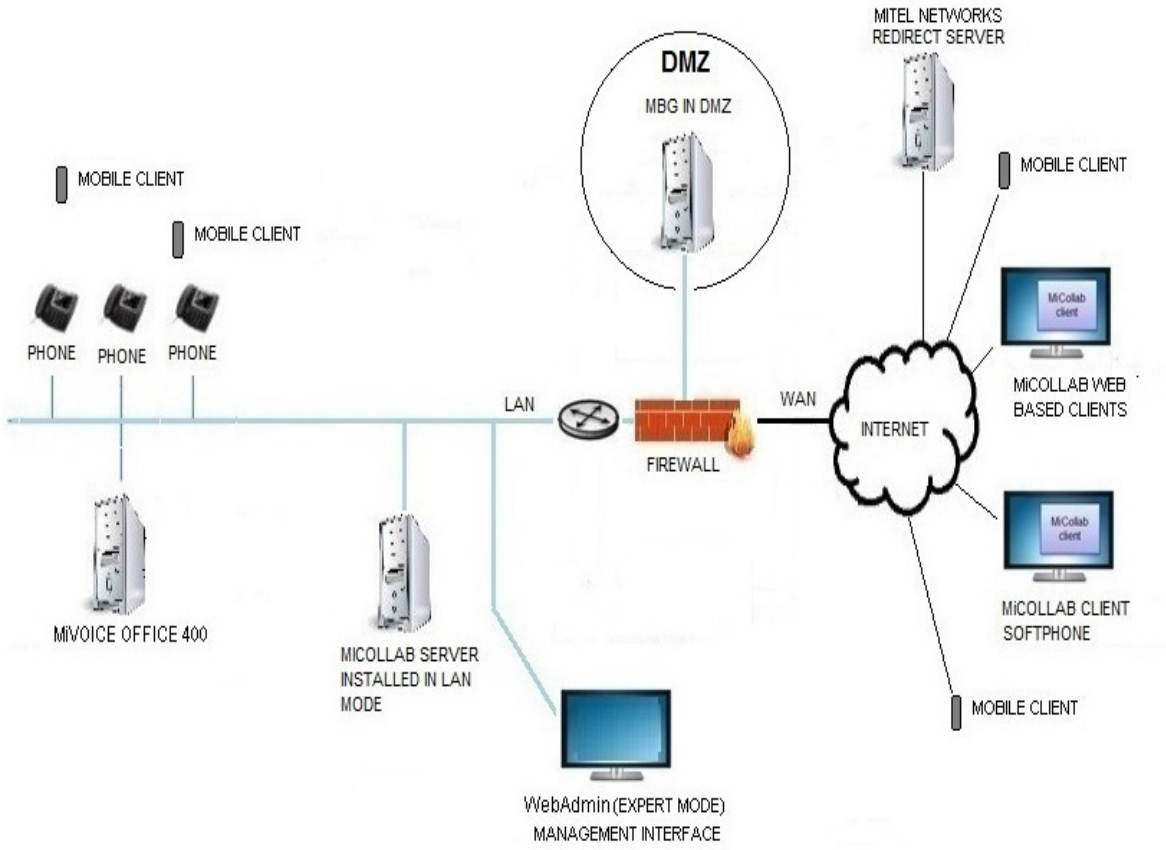


Figure 1: MiVoice Office 400 Integration

REQUIREMENTS

- Integration with MiCollab 7.2 or higher is supported with MiVoice Office 400 Release 4.1 or higher.
- MiCollab Client must be configured in Integrated Mode.

CONDITIONS AND LIMITATIONS

- The only supported configuration is a single MiVoice Office 400 or Advanced Integrated Network (AIN) with a single MiCollab server in the same network.
- Administrators must perform user and services provisioning (for example, adds or deletes) separately from both MiCollab Users and Services and the MiVoice Office 400 Web Admin.

- The MiCollab End User Portal is supported for MiVoice Office 400 users. It provides them with access to their user portal and AWV settings. However, a user's MiVoice Office 400 phones are not displayed in the portal interface.
- Voice messaging services are provided by the embedded voice mail application in the MiVoice Office 400. The NuPoint Unified Messaging application is not a supported for MiVoice Office 400 integrations.
- MiCollab does not provide administrators with the ability to manage MiVoice Office 400 desk phones.
- MiCollab Integrated Directory Services does not support a connection to MiVoice Office 400 directory service.

LICENSING

To license the solution, you must apply licenses to both the MiCollab and the MiVoice Office 400. Separate licensing servers are used.

MIVOICE OFFICE 400 LICENSING

License the MiVoice Office 400 system from the Software License Server (SLS). Only MiVoice Office 400 certified technicians should apply licenses to the MiVoice Office 400.

MICOLLAB LICENSING

You license the MiCollab system through the Application Management Center (AMC). The AMC is not used to assign licenses that are required on the MiVoice Office 400.

1. Log into AMC.
2. Create a customer account.
3. Register (purchase) products and licenses and assign them to the customer account.
4. Create Application Record IDs for the MiCollab server.
5. Assign base software licenses to the system ARIDs.
6. Create a ULM using the MiCollab ARID.
7. If a standalone MBG system is required, add its server ARID.
8. Assign UCC user licenses to the ULM. The UCC user licenses will provide the communication platform users with entitlement to the MiCollab applications.
9. Purchase and activate any additional "a-la-carte" feature, port, or language licenses for the MiCollab system applications.

Note: Refer to the AMC on-line help for detailed licensing steps.

INTEGRATION PROCEDURE

OVERVIEW

The following procedures describes the steps required to integrate a new MiCollab system with a new or existing MiVoice Office 400 platform.

- Install the communication platform and server
- Configure MiCollab into MiCollab Client Integrated Mode
- Create network elements
- Configure MiCollab system application settings
- Integrate with MiVoice Office 400:
  - Integrate MiCollab Server
  - Integrate Audio, Web and Video Conferencing
  - Integrate MiVoice Border Gateway
  - Integrate MiCollab Client Service
- Perform user and services provisioning.

If you are integrating an existing MiVoice Office 400 with a new MiCollab system, you can export a CSV file of user entries from the MiVoice Office 400 system. You can then import the user entries into the MiCollab system using the Bulk User Provisioning (BUP) tool in USP.

INSTALL COMMUNICATION PLATFORM AND SERVER

1. Install, license, configure, and provision the MiVoice Office 400.Refer to the MiVoice Office 400 documentation for instructions.
2. Install the MiCollab server.
3. Log into MiCollab server manager. Under **ServiceLink**, click **Install Applications** and then click the **Install Applications** tab. Set the ICP type to **MiVoice Office 400**.
4. Collect the following information for the integration:
   - MiCollab IP Address
   - MiVoice Office 400 IP Address.

CONFIGURE MICOLLAB CLIENT INTEGRATION MODE

Configure MiCollab in MiCollab Client Integration Mode. Refer to the *MiCollab Installation and Maintenance Guide* for instructions.

CREATE NETWORK ELEMENT

Create the network element for the communication platform:

1. Log into the MiCollab server manager.
2. Under **Applications**, click **Users and Services**.

3. Click the **Network Element** tab.
4. Click **Add**.
5. In the Type field select the system type: “MiVoice Office 400”.
6. Enter the IP address of the MiVoice Office 400 Service Node Manager.
7. After you save your updates to the Network Element page, you are prompted to associate the element with templates. If you select **Yes**, the network element field for the primary phone in all templates will be automatically set to the name of this network element. If you select **No**, you must create custom templates and associate them with this network element.

   Note: During MiCollab installation, the default UCC roles and associated template definitions are downloaded from the AMC. The settings in the downloaded roles and templates do not apply to the MiVoice Office 400. However, after you assign a MiVoice Office 400 network element in the MiCollab Network Element page, the roles and templates are updated to reflect the settings for the MiVoice Office 400.

   If required create custom roles and templates in the MiCollab USP application from the UCC default templates.
8. Configure the MiVoice Office 400 as a SIP Server in the MiCollab Audio, Web and Video application.

CONFIGURE MICOLLAB SYSTEM APPLICATION SETTINGS

Configure the MiCollab system application settings manually through the application administration interfaces in the MiCollab server manager. Refer to the application help for instructions.

INTEGRATE MICOLLAB SERVER WITH MIVOICE OFFICE 400

DEFINE MICOLLAB SERVER ON MIVOICE OFFICE 400

1. Log into the MiVoice Office 400 WebAdmin in Expert Mode.
2. Go to **Services** > **BluStar / MiCollab** (see Figure 2).

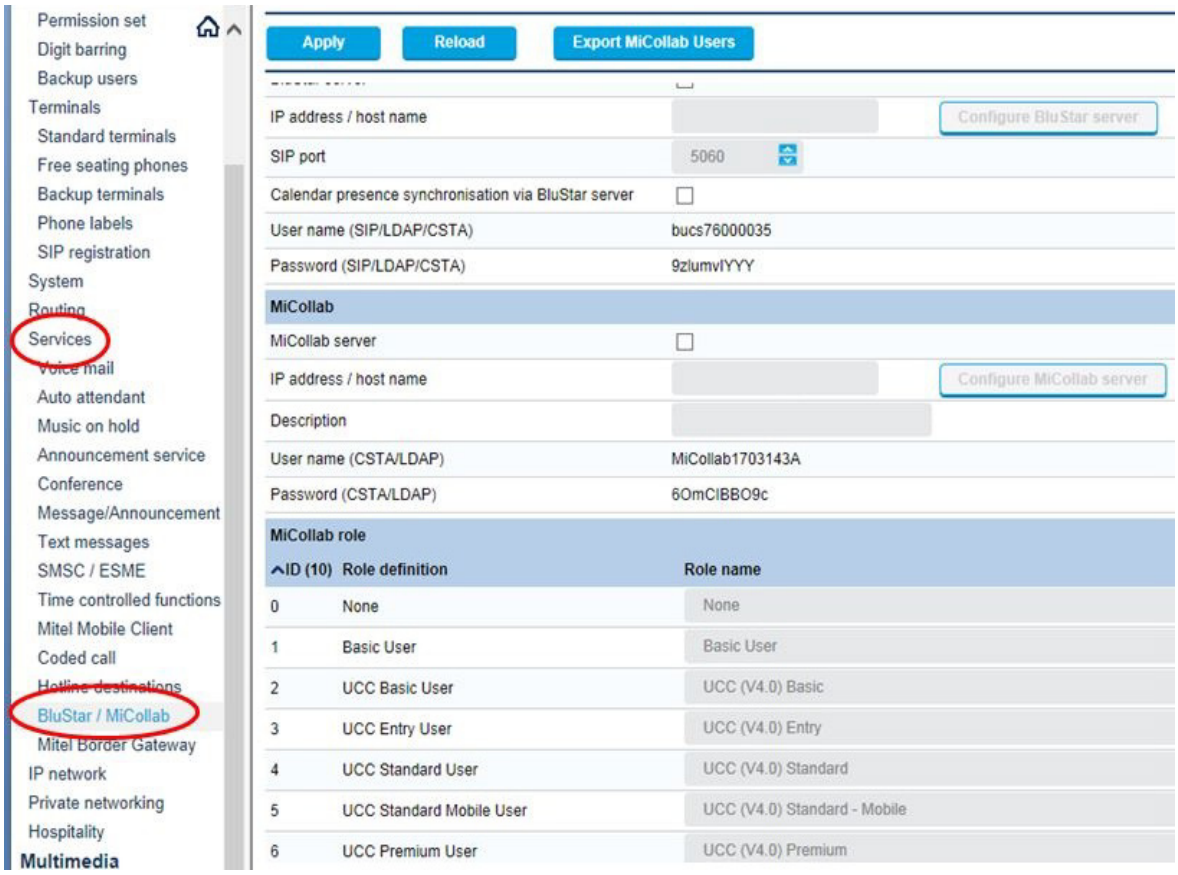


Figure 2: Configure BluStar/MiCollab Services

3. Complete the following fields:
   - **MiCollab server**: Check the box.
   - **IP address / host name**: Enter the IP Address or FQDN of the MiCollab server.
   - **Description**: Enter a string, if desired, to identify the server.
   - **User name / Password**: Cannot be changed here – see Figure 4.
   - **MiCollab role**: The ID and Role Definition cannot be changed. If desired, modify the Role name to correspond to the name used in the MiCollab server.

CHANGE USER NAME AND / OR PASSWORD FOR CSTA

You must configure the CSTA user name and password on the MiVoice Office 400.

1. Go to **System** > **Access control** > **User account** (see Figure 3).

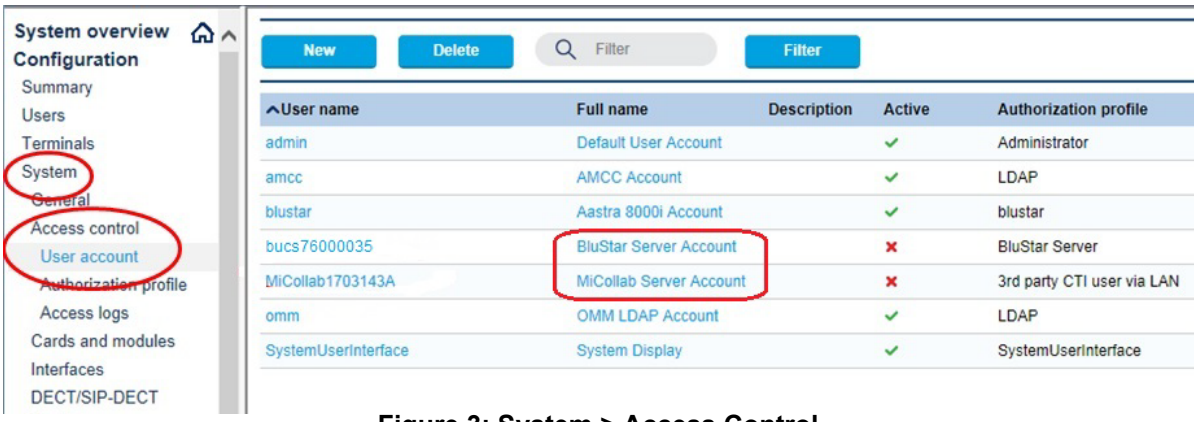


Figure 3: System > Access Control

2. Click **BluStar Server Account**.
3. Change the User name to "bucs1234". Leave the other fields at the defaults.
4. Click **MiCollab Server Account**.
5. Change the User name to "bucs76000035".
6. Change the Password to "Mitel123". Ensure that you activate the account. Leave the other fields at the defaults. See Figure 4.

Note: After you enter and confirm the new password successfully, the Password and Password confirm fields are blank. Click **Services** > **BluStar / MiCollab** to confirm your password change.

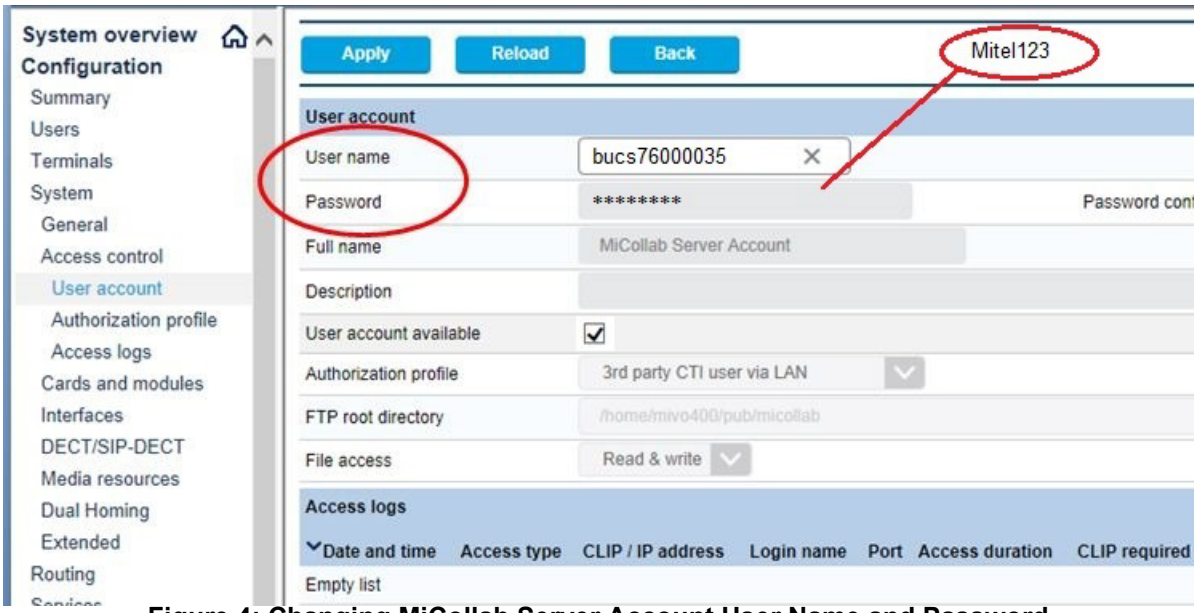


Figure 4: Changing MiCollab Server Account User Name and Password

7. Click **Apply**. The **System > User account** screen should appear as follows:

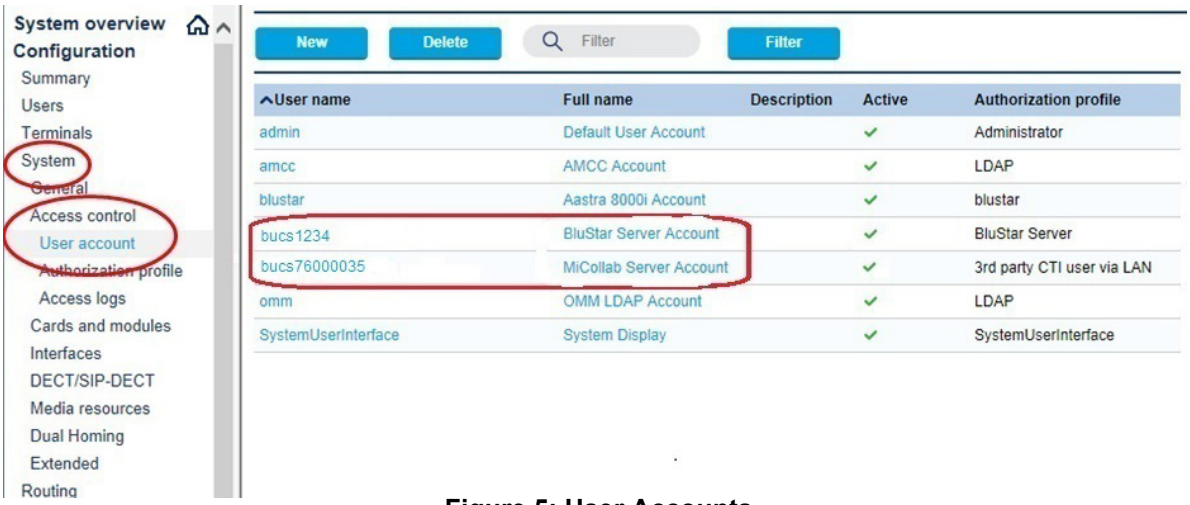


Figure 5: User Accounts

8. Turn on the CSTA service under **Configuration > IP network > CSTA service**.

INITIAL MIVOICE OFFICE 400 CONFIGURATION

Configure MiVoice Office 400 to make inbound and outbound calls.

1. Go to **MiVoice Office 400 Web Admin > Configuration > IP Network > VoIP.**
2. Change **Session refresh timer for active line supervision (s)** from 3600 to 1800.

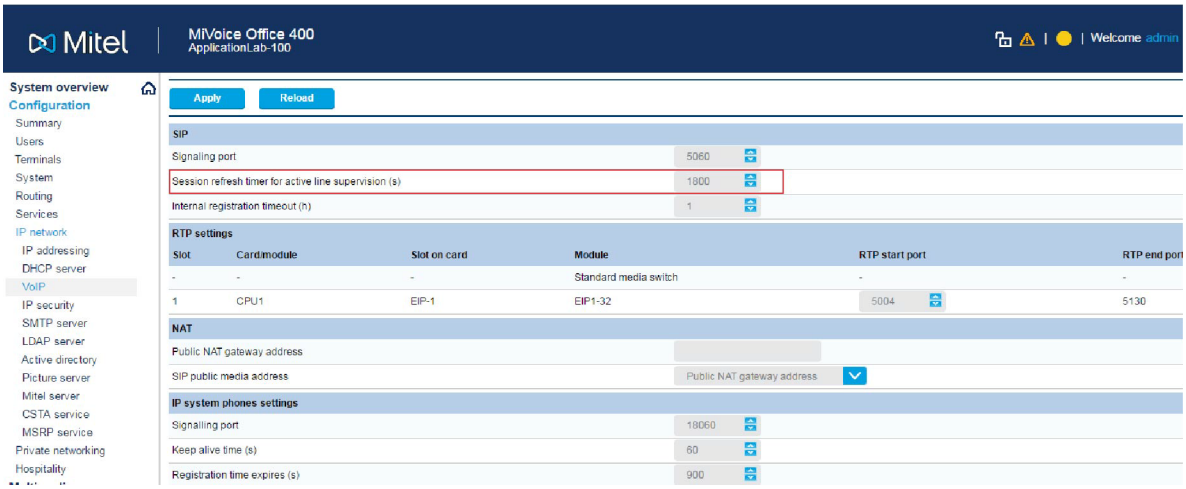


Figure 6: Initial Configuration

INTEGRATE AUDIO, WEB AND VIDEO (AWV)

To integrate the AWV application with the MiVoice Office 400, you must configure the MiVoice Office 400 system settings first, then configure the SIP server settings in the AWV application.

INSTALL MICOLLAB AWV CONFERENCING CLIENT FOR ALL USERS

If you are running in a networked environment, you can (as the administrator of the computers) install MiCollab Audio, Web and Video Conferencing Client for all users. This is usually done in a Terminal server or Citrix environment.

If you wish to do this, download the executable file from **http://<MiCollab IP address>/wd/MCAClient-admin.exe** and follow the instructions.

Note: You must have Administrator privileges to install MiCollab Audio, Web and Video Conferencing Client for all users. The software must be placed in a location that all users can access. If a user on the system already has the MiCollab Audio, Web and Video Conferencing Client installed on their machine locally, that version takes precedence over the administrator-installed version.

CONNECT AWV APPLICATION TO MIVOICE OFFICE 400

You connect the AWV application to MiVoice Office 400 as an internal user group with standard SIP terminals. The work flow for initiating the SIP users / terminals and user group is as follows:

- Create the users and terminals.
- Configure the user group.

Create Users and Terminals

1. Log into the MiVoice Office 400 WebAdmin (Expert Mode).
2. Go to **Users** > **User list**
3. Click the **New** tab (see Figure 7).

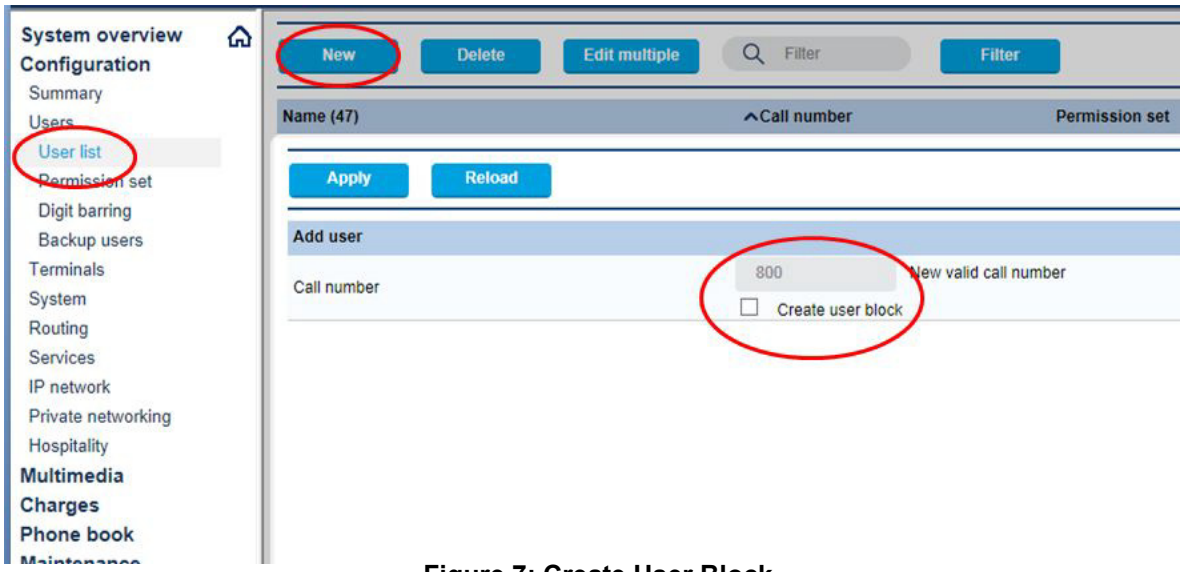


Figure 7: Create User Block

4. Enter the first telephone number for the block of users.
5. Check the **Create user block** box – The screen shown in Figure 8 appears.

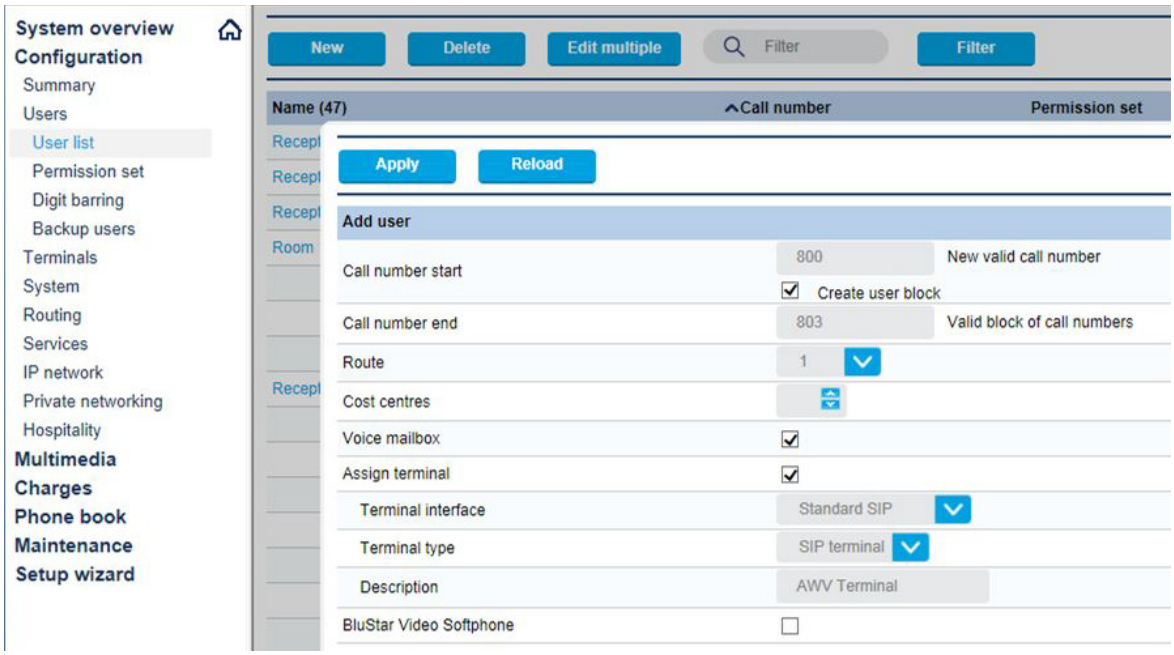


Figure 8: Create User Block

6. Enter the following parameters:
   - **Call number end**: Enter the last number for the block of users**.**
   - **Assign terminal**: Check the box.
   - **Terminal interface**: Select **Standard SIP.**
   - **Description**: Enter a string, if desired, to identify the terminals.
   - All other parameters can be left at their default values.
   - Click **Apply**.

7. Change the SIP user name and password for each terminal:
   - Go to **Terminals > Standard terminals**.
   - Select each terminal in turn (see Figure 9).
   - Change **SIP user name** to be the same as the telephone number.
   - Use the **SIP password** that is provided by the administration interface (for example: h1xgTHhR).
   - Click **Apply**.

Note: All created Standard-SIP phones require the same SIP password. Copy the password of the first SIP phone and paste it to all the others.

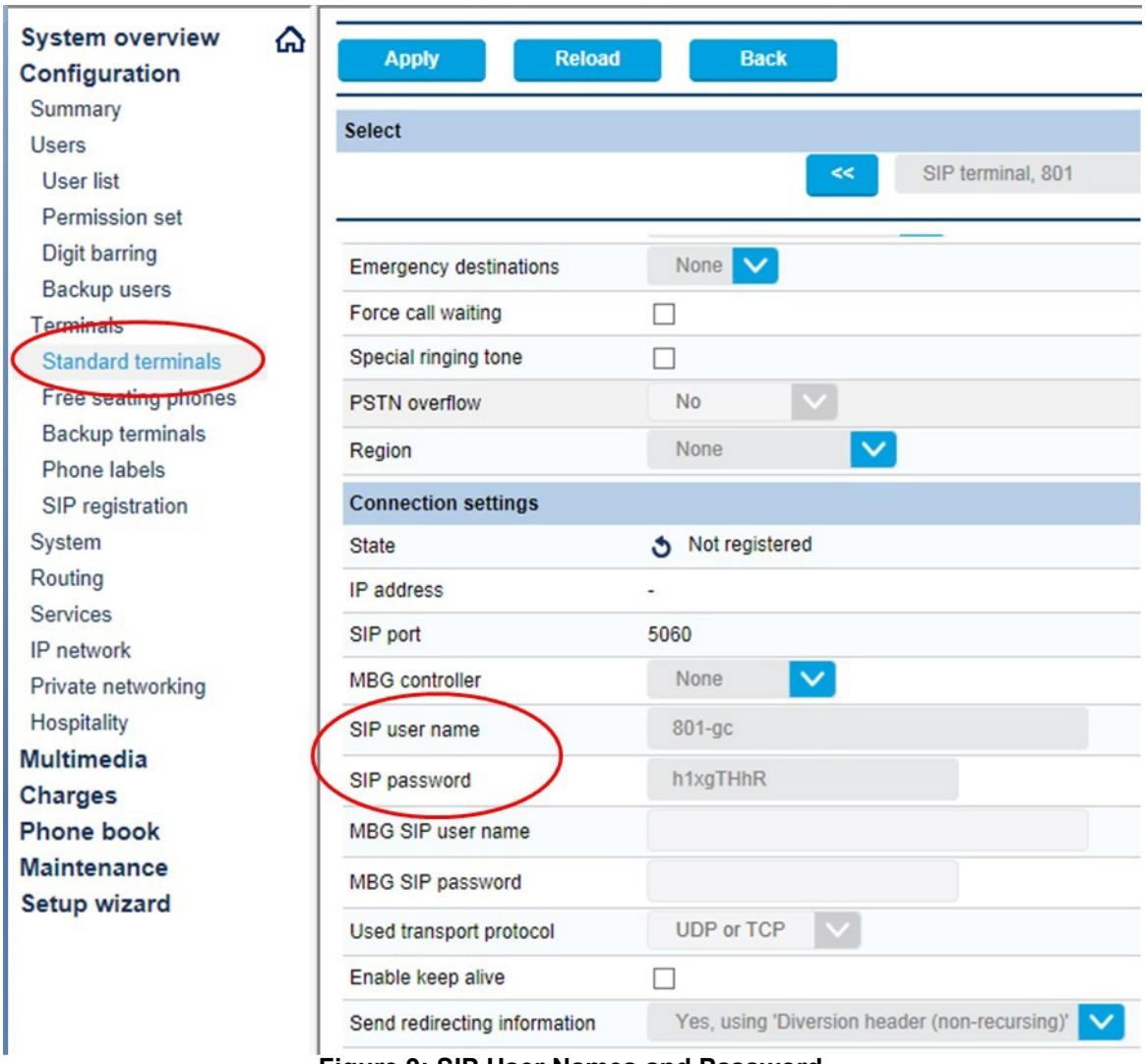


Figure 9: SIP User Names and Password

Configure the User Group

1. Go to **Routing** > **List view** > **User groups** (see Figure 10).

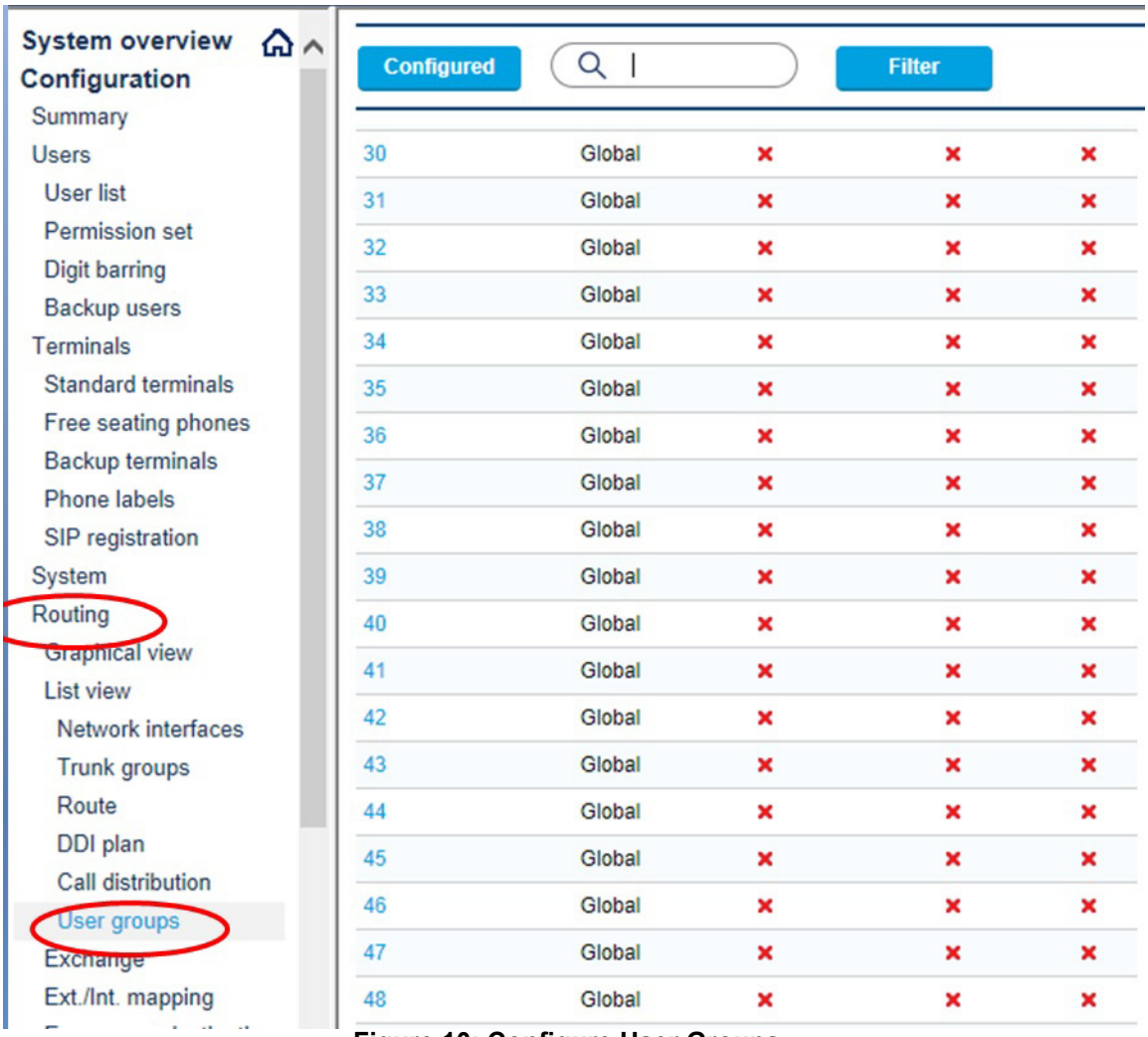


Figure 10: Configure User Groups

2. Select an unused user group. The following screen is displayed.

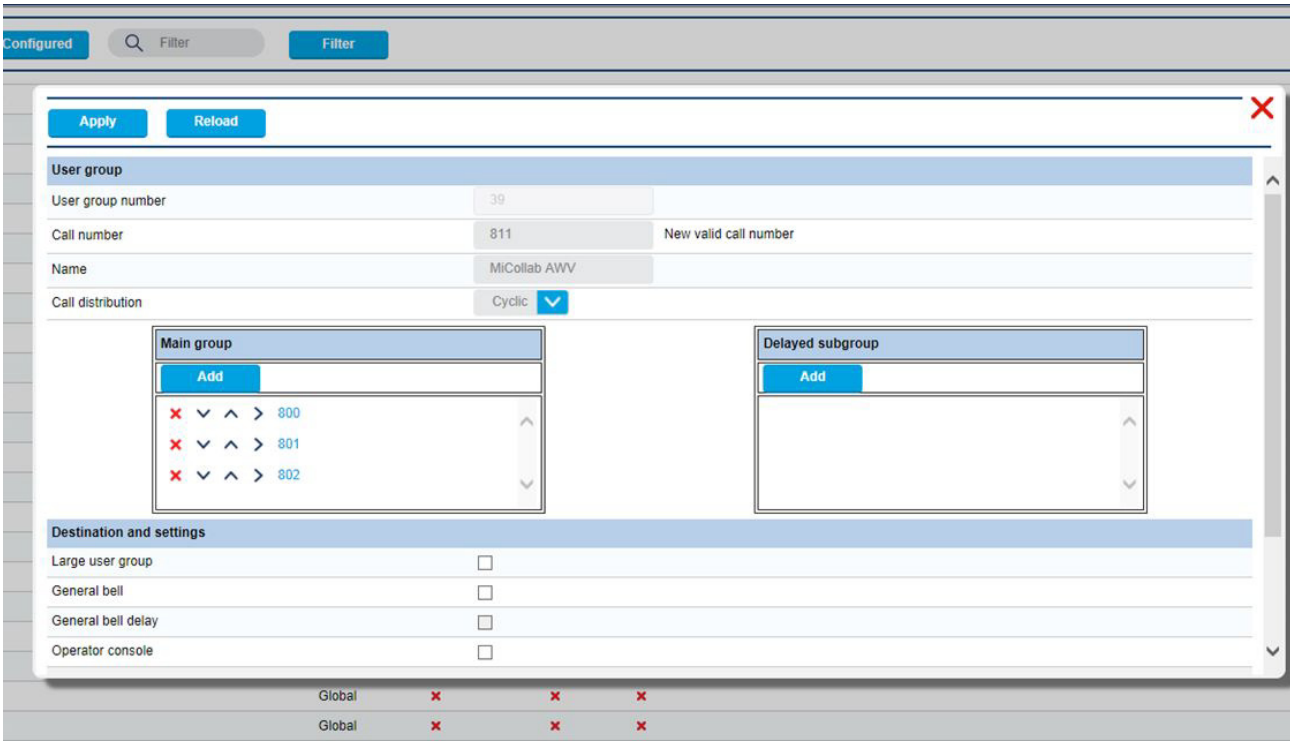


Figure 11: Adding New Group

3. Enter the following parameters:
   - **Call number**: Enter the internal telephone number for AWV**.**
   - **Name**: Enter a string, if desired (advisable)**.**
   - **Main group**: **Add** the numbers of the previously created users**.**
   - **Call distribution**: Change to **Cyclic**.
   - **Large user group**: Check this box if there are more than 16 members of the group.
   - All other parameters can be left at their default values.
   - Click **Apply**.

CONFIGURE SIP SERVER SETTINGS IN MICOLLAB AWV

Configure the SIP Server settings in MiCollab Audio, Web and Video Conferencing using the account information from the Mitel MiVoice Office 400 system configuration:

1. Log into the MiCollab server manager interface.
2. Under **Applications**, click **Audio, Web and Video Conferencing**.
3. From the MiCollab Audio, Web and Video Conferencing main page, click **System Options** on the navigation pane.
4. In **System Options > Platform,** select **MiVoice 400** for the system that is connected to MiCollab Audio, Web and Video Conferencing.
5. Click **Save**.
6. Click **Ok** at the prompt to restart the server.

7. Click **Configure SIP Server** on the navigation pane. The SIP Server Configuration page appears.
8. Enter the following information:
   - **Extension First**: Type the extension number of the first IP device in the user group used by the MiCollab Audio, Web and Video Conferencing server to register itself with the PBX.
   - **Extension Last**: Type the extension number of the last IP device in the user group used by the MiCollab Audio, Web and Video Conferencing server to register itself with the PBX.
   - **Extension PIN**: This PIN is used for SIP MD5 authentication. This field is mandatory. It is the SIP password of the standard SIP terminals belonging to the users in the user group.
   - **SIP Domain**: This can be the domain name, fully qualified domain name (FQDN), or the IP address of the PBX system used to register the MiCollab Audio, Web and Video Conferencing SIP ports. If you do not know the domain name or FQDN, type the PBX system IP address.
   - **IP Address**: Type the IP address of the PBX system. Alternatively, type the FQDN. Note that when typing the FQDN, only the first IP Address value returned by the DNS lookup will be used.
9. Click **Save**.

INTEGRATE MIVOICE BORDER GATEWAY (MBG)

MiVoice Border Gateway provides a secure communications path for remote MiCollab Client users to the MiCollab Client Service. Only MiCollab clients are supported as Teleworker devices on MiVoice Office 400 systems.

CONFIGURE MBG

1. Configure a MBG in the DMZ and cluster with the MiCollab-MBG in the LAN (recommended configuration). When you create the network element in the MiCollab USP network element tab, the network element is automatically added to the embedded MiVoice Border Gateway (MBG) application.
2. Set the MBG SIP Capabilities for the MiVoice Office 400 to UDP, TCP.

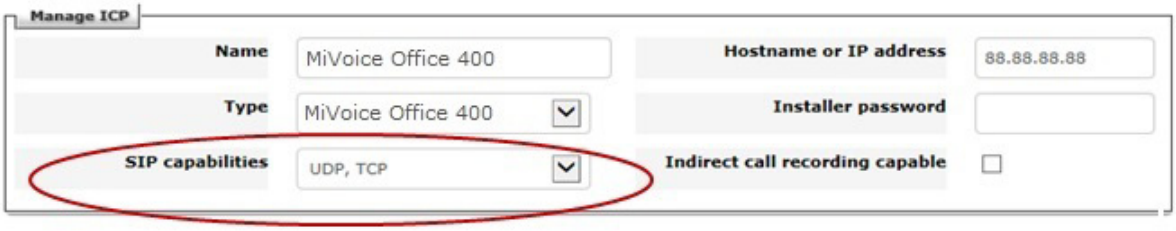


Figure 12: Configure MBG SIP Capabilities

3. Configure the SIP settings:

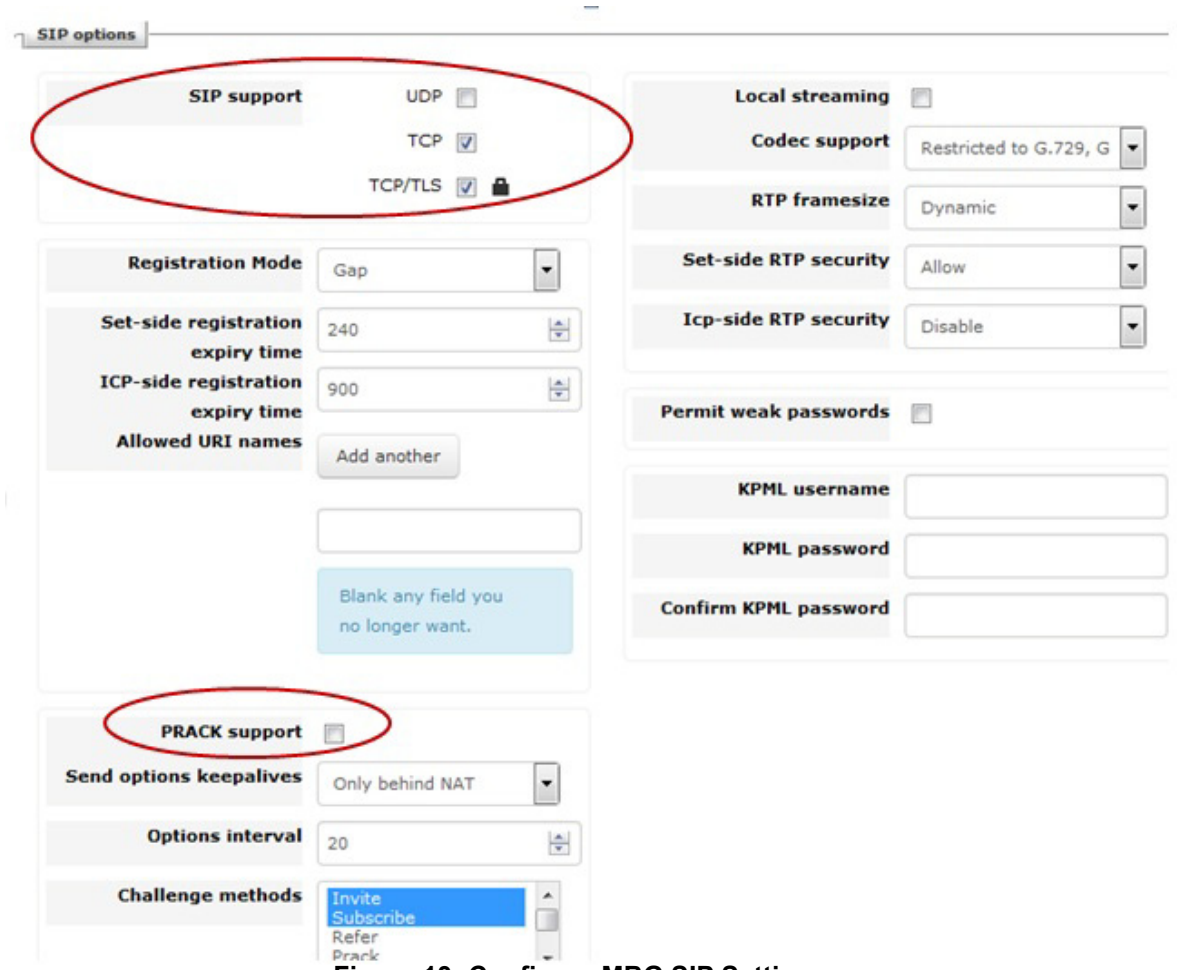


Figure 13: Configure MBG SIP Settings

4. Configure the "Network profile" according to the network configuration.
5. Configure the "Application Integration".

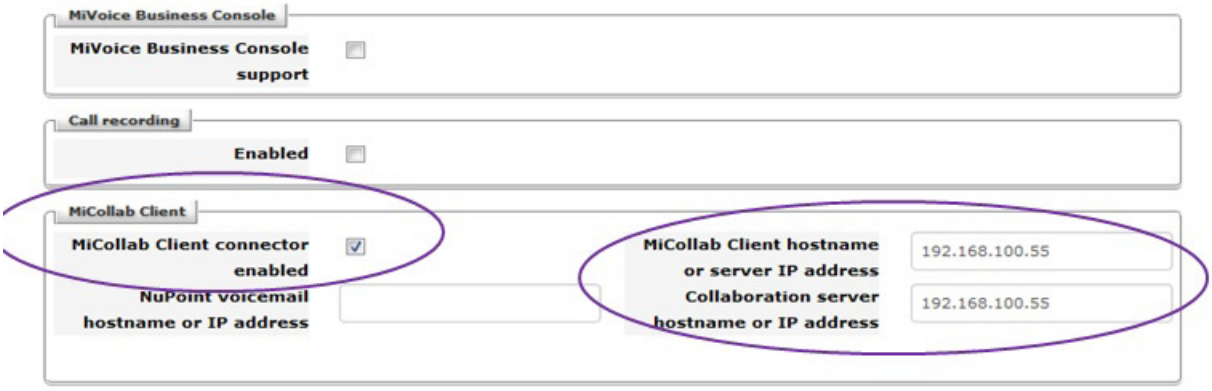


Figure 14: Configure Application Integration

6. Configure the Web Proxy (for the Standalone MBG clustered only) to allow the connection between applications on the LAN and clients (for example, AWV, MiCollab Client) on the Internet.

INTEGRATE MICOLLAB CLIENT SERVICE

CONFIGURE MICOLLAB CLIENT

Refer to the MiCollab Client Service application help and the *MiCollab Client Administrator's Guide* for configuration information.

DEPLOY MICOLLAB CLIENT MOBILE CLIENTS

MiVoice Office 400 platforms support MiCollab for Mobile clients. After you configure a user with a mobile client in the MiCollab Client application, a deployment e-mail is sent to the user with simplified configuration instructions on how to set it up.

Configure CSTA Link

The MiCollab Client CSTA Proxy application supports the call control messaging between MiCollab and the MiVoice Office 400 platform to support MiCollab Client features such as "Click-to-Call".

1. Log into the MiCollab server manager.
2. Under **Applications**, click **MiCollab Client Service**.
3. Click **Configure MiCollab Client Service**.
4. Click **PBX Nodes**.
5. Double-click the system name or IP Address of the MiVoice Office 400.
6. Open **CSTA Settings**.
7. In the Port field, enter the number of the CSTA port on the MiVoice Office 400.
8. Refer to the on-line help for descriptions of the other fields. Typically, you will not need to change the default settings.
9. Click **Save**.

Configure MiCollab Client Deployment

1. Log into the MiCollab server manager interface.
2. Under **Applications** click **MiCollab Client Deployment**.
3. Refer to the MiCollab Client Deployment on-line help for instructions on how to configure and deploy the clients.

USER PROVISIONING

User provisioning must be performed using an export of user entries from the MiVoice Office 400. All additions must be done manually on both the MiCollab and MiVoice Office 400.

For the initial user provisioning you must complete the following steps:

- Create the users on MiVoice Office 400
- Export the CSV file of users

- Import the CSV file into the MiCollab bulk user provisioning.

CONFIGURE THE USERS ON MIVOICE OFFICE 400

1. Go to **Users** > **User list view**.
2. Click **New** (see Figure 15).
3. Enter the **Call number** of the new user

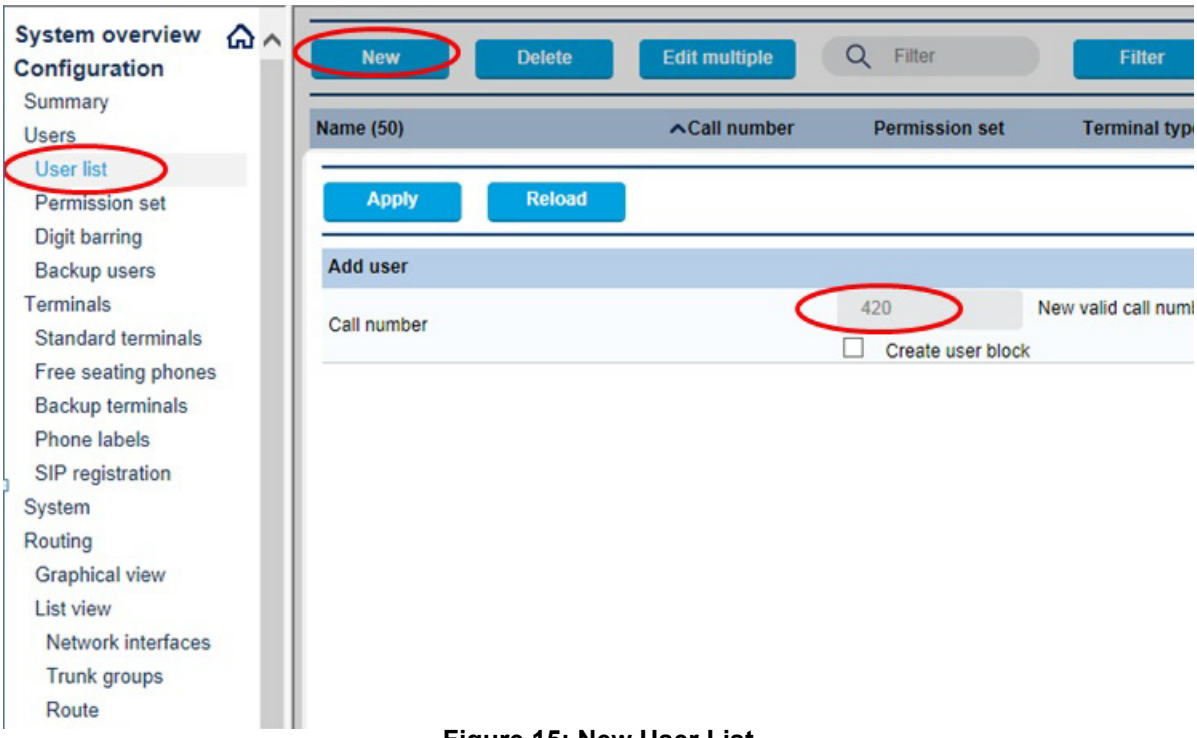


Figure 15: New User List

4. Click **Apply**.

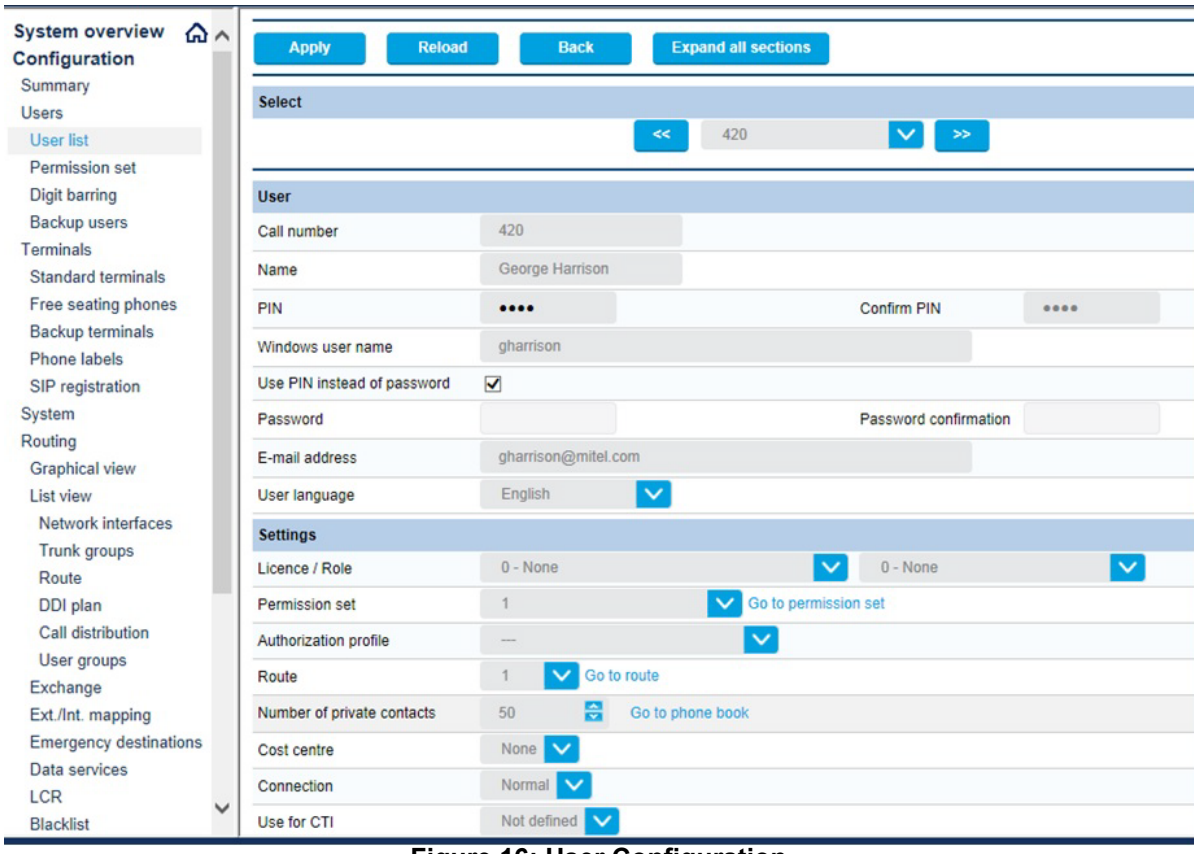


Figure 16: User Configuration

5. Complete the following:
   - **Name**: Enter the name of the user. Note that the first part (before the space) must be the surname and the second part (after the space) must be the first name. This is currently hard-coded in MiVoice Office 400.
   - **PIN / Password**: One or the other should be entered and the tick box set accordingly.
   - **Windows user name**: Required for some MiCollab roles. It is the Login Id.
   - **E-mail address**: Required for some MiCollab roles.
   - **License / Role**: Select the MiCollab bundle license and role from the drop down lists. (see Figure 17 and Figure 18)**.**
   - All other parameters can be left at their default values or changed if required.
   - Click **Apply**.

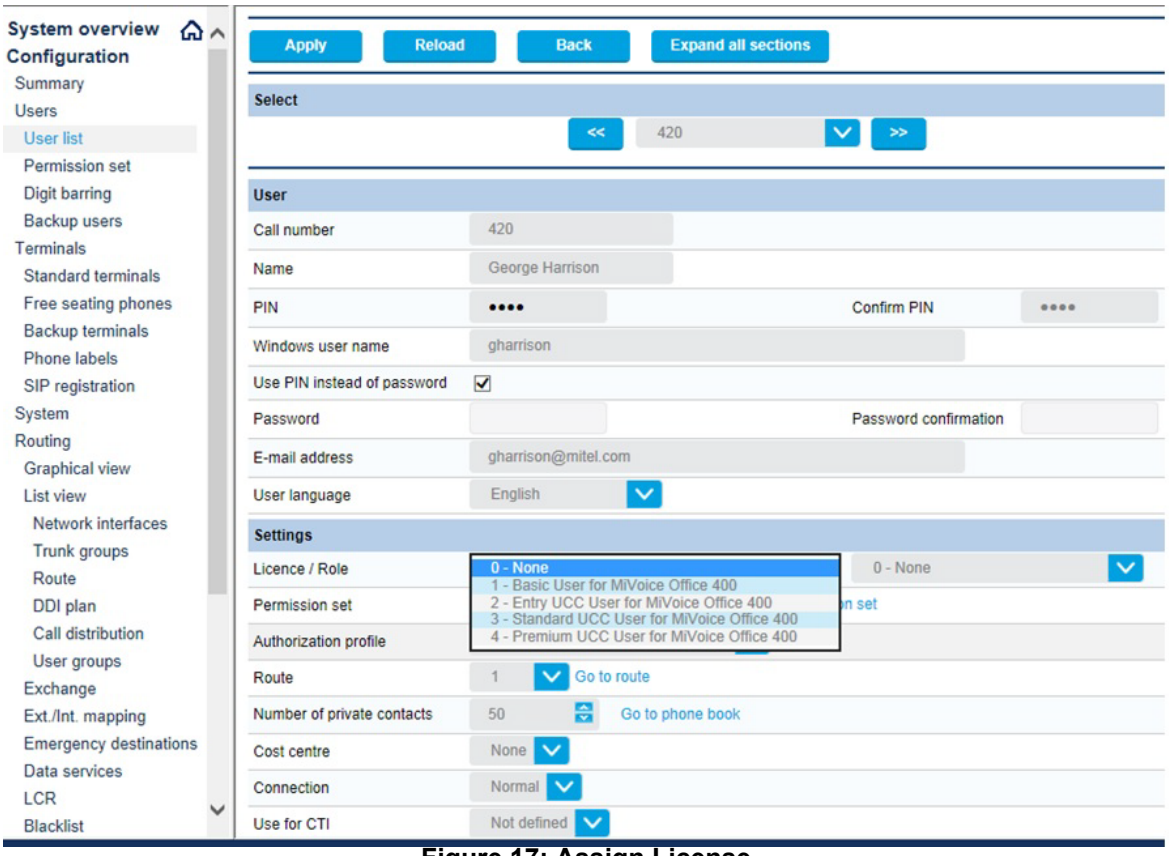


Figure 17: Assign License

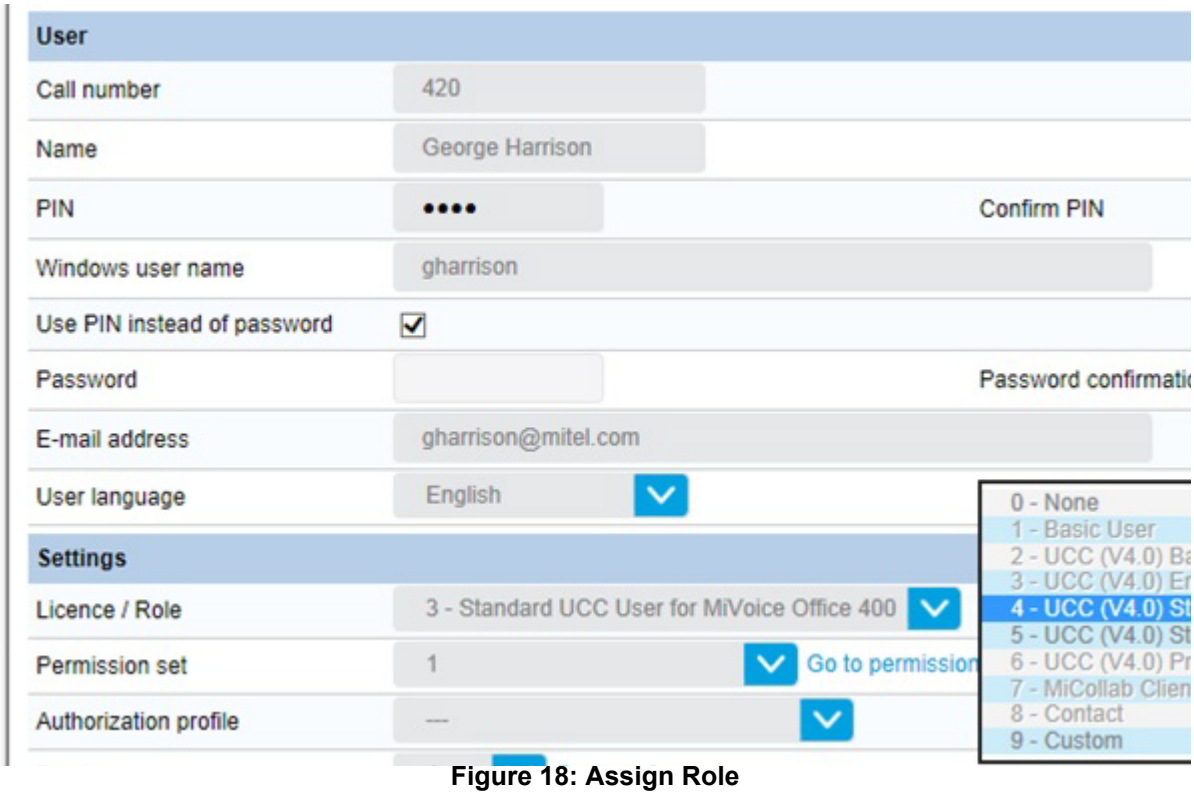


Figure 18: Assign Role

EXPORT LIST OF USERS

1. Go to **Services** > **BluStar / MiCollab** (see Figure 19).

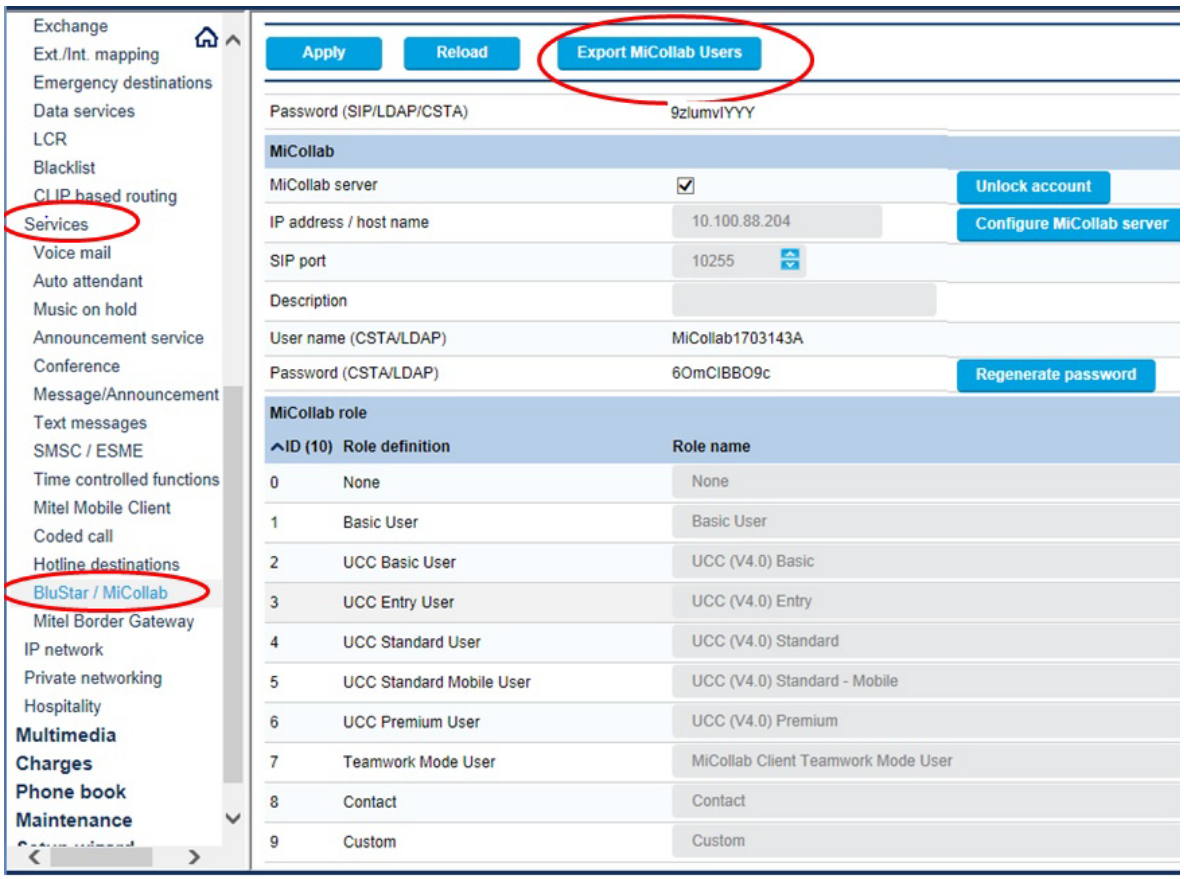


Figure 19: BluStar / MiCollab

2. Click **Export MiCollab Users** to export a list of users in a CSV file.
3. Import the users into the MiCollab database using the Bulk User Provisioning tool. Refer to the MiCollab server manager help for instructions.
4. After you have imported the users into MiCollab, you must remember to perform all future user provisioning (for example adds or deletes) in both MiCollab Users and Services and the MiVoice Office 400 Web Admin.

Chapter 3

MIVOICE 5000 INTEGRATION

OVERVIEW

You can integrate a MiCollab system with a MiVoice 5000 platform to provide MiCollab applications, such as NuPoint voice mail, MiCollab Client, Teleworker, and Audio, Video, and Web to users who are hosted on the MiVoice 5000 platform.

- For MiCollab integrations with the MiVoice 5000, the administrator performs user provisioning from the MiVoice 5000 Management Portal (MMP) or the MiVoice 5000 Manager.
- Roles and templates are used to define the MiCollab services for the users.

The administrator creates roles and templates in the User and Services application on the MiCollab system, and then performs a manual synchronization to update the MiVoice 5000 communication platform with the roles that are defined on MiCollab.

The administrator then assigns roles to the primary directory number of the user on the MiVoice 5000. The roles on the communications platform correspond to roles on the MiCollab system. The UCC roles map to MiCollab USP templates that define the required application services for the user type. When an administrator adds, edits or deletes a user from the platform management interface, the user's services are updated on MiCollab based on the assigned template on the next manual immediate synchronization or during the next scheduled database synchronization.

Non-Corporate contacts that appear in the MiCollab Client corporate directory are obtained via MiCollab IDS from an Active Directory server or from the LDAP database located on the MiVoice 5000.

A typical integration consists of the components shown in Figure 20:

- **Communications Platform**: The MiVoice 5000 can be integrated with a single MiCollab system.
- **MiCollab Server**: Provides application services (NuPoint voice mail, AWV, MBG, and MiCollab Client) to the MiVoice 5000 users and supports MiCollab Client softphones for external users over the Internet.
  - NuPoint Unified Messaging integrates with the MiVoice 5000 via SIP trunking.
  - Audio, Web and Video integrates with the MiVoice 5000 using SIP subscriptions.
  - MiCollab Client softphones are integrated with the MiVoice 5000 via SIP subscriptions. Computer Telephony Integration (CTI) is achieved via a CSTA proxy on the MiCollab server.
  - MiVoice Border Gateway solution provides a secure communications path for remote MiCollab Client Softphones to the MiCollab Client Service. The MBG provides support for MiCollab Client Softphones through the implementation of proprietary SIP headers, SIP feature enhancements, line enhancements, and security enhancements, along with administrator interface changes for its management.
  - MiCollab Client CSTA Proxy: Provides Computer Telephony Integration (CTI) between the MiVoice 5000 and MiCollab Client to support telephony features such as "Click-to-Call" and presence. The MiVoice 5000 communicates with the CSTA proxy using CSTA II protocol.

- **Standalone MBG**: A standalone vMBG server can be installed in the Demilitarized Zone (DMZ) of a customer's existing firewall to support SIP Teleworker devices. The MiCollab MBG application must be clustered with the standalone MBG.
- **MiCollab Advanced Messaging (AVST) server**: An optional standalone server that can be used to provide voice messaging services.
- **Firewall**: Protects corporate LAN from Internet.
- **Redirect Server:** Provides the configuration data to MiCollab mobile clients. This is a Mitel server located on the Internet. It sends MiCollab mobile client users a configuration e-mail that allows the users to download and install the required configuration files from the redirect server.
- **SIP Trunking**: The NuPoint Voicemail application is supported via SIP trunking.
- **SIP Subscriptions/Extensions**: The Audio, Web and Conferencing application is supported via SIP subscriptions on the MiVoice 5000.
- **Administration Interface**: User provisioning is performed from the communication platform management platform.
- **Directory Server**: An optional Active Directory server can be used to support the synchronization of MiCollab Client contacts to the MiCollab Client Corporate Directory and to support Active Directory Authentication of MiCollab users.

  MiCollab Client contacts can also be synchronized to the MiCollab Client Corporate Directory from the MiVoice 5000 directory service or the MiVoice 5000 Manager directory service.

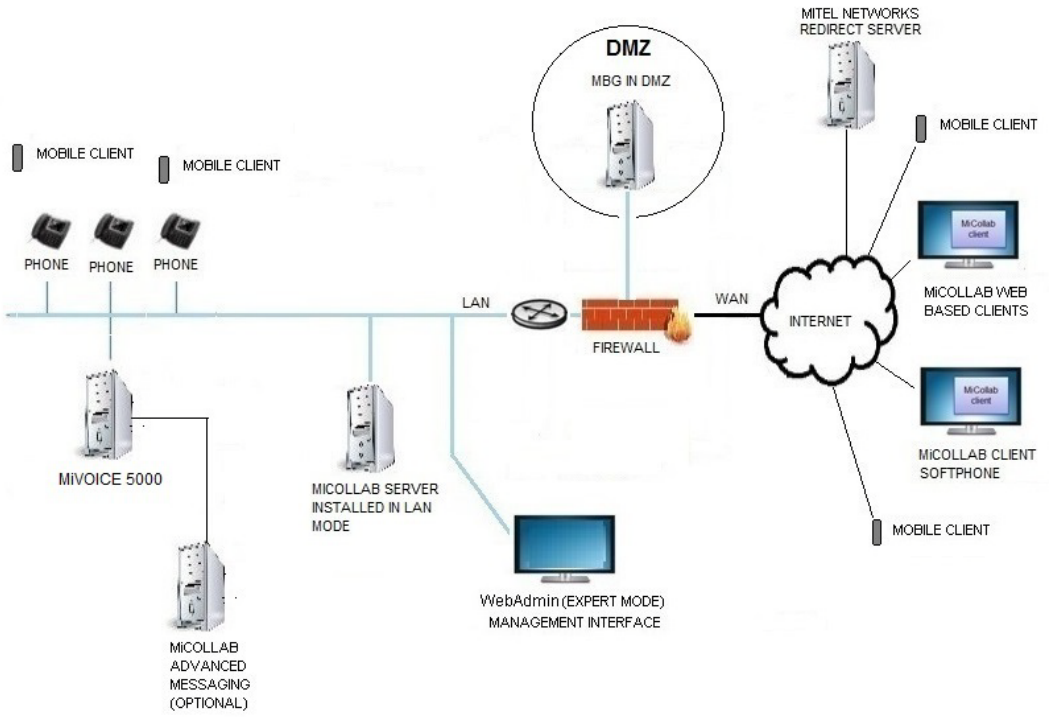


Figure 20: MiVoice 5000 Integration

REQUIREMENTS

- Integration with MiCollab 7.1 or higher is supported with MiVoice 5000 version 6.1 SP2 or higher and MiVoice 5000 Manager version 3.1 or higher.
- MiCollab Client service must be configured in Integrated Mode.

CONDITIONS AND LIMITATIONS

- One or more MiCollab servers (up to four) can provide applications services to the users on the MiVoice 5000 system in the same network.
- The integration of multiple MiCollab systems to the MiVoice 5000 platform is supported.
- User and services provisioning is performed from the MiVoice 5000 management interface. The Add, and Quick Add functions are not supported from the Users and Services Application if MiCollab is integrated with a MiVoice 5000.
- The MiVoice 5000 supports a maximum of four terminals/devices per user. Although the MiVoice 5000 supports users with multiple devices, only the users' primary directory numbers appear in MiCollab. MiCollab services are applied to the primary directory number of the user.
- A MiVoice 5000 can have up to 64 lines associated with a user. MiCollab only supports the user's primary number.
- MiCollab Integrated Directory Services is not supported for managing user entries. Only non-corporate entries (contacts) are synchronized from the directory services database to the MiCollab Client corporate directory.
- Functions and fields in the USP application that are not applicable to MiVoice 5000 are disabled (or hidden). They are disabled after a MiVoice 5000 type network element is assigned in the USP application. The administrator adds application services by assigning a role with the required service level. The administrator removes the role to remove the services. To remove only the NuPoint voice mailbox from a user, the administrator must create a role without a mailbox and assign it to the user.
- Each MiCollab system supports a maximum of 5000 users. In a multi-MiCollab deployment, up to four peered MiCollab systems can be deployed to support a total of up to 20,000 users and contacts.
- LDAP authentication is supported for users who have been created from the MV5000 with authentication enabled. An "authentication only" IDS connection is required to allow MiCollab to validate the end-user password against the Active Directory password. Users can then log into their end-user interfaces by entering their Active Directory password.
- The MiCollab End User Portal is supported for MiVoice 5000 users. It provides them with access to their user portal, voice mail, and AWV settings. However, a user's MiVoice 5000 phones are not displayed in the portal interface.
- The MiVoice 5000 can operate in a multi-company management mode where the PBX resources are shared between different companies. Currently, MiCollab does not support multi-company management mode.
- The Speech Auto Attendant application is NOT supported for MiVoice 5000.

- MiCollab does not provide the ability to configure the phone types for each MiVoice 5000 subscriber. Note that the MiCollab Client and MBG applications function as SIP phone integrations. MBG creates a SIP device account and UCA allows a soft phone because the user has a SIP account.
- User pictures cannot be imported into the MiCollab Client server via the MX-ONE Provisioning Manager, but they can be imported directly from Active Directory using MiCollab Integrated Directory Services.
- The integration of MiVoice 5000 systems to the MiCollab Server Appliance is not supported. The MiCollab Server Appliance is a small-business capacity MiCollab system that is shipped from Mitel Network to the customer pre-installed on an industry standard server.

LICENSING

MIVOICE 5000 LICENSING

License the MiVoice 5000 system from the Aastra Keycode Order Placement (AKOP) licensing server. The AKOP server provides licenses according to a System ID on the MiVoice 5000. Only MiVoice 5000 certified technicians should apply licenses to the MiVoice 5000.

MICOLLAB LICENSING

You license the MiCollab system using the Application Management Center (AMC) licensing server. The AMC is not used to assign licenses that are required on the MiVoice 5000.

1. Log into AMC.
2. Create a customer account.
3. Register (purchase) products and licenses and assign them to the customer account.
4. Create Application Record IDs for the MiCollab and optional MiVoice Business Gateway.
5. Assign base software licenses to the system ARIDs.
6. Create a ULM using the MiCollab ARID.
7. If a standalone MBG system is required, add its server ARID.
8. Assign UCC user licenses to the ULM. The UCC user licenses will provide the communication platform users with entitlement to the MiCollab applications.
9. Purchase and activate any additional “a-la-carte” feature, port, or language licenses for the MiCollab system applications.

Note: Refer to the AMC online help for detailed licensing steps.

Note: MiCollab Advanced Messaging (AVST) is not licensed through the AMC.

INTEGRATION PROCEDURE

The following procedure describes the steps required to integrate a new MiCollab system with a new or existing MiVoice 5000.

OVERVIEW

- Install MiCollab platform
- Install MiVoice 5000 platform
- Configure MiCollab into MiCollab Client Integrated Mode
- Create network elements
- Configure a password for the "micollab_api" account
- Configure MiCollab system application settings
- Integrate the applications with the MiVoice 5000:
  - Integrate NuPoint Unified Messaging (or optionally install MiCollab Advanced Messaging server)
  - Integrate Audio, Web and Video
  - Integrate MiVoice Border Gateway
  - Integrate MiCollab Client
- Configure Integrated Directory Services (optional)
- Configure the connection and sync databases
- Perform user adds, edits, and deletes.

INSTALL PLATFORM

1. Install, license, configure, and provision the MiVoice 5000 (refer to the *MiVoice 5000 Installation and Maintenance Guide*)
2. Install the MiCollab platform. Do not run the Mitel Initial Configuration Wizard. The MiCW is not supported for MiCollab systems that will be integrated with the MiVoice 5000.
3. Log into MiCollab server manager. Under **ServiceLink**, click **Install Applications** and then click the **Install Applications** tab. Set the ICP type to "MiVoice 5000".
4. Collect the following information for the integration:
   - MiCollab IP address
   - MiVoice 5000 IP address.

CONFIGURE MICOLLAB CLIENT INTEGRATION MODE

Configure MiCollab in MiCollab Client Integration Mode. Refer to the *MiCollab Installation and Maintenance Guide* for instructions.

CREATE NETWORK ELEMENTS

Create the network elements for the communication platform(s):

1. Log into the MiCollab server manager.
2. Under **Applications**, click **Users and Services**.
3. Click the **Network Element** tab.
4. Click **Add**.
5. In the Type field select the system type: “MiVoice 5000”.
6. Enter the IP address of the MiVoice 5000. The MiCollab can support multiple MiVoice 5000 network elements.
7. Enter the MiCollab Client Outgoing Dialing Prefix.
8. Enter the NuPoint voice mail number to be used by MiCollab Client into the Call Forward Destination Directory Number field.
9. After you save your updates to the Network Element page, you are prompted to associate the element with the templates. If you select **Yes**, the network element field for the primary phone in all templates will be automatically set to the name of this network element. If you select **No**, you must create custom templates and associate them with this network element.

Note: During MiCollab installation, the default UCC roles and associated template definitions were downloaded from the AMC. On initial download, the USP forms and templates support MiVoice Business settings. After you assign a MiVoice 5000 network element in the MiCollab Network Element page, the USP user interface and templates are updated to reflect the settings for the selected platform.

   - If required create custom roles and templates in the MiCollab USP application from the UCC default templates.
   - Default user templates cannot be modified, however you can modify the AWV system defaults that are applied to the default UCC templates.

10. Configure the MiVoice 5000 network element within the NuPoint Unified Messaging application
    - as a SIP GATEWAY, and
    - add the line groups to the SIP GATEWAY (ports).
11. Configure the MiVoice 5000 as a SIP Server in the MiCollab Audio, Web and Video application.

Configure "micollab_api" Password

You must configure a password for the "micollab_api" account. The MiVoice 5000 uses this account to synchronize data with the MiCollab system. You must configure the same password for the account on the MiVoice 5000. If you change the password on either system, you must also change it on the other.

1. Log into the MiCollab server manager.
2. Under **Administration**, click **System users**.

3. Next to the "micollab_api" account, click Modify and add any required account info.
4. Click Reset password and enter a password for the account.
5. Enter a new password and verify it.
6. Click **Save**.
7. Log into the MiVoice 5000 management interface.
8. Access the **Telephony Service > Subscribers > Terminals and Applications > MiCollab > Connections** page.
9. For the "micollab_api" account, add any required account info.
10. Enter the same password that you entered on the MiCollab system.

CONFIGURE MICOLLAB SYSTEM APPLICATION SETTINGS

Configure the MiCollab system application settings manually through the application administration interfaces in the MiCollab server manager. Refer to the application online help for instructions.

INTEGRATE NUPOINT

OVERVIEW

NuPoint Unified Messaging (NuPoint UM) supports Session Initiation Protocol (SIP) integration with the MiVoice 5000. The maximum number of NuPoint ports is 120. Speech Auto Attendant is NOT supported.

One or more SIP trunks can link NuPoint UM to the MiVoice 5000. NuPoint Unified Messaging receives and sends SIP messages over these trunks. Each SIP trunk consists of one or multiple SIP ports.

Figure 21 illustrates the SIP trunk integration:

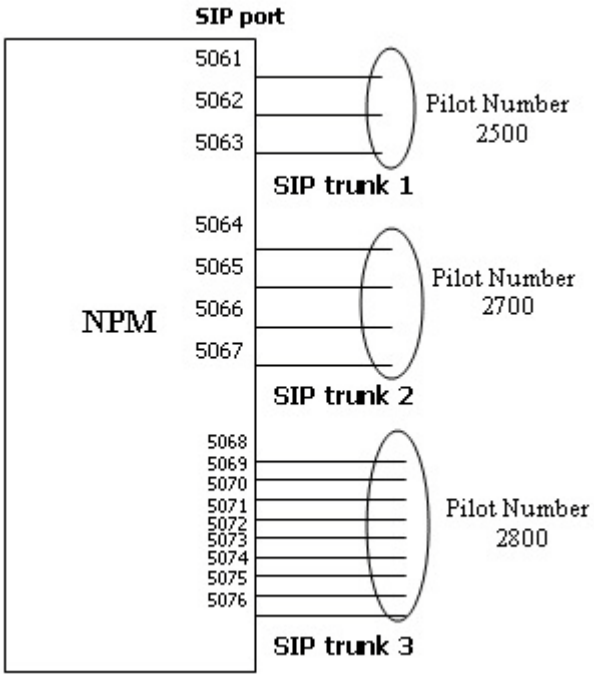


Figure 21: NuPoint SIP Trunk Integration

Every SIP trunk is assigned a Pilot Number. To call into NuPoint UM, the MiVoice 5000 provides a pilot number for the endpoint users to dial. When NuPoint UM makes a trunk call to the communications platform, it identifies itself using a pilot number. Therefore, when NuPoint UM receives an incoming call, the pilot number is used as the Called ID. When NuPoint UM makes an outgoing call, in the case of MWI, the pilot number is used as the Calling ID.

A SIP session is established through connection to a SIP port in real-time. Each SIP port handles one call connection to NuPoint UM, thus the number of ports grouped in a SIP trunk determines the number of parallel-connections this trunk can handle at the same time. For example, if four callers on the communications platform simultaneously dial the pilot number 2500 (shown in the figure above), only three of these callers can be connected to NuPoint UM. This principle is applied to every voice mail call connection, whether it is inbound and outbound.

The pilot numbers on NuPoint UM are mapped to applications on the communications platform. For example, pilot number 2500 for NuPoint UM Voice is mapped to extension 2500 for the Voice Mail application programmed on the communications platform. In the configuration where the application is configured as a mailbox, you must associate an extension to an application as well as the pilot number that is used to access the application. NuPoint can be used in MiVoice 5000 multi-site configurations if more than one SIP trunk is configured.

All calls arriving to NuPoint UM on a SIP trunk are accepted at the fixed and predefined SIP port. This port is not configurable. The call is redirected based on the pilot number (which is the called ID in the case of an incoming trunk).

All SIP trunk calls generated by NuPoint UM include a pre-configured SIP port and a pilot number (which is the calling ID in the case of an outgoing trunk).

PREPARATION

Gather the following information in preparation for this voice mail integration:

- customer's desired voice mail call flows, features, applications, users, and extensions.
- network information including IP addresses, Subnet Mask, Gateway IP address, primary domain name, and Fully Qualified Domain Name (FQDN) information.

CONFIGURE NUPOINT

1. Ensure that the MiVoice 5000 is running and correctly configured.

   The communications platform provides NuPoint UM with the SIP Gateway IP address, port data, and line mapping details that are used to accept calls from the communications platform and redirects them to available NuPoint lines. SIP endpoints are able to call a Pilot Number that route to an available NuPoint UM line and hear a greeting prompt, such as "Welcome to the message center. Please enter a mailbox number or wait."

2. If you haven't done so already, add the MiVoice 5000 as a **SIP GATEWAY** network element to the NuPoint UM application. This is necessary to set up network mappings for SIP calls. Refer to Add a Network Element for instructions on how to configure a SIP Gateway.

3. Modify the MiCollab server security settings to allow full telephony communication to be established between the communications platform and the NuPoint application.
   - Log into the MiCollab server console.
   - Under **Configuration**, click **Configure Networks**
   - Click **Add a new trusted network**.
   - In the **Network Address** field, enter the IP address of the network to designate as "local".
   - In the **Subnet mask** or **network prefix length** field, enter the dot-decimal subnet mask or CIDR network prefix to apply to the Network Address. If this field is left blank, the system assigns a network prefix length of /24.
   - In the **Router** field, enter the IP address of the router you will use to access the newly-added network.
   - Click **Add**.

4. Configure NuPoint UM Line Groups and Dialing Plan for the SIP Gateway.

   Each NuPoint UM line is dedicated to handle one call at a time. Therefore, the number of lines defined in NuPoint UM is the maximum number of simultaneous calls possible. NuPoint UM can have up to 120 lines. A Line Group is a collection of one or more NuPoint UM lines, each mapped to a cluster node. When lines are linked to a SIP Gateway cluster node, incoming SIP calls can be accepted and routed to available NuPoint UM lines for SIP.

5. Configure system mailboxes and greetings.

6. Set up and initialize the Administrator mailbox.

   The Administrator mailbox is set up by default (under mailbox number 998) during the NuPoint UM application installation. It can be used to record System Message Prompts and program additional user mailboxes. See Managing Mailboxes for additional information.

7. Direct callers to NuPoint UM mailboxes on Call No Answer.

Call No Answer scenarios must be correctly configured through the SIP Gateway/SIP Endpoint Call Forwarding options. In general, when Call No Answer is detected at the SIP Endpoint, the call should be forwarded to the NuPoint UM Pilot Number (Extension) as "Call Forward Not Available." It is assumed that the Endpoint Extension forwarding the call matches a mailbox number programmed in NuPoint UM. If this is the case, when a forwarded call is received by NuPoint UM, a prompt will indicate that the recipient is not available and ask the caller to leave a message.

8. Enable paging message notifications.

   Check that message notifications are set up at the mailbox level. Each mailbox may be set up for two notification types concurrently.

9. Configure Distribution Lists.

   Distribution lists allow a mailbox user to send messages to multiple mailboxes in one step.

10. Configure the following FCOS:
    - 263 - Store Caller Line Id as a phone or mailbox number
    - 264 - Play outside caller user interface (with FCOS bit 280)
    - 280 - Enable CLI outside caller interface (with FCOS bit 264).

PERFORM REQUIRED NUPOINT CONFIGURATION ON MIVOICE 5000

To allow the MiVoice 5000 to communicate with NuPoint UM and use it as its voice mail system, you must complete the following tasks:

- Add a new trunk group
- Define the trunk group for MiCollab NuPoint Voice Mail
- Provide access to the MiCollab NuPoint Voice Mail
- Configure the calling party in the « From » msg header of outgoing calls towards MiCollab NuPoint.
- Add the NuPoint IP Address in the Whitelist if the SIP security is enabled

Perform the following configuration from the MiVoice 5000 management interface

1. From a web browser on the LAN, log into the MiVoice 5000 Management Interface (MMI):
   https://(IP address of MiVoice 5000 server
   Username: admin (default)
   Password: admin (default)
2. Define trunk group for MiCollab NuPoint.

Figure 22: Trunk Group for MiCollab NuPoint

3. Specify Private Direction name.

Figure 23: Specify Private Direction Name

4. Select and display the route (4.2.2 and 4.2.3). The configuration interface only checks that call routing has been correctly defined

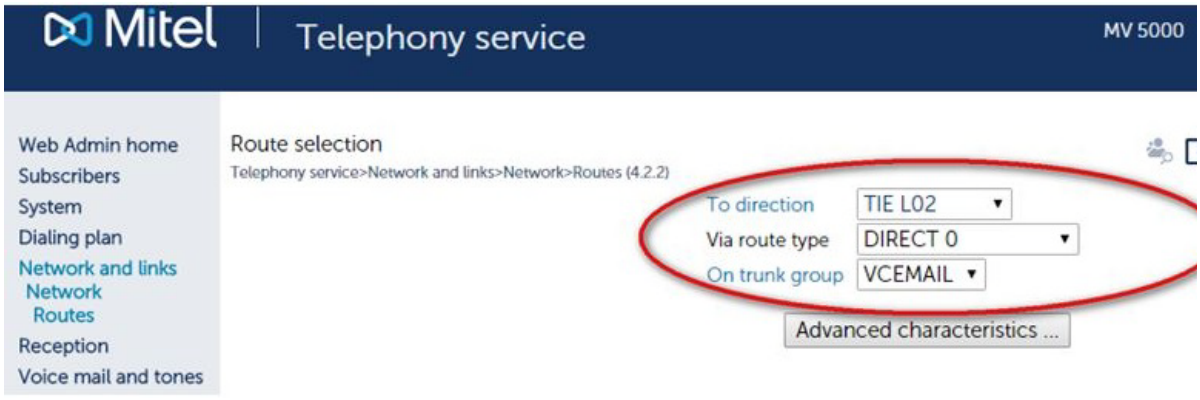


Figure 24: Call Routing Definition

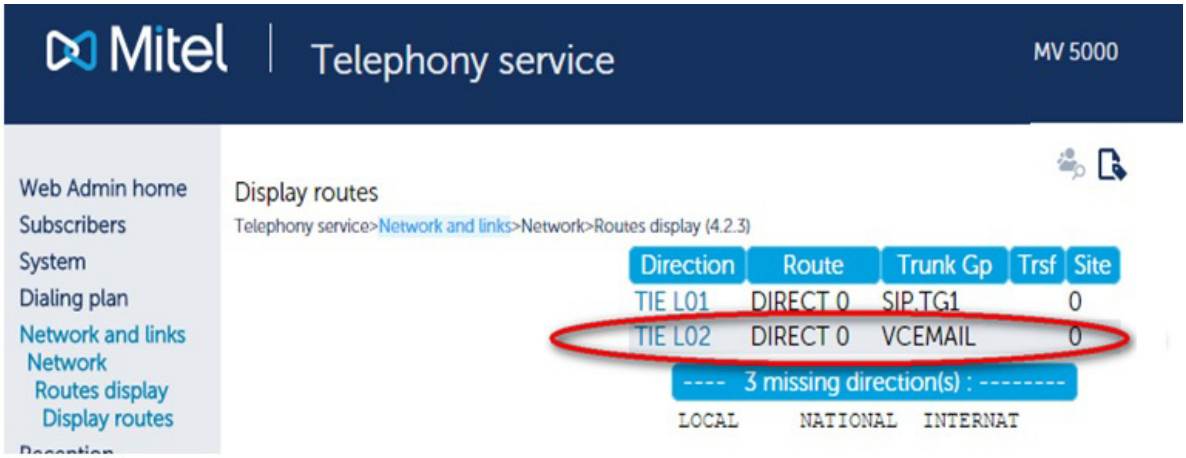


Figure 25: Display Routes

5. Enter an access code for direction (3.2.4).

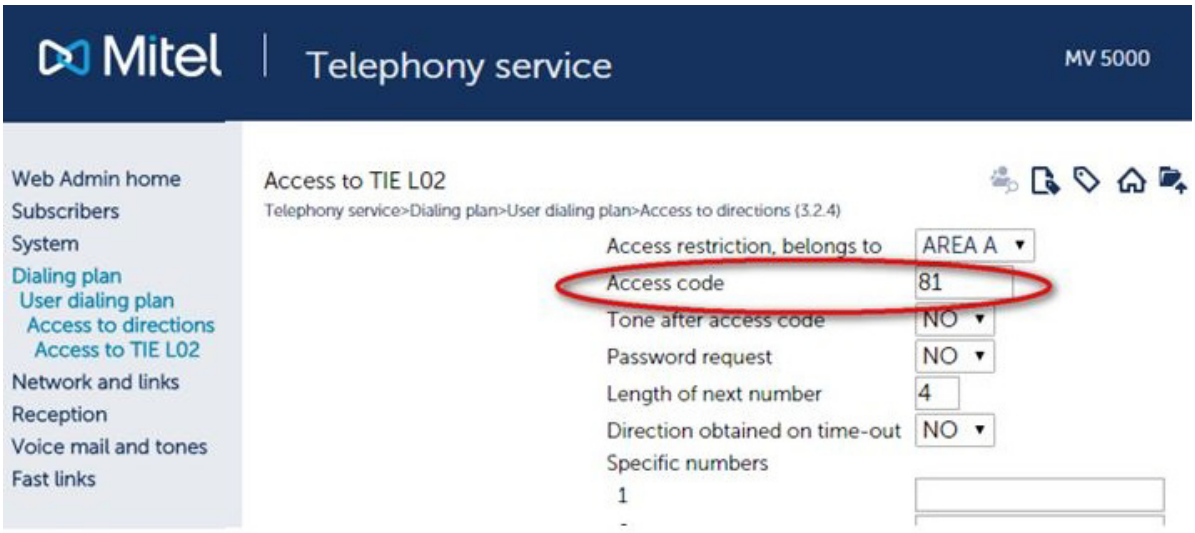


Figure 26: Access to Direction

6. Define an internal plan.

Figure 27: Define Internal Plan

7. Define trunk group characteristics.

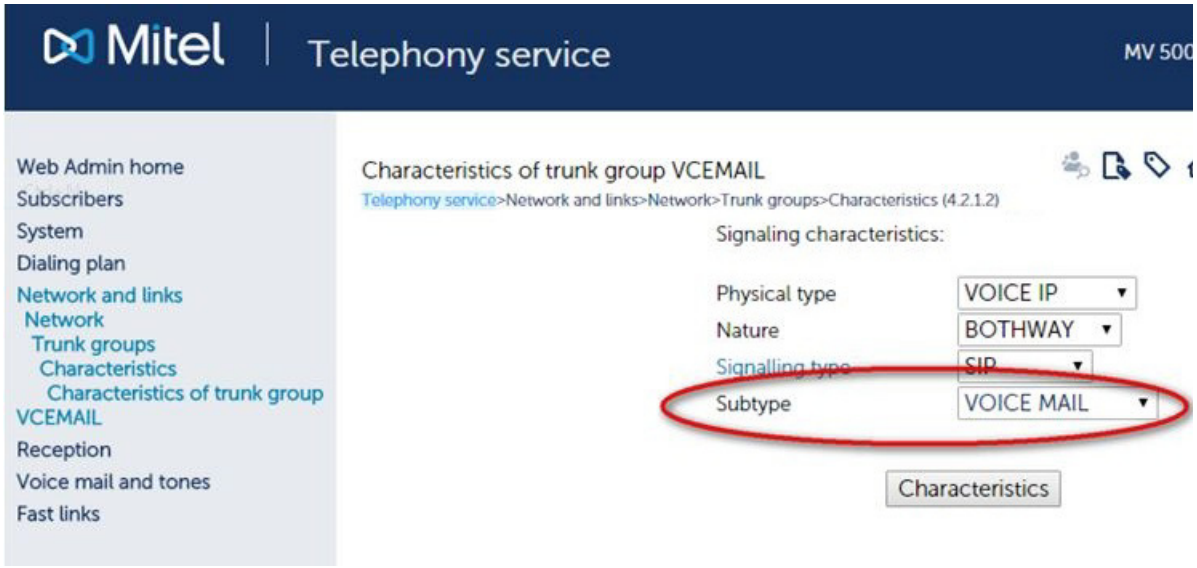


Figure 28: Trunk Group Characteristics

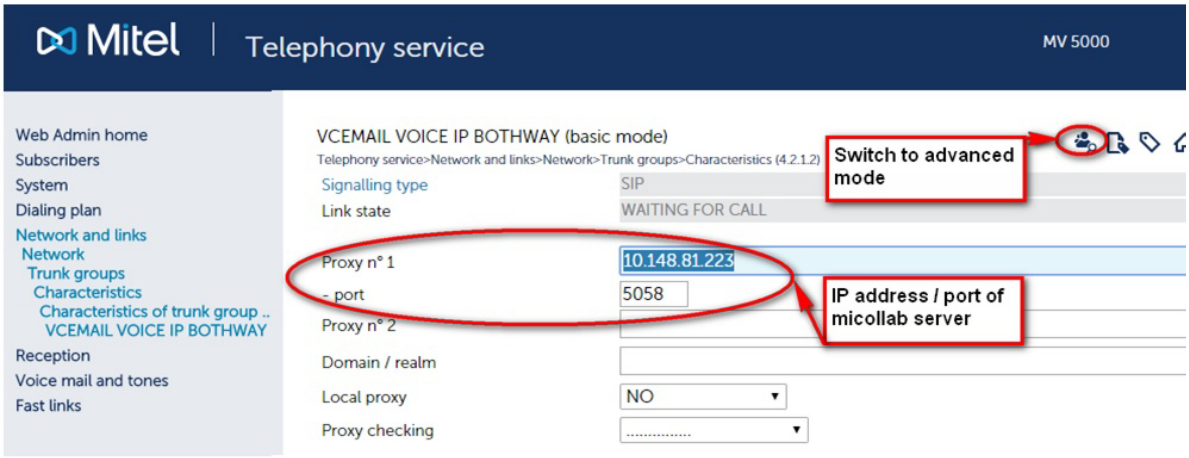


Figure 29: Configure IP BOTHWAY

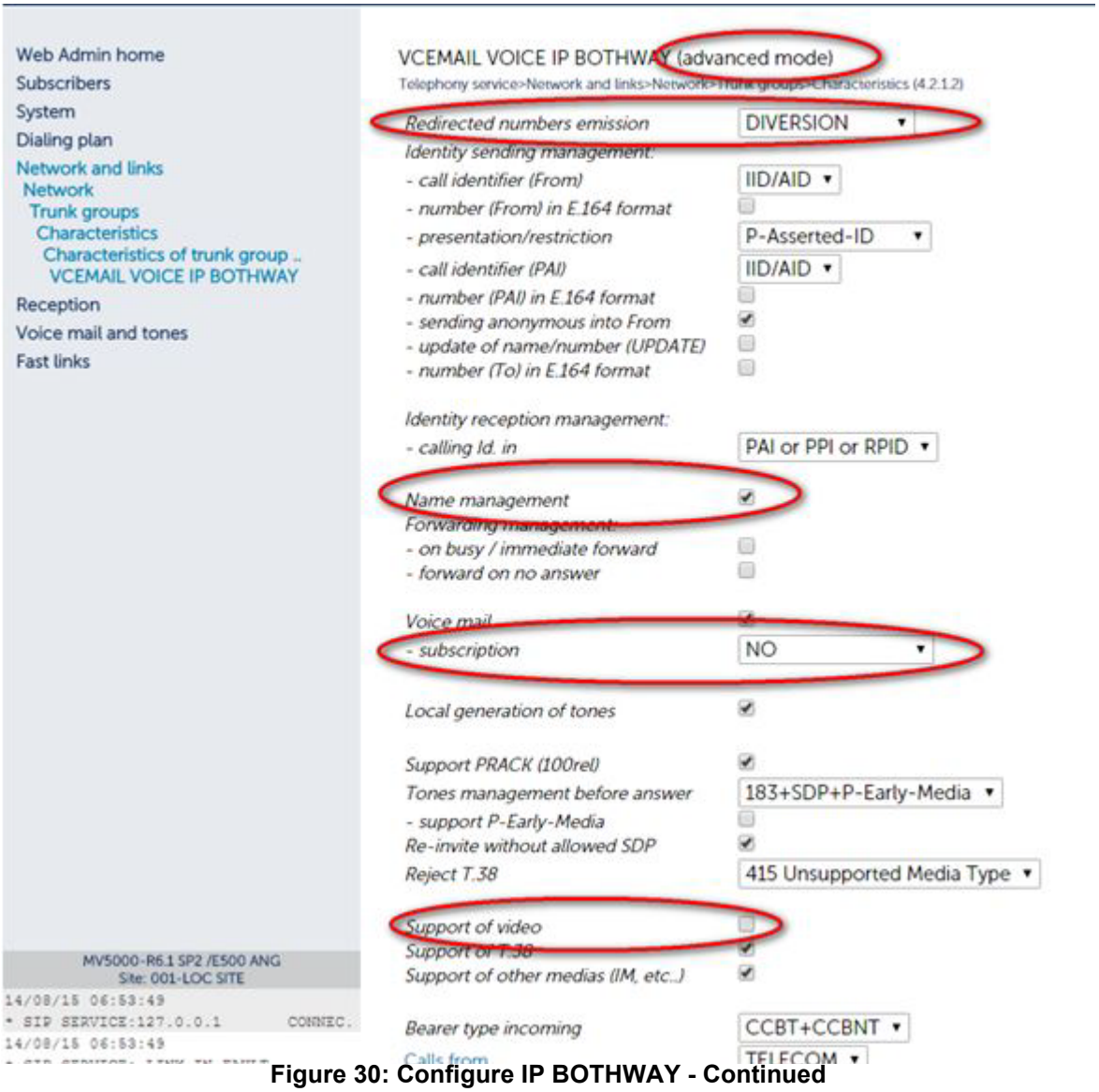


Figure 30: Configure IP BOTHWAY - Continued

8. Define voice mail

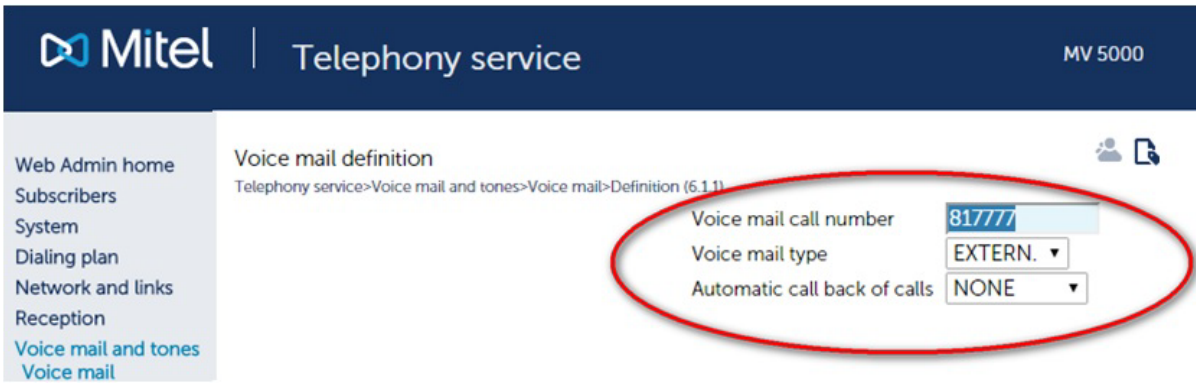


Figure 31: Voice Mail Definition

9. Set Broadcast priority

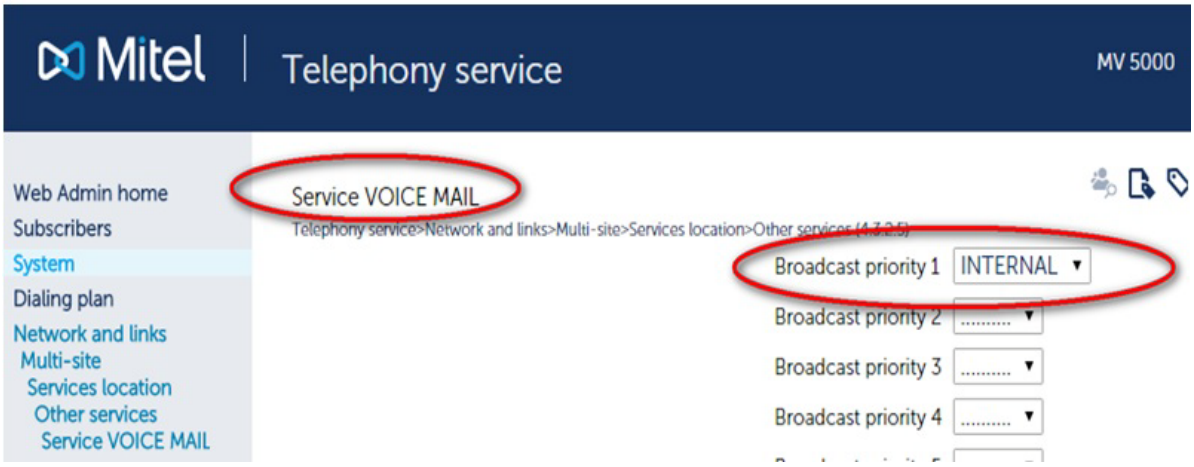


Figure 32: Broadcast Priority

10. Perform the SIP trunk configuration required to insert the calling party in the « From » msg header of outgoing call. The following configuration example uses data from the previous steps for MiCollab NuPoint.

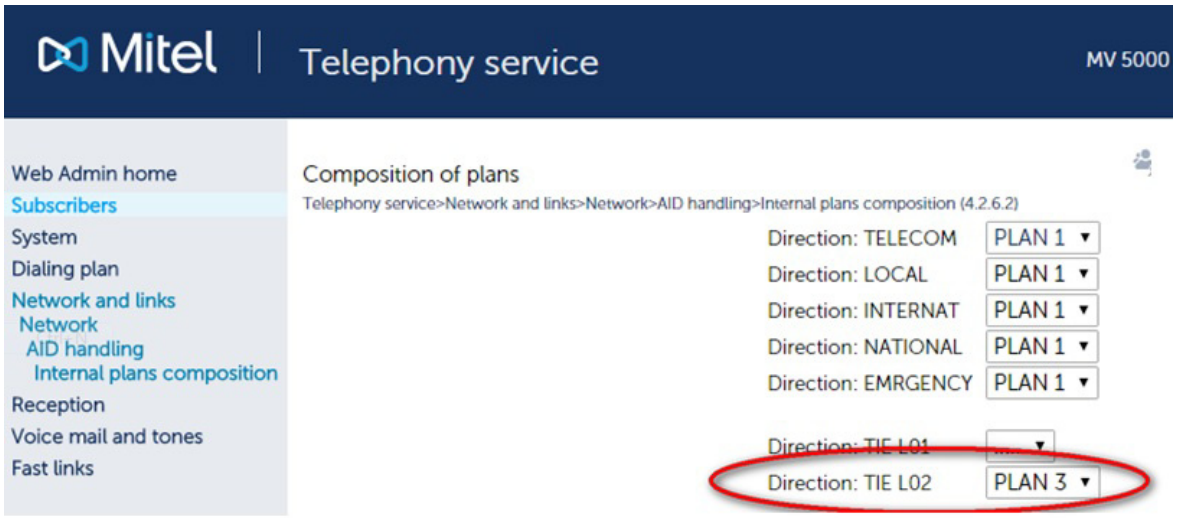


Figure 33: AID Handling - Composition of Plans

Figure 34: AID Handling - Selection of Calling Party

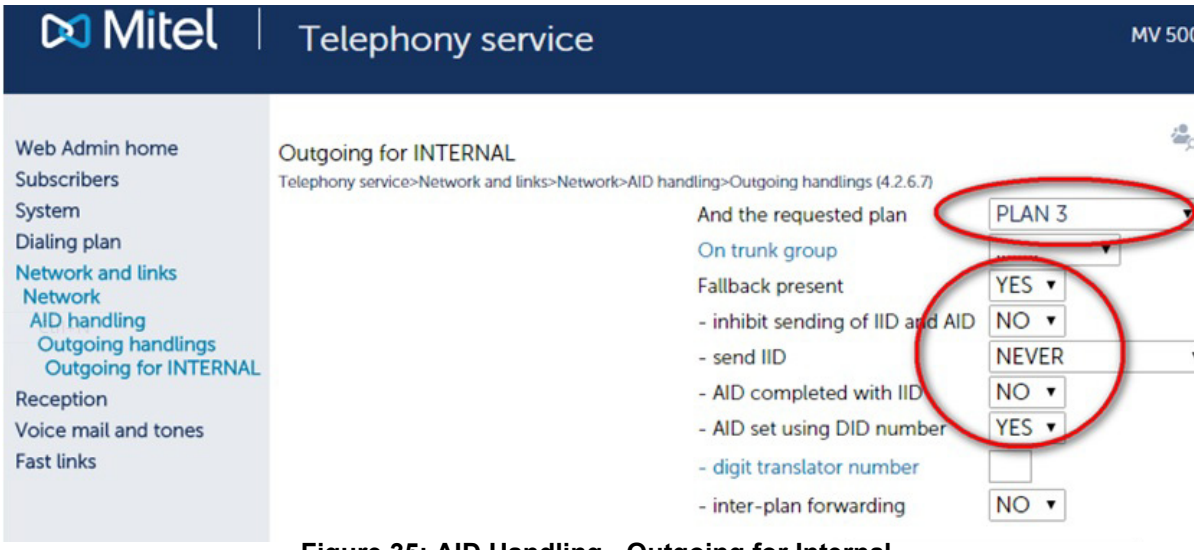


Figure 35: AID Handling - Outgoing for Internal

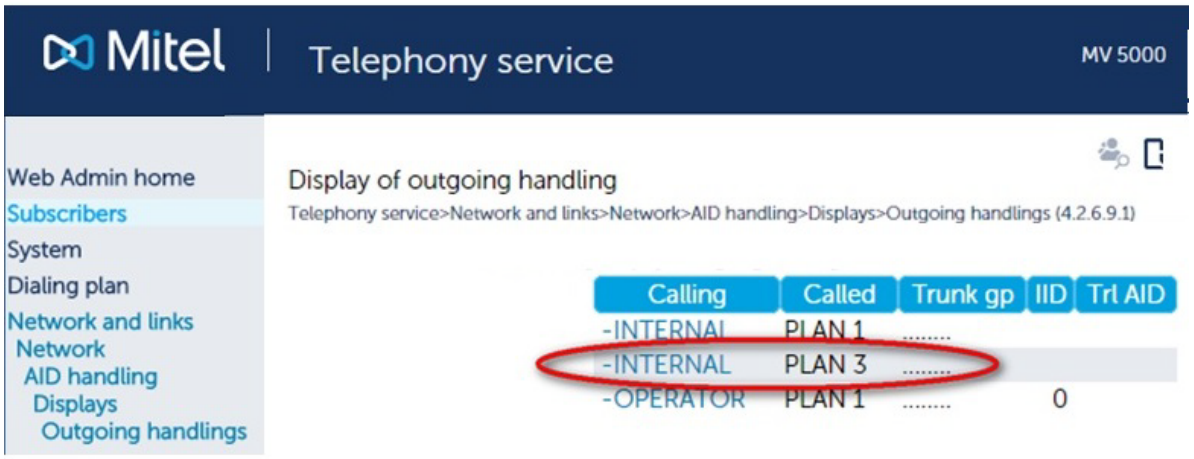


Figure 36: AID Handling - Display of Outgoing Handling

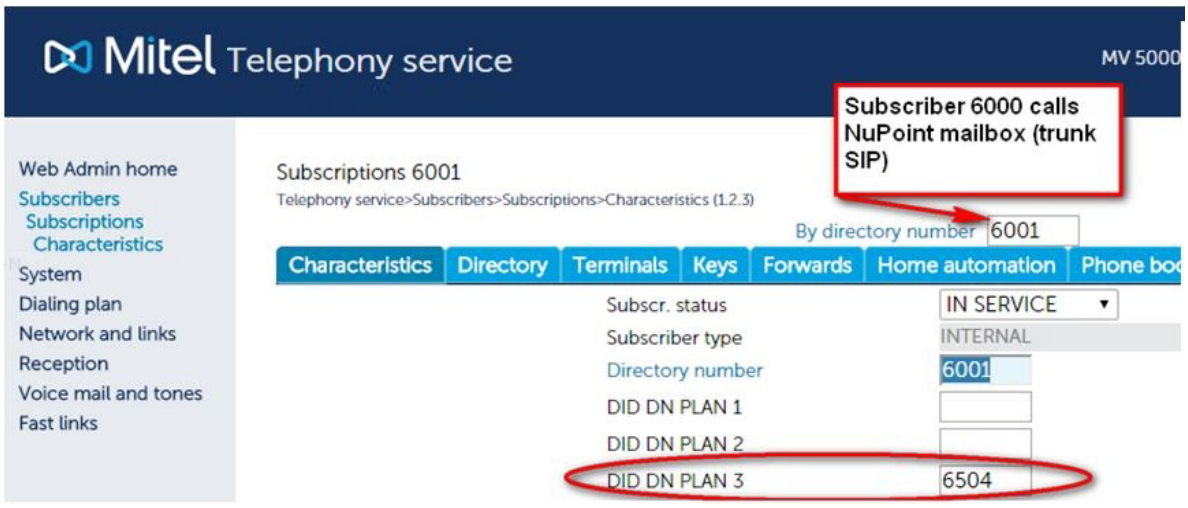


Figure 37: SIP Trunk Group - Voice Mail Direct Call

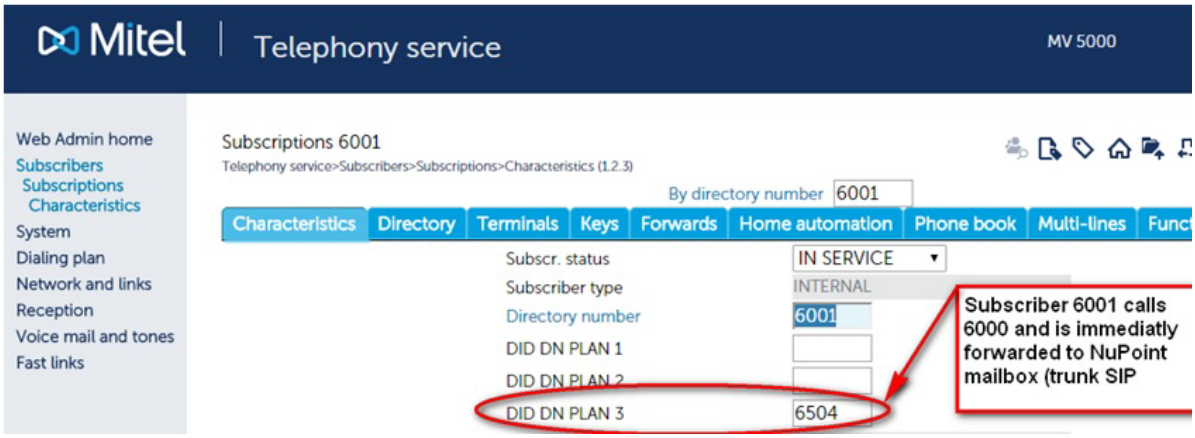


Figure 38: SIP Trunk Group - Voice Mail Forwarded Call

11. Add the MiCollab/NuPoint IP address in the Whitelist if the security is enabled.

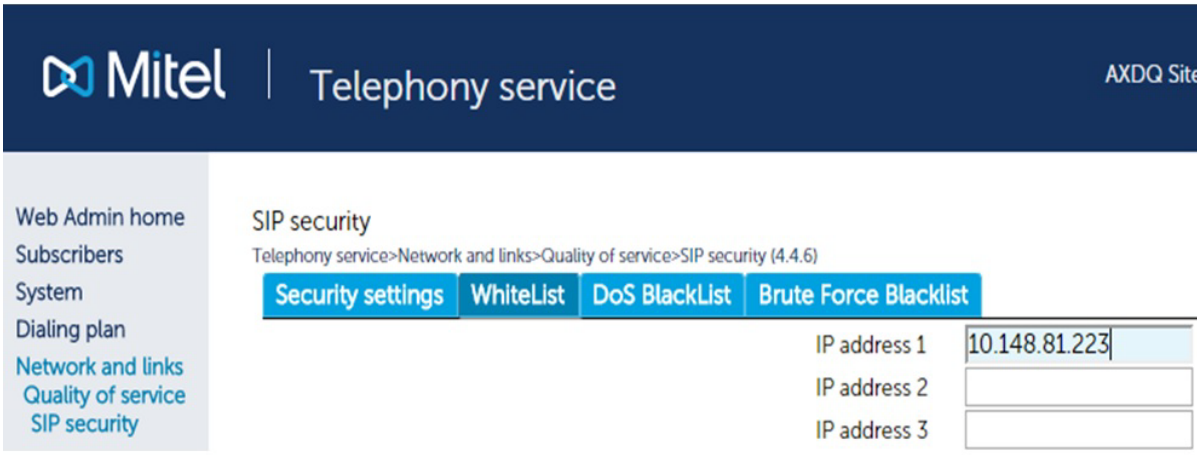


Figure 39: Add WhiteList for NuPoint

TEST NUPOINT VOICE MAIL OPERATION

To test basic communication between the MiVoice 5000 and the NuPoint UM:

1. From any extension configured on the communications platform, call the NuPoint UM voice mail extension.
2. Verify you hear the voice mail system greeting: “Welcome to the message center.” This step establishes that you connected successfully to the NuPoint UM voice mail system.
3. Set up the test Mailbox Name and Greeting.

From the phone for which you created a test mailbox on NuPoint UM, dial the NuPoint UM voice mail extension.

1. Dial the mailbox passcode to access the voice mail system options for that mailbox.
2. Follow the voice mail prompts to set up the mailbox and create a greeting.
3. Dial Extension “xxxxx” and Leave a Voice Mail Message

- From any phone on the communications platform, dial the NuPoint UM voice mail extension.
- When prompted for an extension at the system greeting, dial the test mailbox created earlier.
- Leave a voice mail message and then follow the prompts to deliver the message.

4. Verify MWI and Retrieve Voice Message from Extension “xxxxx”.
5. Verify that your voice mail message was recorded by accessing the voice mail system, providing the passcode, and then listening to the message.

INTEGRATE AUDIO, WEB AND VIDEO

To integrate the AWV application with the MiVoice 5000, you must configure the MiVoice 5000 system settings first, then configure the SIP server settings in the AWV application.

INSTALL MICOLLAB AWV CONFERENCING CLIENT FOR ALL USERS

If you are running in a networked environment, you can (as the administrator of the computers) install MiCollab Audio, Web and Video Conferencing Client for all users. This is usually done in a Terminal server or Citrix environment.

If you wish to do this, download the executable file from **http://<MiCollab IP address>/wd/MCAClient-admin.exe** and follow the instructions.

Note: You must have Administrator privileges to install MiCollab Audio, Web and Video Conferencing Client for all users. The software must be placed in a location that all users can access. If a user on the system already has the MiCollab Audio, Web and Video Conferencing Client installed on their machine locally, that version takes precedence over the administrator-installed version.

CONFIGURE MIVOICE 5000 TO COMMUNICATE WITH AWV

1. Define the Hunt Group for AWV with a cyclical hunt group head (1.2.1 and 1.3.1.2).

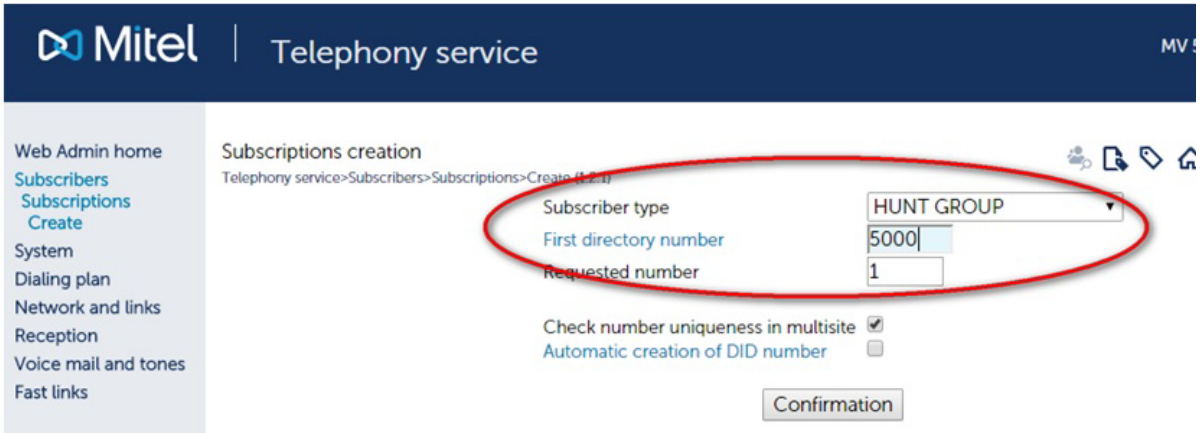


Figure 40: Hunt Group Head Definition

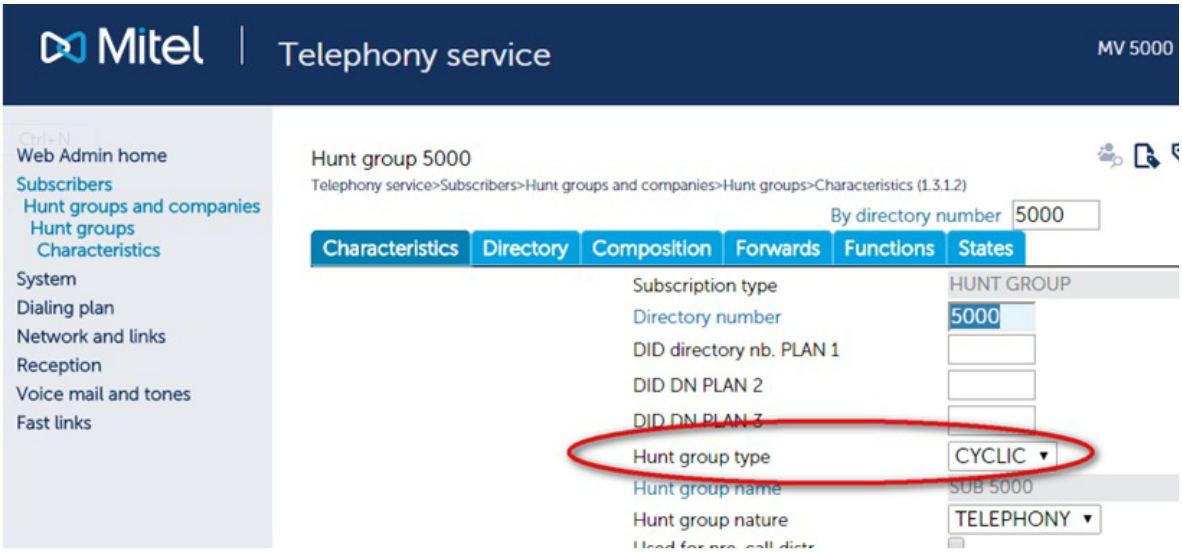


Figure 41: Hunt Group Cyclic Head Type

2. Add subscriptions used by MiCollab to Hunt Group (1.3.1.2, 1.4.3, 1.3.1.2, and 1.2.3)
   - Number of subscriptions to be included according to max participant number inside conference
   - Number max of subscriptions defined in Hunt Group is limited to 100
   - SIP MD5 password defined on MiCollab must be the same for all subscriptions belonging to Hunt Group

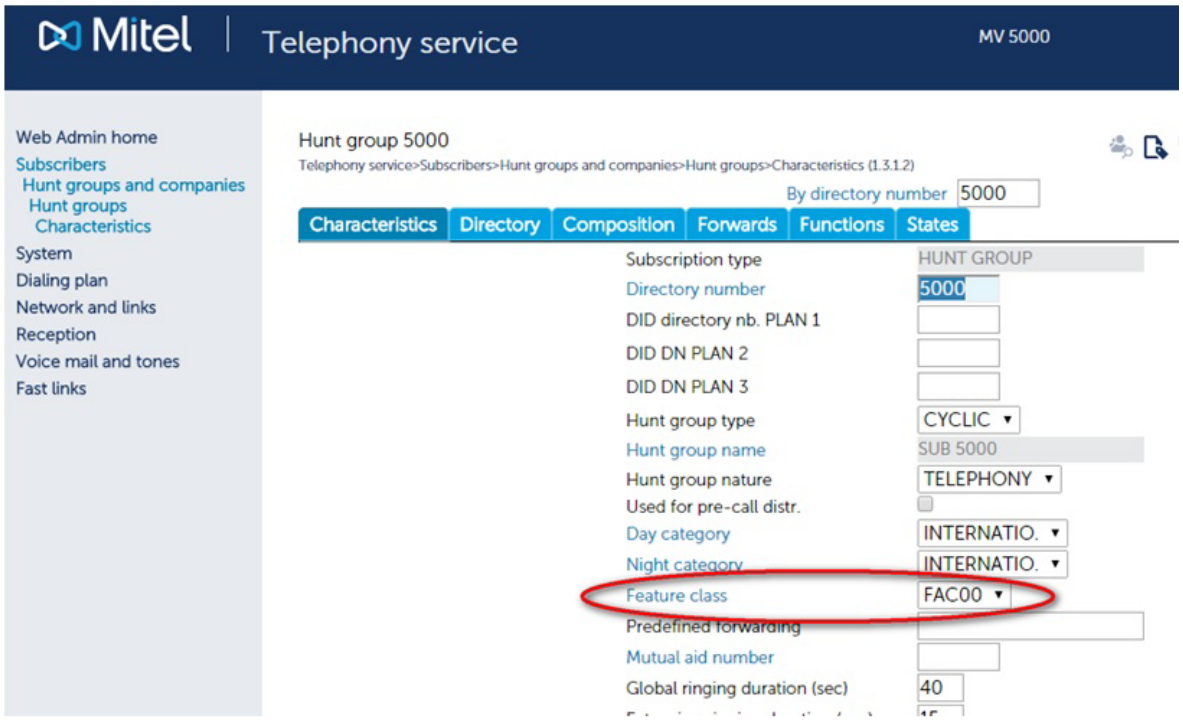


Figure 42: Hunt Group Feature Class

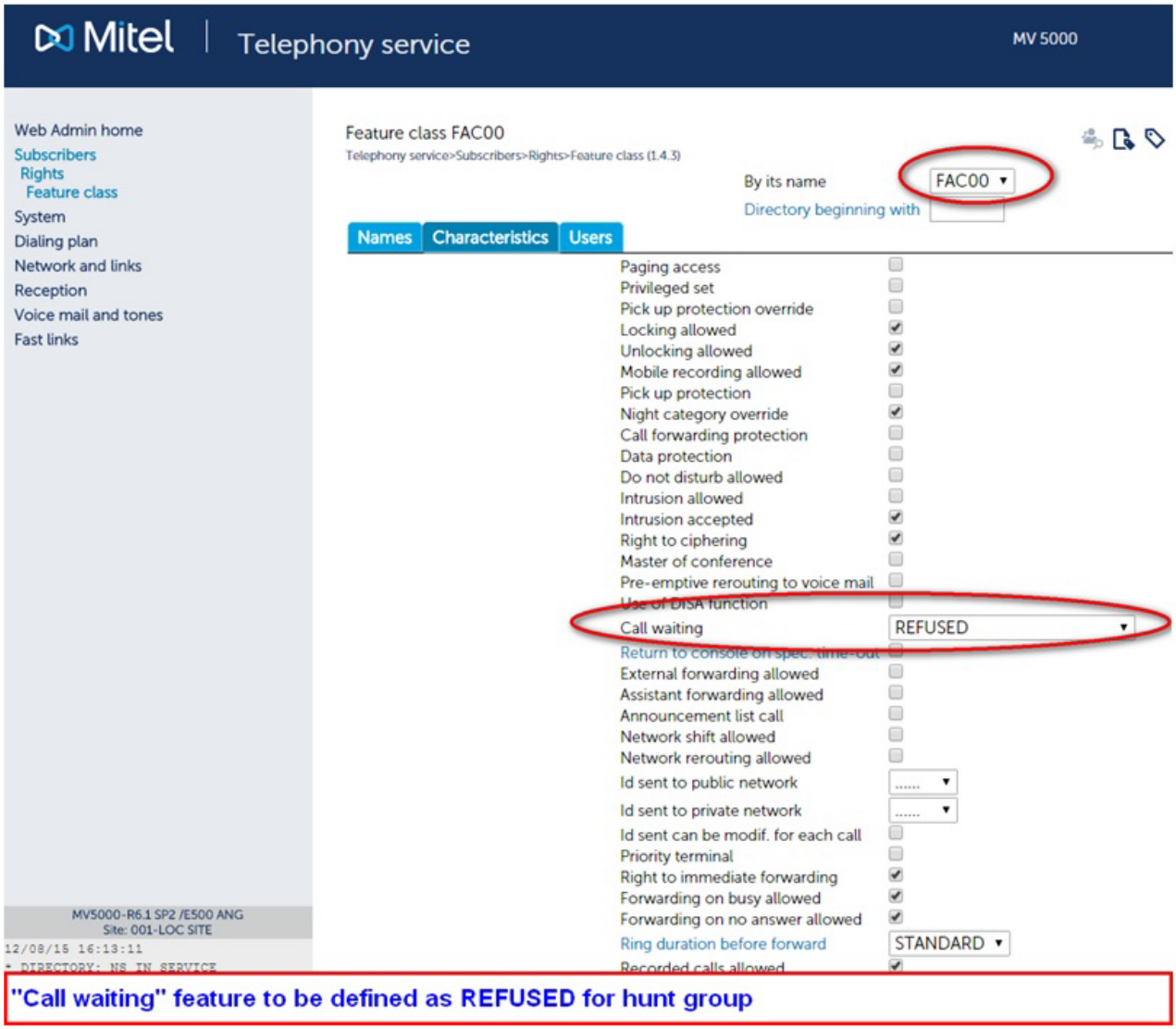


Figure 43: Hunt Group Feature Class

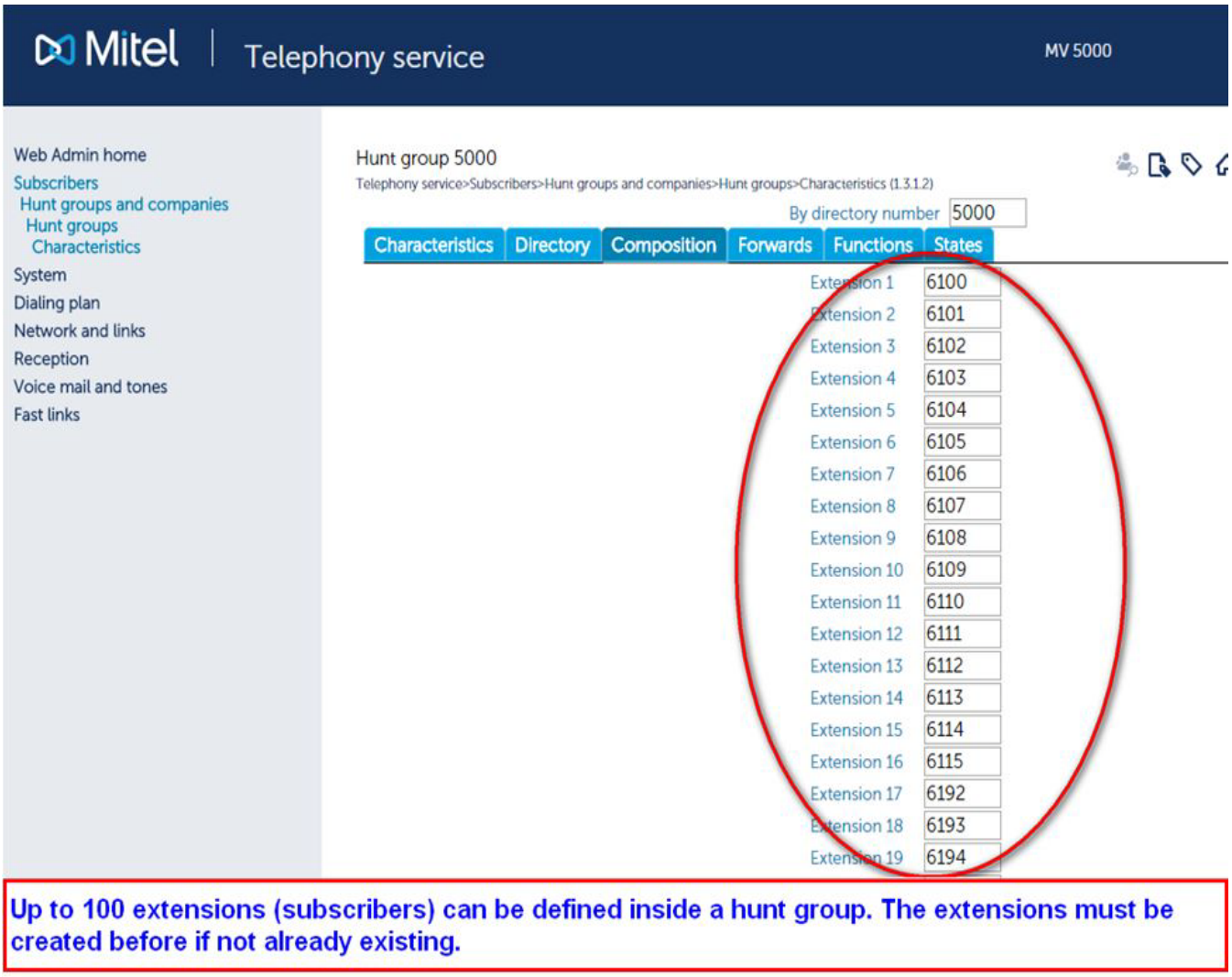


Figure 44: Subscriptions to be included in Hunt Group

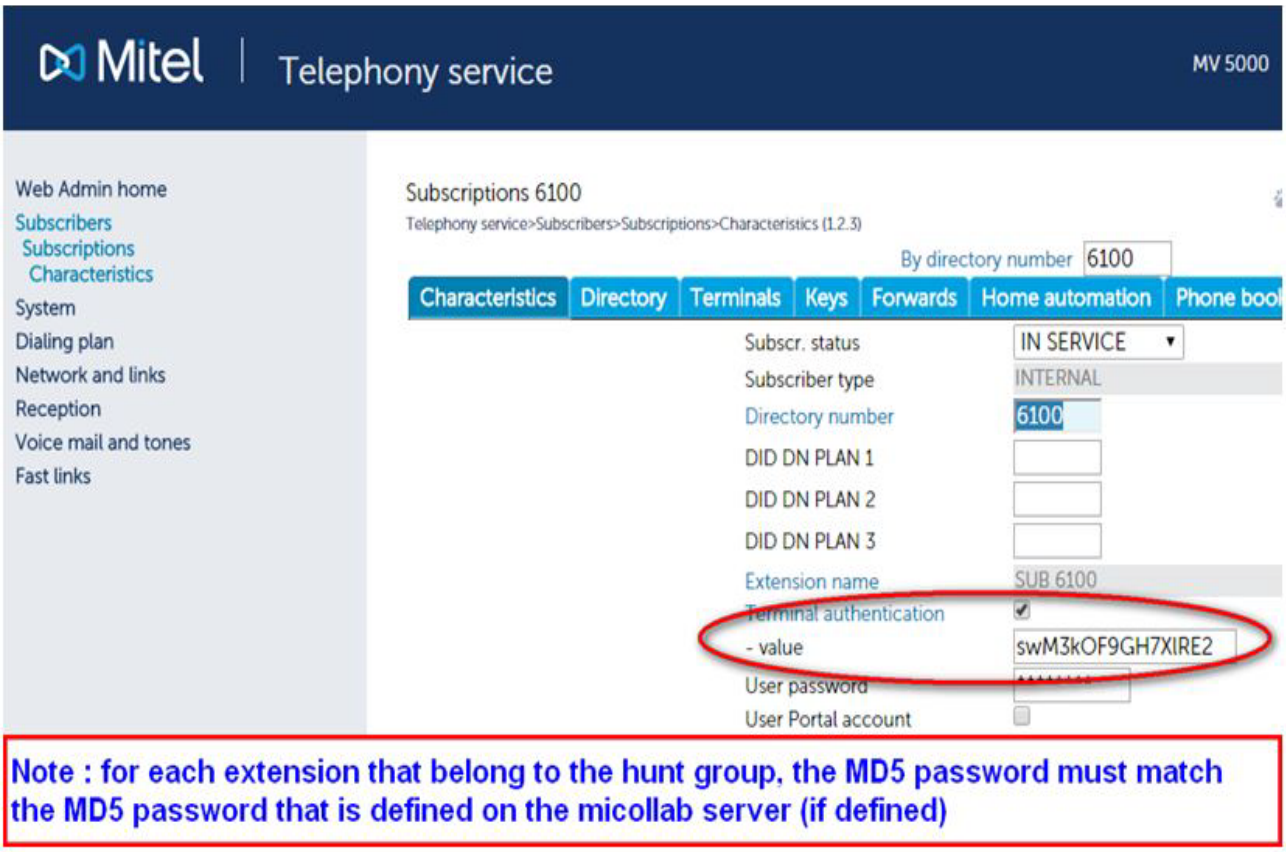


Figure 45: MD5 Password Must Match

3. Configure the supported codec and payload for the SIP phones. The duration of packets must be 20 ms for all codecs.

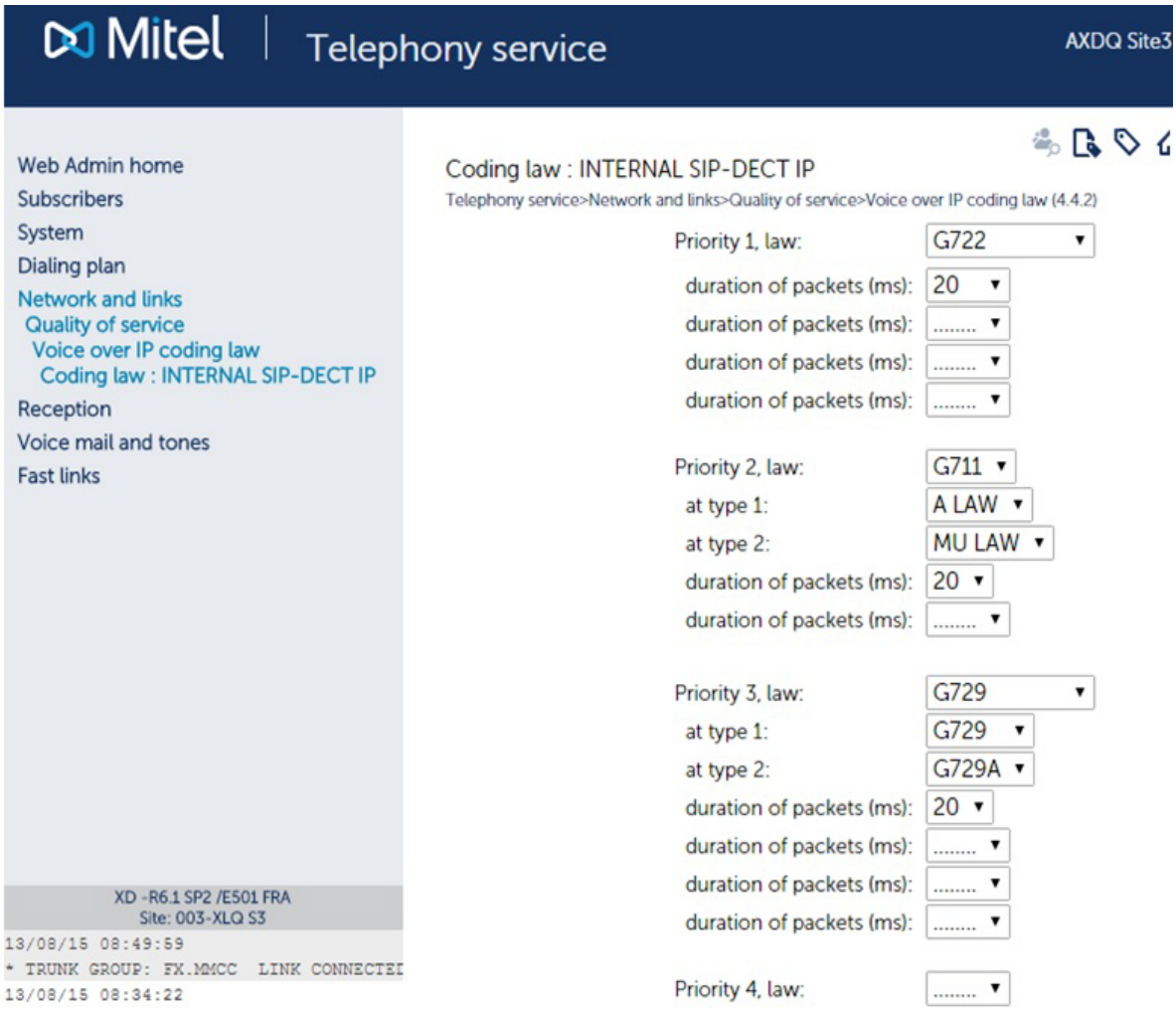


Figure 46: Configure Codec

4. Set the DTMF Method to RTP PACKET and the Header Value to 101.Note that SIP-INFO is not managed for the MiCollab Clients

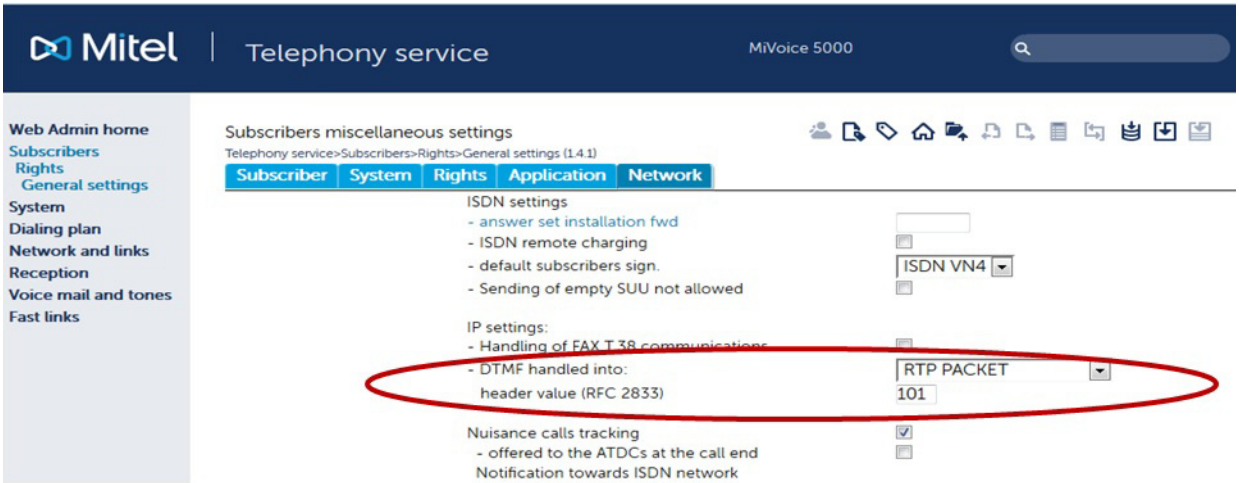


Figure 47: Configure the DTMF Method and the Header Value

CONFIGURE SIP SERVER SETTINGS IN MICOLLAB AWV

Configure the SIP Server settings in MiCollab Audio, Web and Video Conferencing using the account information from the MiVoice 5000 configuration:

1. Log into the MiCollab server manager interface.
2. Under **Applications**, click **Audio, Web and Video Conferencing**.
3. From the MiCollab Audio, Web and Video Conferencing main page, click **System Options** on the navigation pane.
4. In **System Options > Platform**, select **MiVoice 5000** as the system that is connected to MiCollab Audio, Web and Video Conferencing. Set **DTMF Payload Type** to 101.
5. Click **Save**
6. Click **Ok** at the prompt to restart the server.
7. Click **Configure SIP Server** on the navigation pane. The SIP Server Configuration page appears.
8. Enter the following information:
   - **Extension First**: Type the extension number of the first IP device in the hunt group used by the MiCollab Audio, Web and Video Conferencing server to register itself with the PBX.
   - **Extension Last**: Type the extension number of the last IP device in the hunt group used by the MiCollab Audio, Web and Video Conferencing server to register itself with the PBX.
   - **Extension PIN**: This PIN is used for SIP MD5 authentication. If authentication is activated on the MiVoice 5000, this field is mandatory and is equal to the SIP password for subscriber "Extension First" to "Extension Last".
   - **SIP Domain**: This can be the domain name, fully qualified domain name (FQDN), or the IP address of the PBX system used to register the MiCollab Audio, Web and Video Conferencing
   - **SIP ports**: If you do not know the domain name or FQDN, type the PBX system IP address.
   - **IP Address**: Type the IP address of the PBX system. Alternatively, type the FQDN. Note that when typing the FQDN, only the first IP Address value returned by the DNS lookup will be used.
9. Click **Save**.

INTEGRATE MIVOICE BORDER GATEWAY

MiVoice Border Gateway provides a secure communications path for remote MiCollab Client users to the MiCollab Client Service. The MBG provides SIP Teleworker support for MiCollab Client softphones.

CONFIGURE THE ICPS IN THE STANDALONE MBG (OPTIONAL)

When you create the network elements in the MiCollab USP network element tab, the network elements are automatically added to the embedded MiVoice Border Gateway (MBG) application. However, if your deployment includes a standalone MBG system, you must

manually configure the network elements as ICPs in the standalone MBG server manager interface.

Note: The standalone MBG must be clustered with the embedded MBG application on the MiCollab server.

To add a communications platform as an ICP:

1. Log into the standalone MBG server manager interface.
2. Under **Applications**, click **MiVoice Border Gateway**.
3. From **Service Configuration**, click **ICP**
4. From **ICP Information**, click **+**
5. Complete the ICP information. Refer to the online help for details. Select "MiVoice 5000" as the ICP type.
6. Click **Save**. You can now select the ICP type (MiVoice 5000) from any MBG device management page:

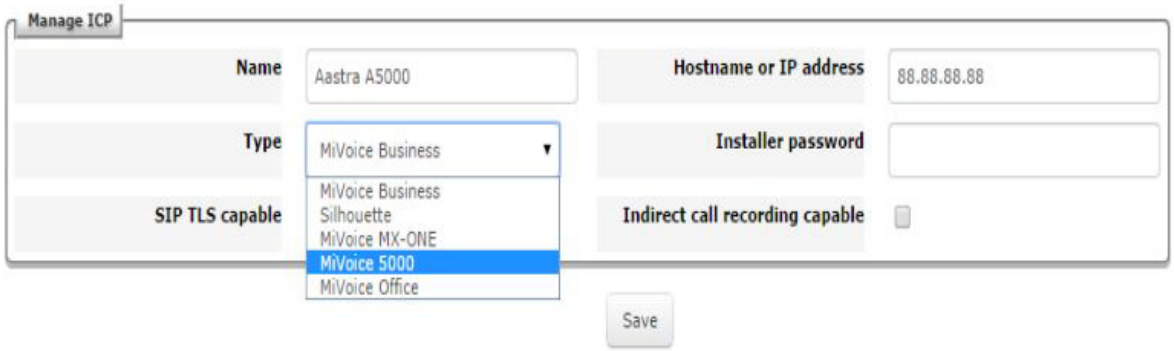


Figure 48: Configure MiVoice 5000 as ICP on Standalone MBG

CONFIGURE SIP SETTINGS

1. Set the MBG SIP Capabilities for the MiVoice 5000 ICP to UDP, TCP.

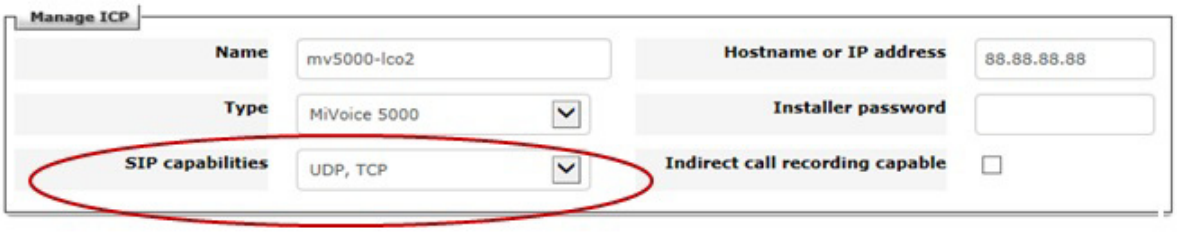


Figure 49: Configure MBG SIP Capabilities

2. Configure the SIP settings.In the Allowed URI Names field, you can enter the name of the FQDN of the MBG SIP host. This is useful for identifying 68xxi remote workers and MiCollab mobile client teleworkers.

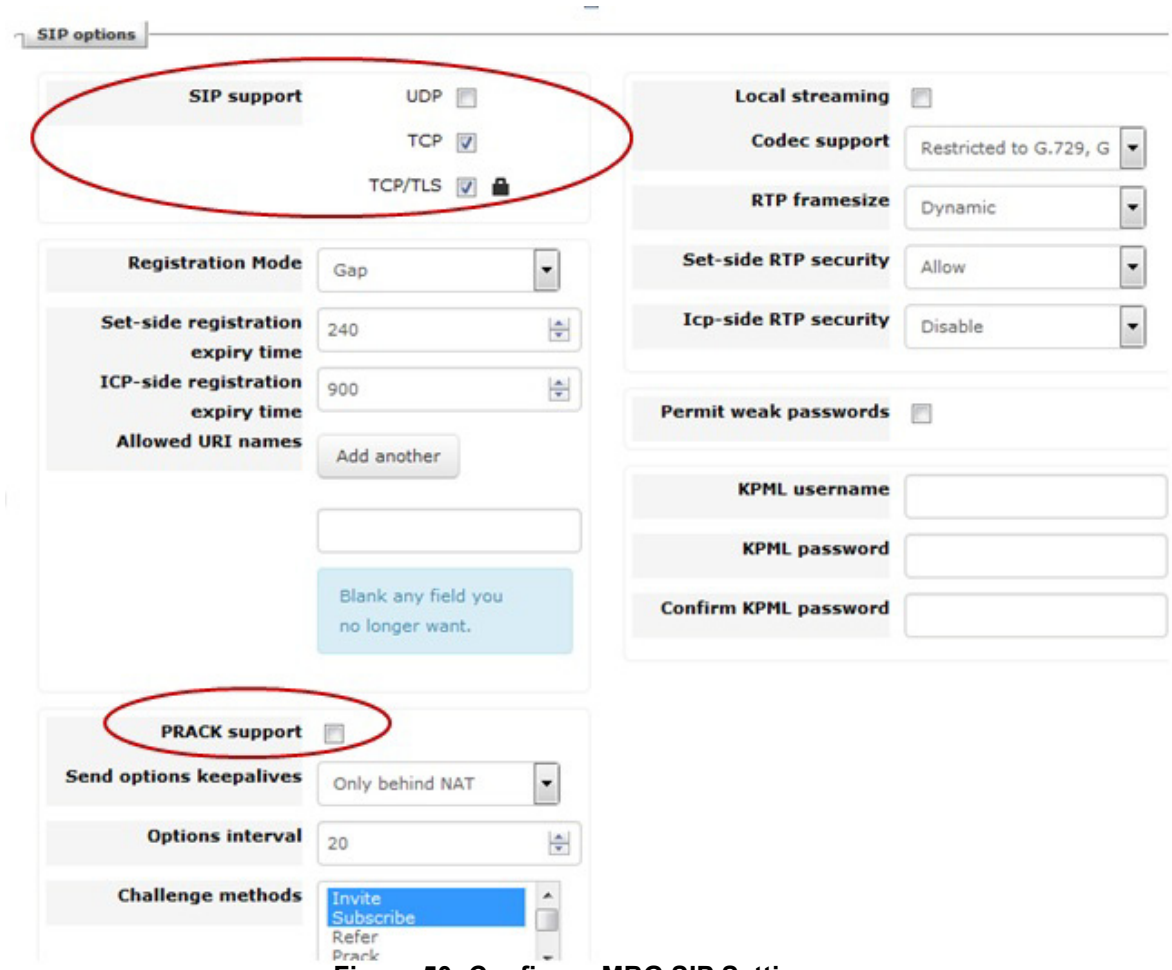


Figure 50: Configure MBG SIP Settings

3. Configure the "Network profile" according to the network configuration
4. Configure the "Application Integration".

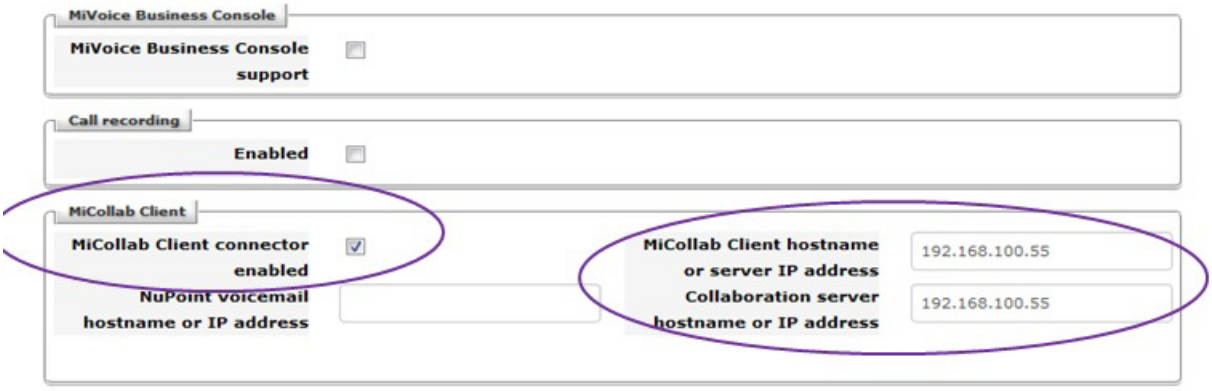


Figure 51: Configure Application Integration

5. Configure the Web Proxy (for the Standalone MBG clustered only) to allow the connection between applications on the LAN and clients (for example, AWV, MiCollab Client) on the Internet.

INTEGRATE MICOLLAB CLIENT

CONFIGURE MICOLLAB CLIENT

Refer to the MiCollab Client Service application online help and the *MiCollab Client Administrator Guide* for configuration information.

Note that you must enable the following Nupoint UM FCOS options to allow the MiCollab Client Desktop client to control voice mail calls:

- FCOS 289 Enable UM-SMTP
- FCOS 290 Enable UM-Web
- FCOS 295 Enable UM Pro

DEPLOY MICOLLAB CLIENT MOBILE CLIENTS

MiVoice 5000 platforms support MiCollab mobile clients. After you configure a user with a mobile client in the MiCollab Client application, a deployment e-mail is sent to the user with simplified configuration instructions on how to set it up.

Configure CSTA Link

The MiCollab Client CSTA Proxy application supports the call control messaging between MiCollab and the MiVoice 5000 platform to support MiCollab Client features such as "Click-to-Call".

1. Log into the MiCollab server manager.
2. Under **Applications**, click **MiCollab Client Service**.
3. Click **Configure MiCollab Client Service**.
4. Click **PBX Nodes**.
5. Double-click the system name or IP Address of the MiVoice 5000.
6. Open **CSTA Settings**.
7. In the Port field, enter the number of the CSTA port on the MiVoice 5000 (default is 3211).
8. Refer to the online help for descriptions of the other fields. Typically, you will not need to change the default settings.
9. Click **Save**.

Configure MiCollab Client Deployment

1. Log into the MiCollab server manager interface.
2. Set up the connection to MBG for the internal MBG:
   - Under **Applications** click **MiCollab Client Deployment**.
   - Access the **Configuration > Connections to MBGs** panel.
   - Create a connection to the local MBG using the LAN (Server Only) or WAN (Server/Gateway) IP address of the MiVoice Business Gateway. *See the MiCollab Client Deployment help for details.*

- Click the **Save and send AuthRequest** button.

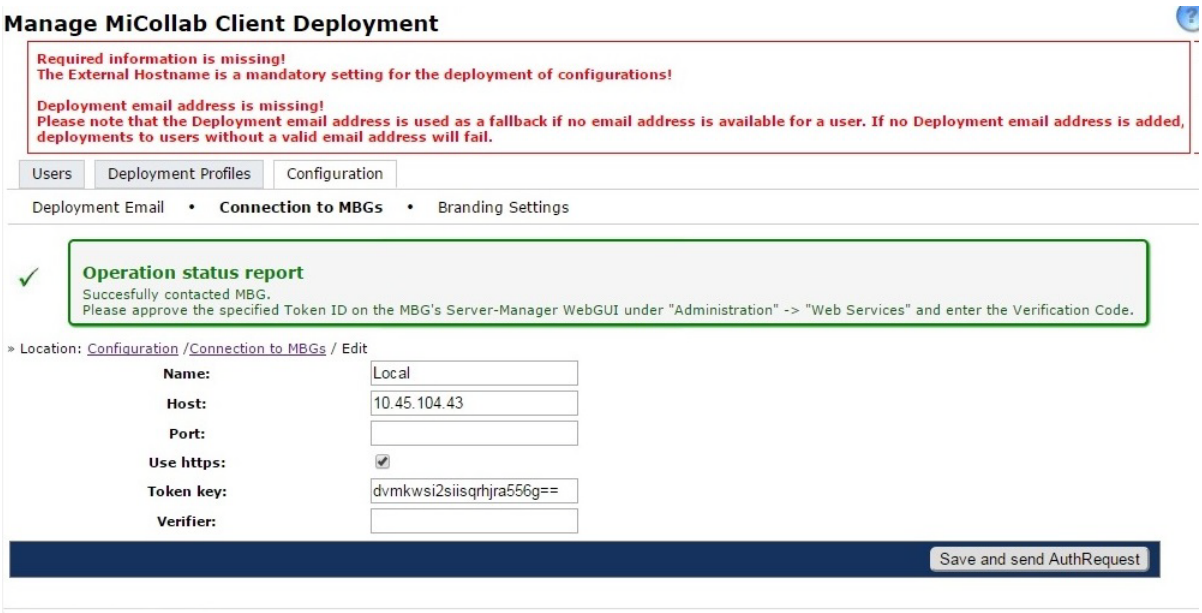


Figure 52: Setting up MiCollab Client Deployment Connection to Local MBG

3. Under **Administration**, click **Web Services**.

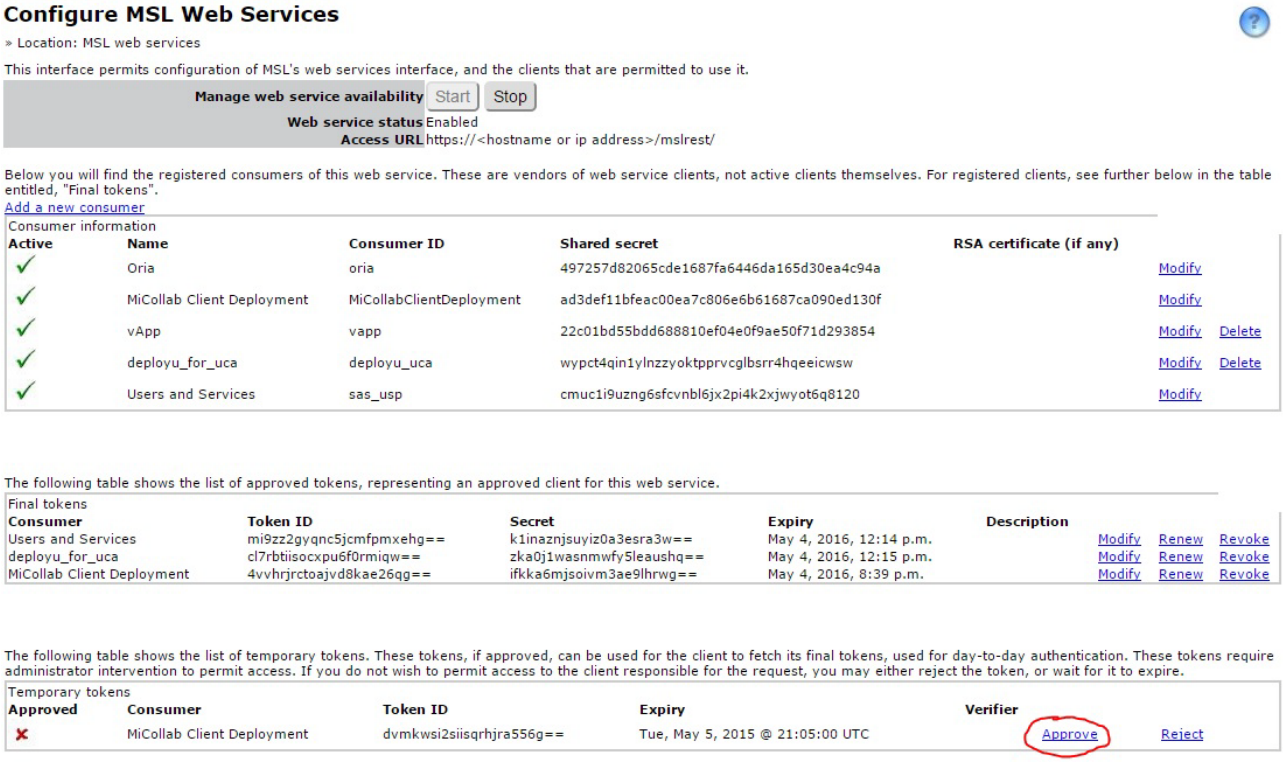
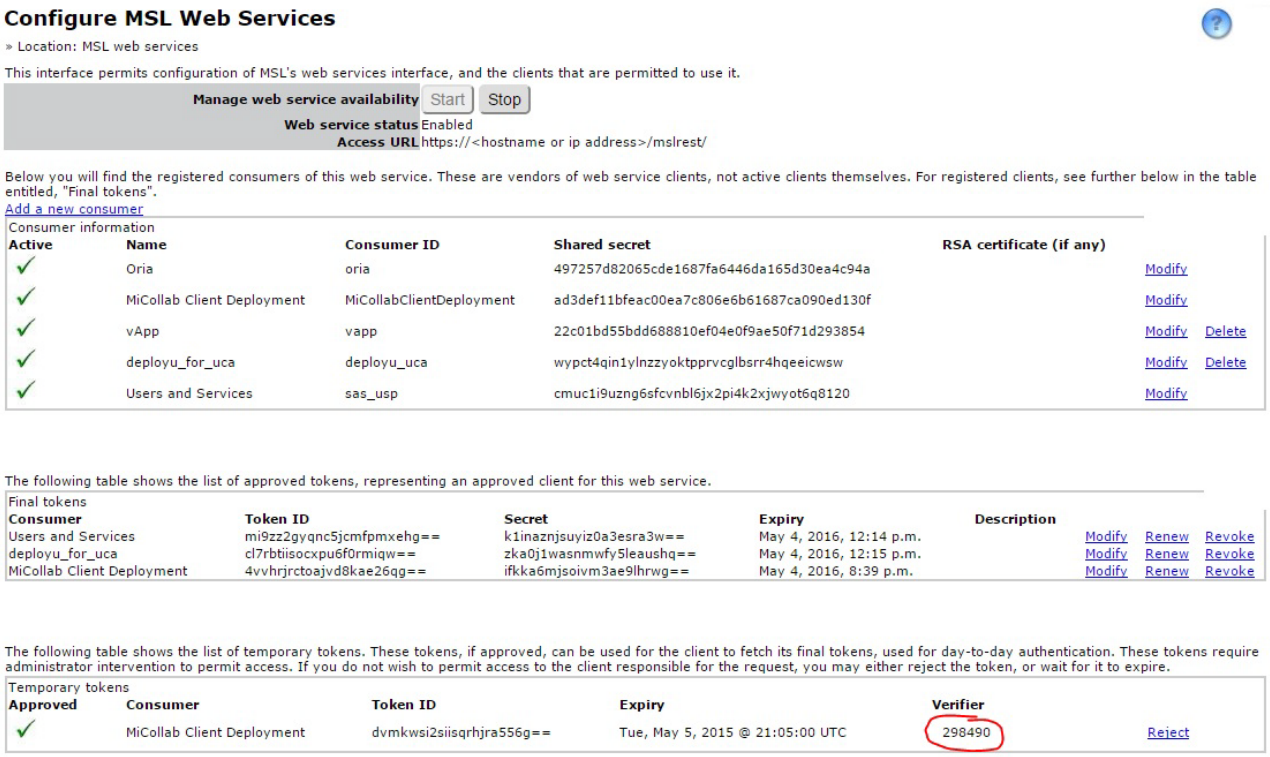


Figure 53: Approve MiCollab Client Deployment Temporary Token in Web Services Page

4. Click **Approve**.

5. The system generates a verifier code for the MiCollab Client deployment. Copy the "verifier code" that is generated by the system. You will need to enter it in a later step.



Configure MSL Web Services

» Location: MSL web services

This interface permits configuration of MSL's web services interface, and the clients that are permitted to use it.

Manage web service availability Start Stop
Web service status Enabled
Access URL https://<hostname or ip address>/mslrest/

Below you will find the registered consumers of this web service. These are vendors of web service clients, not active clients themselves. For registered clients, see further below in the table entitled, "Final tokens".

Add a new consumer

Consumer information

Active	Name	Consumer ID	Shared secret	RSA certificate (if any)		
✓	Oria	oria	497257d82065cde1687fa6446da165d30ea4c94a		Modify	
✓	MiCollab Client Deployment	MiCollabClientDeployment	ad3def11bfeac00ea7c806e6b61687ca090ed130f		Modify	
✓	vApp	vapp	22c01bd55bdd688810ef04e0f9ae50f71d293854		Modify	Delete
✓	deployu_for_uca	deployu_uca	wypct4qin1ylnzzyoktpprvcglbsrr4hqeeicwsw		Modify	Delete
✓	Users and Services	sas_usp	cmuc1i9uzng6sfcvnbl6jx2pi4k2xjwyot6q8120		Modify	

The following table shows the list of approved tokens, representing an approved client for this web service.

Final tokens

Consumer	Token ID	Secret	Expiry	Description			
Users and Services	mi9zz2gyqnc5jcmfpmxehg==	k1inaznjsuyiz0a3esra3w==	May 4, 2016, 12:14 p.m.		Modify	Renew	Revoke
deployu_for_uca	cl7rbtiisocxpu6f0rmiqw==	zka0j1wasnmwfy5leaushq==	May 4, 2016, 12:15 p.m.		Modify	Renew	Revoke
MiCollab Client Deployment	4vvhrjrctoajvd8kae26qg==	ifkka6mjsoivm3ae9lhrwg==	May 4, 2016, 8:39 p.m.		Modify	Renew	Revoke

The following table shows the list of temporary tokens. These tokens, if approved, can be used for the client to fetch its final tokens, used for day-to-day authentication. These tokens require administrator intervention to permit access. If you do not wish to permit access to the client responsible for the request, you may either reject the token, or wait for it to expire.

Temporary tokens

Approved	Consumer	Token ID	Expiry	Verifier	
✓	MiCollab Client Deployment	dvmkwsi2siisqrhjra556g==	Tue, May 5, 2015 @ 21:05:00 UTC	298490	Reject

Figure 54: Verifier Code

6. Under **Applications**, click **MiCollab Client Deployment**.
7. Access the **Configuration** > **Connections to MBG** panel.
8. Modify the connection and enter the verifier code that you copied above.
9. Click **Save and send AuthRequest**.

Enable Remote Access to the Deployment Unit Interface

10. Log into the MBG server manager.
11. Under **Administration** click **Remote proxy services**.
12. Click the **LAN server proxy list** tab.
13. Click **Add new LAN server proxy** and add the MiCollab server.
14. Click Modify and configure the proxy settings.
15. Click **Save**.

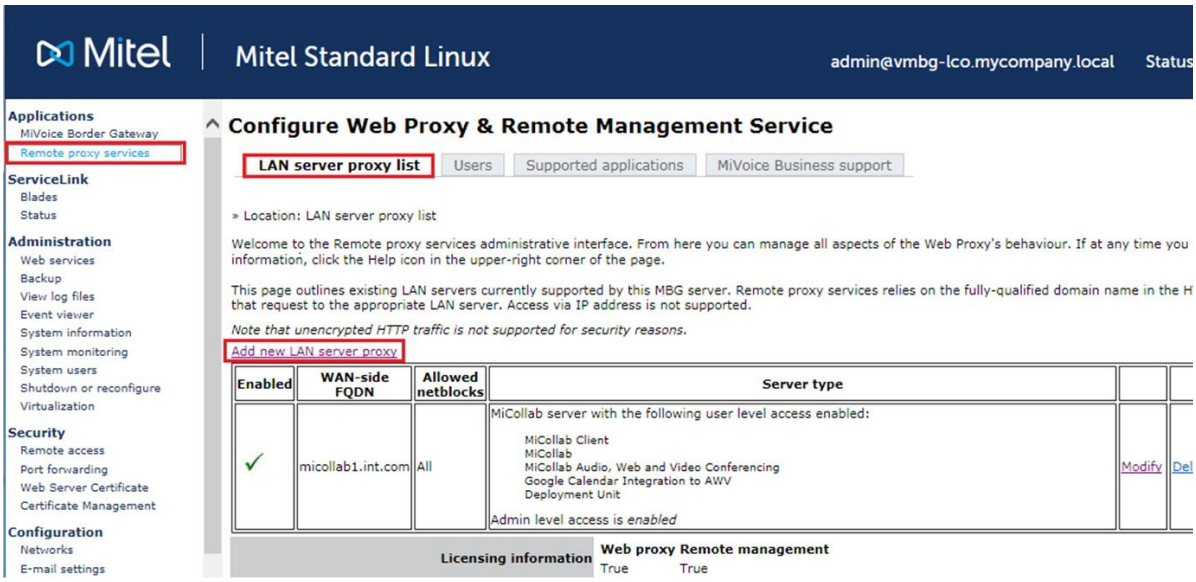


Figure 55: Remote Proxy Services

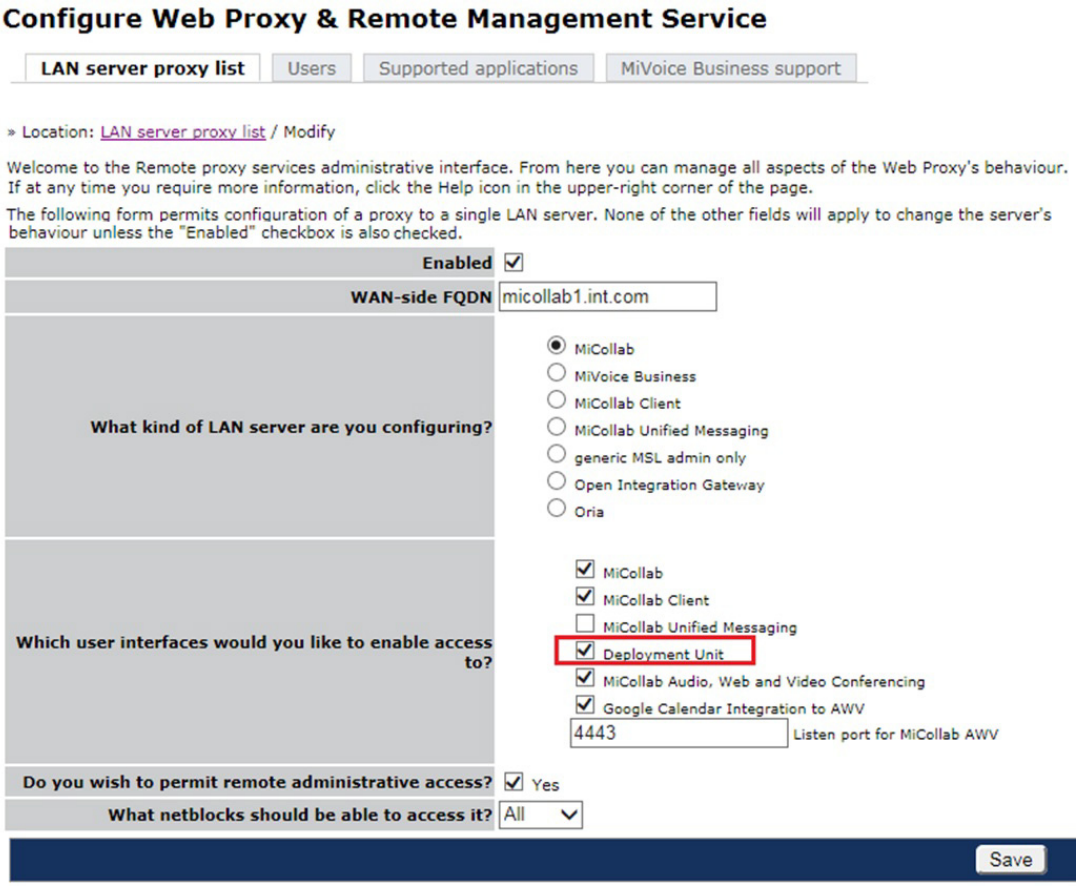


Figure 56: Enable Access to Deploy Unit Interface

Create and Assign Deployment Profiles

16. Log into MiCollab server manager.
17. Under **Applications**, click **MiCollab Client Deployment**.
18. Click **Deployment profiles**. You can use the default deployment profile, create a new profile, or modify the existing ones. Deployment is supported for MiCollab Client users who are assigned with profiles.
19. Configure the **General settings** and **Softphone settings**. Refer to the online help for field descriptions.
    - In the General settings configure the connection parameters:
      - **Config download host**: Enter the FQDN of the MiCollab Server
      - **MBG SIP host**: Enter the IP address or the FQDN of the MBG SIP host if client is connected in Teleworker mode
      - **PBX SIP host**: The IP address of the MiVoice 5000 if Teleworker is deactivated
    - In the Softphone settings, configure if the client will register
      - to the MBG in Teleworker mode, or
      - to the MiVoice 5000, if Teleworker is deactivated

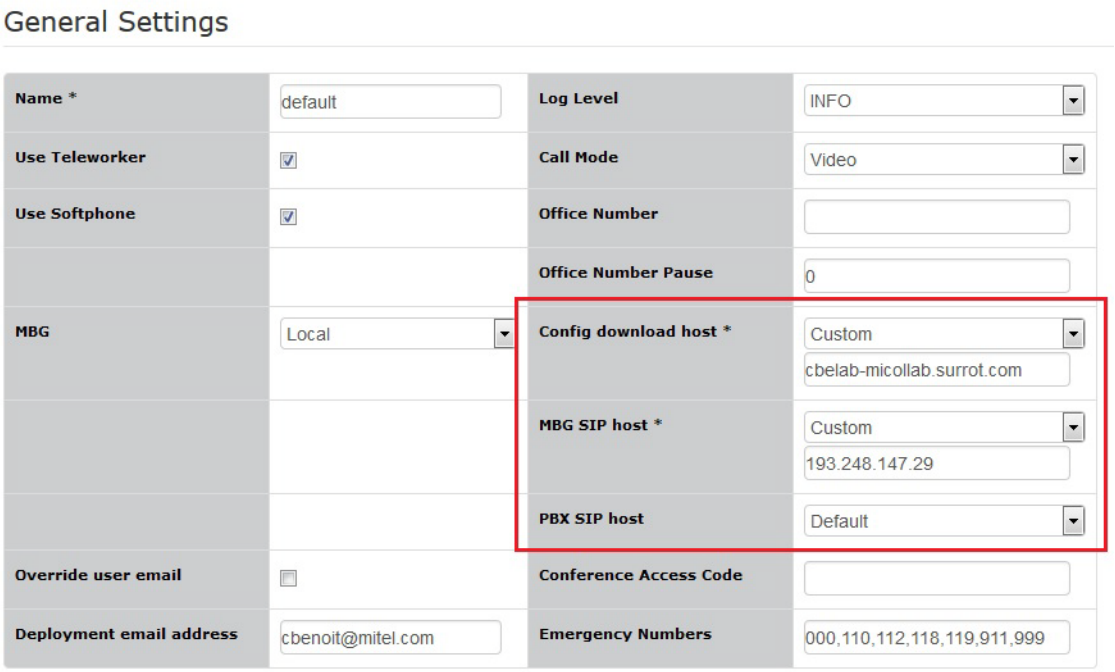


Figure 57: General Setting (Settings shown are examples only)

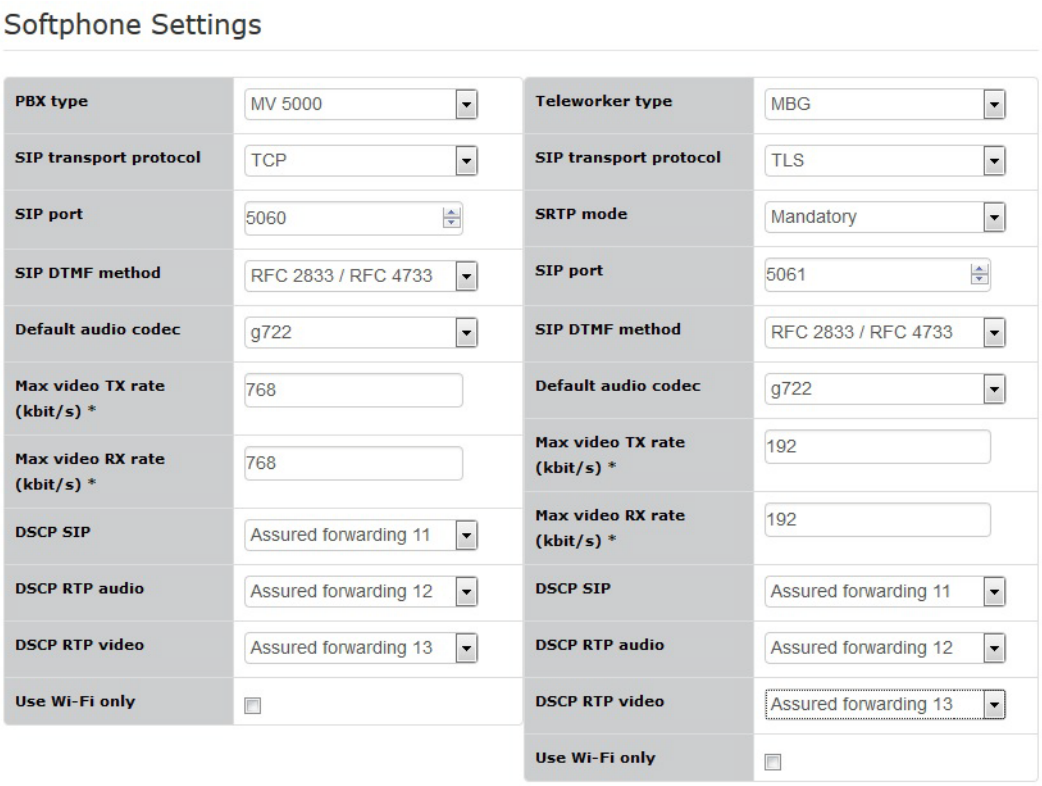


Figure 58: Softphone Settings

20. Click the **Users** tab and assign the deployment profiles (templates/roles) to the MiCollab Client users.

Purchase and Import SSL Certificates to Servers

21. Log into the MiCollab server manager.

22. Under **Security**, click **Web Server Certificates.**

23. To enable remote client station to log in and to enable MiCollab Mobile Client users to establish connections, you must install an SSL Certificate on the MiCollab and MBG servers. Refer to the online help associated with the Web Server Certificates page for instructions.

Synchronize from MiVoice 5000

24. Launch the synchronization from the MiVoice 5000. The MiCollab Client Deployment application automatically deploys the clients for users who are assigned with a role that corresponds to a template with a deployment profile.

The system pushes the user configuration file to the redirect server which sends an email to the user clients.The users click a link in the email to download and install the configuration file on their mobile client.

CONFIGURE INTEGRATED DIRECTORY SERVICES (OPTIONAL)

Optionally, configure Integrated Directory Services to integrate the non-corporate contacts from a directory server or a MiVoice 5000 with the MiCollab Client Corporate Directory database. Note that only non-corporate entries (contacts) are supported via IDS. User entries are not synchronized and are not copied to the MiCollab USP database.

During an IDS synchronization event, the system imports the non-corporate entries. When users start up their MiCollab clients, the system updates the user's Contacts list. Users can then place calls to the non-corporate contacts using "Click-to-Call" functionality from their phone clients.

Refer to the *Integrated Directory Services* help in the MiCollab server mananager online help for configuration instructions.

CONFIGURE THE CONNECTION AND SYNC DATABASES

1. Configure the connection to the MiCollab server. In the MiVoice 5000 Management Portal (MMP) or the MiVoice 5000 Manager, access the **Telephony Service > Subscribers > Terminals and Applications > MiCollab > Connections** menu, and enter the following parameters:
   - **Label**: Enter the system name of the MiCollab server
   - **Main IP Address**: Enter the IP Address of the MiCollab server
   - **Login**: Enter the MiCollab Server Manager "micollab_api" account username
   - **Password**: Enter the MiCollab Server Manager "micollab_api" account password
   - **Daily Re-alignment**: Set the time (HH:MM) for the daily synchronization to occur with the MiCollab server (default 02:59)
   - Check the **MiCollab server synchronization** box
2. Perform a manual synchronization with the MiCollab server to obtain the default and custom roles from MiCollab.
   - In the MiVoice 5000 Management Portal (MMP) or the MiVoice 5000 Manager, access the **Telephony Service > Subscribers > Terminals and Applications > MiCollab > Connections** menu.
   - If Windows login authentication is required for IDS integration, check the **Windows Login for Authentication** box.
   - Click **Immediate realignment** to launch an immediate synchronization. The roles are obtained from MiCollab.
3. Check that the roles are present on the communication platform:
   - In the MiVoice 5000 Management Portal (MMP) or MiVoice 5000 Manager, access the **Telephony Service > Subscribers > Terminals and Applications > MiCollab >MiCollab Role** menu.
   - Ensure that the desired roles are listed under the Label heading.
4. Assign the roles to users
   - Assign Entry, Standard, or Premium default roles or custom roles to users who require MiCollab applications services. Refer to the *MiCollab Engineering Guidelines* for the maximum number of Entry, Standard, or Premium users that can be configured on

your MiCollab platform.

- Assign the Basic role to users who require the MiCollab Client desktop and web client with Chat only.
- Ensure that subscribers are configured with an e-mail addresses.

5. Perform a manual synchronization from the MiVoice 5000 with MiCollab. The synchronization populates the MiCollab database with the MiVoice 5000 users and applies the application services that are defined in the associated roles and templates.

PERFORM USER AND SERVICES PROVISIONING

User and services provisioning is performed from the communications platform administration interfaces -- not from the MiCollab Users and Services application.

- To add or modify MiCollab services, assign a role to the user from the MiVoice 5000 management interface. For example, to add a NP-UM mailbox to a user, the administrator assigns a Role that contains a mailbox to the user. To delete a mailbox, the administrator assigns the user with a Role that does not include a mailbox.
- Most of the fields and buttons within the MiCollab Users and Services application are disabled since the administrator configures users from the communications platform administration interfaces.
- Assign a role to a new user to apply the associated MiCollab template and configure the user with the application services that are defined in the template. The MiVoice 5000 periodically performs an automatic synchronization to update the MiCollab database. After the synchronization, the application services are enabled for the user.
- If you remove a role from a user on the MiVoice 5000, the user is deleted from MiCollab after the next synchronization event.
- If you change a user's role, the user's application services are updated with the new service mix that is defined in the role's template. For MiVoice 5000 integrations this occurs after the next synchronization.

CONFIGURE MIVOICE 5000 WITH MBG IP ADDRESS

If the SIP security is enabled on the MV5000, you must add the MBG IP address in the Whitelist.

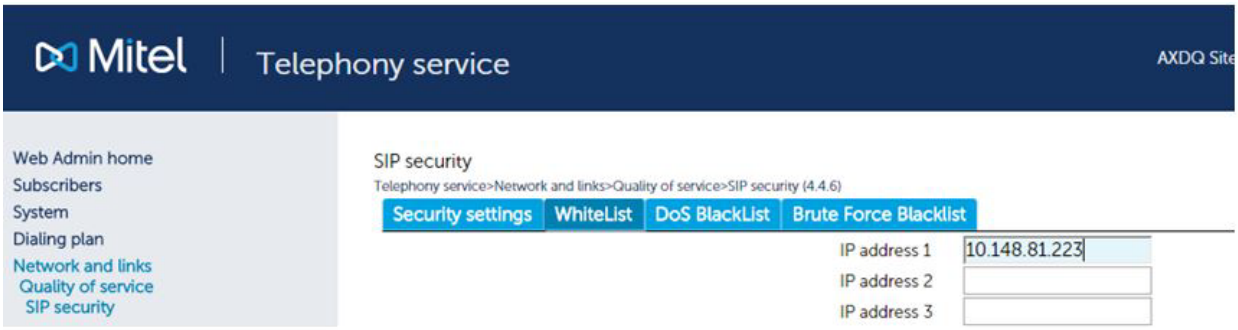


Figure 59: Add MBG IP Address in Whitelist

MIGRATION PROCEDURE FOR AWV

MiCollab Release 6.0 supported the integration of the Audio, Web, and Video application with MiVoice 5000 platforms. The following paragraphs describe how to migrate an existing MiCollab Release 6.0 AWV site to MiCollab Release 7.1 or later support.

You can migrate systems where the AWV accounts were only created within the AWV application to MiCollab 7.1 or later. These accounts do not lose their existing conferences during the migration.

1. Backup the database, install MiCollab 7.1, and then restore their database.
2. Integrate the MiCollab system with the MiVoice 5000 call manager. See “Integration Procedure” on page 33 for instructions.
3. After you integrate the MiCollab with the MiVoice 5000 call manager, use the call manager to assign roles to the users.
4. After the users are created on MiCollab, providing that the e-mail address is provided and it matches the existing AWV account e-mail address, the account is linked to the newly created user.

Systems where the AWV user accounts were created via USP or IDS and already have a MiCollab user assigned are not automatically paired. You must delete these users and recreate them after you install MiCollab Release 7.1 and integrate it with the MiVoice 5000. In this case, the users lose their existing conferences.

Chapter 4

MX-ONE INTEGRATION

OVERVIEW

You can integrate up to eight MiCollab servers with a MiVoice MX-ONE platform to provide MiCollab applications, such as NuPoint voice mail, MiCollab Client, Teleworker, and Audio, Web, and Video to users who are hosted on the MiVoice MX-ONE platform.

- For MiCollab integrations with the MiVoice MX-ONE system, the administrator performs user provisioning from the MX-ONE Provisioning Manager interface.
- Roles and templates are used to define the MiCollab services for the users.

The administrator creates roles and templates in the User and Services application on the MiCollab system. The MX-ONE reads the roles from the MiCollab system whenever it needs to display them.

The administrator then assigns roles to the primary directory number of the user on the MiVoice MX-ONE. The roles on the communications platform correspond to roles on the MiCollab system. The UCC roles map to MiCollab USP templates that define the required application services for the user type. When an administrator adds, edits or deletes a user from the platform management interface, the user's services are updated on MiCollab based on the assigned template on the next manual immediate synchronization or during the next scheduled database synchronization.

Non-Corporate contacts that appear in the MiCollab Client corporate directory can be obtained via MiCollab IDS from an Active Directory server.

A typical integration consists of the components shown in Figure 60:

- **Communications Platform**: The MiVoice MX-ONE can be integrated with a single MiCollab system.
- **MiCollab Server**: Provides application services (NuPoint voice mail, AWV, MBG, and MiCollab Client) to MiVoice MX-ONE users and supports MiCollab Client softphones for external users over the Internet.
  - NuPoint Unified Messaging integrates with the MiVoice MX-ONE via SIP trunking.
  - Audio, Web and Video integrates with the MiVoice MX-ONE using SIP extensions.
  - MiCollab Client softphones are integrated with the MiVoice MX-ONE via SIP extensions. Computer Telephony Integration (CTI) is achieved via a CSTA Proxy in the MiCollab system
  - MiVoice Border Gateway solution provides a secure communications path for remote MiCollab Client SIP softphones to the MiCollab Client Service. The MBG provides support for MiCollab Client SIP softphones through the implementation of proprietary SIP headers, SIP feature enhancements, line enhancements, and security enhancements, along with administrator interface changes for its management.
- **Standalone MBG**: A standalone vMBG server can be installed in the Demilitarized Zone (DMZ) of a customer's existing firewall to support SIP Teleworker devices. The MiCollab MBG application must be clustered with the standalone MBG.
- **MiCollab Advanced Messaging (AVST) server**: An optional standalone server that can be used to provide voice messaging services.

- **MiCollab Client CSTA Proxy**: Provides Computer Telephony Integration (CTI) between the MiVoice MX-ONE and MiCollab Client to support telephony features such as "Click-to-Call" and presence. The MiVoice MX-ONE communicates with the CSTA proxy using CSTA III protocol.
- **Firewall**: Protects corporate LAN from Internet.
- **Redirect Server:** Provides the configuration data to MiCollab mobile clients. This is a Mitel server located on the Internet. It sends MiCollab mobile client users a configuration e-mail that allows the users to download and install the required configuration files from the redirect server.
- **SIP Trunking**: The NuPoint Voice mail application is supported via SIP trunking.
- **SIP Extensions**: The Audio, Web and Conferencing application is supported via SIP extensions on the MiVoice MX-ONE.
- **Administration Interface**: User provisioning is performed from the Provisioning Manager (PM), the communication platform management tool.
- **Directory Server**: An optional Active Directory server can be used to support the synchronization of MiCollab Client contacts to the MiCollab Client Corporate Directory and to support Active Directory Authentication of MiCollab users.

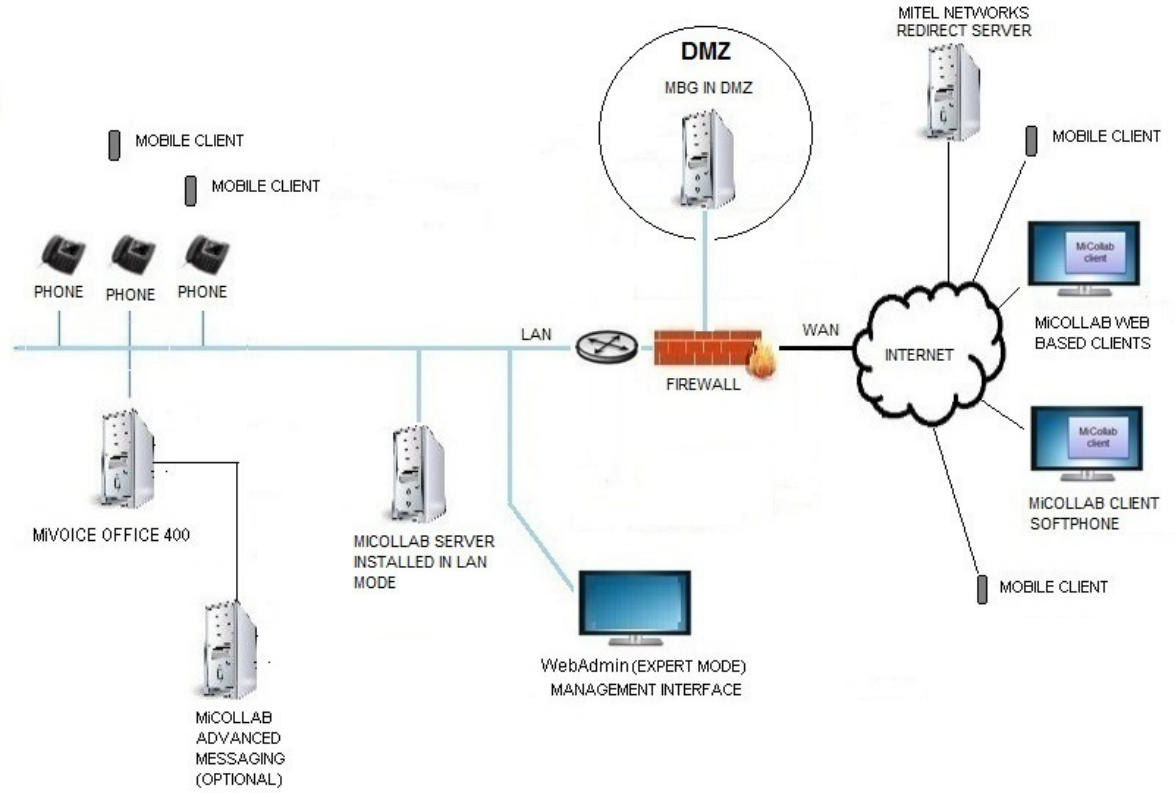


Figure 60: MiVoice MX-ONE Integration

REQUIREMENTS

- Integration with MiCollab 7.1 or higher is supported with MiVoice MX-ONE 6.1 SP1 or higher.
- MiCollab Client must be configured in Integrated Mode.

CONDITIONS AND LIMITATIONS

- One or more MiCollab servers (up to eight) can provide applications services to the users on the MiVoice MX-ONE system in the same network.
- The integration of multiple MiCollab systems to the MiVoice MX-ONE platform is supported.
- Connection of a MiCollab server to a mix of different network elements (for example, MiVoice 5000 and MiVoice MX-ONE) is not supported. All network element types must be of the same type on a single MiCollab. It is not possible to switch the communications server that is connected to the MiCollab system. The MiCollab system must be reinstalled and reconfigured to support a different type of communication server.
- User and services provisioning is performed from the MiVoice MX-ONE Provisioning Manager. The Add, and Quick Add functions are not supported from the Users and Services Application if MiCollab is integrated with the MiVoice MX-ONE.
- The MiVoice MX-ONE supports a maximum of four terminals/devices per user. Although MX-ONE supports users with multiple devices, only the users' primary directory numbers appear in MiCollab. MiCollab services are applied to the primary directory number of the user.
- Voice messaging services can be provided by the MiCollab NuPoint Unified Messaging application or from an optional MiCollab Advanced Messaging server.
- NuPoint Unified Messaging Speech Auto Attendant is not a supported application for MX-ONE integrations.
- MiCollab Integrated Directory Services is not supported for managing user entries. Only non-corporate entries (contacts) are synchronized from the directory services database to the MiCollab Client corporate directory.
- Functions and fields in the USP application that are not applicable to MiVoice MX-ONE are disabled (or hidden). They are disabled after a MiVoice MX-ONE type network element is assigned in the USP application. The administrator adds application services by assigning a role with the required service level. The administrator removes the role to remove the services. To remove only the NuPoint voice mailbox from a user, the administrator must create a role without a mailbox and assign it to the user.
- Each MiCollab system supports a maximum of 5000 users. In a multi-MiCollab deployment, up to eight peered MiCollab systems can be deployed to support a total of up to 40,000 users and contacts.
- If you are integrating an existing MiVoice MX-ONE with a new MiCollab system, you can export a CSV file of user entries from the MX-ONE Provisioning Manager interface. You can then import the user entries into the MiCollab system using the Bulk User Provisioning (BUP) tool in USP. Manually refresh the MiCollab server from the PM Subsystem task on the MX-ONE to complete the synchronization of users.

- LDAP authentication is supported for users who have been created from the MiVoice MX-ONE system with authentication enabled. An "authentication only" IDS connection is required to allow MiCollab to validate the end-user password against the Active Directory password. Users can then log into their end-user interfaces by entering their Active Directory password.
- The MiCollab End User Portal is supported for MiVoice MX-ONE users. It provides them with access to their user portal, voice mail, and AWV settings. However, a user's MiVoice MX-ONE phones are not displayed in the portal interface.
- The MiVoice MX-ONE can operate in a multi-company management mode where the PBX resources are shared between different companies. Currently, MiCollab does not support multi-company management mode.
- The MX-ONE Parallel Ringing feature allows an incoming call to ring several phones (desk-phones, softphones or mobile phones) that are registered with different extension numbers simultaneously. The call can then be answered on any of the phones. This feature requires all the phones involved to be defined in a Parallel Ringing list. One phone in the list is configured as the main extension and only calls to this extension are distributed among the other phones in the list. MiCollab can only support application services to the main extension in the Parallel Ringing list.
- MiCollab does not provide the ability to configure the phone types for each MiVoice MX-ONE subscriber. Note that the MiCollab Client and MBG applications function as SIP phone integrations. MBG creates a SIP device account and UCA allows a soft phone because the user has a SIP account.
- User pictures cannot be imported into the MiCollab Client server via the MX-ONE Provisioning Manager, but they can be imported directly from Active Directory using MiCollab Integrated Directory Services.
- The integration of MiVoice MX-ONE systems to the MiCollab Server Appliance is not supported. The MiCollab Server Appliance is a small-business capacity MiCollab system that is shipped from Mitel Network to the customer pre-installed on an industry standard server.
- The Provisioning Manager supports configuration of only one MiCollab Release 7.0 or Release 7.1 server, but supports the configuration of multiple MiCollab Release 7.2 or later servers. Note that the MiCollab servers must be running the same software release.
- A MiCollab Export task exports data in to a MiCollab_Users.zip file that is comprised of multiple MiCollab CSV files. The user data in each file varies depending on the source user data:

USER DATA	FILENAME STARTS WITH
Email IDs, Phone Numbers and SIP Passwords	MiCollabUsers0_x.csv
Phone Numbers	MiCollabUsers1_x.csv
Email IDs	MiCollabUsers2_x.csv
without Email IDs, Phone Numbers and SIP Passwords	MiCollabUsers3_x.csv
with MiCollab roles assigned	MiCollabUsers4_x.csv

- Each CSV file is generated with a maximum of 2500 user records. New files are generated if user count exceeds 2500 in any of the above categories.
- The External Number and DID Number fields are updated on a user record if the UDF fields are defined as External Number and DID Number in the UDF Mapping task. The field names External Number and DID Number are case sensitive.

LICENSING

MIVOICE MX-ONE LICENSING

License the MiVoice MX-ONE system from the Software License Server (SLS). Only MiVoice MX-ONE certified technicians should apply licenses to the MiVoice MX-ONE.

MICOLLAB LICENSING

You license the MiCollab system through the Application Management Center (AMC). The AMC is not used to assign licenses that are required on the MiVoice MX-ONE.

1. Log into AMC.
2. Create a customer account.
3. Register (purchase) products and licenses and assign them to the customer account.
4. Create Application Record IDs for the MiCollab and optional MiVoice Business Gateway.
5. Assign base software licenses to the system ARIDs.
6. Create a ULM using the MiCollab ARID.
7. If a standalone MBG system is required, add its server ARID.
8. Assign UCC user licenses to the ULM. The UCC user licenses will provide the communication platform users with entitlement to the MiCollab applications.
9. Purchase and activate any additional “a-la-carte” feature, port, or language licenses for the MiCollab system applications.

Note: Refer to the AMC online help for detailed licensing steps.

Note: MiCollab Advanced Messaging (AVST) is not licensed through the AMC.

INTEGRATION PROCEDURE

OVERVIEW

The following procedures describes the steps required to integrate a new MiCollab system with a new or existing MiVoice MX-ONE platform.

- Install platforms
- Configure MiCollab into MiCollab Client Integrated Mode
- Create network elements
- Configure a password for the "micollab_api" account
- Configure MiCollab system application settings
- Integrate the applications with the MiVoice MX-ONE:
  - Integrate NuPoint Unified Messaging (or optionally install MiCollab Advanced Messaging server)
  - Integrate Audio, Web and Video Conferencing
  - Integrate MiVoice Border Gateway
  - Integrate MiCollab Client Service
- Configure Integrated Directory Services (optional)
- Configure the connection and sync databases
- Perform user adds, edits, and deletes.

INSTALL PLATFORM

1. Install, license, configure, and provision the MiVoice MX-ONE.
   - Refer to the *MiVoice MX-ONE Installation and Maintenance Guide*.
2. Install the MiCollab platform.
3. Log into MiCollab server manager. Under **ServiceLink**, click **Install Applications** and then click the **Install Applications** tab. Set the ICP type to "MiVoice MX-ONE".
4. Collect the following information for the integration:
   - MiCollab IP Address
   - MiVoice MX-ONE IP Address.

CONFIGURE MICOLLAB CLIENT INTEGRATION MODE

Configure MiCollab in MiCollab Client Integration Mode. Refer to the *MiCollab Installation and Maintenance Guide* for instructions.

CREATE NETWORK ELEMENTS

Create the network elements for the communication platform(s):

1. Log into the MiCollab server manager.
2. Under **Applications**, click **Users and Services**.
3. Click the **Network Element** tab.
4. Click **Add**.
5. In the Type field select the system type: “MiVoice MX-ONE”.
6. Enter the IP address of the MiVoice MX-ONE Service Node Manager. The MiCollab can support multiple MiVoice MX-ONE Service Node Managers.
7. Enter the NuPoint voice mail number to be used by MiCollab Client into the Call Forward Destination Directory Number field.
8. After you save your updates to the Network Element page, you are prompted to associate the element with the templates. If you select **Yes**, the network element field for the primary phone in all templates will be automatically set to the name of this network element. If you select **No**, you must create custom templates and associate them with this network element.

   Note: During MiCollab installation, the default UCC roles and associated template definitions were downloaded from the AMC. On initial download, the USP forms and templates support MiVoice Business settings. After you assign a MiVoice MX-ONE network element in the MiCollab Network Element page, the USP user interface and templates are updated to reflect the settings for the selected platform.

   - If required create custom roles and templates in the MiCollab USP application from the UCC default templates.
9. Configure the MiVoice MX-ONE network element
   - as a SIP GATEWAY within the NuPoint Unified Messenger application, and
   - add the line groups to the SIP GATEWAY (ports).
10. Configure the MiVoice MX-ONE as a SIP Server in the MiCollab Audio, Web and Video application.

Configure "micollab_api" Password

You must configure a password for the "micollab_api" account. The MiVoice MX-ONE uses this account to synchronize data with the MiCollab system. You must configure the same password for the account on the MiVoice MX-ONE. If you change the password on either system, you must also change it on the other.

1. Log into the MiCollab server manager.
2. Under **Administration**, click **System users**.
3. Next to the "micollab_api" account, click Modify and add any required account info.
4. Click Reset password and enter a password for the account.
5. Enter a new password and verify it.

6. Click **Save**.
7. Log into the MiVoice MX-ONE Provisioning Manager management interface.
8. Go to **System tab > Subsystem tab > Add** and enter the following parameters:
   - **Subsystem type**: Select MiCollab Server in the drop down list
   - **Subsystem Name**: Enter the system name of the MiCollab Server
   - **Version**: Select the MiCollab version
   - **IP Address**: Enter the IP Address of the MiCollab Server
   - **User ID in Subsystem**: Enter the MiCollab Server “micollab_api” account user name
   - **Password in Subsystem**: Enter the MiCollab Server “micollab_api” account password
   - **Confirm Password in Subsystem**: Confirm the MiCollab Server “micollab_api” account password
   - **Location**: Select the location
   - **MiCollab pool**: Select the MiCollab pool
   - **Enable MiCollab AD Authentication**: If the check box is enabled, then the user in MiCollab will be created with Active Directory authentication.

Note: Enable **AD Authentication** for MiCollab User works if Enable MiCollab AD Authentication field of MiCollab Server is enabled.

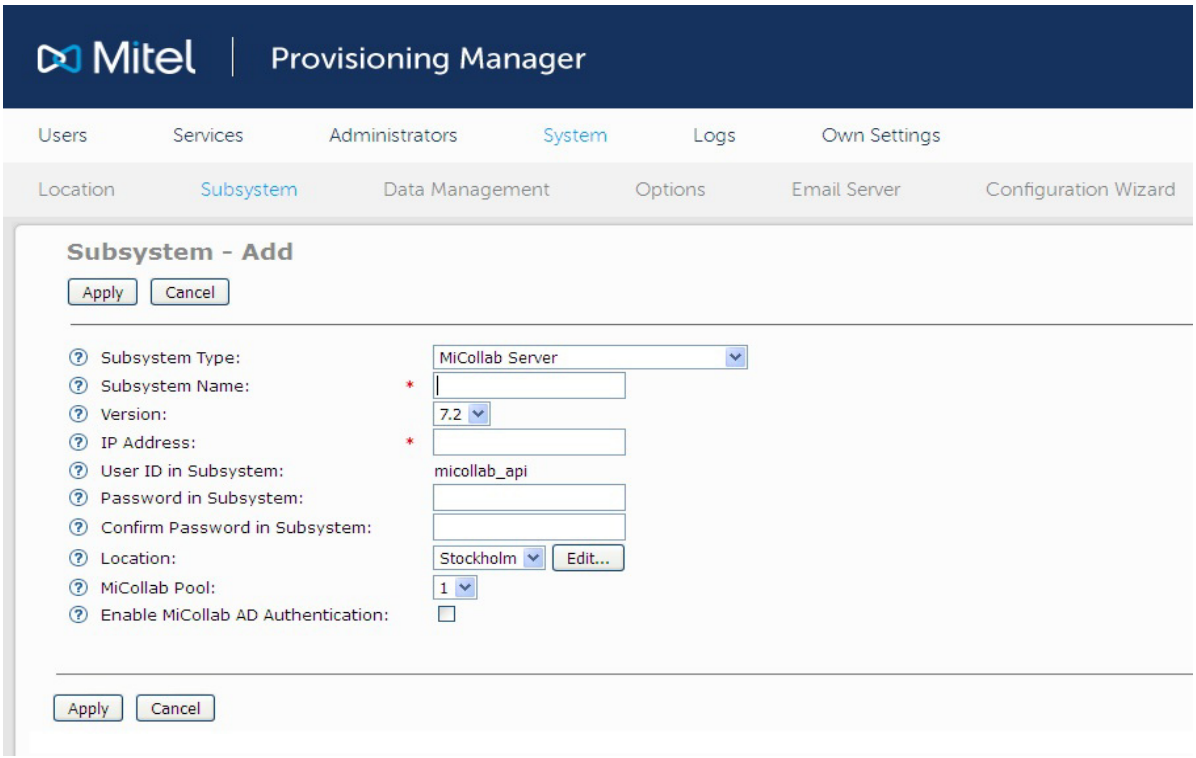


Figure 61: Subsystem - Add

9. Click **Apply**.

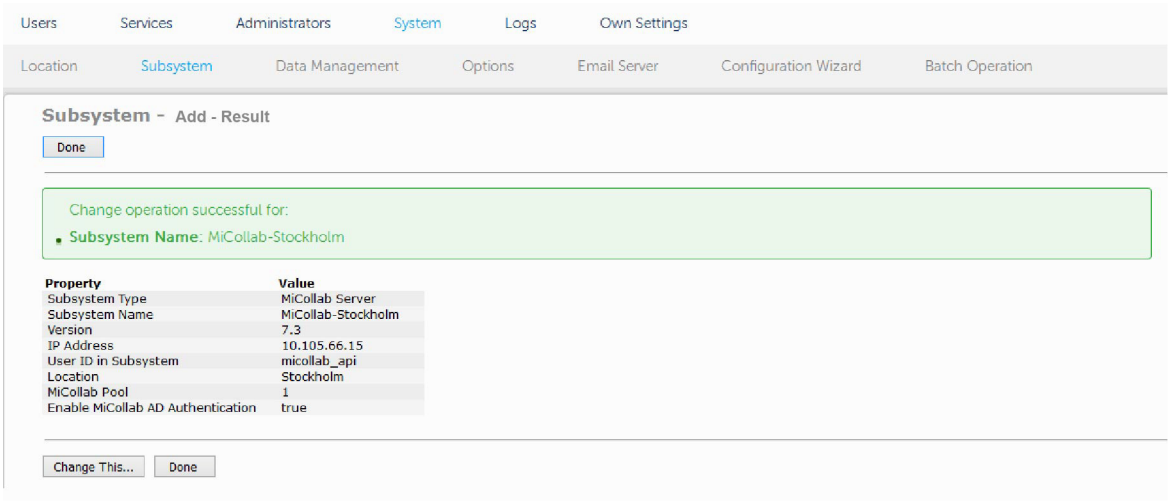


Figure 62: Subsystem - Add - Result

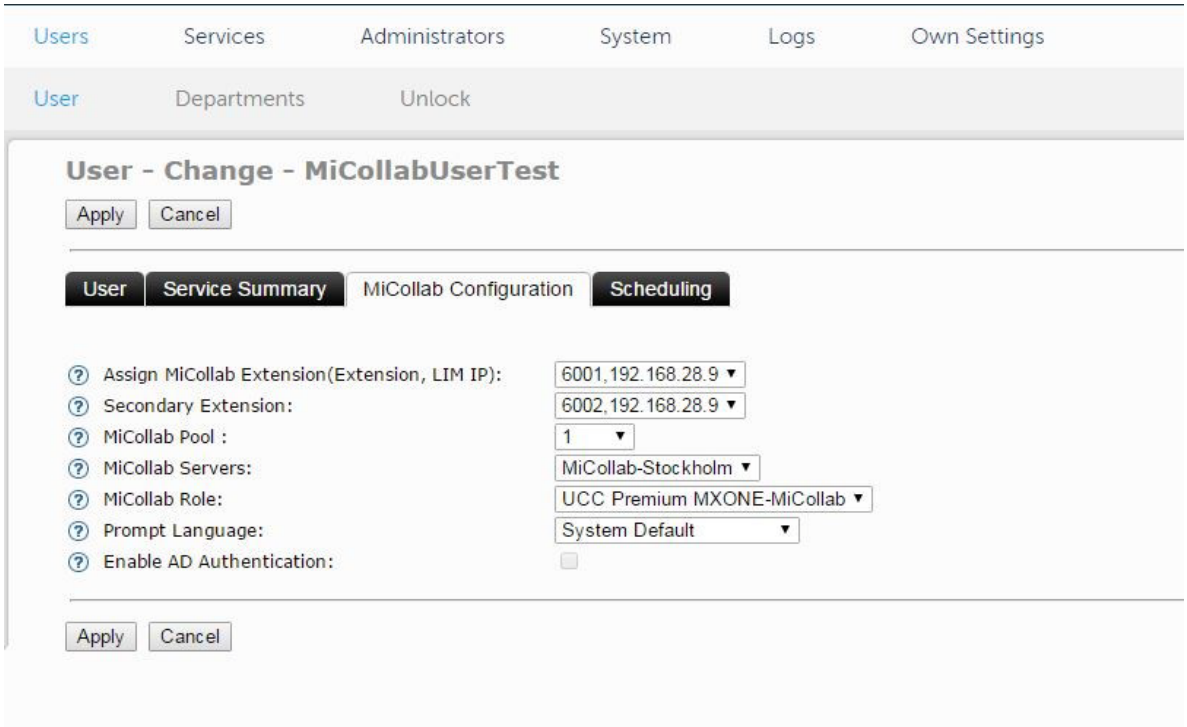


Figure 63: User - Change

CONFIGURE MICOLLAB SYSTEM APPLICATION SETTINGS

Configure the MiCollab system application settings manually through the application administration interfaces in the MiCollab server manager. Refer to the application help for instructions.

INTEGRATE NUPOINT

OVERVIEW

NuPoint Unified Messaging (NuPoint UM) supports Session Initiation Protocol (SIP) integration with the MiVoice MX-ONE. The maximum number of NuPoint ports is 120. Speech Auto Attendant is not supported.

One or more SIP trunks can link NuPoint UM to the MiVoice MX-ONE. NuPoint Unified Messaging receives and sends SIP messages over these trunks. Each SIP trunk consists of one or multiple SIP ports.

Figure 64 illustrates the SIP trunk integration:

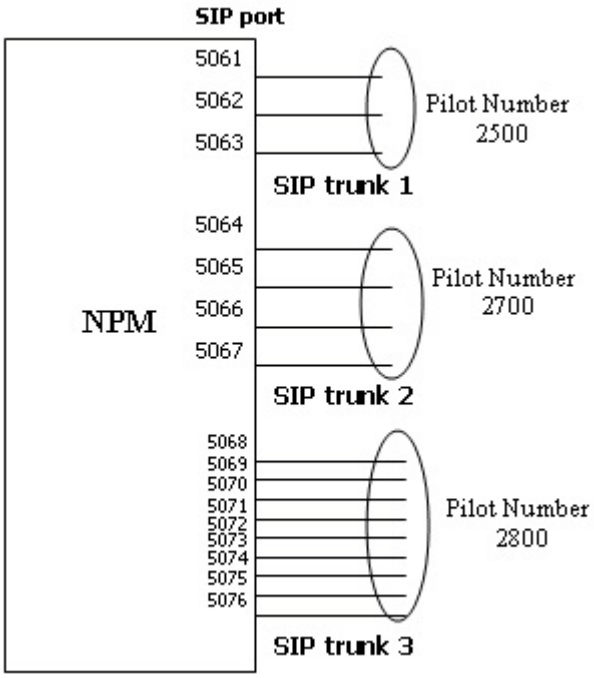


Figure 64: NuPoint SIP Trunk Integration

Every SIP trunk is assigned a Pilot Number. To call into NuPoint UM, the MiVoice MX-ONE provides a pilot number for the endpoint users to dial. When NuPoint UM makes a trunk call to the communications platform, it identifies itself using a pilot number. Therefore, when NuPoint UM receives an incoming call, the pilot number is used as the Called ID. When NuPoint UM makes an outgoing call, in the case of MWI, the pilot number is used as the Calling ID.

A SIP session is established through connection to a SIP port in real-time. Each SIP port handles one call connection to NuPoint UM, thus the number of ports grouped in a SIP trunk determines the number of parallel-connections this trunk can handle at the same time. For example, if four callers on the communications platform simultaneously dial the pilot number 2500 (shown in the figure above), only three of these callers can be connected to NuPoint UM. This principle is applied to every voice mail call connection, whether it is inbound and outbound.

The pilot numbers on NuPoint UM are mapped to applications on the communications platform. For example, pilot number 2500 for NuPoint UM Voice is mapped to extension 2500 for the Voice Mail application programmed on the communications platform. In the configuration where the application is configured as a mailbox, you must associate an extension to an application as well as the pilot number that is used to access the application.

All calls arriving to NuPoint UM on a SIP trunk are accepted at the fixed and predefined SIP port. This port is not configurable. The call is redirected based on the pilot number (which is the called ID in the case of an incoming trunk).

All SIP trunk calls generated by NuPoint UM include a pre-configured SIP port and a pilot number (which is the calling ID in the case of an outgoing trunk).

PREPARATION

Gather the following information in preparation for this voice mail integration:

- customer’s desired voice mail call flows, features, applications, users, and extensions.
- network information including IP addresses, Subnet Mask, Gateway IP address, primary domain name, and Fully Qualified Domain Name (FQDN) information.

CONFIGURE NUPOINT

1. Ensure that the MiVoice MX-ONE is running and correctly configured.

   The communications platform provides NuPoint UM with the SIP Gateway IP address, port data, and line mapping details that are used to accept calls from the communications platform and redirects them to available NuPoint lines. SIP endpoints are able to call a Pilot Number that route to an available NuPoint UM line and hear a greeting prompt, such as "Welcome to the message center. Please enter a mailbox number or wait."

2. If you haven’t done so already, add the MiVoice MX-ONE as a **SIP GATEWAY** network element to the NuPoint UM application. This is necessary to set up network mappings for SIP calls. Refer to Add a Network Element for instructions on how to configure a SIP Gateway.

3. Modify the MiCollab server security settings to allow full telephony communication to be established between the communications platform and the NuPoint application.
   - Log into the MiCollab server console.
   - Under **Configuration**, click **Configure Networks**
   - Click **Add a new trusted network**.
   - In the **Network Address** field, enter the IP address of the network to designate as “local”.

- In the **Subnet mask** or **network prefix length** field, enter the dot-decimal subnet mask or CIDR network prefix to apply to the Network Address. If this field is left blank, the system assigns a network prefix length of /24.
- In the **Router** field, enter the IP address of the router you will use to access the newly-added network.
- Click **Add**.

4. Configure NuPoint UM Line Groups for the SIP Gateway.

   Each NuPoint UM line is dedicated to handle one call at a time. Therefore, the number of lines defined in NuPoint UM is the maximum number of simultaneous calls possible. NuPoint UM can have up to 120 lines. A Line Group is a collection of one or more NuPoint UM lines, each mapped to a cluster node. When lines are linked to a SIP Gateway cluster node, incoming SIP calls can be accepted and routed to available NuPoint UM lines for SIP.

5. Configure system mailboxes and greetings.

6. Set up and initialize the Administrator mailbox.

   The Administrator mailbox is set up by default (under mailbox number 998) during the NuPoint UM application installation. It can be used to record System Message Prompts and program additional user mailboxes. See Managing Mailboxes for additional information.

7. Direct callers to NuPoint UM mailboxes on Call No Answer.

   Call No Answer scenarios must be correctly configured through the SIP Gateway/SIP Endpoint Call Forwarding options. In general, when Call No Answer is detected at the SIP Endpoint, the call should be forwarded to the NuPoint UM Pilot Number (Extension) as "Call Forward Not Available." It is assumed that the Endpoint Extension forwarding the call matches a mailbox number programmed in NuPoint UM. If this is the case, when a forwarded call is received by NuPoint UM, a prompt will indicate that the recipient is not available and ask the caller to leave a message.

8. Enable paging message notifications.

   Check that message notifications are set up at the mailbox level. Each mailbox may be set up for two notification types concurrently.

9. Configure Distribution Lists.

   Distribution lists allow a mailbox user to send messages to multiple mailboxes in one step.

10. Configure the following FCOS:
    - 263 - Store Caller Line Id as a phone or mailbox number
    - 264 - Play outside caller user interface (with FCOS bit 280)
    - 280 - Enable CLI outside caller interface (with FCOS bit 264).

CONFIGURE MIVOICE MX-ONE TO SUPPORT NUPOINT

This section details the configuration necessary on the MiVoice MX-ONE so it can communicate with and use NuPoint UM as the voice mail system.

1. Log into the Service Node Manager (MX-ONE management system).
2. Initiate the Voice Mail numbers.
3. Go to **Number Analysis** and then **Number Plan**, **Number Series**, and then click **Add**.

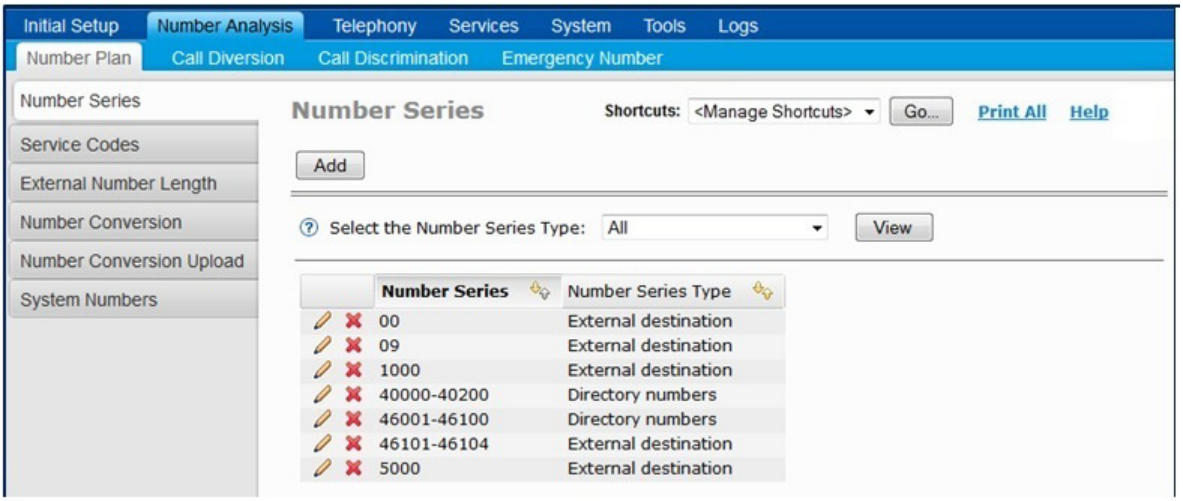


Figure 65: Number Series

4. Select the **Number Series Type**, and enable the **External numbers** option.

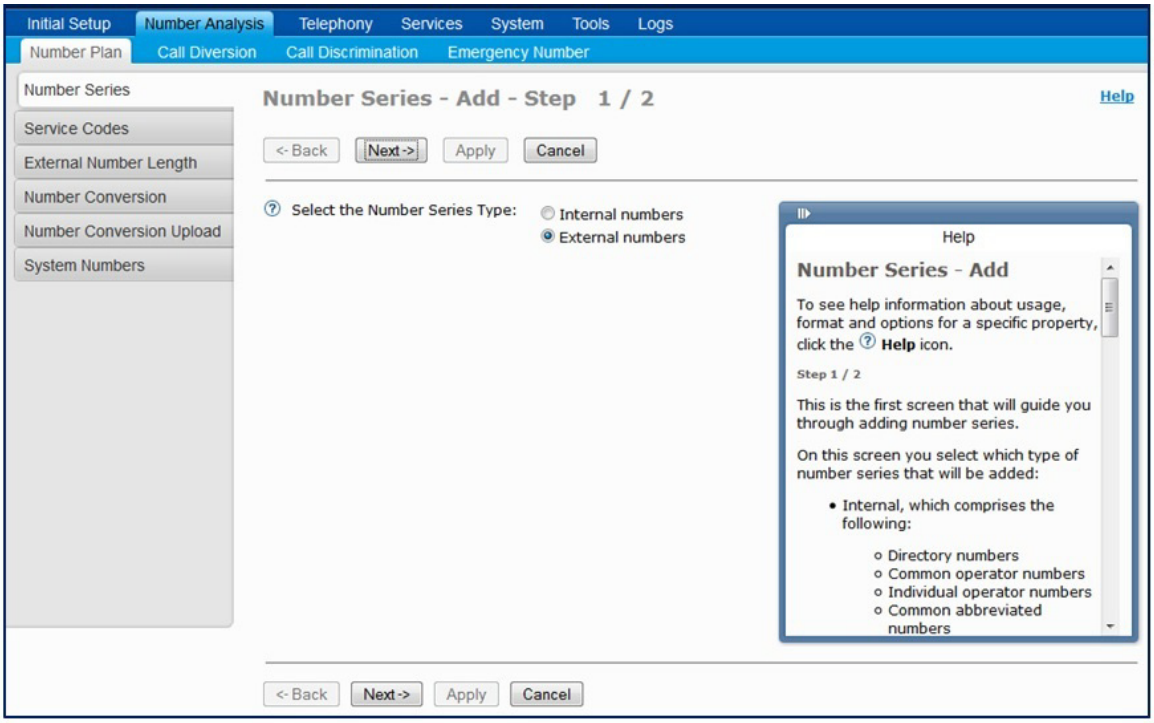


Figure 66: Number Series - Add - Step 1

5. Enter the Voice Mail numbers in the External Destination field.

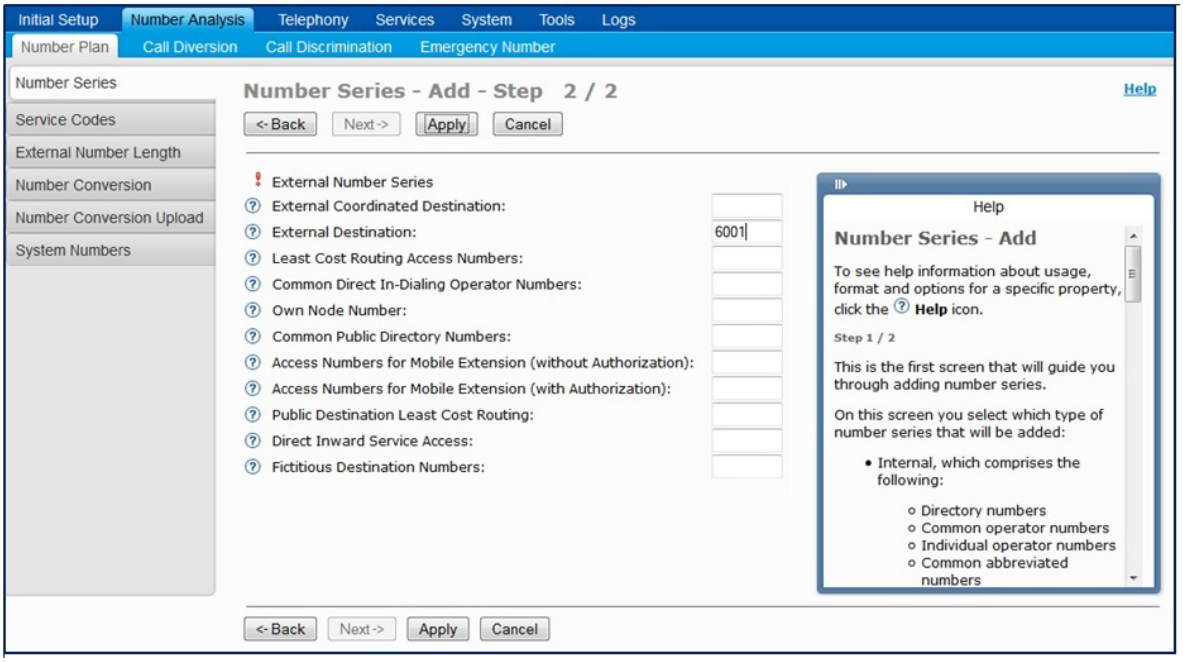


Figure 67: Number Series - Add

6. Click **Apply**. The Service Node Manager shows the result of the operation

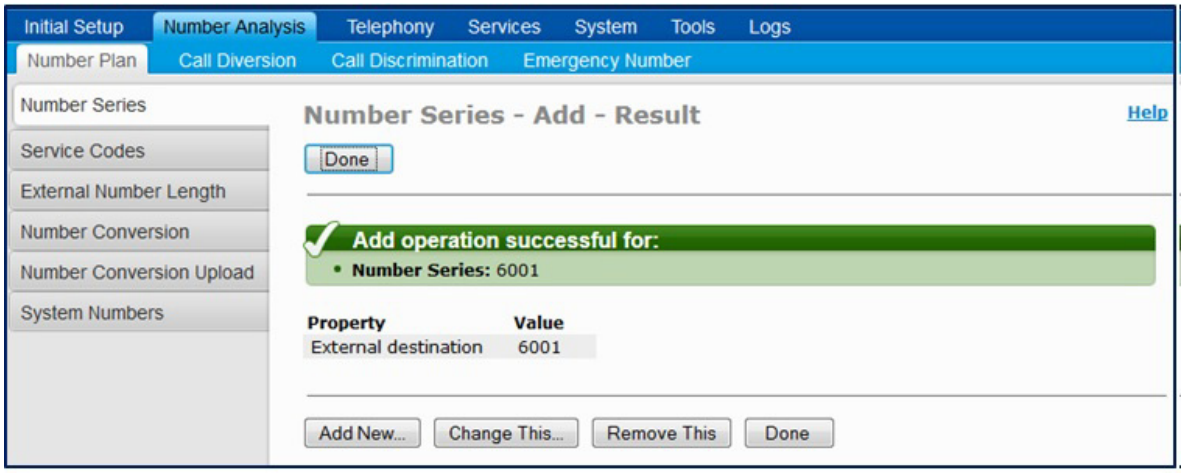


Figure 68: Number Series - Add - Result

7. Set the number length to the external number.
8. Click **Number Analysis**, **Number Plan**, and then select **External Number Length**.
9. Click **Add**.

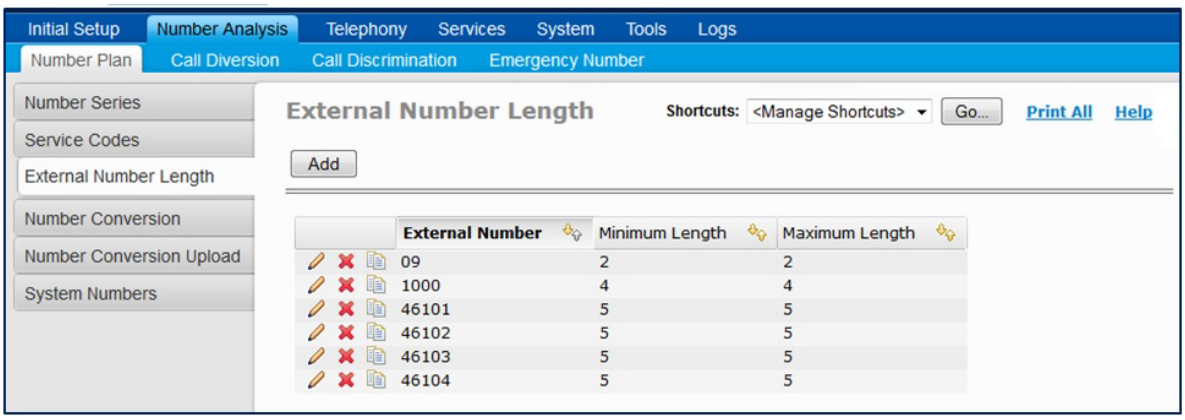


Figure 69: External Number Length

10. Enter the **External Number, Minimum Length** and **Maximum Length**.

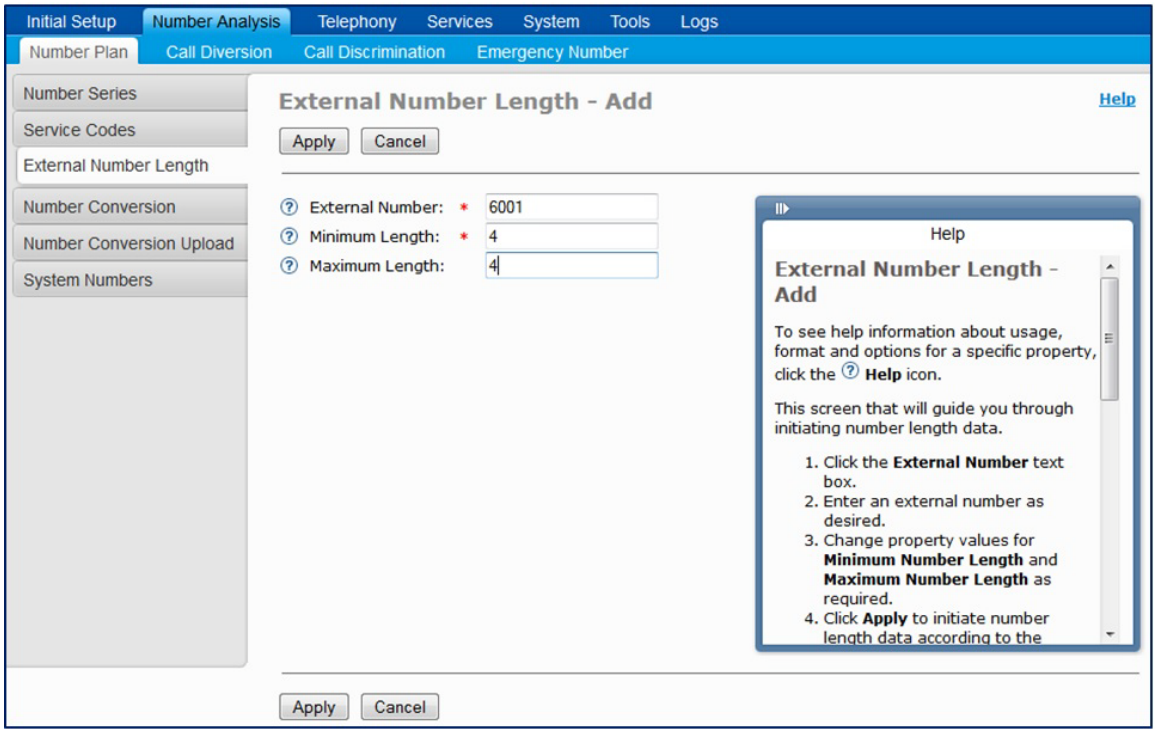


Figure 70: External Number Length - Add

11. Click **Apply**. The Service Node Manager shows the operation result:

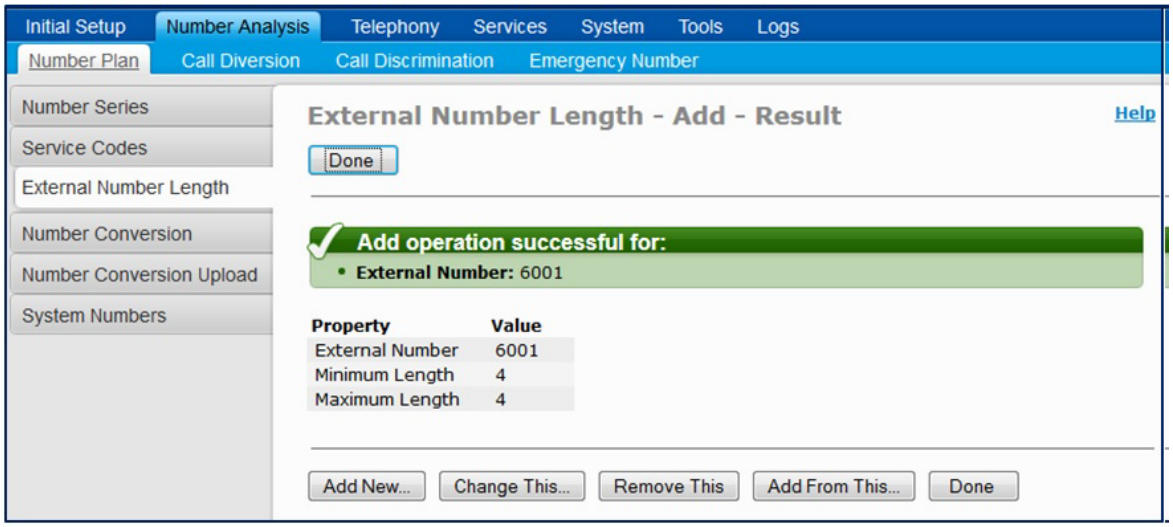


Figure 71: External Number Length - Add - Result

12. Configure a SIP trunk:

- Click **Telephony**, click **External Lines**, and then select **Route**.
- Click **Add**.

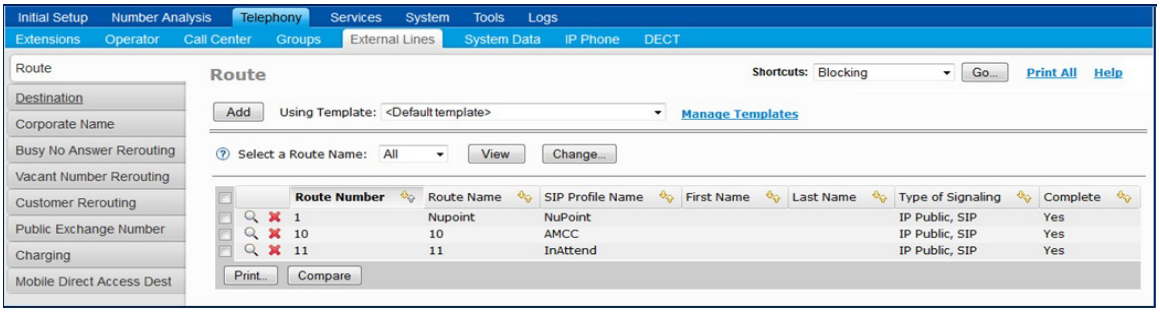


Figure 72: Route

- Set the Type of Signaling to “IP Public, SIP”
- Select “NuPoint” in the Profile Name List.

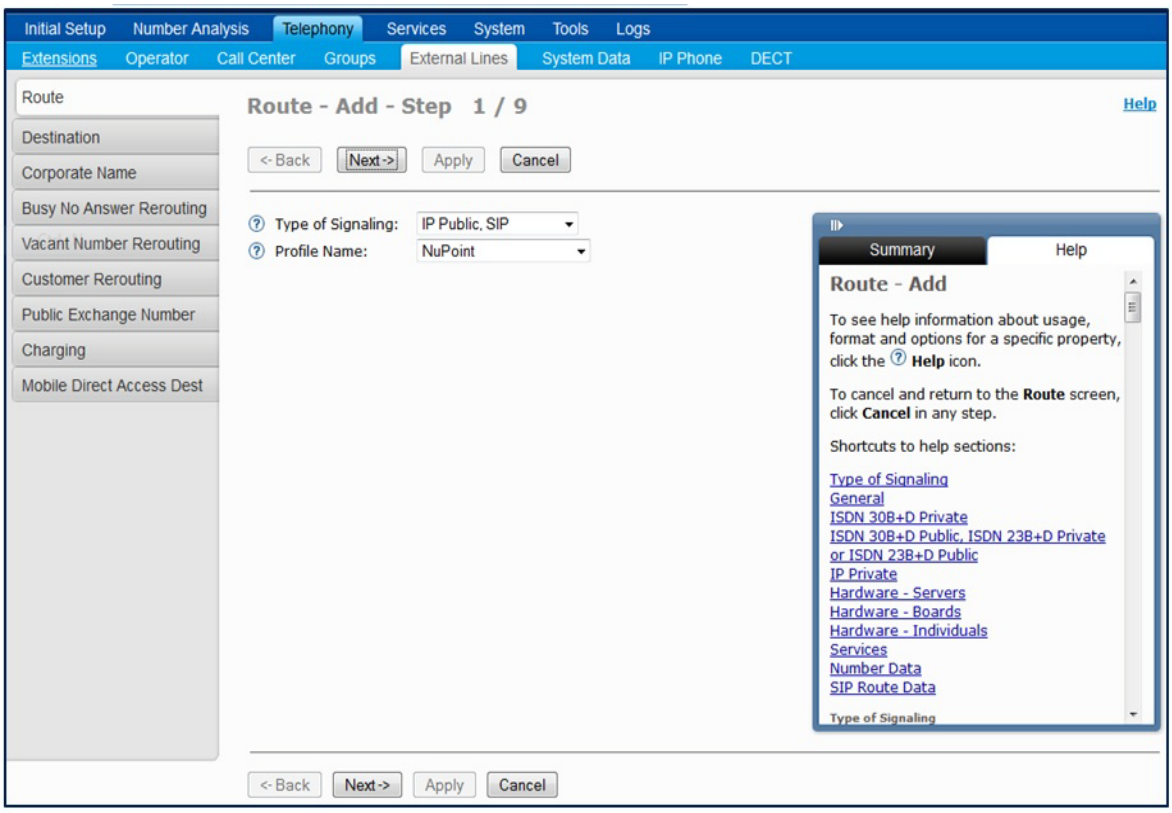


Figure 73: Add Route - Step 1

13. Enter the following NuPoint information:
    - **Route Name**: Enter a meaningful name for the route
    - **Route Number**: Select the next route number in the drop down list
    - **Number of Trunks**: Enter the number of trunks dimensioned to the customer system
    - **Remote Proxy IP**: Enter the MiCollab server FQDN or IP address
    - **Remote Proxy Port**: 5058
    - **Server Numbers**: Service Node number where the SIP trunk is configured.
    - **Voice Number**: Enter the number that was used in Step 2.

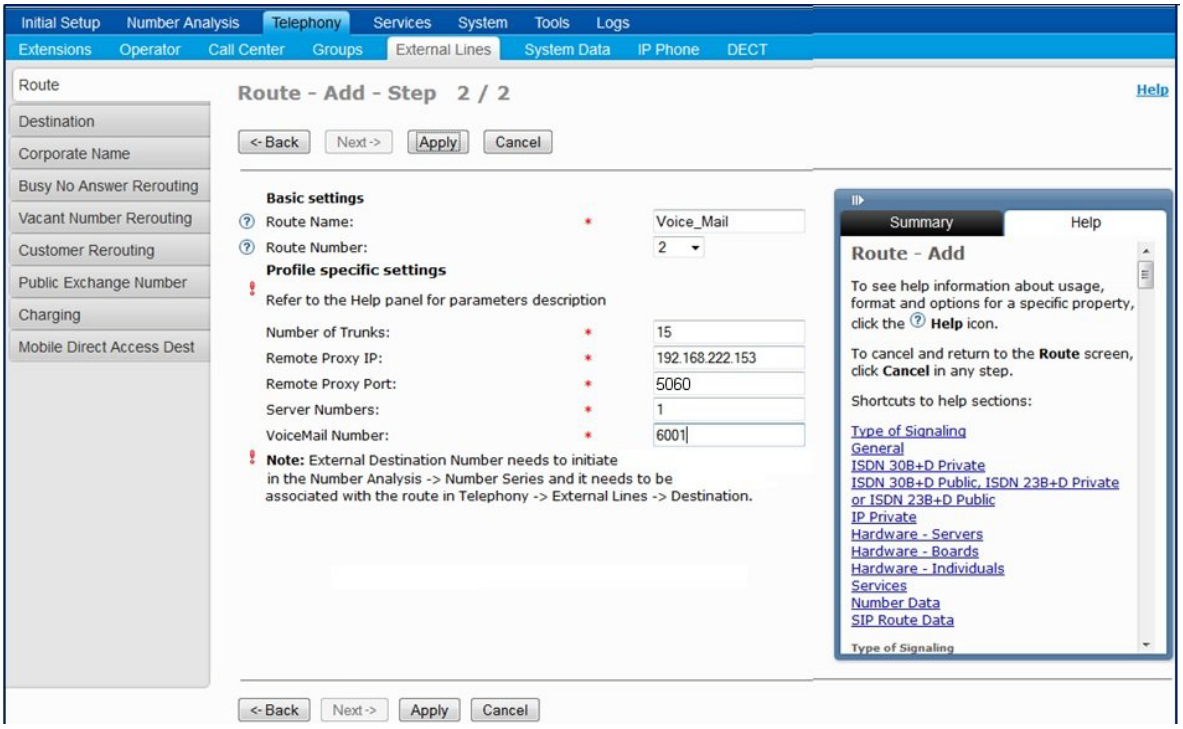


Figure 74: Add Route - Step 2

14. Click **Apply**. The Service Node Manager shows the operation result.

Add operation successful for:

- **Route Name:** Voice_Mail

General

Profile Name	NuPoint
Route Name	Voice_Mail
Route Number	2

SIP Route Specific Data

Outgoing Traffic	
Remote Port	5060
Unknown Public Number	sip:?@192.168.222.153
Incoming Traffic	
Type of Accepted Calls	Remote IP
Addresses or Numbers to Match Incoming Call	192.168.222.153
Priority for Incoming Calls	255
MWI Number	6001
Handle as Extension	No
Incoming Invite Challenge	No
Emergency Call Data	
Type of Accepted Calls	EMERGENCY
Addresses or Numbers to Match Incoming Call	192.168.222.153
Priority for Incoming Calls	255
Third Party Registration	
Supervise Time	30

Route Category

Transmission Category	4
Disturbance Level	0
Route Selection Category	
Incoming Traffic	Open for Incoming Traffic
Line Selection During Outgoing Traffic	Sequential
Route Characteristics Outgoing Traffic	Normal route
Allow Alternative Route Selection	Permitted
Customer Affiliation	0
Allow Virtual Calls	Yes
Allow Malicious Call Tracing	No
Facilities Restriction Level	0
Receive Traveling Class Mark Information	No
Route to Telident Machine for Emergency Calls	Normal
Traffic Category	
Abbreviated Dialing Traffic Class	3
Call Discrimination Group Night for Incoming External Lines	15
Call Discrimination Group Day for Incoming External Lines	15
Traffic Connection Class	15
Service Category	
Allow Initiation of Call Waiting Tone Transmission	Yes
Allow Reception of Call Waiting Tone and Intrusion	Yes
Automatic Call Back Characteristics	Permitted
Type of Route	Tie line
Allow Paging Over Speech Channel	No
Mobile Extension without R1 Number	No
Allow Bearer Capability Substitution	No
Allow High Level Compability Substitution	No
Allow Number Conversion	Yes
Route Selection Category	
Signaling Data	
Dial Tone Characteristics after External Line Seizure	No monitoring path established
User of Digit Transmission for Transit Exchange	No
Use Net Service Facilities	No
Ringing Tone Transmission for Outgoing Traffic	A-party receives ringing tone
Ringing Tone Transmission for Outgoing Traffic	After minimum number of digits

Route Equipment

Trunk Line Number	1-15

Figure 75: Add Route - Result

15. Associate the route with the destination access code.
16. Click **Telephony** and then **External Lines**, select **Destination**, and click **Add**.

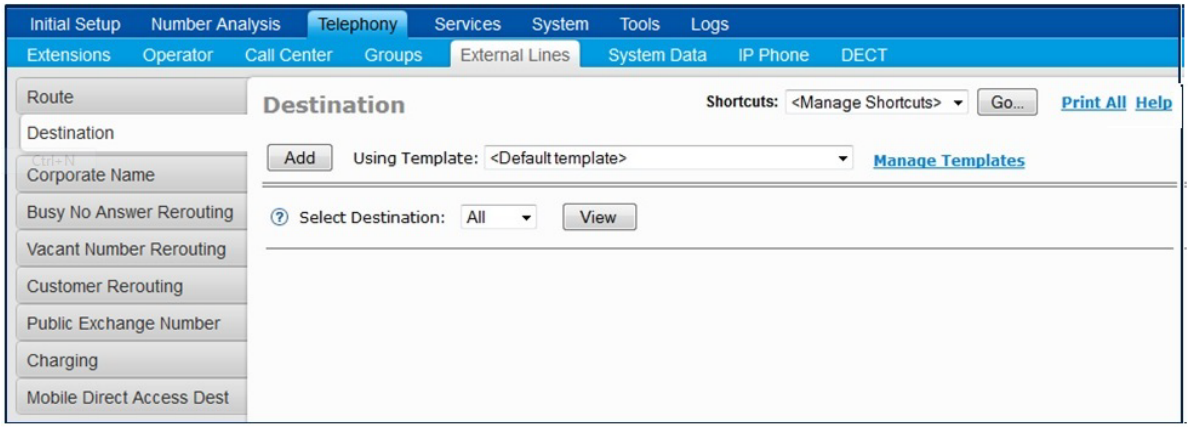


Figure 76: External Lines - Destination

17. Click **Destination**, set the Type of Destination to **Destination** and then click **Next**.

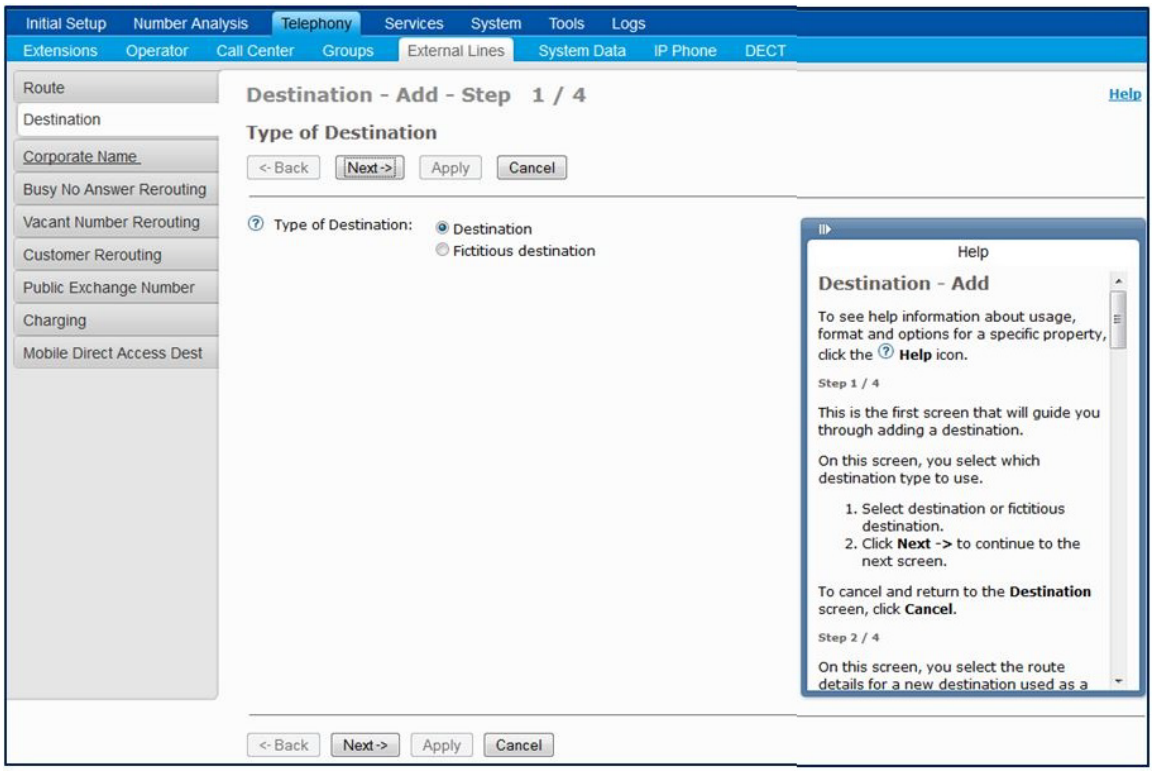


Figure 77: Destination - Add - Step 1

18. Select the **Destination Number** and the **Route Name** and then click **Next**.

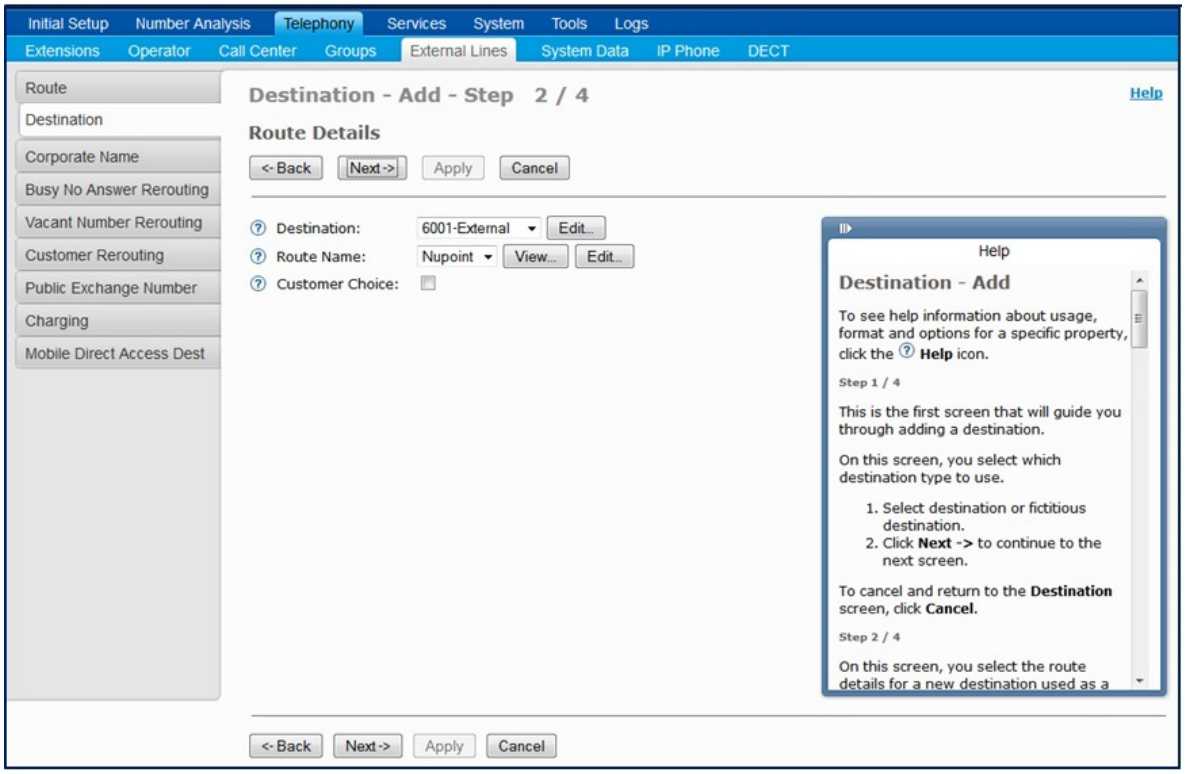


Figure 78: Destination - Add - Step 2

19. Click **Advanced** and select:
    - Show Original A-Number
    - Enable Enhanced Sent A-Number Conversion.
    - Set Type of Called Number to "Private Unknown".

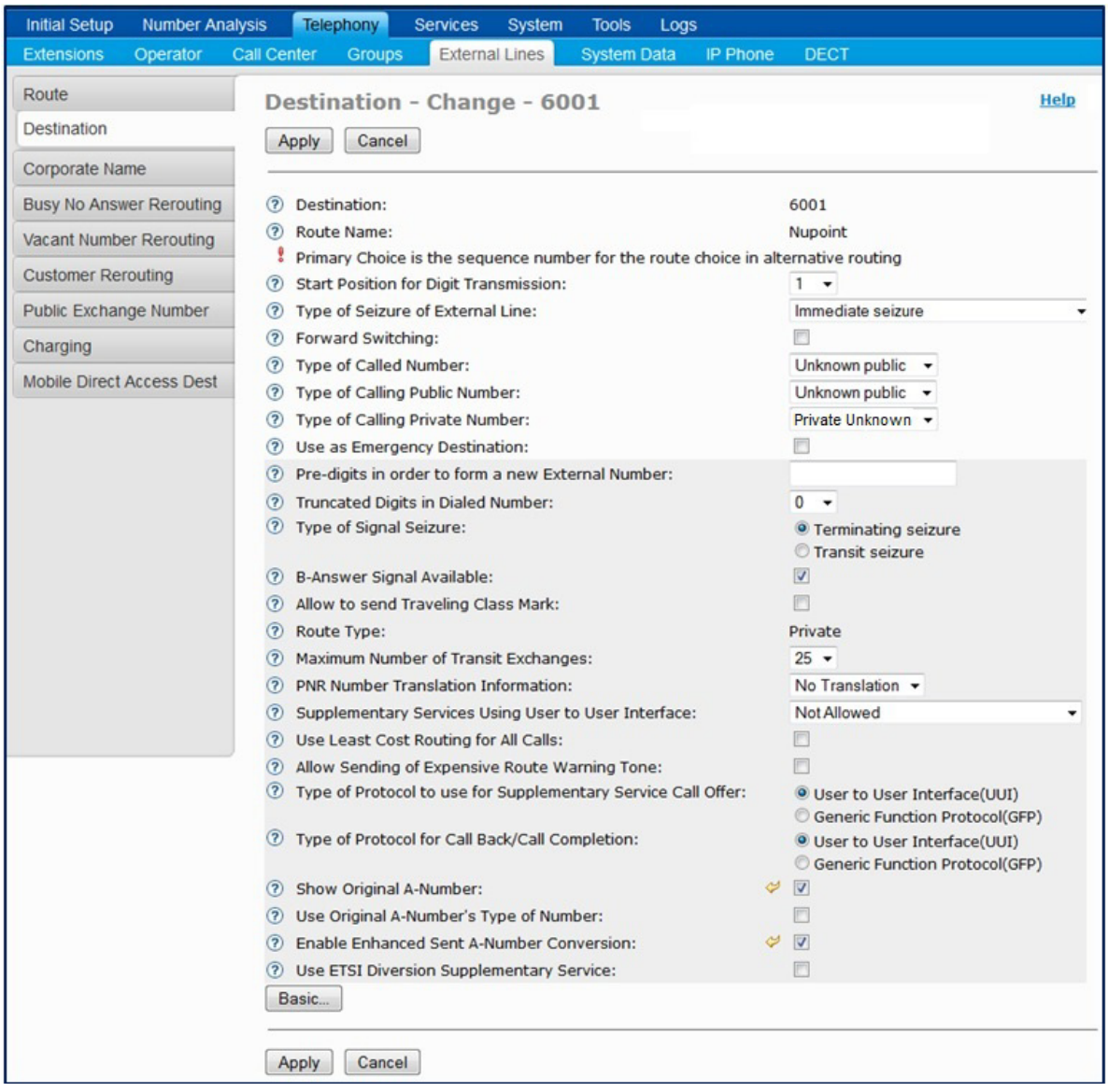


Figure 79: External Lines - Destination - Change

20. Click **Apply**. The Service Node Manager shows the operation result.

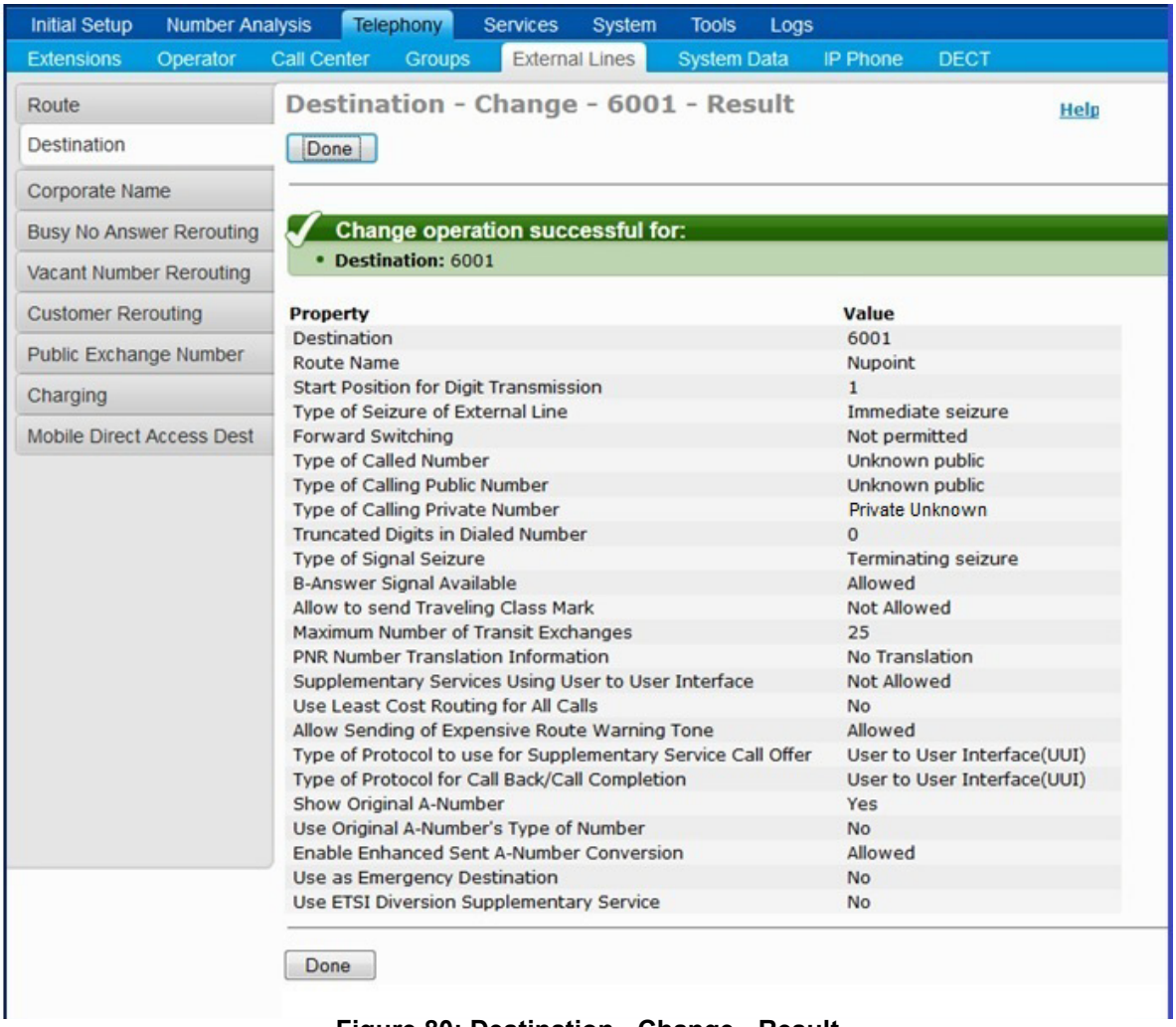


Figure 80: Destination - Change - Result

21. Log into the Provisioning Manager (MiVoice MX-ONE management system) and set up a Personal Number List to an extension.
22. Complete the user configuration to forward to Mitel Voice Mail. Any third-party terminal registered in MiVoice MX-ONE can subscribe on Message Waiting Indicator (MWI) according to RFC 3842.
23. Click **Services**, and then click the **Extension** tab.

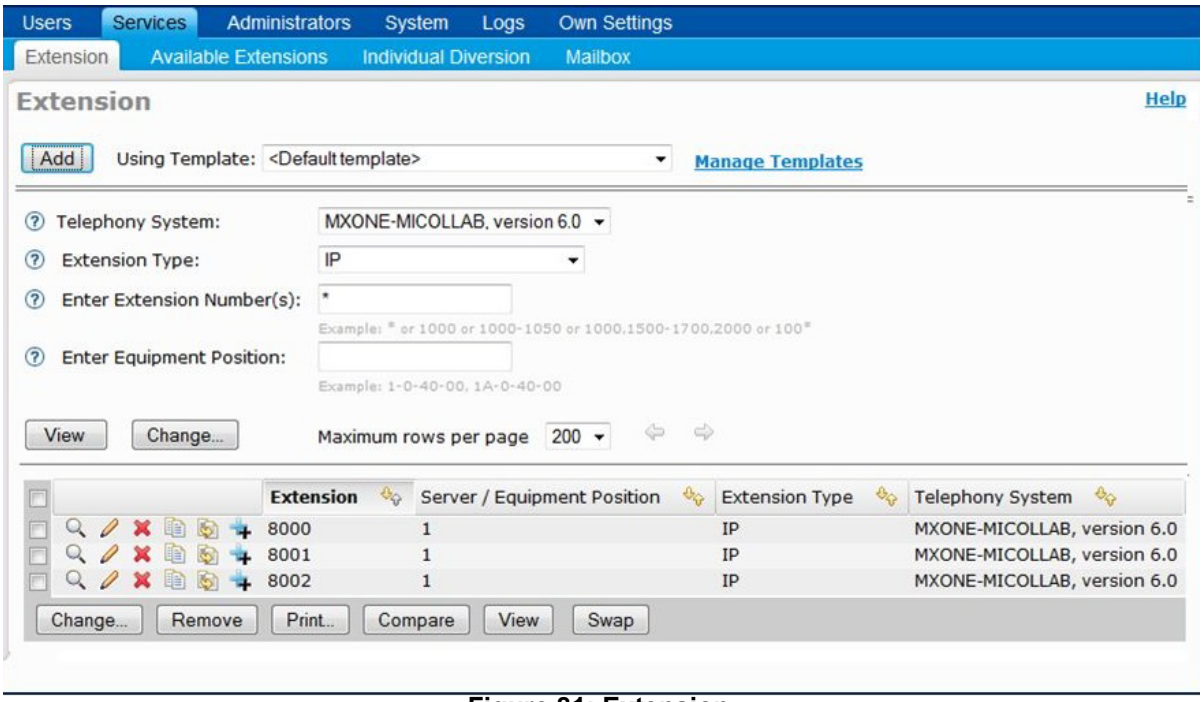


Figure 81: Extension

24. Select the extension to set up the Personal Number List.
25. Click edit  in the Personal Number List.

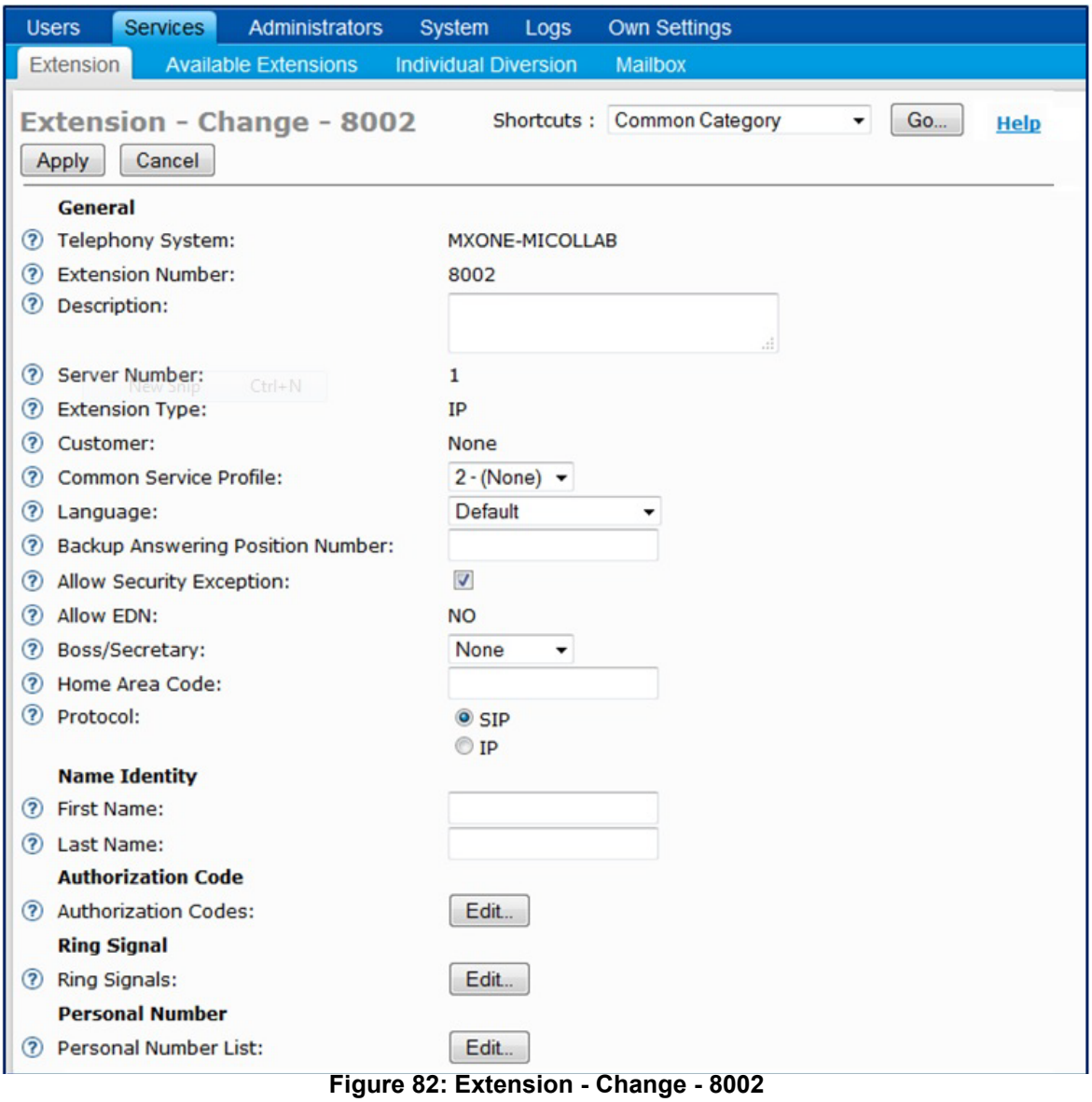


Figure 82: Extension - Change - 8002

26. Click in the first pen to edit List Number 1.

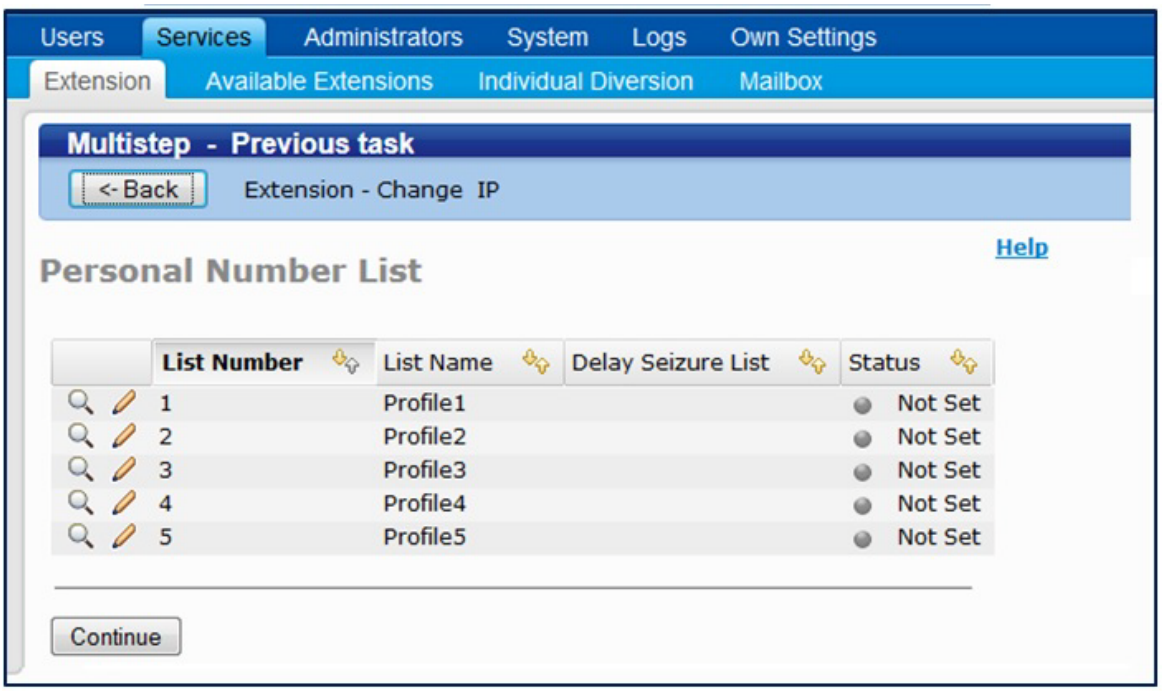


Figure 83: Extension - Personal Number List

27. Make the changes in the Personal Number List and click **Continue**. The setup below enables a user to forward calls to Mitel Voice Mail. The example shows how calls will be forwarded to Mitel Voice Mail number 6001 if a call is made to extension 8002 on no answer:

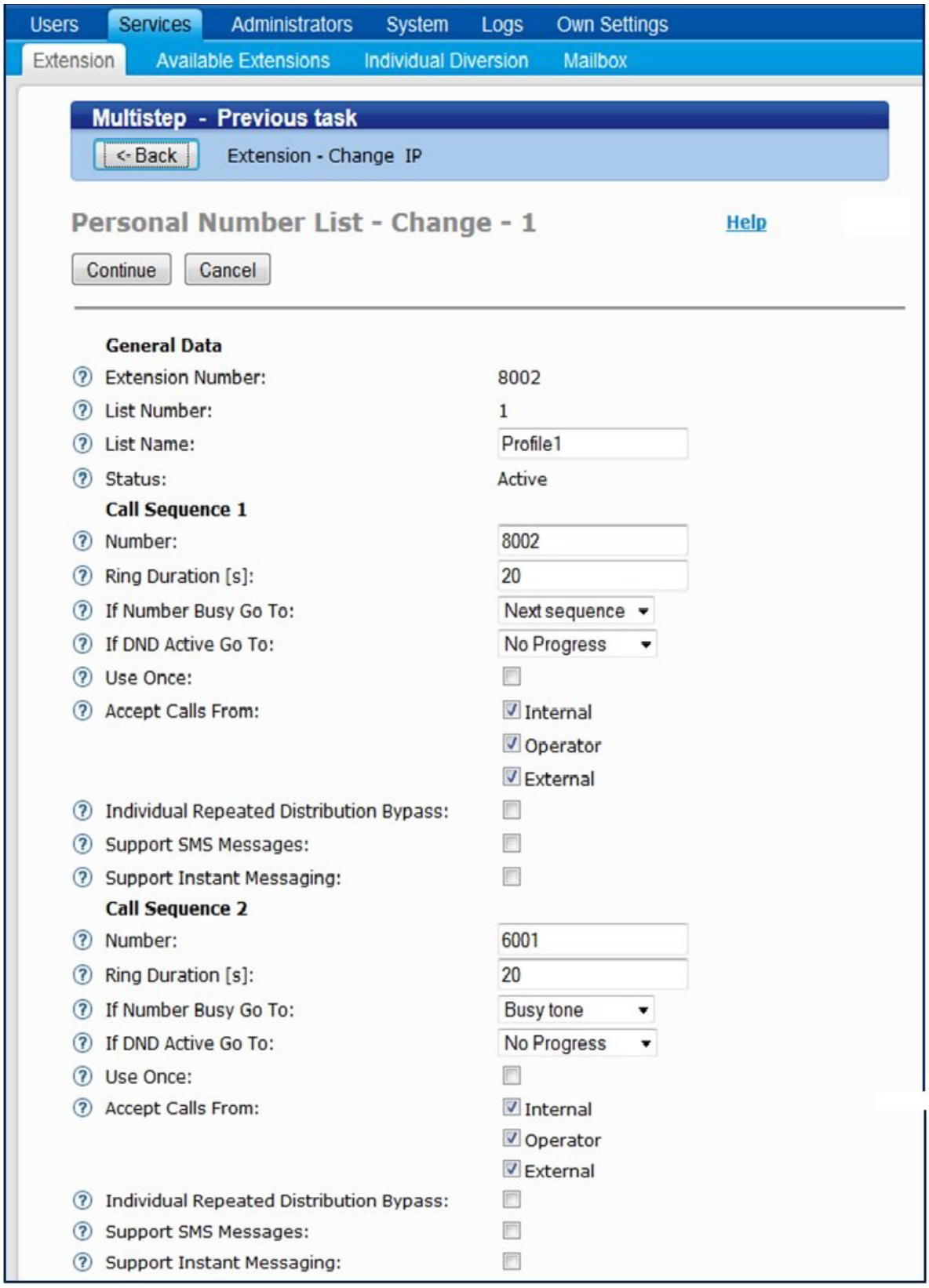


Figure 84: Personal Number List - Change - 1

28. Click **Continue**.

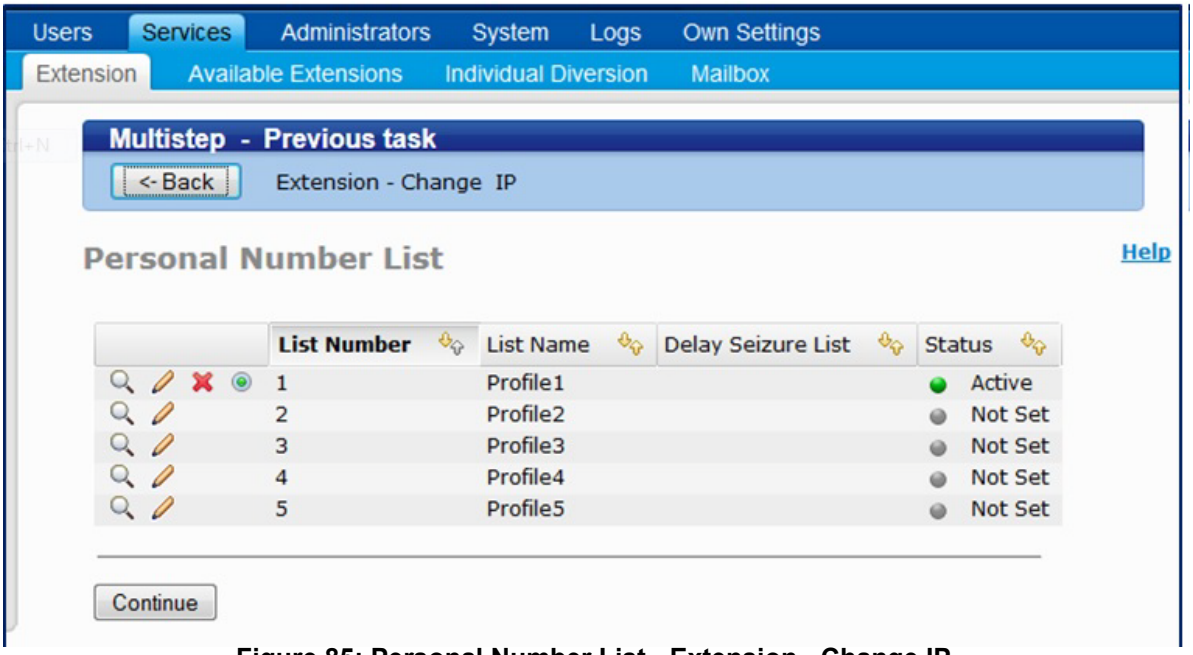


Figure 85: Personal Number List - Extension - Change IP

29. Click **Continue**.

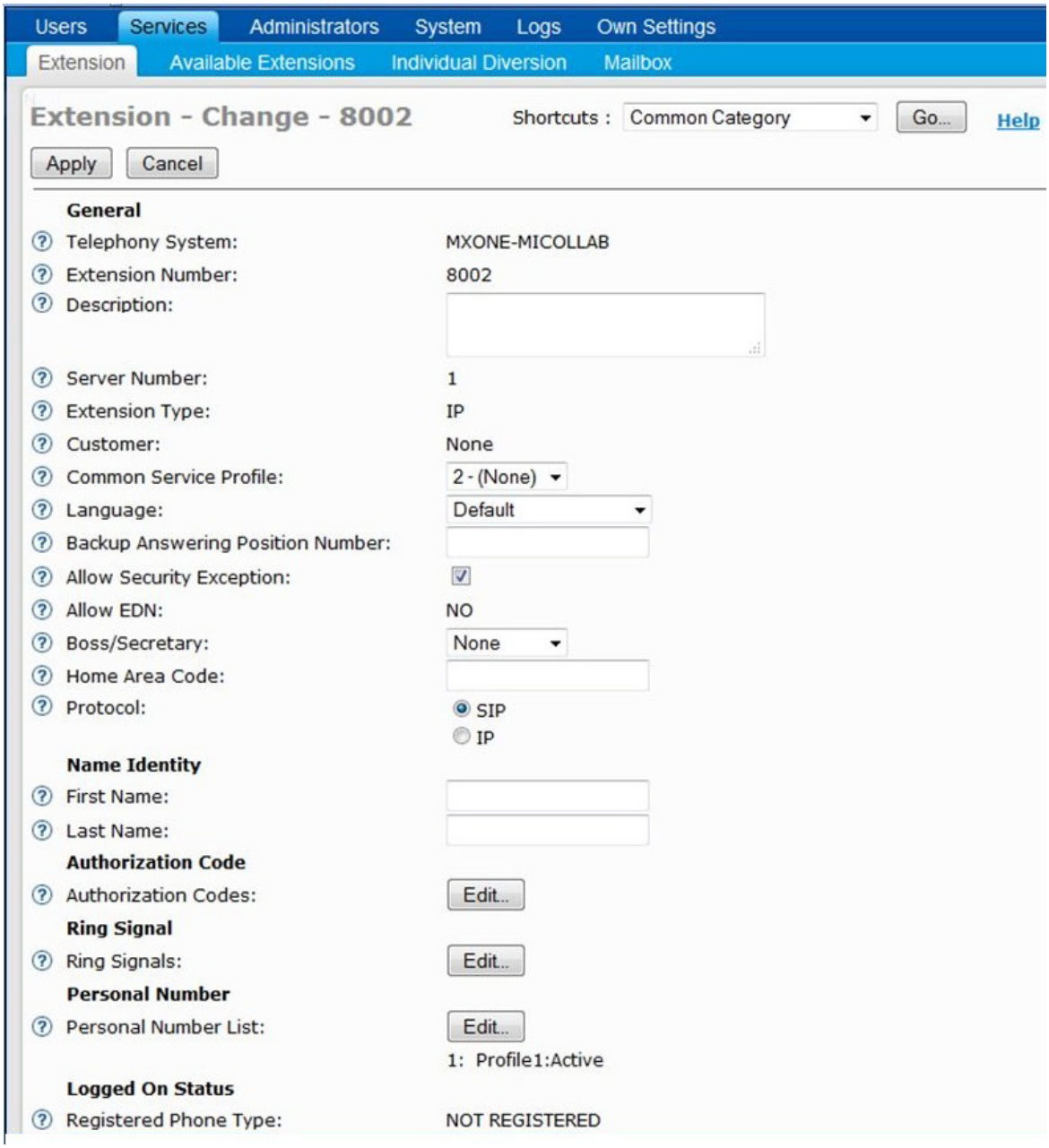


Figure 86: Extension - Change - 8003

30. When the extension change task is presented, click **Apply** to complete the configuration.

TEST NUPOINT VOICE MAIL OPERATION

To test basic communication between the MiVoice MX-ONE and the NuPoint UM:

1. From any extension configured on the communications platform, call the NuPoint UM voice mail extension.
2. Verify you hear the voice mail system greeting: “Welcome to the message center.” This step establishes that you connected successfully to the NuPoint UM voice mail system.

3. Set up the test Mailbox Name and Greeting.

From the phone for which you created a test mailbox on NuPoint UM, dial the NuPoint UM voice mail extension.

1. Dial the mailbox passcode to access the voice mail system options for that mailbox.
2. Follow the voice mail prompts to set up the mailbox and create a greeting.
3. Dial Extension “xxxxx” and Leave a Voice Mail Message
   - From any phone on the communications platform, dial the NuPoint UM voice mail extension.
   - When prompted for an extension at the system greeting, dial the test mailbox created earlier.
   - Leave a voice mail message and then follow the prompts to deliver the message.
4. Check MWI and Retrieve Voice Message from Extension “xxxxx”.
5. Verify MWI on the phone that was left a voice mail message.
6. Access the voice mail system, provide the passcode, and then listen to the message.

INTEGRATE AUDIO, WEB AND VIDEO

To integrate the AWV application with the MiVoice MX-ONE, you must configure the MiVoice MX-ONE system settings first, then configure the SIP server settings in the AWV application.

INSTALL MICOLLAB AWV CONFERENCING CLIENT FOR ALL USERS

If you are running in a networked environment, you can (as the administrator of the computers) install MiCollab Audio, Web and Video Conferencing Client for all users. This is usually done in a Terminal server or Citrix environment.

If you wish to do this, download the executable file from **http://<MiCollab IP address>/wd/MCAClient-admin.exe** and follow the instructions.

Note: You must have Administrator privileges to install MiCollab Audio, Web and Video Conferencing Client for all users. The software must be placed in a location that all users can access. If a user on the system already has the MiCollab Audio, Web and Video Conferencing Client installed on their machine locally, that version takes precedence over the administrator-installed version.

CONFIGURE MIVOICE MX-ONE TO COMMUNICATE WITH AWV

You connect the AWV application to MiVoice MX-ONE as an internal hunt group with SIP extensions. The workflow for initiating the SIP extensions and hunt group is as follows:

- Initiate an extension profile suitable for the MiCollab AWV extensions.
- Initiate generic extension numbers, in consecutive series.
- Initiate SIP extensions for the same numbers.
- Initiate a Hunt Group with appropriate service profile.

- Initiate the SIP extensions as hunt group members.
- Optionally initiate the Voice Mail function for the hunt group number and the member extensions (to get DTMF support).
- Configure MiCollab via its web GUI.

Initiate the Hunt Group

1. Log into the Service Node Manager (MX-ONE management system).
2. Go to **Telephony** and then **Groups**, select **Hunt Group**.

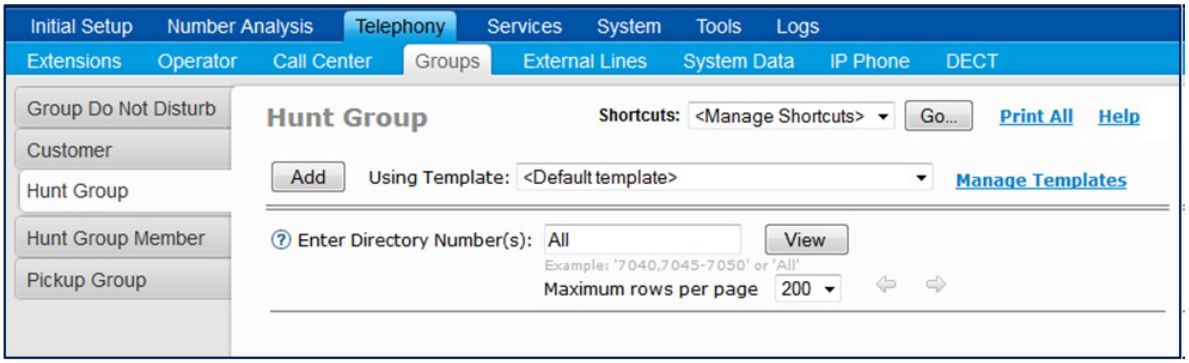


Figure 87: Hunt Group

3. Click **Add**.
4. In the Available Directory Number Intervals field, set the range of Directory Numbers that will be used a pilot.

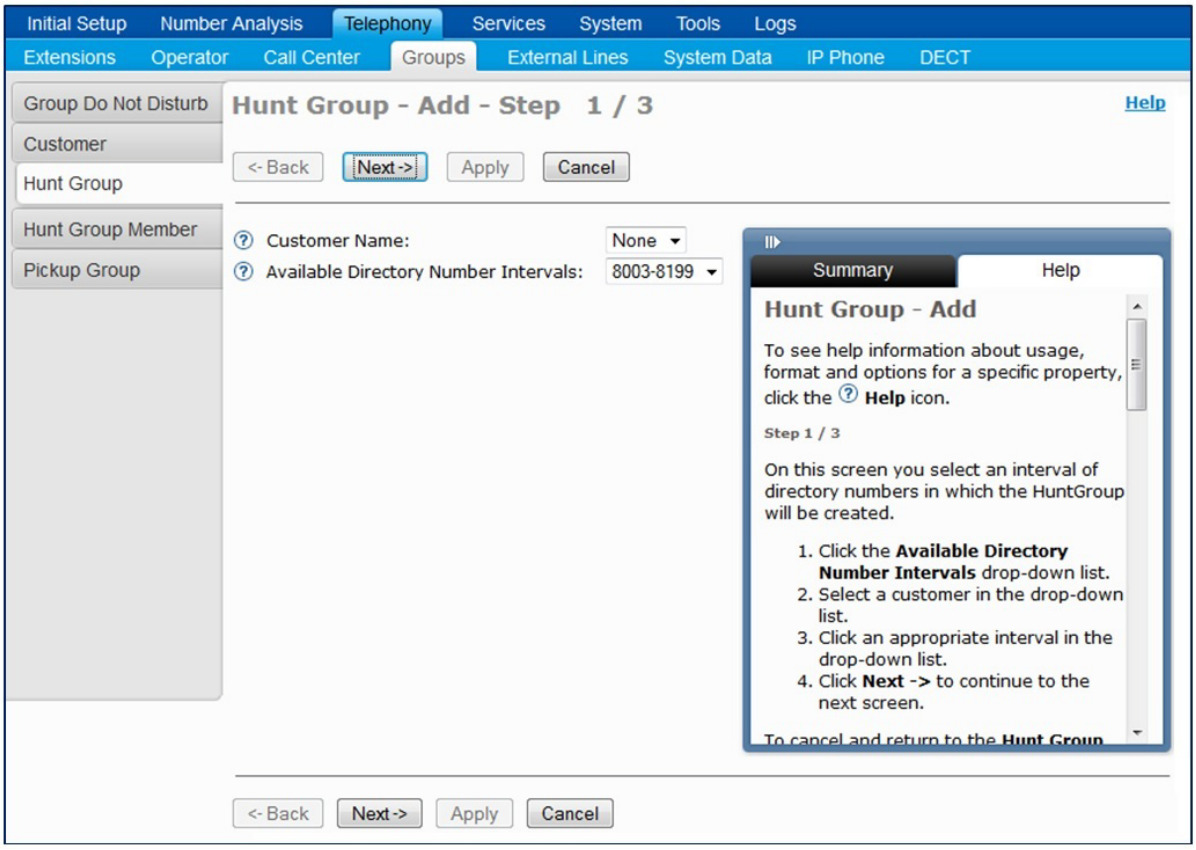


Figure 88: Hunt Group - Add - Step 1

5. Click **Next**.
6. Select the Directory Number that will be used a pilot and configure the group parameters and click **Apply**. The recommended settings are shown below.

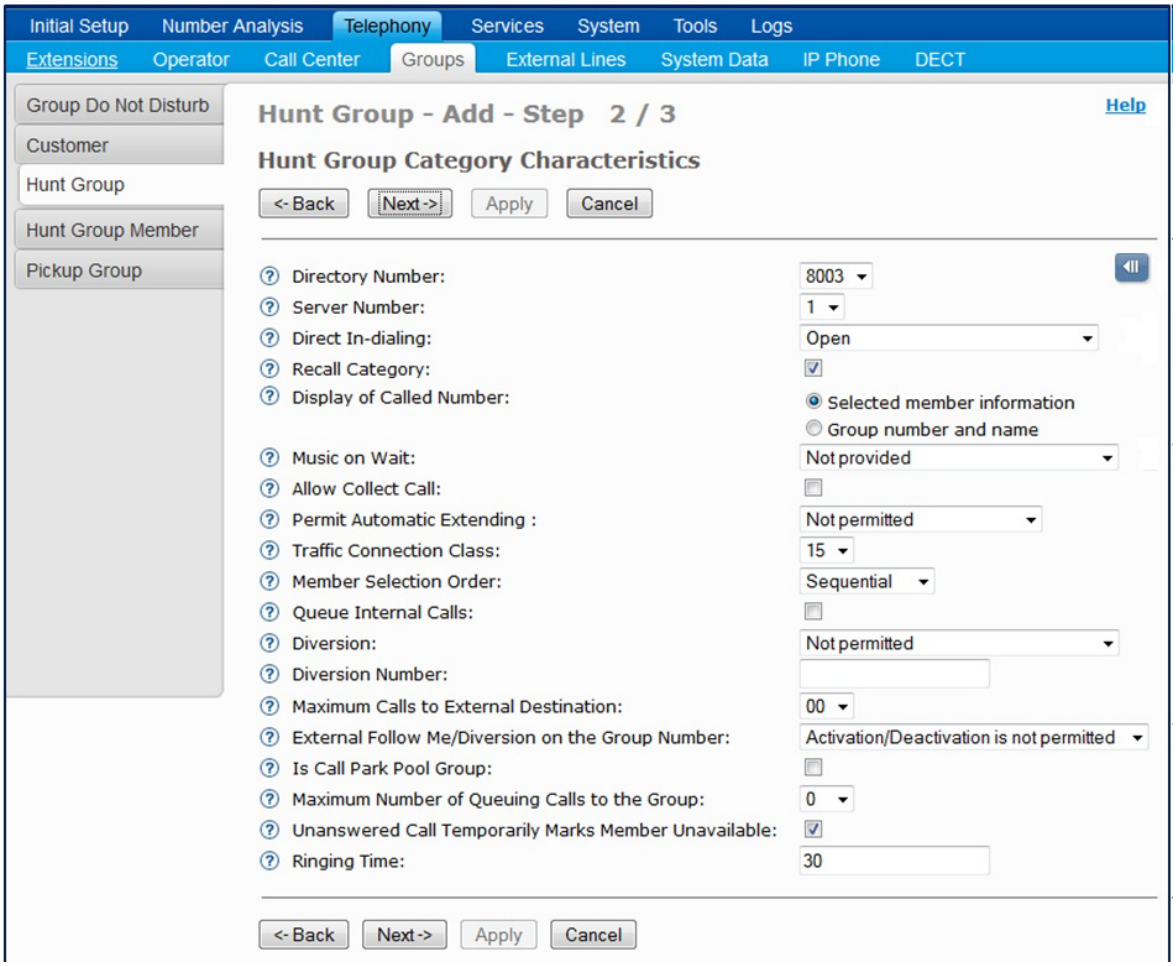


Figure 89: Hunt Group - Add Step 2

7. Click **Next**.
8. Enter a name for the group.

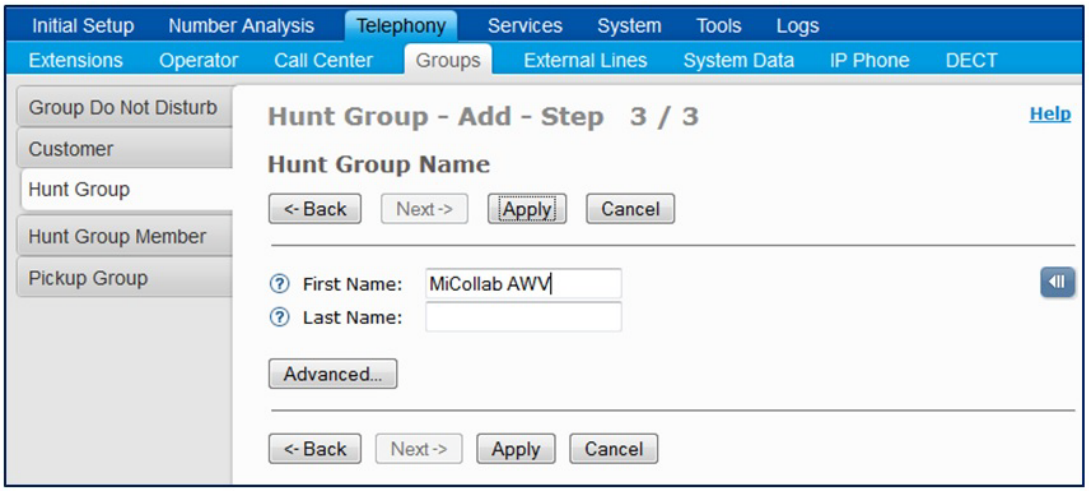


Figure 90: Hunt Group - Add Step 3

9. Click **Apply**. The Service Node Manager shows the operation result.

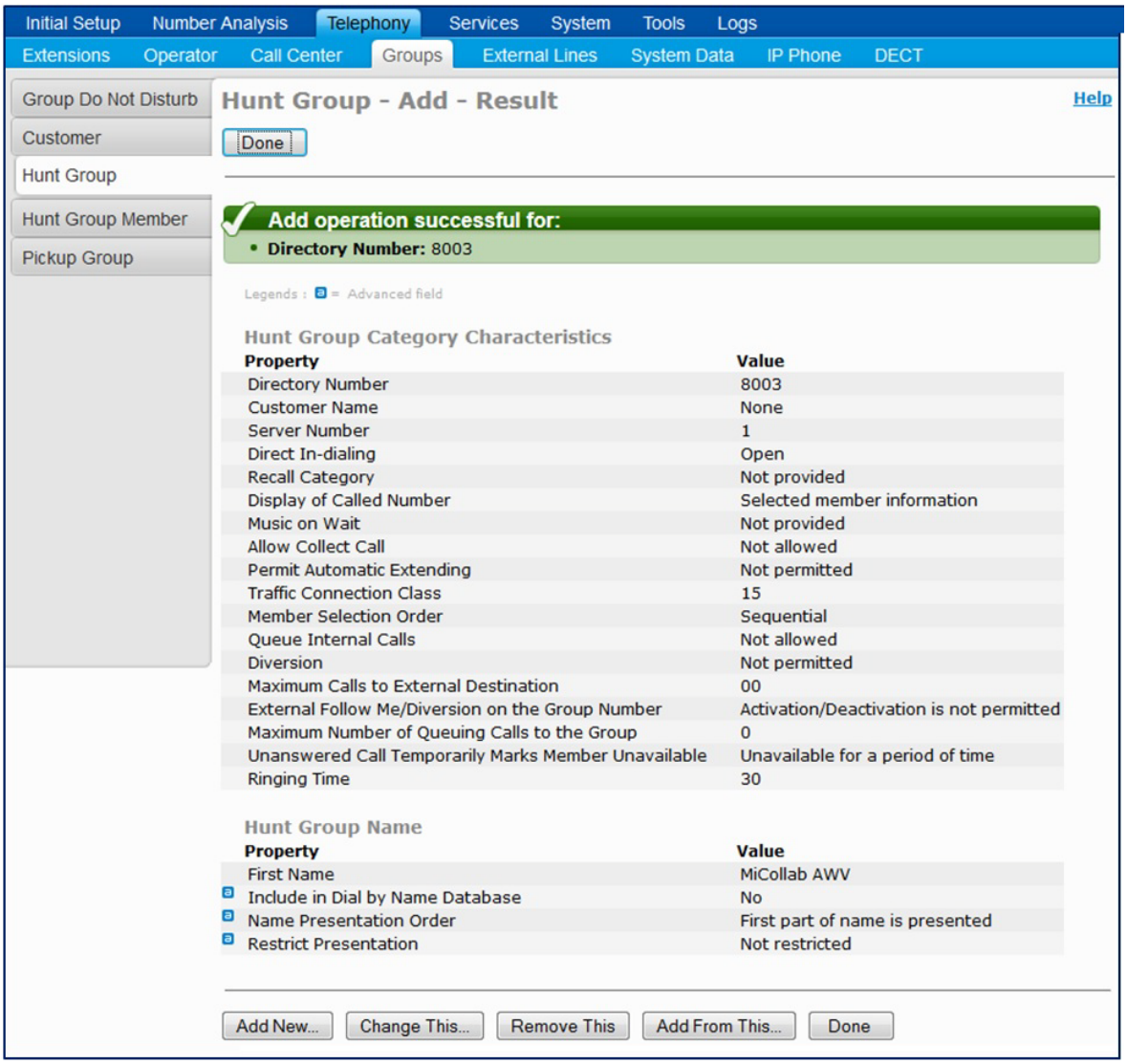


Figure 91: Hunt - Group - Add - Result

10. Click **Done**.

Initiate the Common Service Profile (CSP)

11. Click **Telephony**, click **Extensions**, then select **Common Service Profiles**. The Common Service Profile task is divided into six steps. The following is an example and the Traffic category and may vary depending the customer setup.

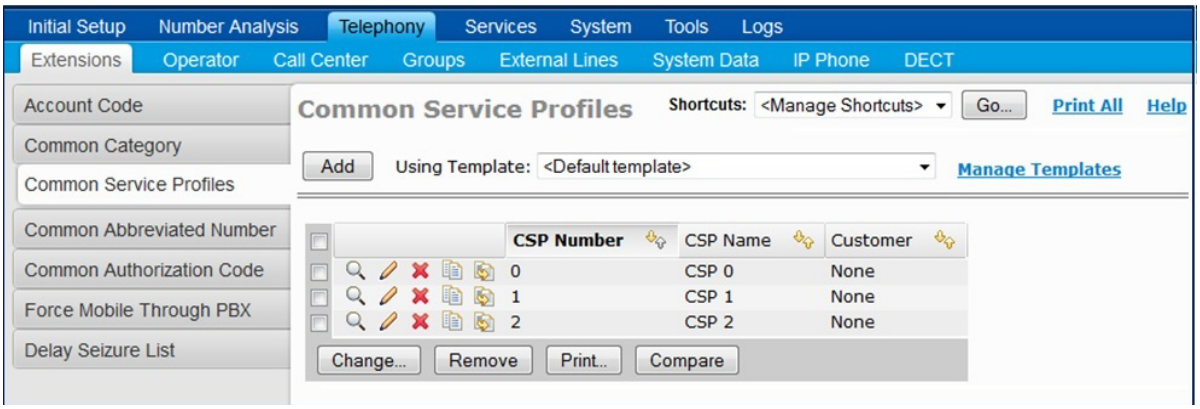


Figure 92: Common Service Profiles

12. Click **Add**.
13. Enter a name for the common service profile and select the CSP number:

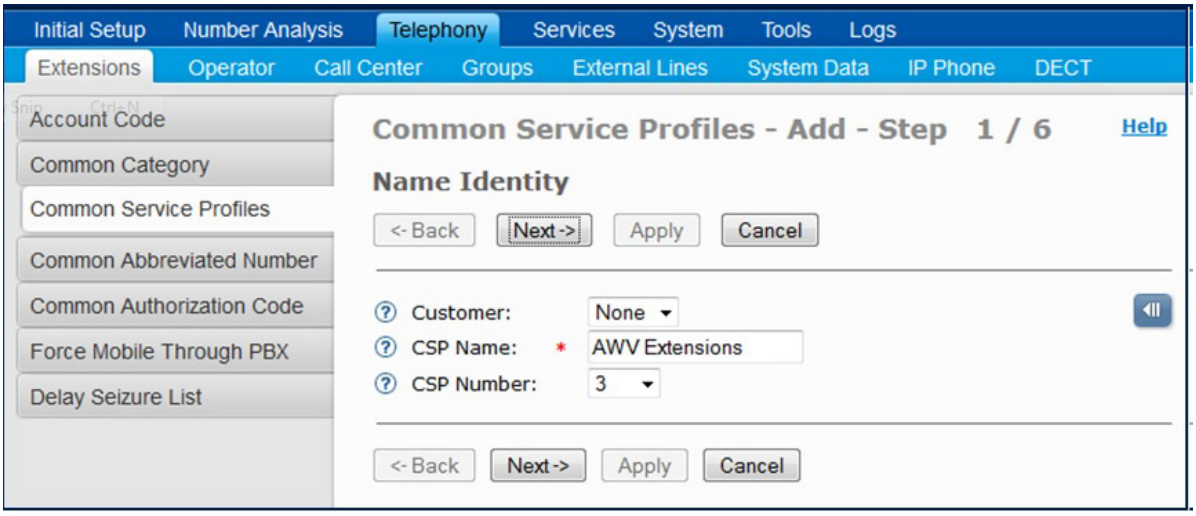


Figure 93: Common Service Profiles - Add - Step 1

14. Click **Next**.

15. Define the Number Presentation Category.

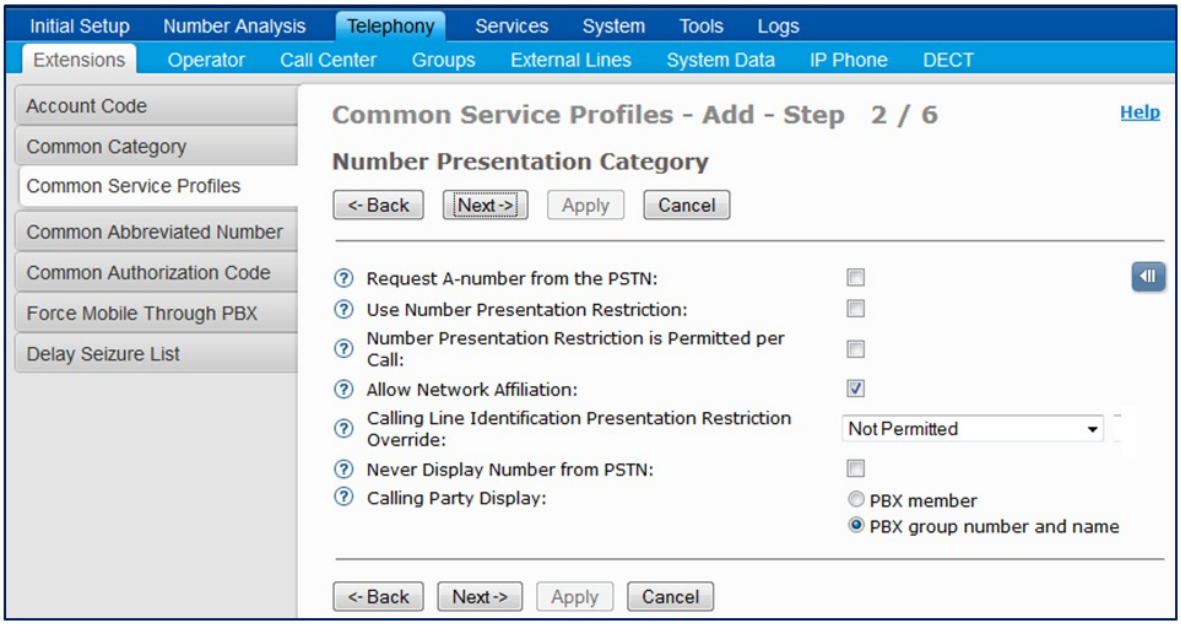


Figure 94: Common Service Profiles - Add - Step 2

16. Click **Next**.

17. Define the Traffic Category.

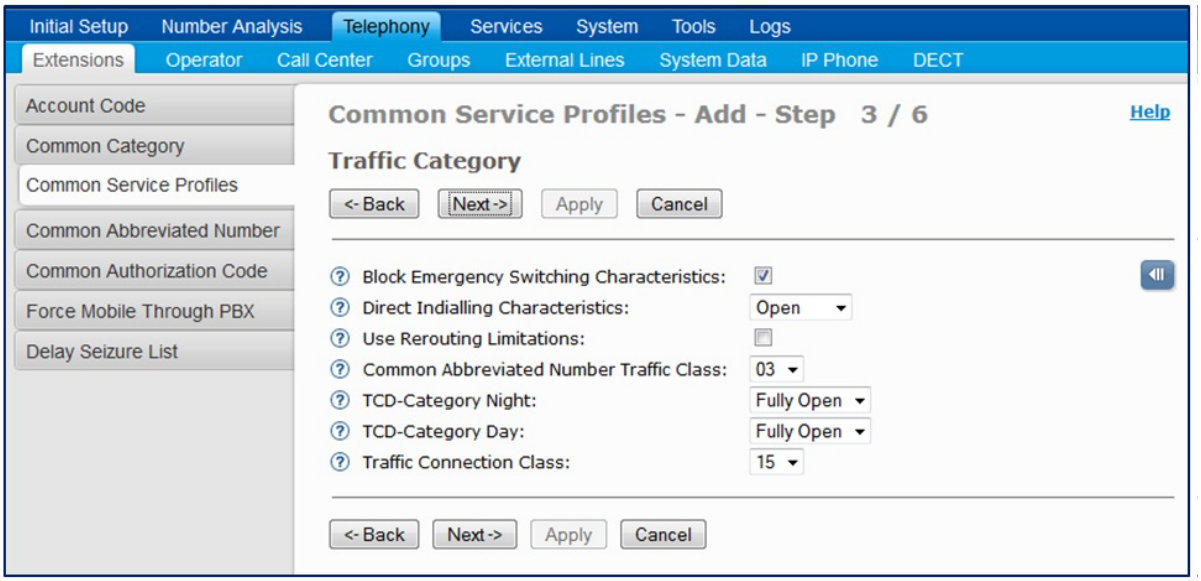


Figure 95: Common Service Profiles - Add - Step 3

18. Click **Next**.

19. Define the Service Category.

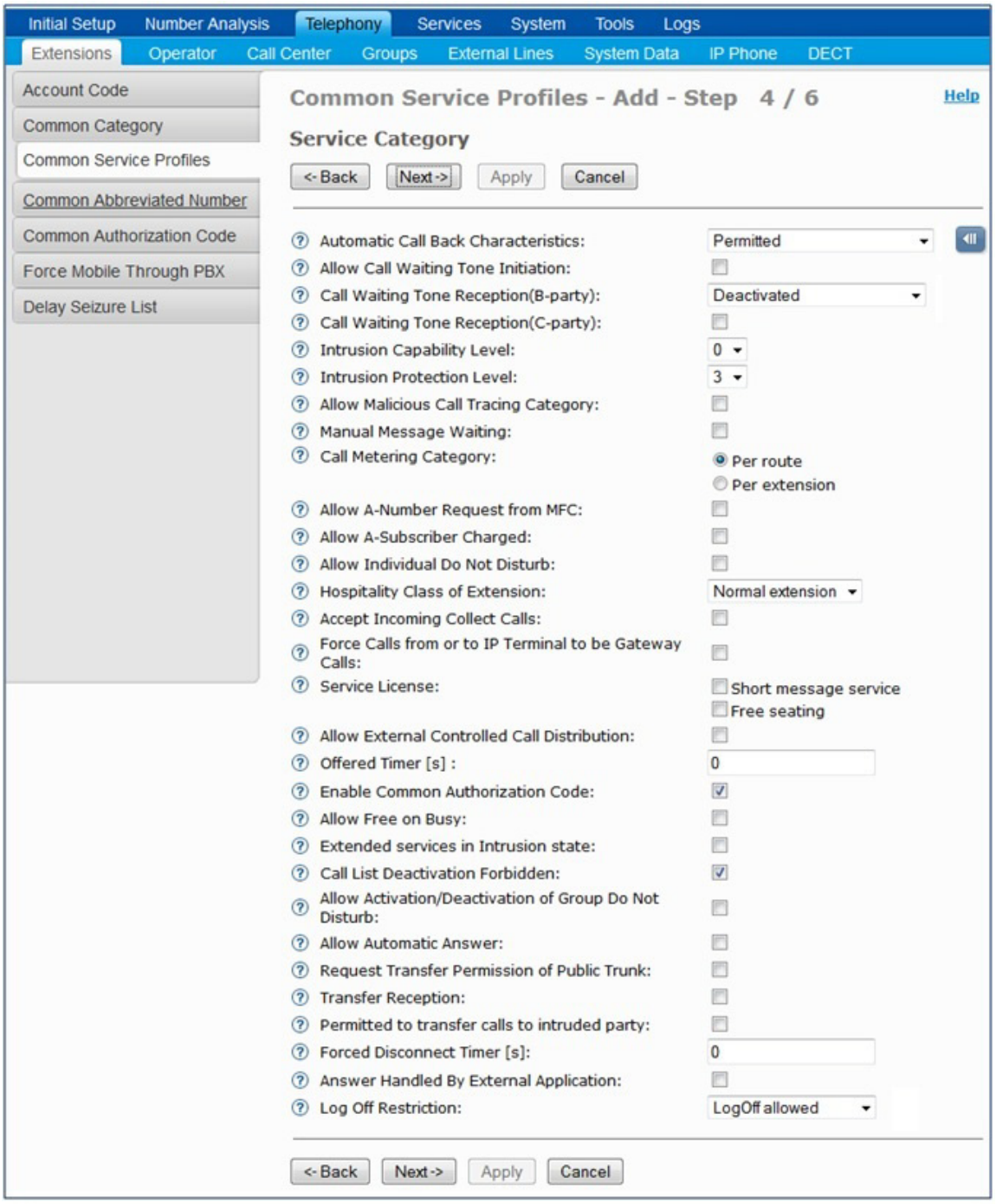


Figure 96: Common Service Profiles - Add - Step 4

20. Click **Next**.

21. Define the Diversion Category.

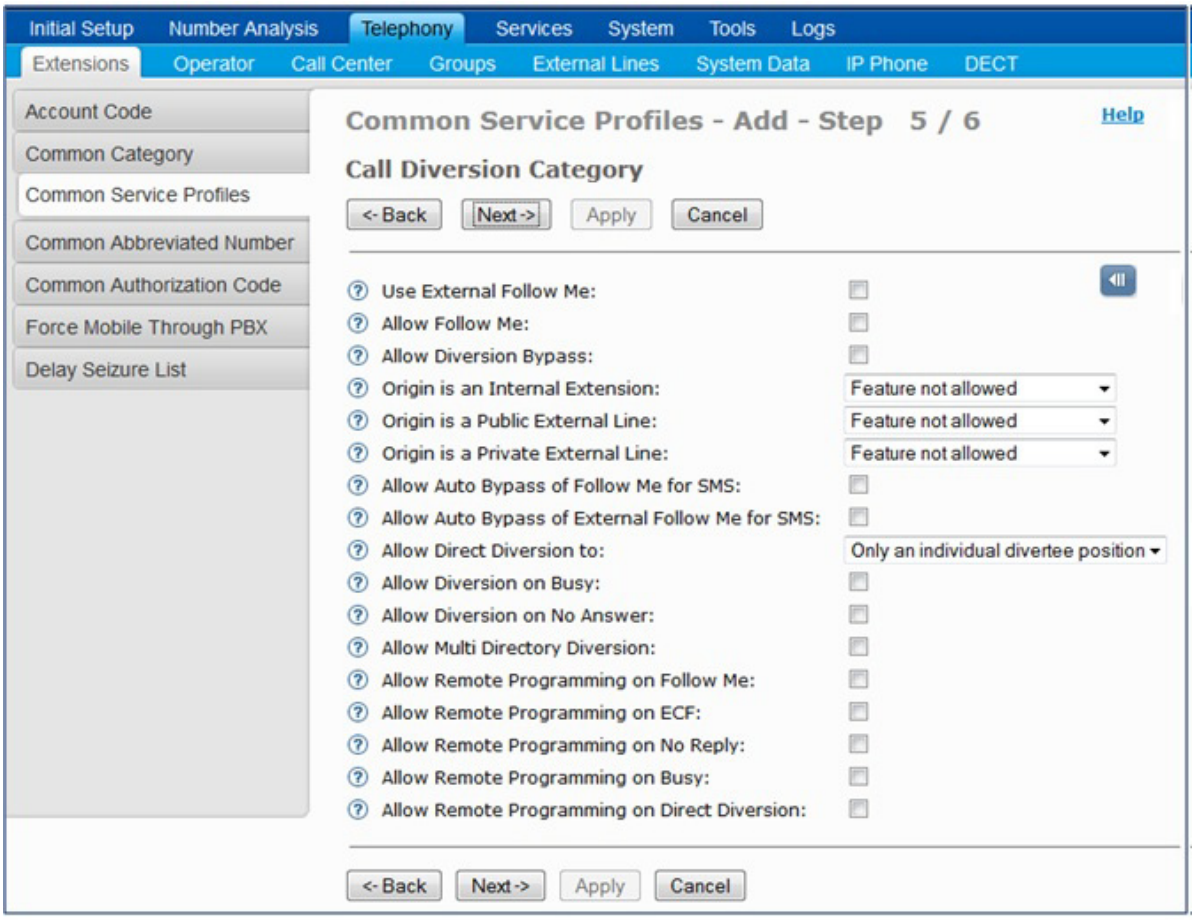


Figure 97: Common Service Profiles - Add - Step 5

22. Click **Next**.
23. Define the Routing Category.

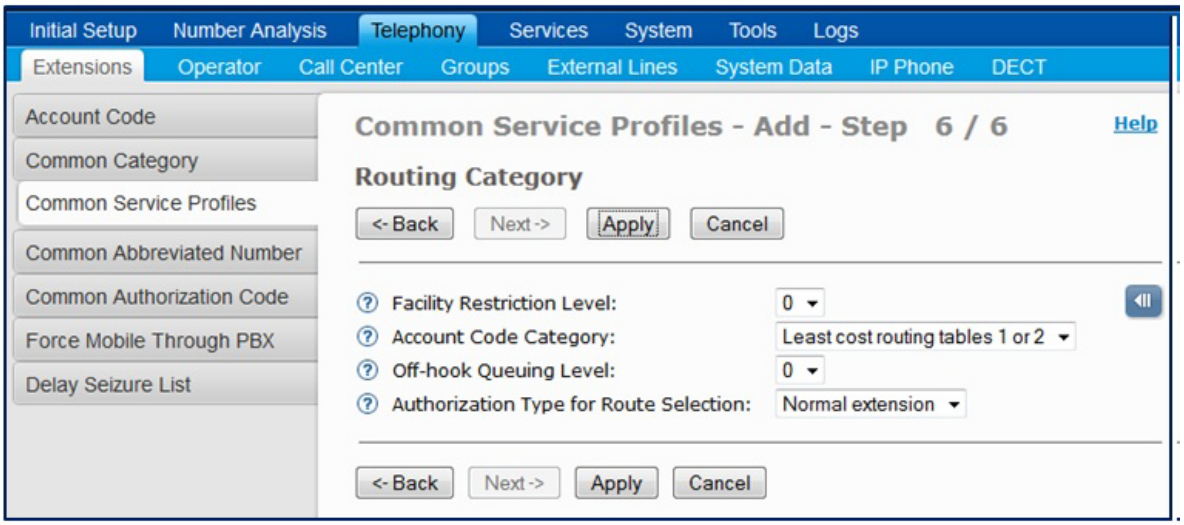


Figure 98: Common Service Profiles - Add - Step 6

24. Click **Apply**. The Service Node Manager shows the operation result.

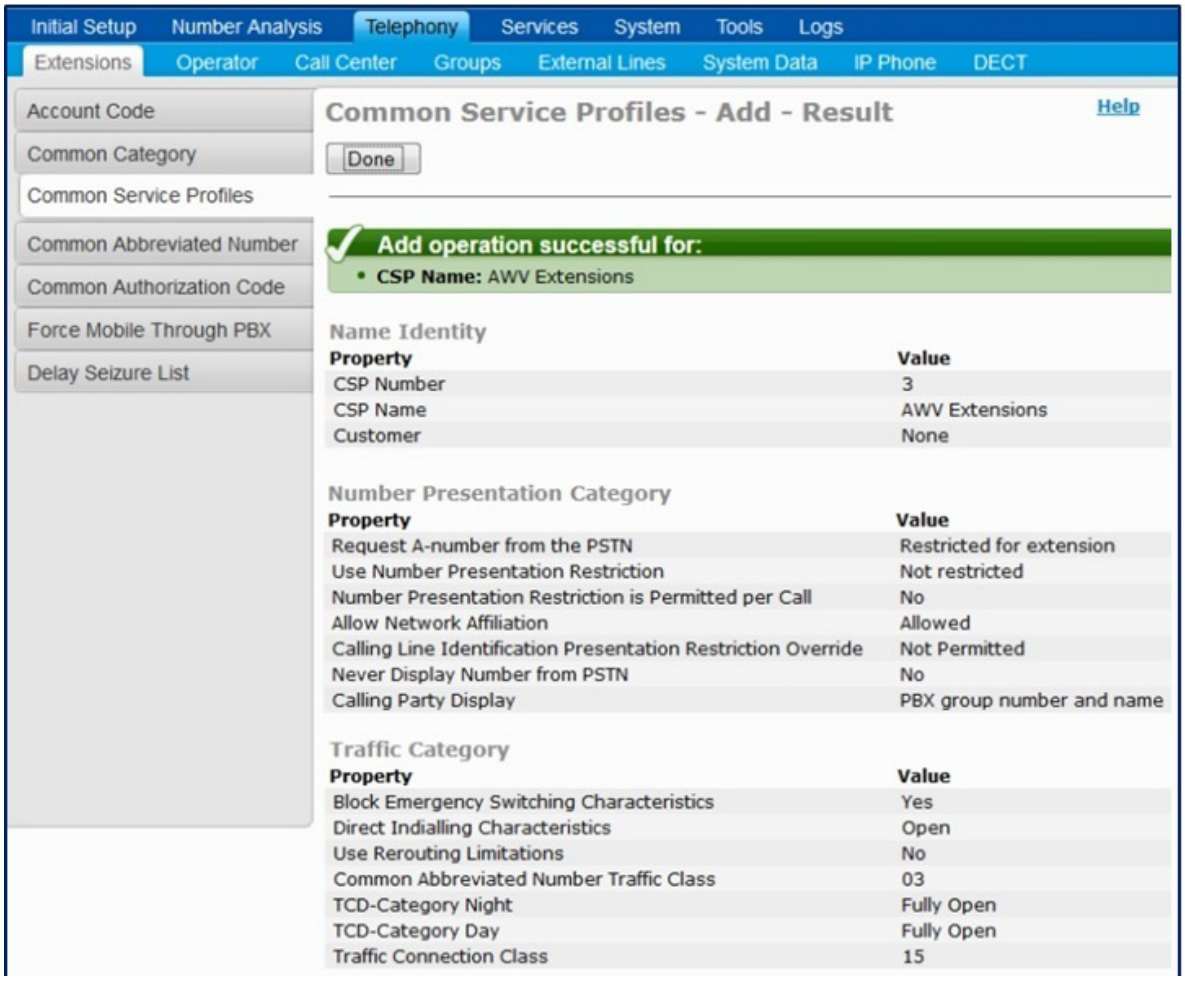


Figure 99: Common Service Profiles - Add - Result

Traffic Connection Class	15

Service Category

Property	Value
Automatic Call Back Characteristics	Permitted
Allow Call Waiting Tone Initiation	No
Call Waiting Tone Reception(B-party)	Deactivated
Call Waiting Tone Reception(C-party)	No
Intrusion Capability Level	0
Intrusion Protection Level	3
Allow Malicious Call Tracing Category	No call tracing
Manual Message Waiting	Not allowed
Call Metering Category	Per route
Allow A-Number Request from MFC	No
Allow A-Subscriber Charged	Normal
Allow Individual Do Not Disturb	No
Hospitality Class of Extension	Normal extension
Accept Incoming Collect Calls	No
Force Calls from or to IP Terminal to be Gateway Calls	Yes
Allow External Controlled Call Distribution	No
Offered Timer [s]	0
Enable Common Authorization Code	Enabled
Allow Free on Busy	Disabled
Extended services in Intrusion state	Extended services not permitted
Call List Deactivation Forbidden	Yes
Allow Activation/Deactivation of Group Do Not Disturb	Not permitted
Allow Automatic Answer	No
Service License	
Short message service	No
Free seating	No
Request Transfer Permission of Public Trunk	Not allowed
Transfer Reception	Not allowed
Permitted to transfer calls to intruded party	Not allowed
Forced Disconnect Timer [s]	0
Answer Handled By External Application	No
Log Off Restriction	LogOff allowed

Call Diversion Category

Property	Value
Use External Follow Me	No
Allow Follow Me	No
Allow Diversion Bypass	No
Origin is an Internal Extension	Feature not allowed
Origin is a Private External Line	Feature not allowed
Origin is a Public External Line	Feature not allowed
Allow Auto Bypass of Follow Me for SMS	No
Allow Auto Bypass of External Follow Me for SMS	No
Allow Direct Diversion to	Only an individual divertee position
Allow Diversion on Busy	No
Allow Diversion on No Answer	No
Allow Multi Directory Diversion	No
Allow Remote Programming on Follow Me	No
Allow Remote Programming on ECF	No
Allow Remote Programming on No Reply	No
Allow Remote Programming on Busy	No
Allow Remote Programming on Direct Diversion	No

Routing Category

Property	Value
Facility Restriction Level	0
Account Code Category	Least cost routing tables 1 or 2
Off-hook Queuing Level	0
Authorization Type for Route Selection	Normal extension

Add New... | Change This... | Remove This | Add From This... | Done

Figure 100: Common Service Profiles - Add - Result (Continued)

Initiate the SIP extension to be used as group members

25. Log into the Provisioning Manager (MX-ONE management system).

26. Click **Services** and then click **Extension**.

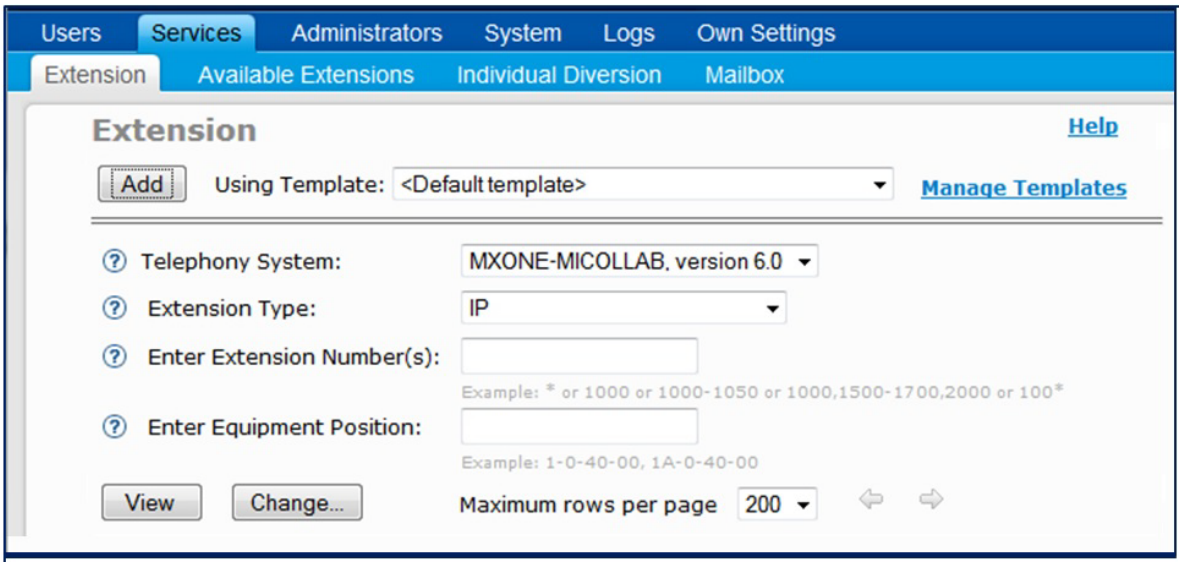


Figure 101: Extension - Add

27. Click **Add**.

28. In Step 1, set the Extension Type to IP.

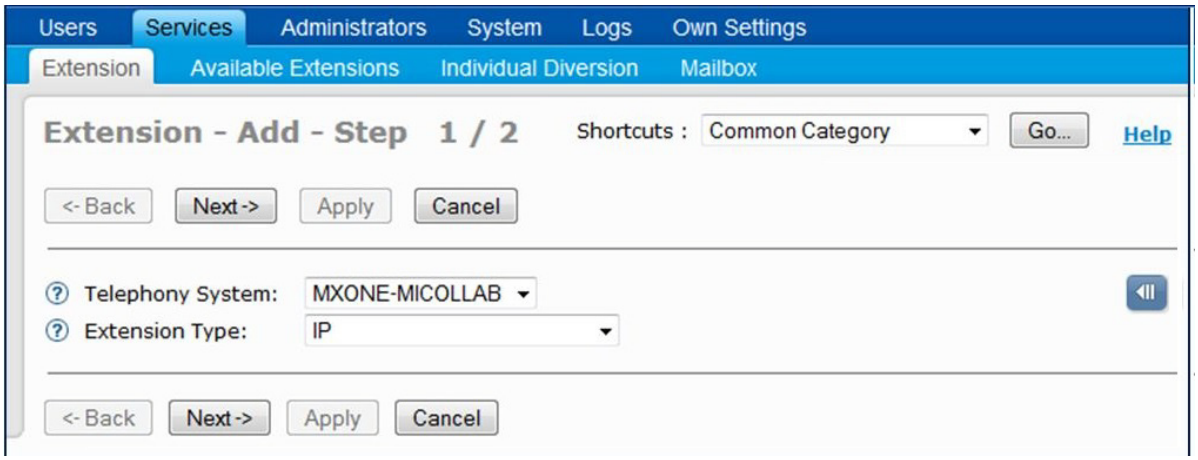


Figure 102: Extension - Add - Step 1

29. Click **Next**.

30. In the step 2, at minimum select Server Number, Common Service Profile, Protocol SIP and under Hunt Group Number add the group number that you created (see Figure 89).

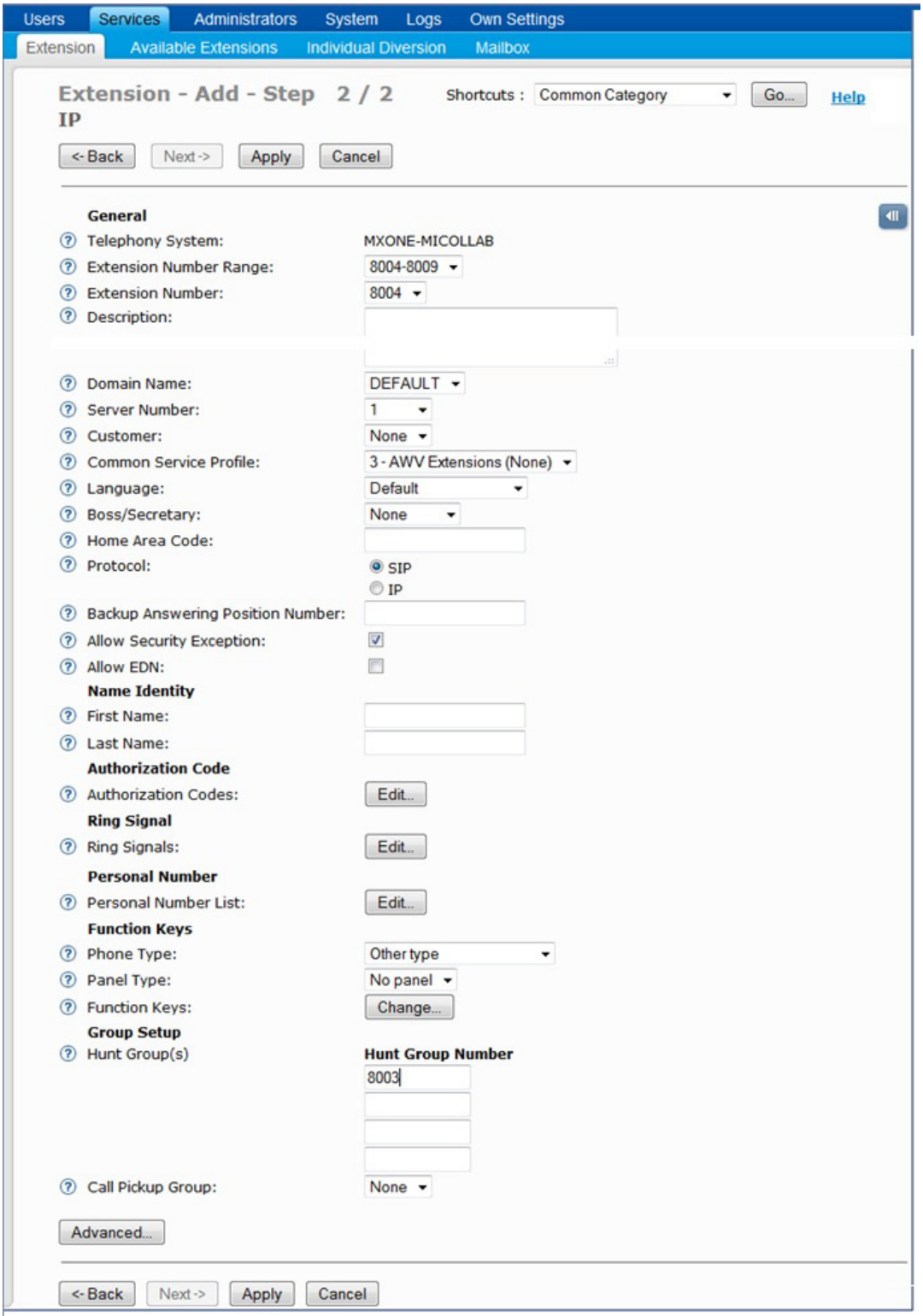


Figure 103: Extension - Add - Step2

31. Click **Apply**. The Provisioning Manager shows the operation result.

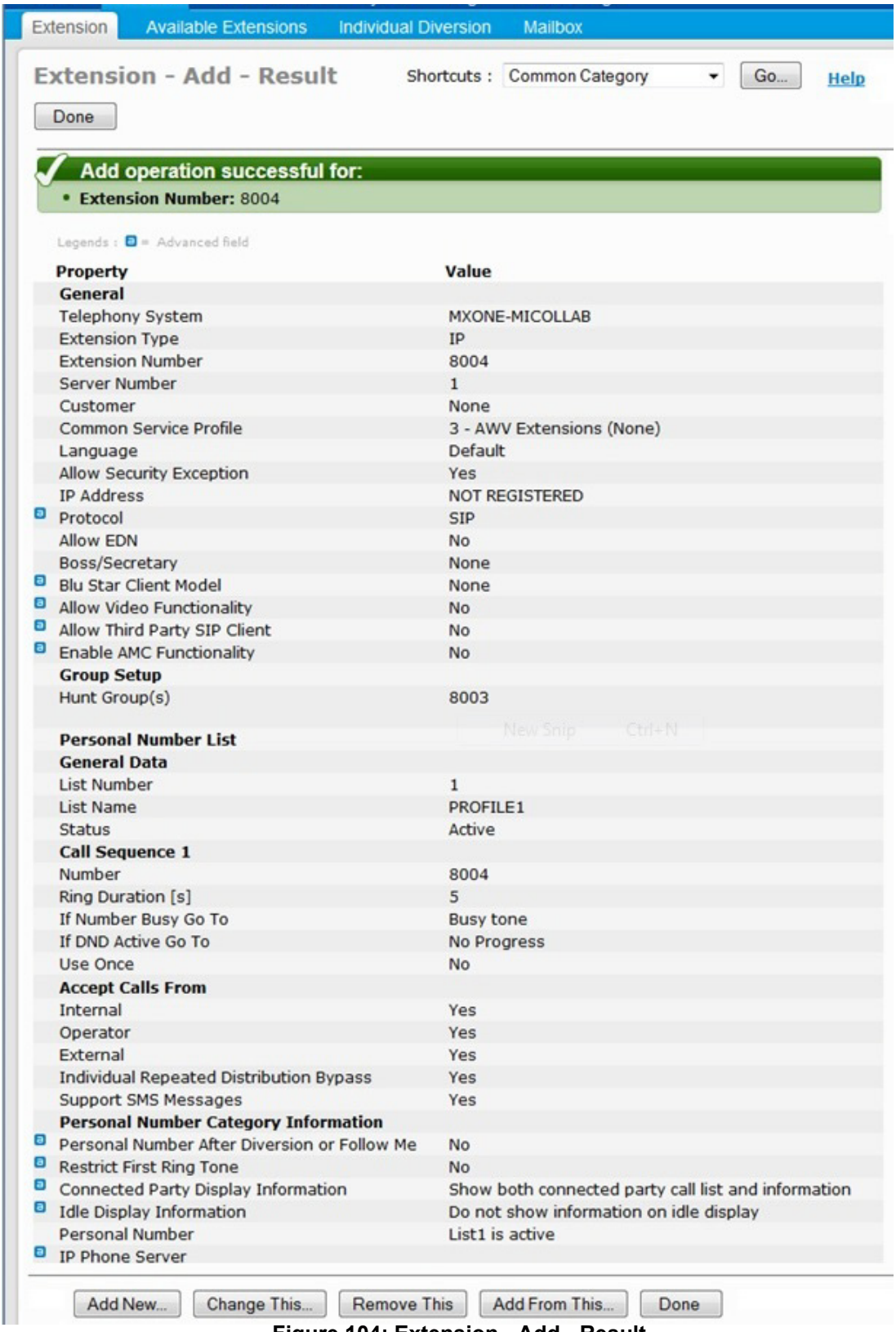


Figure 104: Extension - Add - Result

32. Click **Add From This** to initiate more SIP extensions with the same set of parameters.
33. In the **Shortcut** field, select Hunt Group.

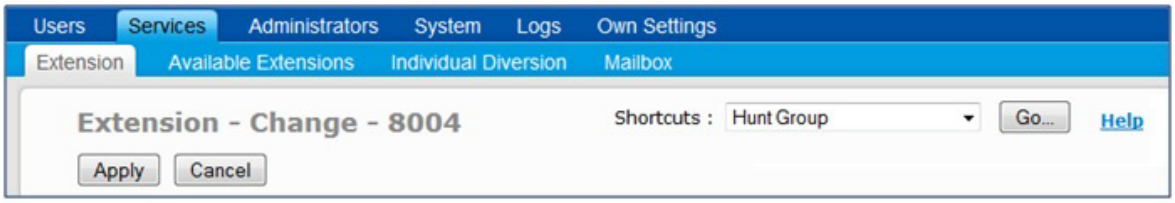


Figure 105: Extension - Change

34. Click **Go**. The Provisioning Manager opens the Service Node Manager – Hunt Group tab.

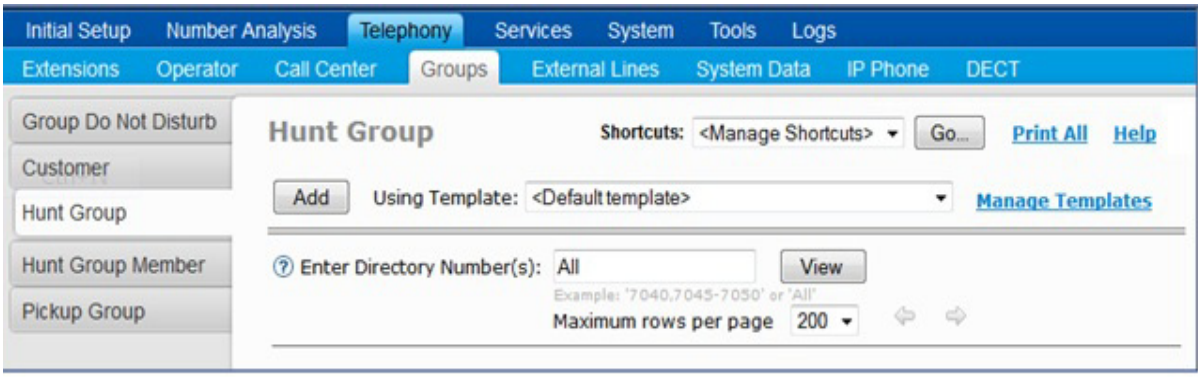


Figure 106: Hunt Group

35. Select **Hunt Group Member**.

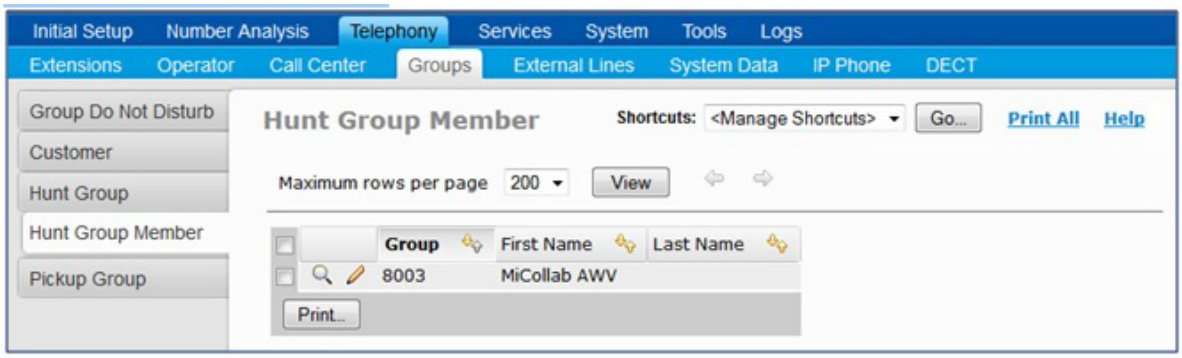


Figure 107: Hunt Group Member

36. Review the Hunt Group Members.

Figure 108: Hunt Group Member - View

37. You can also manage the Hunt Group Members using the **Change This...** function.

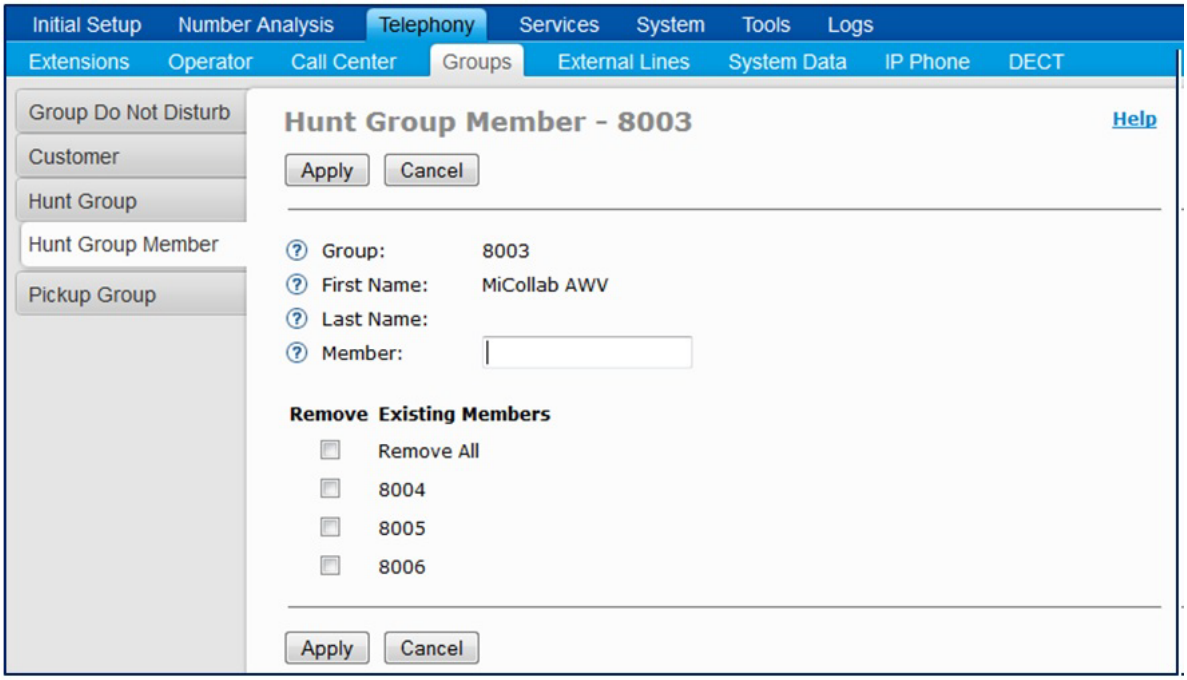


Figure 109: Manage Hunt Group Members - Managing

CONFIGURE SIP SERVER SETTINGS IN MICOLLAB AWV

Configure the SIP Server settings in MiCollab Audio, Web and Video Conferencing using the account information from the MiVoice MX-ONE configuration:

1. Log into the MiCollab server manager interface.
2. Under **Applications**, click **Audio, Web and Video Conferencing**.
3. From the MiCollab Audio, Web and Video Conferencing main page, click **System Options** on the navigation pane.
4. In System Options – Platform, select **MiVoice MX-ONE** as the system that is connected to MiCollab Audio, Web and Video Conferencing.
5. Click **Save**
6. Click **Ok** at the prompt to restart the server.
7. Click **Configure SIP Server** on the navigation pane. The SIP Server Configuration page appears.
8. Enter the following information:
   - **Extension First**: Type the extension number of the first IP device in the hunt group used by the MiCollab Audio, Web and Video Conferencing server to register itself with the PBX.
   - **Extension Last**: Type the extension number of the last IP device in the hunt group used by the MiCollab Audio, Web and Video Conferencing server to register itself with the PBX.
   - **Extension PIN**: This PIN is used for SIP MD5 authentication.
   - **SIP Domain**: This can be the domain name, fully qualified domain name (FQDN), or the IP address of the PBX system used to register the MiCollab Audio, Web and Video Conferencing
   - **SIP ports**: If you do not know the domain name or FQDN, type the PBX system IP address.
   - **IP Address**: Type the IP address of the PBX system. Alternatively, type the FQDN. Note that when typing the FQDN, only the first IP Address value returned by the DNS lookup will be used.
9. Click **Save**.

INTEGRATE MIVOICE BORDER GATEWAY

MiVoice Border Gateway provides a secure communications path for remote MiCollab Client users to the MiCollab Client Service.

The MBG provides

- SIP Teleworker for MiCollab Client softphones and 6800 sets
- SIP Trunking, and
- Secure Call Recording

CONFIGURE ICP IN MBG (STANDALONE MBG ONLY)

When you create the network elements in the MiCollab USP network element tab, the network elements are automatically added to the embedded MiVoice Border Gateway (MBG) application. However, if your deployment includes a standalone MBG system, you must manually configure the network elements as ICPs in the standalone MBG server manager interface.

To add a communications platform as an ICP:

1. Log into the standalone MBG server manager interface.
2. Under **Applications**, click **MiVoice Border Gateway**.
3. From **Service Configuration**, click **ICP**
4. From **ICP Information**, click **+**
5. Complete the ICP information. Refer to the help for details. Select "MiVoice MX-ONE" as the ICP type.
6. Click **Save**. You can now select the ICP type (MiVoice MX-ONE) from any MBG device management page:

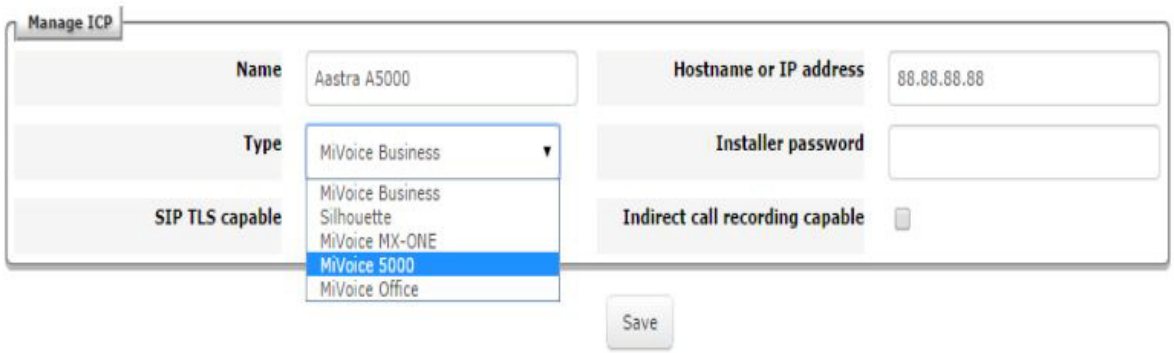


Figure 110: Configure MiVoice MX-ONE as ICP on Standalone MBG

CONFIGURE SIP TRUNKS

1. Configure the MiVoice MX-ONE with SIP trunks.
2. Configure the SIP trunks on MBG.

INTEGRATE MICOLLAB CLIENT SERVICE

MICOLLAB CLIENT CONFIGURATION

Refer to the *MiCollab Client Service* application help and the *MiCollab Client Administrator Guide* for configuration information.

Note that you must enable the following Nupoint UM FCOS options to allow the MiCollab Client Desktop client to control voice mail calls:

- FCOS 289 Enable UM-SMTP
- FCOS 290 Enable UM-Web

- FCOS 295 Enable UM Pro

DEPLOY MICOLLAB CLIENT MOBILE CLIENTS

MiVoice MX-ONE platforms support MiCollab mobile clients. After you configure a user with a mobile client in the MiCollab Client application, a deployment e-mail is sent to the user with simplified configuration instructions on how to set it up.

Configure CSTA Link

The MiCollab Client CSTA Proxy application supports the call control messaging between MiCollab and the MiVoice MX-ONE platform to support MiCollab Client features such as "Click-to-Call".

1. Log into the MiCollab server manager.
2. Under **Applications**, click **MiCollab Client Service**.
3. Click **Configure MiCollab Client Service**.
4. Click **PBX Nodes**.
5. Double-click the system name or IP Address of the MiVoice MX-ONE
6. Open **CSTA Settings**.
7. In the Port field, enter the number of the CSTA port on the MiVoice MX-ONE (default is 8882).
8. Refer to the help for descriptions of the other fields. Typically, you will not need to change the default settings.
9. Click **Save**.

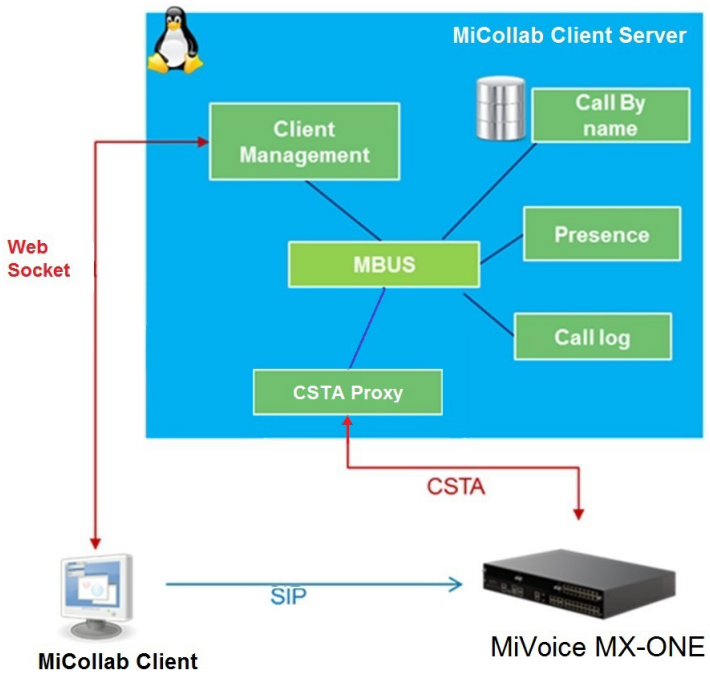


Figure 111: MiCollab Client Integration

Configure MiCollab Client Deployment

1. Log into the MiCollab server manager interface.
2. Under **Applications**, click **MiCollab Client Deployment**. Refer to the application on-line help for instructions to configure client deployment.

Purchase and Import SSL Certificates to Servers

1. Log into the MiCollab server manager.
2. Under **Security**, click **Web Server Certificates.**
3. To enable remote client station to log in and to enable MiCollab Mobile Client users to establish connections, you must install an SSL Certificate on the MiCollab and MBG servers. Refer to the help associated with the Web Server Certificates page for instructions.

CONFIGURE INTEGRATED DIRECTORY SERVICES (OPTIONAL)

Optionally, configure Integrated Directory Services to integrate the non-corporate contacts from a directory server or a MiVoice MX-ONE with the MiCollab Client Corporate Directory database. Note that only non-corporate entries (contacts) are supported via IDS. User entries are not synchronized and are not copied to the MiCollab USP database.

During an IDS synchronization event, the system imports the non-corporate entries. When users start up their MiCollab clients, the system updates the user's Contacts list. Users can then place calls to the non-corporate contacts using "Click-to-Call" functionality from their phone clients.

PERFORM USER AND SERVICES PROVISIONING

You perform all user add, change, and delete operations from the MiVoice MX-ONE administration interface.

- To add or modify MiCollab services, assign a role to a new user to apply the associated MiCollab template and configure the user with the application services that are defined in the template. MiVoice MX-ONE automatically applies the update to the MiCollab database (a periodic synchronization is not required)
- If you remove a role from a user on the MiVoice MX-ONE, a synchronization is not required. The deletion is applied automatically. The licenses associated with those services become available on MiCollab.
- If you change a user’s role, the user’s application services are updated with the new service mix that is defined in the role’s template. For MiVoice MX-ONE integrations, you must re-apply the role to the user manually because there is no automatic sync.

See “User Provisioning” on page 116 for details.

USER PROVISIONING

The Provisioning Manager is used to create, delete and change users in MiCollab. In MX-ONE 6.1 SP1 and later, there are two supported MiCollab deployment configurations:

- Single MiCollab Server with 5000 users in MiCollab, requiring 10,000 SIP registrations in the MiVoice MX-ONE (based on a SIP deskphone and SIP softphone per user). See
- Multiple MiCollab servers with 40,000 users in MiCollab, requiring 80,000 SIP registrations in MiVioce MX-ONE (based on a SIP deskphone and SIP softphone per user):

Note: Active Directory is not supported for multiple MiCollab servers.

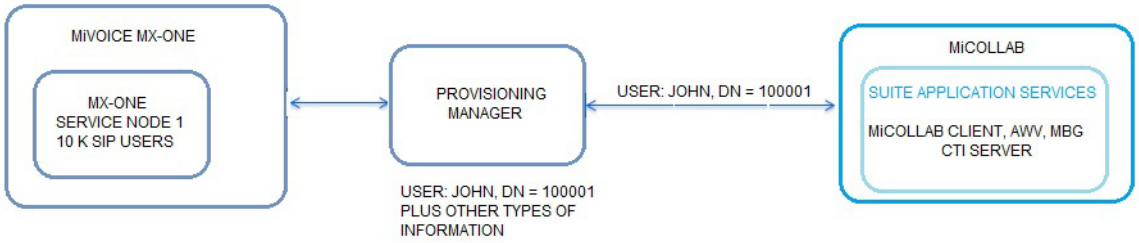


Figure 112: Single MiCollab Server
(5,000 Users in MiCollab and a Minimum of 10,000 SIP Registrations in MX-ONE)

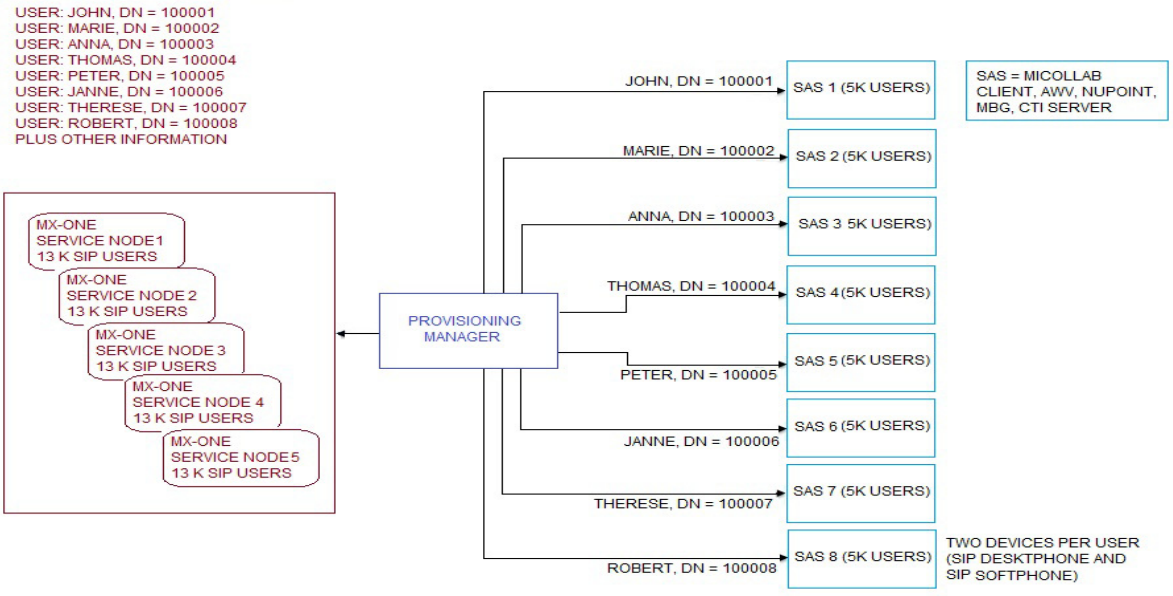


Figure 113: Multiple MiCollab Servers
(40,000 Users in MiCollab and a Minimum of 80,000 SIP Registrations in MX-ONE)

INTEGRATING MICOLLAB SERVERS

If your deployment has one or multiple MiCollab servers, you must add the servers into Provisioning Manager pools (**PM setup > subsystem**).

To integrate the Provisioning Manager with multiple MiCollab servers:

1. Configure MiCollab with Network Elements, Roles, Licenses, and so forth).
2. Create the MiCollab Server in the Provisioning Manager under **System > Subsystem Task.** Figure 114 shows an example of three MiCollab pools; each pool containing eight MiCollab servers.

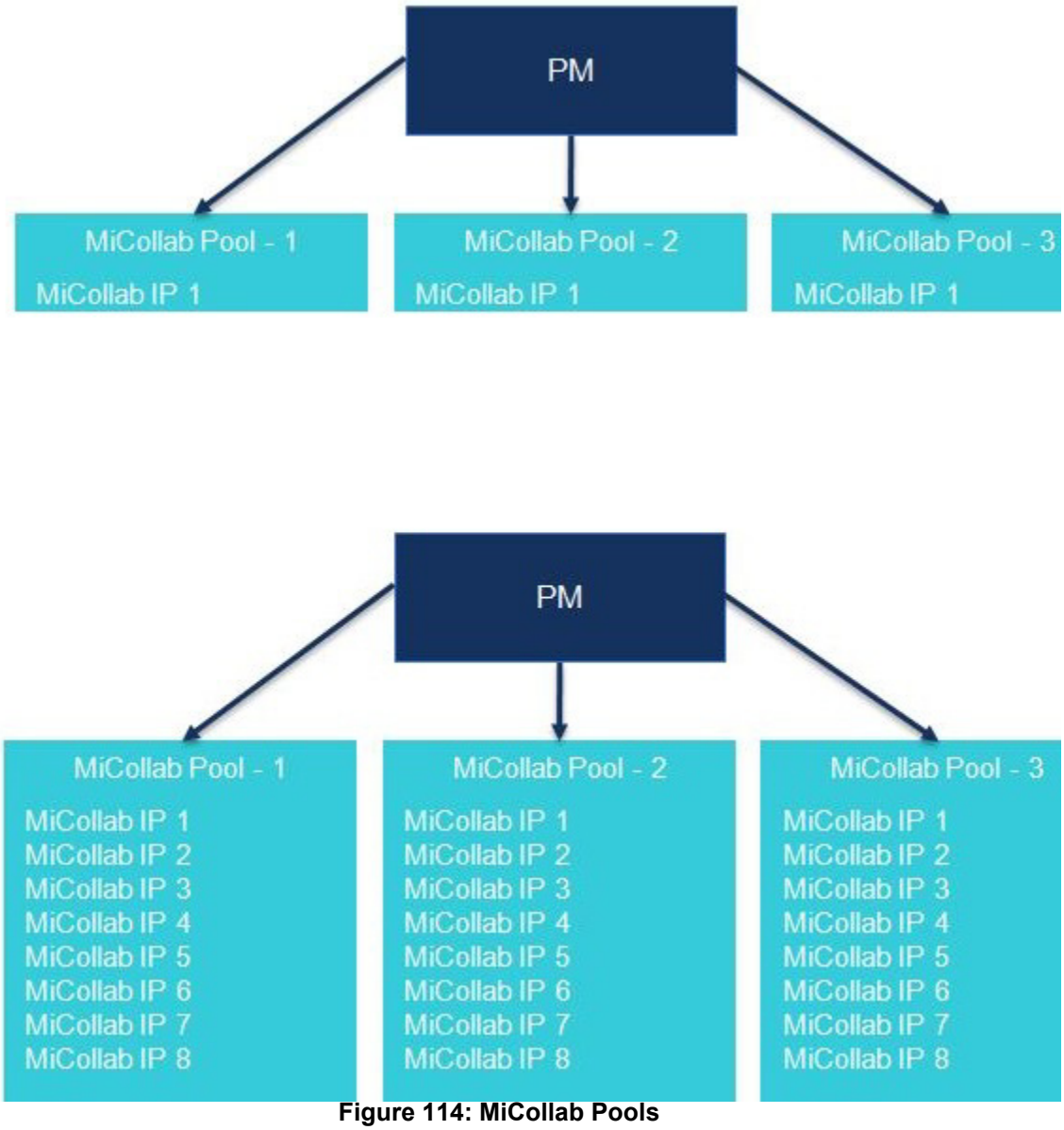


Figure 114: MiCollab Pools

3. Figure 115 shows an example of two MiCollab servers in pool #1.

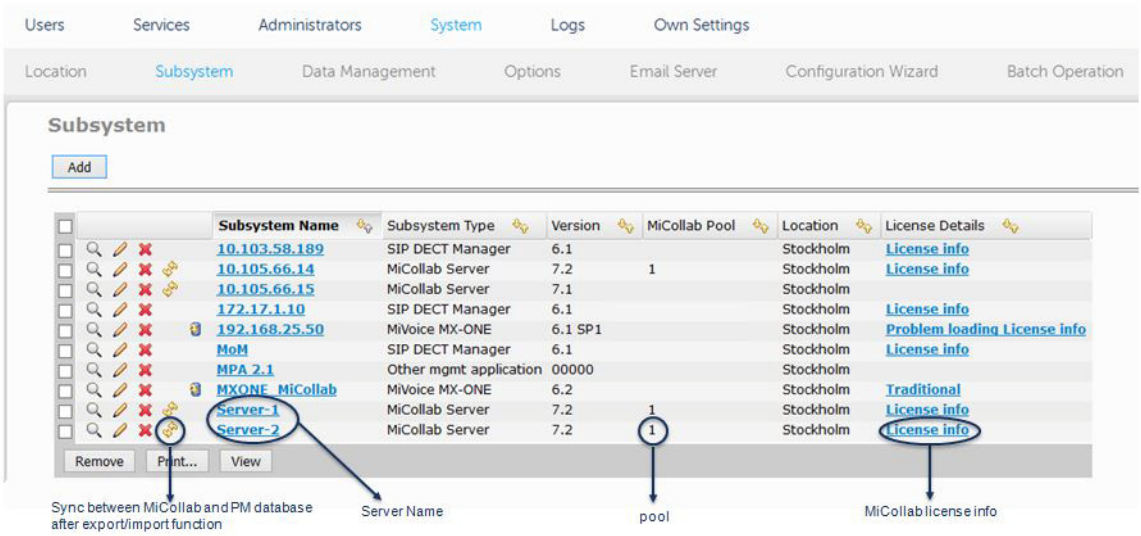


Figure 115: Provisioning Manager – MiCollab Subsystem Example

4. Add the MiCollab servers as subsystems. Ensure that you select the correct release version of the MiCollab.

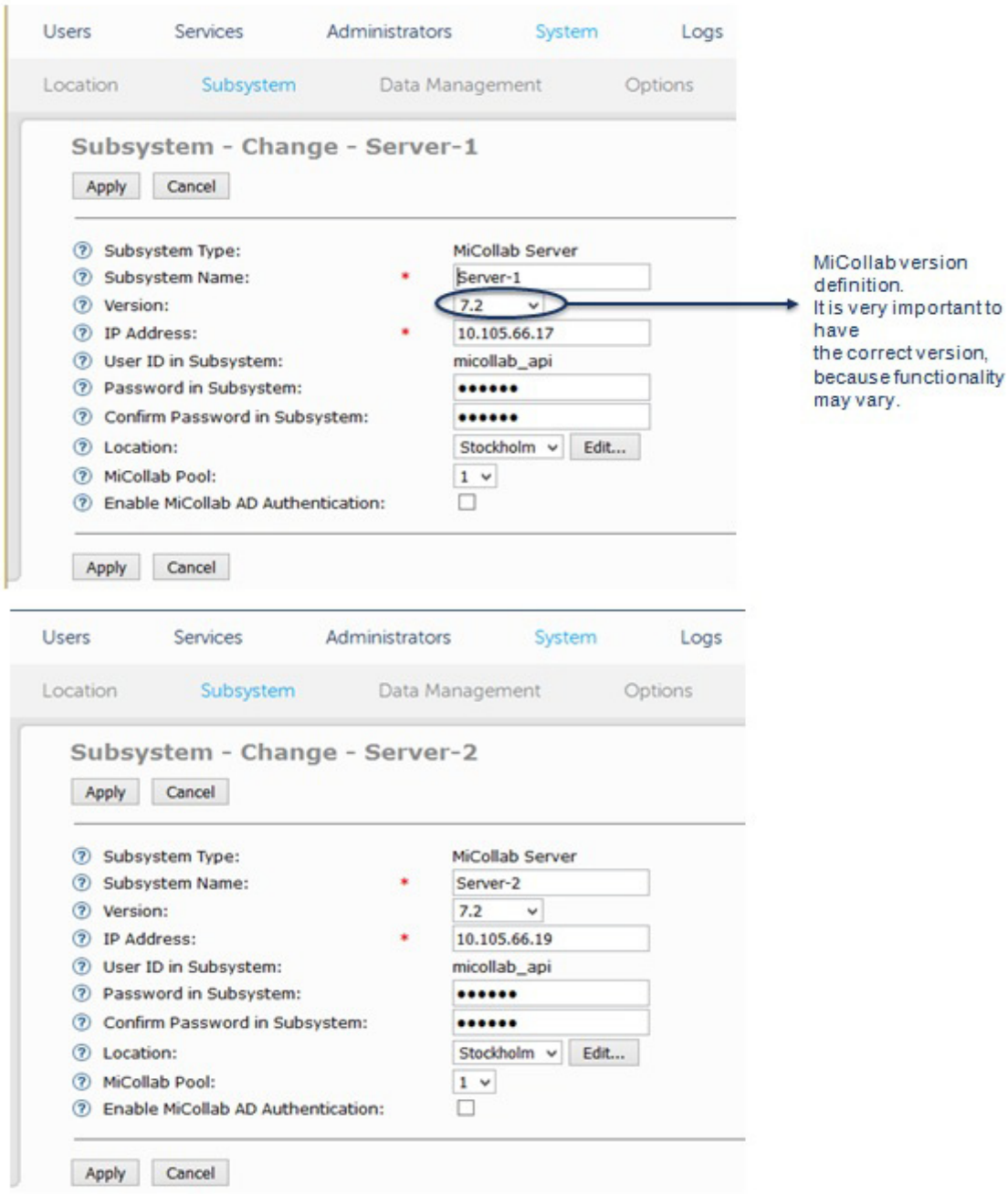


Figure 116: MiCollab Subsystems Example: Pool with 2 MiCollab Servers

5. The **Subsystem > View** shows the number of UCC User Licenses currently used by the server. The numbers are updated after the sync.

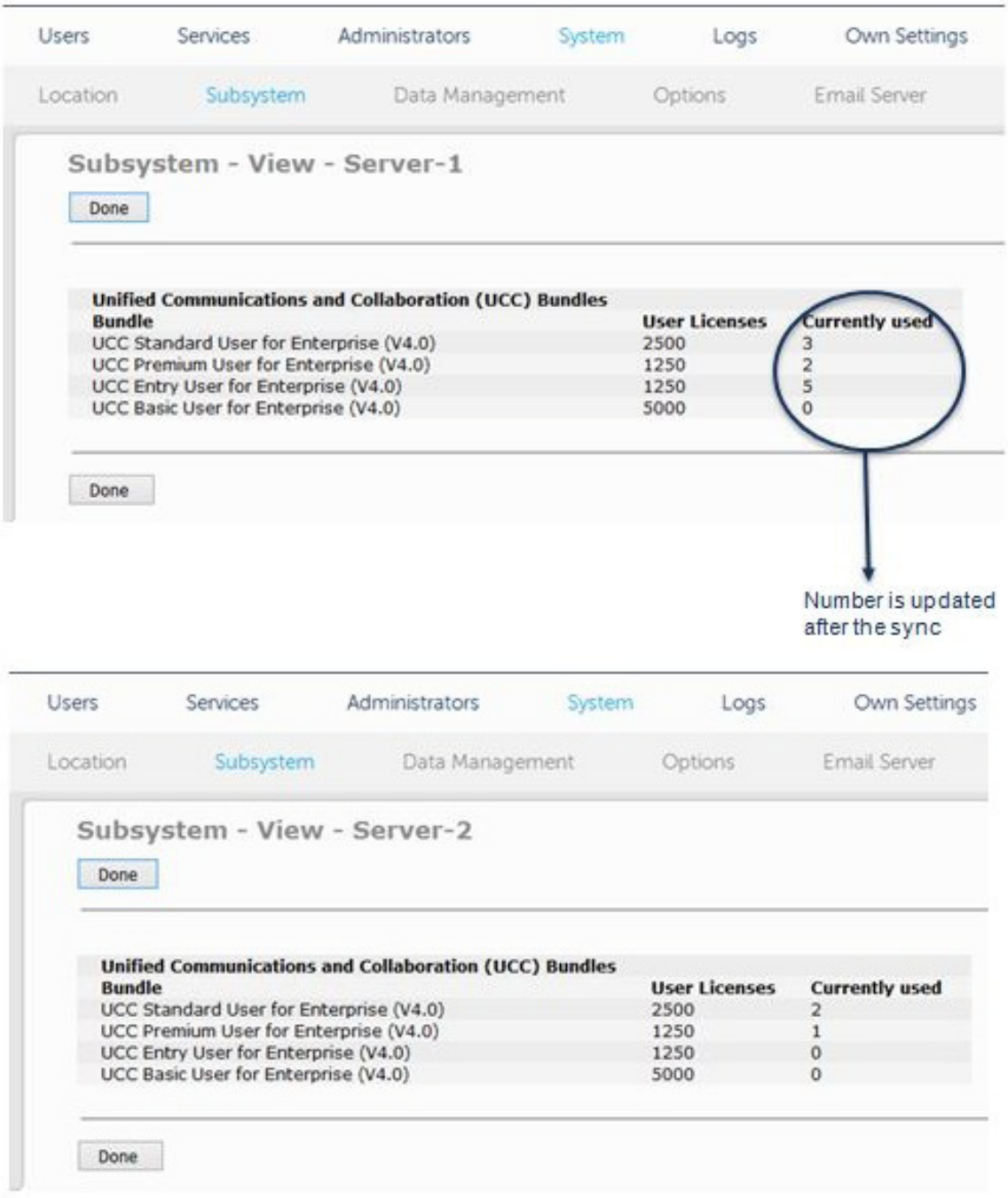


Figure 117: Pool with 2 MiCollab Servers - Licenses

6. Access the **User > User** screen to view the User IDs, MiCollab servers, and MiCollab Roles:

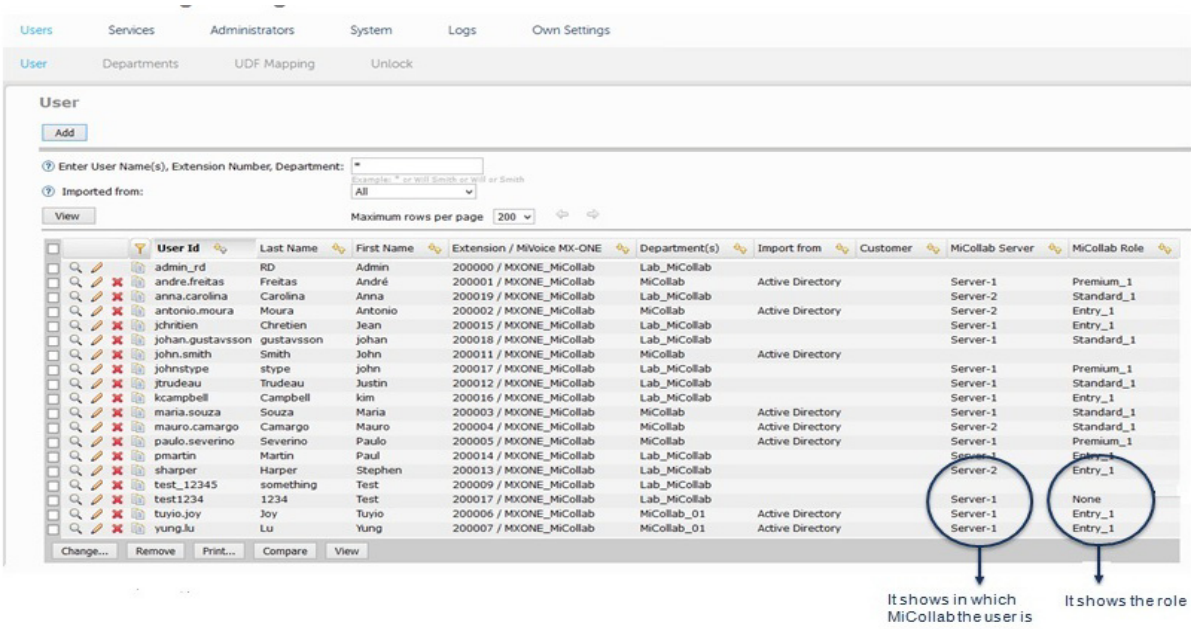


Figure 118: User List

USER PROVISIONING METHODS

In MX-ONE 6.1 SP1 and later, the method that you use to provision users depends upon the deployment configuration:

- For a single MiCollab Server with 5000 users in MiCollab and a minimum of 10,000 SIP registrations in the MX-ONE (based on a SIP deskphone and SIP softphone per user) you can use the following methods:
  - **Method 1**: Provisioning Manager User task
  - **Method 2**: Provisioning Manager Export tool or
  - **Method 3**: Provisioning Manager Active Directory integration
- For multiple MiCollab servers with 40,000 users in MiCollab and a minimum of 80,000 SIP registrations in MX-ONE (based on a SIP deskphone and SIP softphone per user) you can use either of the following methods.
  - **Method 1**: Provisioning Manager User task (you must manually select the MiCollab server of the user) or
  - **Method 2**: Provisioning Manager Export tool (you must manually specify the MiCollab server of the user)

Note: Active Directory is not supported for multiple MiCollab servers.

METHOD 1: PROVISIONING MANAGER USER TASK

In Method 1, shown in Figure 119 and Figure 120 users are provisioned from the MiVoice MX-ONE Provisioning Manager.

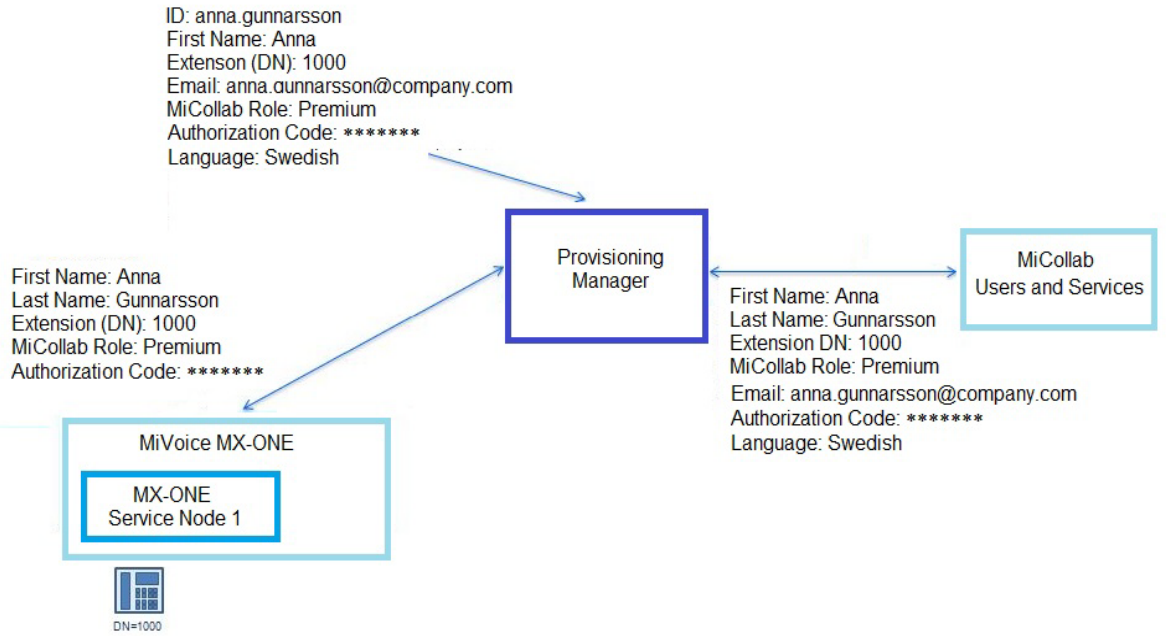


Figure 119: Single MiCollab Server via PM User Task

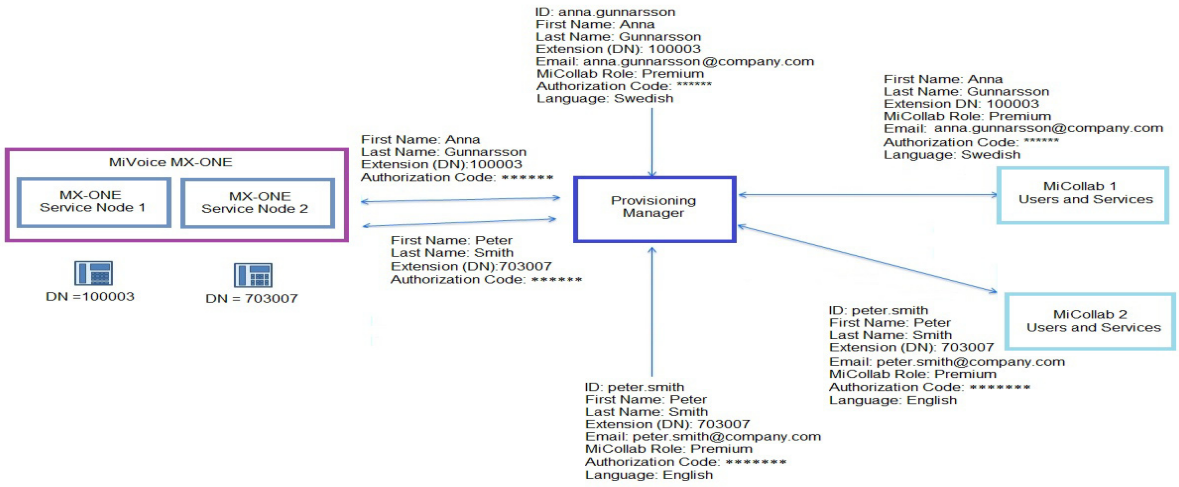


Figure 120: Multi-MiCollab Server via PM User Task

1. Under **Users > User > Add** enter the user's information in Step 1.

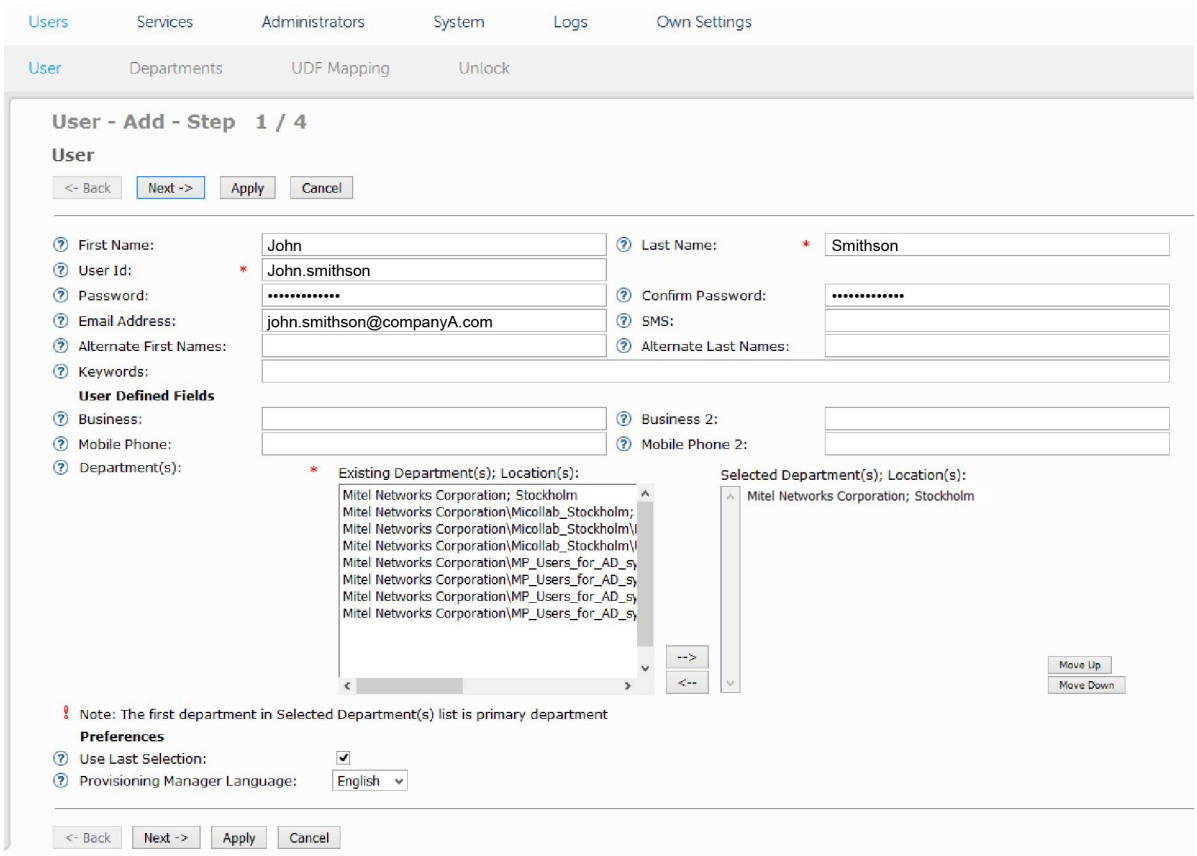


Figure 121: Provisioning Manager User Task

2. Assign an existing extension or add a new extension. If the deployment includes multiple MX-ONE service nodes, select the desired node for the extension.

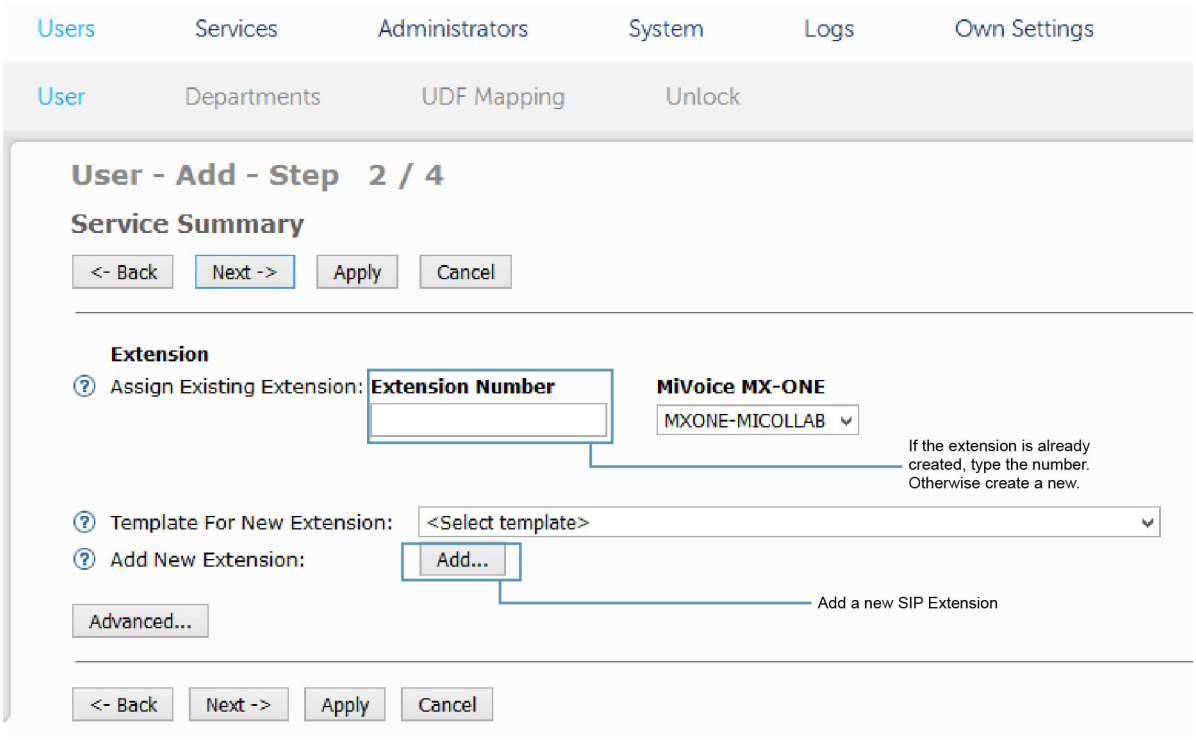


Figure 122: Provisioning Manager User Task - cont.

3. Set the Extension Type to Multi-Terminal.

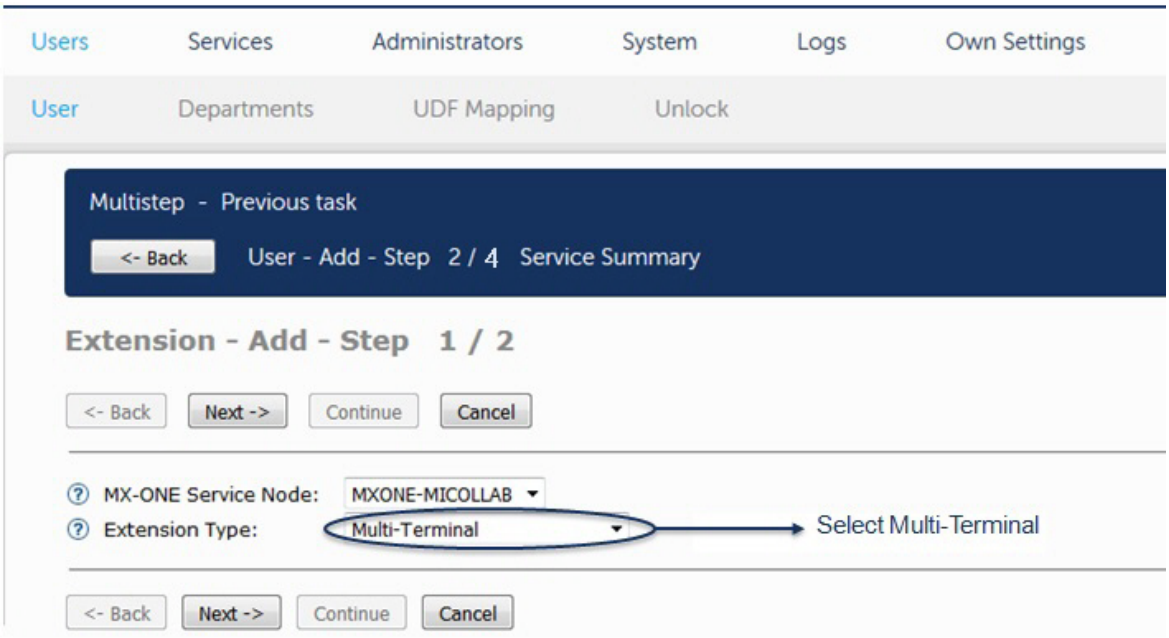


Figure 123: Provisioning Manager User Task - cont.

4. Select the Extension Number DN and click the **Add** button next to IP Extension.

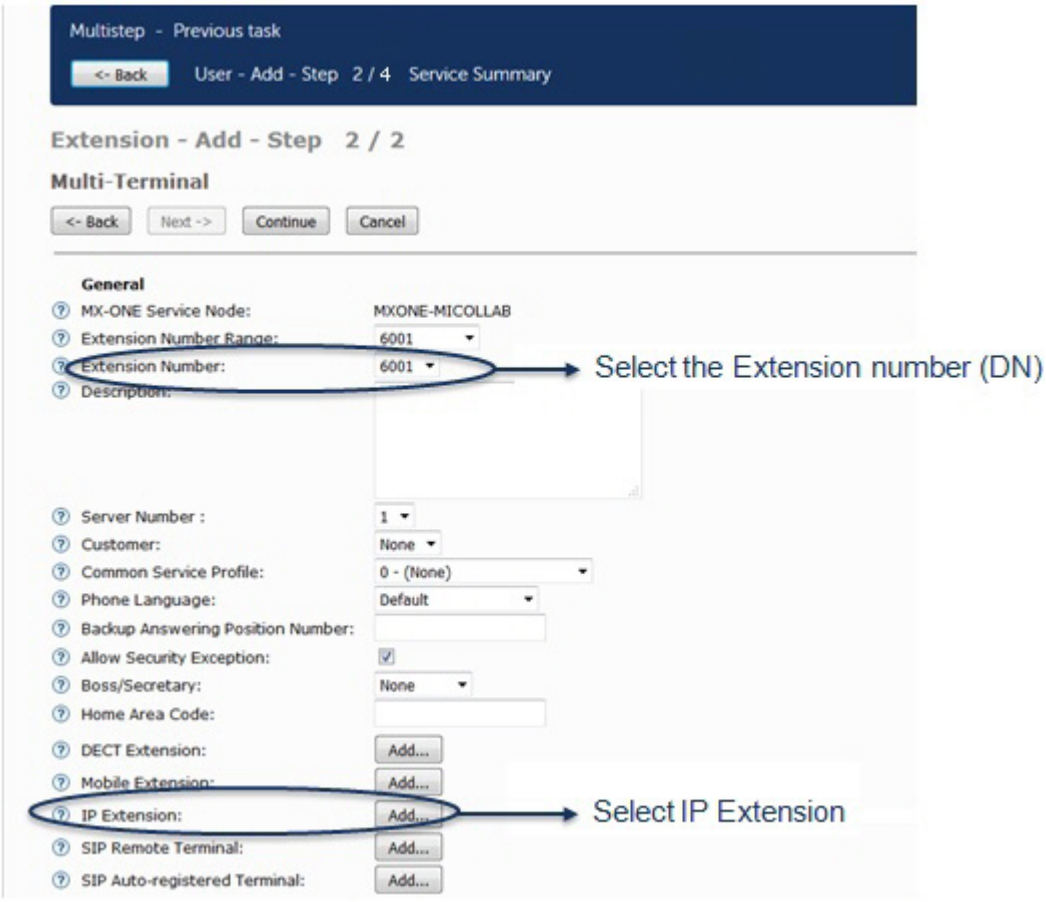


Figure 124: User Provisioning Task - cont.

5. Enter the maximum number of terminals (SIP extensions) for the user:

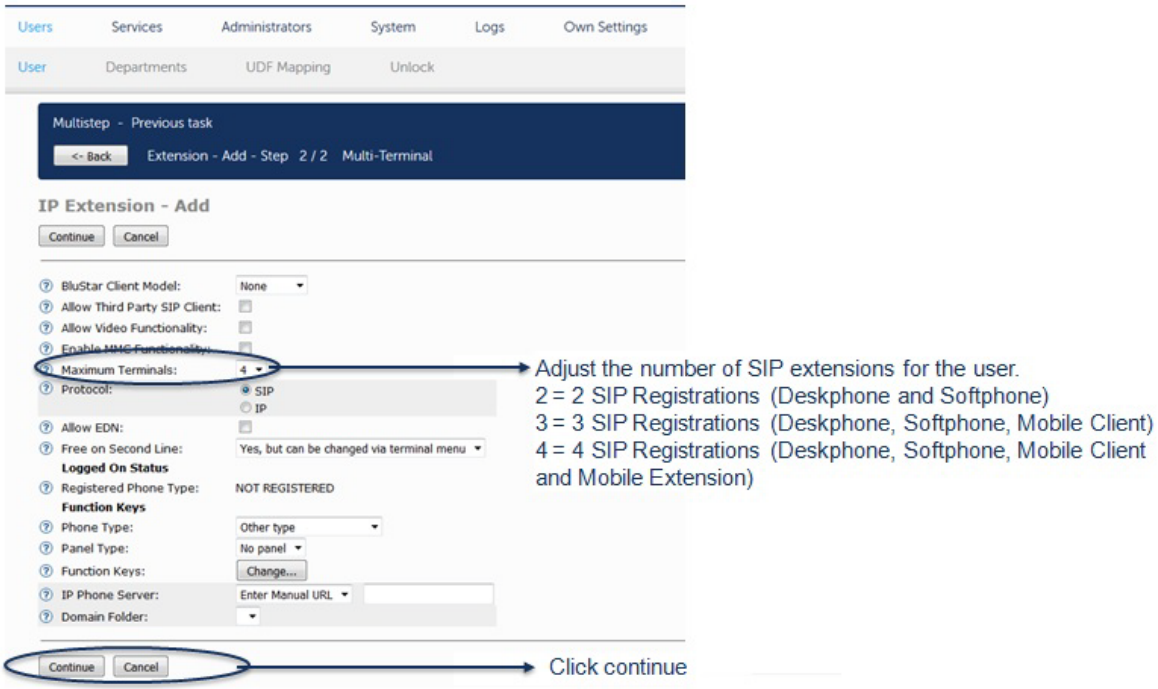


Figure 125: User Provisioning Task - Extension Add - Step 1

6. Click **Continue**.

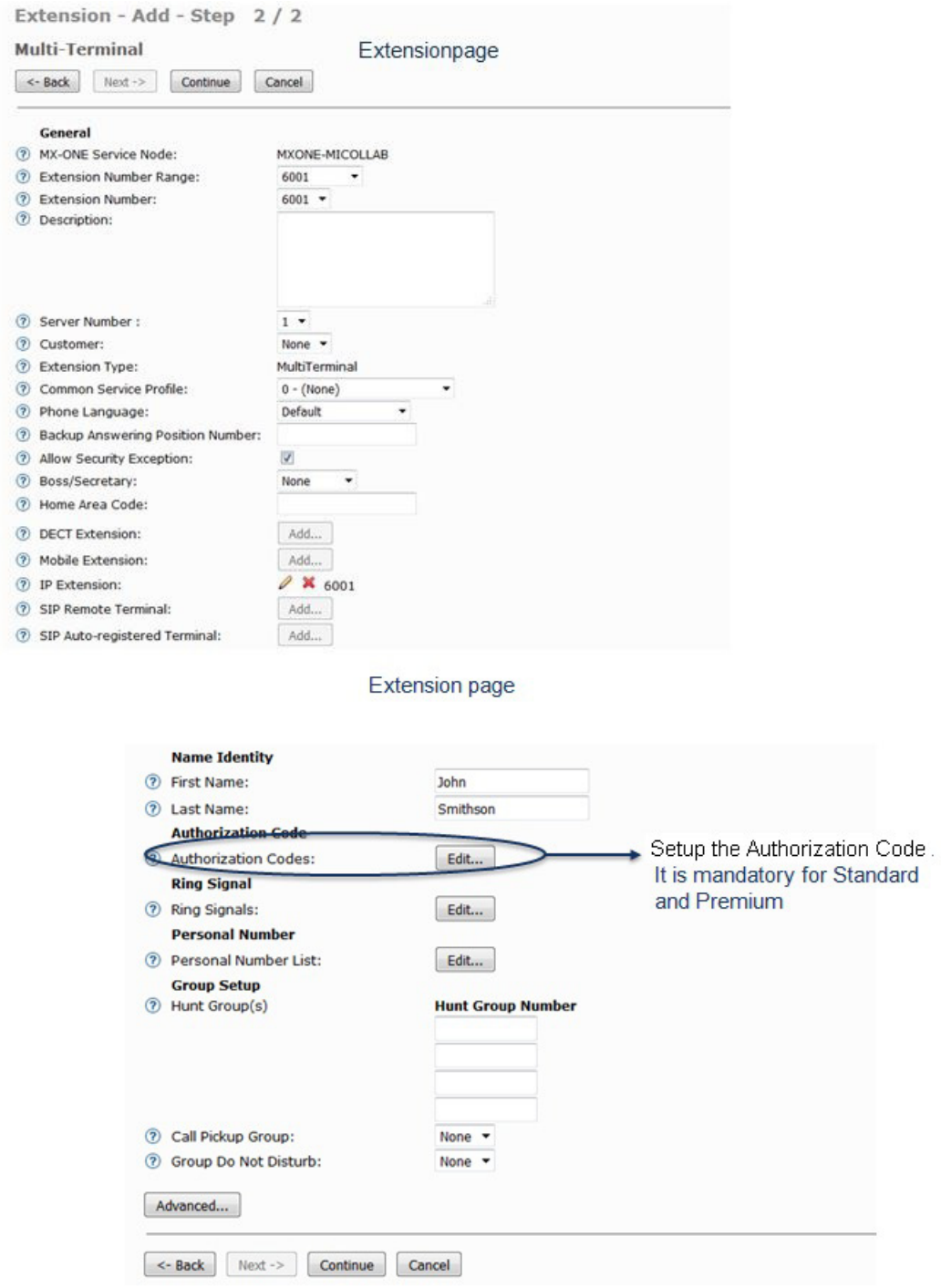


Figure 126: User Provisioning Task - Extension Add - Step 2 of 2

7. Edit the Authorization codes (mandatory for Standard and Premium users).
8. Enter the Authorization and Call Logging Codes for the user and click **Apply**.

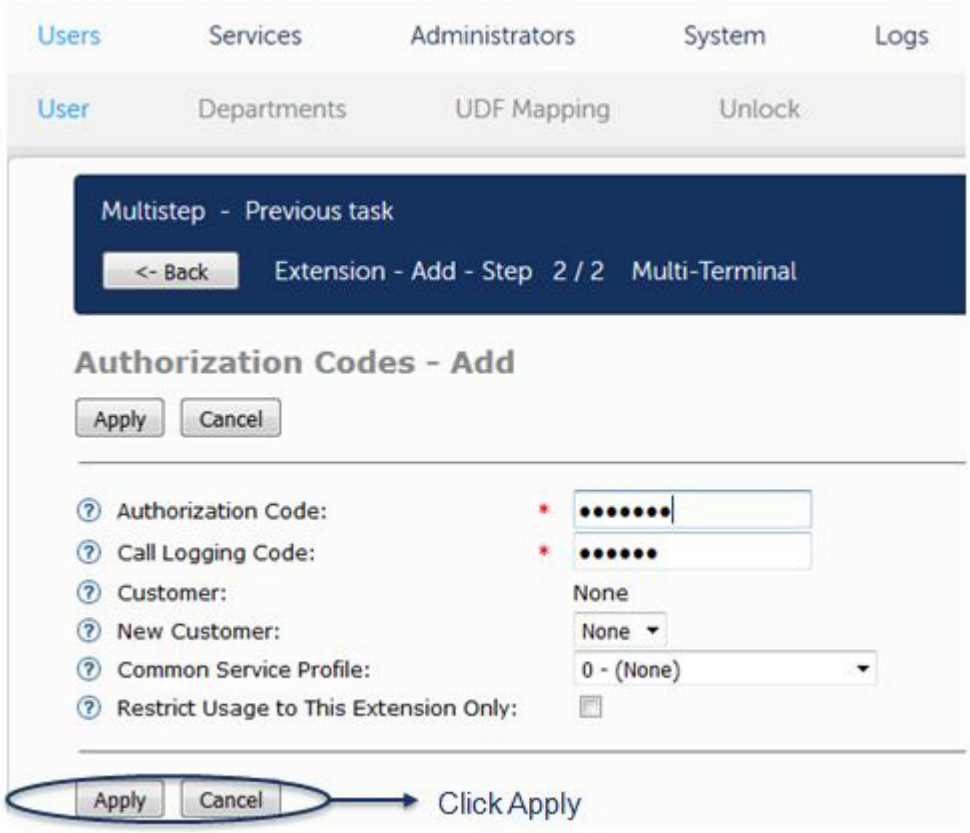


Figure 127: Provisioning User Task - cont.

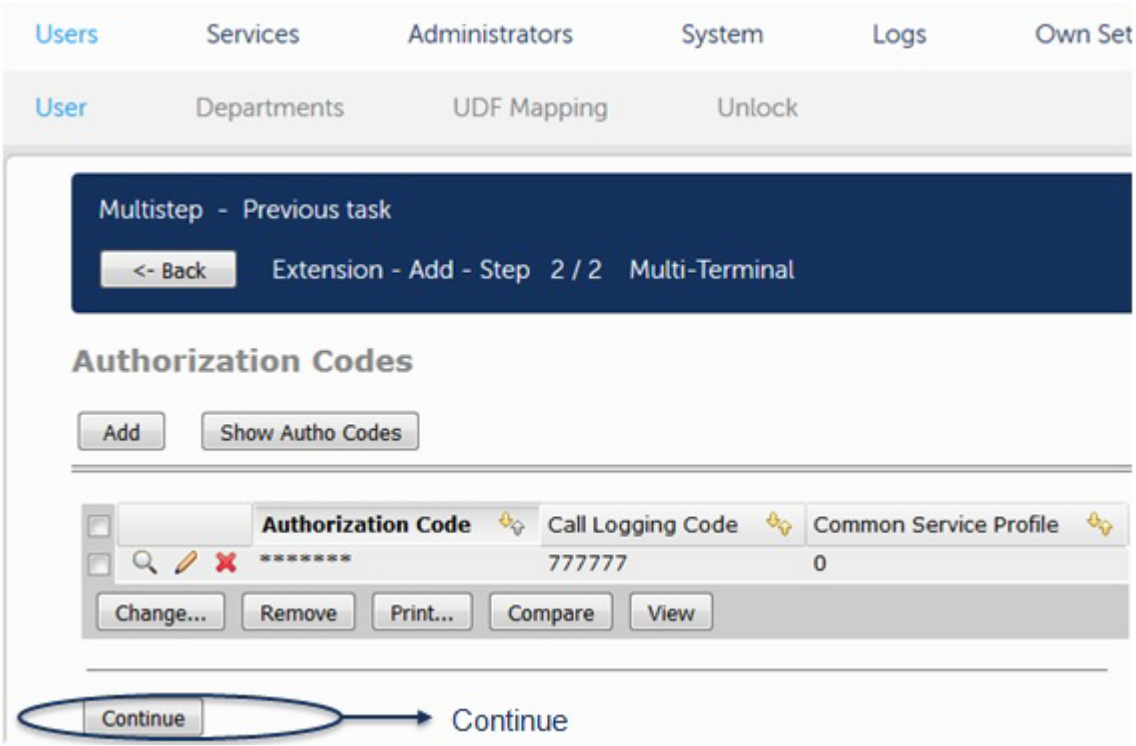


Figure 128: **Provisioning User Task - cont**.

9. Click **Continue**.
10. Select **MiCollab Extension** and click **Next**.

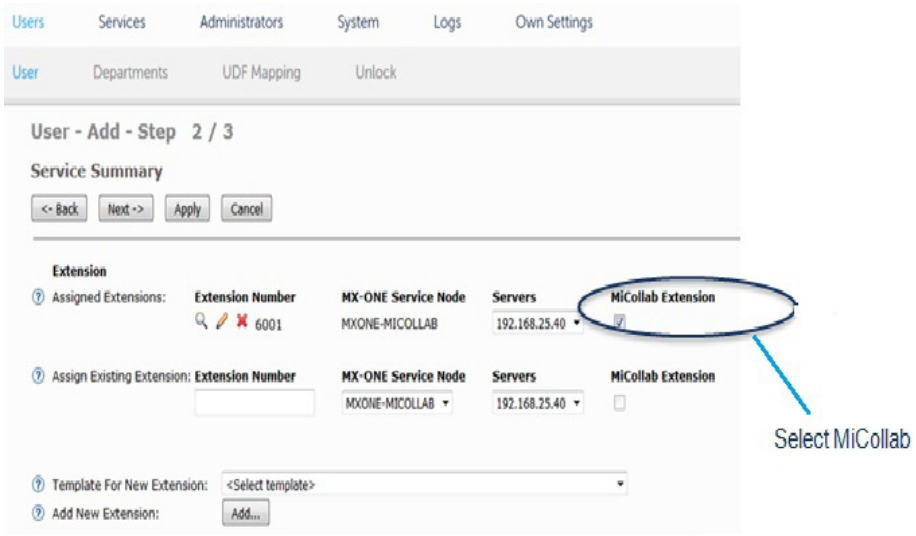


Figure 129: Provisioning User Task cont.

11. Assign MiCollab Extension (service node) and select the MiCollab Server.

Note: Provisioning Manager will fetch the roles for that specific MX-ONE.

12. Assign Secondary Extension to the user (This field will be available only when the selected MiCollab server version is 8.0 or above).

Note: Primary and Secondary extension should be from same MiVoice MX-ONE.

13. Select the MiCollab Prompt language.

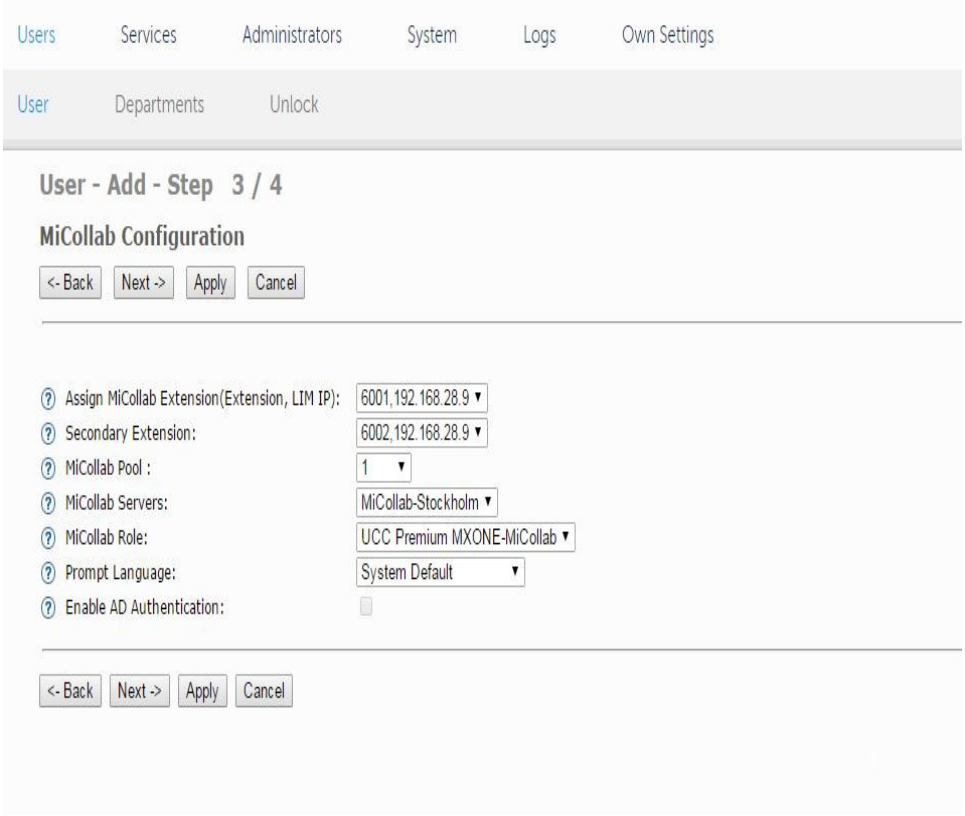


Figure 130: Provisioning User Task cont.

14. You will receive an on-screen reminder regarding the MiCollab role requirements. Click **OK**. The Add User Result is displayed.

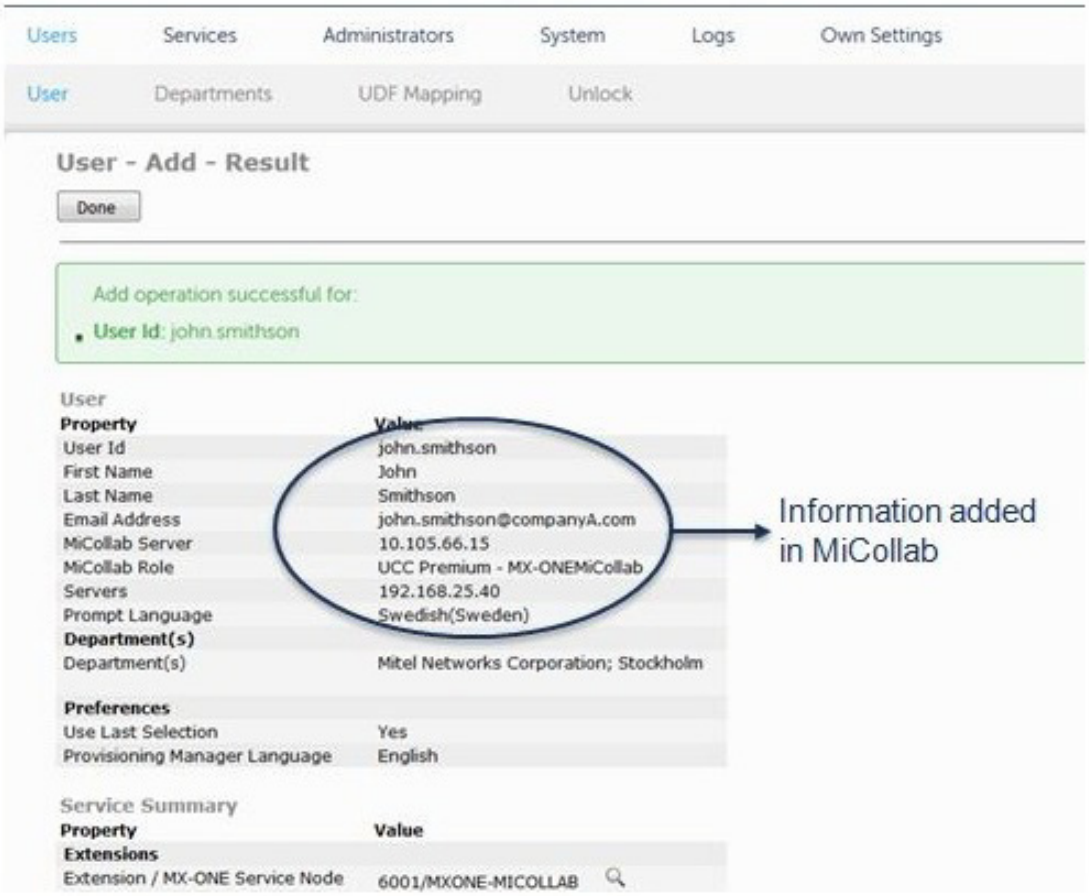


Figure 131: Add User Result

15. If you log into the MiCollab Users and Services application, select the user and click **Edit**, the user information is displayed.

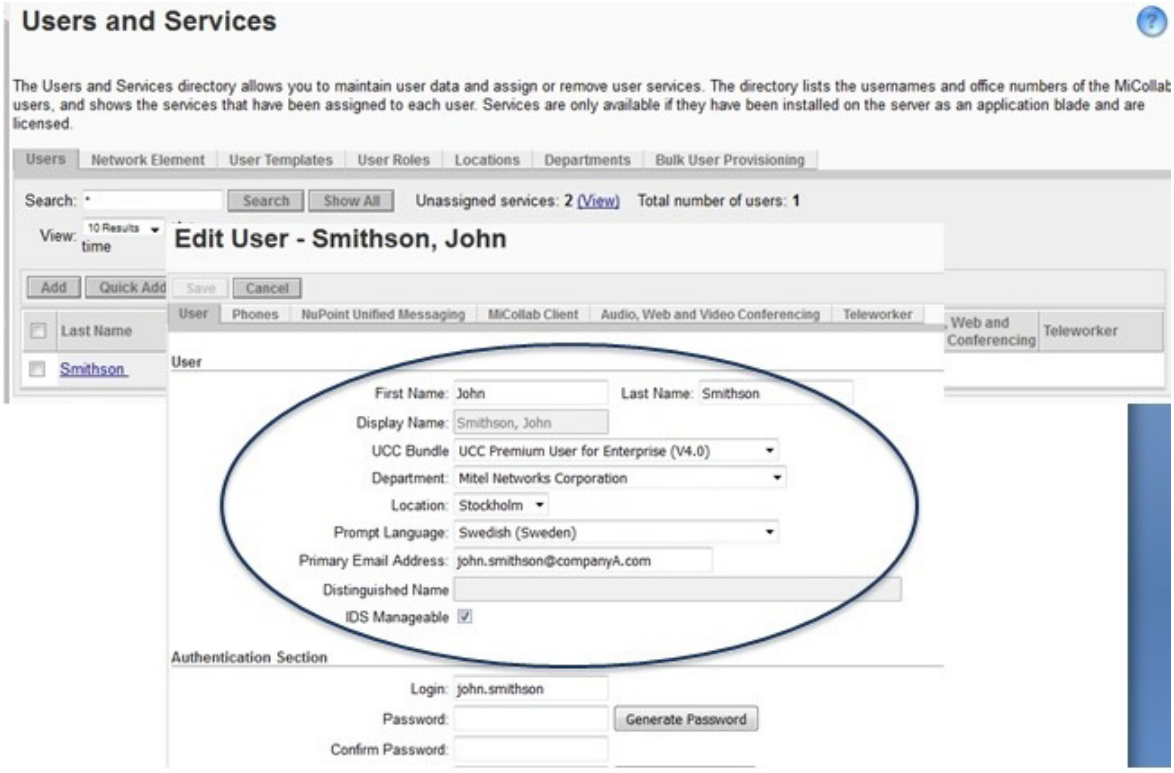


Figure 132: User Information in MiCollab Users and Services

METHOD 2: PROVISIONING MANAGER EXPORT TOOL

You can provision the MiCollab server(s) with users by exporting the users from the MiVoice MX-ONE Provisioning Manager. You need to

- Create CSV files with a maximum of 2500 users, and
- Set the Export Type to collect MiCollab user data.

1. Access **System > Data Management > Export**.

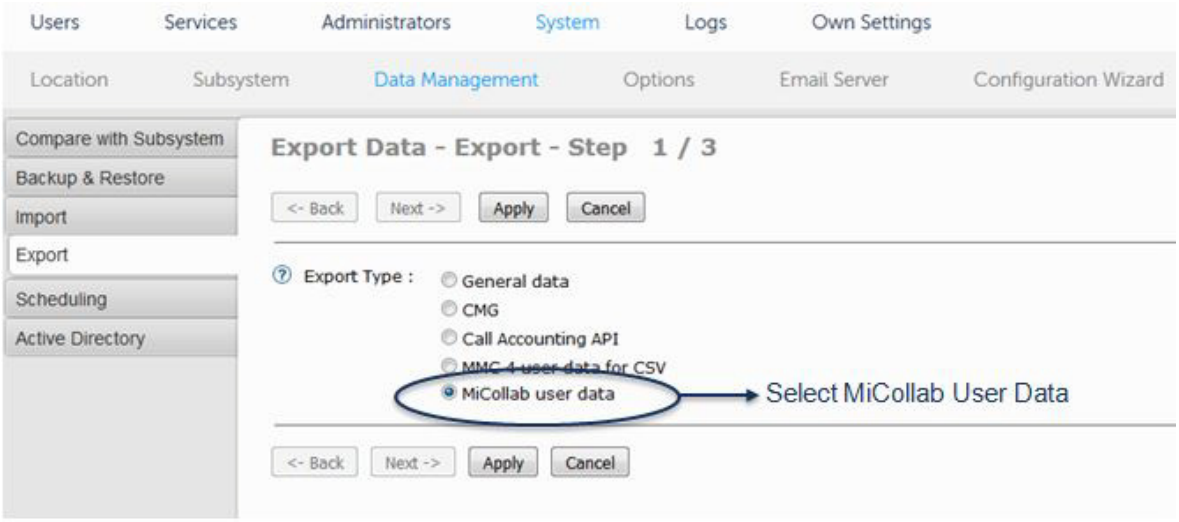


Figure 133: Export Tool: Select MiCollab User Data

2. Select **MiCollab user data** and click **Apply**.

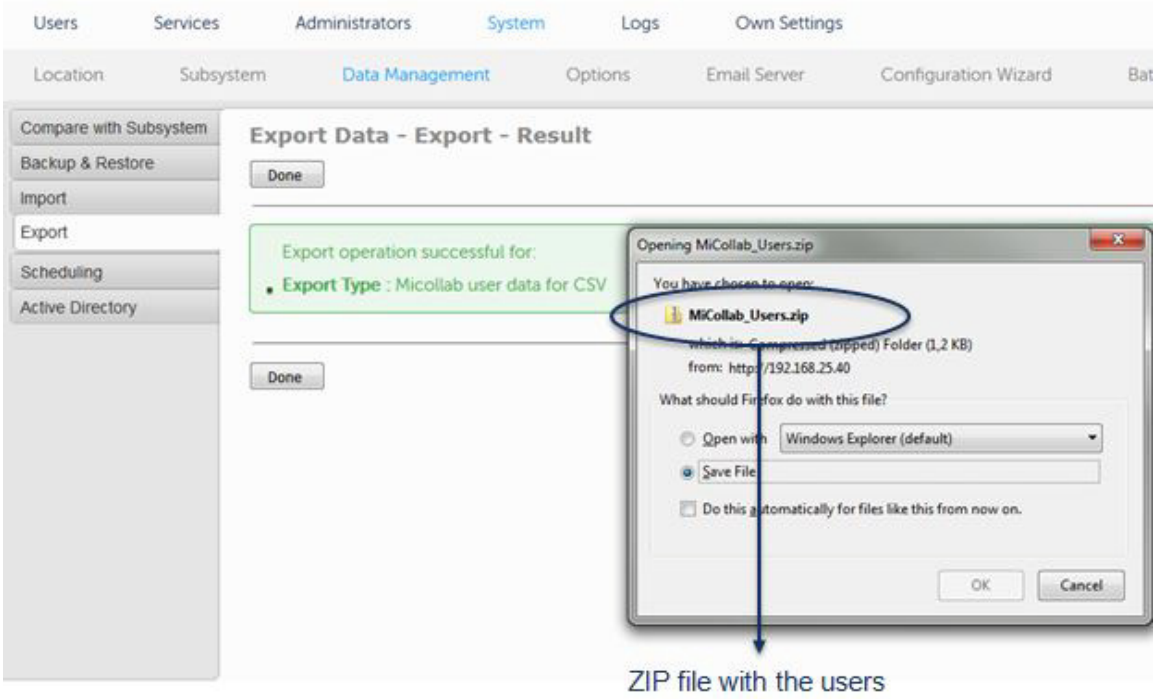


Figure 134: Export User Data

3. Save the MiCollab_Users.zip file to your PC.
4. Unzip it and open in Excel. Below is an example:

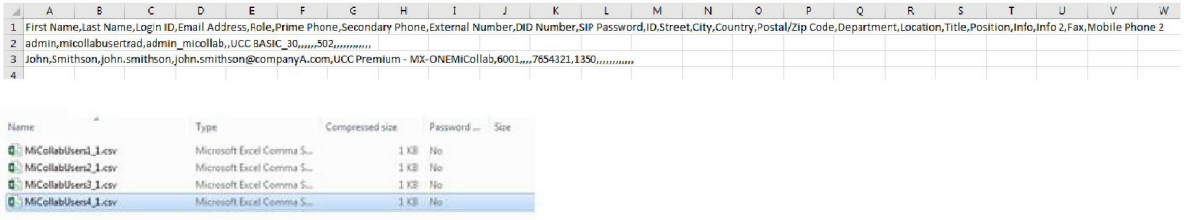


Figure 135: CSV File Example

5. Log into the MiCollab Server manager.
6. Under **Applications**, click **Users and Services**.
7. Click the Bulk User Provisioning tab.
8. Import the CSV file. For detailed instructions see the *Users and Services* application help (see Applications > Users and Services > System Administrator > Provision Users and Services > Bulk User Provisioning)
   - Click **Tools** and then click **Import from File**.
   - Select **Import Bulk Add CSV File**.
   - Click Browse and navigate to the CSV file.
   - Select the file and click **Open**.

- Click **Import**. The data from the file is imported.
- Auto Fill the roles
- Click **Save**.

Figure 136 to Figure 139 show the screens:

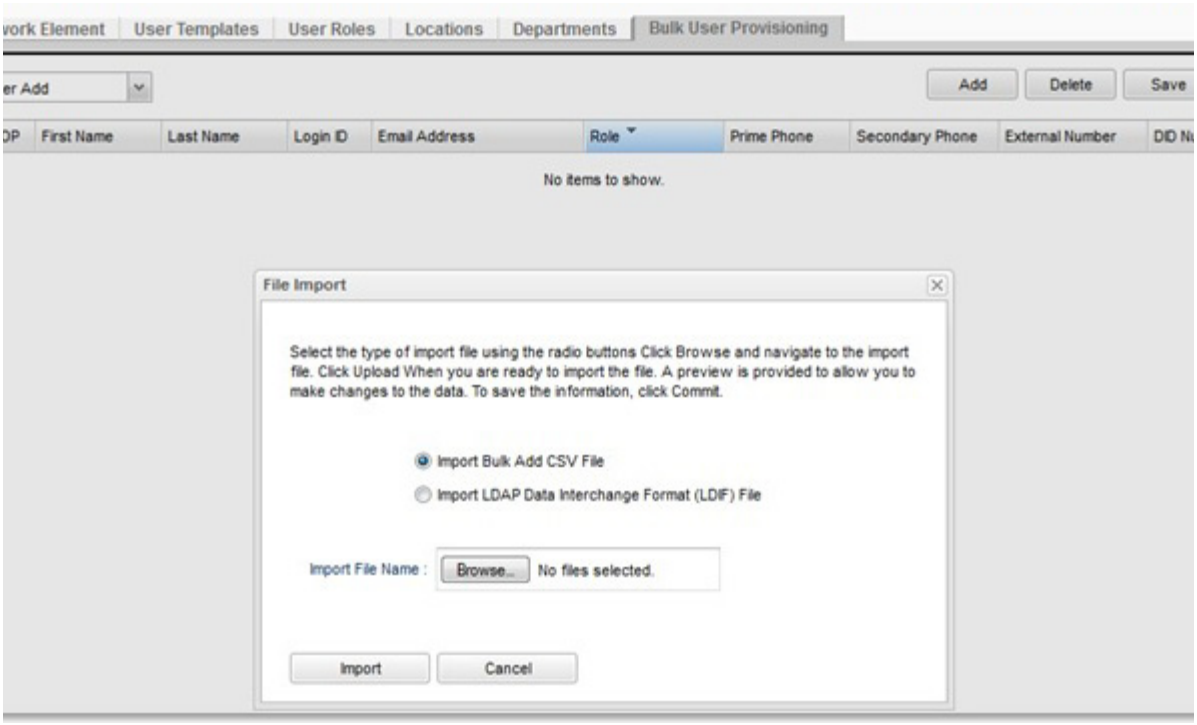


Figure 136: Import CSV File into MiCollab USP Bulk User Provisioning

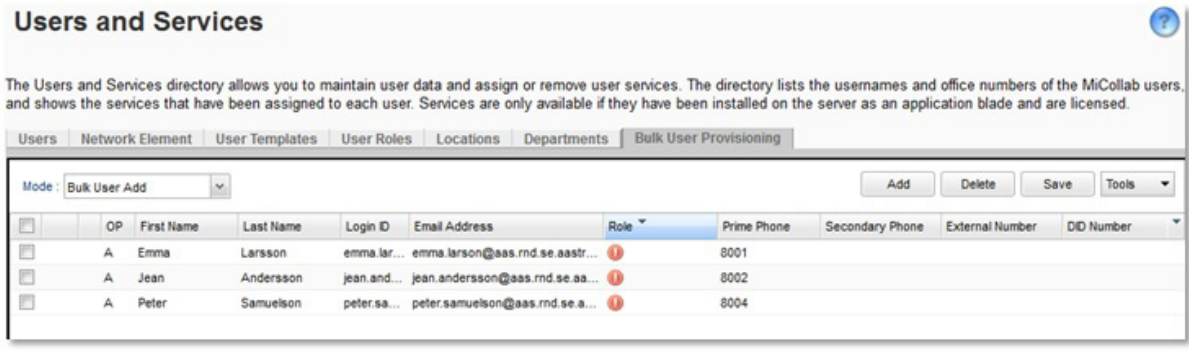


Figure 137: Bulk User Provisioning

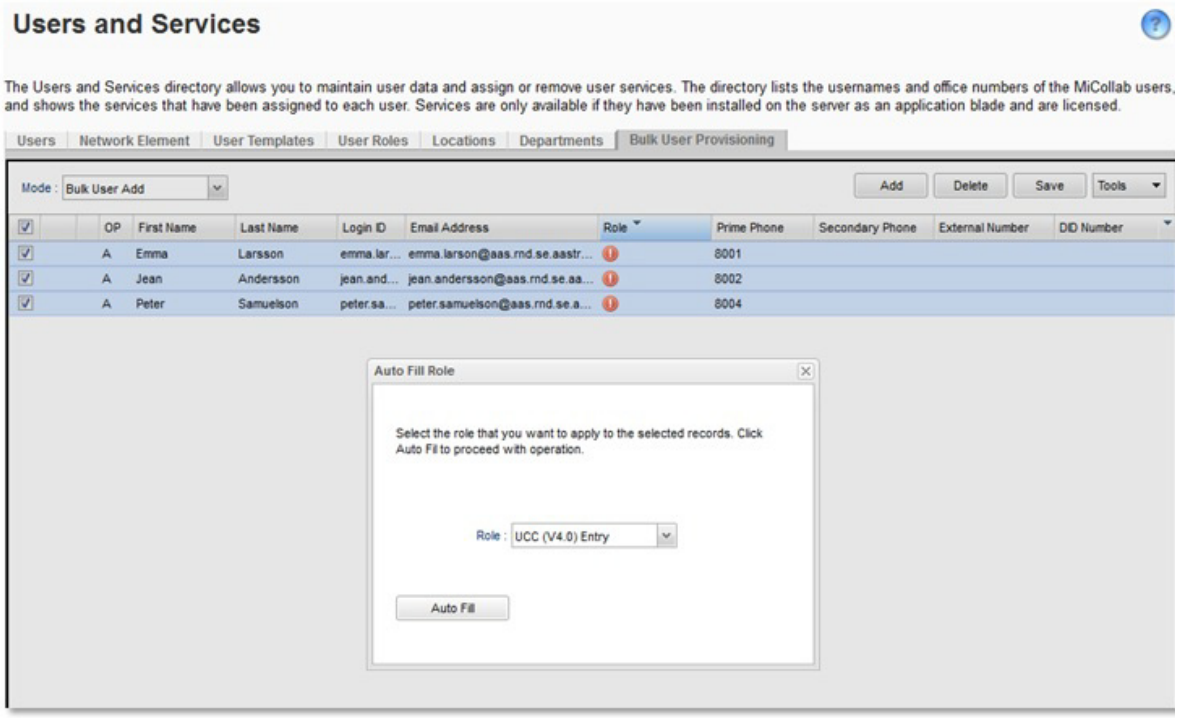


Figure 138: Auto-Fill Roles

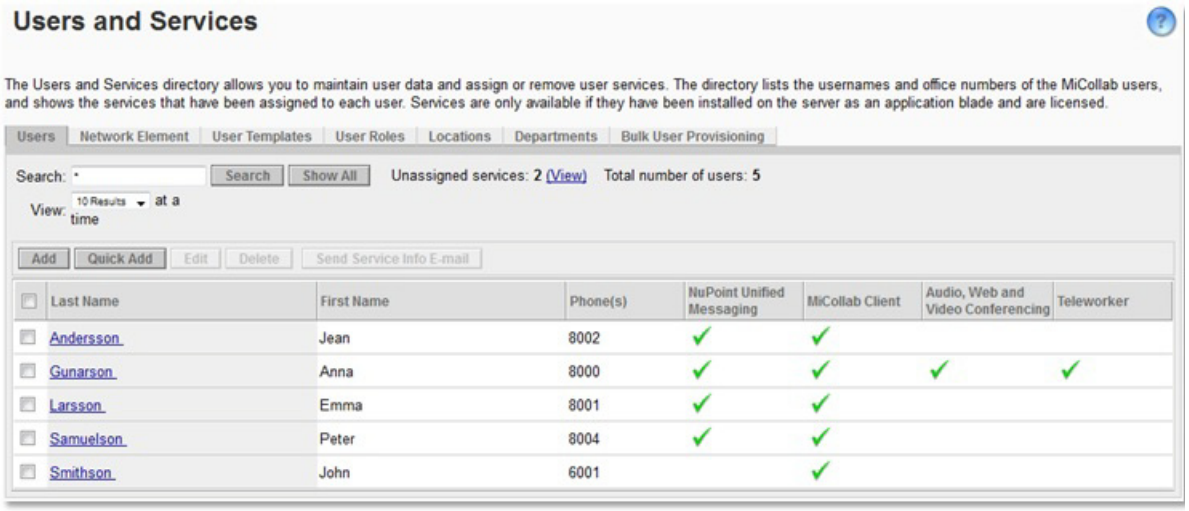


Figure 139: Users Imported into USP Directory

9. After the import is complete check the Provision Manager to verify that the entries have been imported. Figure shows an example:

METHOD 3: PROVISIONING MANAGER WITH ACTIVE DIRECTORY

Only a single MiCollab Server is supported. Active Directory is not supported with multiple MiCollab servers.

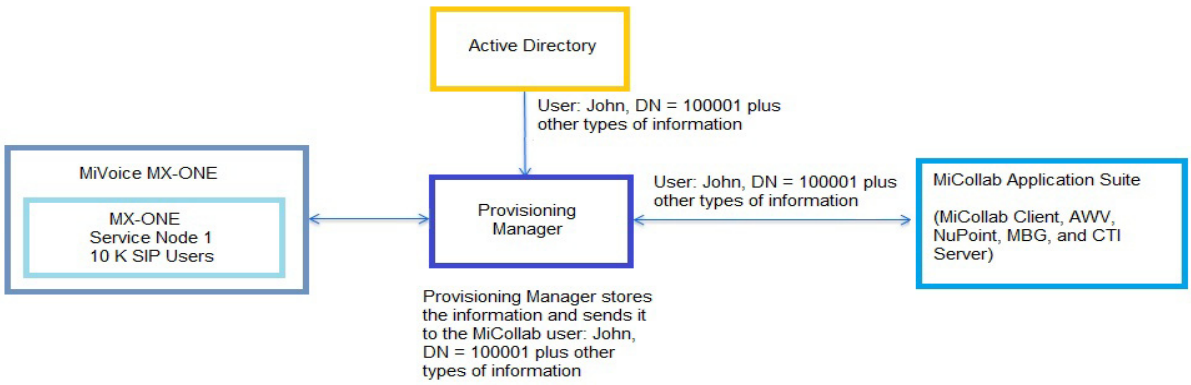


Figure 140: Active Directory Support

10. Set up Active Directory in the Provisioning Manager and sync it (see Figure 141). The user entries from the Active Directory server are added to the Provisioning Manager (see Figure 142).

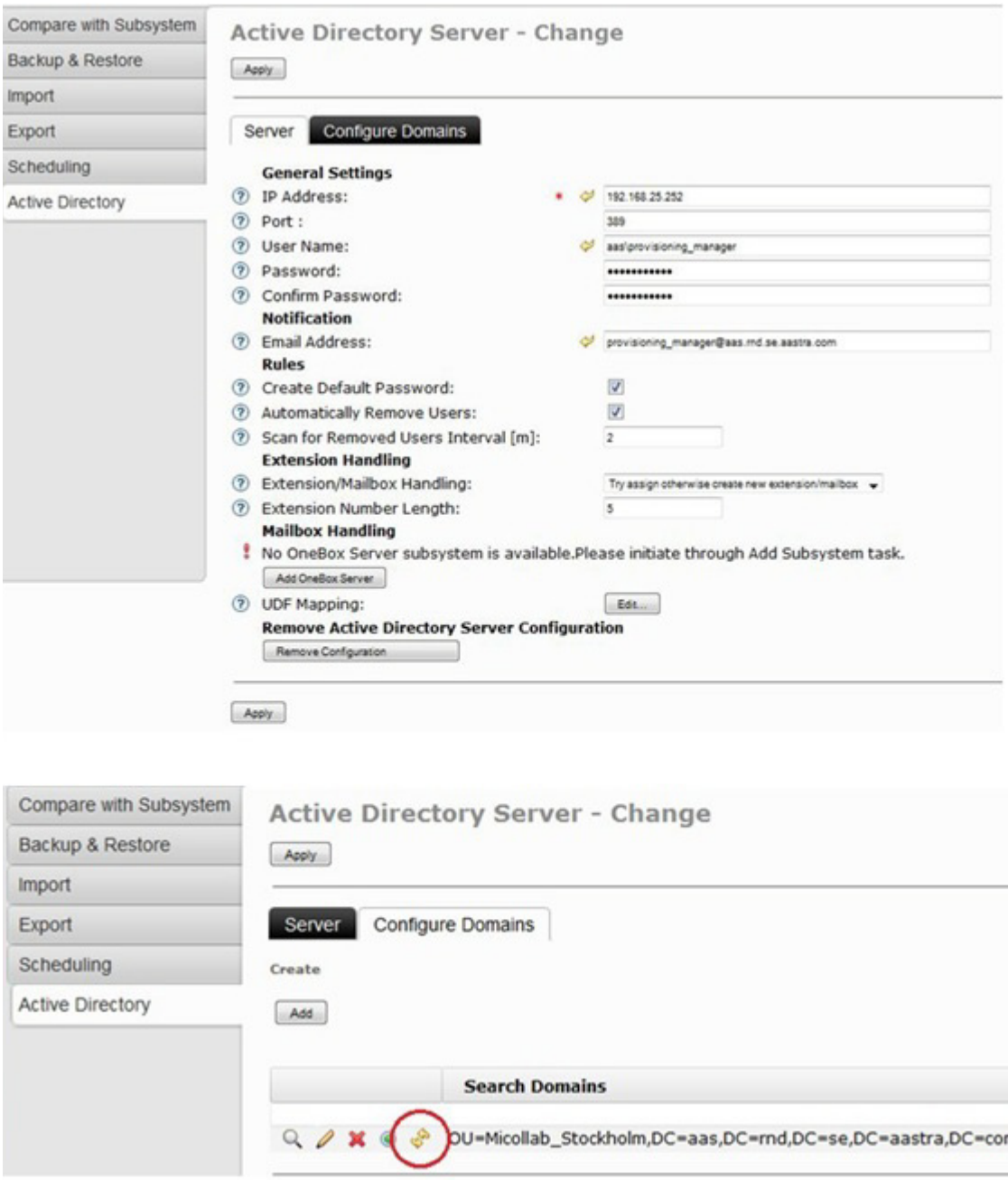


Figure 141: Set up and Sync

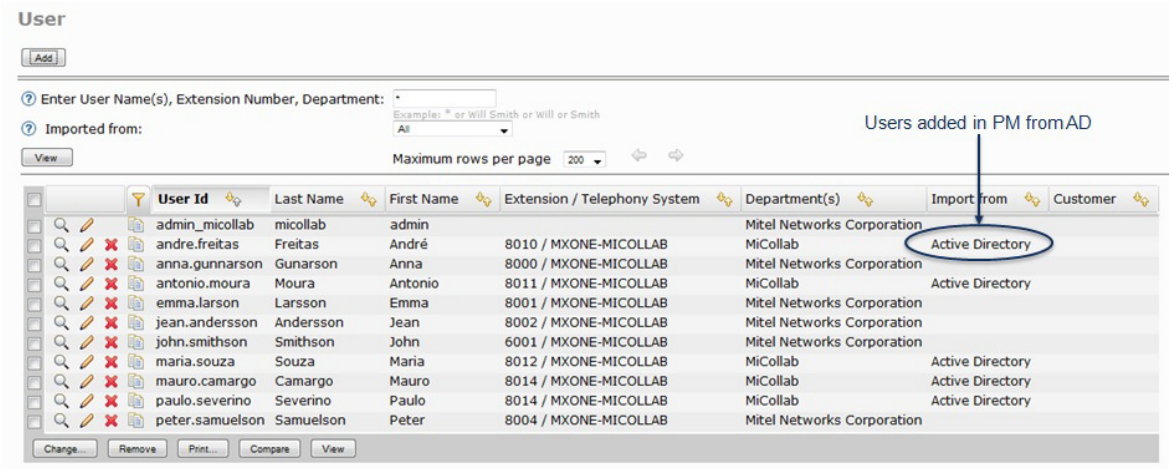


Figure 142: Users Added to Provisioning Manager

Note: User is updated in MiCollab Detained Queue when Active Directory sync is done with single MiCollab Server in Provisioning Manager.

11. Export the MiCollab users from the Provisioning Manager to a CSV file.

12. Import the users into the Users and Services Bulk Provisioning tool.

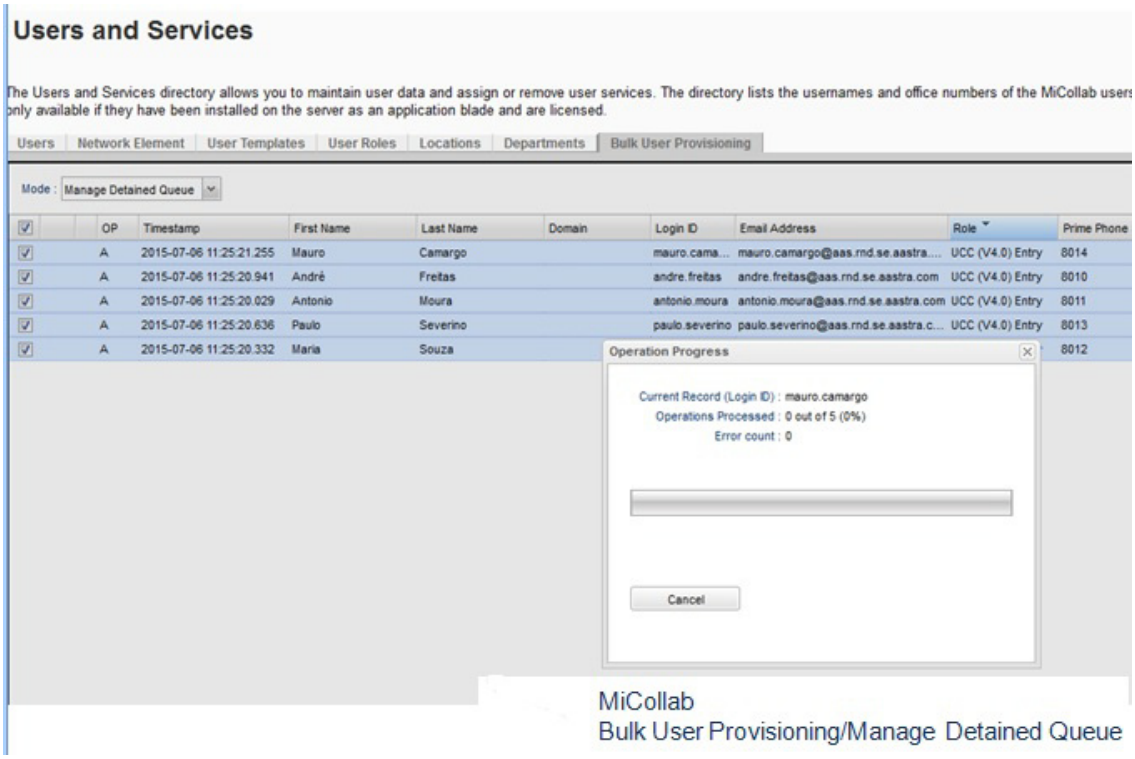


Figure 143: Users Added to MiCollab Bulk User Provisioning Detained Queue

13. Import the users from the Bulk User Provisioning tool into the MiCollab directory by selecting the entries and then clicking **Save**. Figure 144 shows the entries imported into the Users and Services application. Figure 145 shows an example entry in the Provisioning Manager.

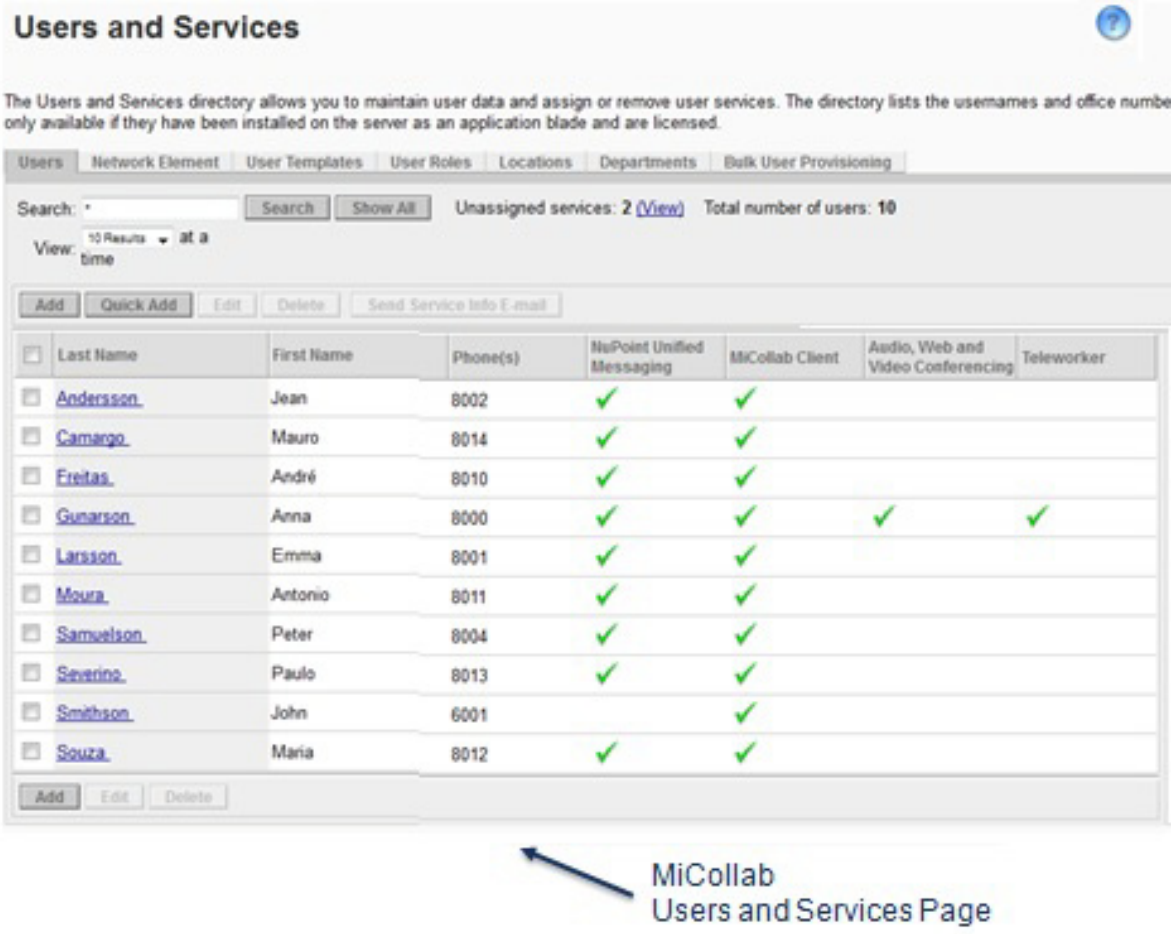


Figure 144: Users Added to USP Directory

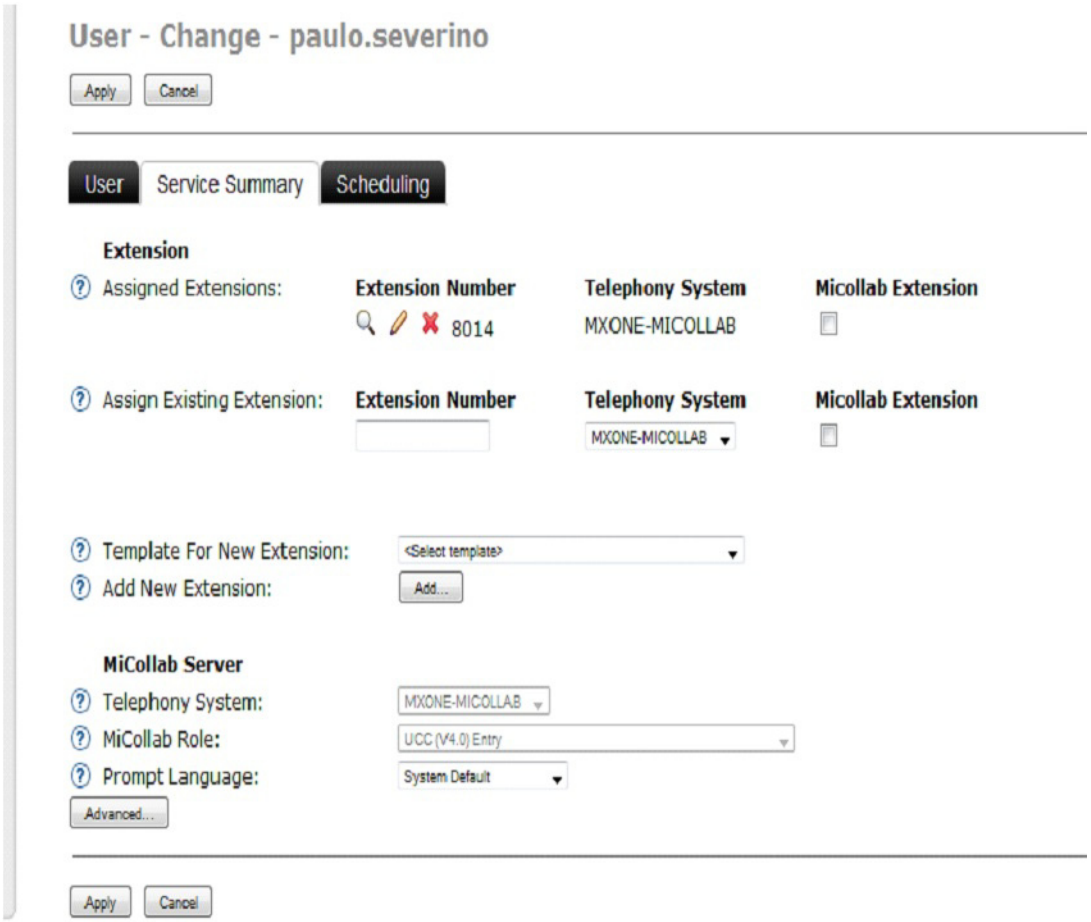


Figure 145: Provisioning Manager User Page

MAPPING ACTIVE DIRECTORY FIELDS TO PROVISIONING MANAGER

1. Under **Users > UDF Mapping** select the Active Directory Field that needs to be mapped to Provisioning Manager.

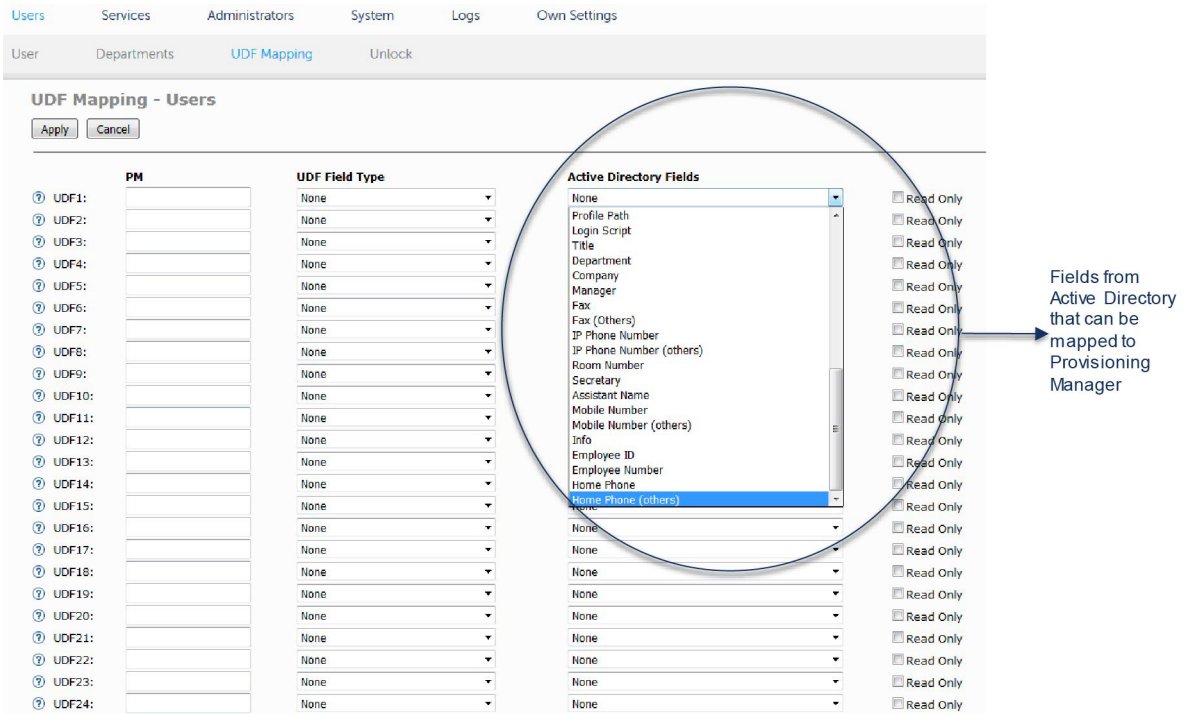


Figure 146: UDF Mapping User Page

2. Enter the Provisioning Manager name select UDF Field Type.

Note: Deselect the **Read Only** button to allow user information editing in Provisioning Manager. By default **Read Only** option is selected.

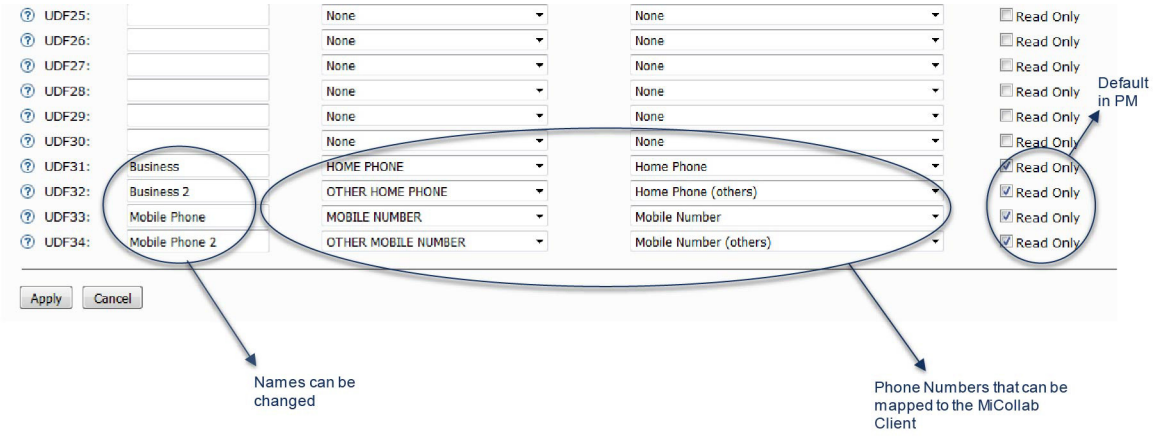


Figure 147: UDF Mapping User Page - cont.

3. Click **Apply**.

ACTIVE DIRECTORY FIELDS

IN PROVISIONING MANAGER

- Click **Users > User > Change - anagram** to display the UDF mapped information.

Note: Names of the Active Directory fields can be changed in UDF Mapping.

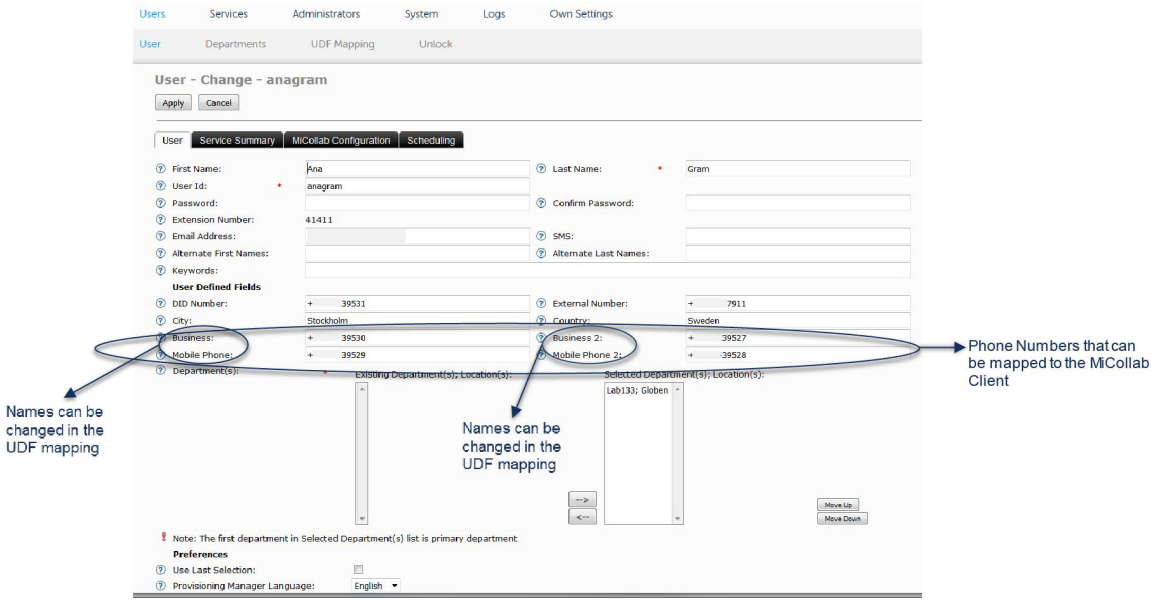


Figure 148: Active Directory Fields in Provisioning Manager

IN MICOLLAB

1. Log into the MiCollab server manager.
2. Under **Applications**, click **Users and Services**.
3. Click the **Users** tab.

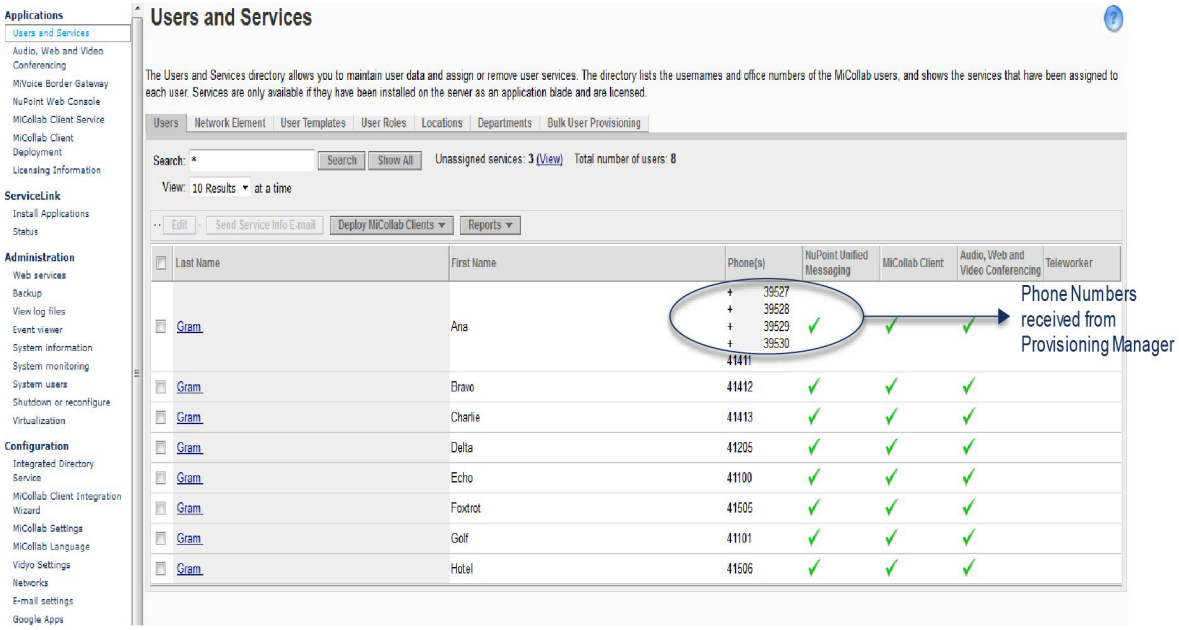


Figure 149: Active Directory Fields in MiCollab

4. Click on a User to see the details.
5. Click on **Phones** tab.

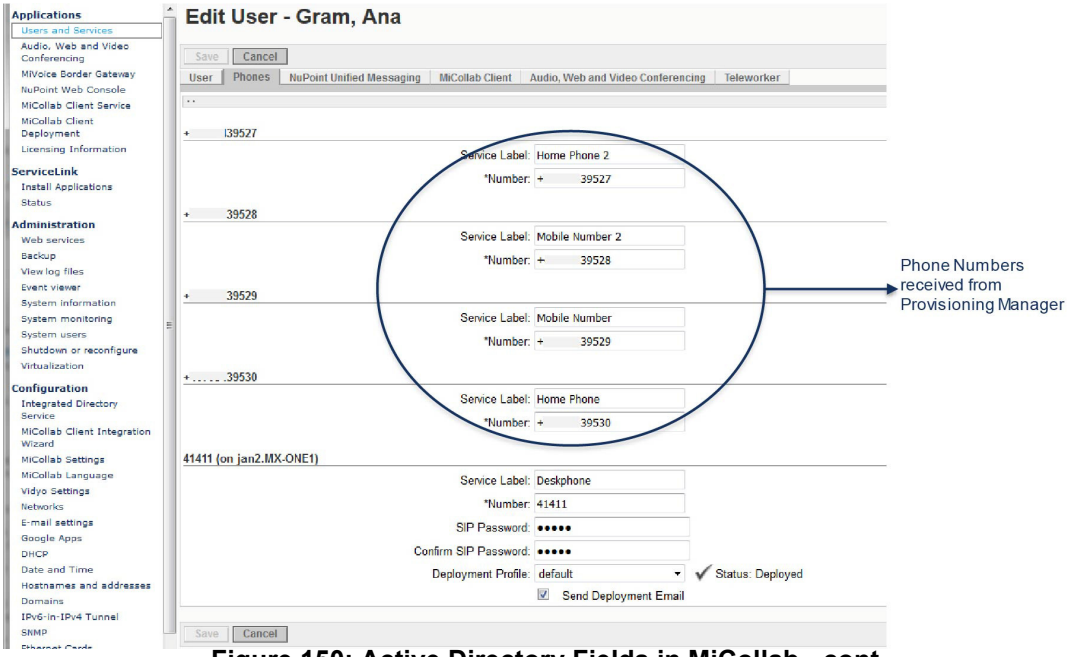


Figure 150: Active Directory Fields in MiCollab - cont.

6. Under **Applications**, click **MiCollab Client Service**.
7. Click **Configure MiCollab Client Service** and then select **Accounts** tab.
8. Click on a User to see the details.
9. Select **Phone Numbers**.

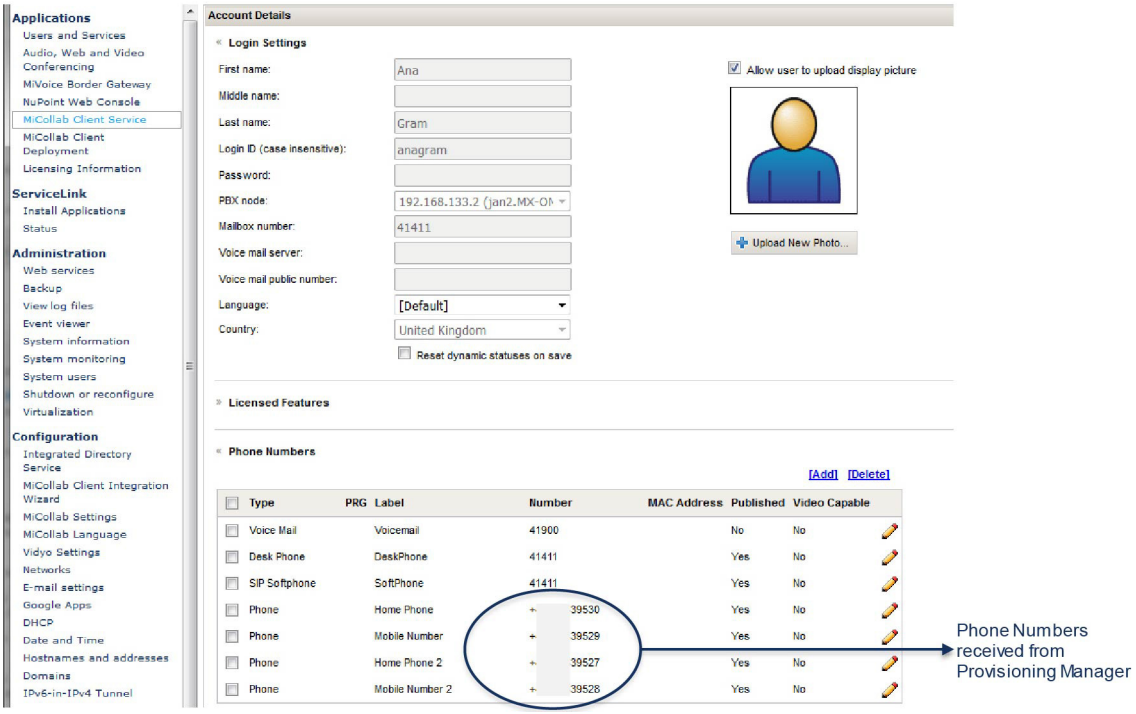


Figure 151: Active Directory Fields in MiCollab - cont.

IN MICOLLAB CLIENT

1. Log into the **MiCollab Client**.
2. Right click on a user and select **Contact Information**.

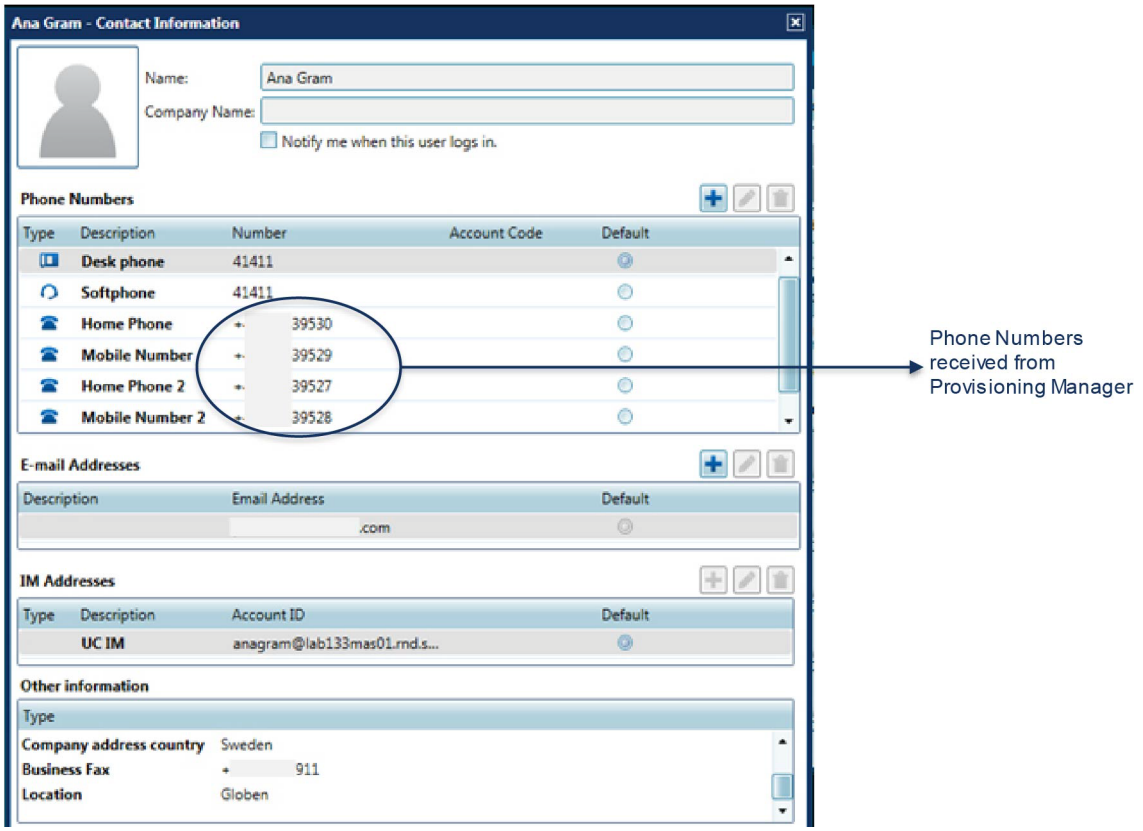


Figure 152: Active Directory Fields in MiCollab Client

MICOLLAB ADVANCED MESSAGING SETUP IN PROVISIONING MANAGER

ADD EXISTING MAILBOX

1. In provisioning manager, click **Users > User > Service Summary**.
2. Select **MiCollab AM** in the drop down menu.

Note: MiCollab Advanced Messaging Server option is available only if MiCollab Advanced Messaging Server is defined in the sub-system.

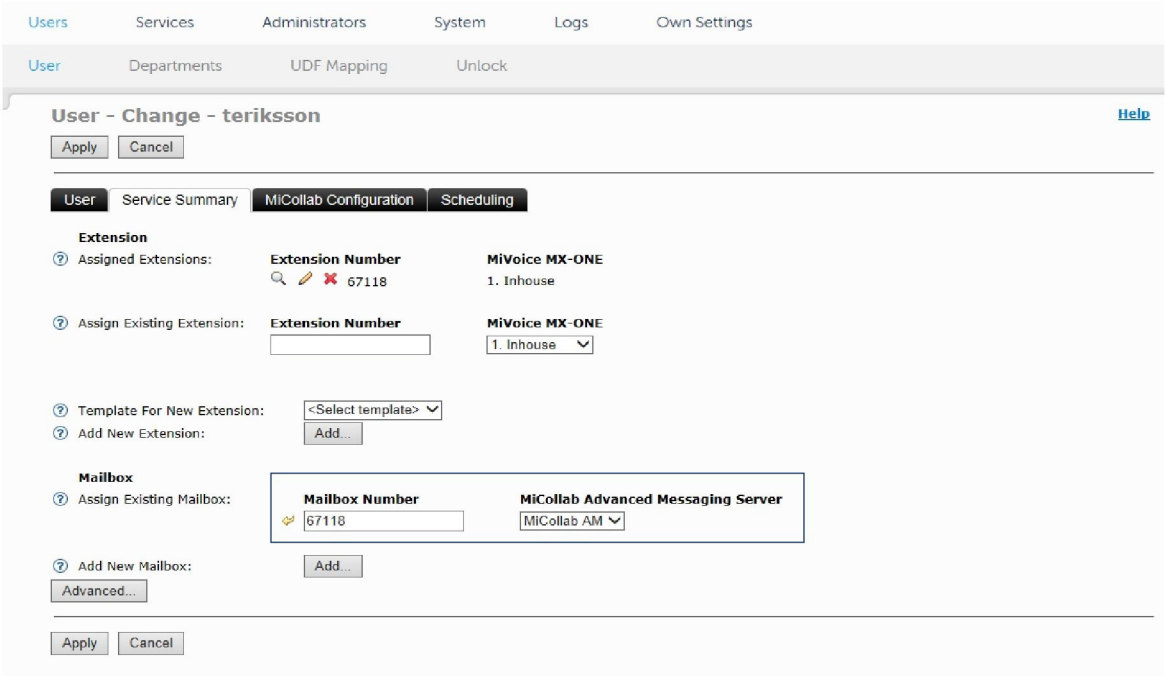


Figure 153: Add Existing Mailbox

3. Enter the extension number for the user in **Mailbox Number** and click **Apply**.

CREATE NEW MAILBOX

1. In provisioning manager, click **Users > User > Service Summary**.
2. Click **Add** under Mailbox section.

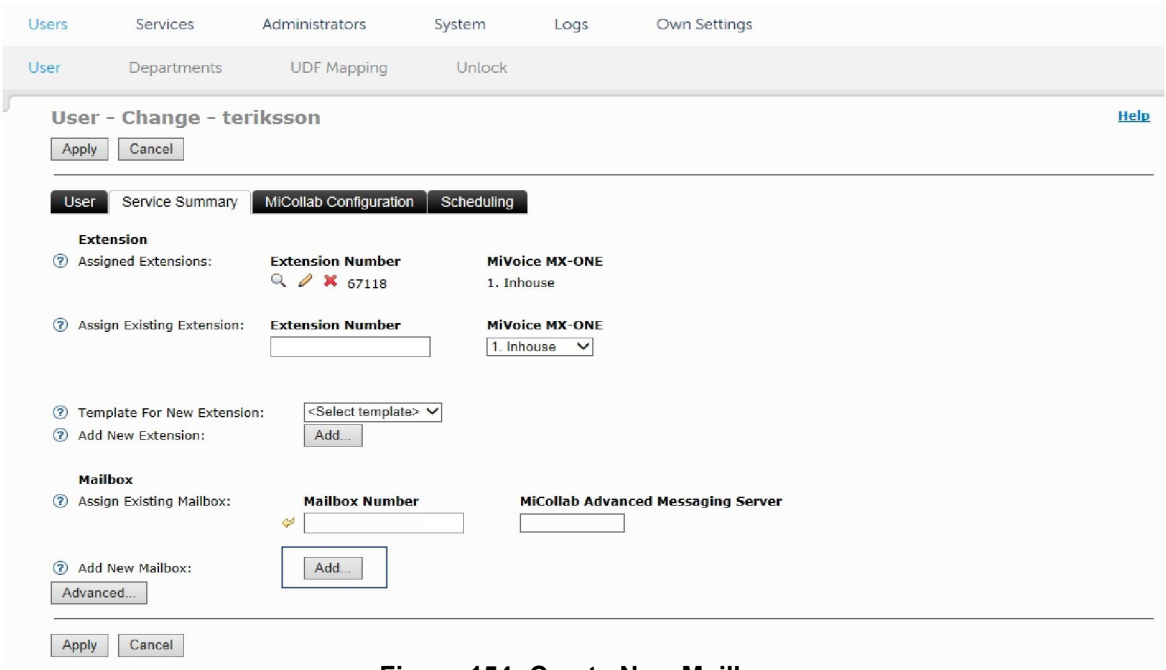


Figure 154: Create New Mailbox

3. Select **MiCollab AM** in the drop down menu and click **Next**.

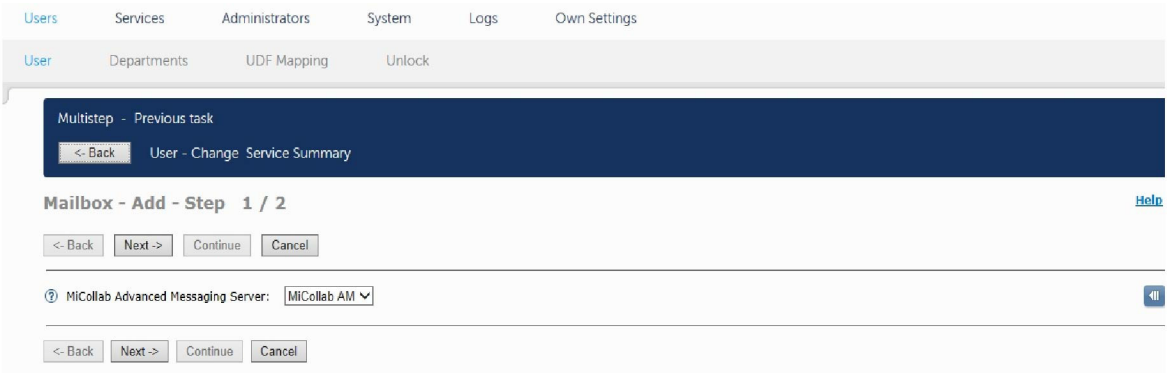


Figure 155: Mailbox - Add

4. Enter **Mailbox Id**, **Mailbox Extension**, and **Subscriber Name** to setup the mailbox.

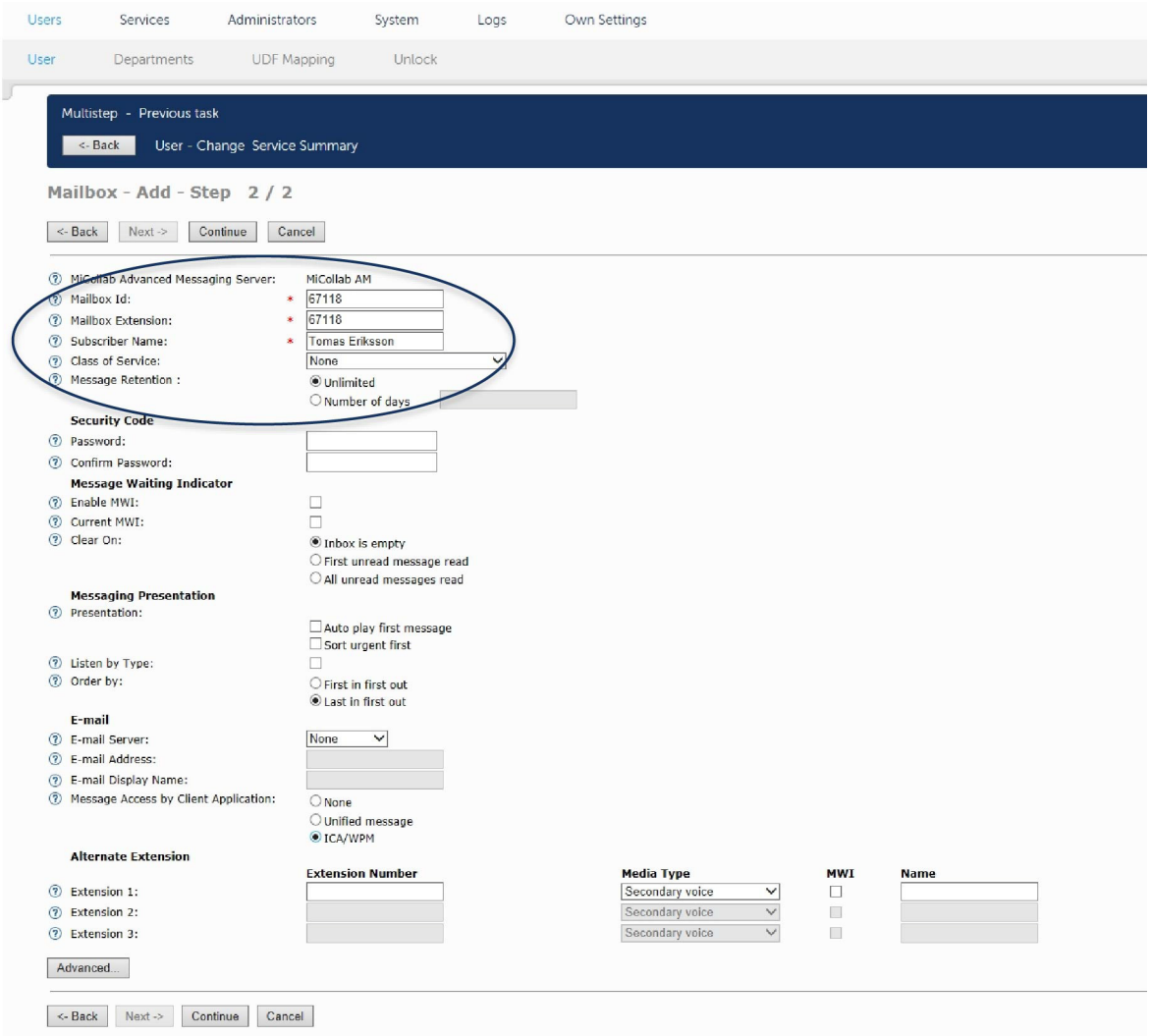


Figure 156: Mailbox - Add - cont.

5. Click **Continue**.

Note: MiCollab Advanced Messaging Server is setup in the MiCollab.

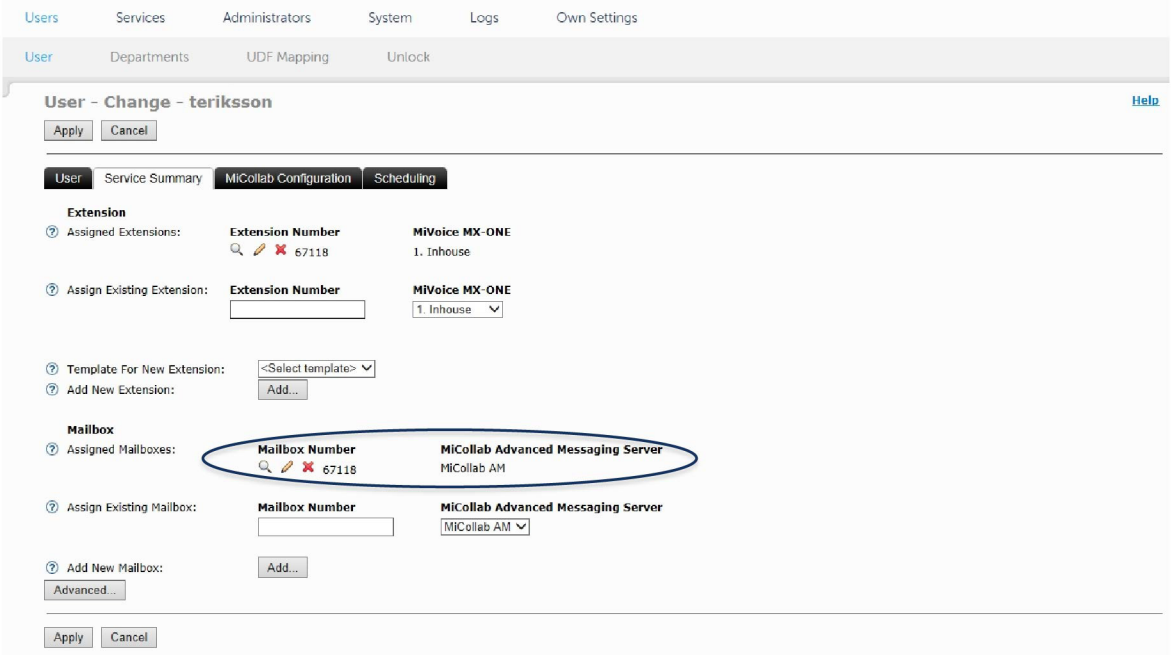


Figure 157: Create New Mailbox - cont.

6. Click **Apply.**
7. Under **MiCollab Configuration** tab, select the MiCollab details.

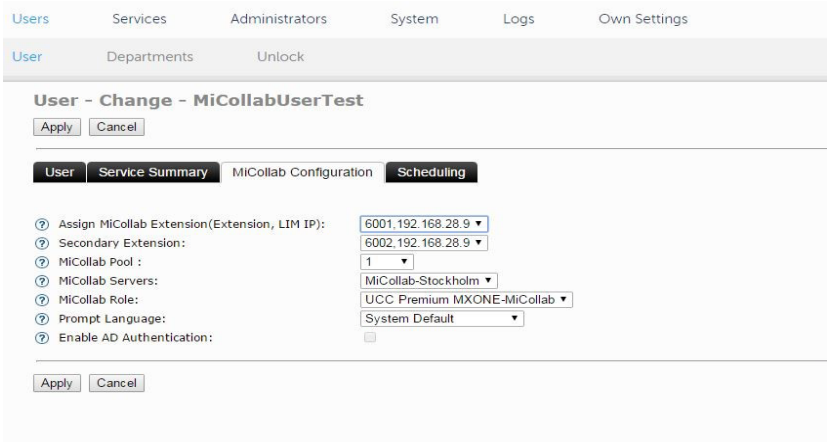


Figure 158: MiCollab Configuration

8. Click **Apply**.

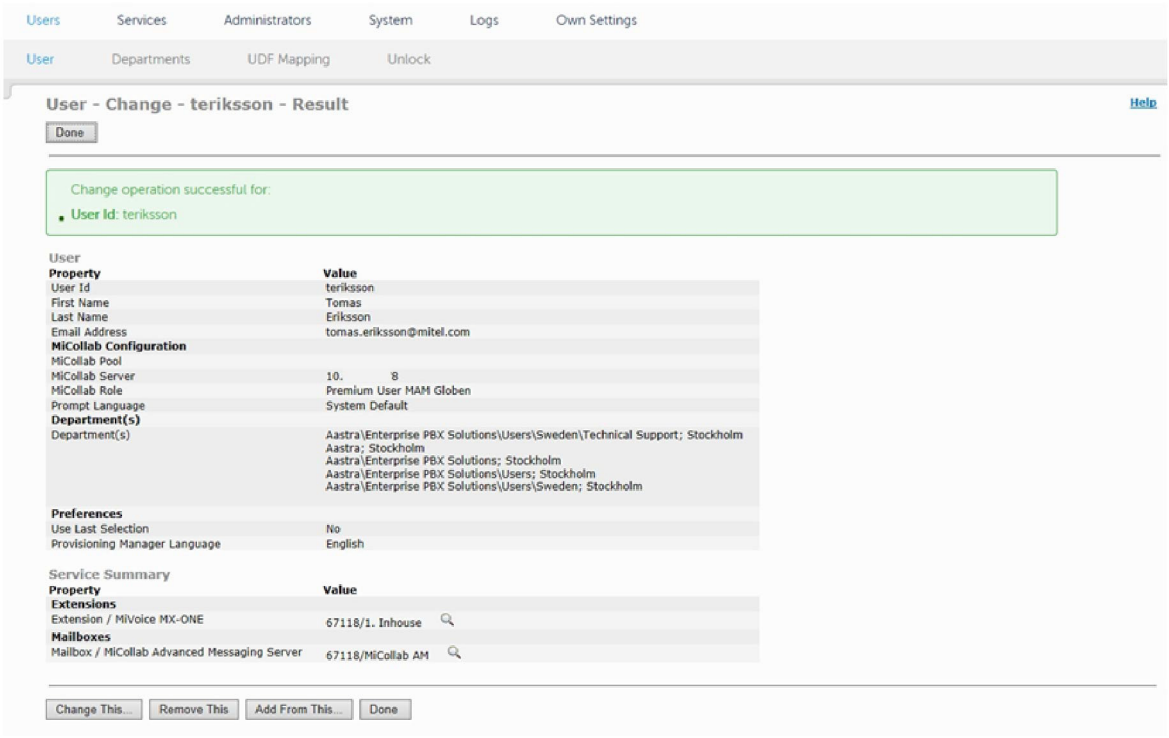


Figure 159: User - Change - Result

MIVOICE MX-ONE MESSAGE DIVERSION PROFILES AND FEATURE CODES

MiCollab Client uses the following default Message Diversion Profiles and associated feature codes (*23*<digit 0-9>#):

Digit	Status
0	Lunch break
1	Gone for the day
2	Away from desk
3	In a meeting
4	Business trip
5	Visiting customer
6	Vacation
7	Not available
8	Back soon
9	Sick-leave

You can reorder the Message Diversion activities list:

1. Create a script.txt file with the profiles and feature codes:

   Example:

   Diversion Profiles;LunchBreak;0
   Diversion Profiles;GoneForTheDay;8
   Diversion Profiles;AwayFromDesk;2
   Diversion Profiles;InAMeeting;3
   Diversion Profiles;BusinessTrip;4
   Diversion Profiles;VisitingACustomer;5
   Diversion Profiles;Vacation;6
   Diversion Profiles;NotAvailable;7
   Diversion Profiles;BackSoon;1
   Diversion Profiles;SickLeave;9

2. Copy the file to directory “/opt/CstaProxy/config”
3. Open a terminal and switch to this directory
4. Run the following two commands:

   sqlite3 csta_config.sqlite "delete from ini where section = 'diversion profiles';"

   echo -e '.separator ";"\n.import script.txt ini' | sqlite3 csta_config.sqlite

Appendix A

AUDIO, WEB AND VIDEO CONFERENCING

VOICE PROMPTS

VOICE PROMPTS

The following table lists the English (United States) voice prompts available in the MiCollab Audio, Web and Video Conferencing product. The prompt numbers and names listed are the same for all available languages.

The following table lists the English (United States) voice prompts.

#	PROMPT NAME	SCRIPT
0	TURN_OFF_MUSIC	To turn off the music, press one.
1	WELCOME	Welcome to the conference center.
2	ENTER_PIN	Enter an access code, and then press #. To cancel, press *.
3	CANCELLED_RETRY	Cancelled. Please try again.
4	FIRST_BADPIN	That access code isn't recognized — please try again.
5	NEXT_BAD_PIN	That access code isn't recognized.
6	REENTER_PIN	To enter another code, press *.
7	REENTER_END	To enter another code, press *, or to end this call, press #.
8	REENTER_ASSIST	To enter another code, press *, or for assistance, press zero.
9	SAY_NAME	At the tone, say your name and then press #. <beep>
10	NO_LEADER	The leader hasn't activated this call yet. Please stay on the line.
11	GOODBYE	Thank you for calling the conference center. Goodbye.
12	CONNECTING	One moment while your call is connected.
13	TOO_EARLY	That conference hasn't started yet.
14	TOO_LATE	That conference has already ended.
15	CALL_NOT_AVAIL	That conference isn't available now.
16	NO_OPER	I'm sorry, the operator isn't available now.
17	FIRSTCALLER	You're the first person in this conference. Please stay on the line.
18	CAN'T_COMPLETE	Sorry, we're unable to complete your call.
19	CALLER_UNAVAIL	That person isn't available right now.
20	ZERO	Zero

#	PROMPT NAME	SCRIPT
21	ONE	One
22	TWO	Two
23	THREE	Three
24	FOUR	Four
25	FIVE	Five
26	SIX	Six
27	SEVEN	Seven
28	EIGHT	Eight
29	NINE	Nine
30	ONE_MOMENT	One moment, please.
31	NO_PORTS	All circuits are busy. Please try again in a few minutes.
32	DBL_POUND	At any time, you may press the # key twice for a list of options.
33	RECORDING_END	The recording has ended. To start again, press one. Otherwise, you may hang up.
34	PAUSED	Paused. To resume, press two.
35	RECORDINGS	Recordings
36	DIALOUT_CONFIRM	You've been invited to a conference call. To join, press one. To decline, press two.
37	DECLINED	Invitation declined. Goodbye.
40	LIST_NAMES	For a list of names, press three.
41	PLACE_CALL	To place a call, press two.
42	NO_NAMES	Names are not available.
43	RETURN_CONF	To return to the conference, press *.
44	INVALID_OPTION	Sorry, that's not a recognized option.
45	OPTION_NA	Sorry, that option isn't available.
46	RETURNING	Returning to conference.
47	2ND_LEG_2WAY	Do you want to keep this call? To keep the call and return to the conference, press one. To drop the call and return, press two.

#	PROMPT NAME	SCRIPT
48	BUSY	That number is busy.
49	CALL_2WAY	To return to the conference, press *. To try another number, press one.
50	CANT_JOIN	I'm sorry. The call leader hasn't given approval for you to join this conference. Goodbye.
51	HUNG_UP	The person you called is no longer on the line.
52	INCOMPLETE_CALL	Sorry, we couldn't complete your call.
53	JOINING	Now joining...
54	NAME_2WAY	I'm not sure if you recorded a name. To keep this recording, press one. To try again, press two.
55	NEXT_NO_NAME	Sorry, I still didn't hear you say a name. You can't join the conference until you record your name. To try again, press one.
56	NO_ANSWER	There's no answer at that number.
57	MAGIC_KEY	Ready to place a call. To return to the conference at any time, press the * key twice.
58	NO_NAME	Sorry, I didn't hear you say a name.
59	RECORD_CANCELLED	Recording cancelled.
60	ROLLCALL	To cancel the list at any time, press *.
61	ROLLCALL_2WAY	To return to the conference, press *. To repeat the list, press one.
62	CANCELLED	Cancelled.
63	ENTER_NUMBER	Enter a phone number. When you have finished, press #.
64	DIAL_ANOTHER	Cancelled. You may dial another number now, or to return to the conference, press *.
65	INVALID_PHONE	Sorry, we're unable to call that number. You may dial another number now, or to return to the conference, press *.
66	INVALID_PHONE2	Sorry, that phone number isn't valid.
67	COUNT1	There are...
68	COUNT2	...people in this call.
69	TEN	Ten
70	ELEVEN	Eleven
71	TWELVE	Twelve

#	PROMPT NAME	SCRIPT
72	THIRTEEN	Thirteen
73	FOURTEEN	Fourteen
74	FIFTEEN	Fifteen
75	SIXTEEN	Sixteen
76	SEVENTEEN	Seventeen
77	EIGHTEEN	Eighteen
78	NINETEEN	Nineteen
79	TWENTY	Twenty
80	THIRTY	Thirty
81	FORTY	Forty
82	FIFTY	Fifty
83	SIXTY	Sixty
84	SEVENTY	Seventy
85	EIGHTY	Eighty
86	NINETY	Ninety
87	HUNDRED	Hundred
88	OPTIONS	Options.
89	DROPPED	The call has been dropped.
90	ONE_CALLER	There is one person in this call.
91	MUTE	To mute your line, press one.
92	UNMUTE	To unmute your line, press one.
93	NUMCALLERS	To hear the number of callers, press three.
94	CHECK_RETURN	To return to the conference, press * now. Otherwise select from the following options...
95	NAMES	Names.
96	DIALOUT_NO_PORTS	All circuits are busy. Please try your call again in a few minutes.
		Page 4 of 6

#	PROMPT NAME	SCRIPT
97	RECORD	This call is being recorded.
98	REC_STOP	The recording has been stopped.
99	TRY LATER	Please try your call again in a few minutes.
100	JOIN_TONE	<Rising beep tone>
101	LEAVE_TONE	<Descending beep tone>
102	MUTE_TONE	<double beep tone>
103	UNMUTE_TONE	<triple beep tone>
104	DIALTOJOIN	To join the call press one.
105	EOCP_CONFWILLEND	This conference will end in...
106	EOCP_MINUTES	...minutes.
107	EOCP_ENDNOW	Please conclude your conference now to avoid being disconnected when this conference terminates.
108	EOCP_LDREXTEND	The designated leader will now be asked to extend this conference. You may continue this conference while the leader is away.
109	EOCP_LDRMNU1	Extend conference. Press the * key to cancel and return to the conference at any time.
110	EOCP_LDRMNU2	To extend the conference for 15 minutes, press one; for 30 minutes, press two, for 45 minutes, press three; for 60 minutes, press four.
111	EOCP_EXTGOOD	This conference has been extended successfully.
112	EOCP_EXTFAIL	I'm sorry, currently there are not enough ports available to extend this conference for that length of time.
113	EOCP_TOOLONG	Please select a shorter extension period...
114	EOCP_ENDED	This call has ended. Goodbye.
115	EOCP_LDRMNU3	...or press the * key to return to the conference.
116	AUDIO_LOCKED	This conference has been locked by the leader.
117	AUDIO_LK_MNU1	To lock this conference, press 5.
118	AUDIO_LK_MNU2	To unlock this conference, press 5.
119	AUDIO_LK_ST_1	This meeting is now locked.
120	AUDIO_LK_ST_2	This meeting is now unlocked.

#	PROMPT NAME	SCRIPT
121	PID_TOGGLE	To enter a Personal ID, press star.
122	PID_SELECT	Enter your Personal ID, then press pound.
123	ACODE_TOGGLE	To enter an Access Code, press star.
124	PID_SKIP	To skip your Personal ID, press star.
125	PID_RETRY	That Personal ID isn’t recognized, please try again.
126	PID_FINAL	That Personal ID isn’t recognized.
127	PID_APPROVAL	Access to this conference requires leader approval.
128	PID_LEADER	Contact your Conference Leader to accept your request to attend this conference.
129	PID_MNU_4	To enter your Personal ID, press 4.
130	PID_MNU_RET	To return to the conference, press star.
131	PID_NOT_REG	That Personal ID isn't registered for this conference.
132	PID_CHG_FAIL	There was an error when attempting to change your Personal ID.
133	ACODE_SELECT	Enter an Access Code, then press pound.
134	JOIN_MUTED	Your audio is muted. You can hear the conference but cannot speak unless enabled by the conference leader.
135	DUPLICATE_PID	This conference restricts duplicate Personal IDs. That Personal ID is already in use.
136	AUDIO_ONLY_CONF	You have accessed an audio-only conference. Video is not available.
		Page 6 of 6

Mitel
Powering connections
mitel.com

© Copyright 2017, Mitel Networks Corporation. All Rights Reserved.
The Mitel word and logo are trademarks of Mitel Networks Corporation.
Any reference to third party trademarks are for reference only and Mitel makes no representation of the ownership of these marks.